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INTERVENTO

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

**PROGETTO DI MANUTENZIONE STRAORDINARIA PER IL RESTAURO E RISANAMENTO
CONSERVATIVO DI DUE CASAMENTI A CORTE SITI IN
COMUNE DI BOLOGNA LOCALITA' CIRENAICA.
VIA BENTIVOGLI CIV. 31÷59 PER COMPLESSIVI 56 ALLOGGI
DI ERP CON RELATIVE PERTINENZE E PARTI COMUNI**

LOTTO **3053/PN_1**

PROGETTO ESECUTIVO

TAV. TAB_03		OGGETTO TABULATI DI CALCOLO CIVICO 31 STATO DI FATTO			DATA Settembre 2022	
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TABULATI DI CALCOLO
CIVICO 31
STATO DI FATTO



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1 Risultati numerici

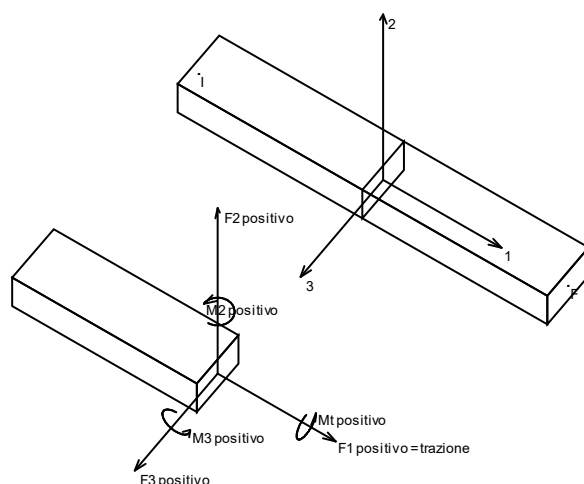
1.1 Sollecitazioni

1.1.1 Sollecitazioni aste

1.1.1.1 Convenzioni di segno aste

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

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



La convenzione sui segni per i parametri di sollecitazione delle aste è la seguente:

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

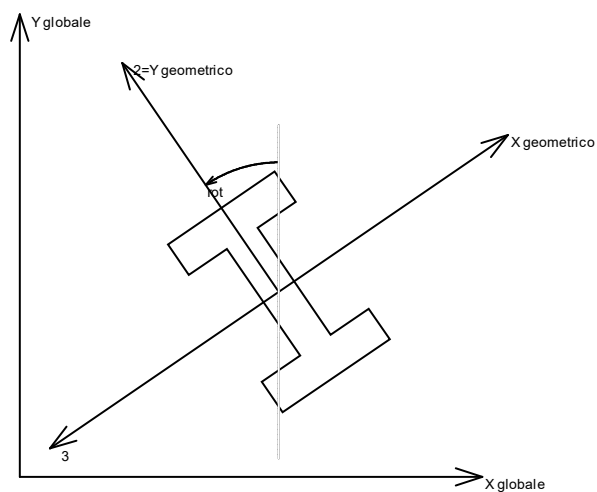
Il sistema è definito diversamente per tre categorie di aste, a seconda che siano originate da:

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

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

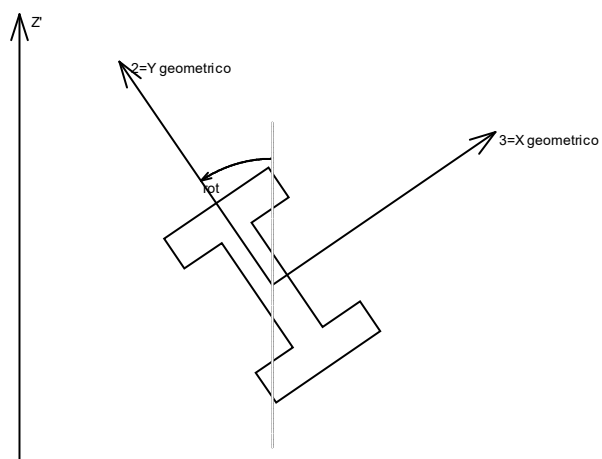


Sistema locale aste verticali



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

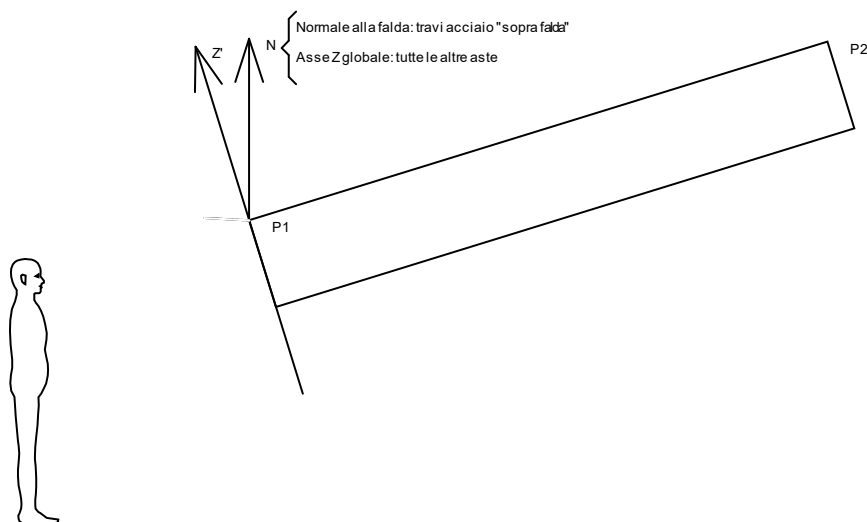
Sistema locale aste non verticali



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

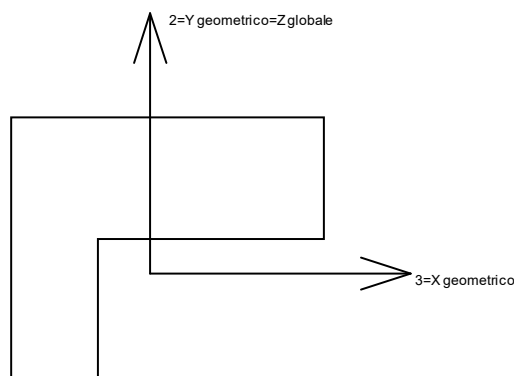
L'asse Z' è illustrato nella figura seguente dove:

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



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

Sistema locale aste derivanti da travi in c.a.



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

1.1.1.2 Sollecitazioni estreme aste

Asta: elemento asta a cui si riferiscono le sollecitazioni.

Ind.: indice dell'asta.

Cont.: contesto a cui si riferisce la sollecitazione

N.br.: nome breve della condizione o combinazione di carico.

Pos.: numero della sezione all'interno dell'asta (tra 1 e 31, dove 1 corrisponde alla sezione al nodo iniziale, 16 è la sezione in mezzera, 31 corrisponde alla sezione al nodo finale).

Posizione: posizione a cui si riferisce la sollecitazione dell'asta.

X: componente X della posizione a cui si riferisce la sollecitazione dell'asta. [m]

Y: componente Y della posizione a cui si riferisce la sollecitazione dell'asta. [m]

Z: componente Z della posizione a cui si riferisce la sollecitazione dell'asta. [m]

Soll.traslazionale: componente traslazionale della sollecitazione dell'asta.

F1: componente F1 della sollecitazione dell'asta. [daN]

F2: componente F2 della sollecitazione dell'asta. [daN]

F3: componente F3 della sollecitazione dell'asta. [daN]

Soll.rotazionale: componente rotazionale della sollecitazione dell'asta.

M1: componente M1 della sollecitazione dell'asta. [daN*m]

M2: componente M2 della sollecitazione dell'asta. [daN*m]

M3: componente M3 della sollecitazione dell'asta. [daN*m]

Sollecitazioni con sforzo normale (N) minimo

Vengono mostrate le sole 5 aste più sollecitate.

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



Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
159	SLV 5	31	-24.68	-3.36	15.39	-6896	660	-78	-0.59	-367.22	-783.76
160	SLU 79	31	-24.69	5.95	15.38	-6845	2625	-2	-0.81	-12.83	-3928.01
66	SLV 1	1	-5.43	6.66	15.32	-5594	-1065	-422	67.97	-514.1	252.9
104	SLV 3	1	-5.16	6.28	15.32	-5413	2821	1870	41.58	110.42	587.79
202	SLV 15	17	-14.64	1.05	17.8	-5315	-502	-1640	-5.87	-228.42	91.03

Sollecitazioni con sforzo normale (N) massimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
183	SLV 5	1	-24.68	-2.95	15.32	4528	-1154	77	-10.35	-559.7	-48.45
187	SLV 5	31	-10.47	1.05	17.8	4398	956	-108	1.79	-491.08	13.54
145	SLV 5	1	-24.3	-3.36	15.32	4344	-691	710	-21.58	629.21	-28.46
182	SLV 5	1	-24.68	-2.55	15.32	4164	50	61	-5.44	-457.95	-40.12
92	SLV 1	1	-0.05	1.05	15.32	4016	-1043	683	-5.39	-593.7	-441.17

Sollecitazioni con momento M2 minimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
263	SLV 13	31	-11.01	-4.78	14.84	-22	-52	-2628	-50.77	-2770.55	35
269	SLV 15	31	-13.76	-4.78	14.84	397	237	-2552	22.71	-2539.98	-36.65
246	SLV 1	31	-13.76	-4.78	14.84	-295	-919	-1592	-33.45	-2231.49	468.15
271	SLV 11	1	-17.05	-3.37	15.34	-2020	-200	1727	13.45	-2220.31	-95.84
240	SLV 15	1	-11.01	-4.78	14.84	2168	577	1714	-41.28	-2211.43	288.38

Sollecitazioni con momento M2 massimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
269	SLV 1	31	-13.76	-4.78	14.84	-391	-153	2902	-23.1	2956.62	28.95
263	SLV 3	31	-11.01	-4.78	14.84	104	74	2489	51.97	2638.33	-45.08
240	SLV 1	1	-11.01	-4.78	14.84	-1509	-701	-1770	41.39	2367.37	-323.17
246	SLV 15	31	-13.76	-4.78	14.84	34	863	1537	33.48	2235.84	-412.87
126	SLV 11	1	-17.2	-3.36	15.32	-5035	-983	-2537	6.92	2092.25	-321.8

Sollecitazioni con momento M3 minimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
187	SLU 79	1	-5.15	6.66	15.34	269	-2541	-124	5	361.44	-4277.11
188	SLU 72	1	-20.15	1.05	17.8	949	-8232	-77	19.07	200.72	-4076.65
160	SLU 79	31	-24.69	5.95	15.38	-6845	2625	-2	-0.81	-12.83	-3928.01
159	SLU 72	1	-20.15	1.05	17.8	-4389	-3224	25	-2.22	-197.17	-3772.06
186	SLU 79	31	-5.15	5.95	15.35	-2316	2151	-110	1.92	-356.69	-2466.5

Sollecitazioni con momento M3 massimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
187	SLU 71	20	-8.52	3.11	16.9	945	48	-119	5.04	-270.3	3023.24
103	SLU 72	1	-5.16	6.66	15.32	-1796	5804	1002	1.63	-396.62	2898.5
160	SLU 72	14	-22.12	3.17	16.75	-5456	22	5	-0.8	-7.57	2694.55
161	SLU 72	1	-24.68	5.95	15.32	1342	5099	-21	4.99	54.55	2391.57
105	SLU 71	1	-24.68	5.95	15.32	1166	4611	13	-5.43	4.78	2167.48

1.1.2 Sollecitazioni gusci

1.1.2.1 Convenzioni di segno gusci

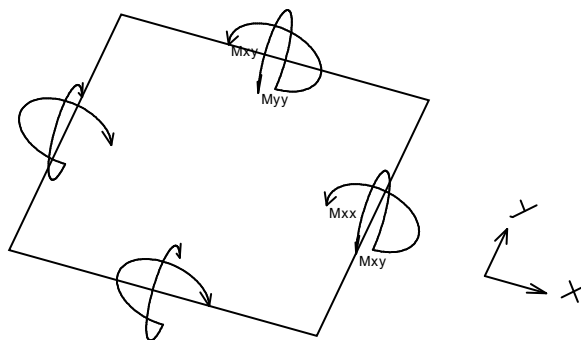
Sono individuate distinte convenzioni di segno in relazione al tipo di elemento strutturale a cui il guscio si riferisce:

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

Convenzione di segno per gusci non verticali

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

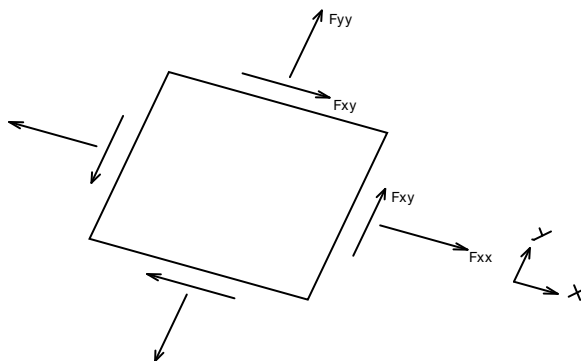
In figura è mostrato un elemento infinitesimo di shell orizzontale con indicato il sistema di riferimento e i parametri di sollecitazione Mxx, Myy, Mxy.



Si definiscono:

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

Per quanto riguarda le sollecitazioni estensionali si faccia riferimento alla figura seguente dove per lo stesso elemento infinitesimo di shell orizzontale con indicato il sistema di riferimento e i parametri di sollecitazione F_{xx} , F_{yy} , F_{xy} .



Si definiscono:

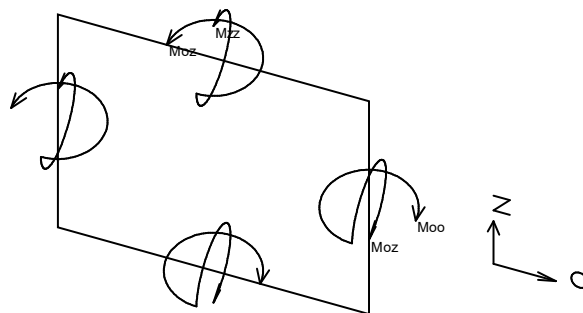
- F_{xx} : sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale x (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- F_{yy} : sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale all'asse y (verso positivo indicato dalla freccia in figura che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

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

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

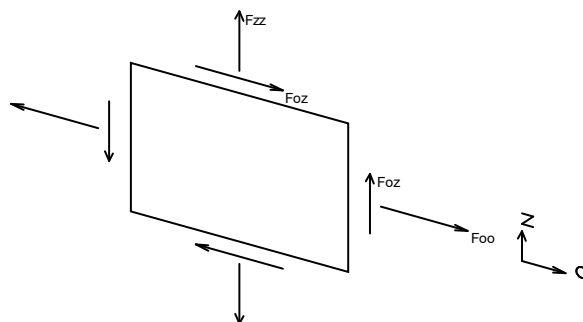
Convenzione di segno per gusci verticali

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



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

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



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

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

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

1.1.2.2 Sollecitazioni estreme gusci

Shell: elemento guscio a cui si riferiscono le sollecitazioni.

Ind: indice del guscio.

Cont.: contesto a cui si riferiscono le sollecitazioni.

N.br.: nome breve della condizione o combinazione di carico.

Nodo: nodo su cui si basa il guscio a cui si riferisce la sollecitazione.

Ind: indice del nodo.

Sollecitazione: valori della sollecitazione.

M11: componente M11 della sollecitazione del guscio nel nodo indicato. $[daN * m / m]$

M12: componente M12 della sollecitazione del guscio nel nodo indicato. $[daN * m / m]$

M22: componente M22 della sollecitazione del guscio nel nodo indicato. $[daN * m / m]$

F11: componente F11 della sollecitazione del guscio nel nodo indicato. $[daN / m]$

F12: componente F12 della sollecitazione del guscio nel nodo indicato. $[daN / m]$

F22: componente F22 della sollecitazione del guscio nel nodo indicato. $[daN / m]$

V13: componente V13 della sollecitazione del guscio nel nodo indicato. $[daN / m]$

V23: componente V23 della sollecitazione del guscio nel nodo indicato. $[daN / m]$

Sollecitazioni con momento M11 minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
15897	SLV 5	10959	-2669	551	1082	-19957	29000	45765	12846	-5053



Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
955	SLV 7	3257	-2222	51	-1199	-27221	-20976	-43556	9104	2733
948	SLV 7	3256	-2193	138	-1063	19759	-19258	-7583	9637	2680
941	SLV 7	3255	-1978	-123	-785	14774	-17105	-9656	9050	1901
1056	SLV 11	3271	-1972	-102	-898	-31755	29158	-57880	-9661	2183

Sollecitazioni con momento M11 massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Scheda			Sollecitazione								
Shell	Cont.	Nodo	M11		M12	M22	F11	F12	F22	V13	V23
Ind	N.br.	Ind									
15897	SLV 11	10959	2655	-552	-1078	6138	-9597	-22641	-12797	5056	
367	SLV 9	2912	2066	66	1028	32378	19469	-37084	8442	-3210	
948	SLV 7	3255	1901	121	-684	-10907	-18057	-10924	9579	-1442	
374	SLV 9	2913	1865	121	852	20648	18128	-5924	8185	-2379	
941	SLV 7	3254	1856	109	-703	9624	-17302	-11103	9001	-1401	

Sollecitazioni con momento M22 minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
14739	SLV 5	18323	-366	281	-1451	-2914	-773	-5163	-1555	3303
9686	SLV 9	18326	-356	-272	-1403	-3195	957	-5331	1508	3196
466	SLV 5	2720	-1003	832	-1399	16671	-8931	-18872	45546	-79840
15897	SLV 7	10959	2307	-630	-1309	-5222	9865	10637	-11044	5953
11185	SLV 5	11219	-836	-234	-1207	-2497	-984	-5733	-2501	-2721

Sollecitazioni con momento M22 massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Scheda Intervento Anagrafica			Sollecitazione								
Shell	Cont.	Nodo	M11		M12	M22	F11	F12	F22	V13	V23
Ind	N.br.	Ind									
14739	SLV 11	18323	369	-282		1444	-7306	1634	-23096	1558	-3288
9686	SLV 7	18326	357	272		1400	-7844	-1805	-25453	-1507	-3189
5430	SLV 3	11032	386	-739		1327	-7073	3588	-9132	7749	-13655
15897	SLV 9	10959	-2321	630		1313	-8597	9538	12486	11093	-5950
5915	SLV 13	12369	1084	185		1246	393	243	-5413	4423	7375

Sollecitazioni con sforzo F11 minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Scheda			Sollecitazione										
Shell	Cont.	Nodo	M11		M12		M22		F11	F12	F22	V13	V23
Ind	N.br.	Ind											
15467	SLV 11	16001	37	70	146	-127490	52888	-150211	-329	-492			
15466	SLV 11	15625	37	77	147	-107271	41735	-103931	-554	-613			
15468	SLV 11	16361	-33	61	145	-102985	57348	-202747	-326	-425			
14963	SLV Y	3598	-16	37	-75	-92016	10712	-1327	-353	356			
9925	SLU 72	18654	9	-3	8	-86860	-58343	-95698	-72	-166			

Sollecitazioni con sforzo F11 massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Caratteristiche generali			Sollecitazione							
Shell	Cont.	Nodo	M11	M12	M22	F11	F12	F22	V13	V23
Ind	N.br.	Ind								
15467	SLV 5	16001	-37	-69	-144	122814	-50841	138417	320	486
14963	SLV 5	3598	14	-44	64	119069	-3200	562	372	-308
15466	SLV 5	15625	-36	-76	-145	103358	-40367	93162	595	571
15468	SLV 11	16001	-36	121	-145	103214	-8865	56632	837	-1251
15230	SLV 11	14616	157	8	-59	83383	-22352	9000	-288	810

Sollecitazioni con sforzo F22 minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
15469	SLV 11	16700	17	-68	-43	12516	24984	-239407	-364	-384
14925	SLV 5	6226	-16	59	41	1059	-4226	-234310	-358	-159
14931	SLV 11	2795	105	-171	266	-10844	-138	-230517	-2248	1263
15236	SLV 5	14200	-36	103	61	-8439	3078	-225877	-413	-274
15465	SLV 5	14700	-109	-69	53	20184	-3862	-221579	-715	211

Sollecitazioni con sforzo F22 massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
15469	SLV 5	16700	-16	65	42	-12729	-23351	224703	334	364
15465	SLV 11	14700	108	66	-56	-20144	2204	222412	692	-230
15242	SLV 5	10917	-106	-105	83	-17193	5535	215582	-1046	320
14925	SLV Y	6226	19	-67	-45	-1609	4291	203591	420	179
15236	SLV 11	14200	38	-107	-61	7593	-2826	202975	428	278

1.1.2.3 Sollecitazioni estreme gusci non verticali

Shell: elemento guscio a cui si riferiscono le sollecitazioni.

Ind: indice del guscio.

Cont.: contesto a cui si riferiscono le sollecitazioni.

N.br.: nome breve della condizione o combinazione di carico.

Nodo: nodo su cui si basa il guscio a cui si riferisce la sollecitazione.

Ind: indice del nodo.

Sollecitazione: valori della sollecitazione.



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

Sollecitazioni con momento Mxx minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
5409	SLV 3	7066	-789	312	276	-5711	-234	-2359	4990	-322
9044	SLV X	7066	-557	-249	-604	-4616	-2001	-3100	-2968	-3297
9036	SLV 15	2984	-542	-63	75	-22392	1556	-258	-1953	-369
5415	SLV 1	7066	-534	-177	-216	-3278	4734	1252	967	1323
10142	SLV 7	18180	-480	-43	-642	36	-201	1582	-1508	-2854

Sollecitazioni con momento Mxx massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
9044	SLV 3	7066	887	344	731	-12155	-2509	-600	4615	4389
10142	SLV 9	18180	511	47	715	-915	126	-10808	1649	3140
10143	SLV 5	18180	478	-87	660	-2826	600	-7209	-1551	2030
10149	SLV 9	18173	476	72	679	-441	842	-4386	1568	2473
1347	SLV 15	2984	467	-189	420	-17018	10665	-52	-1012	2697

Sollecitazioni con momento Myy minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
10142	SLV Y	18180	-458	-26	-650	1172	457	5037	-1470	-2856
9044	SLV 13	7066	-403	-223	-643	-14575	-3063	1169	-2234	-3153
10149	SLV 7	18173	-456	-69	-636	-1054	-1316	-1768	-1490	-2343
10150	SLV 11	18173	-403	25	-627	1279	-668	-689	1295	-2348
10143	SLV Y	18180	-436	73	-602	789	-845	4019	1428	-1852

Sollecitazioni con momento Myy massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
9044	SLV 3	7066	887	344	731	-12155	-2509	-600	4615	4389
10142	SLV 9	18180	511	47	715	-915	126	-10808	1649	3140
10149	SLV 9	18173	476	72	679	-441	842	-4386	1568	2473
10150	SLV 5	18173	423	-28	671	-2775	852	-5554	-1376	2487
10143	SLV 5	18180	478	-87	660	-2826	600	-7209	-1551	2030

Sollecitazioni con sforzo Fxx minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
9036	SLV 11	2987	-184	-99	-23	-46101	8512	-6339	-186	-581
5409	SLV 11	7647	41	-11	32	-42850	-6803	-621	743	88
1372	SLV 15	726	-5	6	9	-28988	6613	-7247	-15	-14
9044	SLV 11	7066	367	100	138	-26102	-9135	-13926	1820	1208
9027	SLV 11	2984	-335	94	-173	-25702	7123	-8329	-798	772

Sollecitazioni con sforzo Fxx massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
1456	SLV 9	2995	27	-13	9	17957	-3956	-1071	123	-34
1747	SLV X	7025	45	21	77	13126	1266	-5913	323	224
9062	SLV Y	3478	-25	10	17	13099	-7157	3804	11	136
1341	SLV 11	2995	37	-21	-46	12396	7257	-490	-43	15
5409	SLV 5	7068	-72	24	-57	11475	4984	10546	-185	-1823

Sollecitazioni con sforzo Fyy minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
337	SLU 84	65	-3	-2	-12	-6808	1559	-33296	14	32
25	SLU 84	64	-3	0	-13	-6912	-1439	-32693	-32	45
23	SLU 84	928	-20	0	-21	-631	5016	-31103	245	83
334	SLU 84	929	-14	-5	-26	-412	-4973	-30559	-236	66
5506	SLV 5	7648	-38	-13	45	-11475	17315	-28093	-239	79

Sollecitazioni con sforzo Fyy massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
3779	SLV 3	7025	-29	-25	-64	-1056	422	22259	-108	-467



Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
5506	SLV Y	7648	49	25	-74	5753	-10665	19803	278	72
25	SLV X	407	-4	16	-55	1513	-3583	15051	-23	-368
9044	SLV 5	7068	-51	33	-49	6438	4002	14593	-641	102
3991	SLV 15	7067	111	71	49	-8805	-3776	14297	-114	-552

1.1.2.4 Sollecitazioni estreme gusci verticali

Shell: elemento guscio a cui si riferiscono le sollecitazioni.

Ind: indice del guscio.

Cont.: contesto a cui si riferiscono le sollecitazioni.

N.br.: nome breve della condizione o combinazione di carico.

Nodo: nodo su cui si basa il guscio a cui si riferisce la sollecitazione.

Ind: indice del nodo.

Sollecitazione: valori della sollecitazione.

Moo: componente Moo della sollecitazione del guscio nel nodo indicato. [daN*m/m]

Moz: componente Moz della sollecitazione del guscio nel nodo indicato. [daN*m/m]

Mzz: componente Mzz della sollecitazione del guscio nel nodo indicato. [daN*m/m]

Foo: componente Foo della sollecitazione del guscio nel nodo indicato. [daN/m]

Foz: componente Foz della sollecitazione del guscio nel nodo indicato. [daN/m]

Fzz: componente Fzz della sollecitazione del guscio nel nodo indicato. [daN/m]

Vo: componente Vo della sollecitazione del guscio nel nodo indicato. [daN/m]

Vz: componente Vz della sollecitazione del guscio nel nodo indicato. [daN/m]

Sollecitazioni con momento Moo minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
15897	SLV 11	10959	-2655	-552	1078	6138	9597	-22641	-12797	-5056
955	SLV 7	3257	-2222	51	-1199	-27221	-20976	-43556	9104	2733
948	SLV 7	3256	-2193	138	-1063	19759	-19258	-7583	9637	2680
941	SLV 7	3255	-1978	-123	-785	14774	-17105	-9656	9050	1901
1056	SLV 11	3271	-1972	-102	-898	-31755	29158	-57880	-9661	2183

Sollecitazioni con momento Moo massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
15897	SLV 5	10959	2669	551	-1082	-19957	-29000	45765	12846	5053
367	SLV 9	2912	2066	66	1028	32378	19469	-37084	8442	-3210
75	SLV 5	2884	1942	-428	1008	38118	-31192	-8329	-7614	-1514
948	SLV 7	3255	1901	121	-684	-10907	-18057	-10924	9579	-1442
74	SLV 5	2883	1898	-74	818	26367	-20162	2986	-8643	-1808

Sollecitazioni con momento Mzz minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
14739	SLV 11	18323	-369	-282	-1444	-7306	-1634	-23096	1558	3288
9686	SLV 7	18326	-357	272	-1400	-7844	1805	-25453	-1507	3189
466	SLV 5	2720	-1003	832	-1399	16671	-8931	-18872	45546	-79840
15897	SLV 9	10959	2321	630	-1313	-8597	-9538	12486	11093	5950
11185	SLV 11	11219	-846	239	-1210	3079	-1333	4286	2524	-2733

Sollecitazioni con momento Mzz massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
14739	SLV 5	18323	366	281	1451	-2914	773	-5163	-1555	-3303
9686	SLV 9	18326	356	-272	1403	-3195	-957	-5331	1508	-3196
5430	SLV 3	11032	386	-739	1327	-7073	3588	-9132	7749	-13655
15897	SLV 7	10959	-2307	-630	1309	-5222	-9865	10637	-11044	-5953
5915	SLV 13	12369	1084	185	1246	393	243	-5413	4423	7375

Sollecitazioni con sforzo Foo minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
15467	SLV 11	16001	-37	70	-146	-127490	-52888	-150211	-329	492
15466	SLV 11	15625	-37	77	-147	-107271	-41735	-103931	-554	613
15468	SLV 11	16361	33	61	-145	-102985	-57348	-202747	-326	425
14963	SLV Y	3598	-16	37	-75	-92016	10712	-1327	-353	356
9925	SLU 72	18654	-9	-3	-8	-86860	58343	-95698	-72	166

Sollecitazioni con sforzo Foo massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
15467	SLV 5	16001	37	-69	144	122814	50841	138417	320	-486
14963	SLV 5	3598	14	-44	64	119069	-3200	562	372	-308
15466	SLV 5	15625	36	-76	145	103358	40367	93162	551	-595
15468	SLV 11	16001	36	121	145	103214	8865	56632	837	1251
15230	SLV 11	14616	-157	8	59	83383	22352	9000	-288	-810



Sollecitazioni con sforzo Fzz minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
			Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
15469	SLV 11	16700	-17	-68	43	12516	-24984	-239407	-364	384
14925	SLV 5	6226	16	59	-41	1059	4226	-234310	-358	159
14931	SLV 11	2795	-105	-171	-266	-10844	138	-230517	-2248	-1263
15236	SLV 5	14200	36	103	-61	-8439	-3078	-225877	-413	274
15465	SLV 5	14700	109	-69	-53	20184	3862	-221579	-715	-211

Sollecitazioni con sforzo Fzz massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
			Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
15469	SLV 5	16700	16	65	-42	-12729	23351	224703	334	-364
15465	SLV 11	14700	-108	66	56	-20144	-2204	222412	692	230
15242	SLV 5	10917	106	-105	-83	-17193	-5535	215582	-1046	-320
14925	SLV Y	6226	-19	-67	45	-1609	-4291	203591	420	-179
15236	SLV 11	14200	-38	-107	61	7593	2826	202975	428	-278

1.1.3 Sollecitazioni gusci armati

1.1.3.1 Convenzioni di segno gusci

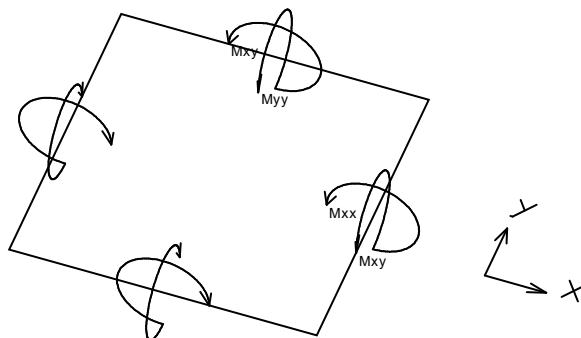
Sono individuate distinte convenzioni di segno in relazione al tipo di elemento strutturale a cui il guscio si riferisce:

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

Convenzione di segno per gusci non verticali

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

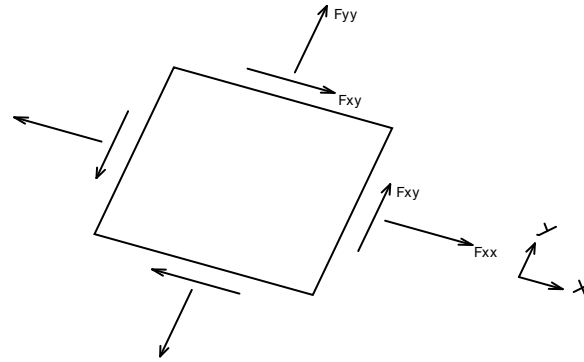
In figura è mostrato un elemento infinitesimo di shell orizzontale con indicato il sistema di riferimento e i parametri di sollecitazione M_{xx} , M_{yy} , M_{xy} .



Si definiscono:

- M_{xx} : momento flettente $[Forza * Lunghezza / Lunghezza]$ agente sul bordo di normale x (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- M_{yy} : momento flettente $[Forza * Lunghezza / Lunghezza]$ agente sul bordo di normale y (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- M_{xy} : momento torcente $[Forza * Lunghezza / Lunghezza]$ agente sui bordi (verso positivo indicato dalla freccia in figura).

Per quanto riguarda le sollecitazioni estensionali si faccia riferimento alla figura seguente dove per lo stesso elemento infinitesimo di shell orizzontale con indicato il sistema di riferimento e i parametri di sollecitazione F_{xx} , F_{yy} , F_{xy} .



Si definiscono:

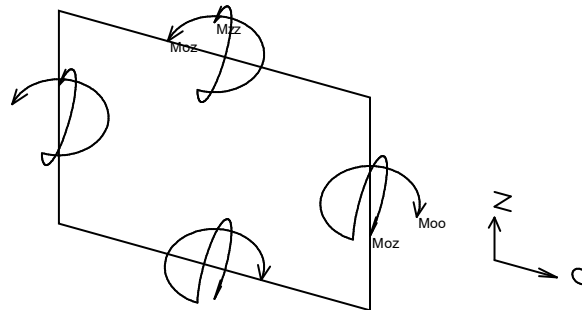
- F_{xx} : sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale x (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- F_{yy} : sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale all'asse y (verso positivo indicato dalla freccia in figura che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

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

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

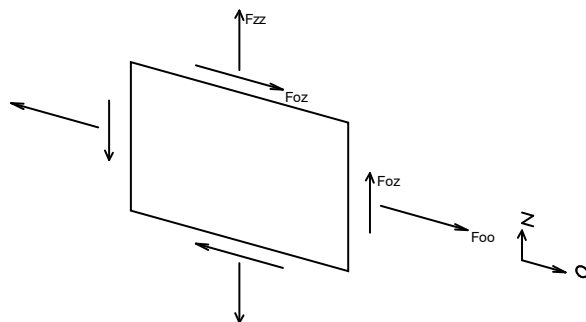
Convenzione di segno per gusci verticali

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



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

Per quanto riguarda le sollecitazioni estensionali si faccia riferimento alla figura seguente dove per lo stesso elemento infinitesimo di shell con indicato il sistema di riferimento i parametri di sollecitazione F_{oo} , F_{zz} , F_{oz} sono rispettivamente:



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

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

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

1.1.4 Sollecitazioni gusci muratura

1.1.4.1 Convenzioni di segno gusci muratura

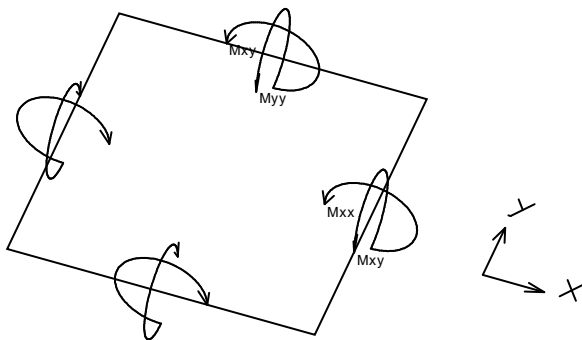
Sono individuate distinte convenzioni di segno in relazione al tipo di elemento strutturale a cui il guscio muratura si riferisce:

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

Convenzione di segno per gusci non verticali

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

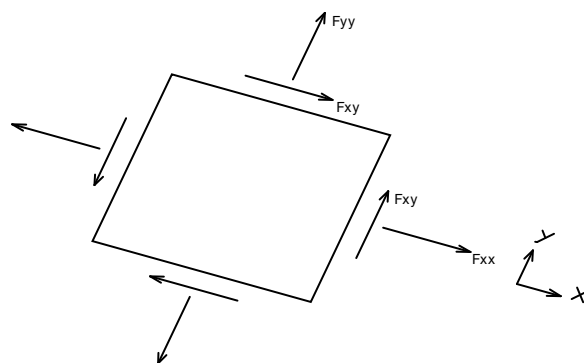
In figura è mostrato un elemento infinitesimo di shell orizzontale con indicato il sistema di riferimento e i parametri di sollecitazione M_{xx} , M_{yy} , M_{xy} .



Si definiscono:

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

Per quanto riguarda le sollecitazioni estensionali si faccia riferimento alla figura seguente dove per lo stesso elemento infinitesimo di shell orizzontale con indicato il sistema di riferimento e i parametri di sollecitazione F_{xx} , F_{yy} , F_{xy} .

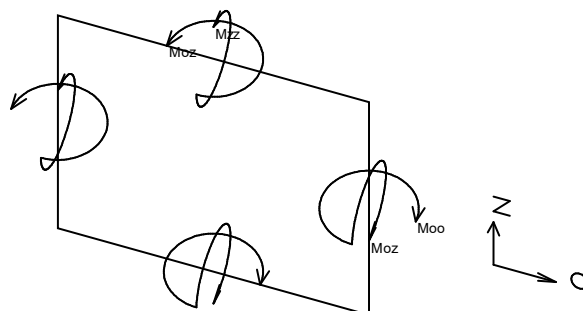


Si definiscono:

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

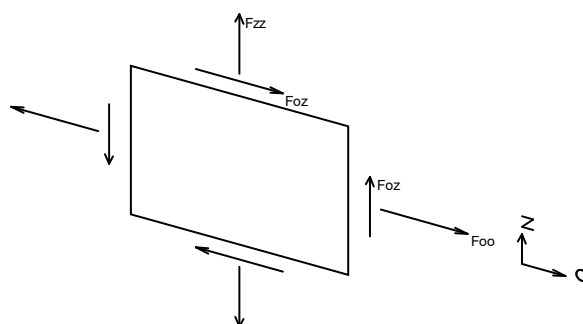
Convenzione di segno per gusci verticali

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



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

Per quanto riguarda le sollecitazioni estensionali si faccia riferimento alla figura seguente dove per lo stesso elemento infinitesimo di shell con indicato il sistema di riferimento i parametri di sollecitazione F_{oo} , F_{zz} , F_{oz} sono rispettivamente:



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



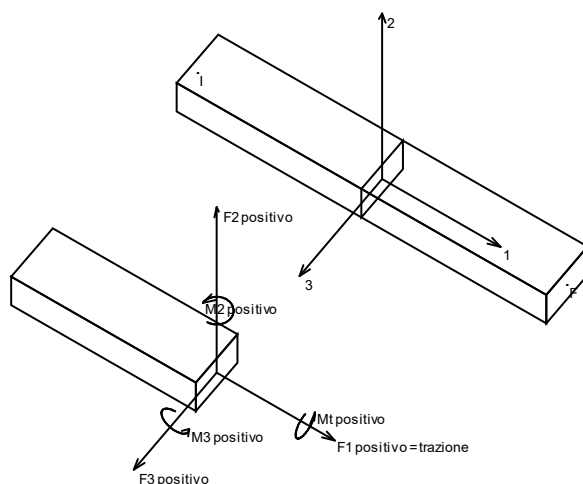
- F_{oo} : sforzo tensionale distribuito [Forza/Lunghezza] applicato al bordo di normale parallela all'asse O (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- F_{oz} : sforzo tagliante distribuito [Forza/Lunghezza] applicato sui bordi (verso positivo indicato dalla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

1.1.5 Sollecitazioni aste in muratura

1.1.5.1 Convenzioni di segno aste

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

- F_1 (N): sforzo normale nell'asta;
- F_2 : sforzo di taglio agente nella direzione dell'asse locale 2;
- F_3 : sforzo di taglio agente nella direzione dell'asse locale 3;
- M_1 (Mt): momento attorno all'asse locale 1; equivale al momento torcente;
- M_2 : momento attorno all'asse locale 2;
- M_3 : momento attorno all'asse locale 3.



La convenzione sui segni per i parametri di sollecitazione delle aste è la seguente:

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

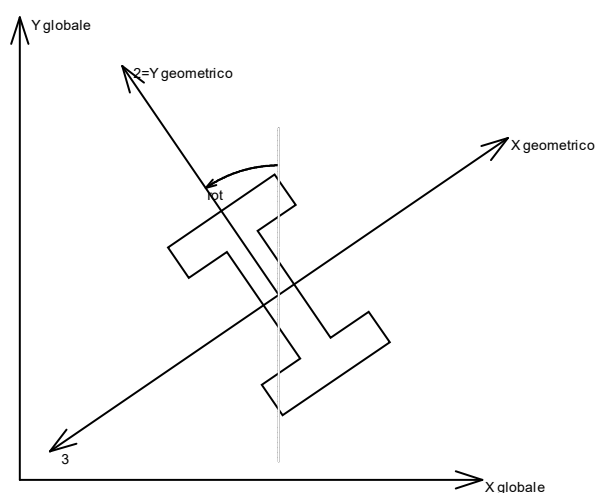
Il sistema è definito diversamente per tre categorie di aste, a seconda che siano originate da:

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

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

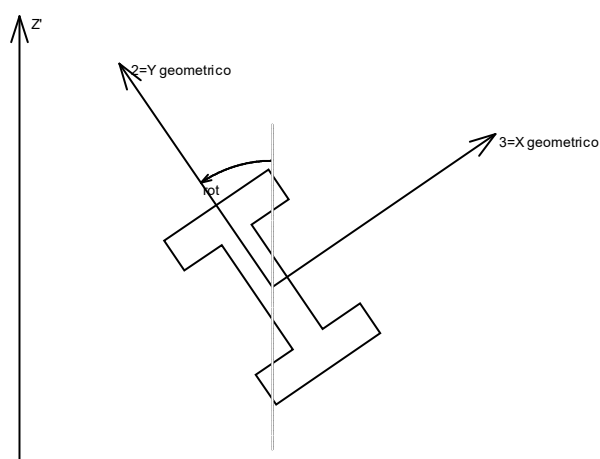


Sistema locale aste verticali



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

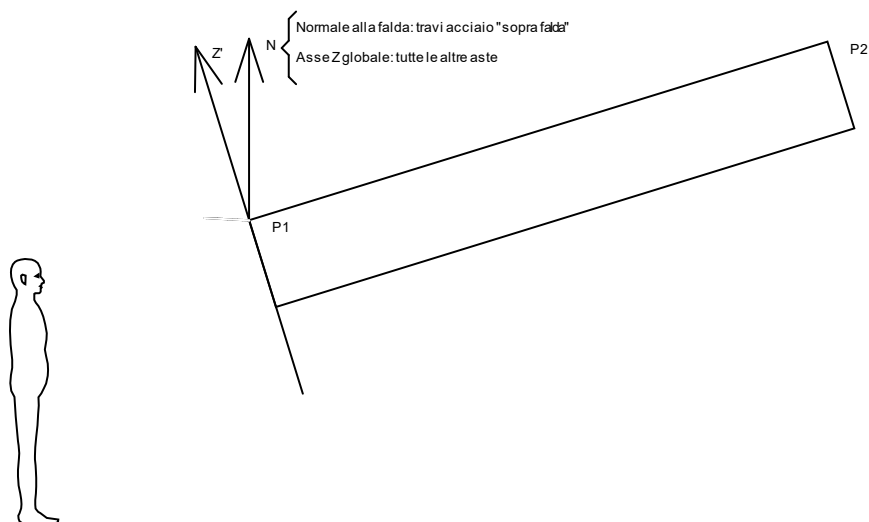
Sistema locale aste non verticali



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

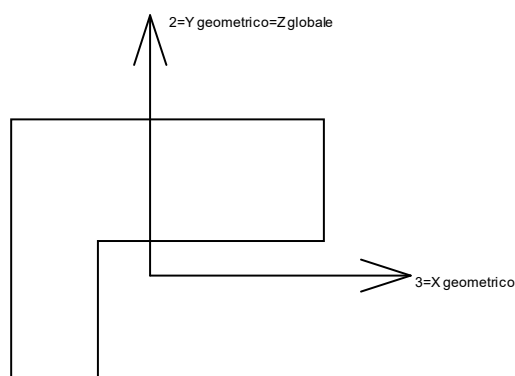
L'asse Z' è illustrato nella figura seguente dove:

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



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

Sistema locale aste derivanti da travi in c.a.



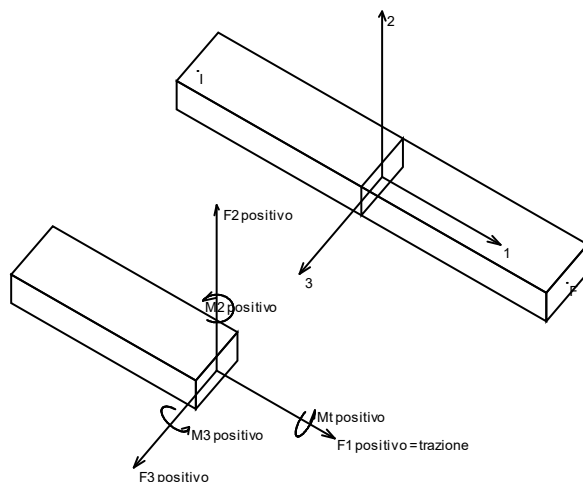
Nella figura si considera l'asse 1 entrante nel foglio (l'osservatore guarda in direzione coincidente a quella dell'asse 1). L'asse 2 è sempre verticale e quindi coincidente con l'asse Z globale nonché con l'asse y geometrico. L'asse 3 coincide con l'asse x geometrico. Si sottolinea il fatto che gli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

1.1.6 Sollecitazioni aste in muratura FRCM

1.1.6.1 Convenzioni di segno aste

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

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



La convenzione sui segni per i parametri di sollecitazione delle aste è la seguente:

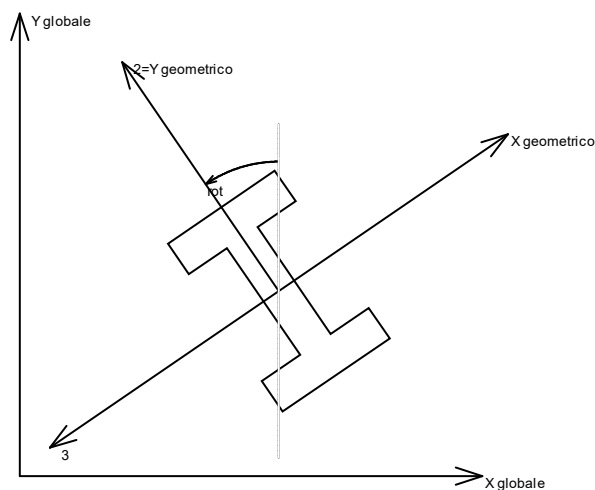
presa un'asta con nodo iniziale i e nodo finale f , asse 1 che va da i a f , assi 2 e 3 presi secondo quanto indicato nei paragrafi successivi relativi al sistema locale delle aste sezionando l'asta in un punto e considerando la sezione sinistra del punto in cui si è effettuato il taglio (sezione da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

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

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

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

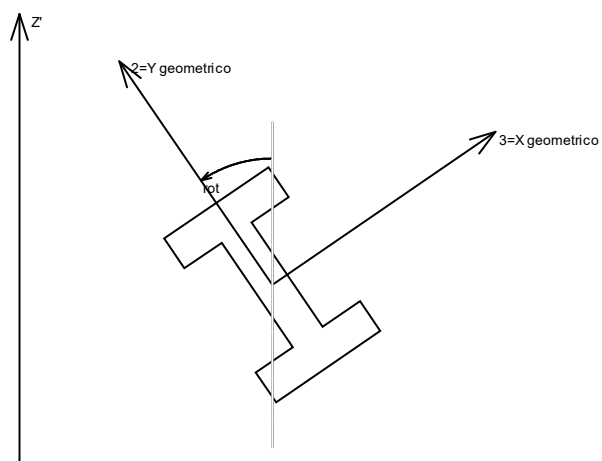
Sistema locale aste verticali



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



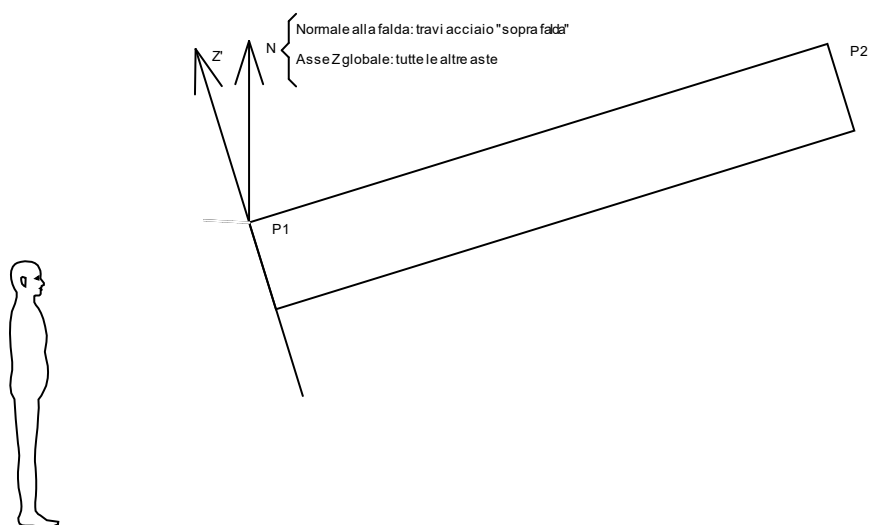
Sistema locale aste non verticali



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

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

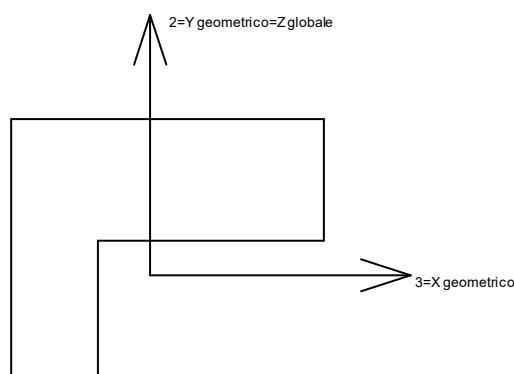
- $P1$ è il punto di inserimento iniziale dell'asta;
- $P2$ è il punto di inserimento finale dell'asta;
- N è la normale al piano o falda di inserimento;



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



Sistema locale aste derivanti da travi in c.a.



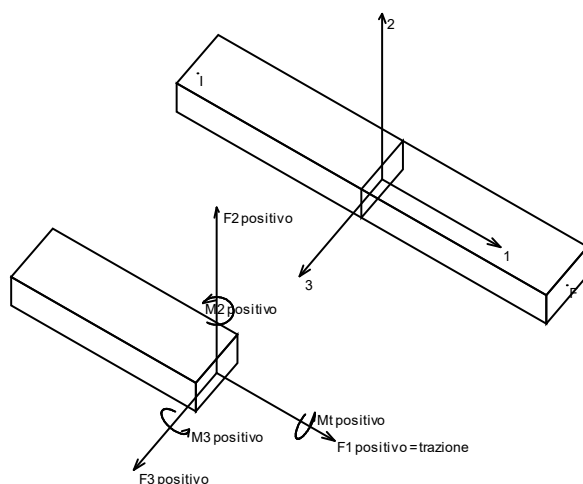
Nella figura si considera l'asse 1 entrante nel foglio (l'osservatore guarda in direzione coincidente a quella dell'asse 1). L'asse 2 è sempre verticale e quindi coincidente con l'asse Z globale nonché con l'asse y geometrico. L'asse 3 coincide con l'asse x geometrico. Si sottolinea il fatto che gli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

1.1.7 Sollecitazioni aste in muratura armata

1.1.7.1 Convenzioni di segno aste

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

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



La convenzione sui segni per i parametri di sollecitazione delle aste è la seguente:

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

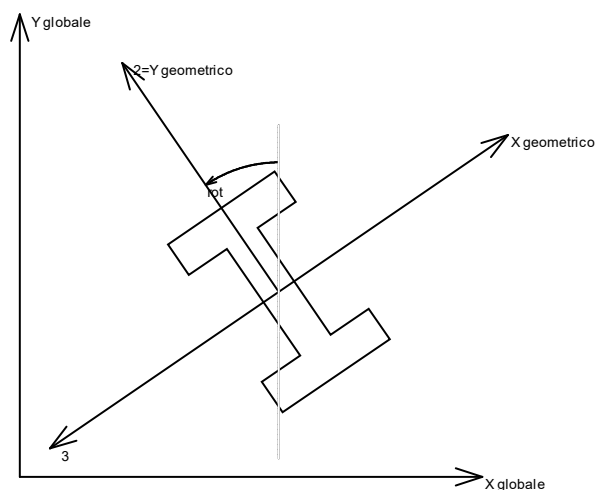
Il sistema è definito diversamente per tre categorie di aste, a seconda che siano originate da:

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

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

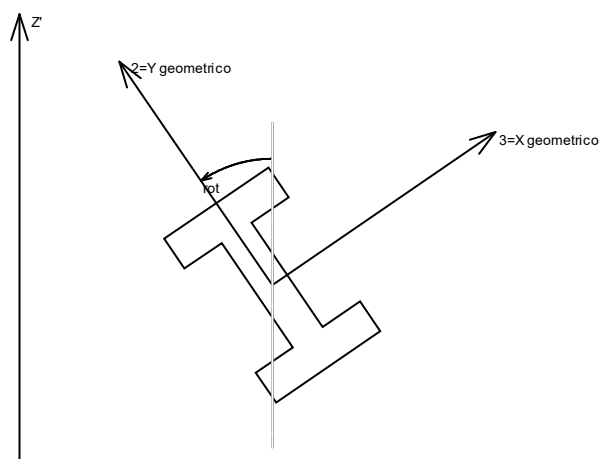


Sistema locale aste verticali



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

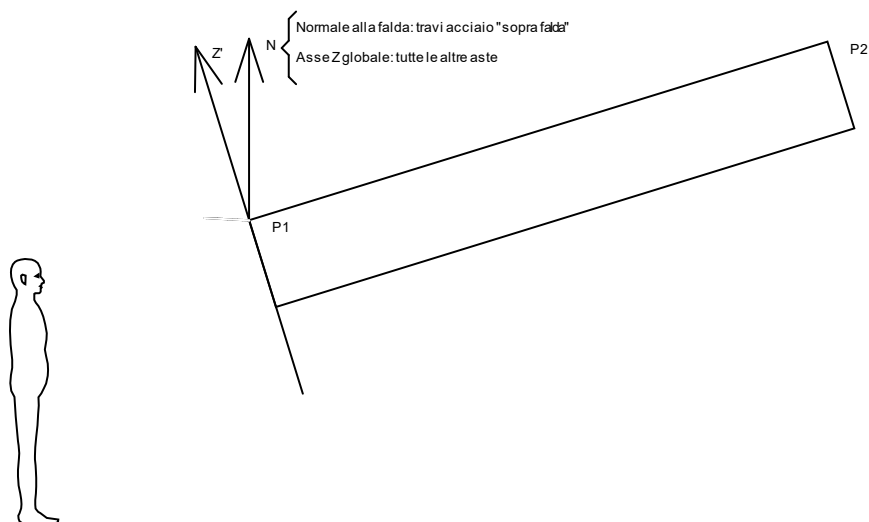
Sistema locale aste non verticali



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

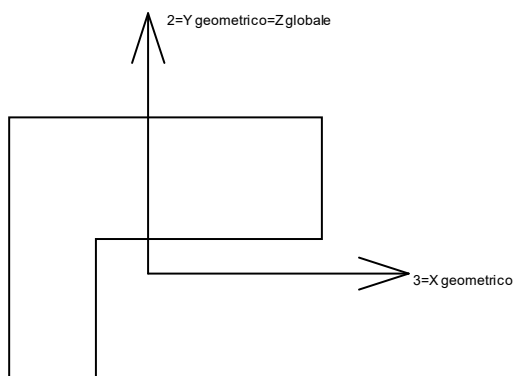
L'asse Z' è illustrato nella figura seguente dove:

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



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

Sistema locale aste derivanti da travi in c.a.



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

1.2 Reazioni nodali

1.2.1 Reazioni nodali estreme

Nodo: Nodo sollecitato dalla reazione vincolare.

Ind.: indice del nodo.

Cont.: Contesto a cui si riferisce la reazione vincolare.

N.br.: nome breve della condizione o combinazione di carico.

Reazione a traslazione: reazione vincolare traslazionale del nodo.

x: componente X della reazione vincolare del nodo. [daN]

y: componente Y della reazione vincolare del nodo. [daN]

z: componente Z della reazione vincolare del nodo. [daN]

Reazione a rotazione: reazione vincolare rotazionale del nodo.

x: componente X della reazione a rotazione del nodo. [daN*m]

y: componente Y della reazione a rotazione del nodo. [daN*m]

z: componente Z della reazione a rotazione del nodo. [daN*m]

Reazioni Fx minime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
220	SLV 13	-4089	-12	9796	-2.22	-185.2	0.03



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
219	SLV 13	-3791	-15	8711	-6.22	-165.04	-0.01
218	SLV 13	-3582	5	8102	-11.56	-156.65	-0.02
217	SLV 13	-3444	13	7583	-16.91	-150.4	-0.05
216	SLV 13	-3348	19	7125	-21.22	-147.24	-0.08

Reazioni Fx massime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
164	SLV 1	4321	-13	7877	-1.07	194.26	-0.03
165	SLV 1	3897	-12	7563	-3.75	163.27	0.01
166	SLV 1	3643	-18	7465	-29.34	160.15	0.01
196	SLV 1	3376	34	9398	-8.3	170.68	-0.25
197	SLV 1	3353	39	8180	-11.93	160.13	-0.36

Reazioni Fy minime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
327	SLV 7	-3	-3088	5270	172.67	2.89	-0.01
189	SLV 11	277	-3004	16745	85.55	-6.18	-0.4
328	SLV 11	2	-2710	5326	129.99	-2.57	0.01
326	SLV 11	-1488	-2694	14400	-1206.38	-41.44	-339.3
242	SLV 7	-62	-2635	2949	111.21	-51.26	-0.03

Reazioni Fy massime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
97	SLV 9	-59	3095	11910	-152.48	13.88	-0.09
30	SLV 5	-12	2992	6171	-134.63	-2.52	-0.03
29	SLV 9	14	2760	6185	-148.52	-3.53	0.21
135	SLV 5	-53	2732	3334	-115.31	-40.91	0.03
96	SLV 5	7	2723	4855	-143.84	-2.43	0.01

Reazioni Fz minime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
6964	SLV X	0	0	-31357	-160.37	120.96	0
7245	SLV X	0	0	-25599	140.78	111.12	0
2868	SLV X	0	0	-19599	1006.7	-1053.57	0
3179	SLV X	0	0	-13509	-710.01	-739.18	0
11	SLV Y	-227	-1400	-6519	51.05	-10.19	0.18

Reazioni Fz massime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
6964	SLV 1	0	0	78716	397.13	-406.27	0
7245	SLV 3	0	0	69633	-379.36	-390.07	0
2868	SLV 1	0	0	44552	-2331.38	2338.92	0
3179	SLV 3	0	0	35803	1896.03	1883.05	0
221	SLV 13	-3131	84	19284	-41.08	-116.33	-0.01

1.2.2 Reazioni nodali in combinazioni di carico

Nodo: Nodo sollecitato dalla reazione vincolare.

Ind.: indice del nodo.

Cont.: Contesto a cui si riferisce la reazione vincolare.

N.br.: nome breve della condizione o combinazione di carico.

Reazione a traslazione: reazione vincolare traslazionale del nodo.

x: componente X della reazione vincolare del nodo. [daN]

y: componente Y della reazione vincolare del nodo. [daN]

z: componente Z della reazione vincolare del nodo. [daN]

Reazione a rotazione: reazione vincolare rotazionale del nodo.

x: componente X della reazione a rotazione del nodo. [daN*m]

y: componente Y della reazione a rotazione del nodo. [daN*m]

z: componente Z della reazione a rotazione del nodo. [daN*m]

Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
2	SLU 1	627	372	3839	0.69	18.32	-0.07
2	SLU 2	626	336	3722	2.86	18.56	-0.08
2	SLU 3	637	377	3894	0.83	18.63	-0.07
2	SLU 4	637	355	3823	2.13	18.77	-0.08
2	SLU 5	635	340	3770	2.94	18.82	-0.08
2	SLU 6	646	381	3942	0.91	18.89	-0.07
2	SLU 7	645	359	3871	2.21	19.03	-0.08
2	SLU 8	644	380	3935	0.85	18.84	-0.07
2	SLU 9	644	359	3865	2.15	18.98	-0.08
2	SLU 10	684	369	4032	3.25	20.39	-0.09
2	SLU 11	694	410	4203	1.23	20.46	-0.08



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
2	SLU 12	694	388	4133	2.53	20.6	-0.09
2	SLU 13	692	373	4080	3.33	20.65	-0.09
2	SLU 14	703	414	4251	1.31	20.72	-0.08
2	SLU 15	702	392	4181	2.61	20.86	-0.09
2	SLU 16	701	413	4245	1.25	20.67	-0.08
2	SLU 17	701	392	4175	2.55	20.81	-0.09
2	SLU 18	709	420	4282	1.26	20.94	-0.08
2	SLU 19	708	398	4212	2.56	21.08	-0.09
2	SLU 20	717	424	4330	1.34	21.19	-0.08
2	SLU 21	717	402	4260	2.64	21.33	-0.09
2	SLU 22	674	400	4101	1.13	19.82	-0.07
2	SLU 23	674	363	3984	3.3	20.05	-0.09
2	SLU 24	684	404	4155	1.27	20.12	-0.08
2	SLU 25	684	382	4085	2.57	20.27	-0.08
2	SLU 26	682	367	4032	3.38	20.31	-0.09
2	SLU 27	693	408	4203	1.35	20.38	-0.08
2	SLU 28	692	387	4133	2.65	20.52	-0.08
2	SLU 29	691	408	4197	1.29	20.33	-0.08
2	SLU 30	691	386	4127	2.59	20.47	-0.08
2	SLU 31	731	397	4294	3.7	21.88	-0.1
2	SLU 32	741	437	4465	1.67	21.95	-0.08
2	SLU 33	741	416	4395	2.97	22.09	-0.09
2	SLU 34	739	401	4342	3.78	22.14	-0.1
2	SLU 35	750	441	4513	1.75	22.21	-0.08
2	SLU 36	749	420	4443	3.05	22.35	-0.09
2	SLU 37	748	441	4507	1.69	22.16	-0.08
2	SLU 38	748	419	4437	2.99	22.3	-0.09
2	SLU 39	756	447	4544	1.7	22.43	-0.09
2	SLU 40	755	425	4474	3	22.57	-0.09
2	SLU 41	764	451	4592	1.78	22.69	-0.09
2	SLU 42	764	429	4522	3.08	22.83	-0.09
2	SLU 43	799	474	4901	0.74	23.31	-0.09
2	SLU 44	798	438	4784	2.91	23.54	-0.1
2	SLU 45	809	479	4956	0.88	23.62	-0.09
2	SLU 46	809	457	4885	2.18	23.76	-0.1
2	SLU 47	807	442	4832	2.99	23.8	-0.1
2	SLU 48	818	483	5003	0.96	23.87	-0.09
2	SLU 49	817	461	4933	2.26	24.01	-0.1
2	SLU 50	816	482	4997	0.9	23.82	-0.09
2	SLU 51	816	461	4927	2.2	23.96	-0.1
2	SLU 52	856	471	5094	3.31	25.37	-0.11
2	SLU 53	866	512	5265	1.28	25.44	-0.1
2	SLU 54	866	490	5195	2.58	25.59	-0.1
2	SLU 55	864	475	5142	3.39	25.63	-0.11
2	SLU 56	875	516	5313	1.36	25.7	-0.1
2	SLU 57	874	494	5243	2.66	25.84	-0.11
2	SLU 58	873	516	5307	1.3	25.65	-0.1
2	SLU 59	873	494	5237	2.6	25.79	-0.11
2	SLU 60	881	522	5344	1.31	25.92	-0.1
2	SLU 61	880	500	5274	2.61	26.06	-0.11
2	SLU 62	889	526	5392	1.39	26.18	-0.1
2	SLU 63	889	504	5322	2.69	26.32	-0.11
2	SLU 64	846	502	5163	1.18	24.8	-0.09
2	SLU 65	846	466	5046	3.35	25.04	-0.11
2	SLU 66	856	506	5217	1.32	25.11	-0.09
2	SLU 67	856	485	5147	2.63	25.25	-0.1
2	SLU 68	854	470	5094	3.43	25.29	-0.11
2	SLU 69	865	511	5265	1.4	25.37	-0.09
2	SLU 70	864	489	5195	2.7	25.51	-0.1
2	SLU 71	863	510	5259	1.34	25.32	-0.09
2	SLU 72	863	488	5189	2.64	25.46	-0.1
2	SLU 73	903	499	5356	3.75	26.87	-0.11
2	SLU 74	913	540	5527	1.72	26.94	-0.1
2	SLU 75	913	518	5457	3.02	27.08	-0.11
2	SLU 76	911	503	5404	3.83	27.12	-0.12
2	SLU 77	922	544	5575	1.8	27.2	-0.1
2	SLU 78	921	522	5505	3.1	27.34	-0.11
2	SLU 79	920	543	5569	1.74	27.14	-0.1
2	SLU 80	920	521	5499	3.04	27.29	-0.11
2	SLU 81	928	549	5606	1.75	27.41	-0.1
2	SLU 82	928	527	5535	3.05	27.56	-0.11
2	SLU 83	936	553	5654	1.83	27.67	-0.1
2	SLU 84	936	532	5583	3.13	27.81	-0.11
2	SLE RA 1	641	380	3914	0.81	18.75	-0.07
2	SLE RA 2	640	356	3836	2.26	18.91	-0.08
2	SLE RA 3	647	383	3950	0.91	18.95	-0.07
2	SLE RA 4	647	369	3903	1.77	19.05	-0.08
2	SLE RA 5	646	359	3868	2.31	19.08	-0.08
2	SLE RA 6	653	386	3982	0.96	19.13	-0.07
2	SLE RA 7	653	371	3935	1.83	19.22	-0.08
2	SLE RA 8	652	385	3978	0.92	19.09	-0.07
2	SLE RA 9	652	371	3931	1.79	19.19	-0.08
2	SLE RA 10	678	378	4043	2.53	20.13	-0.08
2	SLE RA 11	685	405	4157	1.17	20.17	-0.08
2	SLE RA 12	685	391	4110	2.04	20.27	-0.08
2	SLE RA 13	684	381	4075	2.58	20.3	-0.09
2	SLE RA 14	691	408	4189	1.23	20.35	-0.08
2	SLE RA 15	691	393	4142	2.09	20.44	-0.08
2	SLE RA 16	690	408	4185	1.19	20.31	-0.08
2	SLE RA 17	690	393	4138	2.05	20.41	-0.08



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
2	SLE RA 18	695	412	4209	1.19	20.49	-0.08
2	SLE RA 19	695	397	4162	2.06	20.59	-0.08
2	SLE RA 20	701	414	4241	1.25	20.66	-0.08
2	SLE RA 21	700	400	4194	2.11	20.76	-0.08
2	SLE FR 1	641	380	3914	0.81	18.75	-0.07
2	SLE FR 2	641	375	3898	1.1	18.78	-0.07
2	SLE FR 3	643	381	3927	0.84	18.82	-0.07
2	SLE FR 4	657	385	3987	1.22	19.3	-0.07
2	SLE FR 5	659	391	4015	0.95	19.34	-0.07
2	SLE FR 6	668	396	4061	1	19.62	-0.07
2	SLE QP 1	641	380	3914	0.81	18.75	-0.07
2	SLE QP 2	657	389	4002	0.93	19.27	-0.07
2	SLD 1	977	652	5832	-7.88	30.15	-0.18
2	SLD 2	977	652	5832	-7.88	30.15	-0.18
2	SLD 3	876	426	5022	1.24	26.38	-0.08
2	SLD 4	876	426	5022	1.24	26.38	-0.08
2	SLD 5	906	811	5779	-15.56	28.25	-0.27
2	SLD 6	906	811	5779	-15.56	28.25	-0.27
2	SLD 7	569	57	3080	14.87	15.68	0.09
2	SLD 8	569	57	3080	14.87	15.68	0.09
2	SLD 9	745	722	4925	-13.01	22.86	-0.23
2	SLD 10	745	722	4925	-13.01	22.86	-0.23
2	SLD 11	408	-32	2226	17.41	10.29	0.12
2	SLD 12	408	-32	2226	17.41	10.29	0.12
2	SLD 13	439	353	2983	0.61	12.17	-0.07
2	SLD 14	439	353	2983	0.61	12.17	-0.07
2	SLD 15	337	127	2173	9.74	8.4	0.04
2	SLD 16	337	127	2173	9.74	8.4	0.04
2	SLV 1	1406	1007	8300	-19.85	44.73	-0.34
2	SLV 2	1406	1007	8300	-19.85	44.73	-0.34
2	SLV 3	1167	473	6378	1.7	35.86	-0.08
2	SLV 4	1167	473	6378	1.7	35.86	-0.08
2	SLV 5	1244	1384	8208	-37.98	40.36	-0.53
2	SLV 6	1244	1384	8208	-37.98	40.36	-0.53
2	SLV 7	448	-395	1799	33.84	10.8	0.31
2	SLV 8	448	-395	1799	33.84	10.8	0.31
2	SLV 9	867	1173	6206	-31.98	27.75	-0.45
2	SLV 10	867	1173	6206	-31.98	27.75	-0.45
2	SLV 11	70	-605	-203	39.84	-1.82	0.39
2	SLV 12	70	-605	-203	39.84	-1.82	0.39
2	SLV 13	147	306	1627	0.16	2.68	-0.06
2	SLV 14	147	306	1627	0.16	2.68	-0.06
2	SLV 15	-92	-228	-295	21.7	-6.19	0.19
2	SLV 16	-92	-228	-295	21.7	-6.19	0.19
3	SLU 1	606	5	3068	-0.91	28.44	-0.03
3	SLU 2	627	4	2980	-0.97	29.09	-0.03
3	SLU 3	617	5	3109	-0.92	28.94	-0.03
3	SLU 4	630	4	3057	-0.96	29.33	-0.03
3	SLU 5	636	4	3017	-0.99	29.5	-0.03
3	SLU 6	626	5	3146	-0.94	29.35	-0.03
3	SLU 7	638	4	3094	-0.98	29.74	-0.03
3	SLU 8	623	5	3142	-0.94	29.26	-0.03
3	SLU 9	636	4	3090	-0.97	29.65	-0.03
3	SLU 10	694	4	3211	-1.01	32.14	-0.03
3	SLU 11	684	5	3339	-0.96	31.99	-0.03
3	SLU 12	696	5	3287	-1	32.38	-0.03
3	SLU 13	703	4	3248	-1.03	32.55	-0.03
3	SLU 14	692	5	3377	-0.98	32.4	-0.03
3	SLU 15	705	5	3324	-1.02	32.79	-0.03
3	SLU 16	690	5	3372	-0.98	32.31	-0.03
3	SLU 17	703	5	3320	-1.01	32.7	-0.03
3	SLU 18	701	5	3397	-0.97	32.79	-0.03
3	SLU 19	714	5	3344	-1.01	33.19	-0.03
3	SLU 20	710	5	3434	-0.98	33.2	-0.03
3	SLU 21	723	5	3381	-1.02	33.6	-0.03
3	SLU 22	660	5	3262	-0.94	30.91	-0.03
3	SLU 23	681	4	3175	-1.01	31.56	-0.03
3	SLU 24	671	5	3304	-0.96	31.41	-0.03
3	SLU 25	683	5	3251	-1	31.8	-0.03
3	SLU 26	690	4	3212	-1.02	31.97	-0.03
3	SLU 27	679	5	3341	-0.97	31.82	-0.03
3	SLU 28	692	5	3288	-1.01	32.21	-0.03
3	SLU 29	677	5	3336	-0.97	31.73	-0.03
3	SLU 30	690	5	3284	-1.01	32.12	-0.03
3	SLU 31	748	5	3405	-1.05	34.61	-0.03
3	SLU 32	737	5	3534	-1	34.46	-0.03
3	SLU 33	750	5	3481	-1.04	34.85	-0.03
3	SLU 34	756	5	3442	-1.06	35.02	-0.03
3	SLU 35	746	5	3571	-1.01	34.87	-0.03
3	SLU 36	759	5	3519	-1.05	35.26	-0.03
3	SLU 37	744	5	3566	-1.01	34.77	-0.03
3	SLU 38	757	5	3514	-1.05	35.17	-0.03
3	SLU 39	755	5	3591	-1	35.26	-0.03
3	SLU 40	768	5	3538	-1.04	35.66	-0.03
3	SLU 41	764	5	3628	-1.01	35.67	-0.03
3	SLU 42	777	5	3576	-1.05	36.06	-0.03
3	SLU 43	769	6	3921	-1.17	36.12	-0.04
3	SLU 44	791	5	3834	-1.24	36.78	-0.03
3	SLU 45	780	6	3963	-1.19	36.63	-0.04
3	SLU 46	793	5	3911	-1.22	37.02	-0.04



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
3	SLU 47	799	5	3871	-1.25	37.19	-0.03
3	SLU 48	789	6	4000	-1.2	37.04	-0.04
3	SLU 49	802	5	3948	-1.24	37.43	-0.04
3	SLU 50	787	6	3996	-1.2	36.94	-0.04
3	SLU 51	800	5	3943	-1.24	37.34	-0.04
3	SLU 52	857	5	4064	-1.28	39.83	-0.04
3	SLU 53	847	6	4193	-1.23	39.67	-0.04
3	SLU 54	860	6	4141	-1.26	40.07	-0.04
3	SLU 55	866	6	4101	-1.29	40.24	-0.04
3	SLU 56	856	6	4230	-1.24	40.08	-0.04
3	SLU 57	868	6	4178	-1.28	40.48	-0.04
3	SLU 58	854	6	4226	-1.24	39.99	-0.04
3	SLU 59	866	6	4173	-1.28	40.38	-0.04
3	SLU 60	865	6	4250	-1.23	40.48	-0.04
3	SLU 61	878	6	4198	-1.27	40.87	-0.04
3	SLU 62	874	6	4287	-1.24	40.89	-0.04
3	SLU 63	886	6	4235	-1.28	41.28	-0.04
3	SLU 64	823	6	4116	-1.21	38.59	-0.04
3	SLU 65	844	5	4028	-1.27	39.25	-0.04
3	SLU 66	834	6	4157	-1.22	39.09	-0.04
3	SLU 67	847	6	4105	-1.26	39.49	-0.04
3	SLU 68	853	5	4065	-1.28	39.66	-0.04
3	SLU 69	843	6	4194	-1.23	39.5	-0.04
3	SLU 70	855	6	4142	-1.27	39.9	-0.04
3	SLU 71	841	6	4190	-1.23	39.41	-0.04
3	SLU 72	853	6	4138	-1.27	39.8	-0.04
3	SLU 73	911	6	4259	-1.31	42.3	-0.04
3	SLU 74	901	7	4387	-1.26	42.14	-0.04
3	SLU 75	913	6	4335	-1.3	42.54	-0.04
3	SLU 76	920	6	4296	-1.32	42.71	-0.04
3	SLU 77	909	7	4425	-1.27	42.55	-0.04
3	SLU 78	922	6	4372	-1.31	42.94	-0.04
3	SLU 79	907	7	4420	-1.27	42.46	-0.04
3	SLU 80	920	6	4368	-1.31	42.85	-0.04
3	SLU 81	919	7	4445	-1.26	42.95	-0.04
3	SLU 82	931	6	4392	-1.3	43.34	-0.04
3	SLU 83	927	7	4482	-1.28	43.36	-0.04
3	SLU 84	940	6	4429	-1.31	43.75	-0.04
3	SLE RA 1	621	5	3123	-0.92	29.14	-0.03
3	SLE RA 2	636	4	3065	-0.96	29.58	-0.03
3	SLE RA 3	629	5	3151	-0.93	29.48	-0.03
3	SLE RA 4	637	4	3116	-0.96	29.74	-0.03
3	SLE RA 5	641	4	3090	-0.97	29.85	-0.03
3	SLE RA 6	634	5	3176	-0.94	29.75	-0.03
3	SLE RA 7	643	4	3141	-0.96	30.01	-0.03
3	SLE RA 8	633	5	3173	-0.94	29.69	-0.03
3	SLE RA 9	641	4	3138	-0.96	29.95	-0.03
3	SLE RA 10	680	4	3218	-0.99	31.61	-0.03
3	SLE RA 11	673	5	3304	-0.96	31.51	-0.03
3	SLE RA 12	682	5	3269	-0.98	31.77	-0.03
3	SLE RA 13	686	4	3243	-1	31.89	-0.03
3	SLE RA 14	679	5	3329	-0.96	31.78	-0.03
3	SLE RA 15	687	5	3294	-0.99	32.05	-0.03
3	SLE RA 16	678	5	3326	-0.96	31.72	-0.03
3	SLE RA 17	686	5	3291	-0.99	31.98	-0.03
3	SLE RA 18	685	5	3342	-0.96	32.05	-0.03
3	SLE RA 19	693	5	3308	-0.98	32.31	-0.03
3	SLE RA 20	691	5	3367	-0.97	32.32	-0.03
3	SLE RA 21	699	5	3332	-0.99	32.58	-0.03
3	SLE FR 1	621	5	3123	-0.92	29.14	-0.03
3	SLE FR 2	624	5	3112	-0.93	29.23	-0.03
3	SLE FR 3	624	5	3133	-0.92	29.25	-0.03
3	SLE FR 4	643	5	3177	-0.94	30.1	-0.03
3	SLE FR 5	643	5	3199	-0.94	30.12	-0.03
3	SLE FR 6	653	5	3233	-0.94	30.6	-0.03
3	SLE QP 1	621	5	3123	-0.92	29.14	-0.03
3	SLE QP 2	640	5	3189	-0.93	30.02	-0.03
3	SLD 1	1021	8	4496	-3.49	47.73	-0.04
3	SLD 2	1021	8	4496	-3.49	47.73	-0.04
3	SLD 3	843	6	3954	-0.19	40.87	-0.04
3	SLD 4	843	6	3954	-0.19	40.87	-0.04
3	SLD 5	1025	9	4404	-6.71	45.74	-0.04
3	SLD 6	1025	9	4404	-6.71	45.74	-0.04
3	SLD 7	430	2	2596	4.3	22.86	-0.02
3	SLD 8	430	2	2596	4.3	22.86	-0.02
3	SLD 9	851	7	3782	-6.17	37.17	-0.04
3	SLD 10	851	7	3782	-6.17	37.17	-0.04
3	SLD 11	256	1	1974	4.84	14.29	-0.02
3	SLD 12	256	1	1974	4.84	14.29	-0.02
3	SLD 13	438	3	2424	-1.68	19.16	-0.02
3	SLD 14	438	3	2424	-1.68	19.16	-0.02
3	SLD 15	260	1	1882	1.62	12.3	-0.02
3	SLD 16	260	1	1882	1.62	12.3	-0.02
3	SLV 1	1531	13	6263	-6.95	71.47	-0.06
3	SLV 2	1531	13	6263	-6.95	71.47	-0.06
3	SLV 3	1113	8	4969	0.79	55.37	-0.04
3	SLV 4	1113	8	4969	0.79	55.37	-0.04
3	SLV 5	1542	14	6075	-14.48	66.87	-0.06
3	SLV 6	1542	14	6075	-14.48	66.87	-0.06
3	SLV 7	148	-1	1760	11.33	13.2	-0.01



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
3	SLV 8	148	-1	1760	11.33	13.2	-0.01
3	SLV 9	1133	10	4618	-13.19	46.83	-0.04
3	SLV 10	1133	10	4618	-13.19	46.83	-0.04
3	SLV 11	-261	-4	303	12.62	-6.84	0
3	SLV 12	-261	-4	303	12.62	-6.84	0
3	SLV 13	168	1	1409	-2.66	4.66	-0.01
3	SLV 14	168	1	1409	-2.66	4.66	-0.01
3	SLV 15	-250	-3	115	5.08	-11.44	0
3	SLV 16	-250	-3	115	5.08	-11.44	0
4	SLU 1	560	1	2889	-0.15	24.5	0
4	SLU 2	584	0	2834	-0.6	25.39	0
4	SLU 3	572	1	2928	-0.15	24.99	0
4	SLU 4	586	0	2895	-0.42	25.53	0
4	SLU 5	593	0	2868	-0.61	25.78	0
4	SLU 6	580	1	2961	-0.16	25.38	0
4	SLU 7	595	0	2929	-0.43	25.91	0
4	SLU 8	578	1	2957	-0.16	25.28	0
4	SLU 9	592	0	2924	-0.43	25.81	0
4	SLU 10	652	0	3058	-0.55	28.31	0
4	SLU 11	640	1	3151	-0.1	27.91	0
4	SLU 12	654	0	3118	-0.37	28.45	0
4	SLU 13	661	0	3092	-0.56	28.7	0
4	SLU 14	649	1	3185	-0.1	28.3	0
4	SLU 15	663	0	3152	-0.38	28.83	0
4	SLU 16	646	1	3180	-0.11	28.2	0
4	SLU 17	661	0	3147	-0.38	28.73	0
4	SLU 18	658	0	3208	-0.08	28.68	0
4	SLU 19	672	0	3175	-0.35	29.21	0
4	SLU 20	667	0	3242	-0.08	29.06	0
4	SLU 21	681	0	3209	-0.35	29.6	0
4	SLU 22	615	1	3075	-0.11	26.85	0
4	SLU 23	639	0	3021	-0.56	27.74	0
4	SLU 24	626	1	3114	-0.11	27.33	0
4	SLU 25	640	0	3082	-0.38	27.87	0
4	SLU 26	647	0	3055	-0.56	28.12	0
4	SLU 27	635	1	3148	-0.11	27.72	0
4	SLU 28	649	0	3116	-0.38	28.25	0
4	SLU 29	633	1	3143	-0.11	27.62	0
4	SLU 30	647	0	3111	-0.38	28.15	0
4	SLU 31	707	0	3244	-0.51	30.66	0
4	SLU 32	695	1	3337	-0.06	30.26	0
4	SLU 33	709	0	3305	-0.33	30.79	0
4	SLU 34	716	0	3278	-0.51	31.04	0
4	SLU 35	703	1	3371	-0.06	30.64	0
4	SLU 36	718	0	3339	-0.33	31.18	0
4	SLU 37	701	1	3366	-0.06	30.54	0
4	SLU 38	715	0	3334	-0.33	31.07	0
4	SLU 39	713	0	3394	-0.03	31.02	0
4	SLU 40	727	0	3362	-0.3	31.55	0
4	SLU 41	721	0	3428	-0.04	31.41	0
4	SLU 42	736	0	3396	-0.31	31.94	0
4	SLU 43	710	1	3691	-0.21	31.05	0
4	SLU 44	734	1	3637	-0.67	31.94	0
4	SLU 45	721	1	3730	-0.22	31.54	0
4	SLU 46	735	1	3698	-0.49	32.07	0
4	SLU 47	742	1	3671	-0.67	32.33	0
4	SLU 48	730	1	3764	-0.22	31.93	0
4	SLU 49	744	1	3732	-0.49	32.46	0
4	SLU 50	727	1	3759	-0.22	31.82	0
4	SLU 51	742	1	3727	-0.49	32.36	0
4	SLU 52	802	1	3860	-0.61	34.86	0
4	SLU 53	789	1	3953	-0.16	34.46	0
4	SLU 54	804	1	3921	-0.43	34.99	0
4	SLU 55	811	1	3894	-0.62	35.25	0
4	SLU 56	798	1	3987	-0.17	34.85	0
4	SLU 57	812	1	3955	-0.44	35.38	0
4	SLU 58	796	1	3982	-0.17	34.75	0
4	SLU 59	810	1	3950	-0.44	35.28	0
4	SLU 60	808	1	4010	-0.14	35.23	0
4	SLU 61	822	1	3978	-0.41	35.76	0
4	SLU 62	816	1	4044	-0.14	35.61	0
4	SLU 63	830	1	4012	-0.41	36.14	0
4	SLU 64	765	1	3878	-0.17	33.39	0
4	SLU 65	788	1	3824	-0.62	34.28	0
4	SLU 66	776	1	3917	-0.17	33.88	0
4	SLU 67	790	1	3884	-0.44	34.42	0
4	SLU 68	797	1	3858	-0.62	34.67	0
4	SLU 69	784	1	3951	-0.17	34.27	0
4	SLU 70	799	1	3918	-0.44	34.8	0
4	SLU 71	782	1	3946	-0.17	34.17	0
4	SLU 72	796	1	3913	-0.45	34.7	0
4	SLU 73	857	1	4047	-0.57	37.21	0
4	SLU 74	844	1	4140	-0.12	36.8	0
4	SLU 75	858	1	4107	-0.39	37.34	0
4	SLU 76	865	1	4081	-0.57	37.59	0
4	SLU 77	853	1	4174	-0.12	37.19	0
4	SLU 78	867	1	4141	-0.39	37.72	0
4	SLU 79	850	1	4169	-0.12	37.09	0
4	SLU 80	865	1	4137	-0.39	37.62	0
4	SLU 81	862	1	4197	-0.09	37.57	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
4	SLU 82	876	1	4164	-0.37	38.1	0
4	SLU 83	871	1	4231	-0.1	37.95	0
4	SLU 84	885	1	4198	-0.37	38.49	0
4	SLE RA 1	576	1	2942	-0.14	25.17	0
4	SLE RA 2	592	0	2906	-0.44	25.77	0
4	SLE RA 3	584	1	2968	-0.14	25.5	0
4	SLE RA 4	593	0	2946	-0.32	25.85	0
4	SLE RA 5	598	0	2928	-0.44	26.02	0
4	SLE RA 6	589	1	2991	-0.14	25.76	0
4	SLE RA 7	599	0	2969	-0.32	26.11	0
4	SLE RA 8	588	1	2987	-0.14	25.69	0
4	SLE RA 9	597	0	2966	-0.32	26.04	0
4	SLE RA 10	637	0	3055	-0.41	27.71	0
4	SLE RA 11	629	1	3117	-0.11	27.45	0
4	SLE RA 12	639	0	3095	-0.29	27.8	0
4	SLE RA 13	643	0	3077	-0.41	27.97	0
4	SLE RA 14	635	1	3139	-0.11	27.7	0
4	SLE RA 15	644	0	3118	-0.29	28.06	0
4	SLE RA 16	633	1	3136	-0.11	27.64	0
4	SLE RA 17	643	0	3114	-0.29	27.99	0
4	SLE RA 18	641	0	3155	-0.09	27.96	0
4	SLE RA 19	651	0	3133	-0.27	28.31	0
4	SLE RA 20	647	1	3177	-0.09	28.21	0
4	SLE RA 21	656	0	3156	-0.27	28.57	0
4	SLE FR 1	576	1	2942	-0.14	25.17	0
4	SLE FR 2	579	0	2935	-0.2	25.29	0
4	SLE FR 3	578	1	2951	-0.14	25.28	0
4	SLE FR 4	599	0	2999	-0.19	26.13	0
4	SLE FR 5	598	1	3015	-0.13	26.11	0
4	SLE FR 6	609	1	3048	-0.12	26.56	0
4	SLE QP 1	576	1	2942	-0.14	25.17	0
4	SLE QP 2	596	1	3006	-0.13	26.01	0
4	SLD 1	991	1	4023	-5.11	43.91	0.01
4	SLD 2	991	1	4023	-5.11	43.91	0.01
4	SLD 3	815	-4	3598	1.57	36.74	0
4	SLD 4	815	-4	3598	1.57	36.74	0
4	SLD 5	980	9	3956	-11.75	42.25	0.02
4	SLD 6	980	9	3956	-11.75	42.25	0.02
4	SLD 7	396	-9	2538	10.51	18.35	-0.01
4	SLD 8	396	-9	2538	10.51	18.35	-0.01
4	SLD 9	796	10	3474	-10.76	33.66	0.01
4	SLD 10	796	10	3474	-10.76	33.66	0.01
4	SLD 11	211	-8	2055	11.5	9.77	-0.02
4	SLD 12	211	-8	2055	11.5	9.77	-0.02
4	SLD 13	376	5	2414	-1.82	15.28	0
4	SLD 14	376	5	2414	-1.82	15.28	0
4	SLD 15	200	0	1988	4.86	8.11	-0.01
4	SLD 16	200	0	1988	4.86	8.11	-0.01
4	SLV 1	1520	1	5401	-11.9	67.88	0.03
4	SLV 2	1520	1	5401	-11.9	67.88	0.03
4	SLV 3	1109	-11	4383	3.77	51.07	0.01
4	SLV 4	1109	-11	4383	3.77	51.07	0.01
4	SLV 5	1496	19	5268	-27.43	64.07	0.04
4	SLV 6	1496	19	5268	-27.43	64.07	0.04
4	SLV 7	126	-22	1875	24.82	8.03	-0.03
4	SLV 8	126	-22	1875	24.82	8.03	-0.03
4	SLV 9	1065	23	4136	-25.07	43.99	0.03
4	SLV 10	1065	23	4136	-25.07	43.99	0.03
4	SLV 11	-305	-18	744	27.18	-12.06	-0.04
4	SLV 12	-305	-18	744	27.18	-12.06	-0.04
4	SLV 13	82	12	1629	-4.02	0.95	-0.01
4	SLV 14	82	12	1629	-4.02	0.95	-0.01
4	SLV 15	-329	0	611	11.65	-15.87	-0.03
4	SLV 16	-329	0	611	11.65	-15.87	-0.03
5	SLU 1	540	-1	2911	0.32	22.71	0
5	SLU 2	565	0	2882	-0.56	23.66	0
5	SLU 3	552	-1	2951	0.33	23.2	0
5	SLU 4	567	0	2934	-0.2	23.77	0
5	SLU 5	574	0	2916	-0.55	24.04	0
5	SLU 6	561	-1	2985	0.33	23.57	0
5	SLU 7	576	0	2968	-0.19	24.14	0
5	SLU 8	558	-1	2979	0.33	23.47	0
5	SLU 9	573	0	2962	-0.2	24.04	0
5	SLU 10	633	0	3121	-0.44	26.46	0
5	SLU 11	620	-1	3190	0.44	25.99	0
5	SLU 12	635	0	3172	-0.09	26.56	0
5	SLU 13	642	0	3155	-0.44	26.83	0
5	SLU 14	629	-1	3224	0.44	26.37	0
5	SLU 15	644	0	3207	-0.08	26.94	0
5	SLU 16	626	-1	3218	0.44	26.26	0
5	SLU 17	641	0	3200	-0.09	26.83	0
5	SLU 18	637	-1	3252	0.48	26.7	0
5	SLU 19	652	0	3235	-0.05	27.27	0
5	SLU 20	646	-1	3286	0.48	27.08	0
5	SLU 21	661	0	3269	-0.04	27.65	0
5	SLU 22	594	-1	3109	0.42	24.94	0
5	SLU 23	619	0	3079	-0.46	25.89	0
5	SLU 24	606	-1	3149	0.43	25.42	0
5	SLU 25	621	0	3131	-0.1	25.99	0
5	SLU 26	628	0	3113	-0.45	26.27	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
5	SLU 27	615	-1	3183	0.43	25.8	0
5	SLU 28	630	0	3165	-0.09	26.37	0
5	SLU 29	612	-1	3177	0.43	25.7	0
5	SLU 30	627	0	3159	-0.1	26.27	0
5	SLU 31	687	0	3318	-0.34	28.69	0
5	SLU 32	674	-1	3387	0.54	28.22	0
5	SLU 33	689	0	3370	0.02	28.79	0
5	SLU 34	696	0	3352	-0.34	29.06	0
5	SLU 35	683	-1	3421	0.54	28.6	0
5	SLU 36	698	-1	3404	0.02	29.17	0
5	SLU 37	680	-1	3415	0.54	28.49	0
5	SLU 38	695	0	3398	0.01	29.06	0
5	SLU 39	691	-1	3450	0.58	28.93	0
5	SLU 40	706	-1	3432	0.05	29.5	0
5	SLU 41	700	-1	3484	0.58	29.31	0
5	SLU 42	715	-1	3466	0.06	29.88	0
5	SLU 43	684	-1	3717	0.38	28.76	0
5	SLU 44	709	0	3688	-0.5	29.71	0
5	SLU 45	695	-1	3757	0.39	29.25	0
5	SLU 46	710	0	3739	-0.14	29.82	0
5	SLU 47	718	0	3722	-0.49	30.09	0
5	SLU 48	704	-1	3791	0.39	29.62	0
5	SLU 49	719	0	3773	-0.13	30.19	0
5	SLU 50	702	-1	3785	0.39	29.52	0
5	SLU 51	717	0	3767	-0.14	30.09	0
5	SLU 52	777	0	3926	-0.38	32.51	0
5	SLU 53	763	-1	3996	0.5	32.04	0
5	SLU 54	778	-1	3978	-0.02	32.61	0
5	SLU 55	786	0	3960	-0.38	32.88	0
5	SLU 56	772	-1	4030	0.5	32.42	0
5	SLU 57	787	-1	4012	-0.02	32.99	0
5	SLU 58	770	-1	4024	0.5	32.31	0
5	SLU 59	785	-1	4006	-0.03	32.88	0
5	SLU 60	781	-1	4058	0.54	32.75	0
5	SLU 61	796	-1	4040	0.01	33.32	0
5	SLU 62	790	-1	4092	0.54	33.13	0
5	SLU 63	805	-1	4074	0.02	33.7	0
5	SLU 64	738	-1	3914	0.48	30.99	0
5	SLU 65	763	0	3885	-0.39	31.94	0
5	SLU 66	749	-1	3954	0.49	31.47	0
5	SLU 67	764	0	3937	-0.04	32.04	0
5	SLU 68	772	0	3919	-0.39	32.32	0
5	SLU 69	758	-1	3988	0.49	31.85	0
5	SLU 70	773	0	3971	-0.03	32.42	0
5	SLU 71	756	-1	3982	0.49	31.75	0
5	SLU 72	771	0	3965	-0.04	32.32	0
5	SLU 73	831	0	4124	-0.28	34.74	0
5	SLU 74	817	-1	4193	0.6	34.27	0.01
5	SLU 75	832	-1	4176	0.08	34.84	0
5	SLU 76	840	0	4158	-0.28	35.11	0
5	SLU 77	826	-1	4227	0.6	34.65	0.01
5	SLU 78	841	-1	4210	0.08	35.22	0
5	SLU 79	824	-1	4221	0.6	34.54	0.01
5	SLU 80	839	-1	4204	0.08	35.11	0
5	SLU 81	835	-1	4255	0.64	34.98	0.01
5	SLU 82	850	-1	4238	0.11	35.55	0
5	SLU 83	844	-1	4289	0.64	35.36	0.01
5	SLU 84	859	-1	4272	0.12	35.93	0
5	SLE RA 1	556	-1	2968	0.35	23.35	0
5	SLE RA 2	572	0	2948	-0.24	23.98	0
5	SLE RA 3	563	-1	2994	0.35	23.67	0
5	SLE RA 4	573	0	2983	0	24.05	0
5	SLE RA 5	578	0	2971	-0.23	24.24	0
5	SLE RA 6	569	-1	3017	0.36	23.92	0
5	SLE RA 7	579	0	3005	0.01	24.3	0
5	SLE RA 8	568	-1	3013	0.35	23.85	0
5	SLE RA 9	578	0	3001	0	24.23	0
5	SLE RA 10	618	0	3107	-0.16	25.85	0
5	SLE RA 11	609	-1	3153	0.43	25.53	0
5	SLE RA 12	619	0	3142	0.08	25.91	0
5	SLE RA 13	624	0	3130	-0.16	26.1	0
5	SLE RA 14	615	-1	3176	0.43	25.79	0
5	SLE RA 15	625	0	3164	0.08	26.17	0
5	SLE RA 16	613	-1	3172	0.43	25.72	0
5	SLE RA 17	623	0	3160	0.08	26.1	0
5	SLE RA 18	620	-1	3195	0.45	26.01	0
5	SLE RA 19	630	-1	3183	0.1	26.39	0
5	SLE RA 20	626	-1	3218	0.46	26.26	0
5	SLE RA 21	636	-1	3206	0.11	26.64	0
5	SLE FR 1	556	-1	2968	0.35	23.35	0
5	SLE FR 2	559	-1	2964	0.23	23.48	0
5	SLE FR 3	558	-1	2977	0.35	23.45	0
5	SLE FR 4	578	-1	3032	0.26	24.28	0
5	SLE FR 5	577	-1	3045	0.38	24.25	0
5	SLE FR 6	588	-1	3081	0.4	24.68	0
5	SLE QP 1	556	-1	2968	0.35	23.35	0
5	SLE QP 2	575	-1	3036	0.38	24.15	0
5	SLD 1	971	2	3946	-7.19	41.22	-0.01
5	SLD 2	971	2	3946	-7.19	41.22	-0.01
5	SLD 3	795	-10	3520	3	34.24	0.04



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
5	SLD 4	795	-10	3520	3	34.24	0.04
5	SLD 5	959	18	3954	-17.36	39.85	-0.06
5	SLD 6	959	18	3954	-17.36	39.85	-0.06
5	SLD 7	375	-22	2536	16.63	16.6	0.08
5	SLD 8	375	-22	2536	16.63	16.6	0.08
5	SLD 9	775	20	3536	-15.87	31.7	-0.07
5	SLD 10	775	20	3536	-15.87	31.7	-0.07
5	SLD 11	191	-20	2117	18.12	8.45	0.07
5	SLD 12	191	-20	2117	18.12	8.45	0.07
5	SLD 13	355	9	2551	-2.25	14.05	-0.03
5	SLD 14	355	9	2551	-2.25	14.05	-0.03
5	SLD 15	180	-3	2125	7.95	7.08	0.01
5	SLD 16	180	-3	2125	7.95	7.08	0.01
5	SLV 1	1500	6	5178	-17.52	64.07	-0.02
5	SLV 2	1500	6	5178	-17.52	64.07	-0.02
5	SLV 3	1089	-22	4164	6.43	47.7	0.08
5	SLV 4	1089	-22	4164	6.43	47.7	0.08
5	SLV 5	1476	44	5215	-41.31	60.96	-0.15
5	SLV 6	1476	44	5215	-41.31	60.96	-0.15
5	SLV 7	106	-50	1838	38.51	6.38	0.18
5	SLV 8	106	-50	1838	38.51	6.38	0.18
5	SLV 9	1045	49	4234	-37.76	41.91	-0.17
5	SLV 10	1045	49	4234	-37.76	41.91	-0.17
5	SLV 11	-326	-45	856	42.07	-12.66	0.16
5	SLV 12	-326	-45	856	42.07	-12.66	0.16
5	SLV 13	61	21	1907	-5.67	0.6	-0.07
5	SLV 14	61	21	1907	-5.67	0.6	-0.07
5	SLV 15	-350	-7	894	18.28	-15.77	0.02
5	SLV 16	-350	-7	894	18.28	-15.77	0.02
6	SLU 1	577	-1	3017	0.49	24.36	0
6	SLU 2	602	0	3011	-0.72	25.33	0
6	SLU 3	590	-1	3060	0.5	24.9	0
6	SLU 4	605	0	3057	-0.23	25.48	0
6	SLU 5	612	0	3047	-0.72	25.76	0
6	SLU 6	600	-1	3096	0.51	25.32	0
6	SLU 7	615	0	3092	-0.22	25.9	0
6	SLU 8	597	-1	3089	0.5	25.2	0
6	SLU 9	612	0	3085	-0.23	25.79	0
6	SLU 10	674	0	3273	-0.59	28.32	0
6	SLU 11	662	-1	3323	0.64	27.88	0
6	SLU 12	677	0	3319	-0.09	28.47	0
6	SLU 13	684	0	3309	-0.58	28.74	0
6	SLU 14	672	-1	3358	0.64	28.3	0
6	SLU 15	687	0	3355	-0.08	28.89	0
6	SLU 16	669	-1	3351	0.64	28.18	0
6	SLU 17	684	0	3347	-0.09	28.77	0
6	SLU 18	679	-1	3391	0.68	28.62	0
6	SLU 19	695	0	3388	-0.05	29.2	0
6	SLU 20	689	-1	3427	0.69	29.04	0
6	SLU 21	705	0	3424	-0.04	29.62	0
6	SLU 22	634	-1	3232	0.61	26.73	0
6	SLU 23	659	0	3226	-0.6	27.71	0
6	SLU 24	647	-1	3275	0.63	27.27	0
6	SLU 25	662	0	3271	-0.1	27.86	0
6	SLU 26	669	0	3261	-0.59	28.13	0
6	SLU 27	657	-1	3311	0.63	27.69	0
6	SLU 28	672	0	3307	-0.09	28.28	0
6	SLU 29	654	-1	3303	0.63	27.57	0
6	SLU 30	669	0	3300	-0.1	28.16	0
6	SLU 31	731	0	3488	-0.46	30.69	0
6	SLU 32	719	-1	3537	0.76	30.25	0
6	SLU 33	734	-1	3534	0.03	30.84	0
6	SLU 34	741	0	3524	-0.46	31.11	0
6	SLU 35	729	-1	3573	0.77	30.67	0
6	SLU 36	744	-1	3569	0.04	31.26	0
6	SLU 37	726	-1	3565	0.76	30.55	0
6	SLU 38	741	-1	3562	0.03	31.14	0
6	SLU 39	736	-1	3606	0.81	30.99	0
6	SLU 40	752	-1	3603	0.08	31.57	0
6	SLU 41	746	-1	3642	0.81	31.41	0
6	SLU 42	762	-1	3638	0.09	32	0
6	SLU 43	731	-1	3848	0.59	30.85	0
6	SLU 44	756	0	3842	-0.62	31.83	0
6	SLU 45	743	-1	3892	0.61	31.39	0
6	SLU 46	759	0	3888	-0.12	31.98	0
6	SLU 47	766	0	3878	-0.61	32.25	0
6	SLU 48	753	-1	3928	0.61	31.81	0
6	SLU 49	769	0	3924	-0.11	32.4	0
6	SLU 50	751	-1	3920	0.61	31.69	0
6	SLU 51	766	0	3916	-0.12	32.28	0
6	SLU 52	828	0	4104	-0.48	34.81	0
6	SLU 53	815	-1	4154	0.74	34.37	0
6	SLU 54	830	-1	4150	0.01	34.96	0
6	SLU 55	838	0	4140	-0.48	35.23	0
6	SLU 56	825	-1	4190	0.75	34.79	0
6	SLU 57	840	-1	4186	0.02	35.38	0
6	SLU 58	822	-1	4182	0.74	34.67	0
6	SLU 59	837	-1	4178	0.01	35.26	0
6	SLU 60	833	-1	4223	0.79	35.11	0.01
6	SLU 61	848	-1	4219	0.06	35.7	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
6	SLU 62	843	-1	4259	0.79	35.53	0.01
6	SLU 63	858	-1	4255	0.07	36.12	0
6	SLU 64	788	-1	4063	0.72	33.22	0
6	SLU 65	813	0	4057	-0.49	34.2	0
6	SLU 66	800	-1	4107	0.73	33.76	0
6	SLU 67	816	-1	4103	0	34.35	0
6	SLU 68	823	0	4093	-0.49	34.62	0
6	SLU 69	810	-1	4142	0.74	34.18	0
6	SLU 70	826	-1	4139	0.01	34.77	0
6	SLU 71	807	-1	4135	0.73	34.07	0
6	SLU 72	823	-1	4131	0	34.65	0
6	SLU 73	885	0	4319	-0.36	37.18	0
6	SLU 74	872	-1	4369	0.87	36.74	0.01
6	SLU 75	887	-1	4365	0.14	37.33	0
6	SLU 76	895	0	4355	-0.35	37.6	0
6	SLU 77	882	-1	4405	0.87	37.17	0.01
6	SLU 78	897	-1	4401	0.14	37.75	0
6	SLU 79	879	-1	4397	0.87	37.05	0.01
6	SLU 80	894	-1	4393	0.14	37.63	0
6	SLU 81	890	-2	4438	0.91	37.48	0.01
6	SLU 82	905	-1	4434	0.18	38.07	0
6	SLU 83	900	-2	4473	0.92	37.9	0.01
6	SLU 84	915	-1	4470	0.19	38.49	0
6	SLE RA 1	593	-1	3078	0.53	25.03	0
6	SLE RA 2	610	0	3074	-0.28	25.69	0
6	SLE RA 3	602	-1	3107	0.53	25.39	0
6	SLE RA 4	612	0	3105	0.05	25.79	0
6	SLE RA 5	617	0	3098	-0.28	25.97	0
6	SLE RA 6	609	-1	3131	0.54	25.68	0
6	SLE RA 7	619	0	3129	0.05	26.07	0
6	SLE RA 8	607	-1	3126	0.53	25.6	0
6	SLE RA 9	617	0	3124	0.05	25.99	0
6	SLE RA 10	658	0	3249	-0.19	27.67	0
6	SLE RA 11	650	-1	3282	0.62	27.38	0
6	SLE RA 12	660	-1	3280	0.14	27.77	0
6	SLE RA 13	665	0	3273	-0.19	27.95	0
6	SLE RA 14	656	-1	3306	0.63	27.66	0
6	SLE RA 15	666	-1	3303	0.14	28.05	0
6	SLE RA 16	654	-1	3301	0.62	27.58	0
6	SLE RA 17	665	-1	3298	0.14	27.97	0
6	SLE RA 18	662	-1	3328	0.65	27.87	0
6	SLE RA 19	672	-1	3326	0.17	28.26	0
6	SLE RA 20	668	-1	3352	0.66	28.15	0
6	SLE RA 21	678	-1	3349	0.17	28.55	0
6	SLE FR 1	593	-1	3078	0.53	25.03	0
6	SLE FR 2	597	-1	3078	0.36	25.16	0
6	SLE FR 3	596	-1	3088	0.53	25.15	0
6	SLE FR 4	617	-1	3152	0.4	26.02	0
6	SLE FR 5	616	-1	3163	0.57	26	0
6	SLE FR 6	627	-1	3203	0.59	26.45	0
6	SLE QP 1	593	-1	3078	0.53	25.03	0
6	SLE QP 2	614	-1	3153	0.56	25.89	0
6	SLD 1	1017	11	4019	-8.72	43.62	-0.01
6	SLD 2	1017	11	4019	-8.72	43.62	-0.01
6	SLD 3	831	-5	3541	3.78	35.98	0.06
6	SLD 4	831	-5	3541	3.78	35.98	0.06
6	SLD 5	1017	28	4138	-21.17	42.79	-0.11
6	SLD 6	1017	28	4138	-21.17	42.79	-0.11
6	SLD 7	397	-27	2545	20.48	17.33	0.13
6	SLD 8	397	-27	2545	20.48	17.33	0.13
6	SLD 9	830	25	3762	-19.35	34.44	-0.12
6	SLD 10	830	25	3762	-19.35	34.44	-0.12
6	SLD 11	211	-30	2169	22.3	8.98	0.12
6	SLD 12	211	-30	2169	22.3	8.98	0.12
6	SLD 13	397	3	2766	-2.65	15.79	-0.05
6	SLD 14	397	3	2766	-2.65	15.79	-0.05
6	SLD 15	211	-13	2288	9.85	8.15	0.02
6	SLD 16	211	-13	2288	9.85	8.15	0.02
6	SLV 1	1557	28	5187	-21.38	67.36	-0.04
6	SLV 2	1557	28	5187	-21.38	67.36	-0.04
6	SLV 3	1121	-10	4057	7.98	49.45	0.13
6	SLV 4	1121	-10	4057	7.98	49.45	0.13
6	SLV 5	1558	67	5477	-50.54	65.49	-0.26
6	SLV 6	1558	67	5477	-50.54	65.49	-0.26
6	SLV 7	105	-63	1710	47.31	5.8	0.29
6	SLV 8	105	-63	1710	47.31	5.8	0.29
6	SLV 9	1123	61	4596	-46.19	45.98	-0.29
6	SLV 10	1123	61	4596	-46.19	45.98	-0.29
6	SLV 11	-330	-69	829	51.67	-13.72	0.27
6	SLV 12	-330	-69	829	51.67	-13.72	0.27
6	SLV 13	107	9	2250	-6.85	2.32	-0.12
6	SLV 14	107	9	2250	-6.85	2.32	-0.12
6	SLV 15	-329	-30	1120	22.51	-15.59	0.04
6	SLV 16	-329	-30	1120	22.51	-15.59	0.04
7	SLU 1	607	-1	3216	0.46	24.83	0
7	SLU 2	632	1	3232	-0.9	25.8	0
7	SLU 3	621	-1	3264	0.47	25.39	0
7	SLU 4	636	0	3274	-0.35	25.97	0
7	SLU 5	643	1	3271	-0.9	26.24	0
7	SLU 6	631	-1	3303	0.48	25.83	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
7	SLU 7	646	0	3313	-0.34	26.41	0
7	SLU 8	628	-1	3294	0.47	25.7	0
7	SLU 9	643	0	3304	-0.35	26.28	0
7	SLU 10	706	0	3526	-0.77	28.8	0
7	SLU 11	695	-1	3559	0.6	28.38	0
7	SLU 12	710	0	3568	-0.22	28.97	0
7	SLU 13	717	0	3565	-0.77	29.23	0
7	SLU 14	706	-1	3598	0.61	28.82	0
7	SLU 15	721	0	3607	-0.21	29.4	0
7	SLU 16	702	-1	3588	0.6	28.7	0
7	SLU 17	717	0	3598	-0.22	29.28	0
7	SLU 18	713	-1	3636	0.65	29.11	0
7	SLU 19	728	0	3646	-0.17	29.69	0
7	SLU 20	724	-1	3675	0.65	29.55	0
7	SLU 21	739	0	3685	-0.17	30.13	0
7	SLU 22	666	-1	3455	0.59	27.2	0
7	SLU 23	691	0	3471	-0.78	28.18	0
7	SLU 24	679	-1	3503	0.6	27.76	0
7	SLU 25	694	0	3513	-0.22	28.35	0
7	SLU 26	701	0	3510	-0.77	28.61	0
7	SLU 27	690	-1	3542	0.6	28.2	0
7	SLU 28	705	0	3552	-0.22	28.78	0
7	SLU 29	687	-1	3533	0.6	28.08	0
7	SLU 30	702	0	3543	-0.22	28.66	0
7	SLU 31	765	0	3765	-0.65	31.17	0
7	SLU 32	754	-1	3798	0.73	30.76	0
7	SLU 33	769	-1	3807	-0.09	31.34	0
7	SLU 34	775	0	3804	-0.64	31.61	0
7	SLU 35	764	-1	3837	0.73	31.2	0
7	SLU 36	779	-1	3846	-0.09	31.78	0
7	SLU 37	761	-1	3827	0.73	31.07	0
7	SLU 38	776	-1	3837	-0.09	31.66	0
7	SLU 39	772	-2	3875	0.77	31.48	0
7	SLU 40	787	-1	3885	-0.05	32.07	0
7	SLU 41	782	-2	3914	0.78	31.92	0.01
7	SLU 42	797	-1	3924	-0.04	32.5	0
7	SLU 43	769	-1	4099	0.56	31.46	0
7	SLU 44	794	0	4115	-0.81	32.43	0
7	SLU 45	783	-1	4147	0.57	32.02	0
7	SLU 46	798	0	4157	-0.25	32.61	0
7	SLU 47	805	0	4154	-0.8	32.87	0
7	SLU 48	793	-1	4186	0.57	32.46	0
7	SLU 49	808	0	4196	-0.25	33.04	0
7	SLU 50	790	-1	4177	0.57	32.34	0
7	SLU 51	805	0	4186	-0.25	32.92	0
7	SLU 52	868	0	4409	-0.68	35.43	0
7	SLU 53	857	-2	4441	0.7	35.02	0
7	SLU 54	872	-1	4451	-0.12	35.6	0
7	SLU 55	879	0	4448	-0.67	35.87	0
7	SLU 56	868	-2	4480	0.7	35.46	0
7	SLU 57	883	-1	4490	-0.12	36.04	0
7	SLU 58	864	-2	4471	0.7	35.33	0
7	SLU 59	879	-1	4481	-0.12	35.92	0
7	SLU 60	875	-2	4519	0.74	35.74	0.01
7	SLU 61	890	-1	4528	-0.08	36.33	0
7	SLU 62	886	-2	4558	0.75	36.18	0.01
7	SLU 63	901	-1	4568	-0.07	36.76	0
7	SLU 64	828	-1	4338	0.68	33.84	0
7	SLU 65	853	0	4354	-0.68	34.81	0
7	SLU 66	841	-1	4386	0.69	34.4	0
7	SLU 67	856	-1	4396	-0.13	34.98	0
7	SLU 68	863	0	4393	-0.68	35.25	0
7	SLU 69	852	-2	4425	0.7	34.84	0
7	SLU 70	867	-1	4435	-0.12	35.42	0
7	SLU 71	849	-1	4416	0.69	34.71	0
7	SLU 72	864	-1	4425	-0.13	35.29	0
7	SLU 73	927	0	4648	-0.55	37.81	0
7	SLU 74	916	-2	4680	0.82	37.39	0.01
7	SLU 75	931	-1	4690	0.01	37.98	0
7	SLU 76	937	0	4687	-0.55	38.24	0
7	SLU 77	926	-2	4719	0.83	37.83	0.01
7	SLU 78	941	-1	4729	0.01	38.41	0
7	SLU 79	923	-2	4710	0.82	37.71	0.01
7	SLU 80	938	-1	4720	0	38.29	0
7	SLU 81	934	-2	4758	0.87	38.12	0.01
7	SLU 82	949	-1	4767	0.05	38.7	0
7	SLU 83	944	-2	4797	0.87	38.55	0.01
7	SLU 84	959	-1	4807	0.05	39.14	0
7	SLE RA 1	624	-1	3284	0.5	25.51	0
7	SLE RA 2	640	0	3295	-0.41	26.16	0
7	SLE RA 3	633	-1	3317	0.51	25.88	0
7	SLE RA 4	643	0	3323	-0.04	26.27	0
7	SLE RA 5	648	0	3321	-0.41	26.45	0
7	SLE RA 6	640	-1	3343	0.51	26.17	0
7	SLE RA 7	650	0	3349	-0.04	26.56	0
7	SLE RA 8	638	-1	3336	0.5	26.09	0
7	SLE RA 9	648	0	3343	-0.04	26.48	0
7	SLE RA 10	690	0	3491	-0.33	28.15	0
7	SLE RA 11	682	-1	3513	0.59	27.88	0
7	SLE RA 12	692	-1	3519	0.05	28.27	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
7	SLE RA 13	697	0	3517	-0.32	28.44	0
7	SLE RA 14	689	-1	3539	0.6	28.17	0
7	SLE RA 15	699	-1	3545	0.05	28.56	0
7	SLE RA 16	687	-1	3532	0.59	28.09	0
7	SLE RA 17	697	-1	3539	0.05	28.48	0
7	SLE RA 18	694	-1	3564	0.62	28.36	0
7	SLE RA 19	704	-1	3571	0.08	28.75	0
7	SLE RA 20	701	-1	3590	0.63	28.65	0
7	SLE RA 21	711	-1	3597	0.08	29.04	0
7	SLE FR 1	624	-1	3284	0.5	25.51	0
7	SLE FR 2	627	-1	3286	0.32	25.64	0
7	SLE FR 3	627	-1	3295	0.5	25.62	0
7	SLE FR 4	648	-1	3370	0.35	26.49	0
7	SLE FR 5	648	-1	3379	0.54	26.48	0
7	SLE FR 6	659	-1	3424	0.56	26.93	0
7	SLE QP 1	624	-1	3284	0.5	25.51	0
7	SLE QP 2	645	-1	3368	0.54	26.36	0
7	SLD 1	1031	12	4216	-9.03	43.16	-0.06
7	SLD 2	1031	12	4216	-9.03	43.16	-0.06
7	SLD 3	840	-5	3650	3.81	35.54	0.02
7	SLD 4	840	-5	3650	3.81	35.54	0.02
7	SLD 5	1051	29	4480	-21.81	42.95	-0.13
7	SLD 6	1051	29	4480	-21.81	42.95	-0.13
7	SLD 7	413	-29	2595	21	17.57	0.13
7	SLD 8	413	-29	2595	21	17.57	0.13
7	SLD 9	877	27	4141	-19.93	35.15	-0.12
7	SLD 10	877	27	4141	-19.93	35.15	-0.12
7	SLD 11	239	-32	2256	22.89	9.78	0.14
7	SLD 12	239	-32	2256	22.89	9.78	0.14
7	SLD 13	450	3	3086	-2.74	17.18	-0.02
7	SLD 14	450	3	3086	-2.74	17.18	-0.02
7	SLD 15	259	-14	2520	10.11	9.57	0.06
7	SLD 16	259	-14	2520	10.11	9.57	0.06
7	SLV 1	1547	30	5359	-22.09	65.62	-0.14
7	SLV 2	1547	30	5359	-22.09	65.62	-0.14
7	SLV 3	1099	-11	4027	8.09	47.77	0.05
7	SLV 4	1099	-11	4027	8.09	47.77	0.05
7	SLV 5	1596	70	5985	-52.03	65.21	-0.32
7	SLV 6	1596	70	5985	-52.03	65.21	-0.32
7	SLV 7	101	-66	1546	48.58	5.71	0.29
7	SLV 8	101	-66	1546	48.58	5.71	0.29
7	SLV 9	1189	64	5190	-47.51	47.02	-0.29
7	SLV 10	1189	64	5190	-47.51	47.02	-0.29
7	SLV 11	-306	-73	751	53.1	-12.49	0.32
7	SLV 12	-306	-73	751	53.1	-12.49	0.32
7	SLV 13	191	9	2709	-7.02	4.96	-0.04
7	SLV 14	191	9	2709	-7.02	4.96	-0.04
7	SLV 15	-257	-32	1378	23.16	-12.89	0.14
7	SLV 16	-257	-32	1378	23.16	-12.89	0.14
8	SLU 1	609	-1	3487	0.16	24.99	0
8	SLU 2	632	1	3524	-1.14	25.87	-0.01
8	SLU 3	623	-1	3542	0.16	25.55	0
8	SLU 4	636	0	3564	-0.62	26.09	0
8	SLU 5	643	1	3567	-1.14	26.31	-0.01
8	SLU 6	633	-1	3585	0.16	25.99	0
8	SLU 7	647	0	3608	-0.62	26.53	0
8	SLU 8	630	-1	3574	0.15	25.87	0
8	SLU 9	644	0	3596	-0.62	26.4	0
8	SLU 10	706	0	3857	-1.05	28.89	-0.01
8	SLU 11	697	-1	3875	0.24	28.57	0
8	SLU 12	711	0	3897	-0.53	29.1	0
8	SLU 13	717	0	3900	-1.06	29.33	-0.01
8	SLU 14	707	-1	3918	0.24	29.01	0
8	SLU 15	721	0	3941	-0.53	29.54	0
8	SLU 16	704	-1	3907	0.24	28.88	0
8	SLU 17	718	0	3929	-0.54	29.41	0
8	SLU 18	715	-1	3962	0.28	29.29	0
8	SLU 19	728	0	3985	-0.5	29.82	0
8	SLU 20	725	-1	4006	0.28	29.73	0
8	SLU 21	739	0	4028	-0.5	30.26	0
8	SLU 22	667	-1	3755	0.25	27.35	0
8	SLU 23	690	0	3793	-1.05	28.23	-0.01
8	SLU 24	681	-1	3810	0.25	27.91	0
8	SLU 25	694	0	3833	-0.53	28.45	0
8	SLU 26	700	0	3836	-1.05	28.67	-0.01
8	SLU 27	691	-1	3854	0.25	28.36	0
8	SLU 28	705	0	3876	-0.53	28.89	0
8	SLU 29	688	-1	3842	0.25	28.23	0
8	SLU 30	702	0	3865	-0.53	28.76	0
8	SLU 31	764	0	4126	-0.96	31.25	-0.01
8	SLU 32	755	-1	4143	0.33	30.93	0
8	SLU 33	768	0	4166	-0.44	31.46	0
8	SLU 34	774	0	4169	-0.96	31.69	-0.01
8	SLU 35	765	-1	4187	0.33	31.37	0
8	SLU 36	779	0	4209	-0.44	31.9	0
8	SLU 37	762	-1	4175	0.33	31.24	0
8	SLU 38	776	0	4198	-0.45	31.77	0
8	SLU 39	772	-1	4231	0.37	31.65	0
8	SLU 40	786	0	4253	-0.41	32.18	0
8	SLU 41	783	-1	4274	0.37	32.09	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
8	SLU 42	797	0	4297	-0.41	32.62	0
8	SLU 43	772	-1	4441	0.17	31.67	0
8	SLU 44	795	0	4478	-1.12	32.56	-0.01
8	SLU 45	785	-1	4496	0.17	32.24	0
8	SLU 46	799	0	4518	-0.6	32.77	0
8	SLU 47	805	0	4521	-1.12	33	-0.01
8	SLU 48	796	-1	4539	0.17	32.68	0
8	SLU 49	810	0	4562	-0.6	33.21	0
8	SLU 50	793	-1	4528	0.17	32.55	0
8	SLU 51	807	0	4550	-0.61	33.09	0
8	SLU 52	869	0	4811	-1.04	35.57	-0.01
8	SLU 53	860	-1	4829	0.26	35.25	0
8	SLU 54	873	0	4851	-0.52	35.79	0
8	SLU 55	879	0	4854	-1.04	36.01	-0.01
8	SLU 56	870	-1	4872	0.26	35.69	0
8	SLU 57	884	0	4895	-0.52	36.23	0
8	SLU 58	867	-1	4861	0.25	35.57	0
8	SLU 59	881	0	4883	-0.52	36.1	0
8	SLU 60	877	-1	4916	0.29	35.98	0
8	SLU 61	891	0	4939	-0.49	36.51	0
8	SLU 62	888	-1	4960	0.29	36.42	0
8	SLU 63	902	0	4982	-0.49	36.95	0
8	SLU 64	830	-1	4709	0.26	34.03	0
8	SLU 65	852	0	4747	-1.03	34.92	-0.01
8	SLU 66	843	-1	4764	0.26	34.6	0
8	SLU 67	857	0	4787	-0.51	35.13	0
8	SLU 68	863	0	4790	-1.03	35.36	-0.01
8	SLU 69	854	-1	4808	0.26	35.04	0
8	SLU 70	868	0	4830	-0.51	35.57	0
8	SLU 71	851	-1	4796	0.26	34.92	0
8	SLU 72	865	0	4819	-0.52	35.45	0
8	SLU 73	927	0	5079	-0.95	37.93	-0.01
8	SLU 74	917	-1	5097	0.35	37.61	0
8	SLU 75	931	-1	5120	-0.43	38.15	0
8	SLU 76	937	0	5123	-0.95	38.37	-0.01
8	SLU 77	928	-1	5141	0.35	38.06	0
8	SLU 78	942	-1	5163	-0.43	38.59	0
8	SLU 79	925	-1	5129	0.34	37.93	0
8	SLU 80	939	-1	5152	-0.43	38.46	0
8	SLU 81	935	-2	5185	0.38	38.34	0
8	SLU 82	949	-1	5207	-0.39	38.87	0
8	SLU 83	946	-2	5228	0.38	38.78	0
8	SLU 84	960	-1	5251	-0.39	39.31	0
8	SLE RA 1	625	-1	3563	0.18	25.66	0
8	SLE RA 2	641	0	3588	-0.68	26.25	0
8	SLE RA 3	635	-1	3600	0.18	26.04	0
8	SLE RA 4	644	0	3615	-0.33	26.39	0
8	SLE RA 5	648	0	3617	-0.68	26.55	0
8	SLE RA 6	642	-1	3629	0.18	26.33	0
8	SLE RA 7	651	0	3644	-0.33	26.69	0
8	SLE RA 8	640	-1	3621	0.18	26.25	0
8	SLE RA 9	649	0	3636	-0.34	26.6	0
8	SLE RA 10	690	0	3810	-0.63	28.26	0
8	SLE RA 11	684	-1	3822	0.24	28.05	0
8	SLE RA 12	693	0	3837	-0.28	28.4	0
8	SLE RA 13	697	0	3839	-0.63	28.55	0
8	SLE RA 14	691	-1	3851	0.24	28.34	0
8	SLE RA 15	700	0	3866	-0.28	28.7	0
8	SLE RA 16	689	-1	3843	0.24	28.26	0
8	SLE RA 17	698	0	3858	-0.28	28.61	0
8	SLE RA 18	696	-1	3881	0.26	28.53	0
8	SLE RA 19	705	0	3895	-0.26	28.89	0
8	SLE RA 20	703	-1	3910	0.26	28.82	0
8	SLE RA 21	712	0	3924	-0.26	29.18	0
8	SLE FR 1	625	-1	3563	0.18	25.66	0
8	SLE FR 2	628	-1	3568	0.01	25.78	0
8	SLE FR 3	628	-1	3575	0.18	25.78	0
8	SLE FR 4	650	-1	3664	0.03	26.64	0
8	SLE FR 5	649	-1	3670	0.21	26.64	0
8	SLE FR 6	661	-1	3722	0.22	27.1	0
8	SLE QP 1	625	-1	3563	0.18	25.66	0
8	SLE QP 2	647	-1	3659	0.21	26.52	0
8	SLD 1	1005	10	4477	-8.17	42.13	-0.05
8	SLD 2	1005	10	4477	-8.17	42.13	-0.05
8	SLD 3	814	-4	3800	2.99	34.37	0.02
8	SLD 4	814	-4	3800	2.99	34.37	0.02
8	SLD 5	1044	24	4930	-19.23	42.97	-0.11
8	SLD 6	1044	24	4930	-19.23	42.97	-0.11
8	SLD 7	406	-24	2675	17.97	17.11	0.1
8	SLD 8	406	-24	2675	17.97	17.11	0.1
8	SLD 9	887	22	4642	-17.56	35.94	-0.1
8	SLD 10	887	22	4642	-17.56	35.94	-0.1
8	SLD 11	249	-26	2387	19.64	10.07	0.11
8	SLD 12	249	-26	2387	19.64	10.07	0.11
8	SLD 13	479	2	3517	-2.58	18.68	-0.02
8	SLD 14	479	2	3517	-2.58	18.68	-0.02
8	SLD 15	288	-12	2840	8.58	10.92	0.05
8	SLD 16	288	-12	2840	8.58	10.92	0.05
8	SLV 1	1484	25	5578	-19.61	62.98	-0.12
8	SLV 2	1484	25	5578	-19.61	62.98	-0.12



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
8	SLV 3	1036	-9	3989	6.63	44.8	0.04
8	SLV 4	1036	-9	3989	6.63	44.8	0.04
8	SLV 5	1578	59	6644	-45.54	65.04	-0.27
8	SLV 6	1578	59	6644	-45.54	65.04	-0.27
8	SLV 7	83	-55	1348	41.93	4.43	0.24
8	SLV 8	83	-55	1348	41.93	4.43	0.24
8	SLV 9	1210	53	5969	-41.52	48.61	-0.24
8	SLV 10	1210	53	5969	-41.52	48.61	-0.24
8	SLV 11	-285	-61	673	45.95	-11.99	0.26
8	SLV 12	-285	-61	673	45.95	-11.99	0.26
8	SLV 13	257	7	3328	-6.22	8.24	-0.04
8	SLV 14	257	7	3328	-6.22	8.24	-0.04
8	SLV 15	-191	-27	1739	20.02	-9.94	0.12
8	SLV 16	-191	-27	1739	20.02	-9.94	0.12
9	SLU 1	551	0	3799	-0.68	21.93	-0.01
9	SLU 2	570	2	3856	-1.69	22.68	-0.02
9	SLU 3	564	0	3862	-0.69	22.44	-0.01
9	SLU 4	575	1	3896	-1.3	22.89	-0.02
9	SLU 5	580	2	3905	-1.71	23.07	-0.02
9	SLU 6	574	0	3910	-0.71	22.84	-0.01
9	SLU 7	585	1	3944	-1.32	23.29	-0.02
9	SLU 8	571	0	3896	-0.71	22.73	-0.01
9	SLU 9	582	1	3930	-1.31	23.18	-0.02
9	SLU 10	639	2	4233	-1.73	25.35	-0.02
9	SLU 11	632	0	4239	-0.74	25.12	-0.02
9	SLU 12	644	1	4273	-1.34	25.57	-0.02
9	SLU 13	649	2	4282	-1.75	25.75	-0.02
9	SLU 14	642	0	4287	-0.75	25.52	-0.02
9	SLU 15	654	1	4321	-1.36	25.96	-0.02
9	SLU 16	639	0	4273	-0.75	25.41	-0.02
9	SLU 17	651	1	4307	-1.36	25.85	-0.02
9	SLU 18	649	0	4338	-0.74	25.76	-0.02
9	SLU 19	660	1	4372	-1.35	26.2	-0.02
9	SLU 20	658	0	4386	-0.75	26.16	-0.02
9	SLU 21	670	1	4420	-1.36	26.6	-0.02
9	SLU 22	603	0	4101	-0.68	23.99	-0.02
9	SLU 23	623	1	4158	-1.7	24.73	-0.02
9	SLU 24	616	0	4163	-0.7	24.5	-0.02
9	SLU 25	628	1	4197	-1.31	24.95	-0.02
9	SLU 26	633	1	4206	-1.71	25.13	-0.02
9	SLU 27	626	0	4212	-0.71	24.9	-0.02
9	SLU 28	638	1	4246	-1.32	25.35	-0.02
9	SLU 29	623	0	4198	-0.71	24.79	-0.02
9	SLU 30	635	1	4232	-1.32	25.23	-0.02
9	SLU 31	691	1	4535	-1.74	27.41	-0.02
9	SLU 32	684	0	4540	-0.74	27.18	-0.02
9	SLU 33	696	1	4574	-1.35	27.62	-0.02
9	SLU 34	701	1	4583	-1.75	27.81	-0.02
9	SLU 35	694	0	4589	-0.75	27.58	-0.02
9	SLU 36	706	1	4623	-1.36	28.02	-0.02
9	SLU 37	691	0	4575	-0.75	27.47	-0.02
9	SLU 38	703	1	4609	-1.36	27.91	-0.02
9	SLU 39	701	0	4639	-0.74	27.82	-0.02
9	SLU 40	713	1	4673	-1.35	28.26	-0.02
9	SLU 41	711	0	4688	-0.76	28.21	-0.02
9	SLU 42	722	1	4722	-1.37	28.66	-0.02
9	SLU 43	698	0	4836	-0.88	27.81	-0.02
9	SLU 44	718	2	4892	-1.89	28.55	-0.02
9	SLU 45	711	0	4898	-0.9	28.32	-0.02
9	SLU 46	723	1	4932	-1.5	28.76	-0.02
9	SLU 47	728	2	4941	-1.91	28.95	-0.02
9	SLU 48	721	0	4947	-0.91	28.72	-0.02
9	SLU 49	733	1	4981	-1.52	29.16	-0.02
9	SLU 50	718	0	4933	-0.91	28.61	-0.02
9	SLU 51	730	1	4967	-1.52	29.05	-0.02
9	SLU 52	786	2	5269	-1.93	31.23	-0.02
9	SLU 53	779	0	5275	-0.94	31	-0.02
9	SLU 54	791	1	5309	-1.55	31.44	-0.02
9	SLU 55	796	2	5318	-1.95	31.62	-0.02
9	SLU 56	789	0	5324	-0.95	31.39	-0.02
9	SLU 57	801	1	5358	-1.56	31.84	-0.02
9	SLU 58	786	0	5310	-0.95	31.28	-0.02
9	SLU 59	798	1	5344	-1.56	31.73	-0.02
9	SLU 60	796	0	5374	-0.94	31.63	-0.02
9	SLU 61	808	1	5408	-1.55	32.08	-0.02
9	SLU 62	806	0	5423	-0.95	32.03	-0.02
9	SLU 63	817	1	5457	-1.56	32.47	-0.02
9	SLU 64	751	0	5137	-0.89	29.87	-0.02
9	SLU 65	770	2	5194	-1.9	30.61	-0.02
9	SLU 66	763	0	5200	-0.9	30.38	-0.02
9	SLU 67	775	1	5234	-1.51	30.82	-0.02
9	SLU 68	780	2	5242	-1.91	31.01	-0.02
9	SLU 69	773	0	5248	-0.91	30.78	-0.02
9	SLU 70	785	1	5282	-1.52	31.22	-0.02
9	SLU 71	770	0	5234	-0.91	30.66	-0.02
9	SLU 72	782	1	5268	-1.52	31.11	-0.02
9	SLU 73	838	2	5571	-1.94	33.28	-0.03
9	SLU 74	832	0	5577	-0.94	33.05	-0.02
9	SLU 75	843	1	5611	-1.55	33.5	-0.02
9	SLU 76	848	2	5619	-1.95	33.68	-0.03



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
9	SLU 77	842	0	5625	-0.96	33.45	-0.02
9	SLU 78	853	1	5659	-1.56	33.9	-0.02
9	SLU 79	839	0	5611	-0.95	33.34	-0.02
9	SLU 80	850	1	5645	-1.56	33.78	-0.02
9	SLU 81	848	0	5676	-0.94	33.69	-0.02
9	SLU 82	860	1	5710	-1.55	34.14	-0.02
9	SLU 83	858	0	5724	-0.96	34.09	-0.02
9	SLU 84	870	1	5758	-1.57	34.53	-0.02
9	SLE RA 1	566	0	3885	-0.68	22.52	-0.01
9	SLE RA 2	579	1	3923	-1.36	23.02	-0.02
9	SLE RA 3	574	0	3927	-0.69	22.86	-0.01
9	SLE RA 4	582	1	3950	-1.1	23.16	-0.02
9	SLE RA 5	585	1	3956	-1.36	23.28	-0.02
9	SLE RA 6	581	0	3959	-0.7	23.13	-0.01
9	SLE RA 7	589	1	3982	-1.11	23.42	-0.02
9	SLE RA 8	579	0	3950	-0.7	23.05	-0.01
9	SLE RA 9	587	1	3973	-1.1	23.35	-0.02
9	SLE RA 10	624	1	4175	-1.38	24.8	-0.02
9	SLE RA 11	620	0	4178	-0.72	24.65	-0.02
9	SLE RA 12	628	1	4201	-1.12	24.94	-0.02
9	SLE RA 13	631	1	4207	-1.39	25.07	-0.02
9	SLE RA 14	627	0	4211	-0.73	24.91	-0.02
9	SLE RA 15	634	1	4233	-1.13	25.21	-0.02
9	SLE RA 16	625	0	4201	-0.73	24.84	-0.02
9	SLE RA 17	632	1	4224	-1.13	25.13	-0.02
9	SLE RA 18	631	0	4244	-0.72	25.07	-0.02
9	SLE RA 19	639	1	4267	-1.12	25.37	-0.02
9	SLE RA 20	638	0	4277	-0.73	25.34	-0.02
9	SLE RA 21	645	1	4299	-1.13	25.63	-0.02
9	SLE FR 1	566	0	3885	-0.68	22.52	-0.01
9	SLE FR 2	568	0	3893	-0.81	22.62	-0.01
9	SLE FR 3	569	0	3898	-0.68	22.63	-0.01
9	SLE FR 4	588	0	4001	-0.83	23.39	-0.02
9	SLE FR 5	588	0	4006	-0.7	23.39	-0.01
9	SLE FR 6	598	0	4065	-0.7	23.8	-0.02
9	SLE QP 1	566	0	3885	-0.68	22.52	-0.01
9	SLE QP 2	585	0	3993	-0.69	23.29	-0.01
9	SLD 1	919	8	4764	-6.76	37.97	-0.02
9	SLD 2	919	8	4764	-6.76	37.97	-0.02
9	SLD 3	744	-1	3961	1.22	31.18	0.02
9	SLD 4	744	-1	3961	1.22	31.18	0.02
9	SLD 5	951	17	5441	-14.61	37.99	-0.08
9	SLD 6	951	17	5441	-14.61	37.99	-0.08
9	SLD 7	367	-14	2767	11.98	15.35	0.06
9	SLD 8	367	-14	2767	11.98	15.35	0.06
9	SLD 9	803	15	5219	-13.36	31.22	-0.09
9	SLD 10	803	15	5219	-13.36	31.22	-0.09
9	SLD 11	220	-16	2545	13.23	8.58	0.05
9	SLD 12	220	-16	2545	13.23	8.58	0.05
9	SLD 13	427	2	4025	-2.6	15.4	-0.05
9	SLD 14	427	2	4025	-2.6	15.4	-0.05
9	SLD 15	251	-7	3222	5.38	8.61	-0.01
9	SLD 16	251	-7	3222	5.38	8.61	-0.01
9	SLV 1	1365	18	5800	-15.06	57.55	-0.04
9	SLV 2	1365	18	5800	-15.06	57.55	-0.04
9	SLV 3	955	-4	3919	3.72	41.63	0.06
9	SLV 4	955	-4	3919	3.72	41.63	0.06
9	SLV 5	1442	39	7388	-33.48	57.7	-0.17
9	SLV 6	1442	39	7388	-33.48	57.7	-0.17
9	SLV 7	74	-34	1118	29.11	4.66	0.15
9	SLV 8	74	-34	1118	29.11	4.66	0.15
9	SLV 9	1097	35	6868	-30.49	41.92	-0.18
9	SLV 10	1097	35	6868	-30.49	41.92	-0.18
9	SLV 11	-271	-38	598	32.09	-11.13	0.14
9	SLV 12	-271	-38	598	32.09	-11.13	0.14
9	SLV 13	216	4	4067	-5.1	4.94	-0.09
9	SLV 14	216	4	4067	-5.1	4.94	-0.09
9	SLV 15	-194	-17	2186	13.67	-10.97	0.01
9	SLV 16	-194	-17	2186	13.67	-10.97	0.01
10	SLU 1	448	9	4182	-2.63	17.34	0.02
10	SLU 2	462	10	4258	-3.22	17.89	0.02
10	SLU 3	458	9	4253	-2.68	17.76	0.02
10	SLU 4	467	10	4299	-3.04	18.08	0.02
10	SLU 5	471	10	4312	-3.26	18.21	0.02
10	SLU 6	467	10	4308	-2.73	18.08	0.02
10	SLU 7	476	10	4353	-3.08	18.41	0.02
10	SLU 8	464	10	4291	-2.71	17.99	0.02
10	SLU 9	473	10	4336	-3.07	18.32	0.02
10	SLU 10	522	11	4691	-3.55	20.15	0.02
10	SLU 11	518	11	4687	-3.02	20.02	0.02
10	SLU 12	527	11	4733	-3.37	20.34	0.02
10	SLU 13	530	11	4746	-3.6	20.47	0.02
10	SLU 14	526	11	4742	-3.06	20.34	0.02
10	SLU 15	535	11	4787	-3.42	20.67	0.02
10	SLU 16	524	11	4725	-3.04	20.25	0.02
10	SLU 17	532	11	4770	-3.4	20.57	0.02
10	SLU 18	532	11	4802	-3.1	20.57	0.03
10	SLU 19	541	11	4847	-3.46	20.89	0.02
10	SLU 20	541	11	4856	-3.14	20.89	0.03
10	SLU 21	550	12	4902	-3.5	21.22	0.02



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
10	SLU 22	491	10	4524	-2.86	19	0.02
10	SLU 23	506	11	4600	-3.45	19.55	0.02
10	SLU 24	502	10	4596	-2.92	19.42	0.02
10	SLU 25	511	11	4642	-3.27	19.75	0.02
10	SLU 26	514	11	4655	-3.5	19.87	0.02
10	SLU 27	510	10	4651	-2.96	19.74	0.02
10	SLU 28	519	11	4696	-3.32	20.07	0.02
10	SLU 29	508	10	4634	-2.94	19.65	0.02
10	SLU 30	517	11	4679	-3.3	19.98	0.02
10	SLU 31	565	12	5034	-3.79	21.81	0.02
10	SLU 32	561	12	5030	-3.25	21.68	0.03
10	SLU 33	570	12	5075	-3.61	22	0.03
10	SLU 34	574	12	5089	-3.83	22.13	0.03
10	SLU 35	570	12	5084	-3.29	22	0.03
10	SLU 36	578	12	5130	-3.65	22.33	0.03
10	SLU 37	567	12	5067	-3.27	21.91	0.03
10	SLU 38	576	12	5113	-3.63	22.24	0.03
10	SLU 39	576	12	5144	-3.33	22.23	0.03
10	SLU 40	585	12	5190	-3.69	22.56	0.03
10	SLU 41	584	12	5199	-3.37	22.55	0.03
10	SLU 42	593	13	5244	-3.73	22.88	0.03
10	SLU 43	567	12	5319	-3.33	21.97	0.03
10	SLU 44	582	13	5395	-3.93	22.52	0.03
10	SLU 45	578	12	5391	-3.39	22.39	0.03
10	SLU 46	587	12	5436	-3.75	22.72	0.03
10	SLU 47	590	13	5449	-3.97	22.84	0.03
10	SLU 48	586	12	5445	-3.43	22.71	0.03
10	SLU 49	595	13	5491	-3.79	23.04	0.03
10	SLU 50	584	12	5428	-3.42	22.62	0.03
10	SLU 51	592	13	5474	-3.78	22.95	0.03
10	SLU 52	641	14	5828	-4.26	24.78	0.03
10	SLU 53	637	13	5824	-3.72	24.65	0.03
10	SLU 54	646	14	5870	-4.08	24.98	0.03
10	SLU 55	649	14	5883	-4.3	25.1	0.03
10	SLU 56	645	13	5879	-3.77	24.97	0.03
10	SLU 57	654	14	5924	-4.12	25.3	0.03
10	SLU 58	643	13	5862	-3.75	24.88	0.03
10	SLU 59	652	14	5907	-4.11	25.21	0.03
10	SLU 60	652	13	5939	-3.81	25.2	0.03
10	SLU 61	661	14	5984	-4.17	25.53	0.03
10	SLU 62	660	14	5993	-3.85	25.52	0.03
10	SLU 63	669	14	6039	-4.21	25.85	0.03
10	SLU 64	611	13	5662	-3.57	23.63	0.03
10	SLU 65	625	13	5737	-4.16	24.18	0.03
10	SLU 66	621	13	5733	-3.62	24.05	0.03
10	SLU 67	630	13	5779	-3.98	24.38	0.03
10	SLU 68	634	14	5792	-4.2	24.5	0.03
10	SLU 69	630	13	5788	-3.67	24.37	0.03
10	SLU 70	638	13	5833	-4.02	24.7	0.03
10	SLU 71	627	13	5771	-3.65	24.28	0.03
10	SLU 72	636	13	5816	-4.01	24.61	0.03
10	SLU 73	685	15	6171	-4.49	26.44	0.03
10	SLU 74	681	14	6167	-3.96	26.31	0.03
10	SLU 75	690	15	6212	-4.31	26.64	0.03
10	SLU 76	693	15	6226	-4.54	26.76	0.03
10	SLU 77	689	14	6222	-4	26.63	0.03
10	SLU 78	698	15	6267	-4.36	26.96	0.03
10	SLU 79	686	14	6204	-3.98	26.54	0.03
10	SLU 80	695	15	6250	-4.34	26.87	0.03
10	SLU 81	695	14	6281	-4.04	26.86	0.03
10	SLU 82	704	15	6327	-4.4	27.19	0.03
10	SLU 83	704	14	6336	-4.08	27.18	0.03
10	SLU 84	712	15	6381	-4.44	27.51	0.03
10	SLE RA 1	460	9	4280	-2.69	17.81	0.02
10	SLE RA 2	470	10	4330	-3.09	18.18	0.02
10	SLE RA 3	467	10	4327	-2.73	18.09	0.02
10	SLE RA 4	473	10	4358	-2.97	18.31	0.02
10	SLE RA 5	475	10	4367	-3.12	18.39	0.02
10	SLE RA 6	473	10	4364	-2.76	18.31	0.02
10	SLE RA 7	479	10	4394	-3	18.53	0.02
10	SLE RA 8	471	10	4353	-2.75	18.25	0.02
10	SLE RA 9	477	10	4383	-2.99	18.46	0.02
10	SLE RA 10	509	11	4619	-3.31	19.68	0.02
10	SLE RA 11	507	10	4617	-2.95	19.6	0.02
10	SLE RA 12	513	11	4647	-3.19	19.82	0.02
10	SLE RA 13	515	11	4656	-3.34	19.9	0.02
10	SLE RA 14	512	11	4653	-2.98	19.81	0.02
10	SLE RA 15	518	11	4683	-3.22	20.03	0.02
10	SLE RA 16	511	11	4642	-2.97	19.75	0.02
10	SLE RA 17	517	11	4672	-3.21	19.97	0.02
10	SLE RA 18	517	11	4693	-3.01	19.97	0.02
10	SLE RA 19	523	11	4723	-3.25	20.18	0.02
10	SLE RA 20	522	11	4729	-3.04	20.18	0.02
10	SLE RA 21	528	11	4760	-3.27	20.4	0.02
10	SLE FR 1	460	9	4280	-2.69	17.81	0.02
10	SLE FR 2	462	10	4290	-2.77	17.89	0.02
10	SLE FR 3	462	10	4294	-2.7	17.9	0.02
10	SLE FR 4	479	10	4414	-2.87	18.53	0.02
10	SLE FR 5	479	10	4418	-2.8	18.55	0.02
10	SLE FR 6	488	10	4486	-2.85	18.89	0.02



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
10	SLE QP 1	460	9	4280	-2.69	17.81	0.02
10	SLE QP 2	477	10	4404	-2.79	18.46	0.02
10	SLD 1	794	10	4626	-3.78	31.96	0.03
10	SLD 2	794	10	4626	-3.78	31.96	0.03
10	SLD 3	644	6	3666	0.59	26.26	0.01
10	SLD 4	644	6	3666	0.59	26.26	0.01
10	SLD 5	800	16	5926	-9.7	31.15	0.05
10	SLD 6	800	16	5926	-9.7	31.15	0.05
10	SLD 7	299	2	2727	4.84	12.16	0
10	SLD 8	299	2	2727	4.84	12.16	0
10	SLD 9	655	17	6081	-10.42	24.76	0.05
10	SLD 10	655	17	6081	-10.42	24.76	0.05
10	SLD 11	154	3	2881	4.13	5.77	0
10	SLD 12	154	3	2881	4.13	5.77	0
10	SLD 13	311	14	5141	-6.16	10.65	0.03
10	SLD 14	311	14	5141	-6.16	10.65	0.03
10	SLD 15	161	10	4181	-1.79	4.96	0.02
10	SLD 16	161	10	4181	-1.79	4.96	0.02
10	SLV 1	1215	10	4924	-5.09	49.94	0.03
10	SLV 2	1215	10	4924	-5.09	49.94	0.03
10	SLV 3	864	0	2675	5.18	36.58	-0.01
10	SLV 4	864	0	2675	5.18	36.58	-0.01
10	SLV 5	1232	25	7971	-19.06	48.15	0.08
10	SLV 6	1232	25	7971	-19.06	48.15	0.08
10	SLV 7	60	-8	474	15.19	3.64	-0.04
10	SLV 8	60	-8	474	15.19	3.64	-0.04
10	SLV 9	894	28	8333	-20.76	33.27	0.09
10	SLV 10	894	28	8333	-20.76	33.27	0.09
10	SLV 11	-278	-6	837	13.49	-11.23	-0.03
10	SLV 12	-278	-6	837	13.49	-11.23	-0.03
10	SLV 13	91	19	6133	-10.76	0.34	0.05
10	SLV 14	91	19	6133	-10.76	0.34	0.05
10	SLV 15	-261	9	3884	-0.48	-13.02	0.02
10	SLV 16	-261	9	3884	-0.48	-13.02	0.02
11	SLU 1	127	1052	6563	-33.38	6.38	0
11	SLU 2	131	1074	6696	-34.06	6.57	0.01
11	SLU 3	131	1074	6680	-34.1	6.58	0
11	SLU 4	134	1087	6760	-34.51	6.69	0.01
11	SLU 5	135	1090	6784	-34.57	6.74	0.01
11	SLU 6	134	1089	6768	-34.61	6.75	0
11	SLU 7	137	1102	6848	-35.02	6.86	0.01
11	SLU 8	134	1083	6739	-34.4	6.72	0
11	SLU 9	137	1096	6819	-34.81	6.83	0.01
11	SLU 10	151	1208	7414	-38.71	7.49	0.01
11	SLU 11	151	1207	7398	-38.74	7.5	0
11	SLU 12	154	1221	7478	-39.15	7.61	0.01
11	SLU 13	155	1223	7502	-39.22	7.66	0.01
11	SLU 14	154	1223	7486	-39.25	7.67	0
11	SLU 15	157	1236	7566	-39.66	7.78	0.01
11	SLU 16	154	1217	7457	-39.04	7.64	0
11	SLU 17	157	1230	7537	-39.45	7.75	0.01
11	SLU 18	155	1244	7589	-40.01	7.7	0
11	SLU 19	158	1257	7669	-40.42	7.81	0
11	SLU 20	159	1259	7677	-40.52	7.87	0
11	SLU 21	162	1272	7757	-40.93	7.98	0.01
11	SLU 22	139	1154	7121	-36.84	6.97	0
11	SLU 23	143	1176	7254	-37.52	7.16	0.01
11	SLU 24	143	1175	7238	-37.56	7.17	0
11	SLU 25	146	1188	7318	-37.97	7.28	0.01
11	SLU 26	147	1191	7342	-38.03	7.33	0.01
11	SLU 27	146	1190	7326	-38.07	7.34	0
11	SLU 28	149	1203	7406	-38.48	7.45	0.01
11	SLU 29	146	1184	7297	-37.86	7.31	0
11	SLU 30	149	1197	7377	-38.27	7.42	0.01
11	SLU 31	163	1309	7972	-42.17	8.08	0.01
11	SLU 32	163	1309	7956	-42.2	8.09	0
11	SLU 33	166	1322	8036	-42.61	8.2	0
11	SLU 34	167	1325	8060	-42.68	8.25	0.01
11	SLU 35	166	1324	8044	-42.71	8.26	0
11	SLU 36	169	1337	8124	-43.12	8.37	0
11	SLU 37	166	1318	8015	-42.5	8.23	0
11	SLU 38	169	1331	8094	-42.91	8.34	0
11	SLU 39	167	1345	8147	-43.47	8.29	0
11	SLU 40	170	1358	8227	-43.88	8.4	0
11	SLU 41	171	1360	8235	-43.98	8.46	0
11	SLU 42	174	1373	8314	-44.39	8.57	0
11	SLU 43	161	1333	8341	-42.21	8.09	0
11	SLU 44	165	1355	8474	-42.89	8.28	0.01
11	SLU 45	165	1355	8458	-42.93	8.29	0
11	SLU 46	168	1368	8538	-43.34	8.4	0.01
11	SLU 47	169	1371	8562	-43.4	8.45	0.01
11	SLU 48	168	1370	8546	-43.44	8.46	0
11	SLU 49	171	1383	8626	-43.85	8.57	0.01
11	SLU 50	168	1364	8517	-43.23	8.43	0
11	SLU 51	171	1377	8597	-43.64	8.54	0.01
11	SLU 52	185	1489	9192	-47.53	9.21	0.01
11	SLU 53	185	1488	9176	-47.57	9.21	0
11	SLU 54	188	1502	9256	-47.98	9.32	0.01
11	SLU 55	189	1505	9280	-48.04	9.37	0.01
11	SLU 56	188	1504	9264	-48.08	9.38	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
11	SLU 57	191	1517	9344	-48.49	9.49	0.01
11	SLU 58	188	1498	9235	-47.87	9.35	0
11	SLU 59	190	1511	9314	-48.28	9.47	0.01
11	SLU 60	189	1525	9367	-48.84	9.41	0
11	SLU 61	192	1538	9447	-49.25	9.52	0.01
11	SLU 62	193	1540	9455	-49.35	9.58	0
11	SLU 63	195	1553	9534	-49.76	9.69	0.01
11	SLU 64	173	1435	8899	-45.67	8.68	0
11	SLU 65	177	1457	9032	-46.35	8.87	0.01
11	SLU 66	177	1456	9016	-46.39	8.88	0
11	SLU 67	180	1469	9096	-46.8	8.99	0.01
11	SLU 68	181	1472	9120	-46.86	9.04	0.01
11	SLU 69	180	1471	9104	-46.9	9.05	0
11	SLU 70	183	1484	9184	-47.31	9.16	0.01
11	SLU 71	180	1465	9074	-46.69	9.02	0
11	SLU 72	183	1478	9154	-47.1	9.13	0.01
11	SLU 73	197	1590	9750	-50.99	9.8	0.01
11	SLU 74	197	1590	9734	-51.03	9.8	0
11	SLU 75	200	1603	9814	-51.44	9.92	0
11	SLU 76	201	1606	9838	-51.5	9.96	0.01
11	SLU 77	200	1605	9822	-51.54	9.97	0
11	SLU 78	203	1618	9901	-51.95	10.08	0.01
11	SLU 79	200	1599	9792	-51.33	9.94	0
11	SLU 80	202	1612	9872	-51.74	10.06	0.01
11	SLU 81	201	1626	9925	-52.3	10	0
11	SLU 82	204	1639	10004	-52.71	10.11	0
11	SLU 83	205	1641	10012	-52.81	10.17	0
11	SLU 84	207	1654	10092	-53.22	10.28	0
11	SLE RA 1	130	1081	6723	-34.37	6.55	0
11	SLE RA 2	133	1096	6811	-34.82	6.68	0.01
11	SLE RA 3	133	1095	6801	-34.85	6.68	0
11	SLE RA 4	135	1104	6854	-35.12	6.76	0
11	SLE RA 5	136	1106	6870	-35.16	6.79	0.01
11	SLE RA 6	135	1106	6859	-35.19	6.79	0
11	SLE RA 7	137	1114	6912	-35.46	6.87	0.01
11	SLE RA 8	135	1102	6840	-35.05	6.77	0
11	SLE RA 9	137	1111	6893	-35.32	6.85	0.01
11	SLE RA 10	147	1185	7290	-37.92	7.29	0.01
11	SLE RA 11	146	1185	7279	-37.94	7.3	0
11	SLE RA 12	148	1193	7333	-38.22	7.37	0
11	SLE RA 13	149	1195	7349	-38.26	7.4	0.01
11	SLE RA 14	149	1195	7338	-38.28	7.41	0
11	SLE RA 15	150	1204	7391	-38.56	7.48	0
11	SLE RA 16	148	1191	7318	-38.14	7.39	0
11	SLE RA 17	150	1200	7372	-38.42	7.46	0
11	SLE RA 18	149	1209	7407	-38.79	7.43	0
11	SLE RA 19	151	1218	7460	-39.06	7.5	0
11	SLE RA 20	151	1219	7465	-39.13	7.54	0
11	SLE RA 21	153	1228	7518	-39.4	7.62	0
11	SLE FR 1	130	1081	6723	-34.37	6.55	0
11	SLE FR 2	131	1084	6740	-34.46	6.58	0
11	SLE FR 3	131	1085	6746	-34.5	6.6	0
11	SLE FR 4	136	1122	6946	-35.79	6.84	0
11	SLE FR 5	137	1124	6951	-35.83	6.86	0
11	SLE FR 6	140	1145	7065	-36.58	6.99	0
11	SLE QP 1	130	1081	6723	-34.37	6.55	0
11	SLE QP 2	136	1120	6928	-35.7	6.81	0
11	SLD 1	436	1200	7402	-38.21	20.39	0.04
11	SLD 2	436	1200	7402	-38.21	20.39	0.04
11	SLD 3	379	841	5731	-25.09	17.81	0.09
11	SLD 4	379	841	5731	-25.09	17.81	0.09
11	SLD 5	313	1689	9604	-56.36	14.8	-0.06
11	SLD 6	313	1689	9604	-56.36	14.8	-0.06
11	SLD 7	122	491	4035	-12.61	6.2	0.1
11	SLD 8	122	491	4035	-12.61	6.2	0.1
11	SLD 9	150	1748	9821	-58.78	7.43	-0.1
11	SLD 10	150	1748	9821	-58.78	7.43	-0.1
11	SLD 11	-41	550	4252	-15.04	-1.17	0.06
11	SLD 12	-41	550	4252	-15.04	-1.17	0.06
11	SLD 13	-107	1398	8125	-46.3	-4.18	-0.09
11	SLD 14	-107	1398	8125	-46.3	-4.18	-0.09
11	SLD 15	-164	1039	6454	-33.18	-6.76	-0.04
11	SLD 16	-164	1039	6454	-33.18	-6.76	-0.04
11	SLV 1	835	1308	8036	-41.56	38.42	0.09
11	SLV 2	835	1308	8036	-41.56	38.42	0.09
11	SLV 3	699	468	4125	-10.93	32.31	0.21
11	SLV 4	699	468	4125	-10.93	32.31	0.21
11	SLV 5	552	2450	13192	-83.91	25.57	-0.14
11	SLV 6	552	2450	13192	-83.91	25.57	-0.14
11	SLV 7	98	-350	155	18.19	5.19	0.23
11	SLV 8	98	-350	155	18.19	5.19	0.23
11	SLV 9	173	2589	13701	-89.58	8.44	-0.23
11	SLV 10	173	2589	13701	-89.58	8.44	-0.23
11	SLV 11	-280	-211	663	12.52	-11.94	0.14
11	SLV 12	-280	-211	663	12.52	-11.94	0.14
11	SLV 13	-427	1771	9730	-60.46	-18.68	-0.21
11	SLV 14	-427	1771	9730	-60.46	-18.68	-0.21
11	SLV 15	-563	931	5819	-29.83	-24.8	-0.1
11	SLV 16	-563	931	5819	-29.83	-24.8	-0.1
12	SLU 1	-167	10	4315	-3.58	-4.64	-0.06



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
12	SLU 2	-171	10	4407	-2.99	-4.78	-0.06
12	SLU 3	-169	10	4390	-3.66	-4.67	-0.06
12	SLU 4	-172	10	4445	-3.3	-4.76	-0.06
12	SLU 5	-172	10	4463	-3.04	-4.78	-0.06
12	SLU 6	-170	11	4446	-3.71	-4.67	-0.06
12	SLU 7	-172	10	4501	-3.35	-4.75	-0.06
12	SLU 8	-169	11	4428	-3.69	-4.63	-0.06
12	SLU 9	-171	10	4483	-3.33	-4.72	-0.06
12	SLU 10	-188	11	4868	-3.52	-5.18	-0.07
12	SLU 11	-185	12	4851	-4.19	-5.07	-0.07
12	SLU 12	-188	12	4906	-3.83	-5.16	-0.07
12	SLU 13	-188	11	4925	-3.57	-5.18	-0.07
12	SLU 14	-186	12	4908	-4.24	-5.07	-0.07
12	SLU 15	-189	12	4963	-3.89	-5.16	-0.07
12	SLU 16	-185	12	4889	-4.22	-5.03	-0.07
12	SLU 17	-187	12	4945	-3.86	-5.12	-0.07
12	SLU 18	-190	12	4974	-4.34	-5.21	-0.07
12	SLU 19	-193	12	5029	-3.99	-5.3	-0.07
12	SLU 20	-191	13	5031	-4.39	-5.21	-0.07
12	SLU 21	-194	12	5086	-4.04	-5.3	-0.07
12	SLU 22	-184	11	4671	-3.99	-5.1	-0.06
12	SLU 23	-188	11	4763	-3.4	-5.25	-0.07
12	SLU 24	-186	12	4746	-4.07	-5.14	-0.07
12	SLU 25	-188	11	4801	-3.71	-5.23	-0.07
12	SLU 26	-189	11	4819	-3.45	-5.24	-0.07
12	SLU 27	-186	12	4802	-4.12	-5.14	-0.07
12	SLU 28	-189	11	4857	-3.76	-5.22	-0.07
12	SLU 29	-185	12	4784	-4.1	-5.1	-0.07
12	SLU 30	-188	11	4839	-3.74	-5.18	-0.07
12	SLU 31	-204	12	5224	-3.93	-5.65	-0.07
12	SLU 32	-202	13	5207	-4.6	-5.54	-0.07
12	SLU 33	-205	13	5262	-4.24	-5.63	-0.07
12	SLU 34	-205	13	5281	-3.98	-5.65	-0.07
12	SLU 35	-203	13	5264	-4.65	-5.54	-0.08
12	SLU 36	-205	13	5319	-4.29	-5.63	-0.08
12	SLU 37	-202	13	5245	-4.63	-5.5	-0.07
12	SLU 38	-204	13	5301	-4.27	-5.59	-0.08
12	SLU 39	-207	14	5330	-4.75	-5.68	-0.08
12	SLU 40	-210	13	5385	-4.39	-5.77	-0.08
12	SLU 41	-208	14	5387	-4.8	-5.68	-0.08
12	SLU 42	-211	13	5442	-4.45	-5.76	-0.08
12	SLU 43	-211	13	5488	-4.52	-5.87	-0.07
12	SLU 44	-216	12	5579	-3.93	-6.01	-0.07
12	SLU 45	-213	13	5562	-4.59	-5.9	-0.08
12	SLU 46	-216	13	5617	-4.24	-5.99	-0.08
12	SLU 47	-216	13	5636	-3.98	-6.01	-0.08
12	SLU 48	-214	13	5619	-4.64	-5.9	-0.08
12	SLU 49	-217	13	5674	-4.29	-5.98	-0.08
12	SLU 50	-213	13	5600	-4.62	-5.86	-0.08
12	SLU 51	-215	13	5656	-4.27	-5.95	-0.08
12	SLU 52	-232	14	6041	-4.46	-6.41	-0.08
12	SLU 53	-230	15	6024	-5.12	-6.3	-0.08
12	SLU 54	-232	14	6079	-4.77	-6.39	-0.08
12	SLU 55	-233	14	6097	-4.51	-6.41	-0.08
12	SLU 56	-231	15	6080	-5.17	-6.3	-0.08
12	SLU 57	-233	15	6135	-4.82	-6.39	-0.08
12	SLU 58	-229	15	6062	-5.15	-6.26	-0.08
12	SLU 59	-232	14	6117	-4.8	-6.35	-0.08
12	SLU 60	-235	15	6147	-5.27	-6.44	-0.09
12	SLU 61	-237	15	6202	-4.92	-6.53	-0.09
12	SLU 62	-236	15	6203	-5.33	-6.44	-0.09
12	SLU 63	-238	15	6258	-4.97	-6.53	-0.09
12	SLU 64	-228	14	5844	-4.93	-6.33	-0.08
12	SLU 65	-232	14	5935	-4.34	-6.48	-0.08
12	SLU 66	-230	14	5918	-5	-6.37	-0.08
12	SLU 67	-233	14	5973	-4.65	-6.46	-0.08
12	SLU 68	-233	14	5992	-4.39	-6.47	-0.08
12	SLU 69	-231	14	5975	-5.05	-6.37	-0.08
12	SLU 70	-233	14	6030	-4.7	-6.45	-0.08
12	SLU 71	-230	14	5956	-5.03	-6.33	-0.08
12	SLU 72	-232	14	6012	-4.68	-6.41	-0.08
12	SLU 73	-249	15	6397	-4.87	-6.88	-0.09
12	SLU 74	-247	16	6380	-5.53	-6.77	-0.09
12	SLU 75	-249	16	6435	-5.18	-6.86	-0.09
12	SLU 76	-250	15	6453	-4.92	-6.88	-0.09
12	SLU 77	-247	16	6436	-5.58	-6.77	-0.09
12	SLU 78	-250	16	6491	-5.23	-6.86	-0.09
12	SLU 79	-246	16	6418	-5.56	-6.73	-0.09
12	SLU 80	-249	16	6473	-5.21	-6.82	-0.09
12	SLU 81	-252	16	6503	-5.68	-6.91	-0.09
12	SLU 82	-254	16	6558	-5.33	-7	-0.09
12	SLU 83	-252	16	6559	-5.74	-6.91	-0.09
12	SLU 84	-255	16	6614	-5.38	-6.99	-0.09
12	SLE RA 1	-172	11	4417	-3.7	-4.77	-0.06
12	SLE RA 2	-175	10	4478	-3.31	-4.87	-0.06
12	SLE RA 3	-173	11	4467	-3.75	-4.79	-0.06
12	SLE RA 4	-175	11	4503	-3.51	-4.85	-0.06
12	SLE RA 5	-175	10	4516	-3.34	-4.86	-0.06
12	SLE RA 6	-174	11	4504	-3.78	-4.79	-0.06
12	SLE RA 7	-175	11	4541	-3.55	-4.85	-0.06



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
12	SLE RA 8	-173	11	4492	-3.77	-4.77	-0.06
12	SLE RA 9	-175	11	4529	-3.53	-4.82	-0.06
12	SLE RA 10	-186	11	4786	-3.66	-5.13	-0.07
12	SLE RA 11	-184	12	4774	-4.1	-5.06	-0.07
12	SLE RA 12	-186	12	4811	-3.87	-5.12	-0.07
12	SLE RA 13	-186	11	4823	-3.69	-5.13	-0.07
12	SLE RA 14	-185	12	4812	-4.14	-5.06	-0.07
12	SLE RA 15	-186	12	4849	-3.9	-5.12	-0.07
12	SLE RA 16	-184	12	4800	-4.12	-5.04	-0.07
12	SLE RA 17	-185	12	4836	-3.89	-5.09	-0.07
12	SLE RA 18	-187	12	4856	-4.2	-5.15	-0.07
12	SLE RA 19	-189	12	4893	-3.97	-5.21	-0.07
12	SLE RA 20	-188	12	4894	-4.24	-5.15	-0.07
12	SLE RA 21	-190	12	4931	-4	-5.21	-0.07
12	SLE FR 1	-172	11	4417	-3.7	-4.77	-0.06
12	SLE FR 2	-172	11	4429	-3.62	-4.79	-0.06
12	SLE FR 3	-172	11	4432	-3.71	-4.77	-0.06
12	SLE FR 4	-177	11	4561	-3.77	-4.9	-0.06
12	SLE FR 5	-177	11	4564	-3.86	-4.88	-0.06
12	SLE FR 6	-180	11	4637	-3.95	-4.96	-0.06
12	SLE QP 1	-172	11	4417	-3.7	-4.77	-0.06
12	SLE QP 2	-177	11	4549	-3.85	-4.89	-0.06
12	SLD 1	97	11	4840	-4.76	6.96	-0.06
12	SLD 2	97	11	4840	-4.76	6.96	-0.06
12	SLD 3	195	6	3827	-0.61	10.33	-0.05
12	SLD 4	195	6	3827	-0.61	10.33	-0.05
12	SLD 5	-244	18	6173	-10.42	-6.44	-0.09
12	SLD 6	-244	18	6173	-10.42	-6.44	-0.09
12	SLD 7	84	2	2796	3.42	4.79	-0.04
12	SLD 8	84	2	2796	3.42	4.79	-0.04
12	SLD 9	-437	20	6302	-11.12	-14.56	-0.09
12	SLD 10	-437	20	6302	-11.12	-14.56	-0.09
12	SLD 11	-109	4	2925	2.72	-3.33	-0.04
12	SLD 12	-109	4	2925	2.72	-3.33	-0.04
12	SLD 13	-548	16	5270	-7.1	-20.1	-0.08
12	SLD 14	-548	16	5270	-7.1	-20.1	-0.08
12	SLD 15	-450	11	4257	-2.94	-16.73	-0.06
12	SLD 16	-450	11	4257	-2.94	-16.73	-0.06
12	SLV 1	456	10	5231	-5.95	22.56	-0.06
12	SLV 2	456	10	5231	-5.95	22.56	-0.06
12	SLV 3	688	-2	2859	3.79	30.49	-0.03
12	SLV 4	688	-2	2859	3.79	30.49	-0.03
12	SLV 5	-337	28	8352	-19.25	-8.68	-0.12
12	SLV 6	-337	28	8352	-19.25	-8.68	-0.12
12	SLV 7	433	-10	443	13.21	17.75	0
12	SLV 8	433	-10	443	13.21	17.75	0
12	SLV 9	-786	33	8654	-20.91	-27.52	-0.13
12	SLV 10	-786	33	8654	-20.91	-27.52	-0.13
12	SLV 11	-16	-6	746	11.55	-1.09	-0.01
12	SLV 12	-16	-6	746	11.55	-1.09	-0.01
12	SLV 13	-1041	24	6239	-11.49	-40.26	-0.1
12	SLV 14	-1041	24	6239	-11.49	-40.26	-0.1
12	SLV 15	-809	12	3866	-1.75	-32.33	-0.06
12	SLV 16	-809	12	3866	-1.75	-32.33	-0.06
13	SLU 1	-129	2	3849	-2.27	-3.12	0
13	SLU 2	-134	1	3933	-1.06	-3.32	0.01
13	SLU 3	-129	2	3914	-2.32	-3.1	0
13	SLU 4	-133	1	3965	-1.59	-3.22	0
13	SLU 5	-134	1	3983	-1.1	-3.27	0.01
13	SLU 6	-129	2	3964	-2.35	-3.05	0
13	SLU 7	-132	1	4015	-1.63	-3.17	0
13	SLU 8	-128	2	3948	-2.33	-3.02	0
13	SLU 9	-131	1	3999	-1.61	-3.14	0
13	SLU 10	-145	1	4342	-1.43	-3.54	0.01
13	SLU 11	-140	3	4324	-2.69	-3.32	0
13	SLU 12	-144	2	4374	-1.96	-3.44	0
13	SLU 13	-145	1	4392	-1.47	-3.49	0.01
13	SLU 14	-140	3	4374	-2.72	-3.27	0
13	SLU 15	-143	2	4424	-2	-3.39	0
13	SLU 16	-139	3	4358	-2.7	-3.24	0
13	SLU 17	-142	2	4409	-1.98	-3.36	0
13	SLU 18	-144	3	4434	-2.8	-3.43	0
13	SLU 19	-148	2	4484	-2.08	-3.55	0
13	SLU 20	-144	3	4484	-2.83	-3.38	0
13	SLU 21	-147	2	4534	-2.11	-3.5	0
13	SLU 22	-141	3	4160	-2.57	-3.41	0
13	SLU 23	-146	1	4244	-1.36	-3.61	0.01
13	SLU 24	-141	3	4226	-2.62	-3.39	0
13	SLU 25	-145	2	4276	-1.89	-3.51	0
13	SLU 26	-146	1	4294	-1.4	-3.56	0.01
13	SLU 27	-141	3	4276	-2.65	-3.34	0
13	SLU 28	-144	2	4326	-1.93	-3.46	0
13	SLU 29	-140	3	4260	-2.63	-3.31	0
13	SLU 30	-143	2	4311	-1.91	-3.43	0
13	SLU 31	-157	2	4654	-1.73	-3.83	0.01
13	SLU 32	-152	3	4635	-2.99	-3.61	0
13	SLU 33	-156	2	4686	-2.26	-3.73	0
13	SLU 34	-157	2	4704	-1.77	-3.78	0.01
13	SLU 35	-152	3	4685	-3.02	-3.56	0
13	SLU 36	-155	2	4736	-2.3	-3.68	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
13	SLU 37	-151	3	4669	-3	-3.53	0
13	SLU 38	-154	2	4720	-2.28	-3.65	0
13	SLU 39	-156	3	4745	-3.1	-3.72	0
13	SLU 40	-160	2	4796	-2.38	-3.84	0
13	SLU 41	-156	3	4795	-3.13	-3.67	0
13	SLU 42	-159	2	4846	-2.41	-3.79	0
13	SLU 43	-163	3	4896	-2.85	-3.95	0
13	SLU 44	-169	1	4981	-1.64	-4.16	0.01
13	SLU 45	-164	3	4962	-2.89	-3.94	0
13	SLU 46	-167	2	5013	-2.17	-4.06	0
13	SLU 47	-168	1	5031	-1.67	-4.11	0.01
13	SLU 48	-163	3	5012	-2.93	-3.89	0
13	SLU 49	-167	2	5063	-2.2	-4.01	0
13	SLU 50	-162	3	4996	-2.91	-3.85	0
13	SLU 51	-166	2	5047	-2.19	-3.98	0
13	SLU 52	-180	2	5390	-2.01	-4.38	0.01
13	SLU 53	-175	3	5372	-3.26	-4.15	0
13	SLU 54	-178	2	5422	-2.54	-4.28	0
13	SLU 55	-179	2	5440	-2.04	-4.33	0.01
13	SLU 56	-174	3	5422	-3.3	-4.1	0
13	SLU 57	-178	2	5472	-2.57	-4.23	0
13	SLU 58	-173	3	5406	-3.28	-4.07	0
13	SLU 59	-177	2	5456	-2.56	-4.19	0
13	SLU 60	-179	4	5481	-3.38	-4.27	0
13	SLU 61	-182	3	5532	-2.65	-4.39	0
13	SLU 62	-178	4	5531	-3.41	-4.22	0
13	SLU 63	-182	3	5582	-2.68	-4.34	0
13	SLU 64	-175	3	5208	-3.15	-4.25	0
13	SLU 65	-181	2	5292	-1.94	-4.45	0.01
13	SLU 66	-176	3	5273	-3.19	-4.23	0
13	SLU 67	-179	2	5324	-2.47	-4.35	0
13	SLU 68	-180	2	5342	-1.97	-4.4	0.01
13	SLU 69	-175	3	5323	-3.23	-4.18	0
13	SLU 70	-179	2	5374	-2.5	-4.3	0
13	SLU 71	-174	3	5308	-3.21	-4.14	0
13	SLU 72	-178	2	5358	-2.49	-4.27	0
13	SLU 73	-192	2	5702	-2.31	-4.67	0.01
13	SLU 74	-187	4	5683	-3.56	-4.45	0
13	SLU 75	-190	3	5734	-2.84	-4.57	0
13	SLU 76	-191	2	5752	-2.34	-4.62	0.01
13	SLU 77	-186	4	5733	-3.6	-4.4	0
13	SLU 78	-190	3	5784	-2.87	-4.52	0
13	SLU 79	-185	4	5717	-3.58	-4.36	0
13	SLU 80	-189	3	5768	-2.86	-4.49	0
13	SLU 81	-191	4	5793	-3.68	-4.56	0
13	SLU 82	-194	3	5843	-2.95	-4.68	0
13	SLU 83	-190	4	5843	-3.71	-4.51	0
13	SLU 84	-194	3	5893	-2.98	-4.63	0
13	SLE RA 1	-132	2	3937	-2.35	-3.2	0
13	SLE RA 2	-136	1	3994	-1.55	-3.34	0
13	SLE RA 3	-132	2	3981	-2.39	-3.19	0
13	SLE RA 4	-135	2	4015	-1.9	-3.27	0
13	SLE RA 5	-136	1	4027	-1.57	-3.3	0
13	SLE RA 6	-132	2	4015	-2.41	-3.16	0
13	SLE RA 7	-135	2	4048	-1.93	-3.24	0
13	SLE RA 8	-132	2	4004	-2.4	-3.13	0
13	SLE RA 9	-134	2	4038	-1.91	-3.22	0
13	SLE RA 10	-143	2	4267	-1.8	-3.48	0
13	SLE RA 11	-140	3	4254	-2.63	-3.34	0
13	SLE RA 12	-142	2	4288	-2.15	-3.42	0
13	SLE RA 13	-143	2	4300	-1.82	-3.45	0
13	SLE RA 14	-140	3	4288	-2.65	-3.3	0
13	SLE RA 15	-142	2	4321	-2.17	-3.38	0
13	SLE RA 16	-139	3	4277	-2.64	-3.28	0
13	SLE RA 17	-141	2	4311	-2.16	-3.36	0
13	SLE RA 18	-142	3	4328	-2.71	-3.41	0
13	SLE RA 19	-145	2	4361	-2.23	-3.49	0
13	SLE RA 20	-142	3	4361	-2.73	-3.38	0
13	SLE RA 21	-145	2	4395	-2.25	-3.46	0
13	SLE FR 1	-132	2	3937	-2.35	-3.2	0
13	SLE FR 2	-133	2	3949	-2.19	-3.23	0
13	SLE FR 3	-132	2	3951	-2.36	-3.19	0
13	SLE FR 4	-136	2	4066	-2.3	-3.29	0
13	SLE FR 5	-135	3	4068	-2.47	-3.25	0
13	SLE FR 6	-137	3	4133	-2.53	-3.31	0
13	SLE QP 1	-132	2	3937	-2.35	-3.2	0
13	SLE QP 2	-135	3	4055	-2.46	-3.26	0
13	SLD 1	204	5	4323	-4.52	11.36	0.03
13	SLD 2	204	5	4323	-4.52	11.36	0.03
13	SLD 3	296	-6	3467	3.24	14.69	0
13	SLD 4	296	-6	3467	3.24	14.69	0
13	SLD 5	-173	20	5433	-14.85	-3.93	0.06
13	SLD 6	-173	20	5433	-14.85	-3.93	0.06
13	SLD 7	133	-17	2581	11.02	7.17	-0.05
13	SLD 8	133	-17	2581	11.02	7.17	-0.05
13	SLD 9	-404	22	5528	-15.94	-13.7	0.05
13	SLD 10	-404	22	5528	-15.94	-13.7	0.05
13	SLD 11	-98	-15	2676	9.93	-2.6	-0.05
13	SLD 12	-98	-15	2676	9.93	-2.6	-0.05
13	SLD 13	-566	11	4642	-8.16	-21.21	0.01



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
13	SLD 14	-566	11	4642	-8.16	-21.21	0.01
13	SLD 15	-474	0	3786	-0.4	-17.88	-0.03
13	SLD 16	-474	0	3786	-0.4	-17.88	-0.03
13	SLV 1	652	8	4683	-7.25	30.66	0.07
13	SLV 2	652	8	4683	-7.25	30.66	0.07
13	SLV 3	868	-18	2679	10.98	38.55	-0.01
13	SLV 4	868	-18	2679	10.98	38.55	-0.01
13	SLV 5	-228	44	7283	-31.55	-5.05	0.13
13	SLV 6	-228	44	7283	-31.55	-5.05	0.13
13	SLV 7	494	-43	602	29.22	21.24	-0.11
13	SLV 8	494	-43	602	29.22	21.24	-0.11
13	SLV 9	-765	48	7507	-34.15	-27.77	0.12
13	SLV 10	-765	48	7507	-34.15	-27.77	0.12
13	SLV 11	-43	-38	826	26.63	-1.48	-0.13
13	SLV 12	-43	-38	826	26.63	-1.48	-0.13
13	SLV 13	-1139	23	5430	-15.9	-45.08	0.01
13	SLV 14	-1139	23	5430	-15.9	-45.08	0.01
13	SLV 15	-922	-3	3426	2.33	-37.19	-0.06
13	SLV 16	-922	-3	3426	2.33	-37.19	-0.06
14	SLU 1	-17	2	3644	-1.94	-0.61	0
14	SLU 2	-21	0	3724	-0.37	-0.8	0
14	SLU 3	-15	2	3706	-1.99	-0.53	0
14	SLU 4	-17	1	3755	-1.04	-0.65	0
14	SLU 5	-19	0	3772	-0.4	-0.7	0
14	SLU 6	-12	2	3754	-2.01	-0.44	0
14	SLU 7	-15	1	3803	-1.07	-0.55	0
14	SLU 8	-12	2	3740	-2	-0.42	0
14	SLU 9	-15	1	3788	-1.06	-0.53	0
14	SLU 10	-21	0	4114	-0.71	-0.79	0
14	SLU 11	-14	2	4096	-2.32	-0.53	-0.01
14	SLU 12	-17	1	4145	-1.38	-0.64	0
14	SLU 13	-18	0	4162	-0.74	-0.69	0
14	SLU 14	-12	2	4144	-2.35	-0.43	-0.01
14	SLU 15	-15	1	4193	-1.41	-0.54	0
14	SLU 16	-11	2	4130	-2.34	-0.41	-0.01
14	SLU 17	-14	1	4178	-1.4	-0.52	0
14	SLU 18	-16	2	4201	-2.42	-0.6	-0.01
14	SLU 19	-19	1	4249	-1.48	-0.71	0
14	SLU 20	-14	2	4249	-2.45	-0.5	-0.01
14	SLU 21	-17	1	4297	-1.51	-0.61	0
14	SLU 22	-18	2	3937	-2.22	-0.65	-0.01
14	SLU 23	-22	0	4017	-0.66	-0.84	0
14	SLU 24	-16	2	3999	-2.27	-0.58	-0.01
14	SLU 25	-19	1	4048	-1.33	-0.69	0
14	SLU 26	-20	0	4065	-0.68	-0.74	0
14	SLU 27	-13	2	4048	-2.3	-0.48	-0.01
14	SLU 28	-16	1	4096	-1.35	-0.59	0
14	SLU 29	-13	2	4033	-2.28	-0.46	-0.01
14	SLU 30	-16	1	4081	-1.34	-0.57	0
14	SLU 31	-22	0	4407	-0.99	-0.83	0
14	SLU 32	-16	2	4389	-2.6	-0.57	-0.01
14	SLU 33	-18	1	4438	-1.66	-0.68	0
14	SLU 34	-20	0	4455	-1.02	-0.74	0
14	SLU 35	-13	2	4438	-2.63	-0.47	-0.01
14	SLU 36	-16	1	4486	-1.69	-0.59	0
14	SLU 37	-13	2	4423	-2.62	-0.45	-0.01
14	SLU 38	-15	1	4471	-1.68	-0.57	0
14	SLU 39	-17	3	4494	-2.71	-0.64	-0.01
14	SLU 40	-20	1	4542	-1.77	-0.76	0
14	SLU 41	-15	3	4542	-2.73	-0.55	-0.01
14	SLU 42	-18	1	4590	-1.79	-0.66	0
14	SLU 43	-21	2	4636	-2.43	-0.78	-0.01
14	SLU 44	-26	0	4717	-0.86	-0.97	0
14	SLU 45	-19	2	4699	-2.47	-0.7	-0.01
14	SLU 46	-22	1	4747	-1.53	-0.81	0
14	SLU 47	-23	0	4765	-0.89	-0.87	0
14	SLU 48	-17	2	4747	-2.5	-0.6	-0.01
14	SLU 49	-20	1	4795	-1.56	-0.72	0
14	SLU 50	-16	2	4732	-2.48	-0.58	-0.01
14	SLU 51	-19	1	4781	-1.54	-0.7	0
14	SLU 52	-26	0	5107	-1.2	-0.96	0
14	SLU 53	-19	3	5089	-2.81	-0.69	-0.01
14	SLU 54	-22	1	5137	-1.87	-0.81	0
14	SLU 55	-23	0	5155	-1.23	-0.86	0
14	SLU 56	-17	3	5137	-2.84	-0.6	-0.01
14	SLU 57	-19	1	5185	-1.9	-0.71	0
14	SLU 58	-16	3	5122	-2.82	-0.58	-0.01
14	SLU 59	-19	1	5171	-1.88	-0.69	0
14	SLU 60	-21	3	5193	-2.91	-0.77	-0.01
14	SLU 61	-24	1	5242	-1.97	-0.88	0
14	SLU 62	-18	3	5241	-2.94	-0.67	-0.01
14	SLU 63	-21	1	5290	-2	-0.78	0
14	SLU 64	-22	2	4929	-2.71	-0.82	-0.01
14	SLU 65	-27	0	5010	-1.14	-1.01	0
14	SLU 66	-20	3	4992	-2.75	-0.75	-0.01
14	SLU 67	-23	1	5040	-1.81	-0.86	0
14	SLU 68	-25	0	5058	-1.17	-0.91	0
14	SLU 69	-18	3	5040	-2.78	-0.65	-0.01
14	SLU 70	-21	1	5088	-1.84	-0.76	0
14	SLU 71	-18	3	5025	-2.77	-0.63	-0.01



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
14	SLU 72	-20	1	5074	-1.83	-0.74	0
14	SLU 73	-27	1	5400	-1.48	-1	0
14	SLU 74	-20	3	5382	-3.09	-0.74	-0.01
14	SLU 75	-23	2	5430	-2.15	-0.85	0
14	SLU 76	-24	1	5448	-1.51	-0.91	0
14	SLU 77	-18	3	5430	-3.12	-0.64	-0.01
14	SLU 78	-20	2	5478	-2.18	-0.75	0
14	SLU 79	-17	3	5415	-3.1	-0.62	-0.01
14	SLU 80	-20	2	5464	-2.16	-0.73	0
14	SLU 81	-22	3	5486	-3.19	-0.81	-0.01
14	SLU 82	-25	2	5535	-2.25	-0.92	0
14	SLU 83	-20	3	5534	-3.22	-0.71	-0.01
14	SLU 84	-22	2	5583	-2.28	-0.83	0
14	SLE RA 1	-17	2	3727	-2.02	-0.62	0
14	SLE RA 2	-20	0	3781	-0.98	-0.75	0
14	SLE RA 3	-16	2	3769	-2.05	-0.57	0
14	SLE RA 4	-18	1	3801	-1.42	-0.65	0
14	SLE RA 5	-18	0	3813	-1	-0.68	0
14	SLE RA 6	-14	2	3801	-2.07	-0.51	0
14	SLE RA 7	-16	1	3833	-1.44	-0.58	0
14	SLE RA 8	-14	2	3791	-2.06	-0.49	0
14	SLE RA 9	-16	1	3824	-1.43	-0.57	0
14	SLE RA 10	-20	1	4041	-1.2	-0.74	0
14	SLE RA 11	-16	2	4029	-2.28	-0.57	-0.01
14	SLE RA 12	-17	1	4061	-1.65	-0.64	0
14	SLE RA 13	-18	1	4073	-1.22	-0.68	0
14	SLE RA 14	-14	2	4061	-2.3	-0.5	-0.01
14	SLE RA 15	-16	1	4093	-1.67	-0.58	0
14	SLE RA 16	-14	2	4051	-2.29	-0.49	-0.01
14	SLE RA 17	-15	1	4084	-1.66	-0.56	0
14	SLE RA 18	-17	2	4099	-2.34	-0.62	-0.01
14	SLE RA 19	-19	1	4131	-1.72	-0.69	0
14	SLE RA 20	-15	2	4131	-2.36	-0.55	-0.01
14	SLE RA 21	-17	1	4163	-1.74	-0.63	0
14	SLE FR 1	-17	2	3727	-2.02	-0.62	0
14	SLE FR 2	-18	2	3738	-1.81	-0.65	0
14	SLE FR 3	-16	2	3740	-2.03	-0.6	0
14	SLE FR 4	-18	2	3849	-1.91	-0.64	0
14	SLE FR 5	-16	2	3852	-2.13	-0.59	-0.01
14	SLE FR 6	-17	2	3913	-2.18	-0.62	-0.01
14	SLE QP 1	-17	2	3727	-2.02	-0.62	0
14	SLE QP 2	-17	2	3839	-2.12	-0.62	0
14	SLD 1	365	6	4116	-4.97	15.09	-0.02
14	SLD 2	365	6	4116	-4.97	15.09	-0.02
14	SLD 3	439	-9	3339	5.07	18.06	0.02
14	SLD 4	439	-9	3339	5.07	18.06	0.02
14	SLD 5	-14	26	5100	-18.19	-0.4	-0.07
14	SLD 6	-14	26	5100	-18.19	-0.4	-0.07
14	SLD 7	231	-24	2511	15.26	9.48	0.06
14	SLD 8	231	-24	2511	15.26	9.48	0.06
14	SLD 9	-265	28	5166	-19.5	-10.72	-0.07
14	SLD 10	-265	28	5166	-19.5	-10.72	-0.07
14	SLD 11	-20	-22	2578	13.96	-0.83	0.06
14	SLD 12	-20	-22	2578	13.96	-0.83	0.06
14	SLD 13	-472	13	4338	-9.31	-19.3	-0.03
14	SLD 14	-472	13	4338	-9.31	-19.3	-0.03
14	SLD 15	-399	-2	3562	0.73	-16.33	0.01
14	SLD 16	-399	-2	3562	0.73	-16.33	0.01
14	SLV 1	870	12	4484	-8.75	35.86	-0.03
14	SLV 2	870	12	4484	-8.75	35.86	-0.03
14	SLV 3	1045	-24	2666	14.82	42.91	0.07
14	SLV 4	1045	-24	2666	14.82	42.91	0.07
14	SLV 5	-16	59	6790	-39.87	-0.36	-0.16
14	SLV 6	-16	59	6790	-39.87	-0.36	-0.16
14	SLV 7	566	-60	729	38.72	23.13	0.16
14	SLV 8	566	-60	729	38.72	23.13	0.16
14	SLV 9	-600	64	6948	-42.96	-24.37	-0.17
14	SLV 10	-600	64	6948	-42.96	-24.37	-0.17
14	SLV 11	-18	-55	887	35.63	-0.88	0.15
14	SLV 12	-18	-55	887	35.63	-0.88	0.15
14	SLV 13	-1078	28	5011	-19.06	-44.15	-0.08
14	SLV 14	-1078	28	5011	-19.06	-44.15	-0.08
14	SLV 15	-904	-8	3193	4.52	-37.1	0.02
14	SLV 16	-904	-8	3193	4.52	-37.1	0.02
15	SLU 1	142	2	3687	-1.96	5.47	-0.01
15	SLU 2	140	0	3768	-0.37	5.39	0
15	SLU 3	147	2	3752	-2	5.68	-0.01
15	SLU 4	146	0	3801	-1.05	5.63	0
15	SLU 5	145	0	3819	-0.41	5.58	0
15	SLU 6	152	2	3803	-2.03	5.87	-0.01
15	SLU 7	151	0	3852	-1.08	5.82	0
15	SLU 8	152	2	3788	-2.02	5.86	-0.01
15	SLU 9	151	0	3837	-1.07	5.81	0
15	SLU 10	155	0	4164	-0.72	5.97	0
15	SLU 11	162	2	4148	-2.35	6.26	-0.01
15	SLU 12	161	1	4197	-1.4	6.21	0
15	SLU 13	160	0	4215	-0.75	6.17	0
15	SLU 14	167	2	4199	-2.38	6.46	-0.01
15	SLU 15	166	1	4248	-1.43	6.41	0
15	SLU 16	167	2	4184	-2.36	6.44	-0.01



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
15	SLU 17	166	1	4233	-1.41	6.39	0
15	SLU 18	164	2	4253	-2.45	6.31	-0.01
15	SLU 19	163	1	4302	-1.5	6.26	0
15	SLU 20	168	2	4303	-2.48	6.5	-0.01
15	SLU 21	167	1	4352	-1.53	6.45	0
15	SLU 22	156	2	3985	-2.25	6	-0.01
15	SLU 23	154	0	4066	-0.66	5.92	0
15	SLU 24	161	2	4050	-2.29	6.21	-0.01
15	SLU 25	160	1	4099	-1.34	6.16	0
15	SLU 26	159	0	4116	-0.69	6.11	0
15	SLU 27	166	2	4100	-2.32	6.4	-0.01
15	SLU 28	165	1	4149	-1.37	6.35	0
15	SLU 29	165	2	4086	-2.31	6.39	-0.01
15	SLU 30	165	1	4134	-1.36	6.34	0
15	SLU 31	169	0	4462	-1.01	6.5	0
15	SLU 32	176	2	4446	-2.63	6.79	-0.01
15	SLU 33	175	1	4495	-1.69	6.74	-0.01
15	SLU 34	174	0	4513	-1.04	6.7	0
15	SLU 35	181	2	4496	-2.67	6.99	-0.01
15	SLU 36	180	1	4545	-1.72	6.94	-0.01
15	SLU 37	181	2	4482	-2.65	6.98	-0.01
15	SLU 38	180	1	4530	-1.7	6.93	-0.01
15	SLU 39	177	3	4550	-2.74	6.84	-0.01
15	SLU 40	176	1	4599	-1.79	6.79	-0.01
15	SLU 41	182	3	4601	-2.77	7.03	-0.01
15	SLU 42	181	1	4650	-1.82	6.98	-0.01
15	SLU 43	180	2	4691	-2.44	6.93	-0.01
15	SLU 44	178	0	4772	-0.86	6.85	0
15	SLU 45	185	2	4756	-2.49	7.14	-0.01
15	SLU 46	184	1	4805	-1.54	7.09	0
15	SLU 47	183	0	4823	-0.89	7.04	0
15	SLU 48	190	2	4807	-2.52	7.33	-0.01
15	SLU 49	189	1	4856	-1.57	7.28	0
15	SLU 50	190	2	4792	-2.51	7.32	-0.01
15	SLU 51	189	1	4841	-1.56	7.27	0
15	SLU 52	193	0	5169	-1.21	7.43	0
15	SLU 53	200	3	5152	-2.83	7.72	-0.01
15	SLU 54	199	1	5201	-1.88	7.67	-0.01
15	SLU 55	198	0	5219	-1.24	7.63	0
15	SLU 56	205	3	5203	-2.86	7.91	-0.01
15	SLU 57	204	1	5252	-1.91	7.86	-0.01
15	SLU 58	205	3	5188	-2.85	7.9	-0.01
15	SLU 59	204	1	5237	-1.9	7.85	-0.01
15	SLU 60	201	3	5257	-2.93	7.76	-0.01
15	SLU 61	200	1	5306	-1.99	7.71	-0.01
15	SLU 62	206	3	5307	-2.96	7.96	-0.01
15	SLU 63	205	1	5356	-2.02	7.91	-0.01
15	SLU 64	193	2	4989	-2.73	7.46	-0.01
15	SLU 65	192	0	5070	-1.15	7.38	0
15	SLU 66	199	2	5054	-2.78	7.67	-0.01
15	SLU 67	198	1	5103	-1.83	7.62	-0.01
15	SLU 68	197	0	5121	-1.18	7.57	0
15	SLU 69	204	2	5104	-2.81	7.86	-0.01
15	SLU 70	203	1	5153	-1.86	7.81	-0.01
15	SLU 71	203	2	5090	-2.79	7.85	-0.01
15	SLU 72	202	1	5139	-1.85	7.8	-0.01
15	SLU 73	207	1	5466	-1.49	7.96	0
15	SLU 74	214	3	5450	-3.12	8.25	-0.01
15	SLU 75	213	2	5499	-2.17	8.2	-0.01
15	SLU 76	212	1	5517	-1.53	8.16	0
15	SLU 77	219	3	5500	-3.15	8.45	-0.01
15	SLU 78	218	2	5549	-2.2	8.4	-0.01
15	SLU 79	218	3	5486	-3.14	8.43	-0.01
15	SLU 80	218	2	5535	-2.19	8.38	-0.01
15	SLU 81	215	3	5555	-3.22	8.3	-0.01
15	SLU 82	214	2	5603	-2.27	8.25	-0.01
15	SLU 83	220	3	5605	-3.25	8.49	-0.01
15	SLU 84	219	2	5654	-2.31	8.44	-0.01
15	SLE RA 1	146	2	3772	-2.04	5.62	-0.01
15	SLE RA 2	145	0	3826	-0.98	5.57	0
15	SLE RA 3	149	2	3816	-2.07	5.76	-0.01
15	SLE RA 4	149	1	3848	-1.44	5.73	0
15	SLE RA 5	148	0	3860	-1	5.7	0
15	SLE RA 6	153	2	3849	-2.09	5.89	-0.01
15	SLE RA 7	152	1	3882	-1.46	5.86	0
15	SLE RA 8	152	2	3839	-2.08	5.88	-0.01
15	SLE RA 9	152	1	3872	-1.45	5.85	0
15	SLE RA 10	155	1	4090	-1.21	5.96	0
15	SLE RA 11	159	2	4080	-2.3	6.15	-0.01
15	SLE RA 12	159	1	4112	-1.67	6.12	0
15	SLE RA 13	158	1	4124	-1.23	6.09	0
15	SLE RA 14	163	2	4113	-2.32	6.28	-0.01
15	SLE RA 15	162	1	4146	-1.69	6.25	-0.01
15	SLE RA 16	162	2	4103	-2.31	6.27	-0.01
15	SLE RA 17	162	1	4136	-1.68	6.24	0
15	SLE RA 18	160	2	4149	-2.37	6.18	-0.01
15	SLE RA 19	160	1	4182	-1.73	6.15	-0.01
15	SLE RA 20	164	2	4183	-2.39	6.31	-0.01
15	SLE RA 21	163	1	4215	-1.75	6.28	-0.01
15	SLE FR 1	146	2	3772	-2.04	5.62	-0.01



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
15	SLE FR 2	146	2	3783	-1.83	5.61	-0.01
15	SLE FR 3	147	2	3786	-2.05	5.67	-0.01
15	SLE FR 4	150	2	3896	-1.93	5.78	-0.01
15	SLE FR 5	151	2	3899	-2.14	5.84	-0.01
15	SLE FR 6	153	2	3961	-2.2	5.9	-0.01
15	SLE QP 1	146	2	3772	-2.04	5.62	-0.01
15	SLE QP 2	150	2	3885	-2.14	5.79	-0.01
15	SLD 1	591	13	4441	-9.36	24.04	-0.01
15	SLD 2	591	13	4441	-9.36	24.04	-0.01
15	SLD 3	530	-3	3677	0.77	21.5	0.01
15	SLD 4	530	-3	3677	0.77	21.5	0.01
15	SLD 5	375	29	5211	-19.67	15.12	-0.05
15	SLD 6	375	29	5211	-19.67	15.12	-0.05
15	SLD 7	171	-23	2664	14.1	6.65	0.04
15	SLD 8	171	-23	2664	14.1	6.65	0.04
15	SLD 9	129	27	5107	-18.37	4.93	-0.06
15	SLD 10	129	27	5107	-18.37	4.93	-0.06
15	SLD 11	-75	-25	2559	15.4	-3.54	0.04
15	SLD 12	-75	-25	2559	15.4	-3.54	0.04
15	SLD 13	-229	6	4093	-5.04	-9.92	-0.03
15	SLD 14	-229	6	4093	-5.04	-9.92	-0.03
15	SLD 15	-291	-9	3329	5.09	-12.46	0
15	SLD 16	-291	-9	3329	5.09	-12.46	0
15	SLV 1	1178	28	5189	-19.18	48.34	-0.02
15	SLV 2	1178	28	5189	-19.18	48.34	-0.02
15	SLV 3	1031	-8	3401	4.62	42.26	0.04
15	SLV 4	1031	-8	3401	4.62	42.26	0.04
15	SLV 5	680	65	6989	-43.35	27.77	-0.11
15	SLV 6	680	65	6989	-43.35	27.77	-0.11
15	SLV 7	192	-56	1027	35.99	7.51	0.11
15	SLV 8	192	-56	1027	35.99	7.51	0.11
15	SLV 9	108	60	6743	-40.26	4.07	-0.12
15	SLV 10	108	60	6743	-40.26	4.07	-0.12
15	SLV 11	-380	-61	781	39.07	-16.19	0.1
15	SLV 12	-380	-61	781	39.07	-16.19	0.1
15	SLV 13	-731	12	4370	-8.89	-30.68	-0.05
15	SLV 14	-731	12	4370	-8.89	-30.68	-0.05
15	SLV 15	-877	-24	2581	14.91	-36.76	0.01
15	SLV 16	-877	-24	2581	14.91	-36.76	0.01
16	SLU 1	224	2	3959	-2.35	6.9	-0.02
16	SLU 2	224	1	4046	-1.12	6.84	-0.02
16	SLU 3	231	2	4031	-2.41	7.12	-0.02
16	SLU 4	231	1	4083	-1.67	7.09	-0.02
16	SLU 5	230	1	4102	-1.16	7.04	-0.02
16	SLU 6	237	2	4087	-2.45	7.32	-0.02
16	SLU 7	237	1	4140	-1.71	7.29	-0.02
16	SLU 8	236	2	4071	-2.43	7.3	-0.02
16	SLU 9	236	1	4124	-1.69	7.27	-0.02
16	SLU 10	246	1	4470	-1.5	7.48	-0.02
16	SLU 11	252	3	4455	-2.8	7.76	-0.02
16	SLU 12	252	2	4508	-2.06	7.72	-0.02
16	SLU 13	252	1	4526	-1.54	7.68	-0.02
16	SLU 14	258	3	4512	-2.84	7.96	-0.02
16	SLU 15	258	2	4564	-2.1	7.92	-0.02
16	SLU 16	257	3	4496	-2.82	7.93	-0.02
16	SLU 17	257	2	4548	-2.08	7.9	-0.02
16	SLU 18	255	3	4565	-2.91	7.81	-0.02
16	SLU 19	255	2	4617	-2.16	7.78	-0.02
16	SLU 20	261	3	4621	-2.95	8.01	-0.02
16	SLU 21	261	2	4673	-2.2	7.98	-0.02
16	SLU 22	246	3	4282	-2.68	7.57	-0.02
16	SLU 23	246	1	4369	-1.44	7.51	-0.02
16	SLU 24	252	3	4354	-2.73	7.79	-0.02
16	SLU 25	252	2	4406	-1.99	7.76	-0.02
16	SLU 26	252	1	4425	-1.48	7.71	-0.02
16	SLU 27	258	3	4411	-2.77	7.99	-0.02
16	SLU 28	258	2	4463	-2.03	7.96	-0.02
16	SLU 29	257	3	4395	-2.76	7.97	-0.02
16	SLU 30	257	2	4447	-2.02	7.94	-0.02
16	SLU 31	267	1	4793	-1.83	8.15	-0.02
16	SLU 32	274	3	4778	-3.12	8.43	-0.02
16	SLU 33	274	2	4831	-2.38	8.39	-0.02
16	SLU 34	273	2	4849	-1.87	8.35	-0.02
16	SLU 35	280	3	4835	-3.16	8.63	-0.02
16	SLU 36	280	2	4887	-2.42	8.59	-0.02
16	SLU 37	279	3	4819	-3.14	8.61	-0.02
16	SLU 38	279	2	4871	-2.4	8.57	-0.02
16	SLU 39	277	3	4888	-3.23	8.48	-0.02
16	SLU 40	277	2	4940	-2.49	8.45	-0.02
16	SLU 41	282	3	4944	-3.27	8.68	-0.02
16	SLU 42	282	2	4996	-2.53	8.65	-0.02
16	SLU 43	284	3	5036	-2.95	8.74	-0.02
16	SLU 44	284	1	5123	-1.71	8.68	-0.02
16	SLU 45	291	3	5108	-3	8.96	-0.02
16	SLU 46	291	2	5160	-2.26	8.93	-0.02
16	SLU 47	290	1	5179	-1.75	8.88	-0.02
16	SLU 48	296	3	5164	-3.04	9.16	-0.02
16	SLU 49	296	2	5217	-2.3	9.13	-0.02
16	SLU 50	296	3	5148	-3.03	9.14	-0.02
16	SLU 51	296	2	5201	-2.28	9.1	-0.02



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
16	SLU 52	305	2	5547	-2.1	9.32	-0.02
16	SLU 53	312	3	5532	-3.39	9.6	-0.02
16	SLU 54	312	2	5584	-2.65	9.56	-0.02
16	SLU 55	311	2	5603	-2.14	9.52	-0.02
16	SLU 56	318	3	5589	-3.43	9.8	-0.02
16	SLU 57	318	2	5641	-2.69	9.76	-0.02
16	SLU 58	317	3	5573	-3.41	9.77	-0.02
16	SLU 59	317	2	5625	-2.67	9.74	-0.02
16	SLU 60	315	3	5642	-3.5	9.65	-0.02
16	SLU 61	315	2	5694	-2.76	9.62	-0.02
16	SLU 62	321	3	5698	-3.54	9.85	-0.02
16	SLU 63	321	2	5750	-2.8	9.82	-0.02
16	SLU 64	306	3	5359	-3.27	9.41	-0.02
16	SLU 65	306	2	5446	-2.03	9.35	-0.02
16	SLU 66	312	3	5431	-3.33	9.63	-0.02
16	SLU 67	312	2	5483	-2.59	9.6	-0.02
16	SLU 68	311	2	5502	-2.07	9.55	-0.02
16	SLU 69	318	3	5487	-3.37	9.83	-0.02
16	SLU 70	318	2	5540	-2.63	9.8	-0.02
16	SLU 71	317	3	5471	-3.35	9.81	-0.02
16	SLU 72	317	2	5524	-2.61	9.78	-0.02
16	SLU 73	327	2	5870	-2.42	9.99	-0.02
16	SLU 74	334	4	5855	-3.72	10.27	-0.03
16	SLU 75	334	3	5908	-2.97	10.23	-0.02
16	SLU 76	333	2	5926	-2.46	10.19	-0.02
16	SLU 77	340	4	5912	-3.76	10.47	-0.03
16	SLU 78	340	3	5964	-3.01	10.43	-0.03
16	SLU 79	339	4	5896	-3.74	10.44	-0.03
16	SLU 80	339	3	5948	-3	10.41	-0.02
16	SLU 81	336	4	5965	-3.82	10.32	-0.03
16	SLU 82	336	3	6017	-3.08	10.29	-0.03
16	SLU 83	342	4	6021	-3.86	10.52	-0.03
16	SLU 84	342	3	6073	-3.12	10.49	-0.03
16	SLE RA 1	230	2	4051	-2.44	7.09	-0.02
16	SLE RA 2	230	1	4109	-1.62	7.05	-0.02
16	SLE RA 3	235	2	4099	-2.48	7.24	-0.02
16	SLE RA 4	235	2	4134	-1.99	7.22	-0.02
16	SLE RA 5	234	1	4147	-1.65	7.19	-0.02
16	SLE RA 6	239	2	4137	-2.51	7.37	-0.02
16	SLE RA 7	239	2	4172	-2.02	7.35	-0.02
16	SLE RA 8	238	2	4126	-2.5	7.36	-0.02
16	SLE RA 9	238	2	4161	-2	7.33	-0.02
16	SLE RA 10	245	2	4392	-1.88	7.48	-0.02
16	SLE RA 11	249	3	4382	-2.74	7.66	-0.02
16	SLE RA 12	249	2	4417	-2.25	7.64	-0.02
16	SLE RA 13	249	2	4429	-1.91	7.61	-0.02
16	SLE RA 14	253	3	4420	-2.77	7.79	-0.02
16	SLE RA 15	253	2	4454	-2.27	7.77	-0.02
16	SLE RA 16	252	3	4409	-2.76	7.78	-0.02
16	SLE RA 17	252	2	4444	-2.26	7.76	-0.02
16	SLE RA 18	251	3	4455	-2.81	7.7	-0.02
16	SLE RA 19	251	2	4490	-2.32	7.67	-0.02
16	SLE RA 20	255	3	4493	-2.84	7.83	-0.02
16	SLE RA 21	255	2	4527	-2.35	7.81	-0.02
16	SLE FR 1	230	2	4051	-2.44	7.09	-0.02
16	SLE FR 2	230	2	4063	-2.28	7.08	-0.02
16	SLE FR 3	232	2	4066	-2.45	7.14	-0.02
16	SLE FR 4	236	2	4184	-2.39	7.26	-0.02
16	SLE FR 5	238	2	4187	-2.57	7.32	-0.02
16	SLE FR 6	241	3	4253	-2.63	7.39	-0.02
16	SLE QP 1	230	2	4051	-2.44	7.09	-0.02
16	SLE QP 2	236	2	4172	-2.56	7.27	-0.02
16	SLD 1	630	11	4828	-8.35	23.72	-0.03
16	SLD 2	630	11	4828	-8.35	23.72	-0.03
16	SLD 3	564	0	4010	-0.36	21.25	-0.01
16	SLD 4	564	0	4010	-0.36	21.25	-0.01
16	SLD 5	454	23	5609	-16.4	15.96	-0.05
16	SLD 6	454	23	5609	-16.4	15.96	-0.05
16	SLD 7	235	-16	2883	10.21	7.71	0.01
16	SLD 8	235	-16	2883	10.21	7.71	0.01
16	SLD 9	238	21	5461	-15.32	6.83	-0.05
16	SLD 10	238	21	5461	-15.32	6.83	-0.05
16	SLD 11	19	-18	2735	11.29	-1.42	0.01
16	SLD 12	19	-18	2735	11.29	-1.42	0.01
16	SLD 13	-91	5	4335	-4.75	-6.7	-0.02
16	SLD 14	-91	5	4335	-4.75	-6.7	-0.02
16	SLD 15	-157	-6	3517	3.24	-9.18	0
16	SLD 16	-157	-6	3517	3.24	-9.18	0
16	SLV 1	1152	23	5707	-16.23	45.59	-0.05
16	SLV 2	1152	23	5707	-16.23	45.59	-0.05
16	SLV 3	996	-4	3793	2.53	39.69	-0.01
16	SLV 4	996	-4	3793	2.53	39.69	-0.01
16	SLV 5	748	50	7535	-35.12	27.71	-0.09
16	SLV 6	748	50	7535	-35.12	27.71	-0.09
16	SLV 7	227	-41	1157	27.43	8.05	0.05
16	SLV 8	227	-41	1157	27.43	8.05	0.05
16	SLV 9	246	46	7188	-32.54	6.49	-0.08
16	SLV 10	246	46	7188	-32.54	6.49	-0.08
16	SLV 11	-275	-45	810	30.01	-13.17	0.06
16	SLV 12	-275	-45	810	30.01	-13.17	0.06



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
16	SLV 13	-523	9	4551	-7.64	-25.15	-0.03
16	SLV 14	-523	9	4551	-7.64	-25.15	-0.03
16	SLV 15	-680	-18	2638	11.12	-31.05	0.02
16	SLV 16	-680	-18	2638	11.12	-31.05	0.02
17	SLU 1	234	11	4479	-3.88	7.11	0.04
17	SLU 2	234	11	4576	-3.27	7.03	0.05
17	SLU 3	241	12	4564	-3.98	7.32	0.05
17	SLU 4	240	11	4622	-3.61	7.27	0.05
17	SLU 5	239	11	4643	-3.34	7.21	0.05
17	SLU 6	246	12	4630	-4.05	7.5	0.05
17	SLU 7	246	11	4689	-3.68	7.45	0.05
17	SLU 8	245	12	4611	-4.02	7.47	0.05
17	SLU 9	245	11	4670	-3.65	7.42	0.05
17	SLU 10	255	12	5056	-3.82	7.65	0.05
17	SLU 11	263	13	5044	-4.53	7.94	0.05
17	SLU 12	262	13	5102	-4.16	7.89	0.05
17	SLU 13	261	13	5122	-3.89	7.83	0.05
17	SLU 14	268	13	5110	-4.6	8.12	0.05
17	SLU 15	268	13	5169	-4.23	8.07	0.05
17	SLU 16	267	13	5091	-4.57	8.09	0.05
17	SLU 17	267	13	5150	-4.21	8.04	0.05
17	SLU 18	265	14	5164	-4.67	8	0.05
17	SLU 19	265	13	5223	-4.3	7.95	0.05
17	SLU 20	271	14	5230	-4.74	8.18	0.05
17	SLU 21	271	13	5289	-4.37	8.13	0.05
17	SLU 22	258	13	4853	-4.34	7.84	0.05
17	SLU 23	257	12	4951	-3.73	7.76	0.05
17	SLU 24	265	13	4938	-4.44	8.05	0.05
17	SLU 25	264	13	4997	-4.07	8	0.05
17	SLU 26	263	12	5017	-3.8	7.94	0.05
17	SLU 27	270	13	5004	-4.51	8.23	0.05
17	SLU 28	270	13	5063	-4.14	8.18	0.05
17	SLU 29	269	13	4985	-4.48	8.2	0.05
17	SLU 30	269	13	5044	-4.11	8.15	0.05
17	SLU 31	279	14	5430	-4.28	8.38	0.06
17	SLU 32	286	15	5418	-4.99	8.68	0.06
17	SLU 33	286	14	5477	-4.62	8.63	0.06
17	SLU 34	285	14	5497	-4.35	8.56	0.06
17	SLU 35	292	15	5484	-5.06	8.86	0.06
17	SLU 36	292	14	5543	-4.69	8.81	0.06
17	SLU 37	291	15	5465	-5.04	8.83	0.06
17	SLU 38	291	14	5524	-4.67	8.77	0.06
17	SLU 39	289	15	5538	-5.13	8.73	0.06
17	SLU 40	289	15	5597	-4.77	8.68	0.06
17	SLU 41	295	15	5605	-5.2	8.91	0.06
17	SLU 42	294	15	5663	-4.84	8.86	0.06
17	SLU 43	296	14	5694	-4.89	8.99	0.06
17	SLU 44	296	14	5792	-4.27	8.91	0.06
17	SLU 45	303	15	5779	-4.98	9.2	0.06
17	SLU 46	302	14	5838	-4.61	9.15	0.06
17	SLU 47	301	14	5858	-4.34	9.09	0.06
17	SLU 48	308	15	5845	-5.05	9.38	0.06
17	SLU 49	308	14	5904	-4.68	9.33	0.06
17	SLU 50	307	15	5826	-5.03	9.35	0.06
17	SLU 51	307	14	5885	-4.66	9.3	0.06
17	SLU 52	317	15	6272	-4.83	9.53	0.06
17	SLU 53	325	16	6259	-5.54	9.83	0.06
17	SLU 54	324	16	6318	-5.17	9.78	0.06
17	SLU 55	323	15	6338	-4.9	9.71	0.06
17	SLU 56	330	16	6325	-5.61	10.01	0.06
17	SLU 57	330	16	6384	-5.24	9.96	0.06
17	SLU 58	329	16	6306	-5.58	9.97	0.06
17	SLU 59	329	16	6365	-5.21	9.92	0.06
17	SLU 60	327	17	6380	-5.68	9.88	0.06
17	SLU 61	327	16	6438	-5.31	9.83	0.07
17	SLU 62	333	17	6446	-5.75	10.06	0.06
17	SLU 63	332	16	6504	-5.38	10.01	0.07
17	SLU 64	320	16	6068	-5.35	9.73	0.06
17	SLU 65	319	15	6166	-4.73	9.64	0.06
17	SLU 66	327	16	6153	-5.44	9.94	0.06
17	SLU 67	326	15	6212	-5.08	9.89	0.06
17	SLU 68	325	15	6232	-4.8	9.82	0.06
17	SLU 69	332	16	6220	-5.51	10.12	0.06
17	SLU 70	332	16	6278	-5.15	10.07	0.06
17	SLU 71	331	16	6201	-5.49	10.09	0.06
17	SLU 72	331	16	6259	-5.12	10.04	0.06
17	SLU 73	341	17	6646	-5.29	10.26	0.07
17	SLU 74	348	17	6633	-6	10.56	0.07
17	SLU 75	348	17	6692	-5.63	10.51	0.07
17	SLU 76	347	17	6712	-5.36	10.44	0.07
17	SLU 77	354	18	6699	-6.07	10.74	0.07
17	SLU 78	354	17	6758	-5.7	10.69	0.07
17	SLU 79	353	18	6680	-6.04	10.71	0.07
17	SLU 80	353	17	6739	-5.67	10.66	0.07
17	SLU 81	351	18	6754	-6.14	10.61	0.07
17	SLU 82	351	18	6812	-5.77	10.56	0.07
17	SLU 83	357	18	6820	-6.21	10.79	0.07
17	SLU 84	356	18	6879	-5.84	10.74	0.07
17	SLE RA 1	241	12	4586	-4.01	7.32	0.05
17	SLE RA 2	241	11	4651	-3.6	7.26	0.05



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
17	SLE RA 3	245	12	4642	-4.08	7.46	0.05
17	SLE RA 4	245	12	4681	-3.83	7.43	0.05
17	SLE RA 5	244	11	4695	-3.65	7.38	0.05
17	SLE RA 6	249	12	4687	-4.12	7.58	0.05
17	SLE RA 7	249	12	4726	-3.88	7.55	0.05
17	SLE RA 8	248	12	4674	-4.1	7.56	0.05
17	SLE RA 9	248	12	4713	-3.86	7.53	0.05
17	SLE RA 10	255	12	4971	-3.97	7.68	0.05
17	SLE RA 11	260	13	4962	-4.45	7.88	0.05
17	SLE RA 12	260	13	5001	-4.2	7.84	0.05
17	SLE RA 13	259	13	5015	-4.02	7.8	0.05
17	SLE RA 14	264	13	5006	-4.49	8	0.05
17	SLE RA 15	263	13	5046	-4.25	7.96	0.05
17	SLE RA 16	263	13	4994	-4.47	7.97	0.05
17	SLE RA 17	263	13	5033	-4.23	7.94	0.05
17	SLE RA 18	262	13	5043	-4.54	7.91	0.05
17	SLE RA 19	262	13	5082	-4.29	7.88	0.05
17	SLE RA 20	265	13	5087	-4.59	8.03	0.05
17	SLE RA 21	265	13	5126	-4.34	8	0.05
17	SLE FR 1	241	12	4586	-4.01	7.32	0.05
17	SLE FR 2	241	12	4599	-3.93	7.31	0.05
17	SLE FR 3	242	12	4603	-4.03	7.37	0.05
17	SLE FR 4	247	12	4736	-4.09	7.49	0.05
17	SLE FR 5	249	12	4740	-4.19	7.55	0.05
17	SLE FR 6	251	12	4814	-4.28	7.62	0.05
17	SLE QP 1	241	12	4586	-4.01	7.32	0.05
17	SLE QP 2	247	12	4723	-4.17	7.5	0.05
17	SLD 1	587	18	5469	-7.57	21.6	0.06
17	SLD 2	587	18	5469	-7.57	21.6	0.06
17	SLD 3	515	12	4510	-3.17	19.13	0.04
17	SLD 4	515	12	4510	-3.17	19.13	0.04
17	SLD 5	458	22	6400	-11.87	15.46	0.07
17	SLD 6	458	22	6400	-11.87	15.46	0.07
17	SLD 7	219	3	3205	2.8	7.25	0.02
17	SLD 8	219	3	3205	2.8	7.25	0.02
17	SLD 9	275	21	6240	-11.14	7.74	0.07
17	SLD 10	275	21	6240	-11.14	7.74	0.07
17	SLD 11	36	2	3045	3.53	-0.47	0.02
17	SLD 12	36	2	3045	3.53	-0.47	0.02
17	SLD 13	-21	12	4935	-5.17	-4.14	0.05
17	SLD 14	-21	12	4935	-5.17	-4.14	0.05
17	SLD 15	-93	7	3977	-0.77	-6.6	0.04
17	SLD 16	-93	7	3977	-0.77	-6.6	0.04
17	SLV 1	1037	25	6464	-12.18	40.29	0.07
17	SLV 2	1037	25	6464	-12.18	40.29	0.07
17	SLV 3	869	12	4224	-1.85	34.45	0.04
17	SLV 4	869	12	4224	-1.85	34.45	0.04
17	SLV 5	740	36	8643	-22.23	26.2	0.11
17	SLV 6	740	36	8643	-22.23	26.2	0.11
17	SLV 7	177	-8	1175	12.19	6.72	-0.01
17	SLV 8	177	-8	1175	12.19	6.72	-0.01
17	SLV 9	317	32	8270	-20.52	8.27	0.1
17	SLV 10	317	32	8270	-20.52	8.27	0.1
17	SLV 11	-246	-12	802	13.89	-11.2	-0.01
17	SLV 12	-246	-12	802	13.89	-11.2	-0.01
17	SLV 13	-374	12	5222	-6.49	-19.45	0.06
17	SLV 14	-374	12	5222	-6.49	-19.45	0.06
17	SLV 15	-543	-1	2981	3.84	-25.3	0.02
17	SLV 16	-543	-1	2981	3.84	-25.3	0.02
18	SLU 1	-107	909	6780	-31.69	-5.5	0
18	SLU 2	-116	928	6926	-32.31	-5.92	0
18	SLU 3	-110	931	6915	-32.51	-5.61	0
18	SLU 4	-115	942	7003	-32.88	-5.86	0
18	SLU 5	-118	944	7030	-32.91	-5.99	0
18	SLU 6	-111	947	7019	-33.1	-5.68	0
18	SLU 7	-116	958	7107	-33.47	-5.93	0
18	SLU 8	-110	941	6988	-32.88	-5.64	0
18	SLU 9	-115	953	7075	-33.26	-5.89	0
18	SLU 10	-135	1043	7665	-36.42	-6.8	0
18	SLU 11	-129	1046	7654	-36.62	-6.49	0
18	SLU 12	-134	1057	7742	-36.99	-6.74	0
18	SLU 13	-137	1059	7769	-37.02	-6.87	0
18	SLU 14	-130	1062	7758	-37.21	-6.56	0
18	SLU 15	-135	1074	7846	-37.58	-6.81	0
18	SLU 16	-129	1056	7727	-36.99	-6.52	0
18	SLU 17	-135	1068	7814	-37.36	-6.77	0
18	SLU 18	-135	1073	7836	-37.56	-6.76	0
18	SLU 19	-140	1085	7923	-37.94	-7.01	0
18	SLU 20	-136	1089	7940	-38.16	-6.83	0
18	SLU 21	-141	1101	8027	-38.53	-7.08	0
18	SLU 22	-118	1004	7371	-35.12	-6.01	0
18	SLU 23	-126	1023	7517	-35.74	-6.43	0
18	SLU 24	-120	1026	7507	-35.93	-6.12	0
18	SLU 25	-125	1038	7594	-36.3	-6.37	0
18	SLU 26	-128	1039	7621	-36.33	-6.49	0
18	SLU 27	-121	1042	7610	-36.53	-6.19	0
18	SLU 28	-126	1054	7698	-36.9	-6.44	0
18	SLU 29	-120	1037	7579	-36.31	-6.14	0
18	SLU 30	-126	1048	7667	-36.68	-6.4	0
18	SLU 31	-146	1138	8256	-39.85	-7.31	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
18	SLU 32	-139	1141	8246	-40.04	-7	0
18	SLU 33	-144	1153	8333	-40.41	-7.25	0
18	SLU 34	-147	1155	8360	-40.44	-7.38	0
18	SLU 35	-140	1158	8350	-40.64	-7.07	0
18	SLU 36	-146	1169	8437	-41.01	-7.32	0
18	SLU 37	-139	1152	8318	-40.42	-7.02	0
18	SLU 38	-145	1163	8406	-40.79	-7.28	0
18	SLU 39	-145	1169	8427	-40.99	-7.27	0
18	SLU 40	-150	1180	8515	-41.36	-7.52	0
18	SLU 41	-146	1185	8531	-41.58	-7.33	0
18	SLU 42	-152	1196	8619	-41.96	-7.59	0
18	SLU 43	-136	1149	8611	-40.03	-6.98	0
18	SLU 44	-145	1168	8757	-40.65	-7.4	0
18	SLU 45	-138	1171	8746	-40.84	-7.09	0
18	SLU 46	-144	1182	8834	-41.21	-7.34	0
18	SLU 47	-146	1184	8861	-41.24	-7.46	0
18	SLU 48	-140	1187	8850	-41.43	-7.16	0
18	SLU 49	-145	1198	8938	-41.81	-7.41	0
18	SLU 50	-139	1181	8819	-41.22	-7.11	0
18	SLU 51	-144	1193	8906	-41.59	-7.36	0
18	SLU 52	-164	1283	9496	-44.76	-8.28	0
18	SLU 53	-158	1286	9485	-44.95	-7.97	0
18	SLU 54	-163	1297	9573	-45.32	-8.22	0
18	SLU 55	-166	1299	9600	-45.35	-8.34	0
18	SLU 56	-159	1302	9589	-45.54	-8.04	0
18	SLU 57	-164	1314	9677	-45.92	-8.29	0
18	SLU 58	-158	1296	9558	-45.32	-7.99	0
18	SLU 59	-163	1308	9646	-45.7	-8.25	0
18	SLU 60	-164	1313	9667	-45.9	-8.24	0
18	SLU 61	-169	1324	9754	-46.27	-8.49	0
18	SLU 62	-165	1329	9771	-46.49	-8.3	0
18	SLU 63	-170	1341	9858	-46.86	-8.55	0
18	SLU 64	-146	1244	9202	-43.45	-7.48	0
18	SLU 65	-155	1263	9349	-44.07	-7.9	0
18	SLU 66	-149	1266	9338	-44.26	-7.6	0
18	SLU 67	-154	1277	9425	-44.64	-7.85	0
18	SLU 68	-156	1279	9452	-44.67	-7.97	0
18	SLU 69	-150	1282	9442	-44.86	-7.66	0
18	SLU 70	-155	1294	9529	-45.23	-7.91	0
18	SLU 71	-149	1276	9410	-44.64	-7.62	0
18	SLU 72	-154	1288	9498	-45.01	-7.87	0
18	SLU 73	-174	1378	10088	-48.18	-8.78	0
18	SLU 74	-168	1381	10077	-48.37	-8.48	0
18	SLU 75	-173	1393	10164	-48.75	-8.73	0
18	SLU 76	-176	1394	10191	-48.78	-8.85	0
18	SLU 77	-169	1397	10181	-48.97	-8.54	0
18	SLU 78	-174	1409	10268	-49.34	-8.8	0
18	SLU 79	-168	1392	10149	-48.75	-8.5	0
18	SLU 80	-173	1403	10237	-49.12	-8.75	0
18	SLU 81	-174	1408	10258	-49.32	-8.74	0
18	SLU 82	-179	1420	10346	-49.69	-8.99	0
18	SLU 83	-175	1425	10362	-49.92	-8.81	0
18	SLU 84	-180	1436	10450	-50.29	-9.06	0
18	SLE RA 1	-110	936	6949	-32.67	-5.65	0
18	SLE RA 2	-116	949	7046	-33.09	-5.92	0
18	SLE RA 3	-112	951	7039	-33.21	-5.72	0
18	SLE RA 4	-115	958	7097	-33.46	-5.89	0
18	SLE RA 5	-117	959	7115	-33.48	-5.97	0
18	SLE RA 6	-113	961	7108	-33.61	-5.76	0
18	SLE RA 7	-116	969	7167	-33.86	-5.93	0
18	SLE RA 8	-112	958	7087	-33.46	-5.74	0
18	SLE RA 9	-116	965	7146	-33.71	-5.9	0
18	SLE RA 10	-129	1025	7539	-35.82	-6.51	0
18	SLE RA 11	-125	1027	7532	-35.95	-6.31	0
18	SLE RA 12	-128	1035	7590	-36.2	-6.47	0
18	SLE RA 13	-130	1036	7608	-36.22	-6.56	0
18	SLE RA 14	-125	1038	7601	-36.35	-6.35	0
18	SLE RA 15	-129	1046	7659	-36.6	-6.52	0
18	SLE RA 16	-125	1034	7580	-36.2	-6.32	0
18	SLE RA 17	-128	1042	7638	-36.45	-6.49	0
18	SLE RA 18	-129	1046	7653	-36.58	-6.48	0
18	SLE RA 19	-132	1053	7711	-36.83	-6.65	0
18	SLE RA 20	-129	1056	7722	-36.98	-6.53	0
18	SLE RA 21	-133	1064	7780	-37.23	-6.7	0
18	SLE FR 1	-110	936	6949	-32.67	-5.65	0
18	SLE FR 2	-111	938	6968	-32.75	-5.7	0
18	SLE FR 3	-111	940	6977	-32.83	-5.66	0
18	SLE FR 4	-117	971	7179	-33.93	-5.95	0
18	SLE FR 5	-116	973	7188	-34	-5.92	0
18	SLE FR 6	-119	991	7301	-34.63	-6.07	0
18	SLE QP 1	-110	936	6949	-32.67	-5.65	0
18	SLE QP 2	-116	969	7160	-33.84	-5.9	0
18	SLD 1	103	1210	8318	-44.05	3.89	-0.01
18	SLD 2	103	1210	8318	-44.05	3.89	-0.01
18	SLD 3	168	927	6798	-32.14	6.85	-0.02
18	SLD 4	168	927	6798	-32.14	6.85	-0.02
18	SLD 5	-148	1471	9813	-54.95	-7.45	0.01
18	SLD 6	-148	1471	9813	-54.95	-7.45	0.01
18	SLD 7	68	527	4746	-15.29	2.41	-0.02
18	SLD 8	68	527	4746	-15.29	2.41	-0.02



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
18	SLD 9	-299	1411	9574	-52.4	-14.21	0.02
18	SLD 10	-299	1411	9574	-52.4	-14.21	0.02
18	SLD 11	-83	467	4507	-12.74	-4.35	-0.01
18	SLD 12	-83	467	4507	-12.74	-4.35	-0.01
18	SLD 13	-400	1010	7522	-35.55	-18.64	0.02
18	SLD 14	-400	1010	7522	-35.55	-18.64	0.02
18	SLD 15	-335	727	6002	-23.64	-15.68	0.01
18	SLD 16	-335	727	6002	-23.64	-15.68	0.01
18	SLV 1	392	1529	9856	-57.49	16.78	-0.03
18	SLV 2	392	1529	9856	-57.49	16.78	-0.03
18	SLV 3	544	871	6307	-29.86	23.7	-0.05
18	SLV 4	544	871	6307	-29.86	23.7	-0.05
18	SLV 5	-194	2135	13352	-82.85	-9.6	0.02
18	SLV 6	-194	2135	13352	-82.85	-9.6	0.02
18	SLV 7	312	-59	1521	9.27	13.49	-0.05
18	SLV 8	312	-59	1521	9.27	13.49	-0.05
18	SLV 9	-544	1996	12799	-76.96	-25.28	0.05
18	SLV 10	-544	1996	12799	-76.96	-25.28	0.05
18	SLV 11	-38	-197	968	15.16	-2.19	-0.02
18	SLV 12	-38	-197	968	15.16	-2.19	-0.02
18	SLV 13	-775	1066	8013	-37.83	-35.5	0.05
18	SLV 14	-775	1066	8013	-37.83	-35.5	0.05
18	SLV 15	-623	408	4464	-10.2	-28.57	0.03
18	SLV 16	-623	408	4464	-10.2	-28.57	0.03
19	SLU 1	-470	11	4302	-2.99	-17.93	-0.02
19	SLU 2	-489	12	4393	-3.64	-18.69	-0.02
19	SLU 3	-481	11	4383	-3.07	-18.35	-0.02
19	SLU 4	-493	12	4437	-3.46	-18.81	-0.02
19	SLU 5	-497	12	4455	-3.69	-19	-0.02
19	SLU 6	-490	11	4445	-3.13	-18.66	-0.02
19	SLU 7	-501	12	4499	-3.51	-19.12	-0.02
19	SLU 8	-487	11	4427	-3.11	-18.55	-0.02
19	SLU 9	-498	12	4481	-3.5	-19.01	-0.02
19	SLU 10	-550	13	4838	-3.97	-20.99	-0.02
19	SLU 11	-543	13	4828	-3.4	-20.65	-0.02
19	SLU 12	-554	13	4882	-3.79	-21.11	-0.02
19	SLU 13	-558	13	4900	-4.02	-21.3	-0.02
19	SLU 14	-551	13	4890	-3.46	-20.96	-0.02
19	SLU 15	-562	13	4944	-3.84	-21.42	-0.02
19	SLU 16	-548	13	4872	-3.44	-20.84	-0.02
19	SLU 17	-559	13	4926	-3.83	-21.3	-0.02
19	SLU 18	-557	13	4939	-3.46	-21.21	-0.02
19	SLU 19	-569	13	4993	-3.85	-21.67	-0.02
19	SLU 20	-566	13	5001	-3.52	-21.52	-0.02
19	SLU 21	-577	14	5055	-3.91	-21.98	-0.02
19	SLU 22	-516	12	4659	-3.27	-19.65	-0.02
19	SLU 23	-535	13	4749	-3.91	-20.41	-0.02
19	SLU 24	-527	12	4739	-3.34	-20.07	-0.02
19	SLU 25	-539	13	4793	-3.73	-20.53	-0.02
19	SLU 26	-543	13	4812	-3.97	-20.72	-0.02
19	SLU 27	-536	13	4801	-3.4	-20.38	-0.02
19	SLU 28	-547	13	4856	-3.79	-20.84	-0.02
19	SLU 29	-533	12	4783	-3.38	-20.27	-0.02
19	SLU 30	-544	13	4838	-3.77	-20.73	-0.02
19	SLU 31	-596	14	5195	-4.24	-22.71	-0.02
19	SLU 32	-589	14	5185	-3.67	-22.37	-0.02
19	SLU 33	-600	14	5239	-4.06	-22.83	-0.02
19	SLU 34	-604	14	5257	-4.3	-23.02	-0.02
19	SLU 35	-597	14	5247	-3.73	-22.68	-0.02
19	SLU 36	-608	14	5301	-4.12	-23.14	-0.02
19	SLU 37	-594	14	5229	-3.71	-22.56	-0.02
19	SLU 38	-605	14	5283	-4.1	-23.02	-0.02
19	SLU 39	-603	14	5295	-3.74	-22.93	-0.02
19	SLU 40	-615	14	5349	-4.12	-23.39	-0.02
19	SLU 41	-612	14	5357	-3.8	-23.24	-0.02
19	SLU 42	-623	15	5412	-4.18	-23.7	-0.02
19	SLU 43	-595	14	5471	-3.8	-22.72	-0.02
19	SLU 44	-614	15	5561	-4.44	-23.48	-0.02
19	SLU 45	-607	14	5551	-3.87	-23.14	-0.02
19	SLU 46	-618	15	5605	-4.26	-23.6	-0.02
19	SLU 47	-623	15	5623	-4.5	-23.79	-0.02
19	SLU 48	-615	14	5613	-3.93	-23.45	-0.02
19	SLU 49	-626	15	5668	-4.32	-23.91	-0.02
19	SLU 50	-612	14	5595	-3.91	-23.34	-0.02
19	SLU 51	-623	15	5650	-4.3	-23.8	-0.02
19	SLU 52	-675	16	6007	-4.77	-25.78	-0.02
19	SLU 53	-668	15	5996	-4.21	-25.44	-0.03
19	SLU 54	-679	16	6051	-4.59	-25.9	-0.03
19	SLU 55	-684	16	6069	-4.83	-26.09	-0.02
19	SLU 56	-676	16	6059	-4.26	-25.75	-0.03
19	SLU 57	-688	16	6113	-4.65	-26.21	-0.03
19	SLU 58	-673	16	6041	-4.24	-25.63	-0.03
19	SLU 59	-684	16	6095	-4.63	-26.09	-0.03
19	SLU 60	-683	16	6107	-4.27	-26	-0.03
19	SLU 61	-694	16	6161	-4.65	-26.46	-0.03
19	SLU 62	-691	16	6169	-4.33	-26.31	-0.03
19	SLU 63	-702	16	6224	-4.71	-26.77	-0.03
19	SLU 64	-641	15	5827	-4.07	-24.44	-0.03
19	SLU 65	-660	16	5918	-4.71	-25.2	-0.02
19	SLU 66	-653	15	5908	-4.15	-24.86	-0.03



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
19	SLU 67	-664	16	5962	-4.53	-25.32	-0.02
19	SLU 68	-669	16	5980	-4.77	-25.51	-0.02
19	SLU 69	-661	15	5970	-4.21	-25.17	-0.03
19	SLU 70	-672	16	6024	-4.59	-25.63	-0.02
19	SLU 71	-658	15	5952	-4.19	-25.06	-0.03
19	SLU 72	-669	16	6006	-4.57	-25.52	-0.02
19	SLU 73	-721	17	6363	-5.04	-27.5	-0.03
19	SLU 74	-714	17	6353	-4.48	-27.16	-0.03
19	SLU 75	-725	17	6407	-4.86	-27.62	-0.03
19	SLU 76	-730	17	6425	-5.1	-27.81	-0.03
19	SLU 77	-722	17	6415	-4.54	-27.47	-0.03
19	SLU 78	-734	17	6469	-4.92	-27.93	-0.03
19	SLU 79	-719	17	6397	-4.52	-27.35	-0.03
19	SLU 80	-730	17	6451	-4.9	-27.81	-0.03
19	SLU 81	-729	17	6464	-4.54	-27.72	-0.03
19	SLU 82	-740	17	6518	-4.93	-28.17	-0.03
19	SLU 83	-737	17	6526	-4.6	-28.02	-0.03
19	SLU 84	-748	18	6580	-4.99	-28.48	-0.03
19	SLE RA 1	-483	11	4404	-3.07	-18.42	-0.02
19	SLE RA 2	-496	12	4465	-3.5	-18.93	-0.02
19	SLE RA 3	-491	11	4458	-3.12	-18.7	-0.02
19	SLE RA 4	-498	12	4494	-3.38	-19.01	-0.02
19	SLE RA 5	-501	12	4506	-3.54	-19.14	-0.02
19	SLE RA 6	-496	12	4499	-3.16	-18.91	-0.02
19	SLE RA 7	-504	12	4535	-3.42	-19.22	-0.02
19	SLE RA 8	-494	12	4487	-3.15	-18.83	-0.02
19	SLE RA 9	-502	12	4523	-3.41	-19.14	-0.02
19	SLE RA 10	-537	13	4761	-3.72	-20.46	-0.02
19	SLE RA 11	-532	12	4755	-3.34	-20.23	-0.02
19	SLE RA 12	-539	13	4791	-3.6	-20.54	-0.02
19	SLE RA 13	-542	13	4803	-3.76	-20.67	-0.02
19	SLE RA 14	-537	12	4796	-3.38	-20.44	-0.02
19	SLE RA 15	-545	13	4832	-3.64	-20.75	-0.02
19	SLE RA 16	-535	12	4784	-3.37	-20.36	-0.02
19	SLE RA 17	-543	13	4820	-3.63	-20.67	-0.02
19	SLE RA 18	-541	13	4828	-3.39	-20.61	-0.02
19	SLE RA 19	-549	13	4865	-3.64	-20.91	-0.02
19	SLE RA 20	-547	13	4870	-3.42	-20.81	-0.02
19	SLE RA 21	-555	13	4906	-3.68	-21.12	-0.02
19	SLE FR 1	-483	11	4404	-3.07	-18.42	-0.02
19	SLE FR 2	-486	11	4416	-3.16	-18.52	-0.02
19	SLE FR 3	-485	11	4421	-3.09	-18.5	-0.02
19	SLE FR 4	-503	12	4544	-3.25	-19.18	-0.02
19	SLE FR 5	-503	12	4548	-3.18	-19.16	-0.02
19	SLE FR 6	-512	12	4616	-3.23	-19.51	-0.02
19	SLE QP 1	-483	11	4404	-3.07	-18.42	-0.02
19	SLE QP 2	-501	12	4532	-3.17	-19.08	-0.02
19	SLD 1	-362	16	4688	-6.42	-12.33	-0.04
19	SLD 2	-362	16	4688	-6.42	-12.33	-0.04
19	SLD 3	-198	11	3793	-1.99	-6.15	-0.02
19	SLD 4	-198	11	3793	-1.99	-6.15	-0.02
19	SLD 5	-707	20	5935	-10.86	-26.41	-0.05
19	SLD 6	-707	20	5935	-10.86	-26.41	-0.05
19	SLD 7	-162	5	2954	3.91	-5.84	0.01
19	SLD 8	-162	5	2954	3.91	-5.84	0.01
19	SLD 9	-839	18	6109	-10.24	-32.31	-0.05
19	SLD 10	-839	18	6109	-10.24	-32.31	-0.05
19	SLD 11	-294	4	3129	4.53	-11.74	0.01
19	SLD 12	-294	4	3129	4.53	-11.74	0.01
19	SLD 13	-803	12	5270	-4.35	-32	-0.02
19	SLD 14	-803	12	5270	-4.35	-32	-0.02
19	SLD 15	-639	8	4376	0.09	-25.82	0
19	SLD 16	-639	8	4376	0.09	-25.82	0
19	SLV 1	-180	21	4900	-10.9	-3.45	-0.06
19	SLV 2	-180	21	4900	-10.9	-3.45	-0.06
19	SLV 3	201	11	2809	-0.48	10.93	-0.01
19	SLV 4	201	11	2809	-0.48	10.93	-0.01
19	SLV 5	-982	30	7812	-21.29	-36.19	-0.1
19	SLV 6	-982	30	7812	-21.29	-36.19	-0.1
19	SLV 7	287	-4	845	13.44	11.73	0.05
19	SLV 8	287	-4	845	13.44	11.73	0.05
19	SLV 9	-1288	28	8219	-19.77	-49.88	-0.09
19	SLV 10	-1288	28	8219	-19.77	-49.88	-0.09
19	SLV 11	-20	-7	1251	14.96	-1.96	0.06
19	SLV 12	-20	-7	1251	14.96	-1.96	0.06
19	SLV 13	-1202	12	6254	-5.85	-49.08	-0.03
19	SLV 14	-1202	12	6254	-5.85	-49.08	-0.03
19	SLV 15	-822	2	4163	4.57	-34.7	0.02
19	SLV 16	-822	2	4163	4.57	-34.7	0.02
20	SLU 1	-580	1	3858	-0.78	-22.82	0.02
20	SLU 2	-604	2	3934	-1.87	-23.78	0.03
20	SLU 3	-594	1	3925	-0.8	-23.34	0.02
20	SLU 4	-608	1	3971	-1.46	-23.92	0.02
20	SLU 5	-614	2	3987	-1.89	-24.16	0.03
20	SLU 6	-604	1	3978	-0.82	-23.73	0.02
20	SLU 7	-618	1	4024	-1.48	-24.3	0.02
20	SLU 8	-600	1	3963	-0.82	-23.59	0.02
20	SLU 9	-614	1	4009	-1.47	-24.16	0.02
20	SLU 10	-675	2	4318	-1.89	-26.53	0.03
20	SLU 11	-664	1	4309	-0.82	-26.1	0.02



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
20	SLU 12	-679	1	4355	-1.47	-26.67	0.03
20	SLU 13	-685	2	4371	-1.9	-26.91	0.03
20	SLU 14	-674	1	4362	-0.84	-26.48	0.02
20	SLU 15	-689	1	4408	-1.49	-27.05	0.03
20	SLU 16	-671	1	4347	-0.83	-26.34	0.02
20	SLU 17	-685	1	4393	-1.49	-26.91	0.03
20	SLU 18	-681	1	4406	-0.8	-26.76	0.02
20	SLU 19	-695	1	4452	-1.46	-27.33	0.03
20	SLU 20	-691	1	4459	-0.82	-27.14	0.02
20	SLU 21	-705	1	4505	-1.47	-27.71	0.03
20	SLU 22	-635	1	4167	-0.79	-24.95	0.02
20	SLU 23	-659	2	4243	-1.88	-25.9	0.03
20	SLU 24	-648	1	4234	-0.81	-25.47	0.02
20	SLU 25	-663	1	4280	-1.46	-26.04	0.02
20	SLU 26	-669	2	4296	-1.9	-26.29	0.03
20	SLU 27	-658	1	4286	-0.83	-25.86	0.02
20	SLU 28	-673	1	4332	-1.48	-26.43	0.03
20	SLU 29	-655	1	4272	-0.83	-25.72	0.02
20	SLU 30	-669	1	4318	-1.48	-26.29	0.03
20	SLU 31	-729	2	4627	-1.89	-28.66	0.03
20	SLU 32	-719	1	4618	-0.82	-28.23	0.02
20	SLU 33	-733	1	4664	-1.48	-28.8	0.03
20	SLU 34	-739	2	4680	-1.91	-29.04	0.03
20	SLU 35	-729	1	4670	-0.84	-28.61	0.02
20	SLU 36	-743	1	4716	-1.5	-29.18	0.03
20	SLU 37	-725	1	4656	-0.84	-28.47	0.02
20	SLU 38	-740	1	4701	-1.49	-29.04	0.03
20	SLU 39	-736	0	4715	-0.81	-28.89	0.02
20	SLU 40	-750	1	4761	-1.46	-29.46	0.03
20	SLU 41	-746	1	4768	-0.83	-29.27	0.02
20	SLU 42	-760	1	4813	-1.48	-29.84	0.03
20	SLU 43	-735	1	4910	-1.02	-28.94	0.02
20	SLU 44	-759	2	4986	-2.1	-29.89	0.03
20	SLU 45	-749	1	4977	-1.04	-29.46	0.02
20	SLU 46	-763	2	5023	-1.69	-30.03	0.03
20	SLU 47	-769	2	5039	-2.12	-30.27	0.03
20	SLU 48	-759	1	5030	-1.06	-29.84	0.03
20	SLU 49	-773	2	5075	-1.71	-30.42	0.03
20	SLU 50	-755	1	5015	-1.05	-29.71	0.02
20	SLU 51	-770	2	5061	-1.71	-30.28	0.03
20	SLU 52	-830	2	5370	-2.12	-32.65	0.03
20	SLU 53	-819	1	5361	-1.05	-32.22	0.03
20	SLU 54	-834	2	5407	-1.7	-32.79	0.03
20	SLU 55	-840	2	5423	-2.14	-33.03	0.03
20	SLU 56	-829	1	5413	-1.07	-32.6	0.03
20	SLU 57	-844	2	5459	-1.72	-33.17	0.03
20	SLU 58	-826	1	5399	-1.06	-32.46	0.03
20	SLU 59	-840	2	5445	-1.72	-33.03	0.03
20	SLU 60	-836	1	5458	-1.03	-32.88	0.03
20	SLU 61	-851	2	5504	-1.69	-33.45	0.03
20	SLU 62	-846	1	5511	-1.05	-33.26	0.03
20	SLU 63	-861	2	5557	-1.71	-33.83	0.03
20	SLU 64	-790	1	5218	-1.02	-31.07	0.03
20	SLU 65	-814	2	5295	-2.11	-32.02	0.03
20	SLU 66	-804	1	5286	-1.04	-31.59	0.03
20	SLU 67	-818	2	5331	-1.7	-32.16	0.03
20	SLU 68	-824	2	5347	-2.13	-32.4	0.03
20	SLU 69	-814	1	5338	-1.06	-31.97	0.03
20	SLU 70	-828	2	5384	-1.72	-32.54	0.03
20	SLU 71	-810	1	5323	-1.06	-31.83	0.03
20	SLU 72	-824	2	5369	-1.71	-32.41	0.03
20	SLU 73	-885	2	5679	-2.12	-34.78	0.03
20	SLU 74	-874	1	5670	-1.06	-34.35	0.03
20	SLU 75	-889	2	5715	-1.71	-34.92	0.03
20	SLU 76	-895	2	5731	-2.14	-35.16	0.03
20	SLU 77	-884	1	5722	-1.08	-34.73	0.03
20	SLU 78	-899	2	5768	-1.73	-35.3	0.03
20	SLU 79	-881	1	5707	-1.07	-34.59	0.03
20	SLU 80	-895	2	5753	-1.73	-35.16	0.03
20	SLU 81	-891	1	5767	-1.04	-35	0.03
20	SLU 82	-905	1	5813	-1.69	-35.58	0.03
20	SLU 83	-901	1	5819	-1.06	-35.39	0.03
20	SLU 84	-915	2	5865	-1.71	-35.96	0.03
20	SLE RA 1	-596	1	3946	-0.79	-23.43	0.02
20	SLE RA 2	-612	1	3997	-1.51	-24.07	0.02
20	SLE RA 3	-605	1	3991	-0.8	-23.78	0.02
20	SLE RA 4	-614	1	4022	-1.23	-24.16	0.02
20	SLE RA 5	-618	2	4032	-1.52	-24.32	0.02
20	SLE RA 6	-611	1	4026	-0.81	-24.03	0.02
20	SLE RA 7	-621	1	4057	-1.25	-24.42	0.02
20	SLE RA 8	-609	1	4016	-0.81	-23.94	0.02
20	SLE RA 9	-619	1	4047	-1.24	-24.32	0.02
20	SLE RA 10	-659	1	4253	-1.52	-25.9	0.03
20	SLE RA 11	-652	1	4247	-0.81	-25.62	0.02
20	SLE RA 12	-661	1	4278	-1.24	-26	0.02
20	SLE RA 13	-665	1	4288	-1.53	-26.16	0.03
20	SLE RA 14	-658	1	4282	-0.82	-25.87	0.02
20	SLE RA 15	-668	1	4313	-1.26	-26.25	0.02
20	SLE RA 16	-656	1	4272	-0.82	-25.78	0.02
20	SLE RA 17	-666	1	4303	-1.25	-26.16	0.02



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
20	SLE RA 18	-663	1	4312	-0.8	-26.05	0.02
20	SLE RA 19	-673	1	4342	-1.23	-26.44	0.02
20	SLE RA 20	-670	1	4347	-0.81	-26.31	0.02
20	SLE RA 21	-679	1	4377	-1.25	-26.69	0.02
20	SLE FR 1	-596	1	3946	-0.79	-23.43	0.02
20	SLE FR 2	-599	1	3956	-0.93	-23.56	0.02
20	SLE FR 3	-598	1	3960	-0.79	-23.53	0.02
20	SLE FR 4	-619	1	4066	-0.93	-24.35	0.02
20	SLE FR 5	-618	1	4070	-0.79	-24.32	0.02
20	SLE FR 6	-629	1	4129	-0.79	-24.74	0.02
20	SLE QP 1	-596	1	3946	-0.79	-23.43	0.02
20	SLE QP 2	-616	1	4056	-0.79	-24.22	0.02
20	SLD 1	-478	3	3991	-3.14	-17.26	0.03
20	SLD 2	-478	3	3991	-3.14	-17.26	0.03
20	SLD 3	-302	-7	3257	5.01	-10.41	-0.02
20	SLD 4	-302	-7	3257	5.01	-10.41	-0.02
20	SLD 5	-843	16	5150	-13.86	-32.52	0.1
20	SLD 6	-843	16	5150	-13.86	-32.52	0.1
20	SLD 7	-254	-16	2703	13.31	-9.69	-0.07
20	SLD 8	-254	-16	2703	13.31	-9.69	-0.07
20	SLD 9	-978	17	5409	-14.89	-38.75	0.11
20	SLD 10	-978	17	5409	-14.89	-38.75	0.11
20	SLD 11	-389	-15	2962	12.28	-15.92	-0.06
20	SLD 12	-389	-15	2962	12.28	-15.92	-0.06
20	SLD 13	-930	8	4855	-6.59	-38.03	0.06
20	SLD 14	-930	8	4855	-6.59	-38.03	0.06
20	SLD 15	-753	-2	4121	1.56	-31.18	0.01
20	SLD 16	-753	-2	4121	1.56	-31.18	0.01
20	SLV 1	-298	6	3906	-6.18	-8.07	0.05
20	SLV 2	-298	6	3906	-6.18	-8.07	0.05
20	SLV 3	114	-17	2189	12.99	7.9	-0.07
20	SLV 4	114	-17	2189	12.99	7.9	-0.07
20	SLV 5	-1146	37	6616	-31.49	-43.61	0.22
20	SLV 6	-1146	37	6616	-31.49	-43.61	0.22
20	SLV 7	228	-39	891	32.43	9.65	-0.2
20	SLV 8	228	-39	891	32.43	9.65	-0.2
20	SLV 9	-1460	40	7221	-34	-58.09	0.24
20	SLV 10	-1460	40	7221	-34	-58.09	0.24
20	SLV 11	-86	-36	1496	29.91	-4.83	-0.18
20	SLV 12	-86	-36	1496	29.91	-4.83	-0.18
20	SLV 13	-1346	18	5923	-14.57	-56.34	0.11
20	SLV 14	-1346	18	5923	-14.57	-56.34	0.11
20	SLV 15	-934	-5	4206	4.6	-40.36	-0.01
20	SLV 16	-934	-5	4206	4.6	-40.36	-0.01
21	SLU 1	-664	-1	3494	0.22	-27.17	0
21	SLU 2	-693	1	3556	-1.16	-28.37	0.01
21	SLU 3	-680	-1	3551	0.23	-27.78	0
21	SLU 4	-697	0	3588	-0.6	-28.5	0.01
21	SLU 5	-705	1	3601	-1.16	-28.82	0.01
21	SLU 6	-691	-1	3596	0.23	-28.23	0
21	SLU 7	-708	0	3633	-0.6	-28.95	0.01
21	SLU 8	-687	-1	3584	0.23	-28.06	0
21	SLU 9	-704	0	3621	-0.6	-28.79	0.01
21	SLU 10	-772	1	3892	-1.03	-31.55	0.01
21	SLU 11	-758	-1	3887	0.36	-30.95	0
21	SLU 12	-775	0	3924	-0.47	-31.67	0.01
21	SLU 13	-783	1	3937	-1.03	-31.99	0.01
21	SLU 14	-769	-1	3932	0.36	-31.4	0
21	SLU 15	-786	0	3969	-0.47	-32.12	0.01
21	SLU 16	-765	-1	3920	0.36	-31.23	0
21	SLU 17	-782	0	3957	-0.47	-31.96	0.01
21	SLU 18	-776	-1	3974	0.41	-31.7	0
21	SLU 19	-794	0	4011	-0.42	-32.42	0
21	SLU 20	-787	-1	4019	0.41	-32.15	0
21	SLU 21	-805	0	4056	-0.42	-32.87	0
21	SLU 22	-726	-1	3765	0.34	-29.69	0
21	SLU 23	-756	1	3827	-1.04	-30.89	0.01
21	SLU 24	-742	-1	3823	0.35	-30.3	0
21	SLU 25	-759	0	3859	-0.48	-31.02	0.01
21	SLU 26	-767	1	3872	-1.04	-31.34	0.01
21	SLU 27	-753	-1	3867	0.35	-30.74	0
21	SLU 28	-770	0	3904	-0.48	-31.47	0.01
21	SLU 29	-749	-1	3855	0.34	-30.58	0
21	SLU 30	-766	0	3892	-0.49	-31.3	0.01
21	SLU 31	-834	0	4163	-0.91	-34.06	0.01
21	SLU 32	-820	-1	4158	0.48	-33.47	0
21	SLU 33	-837	0	4195	-0.35	-34.19	0
21	SLU 34	-845	0	4208	-0.91	-34.51	0.01
21	SLU 35	-831	-1	4203	0.48	-33.92	0
21	SLU 36	-848	0	4240	-0.35	-34.64	0
21	SLU 37	-827	-1	4191	0.47	-33.75	0
21	SLU 38	-844	0	4228	-0.36	-34.48	0
21	SLU 39	-838	-1	4245	0.53	-34.22	0
21	SLU 40	-856	0	4282	-0.3	-34.94	0
21	SLU 41	-849	-1	4290	0.53	-34.66	0
21	SLU 42	-867	0	4327	-0.3	-35.39	0
21	SLU 43	-842	-1	4450	0.25	-34.45	0
21	SLU 44	-872	1	4511	-1.13	-35.66	0.01
21	SLU 45	-858	-1	4507	0.26	-35.06	0
21	SLU 46	-875	0	4544	-0.57	-35.79	0.01



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
21	SLU 47	-883	1	4556	-1.13	-36.11	0.01
21	SLU 48	-869	-1	4552	0.26	-35.51	0
21	SLU 49	-886	0	4589	-0.57	-36.24	0.01
21	SLU 50	-865	-1	4539	0.25	-35.35	0
21	SLU 51	-882	0	4576	-0.58	-36.07	0.01
21	SLU 52	-950	0	4847	-1	-38.83	0.01
21	SLU 53	-936	-1	4843	0.39	-38.24	0
21	SLU 54	-953	0	4880	-0.44	-38.96	0.01
21	SLU 55	-961	0	4892	-1	-39.28	0.01
21	SLU 56	-947	-1	4887	0.39	-38.68	0
21	SLU 57	-964	0	4924	-0.44	-39.41	0.01
21	SLU 58	-943	-1	4875	0.38	-38.52	0
21	SLU 59	-960	0	4912	-0.45	-39.24	0.01
21	SLU 60	-954	-1	4930	0.44	-38.98	0
21	SLU 61	-972	0	4967	-0.39	-39.71	0
21	SLU 62	-965	-1	4974	0.44	-39.43	0
21	SLU 63	-983	0	5011	-0.39	-40.16	0.01
21	SLU 64	-904	-1	4721	0.37	-36.97	0
21	SLU 65	-934	0	4782	-1.02	-38.18	0.01
21	SLU 66	-920	-1	4778	0.37	-37.58	0
21	SLU 67	-937	0	4815	-0.46	-38.31	0.01
21	SLU 68	-945	0	4827	-1.01	-38.63	0.01
21	SLU 69	-931	-1	4823	0.37	-38.03	0
21	SLU 70	-948	0	4860	-0.45	-38.76	0.01
21	SLU 71	-927	-1	4810	0.37	-37.87	0
21	SLU 72	-944	0	4847	-0.46	-38.59	0.01
21	SLU 73	-1012	0	5118	-0.89	-41.35	0.01
21	SLU 74	-998	-2	5114	0.5	-40.76	0
21	SLU 75	-1015	-1	5151	-0.33	-41.48	0
21	SLU 76	-1023	0	5163	-0.88	-41.8	0.01
21	SLU 77	-1009	-2	5158	0.51	-41.2	0
21	SLU 78	-1026	-1	5195	-0.32	-41.93	0
21	SLU 79	-1005	-2	5146	0.5	-41.04	0
21	SLU 80	-1022	-1	5183	-0.33	-41.76	0
21	SLU 81	-1016	-2	5201	0.55	-41.5	0
21	SLU 82	-1034	-1	5238	-0.28	-42.23	0
21	SLU 83	-1027	-2	5245	0.55	-41.95	0
21	SLU 84	-1045	-1	5282	-0.27	-42.67	0
21	SLE RA 1	-682	-1	3572	0.26	-27.89	0
21	SLE RA 2	-702	0	3613	-0.67	-28.69	0.01
21	SLE RA 3	-692	-1	3610	0.26	-28.29	0
21	SLE RA 4	-704	0	3635	-0.29	-28.78	0
21	SLE RA 5	-709	0	3643	-0.66	-28.99	0.01
21	SLE RA 6	-700	-1	3640	0.26	-28.59	0
21	SLE RA 7	-711	0	3664	-0.29	-29.08	0
21	SLE RA 8	-697	-1	3631	0.26	-28.48	0
21	SLE RA 9	-709	0	3656	-0.29	-28.97	0
21	SLE RA 10	-754	0	3837	-0.58	-30.81	0.01
21	SLE RA 11	-744	-1	3834	0.35	-30.41	0
21	SLE RA 12	-756	0	3858	-0.21	-30.89	0
21	SLE RA 13	-761	0	3867	-0.58	-31.1	0.01
21	SLE RA 14	-752	-1	3864	0.35	-30.71	0
21	SLE RA 15	-763	0	3888	-0.2	-31.19	0
21	SLE RA 16	-749	-1	3855	0.35	-30.6	0
21	SLE RA 17	-761	0	3880	-0.21	-31.08	0
21	SLE RA 18	-757	-1	3892	0.38	-30.91	0
21	SLE RA 19	-768	-1	3916	-0.17	-31.39	0
21	SLE RA 20	-764	-1	3922	0.38	-31.21	0
21	SLE RA 21	-776	-1	3946	-0.17	-31.69	0
21	SLE FR 1	-682	-1	3572	0.26	-27.89	0
21	SLE FR 2	-686	-1	3580	0.07	-28.05	0
21	SLE FR 3	-685	-1	3584	0.26	-28.01	0
21	SLE FR 4	-708	-1	3676	0.11	-28.95	0
21	SLE FR 5	-707	-1	3680	0.29	-28.91	0
21	SLE FR 6	-719	-1	3732	0.32	-29.4	0
21	SLE QP 1	-682	-1	3572	0.26	-27.89	0
21	SLE QP 2	-704	-1	3668	0.29	-28.79	0
21	SLD 1	-551	3	3404	-3.11	-21.41	0.03
21	SLD 2	-551	3	3404	-3.11	-21.41	0.03
21	SLD 3	-360	-12	2792	8.27	-13.65	-0.06
21	SLD 4	-360	-12	2792	8.27	-13.65	-0.06
21	SLD 5	-947	23	4517	-17.99	-38.34	0.14
21	SLD 6	-947	23	4517	-17.99	-38.34	0.14
21	SLD 7	-313	-27	2477	19.95	-12.49	-0.15
21	SLD 8	-313	-27	2477	19.95	-12.49	-0.15
21	SLD 9	-1096	25	4859	-19.36	-45.09	0.15
21	SLD 10	-1096	25	4859	-19.36	-45.09	0.15
21	SLD 11	-462	-25	2818	18.58	-19.25	-0.14
21	SLD 12	-462	-25	2818	18.58	-19.25	-0.14
21	SLD 13	-1049	10	4543	-7.68	-43.93	0.06
21	SLD 14	-1049	10	4543	-7.68	-43.93	0.06
21	SLD 15	-858	-5	3931	3.7	-36.18	-0.03
21	SLD 16	-858	-5	3931	3.7	-36.18	-0.03
21	SLV 1	-347	9	3053	-7.55	-11.64	0.06
21	SLV 2	-347	9	3053	-7.55	-11.64	0.06
21	SLV 3	97	-26	1620	19.2	6.47	-0.15
21	SLV 4	97	-26	1620	19.2	6.47	-0.15
21	SLV 5	-1271	55	5656	-42.63	-51.11	0.33
21	SLV 6	-1271	55	5656	-42.63	-51.11	0.33
21	SLV 7	210	-62	880	46.53	9.25	-0.36



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
21	SLV 8	210	-62	880	46.53	9.25	-0.36
21	SLV 9	-1619	60	6455	-45.95	-66.84	0.36
21	SLV 10	-1619	60	6455	-45.95	-66.84	0.36
21	SLV 11	-138	-57	1679	43.22	-6.47	-0.33
21	SLV 12	-138	-57	1679	43.22	-6.47	-0.33
21	SLV 13	-1506	24	5716	-18.61	-64.05	0.15
21	SLV 14	-1506	24	5716	-18.61	-64.05	0.15
21	SLV 15	-1061	-11	4283	8.14	-45.95	-0.06
21	SLV 16	-1061	-11	4283	8.14	-45.95	-0.06
22	SLU 1	-687	-1	3150	0.63	-27.8	-0.01
22	SLU 2	-718	0	3195	-0.82	-29.04	0
22	SLU 3	-702	-1	3198	0.65	-28.41	-0.01
22	SLU 4	-721	0	3225	-0.22	-29.15	0
22	SLU 5	-729	0	3233	-0.81	-29.48	0
22	SLU 6	-713	-1	3235	0.66	-28.84	-0.01
22	SLU 7	-732	0	3262	-0.21	-29.59	0
22	SLU 8	-709	-1	3225	0.65	-28.67	-0.01
22	SLU 9	-728	0	3252	-0.22	-29.42	0
22	SLU 10	-799	0	3486	-0.64	-32.27	0
22	SLU 11	-782	-1	3489	0.83	-31.63	-0.01
22	SLU 12	-801	0	3515	-0.04	-32.38	0
22	SLU 13	-810	0	3524	-0.63	-32.71	0
22	SLU 14	-793	-1	3526	0.84	-32.07	-0.01
22	SLU 15	-812	-1	3553	-0.03	-32.82	0
22	SLU 16	-789	-1	3516	0.83	-31.9	-0.01
22	SLU 17	-808	0	3543	-0.04	-32.65	0
22	SLU 18	-802	-2	3566	0.89	-32.41	-0.01
22	SLU 19	-820	-1	3593	0.02	-33.16	0
22	SLU 20	-813	-2	3603	0.9	-32.85	-0.01
22	SLU 21	-831	-1	3630	0.03	-33.59	0
22	SLU 22	-751	-1	3386	0.79	-30.39	-0.01
22	SLU 23	-783	0	3431	-0.66	-31.63	0
22	SLU 24	-767	-1	3433	0.81	-31	-0.01
22	SLU 25	-786	0	3460	-0.06	-31.74	0
22	SLU 26	-794	0	3468	-0.65	-32.07	0
22	SLU 27	-778	-1	3471	0.82	-31.44	-0.01
22	SLU 28	-797	0	3497	-0.05	-32.18	0
22	SLU 29	-773	-1	3461	0.81	-31.27	-0.01
22	SLU 30	-792	0	3488	-0.06	-32.01	0
22	SLU 31	-863	0	3721	-0.47	-34.86	0
22	SLU 32	-847	-2	3724	0.99	-34.23	-0.01
22	SLU 33	-866	-1	3751	0.12	-34.97	0
22	SLU 34	-874	0	3759	-0.46	-35.3	0
22	SLU 35	-858	-2	3761	1	-34.67	-0.01
22	SLU 36	-877	-1	3788	0.14	-35.41	0
22	SLU 37	-854	-2	3752	1	-34.5	-0.01
22	SLU 38	-873	-1	3779	0.13	-35.24	0
22	SLU 39	-866	-2	3801	1.05	-35.01	-0.01
22	SLU 40	-885	-1	3828	0.18	-35.75	0
22	SLU 41	-877	-2	3839	1.06	-35.44	-0.01
22	SLU 42	-896	-1	3866	0.19	-36.19	0
22	SLU 43	-871	-1	4015	0.76	-35.25	-0.01
22	SLU 44	-902	0	4059	-0.69	-36.49	0
22	SLU 45	-886	-1	4062	0.78	-35.86	-0.01
22	SLU 46	-905	0	4089	-0.09	-36.6	0
22	SLU 47	-913	0	4097	-0.68	-36.93	0
22	SLU 48	-897	-1	4100	0.79	-36.29	-0.01
22	SLU 49	-916	-1	4126	-0.08	-37.04	0
22	SLU 50	-893	-1	4090	0.78	-36.12	-0.01
22	SLU 51	-912	0	4117	-0.09	-36.87	0
22	SLU 52	-983	0	4350	-0.51	-39.72	0
22	SLU 53	-966	-2	4353	0.96	-39.08	-0.01
22	SLU 54	-985	-1	4380	0.09	-39.83	0
22	SLU 55	-994	0	4388	-0.49	-40.16	0
22	SLU 56	-977	-2	4390	0.97	-39.52	-0.01
22	SLU 57	-996	-1	4417	0.1	-40.27	0
22	SLU 58	-973	-2	4381	0.96	-39.35	-0.01
22	SLU 59	-992	-1	4407	0.1	-40.1	0
22	SLU 60	-985	-2	4430	1.02	-39.86	-0.01
22	SLU 61	-1004	-1	4457	0.15	-40.61	0
22	SLU 62	-996	-2	4468	1.03	-40.3	-0.01
22	SLU 63	-1015	-1	4495	0.16	-41.04	0
22	SLU 64	-935	-2	4250	0.92	-37.84	-0.01
22	SLU 65	-967	0	4295	-0.53	-39.08	0
22	SLU 66	-951	-2	4297	0.94	-38.45	-0.01
22	SLU 67	-970	-1	4324	0.07	-39.19	0
22	SLU 68	-978	0	4332	-0.51	-39.52	0
22	SLU 69	-962	-2	4335	0.95	-38.89	-0.01
22	SLU 70	-981	-1	4362	0.08	-39.63	0
22	SLU 71	-957	-2	4325	0.94	-38.72	-0.01
22	SLU 72	-976	-1	4352	0.08	-39.46	0
22	SLU 73	-1047	0	4586	-0.34	-42.31	0
22	SLU 74	-1031	-2	4588	1.12	-41.68	-0.01
22	SLU 75	-1050	-1	4615	0.26	-42.42	0
22	SLU 76	-1058	0	4623	-0.33	-42.75	0
22	SLU 77	-1042	-2	4626	1.14	-42.12	-0.01
22	SLU 78	-1061	-1	4653	0.27	-42.86	0
22	SLU 79	-1038	-2	4616	1.13	-41.95	-0.01
22	SLU 80	-1057	-1	4643	0.26	-42.69	0
22	SLU 81	-1050	-2	4666	1.18	-42.46	-0.01



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
22	SLU 82	-1069	-1	4693	0.32	-43.2	0
22	SLU 83	-1061	-2	4703	1.19	-42.89	-0.01
22	SLU 84	-1080	-1	4730	0.33	-43.64	0
22	SLE RA 1	-705	-1	3217	0.67	-28.54	-0.01
22	SLE RA 2	-726	0	3247	-0.29	-29.37	0
22	SLE RA 3	-715	-1	3249	0.69	-28.94	-0.01
22	SLE RA 4	-728	-1	3267	0.11	-29.44	0
22	SLE RA 5	-734	0	3272	-0.28	-29.66	0
22	SLE RA 6	-723	-1	3274	0.69	-29.24	-0.01
22	SLE RA 7	-735	-1	3292	0.11	-29.73	0
22	SLE RA 8	-720	-1	3268	0.69	-29.12	-0.01
22	SLE RA 9	-733	-1	3285	0.11	-29.62	0
22	SLE RA 10	-780	0	3441	-0.17	-31.52	0
22	SLE RA 11	-769	-1	3443	0.81	-31.1	-0.01
22	SLE RA 12	-782	-1	3461	0.23	-31.59	0
22	SLE RA 13	-787	0	3466	-0.16	-31.81	0
22	SLE RA 14	-776	-1	3468	0.82	-31.39	-0.01
22	SLE RA 15	-789	-1	3486	0.24	-31.89	0
22	SLE RA 16	-773	-1	3461	0.81	-31.28	-0.01
22	SLE RA 17	-786	-1	3479	0.23	-31.77	0
22	SLE RA 18	-782	-1	3495	0.85	-31.62	-0.01
22	SLE RA 19	-794	-1	3512	0.27	-32.11	0
22	SLE RA 20	-789	-2	3520	0.86	-31.91	-0.01
22	SLE RA 21	-802	-1	3538	0.28	-32.4	0
22	SLE FR 1	-705	-1	3217	0.67	-28.54	-0.01
22	SLE FR 2	-709	-1	3223	0.48	-28.7	0
22	SLE FR 3	-708	-1	3227	0.68	-28.66	-0.01
22	SLE FR 4	-732	-1	3307	0.53	-29.63	0
22	SLE FR 5	-731	-1	3311	0.73	-29.58	-0.01
22	SLE FR 6	-743	-1	3356	0.76	-30.08	-0.01
22	SLE QP 1	-705	-1	3217	0.67	-28.54	-0.01
22	SLE QP 2	-728	-1	3301	0.73	-29.46	-0.01
22	SLD 1	-536	4	2880	-3.23	-20.39	0.02
22	SLD 2	-536	4	2880	-3.23	-20.39	0.02
22	SLD 3	-345	-14	2381	9.85	-12.79	-0.08
22	SLD 4	-345	-14	2381	9.85	-12.79	-0.08
22	SLD 5	-960	27	3932	-20.3	-38.28	0.17
22	SLD 6	-960	27	3932	-20.3	-38.28	0.17
22	SLD 7	-324	-32	2267	23.3	-12.93	-0.19
22	SLD 8	-324	-32	2267	23.3	-12.93	-0.19
22	SLD 9	-1133	29	4335	-21.85	-46	0.18
22	SLD 10	-1133	29	4335	-21.85	-46	0.18
22	SLD 11	-497	-30	2669	21.75	-20.65	-0.18
22	SLD 12	-497	-30	2669	21.75	-20.65	-0.18
22	SLD 13	-1111	11	4221	-8.4	-46.14	0.07
22	SLD 14	-1111	11	4221	-8.4	-46.14	0.07
22	SLD 15	-921	-7	3721	4.68	-38.53	-0.04
22	SLD 16	-921	-7	3721	4.68	-38.53	-0.04
22	SLV 1	-281	11	2318	-8.4	-8.36	0.07
22	SLV 2	-281	11	2318	-8.4	-8.36	0.07
22	SLV 3	165	-31	1148	22.31	9.43	-0.19
22	SLV 4	165	-31	1148	22.31	9.43	-0.19
22	SLV 5	-1271	65	4781	-48.6	-50.1	0.4
22	SLV 6	-1271	65	4781	-48.6	-50.1	0.4
22	SLV 7	217	-73	880	53.79	9.18	-0.44
22	SLV 8	217	-73	880	53.79	9.18	-0.44
22	SLV 9	-1673	71	5721	-52.34	-68.1	0.43
22	SLV 10	-1673	71	5721	-52.34	-68.1	0.43
22	SLV 11	-186	-68	1820	50.05	-8.82	-0.41
22	SLV 12	-186	-68	1820	50.05	-8.82	-0.41
22	SLV 13	-1622	28	5453	-20.86	-68.35	0.17
22	SLV 14	-1622	28	5453	-20.86	-68.35	0.17
22	SLV 15	-1176	-13	4283	9.86	-50.57	-0.08
22	SLV 16	-1176	-13	4283	9.86	-50.57	-0.08
23	SLU 1	-678	0	2857	0.71	-28.23	-0.01
23	SLU 2	-712	0	2884	-0.56	-29.64	0
23	SLU 3	-692	-1	2896	0.73	-28.83	-0.01
23	SLU 4	-713	0	2912	-0.03	-29.68	0
23	SLU 5	-722	0	2916	-0.55	-30.07	0
23	SLU 6	-703	-1	2928	0.74	-29.26	-0.01
23	SLU 7	-723	0	2944	-0.02	-30.1	0
23	SLU 8	-699	-1	2920	0.73	-29.08	-0.01
23	SLU 9	-719	0	2936	-0.03	-29.93	0
23	SLU 10	-791	0	3136	-0.38	-32.9	0
23	SLU 11	-772	-1	3148	0.92	-32.09	-0.01
23	SLU 12	-792	-1	3164	0.15	-32.94	0
23	SLU 13	-801	0	3167	-0.36	-33.32	0
23	SLU 14	-782	-1	3179	0.93	-32.52	-0.01
23	SLU 15	-802	-1	3195	0.17	-33.36	0
23	SLU 16	-778	-1	3172	0.92	-32.34	-0.01
23	SLU 17	-798	-1	3188	0.16	-33.19	0
23	SLU 18	-791	-1	3216	0.97	-32.89	-0.01
23	SLU 19	-811	-1	3232	0.21	-33.73	0
23	SLU 20	-801	-1	3248	0.99	-33.31	-0.01
23	SLU 21	-821	-1	3264	0.22	-34.16	0
23	SLU 22	-742	-1	3061	0.87	-30.88	-0.01
23	SLU 23	-776	0	3088	-0.4	-32.29	0
23	SLU 24	-757	-1	3100	0.9	-31.48	-0.01
23	SLU 25	-777	-1	3116	0.13	-32.32	0
23	SLU 26	-786	0	3119	-0.38	-32.71	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
23	SLU 27	-767	-1	3131	0.91	-31.9	-0.01
23	SLU 28	-787	-1	3148	0.15	-32.75	0
23	SLU 29	-763	-1	3124	0.9	-31.73	-0.01
23	SLU 30	-783	-1	3140	0.14	-32.57	0
23	SLU 31	-855	0	3339	-0.21	-35.54	0
23	SLU 32	-836	-2	3351	1.08	-34.74	-0.01
23	SLU 33	-856	-1	3367	0.32	-35.58	0
23	SLU 34	-865	0	3371	-0.2	-35.97	0
23	SLU 35	-846	-2	3383	1.1	-35.16	-0.01
23	SLU 36	-866	-1	3399	0.34	-36.01	0
23	SLU 37	-842	-2	3375	1.09	-34.99	-0.01
23	SLU 38	-862	-1	3391	0.33	-35.83	0
23	SLU 39	-855	-2	3420	1.14	-35.53	-0.01
23	SLU 40	-875	-1	3436	0.38	-36.38	0
23	SLU 41	-865	-2	3452	1.15	-35.96	-0.01
23	SLU 42	-886	-1	3468	0.39	-36.8	0
23	SLU 43	-859	-1	3645	0.86	-35.8	-0.01
23	SLU 44	-893	0	3672	-0.41	-37.2	0
23	SLU 45	-874	-1	3684	0.88	-36.4	-0.01
23	SLU 46	-894	-1	3700	0.12	-37.24	0
23	SLU 47	-903	0	3703	-0.4	-37.63	0
23	SLU 48	-884	-1	3715	0.9	-36.82	-0.01
23	SLU 49	-904	-1	3731	0.14	-37.67	0
23	SLU 50	-880	-1	3708	0.89	-36.65	-0.01
23	SLU 51	-900	-1	3724	0.13	-37.49	0
23	SLU 52	-972	0	3923	-0.22	-40.46	0
23	SLU 53	-953	-2	3935	1.07	-39.65	-0.01
23	SLU 54	-973	-1	3951	0.31	-40.5	0
23	SLU 55	-982	0	3954	-0.21	-40.89	0
23	SLU 56	-963	-2	3966	1.08	-40.08	-0.01
23	SLU 57	-983	-1	3983	0.32	-40.92	0
23	SLU 58	-959	-2	3959	1.08	-39.9	-0.01
23	SLU 59	-979	-1	3975	0.31	-40.75	0
23	SLU 60	-972	-2	4004	1.13	-40.45	-0.01
23	SLU 61	-992	-1	4020	0.37	-41.29	0
23	SLU 62	-983	-2	4035	1.14	-40.88	-0.01
23	SLU 63	-1003	-1	4051	0.38	-41.72	0
23	SLU 64	-923	-2	3848	1.03	-38.44	-0.01
23	SLU 65	-957	0	3875	-0.24	-39.85	0
23	SLU 66	-938	-2	3887	1.05	-39.04	-0.01
23	SLU 67	-958	-1	3903	0.29	-39.89	0
23	SLU 68	-967	0	3907	-0.23	-40.27	0
23	SLU 69	-948	-2	3919	1.06	-39.47	-0.01
23	SLU 70	-969	-1	3935	0.3	-40.31	0
23	SLU 71	-944	-2	3911	1.06	-39.29	-0.01
23	SLU 72	-964	-1	3927	0.29	-40.14	0
23	SLU 73	-1036	-1	4127	-0.06	-43.11	0
23	SLU 74	-1017	-2	4139	1.24	-42.3	-0.01
23	SLU 75	-1037	-1	4155	0.48	-43.14	-0.01
23	SLU 76	-1047	-1	4158	-0.04	-43.53	0
23	SLU 77	-1027	-2	4170	1.25	-42.72	-0.01
23	SLU 78	-1048	-1	4186	0.49	-43.57	-0.01
23	SLU 79	-1023	-2	4163	1.24	-42.55	-0.01
23	SLU 80	-1043	-1	4179	0.48	-43.39	-0.01
23	SLU 81	-1036	-2	4207	1.29	-43.1	-0.01
23	SLU 82	-1057	-1	4224	0.53	-43.94	-0.01
23	SLU 83	-1047	-2	4239	1.31	-43.52	-0.01
23	SLU 84	-1067	-1	4255	0.55	-44.37	-0.01
23	SLE RA 1	-696	-1	2916	0.75	-28.99	-0.01
23	SLE RA 2	-719	0	2933	-0.09	-29.93	0
23	SLE RA 3	-706	-1	2941	0.77	-29.39	-0.01
23	SLE RA 4	-719	-1	2952	0.26	-29.95	0
23	SLE RA 5	-726	0	2954	-0.08	-30.21	0
23	SLE RA 6	-713	-1	2962	0.78	-29.67	-0.01
23	SLE RA 7	-726	-1	2973	0.27	-30.24	0
23	SLE RA 8	-710	-1	2957	0.77	-29.56	-0.01
23	SLE RA 9	-723	-1	2968	0.26	-30.12	0
23	SLE RA 10	-771	0	3101	0.03	-32.1	0
23	SLE RA 11	-759	-1	3109	0.89	-31.56	-0.01
23	SLE RA 12	-772	-1	3120	0.39	-32.12	0
23	SLE RA 13	-778	0	3122	0.04	-32.38	0
23	SLE RA 14	-766	-1	3130	0.9	-31.84	-0.01
23	SLE RA 15	-779	-1	3141	0.4	-32.41	0
23	SLE RA 16	-763	-1	3125	0.9	-31.73	-0.01
23	SLE RA 17	-776	-1	3136	0.39	-32.29	0
23	SLE RA 18	-772	-1	3155	0.93	-32.09	-0.01
23	SLE RA 19	-785	-1	3166	0.42	-32.65	0
23	SLE RA 20	-778	-1	3176	0.94	-32.38	-0.01
23	SLE RA 21	-792	-1	3187	0.43	-32.94	0
23	SLE FR 1	-696	-1	2916	0.75	-28.99	-0.01
23	SLE FR 2	-701	-1	2919	0.58	-29.18	0
23	SLE FR 3	-699	-1	2924	0.76	-29.1	-0.01
23	SLE FR 4	-723	-1	2991	0.64	-30.11	-0.01
23	SLE FR 5	-722	-1	2996	0.81	-30.03	-0.01
23	SLE FR 6	-734	-1	3035	0.84	-30.54	-0.01
23	SLE QP 1	-696	-1	2916	0.75	-28.99	-0.01
23	SLE QP 2	-719	-1	2987	0.81	-29.92	-0.01
23	SLD 1	-487	4	2456	-3.01	-19.17	0.02
23	SLD 2	-487	4	2456	-3.01	-19.17	0.02
23	SLD 3	-301	-13	2051	9.72	-11.49	-0.08



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
23	SLD 4	-301	-13	2051	9.72	-11.49	-0.08
23	SLD 5	-932	26	3442	-19.63	-38.34	0.15
23	SLD 6	-932	26	3442	-19.63	-38.34	0.15
23	SLD 7	-311	-30	2092	22.77	-12.75	-0.18
23	SLD 8	-311	-30	2092	22.77	-12.75	-0.18
23	SLD 9	-1127	28	3883	-21.16	-47.09	0.16
23	SLD 10	-1127	28	3883	-21.16	-47.09	0.16
23	SLD 11	-506	-28	2533	21.24	-21.5	-0.16
23	SLD 12	-506	-28	2533	21.24	-21.5	-0.16
23	SLD 13	-1136	11	3924	-8.1	-48.35	0.06
23	SLD 14	-1136	11	3924	-8.1	-48.35	0.06
23	SLD 15	-950	-6	3519	4.62	-40.67	-0.03
23	SLD 16	-950	-6	3519	4.62	-40.67	-0.03
23	SLV 1	-180	10	1744	-8.01	-4.87	0.06
23	SLV 2	-180	10	1744	-8.01	-4.87	0.06
23	SLV 3	256	-30	796	21.86	13.11	-0.17
23	SLV 4	256	-30	796	21.86	13.11	-0.17
23	SLV 5	-1219	62	4053	-47.14	-49.67	0.36
23	SLV 6	-1219	62	4053	-47.14	-49.67	0.36
23	SLV 7	235	-69	891	52.43	10.25	-0.4
23	SLV 8	235	-69	891	52.43	10.25	-0.4
23	SLV 9	-1673	67	5083	-50.81	-70.09	0.39
23	SLV 10	-1673	67	5083	-50.81	-70.09	0.39
23	SLV 11	-219	-64	1922	48.75	-10.17	-0.37
23	SLV 12	-219	-64	1922	48.75	-10.17	-0.37
23	SLV 13	-1694	27	5179	-20.25	-72.95	0.16
23	SLV 14	-1694	27	5179	-20.25	-72.95	0.16
23	SLV 15	-1258	-12	4231	9.62	-54.97	-0.07
23	SLV 16	-1258	-12	4231	9.62	-54.97	-0.07
24	SLU 1	-648	-1	2640	0.55	-26.71	-0.01
24	SLU 2	-681	0	2648	-0.35	-27.98	0
24	SLU 3	-662	-1	2672	0.58	-27.25	-0.01
24	SLU 4	-681	0	2677	0.03	-28.01	0
24	SLU 5	-690	0	2675	-0.34	-28.35	0
24	SLU 6	-671	-1	2699	0.59	-27.62	-0.01
24	SLU 7	-691	-1	2704	0.05	-28.38	0
24	SLU 8	-667	-1	2693	0.58	-27.46	-0.01
24	SLU 9	-687	0	2698	0.04	-28.22	0
24	SLU 10	-757	0	2867	-0.19	-31.08	0
24	SLU 11	-738	-1	2891	0.73	-30.35	-0.01
24	SLU 12	-757	-1	2896	0.19	-31.11	-0.01
24	SLU 13	-766	0	2894	-0.18	-31.45	0
24	SLU 14	-747	-1	2918	0.75	-30.73	-0.01
24	SLU 15	-767	-1	2923	0.2	-31.48	-0.01
24	SLU 16	-743	-1	2912	0.74	-30.57	-0.01
24	SLU 17	-763	-1	2917	0.2	-31.32	-0.01
24	SLU 18	-757	-1	2952	0.78	-31.15	-0.01
24	SLU 19	-777	-1	2958	0.24	-31.9	-0.01
24	SLU 20	-766	-1	2979	0.79	-31.52	-0.01
24	SLU 21	-786	-1	2984	0.25	-32.28	-0.01
24	SLU 22	-710	-1	2817	0.7	-29.24	-0.01
24	SLU 23	-743	0	2826	-0.21	-30.5	0
24	SLU 24	-723	-1	2849	0.72	-29.77	-0.01
24	SLU 25	-743	-1	2855	0.17	-30.53	-0.01
24	SLU 26	-752	0	2853	-0.2	-30.88	0
24	SLU 27	-733	-1	2876	0.73	-30.15	-0.01
24	SLU 28	-752	-1	2881	0.19	-30.91	-0.01
24	SLU 29	-729	-1	2871	0.72	-29.99	-0.01
24	SLU 30	-748	-1	2876	0.18	-30.75	-0.01
24	SLU 31	-819	-1	3045	-0.05	-33.6	-0.01
24	SLU 32	-800	-1	3068	0.87	-32.88	-0.01
24	SLU 33	-819	-1	3074	0.33	-33.63	-0.01
24	SLU 34	-828	-1	3072	-0.04	-33.98	-0.01
24	SLU 35	-809	-1	3095	0.89	-33.25	-0.01
24	SLU 36	-829	-1	3100	0.35	-34.01	-0.01
24	SLU 37	-805	-1	3090	0.88	-33.09	-0.01
24	SLU 38	-825	-1	3095	0.34	-33.85	-0.01
24	SLU 39	-819	-1	3130	0.92	-33.67	-0.01
24	SLU 40	-839	-1	3135	0.38	-34.43	-0.01
24	SLU 41	-828	-1	3157	0.93	-34.05	-0.01
24	SLU 42	-848	-1	3162	0.39	-34.8	-0.01
24	SLU 43	-821	-1	3371	0.67	-33.86	-0.01
24	SLU 44	-854	0	3379	-0.23	-35.12	0
24	SLU 45	-835	-1	3403	0.69	-34.4	-0.01
24	SLU 46	-854	-1	3408	0.15	-35.15	-0.01
24	SLU 47	-864	0	3406	-0.22	-35.5	0
24	SLU 48	-844	-1	3430	0.71	-34.77	-0.01
24	SLU 49	-864	-1	3435	0.16	-35.53	-0.01
24	SLU 50	-840	-1	3424	0.7	-34.61	-0.01
24	SLU 51	-860	-1	3429	0.16	-35.37	-0.01
24	SLU 52	-930	-1	3598	-0.07	-38.23	-0.01
24	SLU 53	-911	-1	3622	0.85	-37.5	-0.01
24	SLU 54	-931	-1	3627	0.31	-38.26	-0.01
24	SLU 55	-940	-1	3625	-0.06	-38.6	-0.01
24	SLU 56	-920	-1	3649	0.86	-37.87	-0.01
24	SLU 57	-940	-1	3654	0.32	-38.63	-0.01
24	SLU 58	-916	-1	3643	0.86	-37.71	-0.01
24	SLU 59	-936	-1	3648	0.31	-38.47	-0.01
24	SLU 60	-930	-1	3683	0.9	-38.29	-0.01
24	SLU 61	-950	-1	3689	0.36	-39.05	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
24	SLU 62	-939	-1	3710	0.91	-38.67	-0.01
24	SLU 63	-959	-1	3715	0.37	-39.43	-0.01
24	SLU 64	-883	-1	3548	0.81	-36.39	-0.01
24	SLU 65	-916	-1	3557	-0.09	-37.65	-0.01
24	SLU 66	-897	-1	3580	0.83	-36.92	-0.01
24	SLU 67	-916	-1	3586	0.29	-37.68	-0.01
24	SLU 68	-926	-1	3584	-0.08	-38.02	-0.01
24	SLU 69	-906	-1	3607	0.85	-37.3	-0.01
24	SLU 70	-926	-1	3612	0.31	-38.05	-0.01
24	SLU 71	-902	-1	3602	0.84	-37.14	-0.01
24	SLU 72	-922	-1	3607	0.3	-37.89	-0.01
24	SLU 73	-992	-1	3776	0.07	-40.75	-0.01
24	SLU 74	-973	-1	3799	0.99	-40.02	-0.01
24	SLU 75	-993	-1	3805	0.45	-40.78	-0.01
24	SLU 76	-1002	-1	3803	0.08	-41.13	-0.01
24	SLU 77	-982	-1	3826	1.01	-40.4	-0.01
24	SLU 78	-1002	-1	3831	0.46	-41.16	-0.01
24	SLU 79	-978	-1	3821	1	-40.24	-0.01
24	SLU 80	-998	-1	3826	0.46	-41	-0.01
24	SLU 81	-992	-1	3861	1.04	-40.82	-0.01
24	SLU 82	-1012	-1	3866	0.5	-41.58	-0.01
24	SLU 83	-1001	-1	3888	1.05	-41.19	-0.01
24	SLU 84	-1021	-1	3893	0.51	-41.95	-0.01
24	SLE RA 1	-666	-1	2690	0.59	-27.43	-0.01
24	SLE RA 2	-688	0	2696	-0.01	-28.28	0
24	SLE RA 3	-675	-1	2712	0.61	-27.79	-0.01
24	SLE RA 4	-688	-1	2715	0.25	-28.3	0
24	SLE RA 5	-694	0	2714	0	-28.53	0
24	SLE RA 6	-681	-1	2730	0.62	-28.04	-0.01
24	SLE RA 7	-694	-1	2733	0.26	-28.55	0
24	SLE RA 8	-678	-1	2726	0.61	-27.93	-0.01
24	SLE RA 9	-691	-1	2730	0.25	-28.44	0
24	SLE RA 10	-739	-1	2842	0.1	-30.34	-0.01
24	SLE RA 11	-726	-1	2858	0.71	-29.86	-0.01
24	SLE RA 12	-739	-1	2861	0.35	-30.37	-0.01
24	SLE RA 13	-745	-1	2860	0.11	-30.59	-0.01
24	SLE RA 14	-732	-1	2876	0.72	-30.11	-0.01
24	SLE RA 15	-745	-1	2879	0.36	-30.62	-0.01
24	SLE RA 16	-729	-1	2872	0.72	-30	-0.01
24	SLE RA 17	-742	-1	2876	0.36	-30.51	-0.01
24	SLE RA 18	-738	-1	2899	0.75	-30.39	-0.01
24	SLE RA 19	-752	-1	2902	0.38	-30.89	-0.01
24	SLE RA 20	-745	-1	2917	0.75	-30.64	-0.01
24	SLE RA 21	-758	-1	2920	0.39	-31.14	-0.01
24	SLE FR 1	-666	-1	2690	0.59	-27.43	-0.01
24	SLE FR 2	-670	-1	2692	0.47	-27.6	-0.01
24	SLE FR 3	-668	-1	2698	0.6	-27.53	-0.01
24	SLE FR 4	-692	-1	2754	0.52	-28.49	-0.01
24	SLE FR 5	-690	-1	2760	0.64	-28.42	-0.01
24	SLE FR 6	-702	-1	2795	0.67	-28.91	-0.01
24	SLE QP 1	-666	-1	2690	0.59	-27.43	-0.01
24	SLE QP 2	-688	-1	2753	0.64	-28.32	-0.01
24	SLD 1	-439	8	2133	-2.38	-17.14	-0.02
24	SLD 2	-439	8	2133	-2.38	-17.14	-0.02
24	SLD 3	-265	-4	1785	8.02	-10.2	0.04
24	SLD 4	-265	-4	1785	8.02	-10.2	0.04
24	SLD 5	-878	20	3095	-16.03	-35.48	-0.1
24	SLD 6	-878	20	3095	-16.03	-35.48	-0.1
24	SLD 7	-296	-20	1935	18.61	-12.37	0.1
24	SLD 8	-296	-20	1935	18.61	-12.37	0.1
24	SLD 9	-1079	18	3571	-17.33	-44.27	-0.11
24	SLD 10	-1079	18	3571	-17.33	-44.27	-0.11
24	SLD 11	-498	-22	2411	17.31	-21.16	0.09
24	SLD 12	-498	-22	2411	17.31	-21.16	0.09
24	SLD 13	-1111	2	3721	-6.74	-46.44	-0.05
24	SLD 14	-1111	2	3721	-6.74	-46.44	-0.05
24	SLD 15	-936	-10	3373	3.66	-39.5	0.01
24	SLD 16	-936	-10	3373	3.66	-39.5	0.01
24	SLV 1	-109	21	1301	-6.34	-2.25	-0.03
24	SLV 2	-109	21	1301	-6.34	-2.25	-0.03
24	SLV 3	300	-8	487	18.05	13.99	0.11
24	SLV 4	300	-8	487	18.05	13.99	0.11
24	SLV 5	-1134	49	3552	-38.45	-45.14	-0.23
24	SLV 6	-1134	49	3552	-38.45	-45.14	-0.23
24	SLV 7	229	-46	838	42.86	9.02	0.24
24	SLV 8	229	-46	838	42.86	9.02	0.24
24	SLV 9	-1604	44	4668	-41.58	-65.66	-0.25
24	SLV 10	-1604	44	4668	-41.58	-65.66	-0.25
24	SLV 11	-241	-51	1953	39.73	-11.5	0.21
24	SLV 12	-241	-51	1953	39.73	-11.5	0.21
24	SLV 13	-1676	6	5019	-16.77	-70.63	-0.12
24	SLV 14	-1676	6	5019	-16.77	-70.63	-0.12
24	SLV 15	-1267	-23	4205	7.62	-54.39	0.02
24	SLV 16	-1267	-23	4205	7.62	-54.39	0.02
25	SLU 1	-657	0	2500	0.08	-28.11	0
25	SLU 2	-690	0	2489	-0.38	-29.52	0
25	SLU 3	-669	0	2527	0.09	-28.64	0
25	SLU 4	-689	0	2521	-0.18	-29.48	0
25	SLU 5	-699	0	2513	-0.37	-29.88	0
25	SLU 6	-678	0	2551	0.1	-29.01	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
25	SLU 7	-698	0	2544	-0.18	-29.85	0
25	SLU 8	-674	0	2547	0.09	-28.85	0
25	SLU 9	-694	0	2541	-0.18	-29.69	0
25	SLU 10	-765	0	2683	-0.29	-32.69	0
25	SLU 11	-745	0	2721	0.18	-31.82	0
25	SLU 12	-765	0	2715	-0.1	-32.66	0
25	SLU 13	-774	0	2707	-0.29	-33.06	0
25	SLU 14	-753	0	2745	0.18	-32.19	0
25	SLU 15	-773	0	2738	-0.09	-33.03	0
25	SLU 16	-750	0	2741	0.18	-32.03	0
25	SLU 17	-770	0	2735	-0.1	-32.87	0
25	SLU 18	-764	0	2777	0.2	-32.65	0
25	SLU 19	-784	0	2771	-0.07	-33.49	0
25	SLU 20	-773	0	2801	0.21	-33.02	0
25	SLU 21	-793	0	2794	-0.07	-33.86	0
25	SLU 22	-718	0	2657	0.16	-30.71	0
25	SLU 23	-752	0	2647	-0.3	-32.11	0
25	SLU 24	-731	0	2685	0.17	-31.24	0
25	SLU 25	-751	0	2678	-0.11	-32.08	0
25	SLU 26	-760	0	2671	-0.3	-32.48	0
25	SLU 27	-739	0	2708	0.18	-31.61	0
25	SLU 28	-759	0	2702	-0.1	-32.45	0
25	SLU 29	-736	0	2705	0.17	-31.45	0
25	SLU 30	-756	0	2698	-0.11	-32.29	0
25	SLU 31	-827	0	2841	-0.22	-35.29	0
25	SLU 32	-806	0	2879	0.25	-34.41	0
25	SLU 33	-826	0	2872	-0.02	-35.25	0
25	SLU 34	-836	0	2865	-0.21	-35.66	0
25	SLU 35	-815	0	2902	0.26	-34.78	0
25	SLU 36	-835	0	2896	-0.02	-35.62	0
25	SLU 37	-811	0	2899	0.26	-34.63	0
25	SLU 38	-831	0	2892	-0.02	-35.47	0
25	SLU 39	-826	0	2935	0.28	-35.25	0
25	SLU 40	-846	0	2928	0	-36.09	0
25	SLU 41	-835	0	2958	0.29	-35.62	0
25	SLU 42	-855	0	2952	0.01	-36.46	0
25	SLU 43	-833	0	3196	0.08	-35.66	0
25	SLU 44	-866	0	3185	-0.38	-37.06	0
25	SLU 45	-845	0	3223	0.09	-36.18	0
25	SLU 46	-865	0	3217	-0.19	-37.02	0
25	SLU 47	-875	0	3209	-0.37	-37.43	0
25	SLU 48	-854	0	3247	0.1	-36.55	0
25	SLU 49	-874	0	3240	-0.18	-37.39	0
25	SLU 50	-850	0	3243	0.09	-36.4	0
25	SLU 51	-870	0	3237	-0.18	-37.24	0
25	SLU 52	-941	0	3379	-0.29	-40.24	0
25	SLU 53	-921	0	3417	0.18	-39.36	0
25	SLU 54	-940	0	3411	-0.1	-40.2	0
25	SLU 55	-950	0	3403	-0.29	-40.6	0
25	SLU 56	-929	0	3441	0.18	-39.73	0
25	SLU 57	-949	0	3434	-0.09	-40.57	0
25	SLU 58	-925	0	3437	0.18	-39.57	0
25	SLU 59	-945	0	3431	-0.1	-40.41	0
25	SLU 60	-940	0	3473	0.2	-40.2	0
25	SLU 61	-960	0	3467	-0.07	-41.04	0
25	SLU 62	-949	0	3497	0.21	-40.57	0
25	SLU 63	-969	0	3490	-0.07	-41.41	0
25	SLU 64	-894	0	3353	0.16	-38.26	0
25	SLU 65	-927	0	3343	-0.3	-39.66	0
25	SLU 66	-907	0	3381	0.17	-38.78	0
25	SLU 67	-927	0	3374	-0.11	-39.62	0
25	SLU 68	-936	0	3366	-0.3	-40.03	0
25	SLU 69	-915	0	3404	0.17	-39.15	0
25	SLU 70	-935	0	3398	-0.1	-39.99	0
25	SLU 71	-912	0	3401	0.17	-38.99	0
25	SLU 72	-932	0	3394	-0.11	-39.83	0
25	SLU 73	-1003	0	3537	-0.22	-42.83	0
25	SLU 74	-982	0	3575	0.25	-41.96	0
25	SLU 75	-1002	0	3568	-0.02	-42.8	0
25	SLU 76	-1012	0	3560	-0.21	-43.2	0
25	SLU 77	-991	0	3598	0.26	-42.33	0
25	SLU 78	-1011	0	3592	-0.02	-43.17	0
25	SLU 79	-987	0	3595	0.25	-42.17	0
25	SLU 80	-1007	0	3588	-0.02	-43.01	0
25	SLU 81	-1002	0	3631	0.28	-42.79	0
25	SLU 82	-1022	0	3624	0	-43.63	0
25	SLU 83	-1011	0	3654	0.29	-43.16	0
25	SLU 84	-1031	0	3648	0.01	-44	0
25	SLE RA 1	-674	0	2545	0.1	-28.86	0
25	SLE RA 2	-696	0	2538	-0.2	-29.79	0
25	SLE RA 3	-683	0	2563	0.11	-29.21	0
25	SLE RA 4	-696	0	2559	-0.07	-29.77	0
25	SLE RA 5	-702	0	2554	-0.2	-30.04	0
25	SLE RA 6	-688	0	2579	0.11	-29.45	0
25	SLE RA 7	-702	0	2574	-0.07	-30.01	0
25	SLE RA 8	-686	0	2576	0.11	-29.35	0
25	SLE RA 9	-699	0	2572	-0.07	-29.91	0
25	SLE RA 10	-747	0	2667	-0.15	-31.91	0
25	SLE RA 11	-733	0	2692	0.17	-31.32	0
25	SLE RA 12	-746	0	2688	-0.02	-31.88	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
25	SLE RA 13	-753	0	2683	-0.14	-32.15	0
25	SLE RA 14	-739	0	2708	0.17	-31.57	0
25	SLE RA 15	-752	0	2704	-0.01	-32.13	0
25	SLE RA 16	-736	0	2706	0.17	-31.47	0
25	SLE RA 17	-750	0	2701	-0.02	-32.03	0
25	SLE RA 18	-746	0	2730	0.19	-31.88	0
25	SLE RA 19	-759	0	2725	0	-32.44	0
25	SLE RA 20	-752	0	2745	0.19	-32.13	0
25	SLE RA 21	-765	0	2741	0.01	-32.69	0
25	SLE FR 1	-674	0	2545	0.1	-28.86	0
25	SLE FR 2	-679	0	2543	0.04	-29.04	0
25	SLE FR 3	-677	0	2551	0.11	-28.96	0
25	SLE FR 4	-700	0	2599	0.07	-29.95	0
25	SLE FR 5	-698	0	2607	0.13	-29.86	0
25	SLE FR 6	-710	0	2637	0.14	-30.37	0
25	SLE QP 1	-674	0	2545	0.1	-28.86	0
25	SLE QP 2	-696	0	2600	0.13	-29.76	0
25	SLD 1	-433	6	1901	-1.71	-17.27	0.02
25	SLD 2	-433	6	1901	-1.71	-17.27	0.02
25	SLD 3	-262	0	1538	5.12	-10.25	0.01
25	SLD 4	-262	0	1538	5.12	-10.25	0.01
25	SLD 5	-876	10	2940	-10.78	-36.67	0.03
25	SLD 6	-876	10	2940	-10.78	-36.67	0.03
25	SLD 7	-306	-8	1732	11.99	-13.26	-0.02
25	SLD 8	-306	-8	1732	11.99	-13.26	-0.02
25	SLD 9	-1086	8	3468	-11.73	-46.27	0.02
25	SLD 10	-1086	8	3468	-11.73	-46.27	0.02
25	SLD 11	-515	-9	2261	11.04	-22.86	-0.02
25	SLD 12	-515	-9	2261	11.04	-22.86	-0.02
25	SLD 13	-1130	0	3662	-4.87	-49.28	0
25	SLD 14	-1130	0	3662	-4.87	-49.28	0
25	SLD 15	-959	-5	3300	1.96	-42.25	-0.02
25	SLD 16	-959	-5	3300	1.96	-42.25	-0.02
25	SLV 1	-83	13	962	-4.13	-0.63	0.04
25	SLV 2	-83	13	962	-4.13	-0.63	0.04
25	SLV 3	318	0	116	11.9	15.83	0.01
25	SLV 4	318	0	116	11.9	15.83	0.01
25	SLV 5	-1121	23	3392	-25.46	-46	0.06
25	SLV 6	-1121	23	3392	-25.46	-46	0.06
25	SLV 7	217	-18	572	27.98	8.89	-0.04
25	SLV 8	217	-18	572	27.98	8.89	-0.04
25	SLV 9	-1609	19	4628	-27.72	-68.42	0.04
25	SLV 10	-1609	19	4628	-27.72	-68.42	0.04
25	SLV 11	-271	-22	1809	25.72	-13.53	-0.06
25	SLV 12	-271	-22	1809	25.72	-13.53	-0.06
25	SLV 13	-1710	0	5085	-11.65	-75.36	-0.01
25	SLV 14	-1710	0	5085	-11.65	-75.36	-0.01
25	SLV 15	-1309	-12	4239	4.39	-58.89	-0.04
25	SLV 16	-1309	-12	4239	4.39	-58.89	-0.04
26	SLU 1	-662	4	2565	-0.61	-30.1	0.03
26	SLU 2	-692	3	2534	-0.7	-31.17	0.03
26	SLU 3	-673	4	2591	-0.61	-30.58	0.03
26	SLU 4	-691	3	2572	-0.67	-31.23	0.03
26	SLU 5	-700	3	2557	-0.7	-31.53	0.03
26	SLU 6	-681	4	2614	-0.61	-30.94	0.03
26	SLU 7	-699	3	2596	-0.67	-31.58	0.03
26	SLU 8	-678	4	2611	-0.61	-30.81	0.03
26	SLU 9	-696	3	2593	-0.67	-31.45	0.03
26	SLU 10	-763	3	2726	-0.71	-34.35	0.03
26	SLU 11	-744	4	2782	-0.62	-33.76	0.03
26	SLU 12	-762	4	2764	-0.67	-34.41	0.03
26	SLU 13	-771	3	2749	-0.71	-34.7	0.03
26	SLU 14	-752	4	2805	-0.62	-34.12	0.03
26	SLU 15	-770	4	2787	-0.68	-34.76	0.03
26	SLU 16	-749	4	2803	-0.62	-33.98	0.03
26	SLU 17	-767	4	2784	-0.68	-34.63	0.03
26	SLU 18	-764	4	2838	-0.62	-34.64	0.03
26	SLU 19	-781	4	2820	-0.67	-35.28	0.03
26	SLU 20	-772	4	2862	-0.62	-34.99	0.03
26	SLU 21	-789	4	2843	-0.68	-35.64	0.03
26	SLU 22	-720	4	2721	-0.61	-32.69	0.03
26	SLU 23	-750	3	2690	-0.7	-33.76	0.03
26	SLU 24	-731	4	2747	-0.61	-33.17	0.03
26	SLU 25	-749	4	2728	-0.67	-33.82	0.03
26	SLU 26	-758	3	2713	-0.71	-34.12	0.03
26	SLU 27	-739	4	2770	-0.62	-33.53	0.03
26	SLU 28	-757	4	2752	-0.67	-34.17	0.03
26	SLU 29	-736	4	2767	-0.62	-33.4	0.03
26	SLU 30	-754	4	2749	-0.67	-34.04	0.03
26	SLU 31	-821	4	2882	-0.71	-36.94	0.03
26	SLU 32	-802	4	2938	-0.62	-36.35	0.03
26	SLU 33	-820	4	2920	-0.67	-37	0.03
26	SLU 34	-829	4	2905	-0.71	-37.29	0.03
26	SLU 35	-810	4	2961	-0.62	-36.71	0.03
26	SLU 36	-828	4	2943	-0.68	-37.35	0.03
26	SLU 37	-807	4	2959	-0.62	-36.57	0.03
26	SLU 38	-825	4	2940	-0.68	-37.22	0.03
26	SLU 39	-822	4	2995	-0.62	-37.22	0.03
26	SLU 40	-839	4	2976	-0.68	-37.87	0.03
26	SLU 41	-830	5	3018	-0.62	-37.58	0.03



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
26	SLU 42	-847	4	2999	-0.68	-38.23	0.03
26	SLU 43	-841	5	3281	-0.79	-38.24	0.04
26	SLU 44	-870	4	3250	-0.88	-39.31	0.03
26	SLU 45	-852	5	3307	-0.79	-38.73	0.04
26	SLU 46	-870	4	3288	-0.85	-39.37	0.03
26	SLU 47	-878	4	3273	-0.89	-39.67	0.03
26	SLU 48	-860	5	3330	-0.79	-39.08	0.04
26	SLU 49	-878	4	3311	-0.85	-39.73	0.03
26	SLU 50	-857	5	3327	-0.8	-38.95	0.04
26	SLU 51	-875	4	3309	-0.85	-39.59	0.03
26	SLU 52	-942	4	3442	-0.89	-42.49	0.04
26	SLU 53	-923	5	3498	-0.8	-41.9	0.04
26	SLU 54	-941	5	3480	-0.85	-42.55	0.04
26	SLU 55	-950	4	3465	-0.89	-42.85	0.04
26	SLU 56	-931	5	3521	-0.8	-42.26	0.04
26	SLU 57	-949	5	3503	-0.86	-42.9	0.04
26	SLU 58	-928	5	3519	-0.8	-42.12	0.04
26	SLU 59	-946	5	3500	-0.86	-42.77	0.04
26	SLU 60	-943	5	3554	-0.8	-42.78	0.04
26	SLU 61	-960	5	3536	-0.85	-43.42	0.04
26	SLU 62	-951	5	3578	-0.8	-43.13	0.04
26	SLU 63	-968	5	3559	-0.86	-43.78	0.04
26	SLU 64	-899	5	3437	-0.79	-40.83	0.04
26	SLU 65	-928	4	3406	-0.89	-41.9	0.04
26	SLU 66	-910	5	3463	-0.79	-41.32	0.04
26	SLU 67	-928	5	3444	-0.85	-41.96	0.04
26	SLU 68	-936	4	3429	-0.89	-42.26	0.04
26	SLU 69	-918	5	3486	-0.8	-41.67	0.04
26	SLU 70	-936	5	3468	-0.85	-42.32	0.04
26	SLU 71	-915	5	3483	-0.8	-41.54	0.04
26	SLU 72	-933	5	3465	-0.85	-42.18	0.04
26	SLU 73	-999	5	3598	-0.89	-45.08	0.04
26	SLU 74	-981	5	3654	-0.8	-44.49	0.04
26	SLU 75	-999	5	3636	-0.86	-45.14	0.04
26	SLU 76	-1007	5	3621	-0.89	-45.44	0.04
26	SLU 77	-989	5	3677	-0.8	-44.85	0.04
26	SLU 78	-1007	5	3659	-0.86	-45.49	0.04
26	SLU 79	-986	5	3675	-0.8	-44.71	0.04
26	SLU 80	-1004	5	3656	-0.86	-45.36	0.04
26	SLU 81	-1000	6	3710	-0.8	-45.37	0.04
26	SLU 82	-1018	5	3692	-0.86	-46.01	0.04
26	SLU 83	-1008	6	3734	-0.8	-45.72	0.04
26	SLU 84	-1026	5	3715	-0.86	-46.37	0.04
26	SLE RA 1	-679	4	2609	-0.61	-30.84	0.03
26	SLE RA 2	-698	3	2589	-0.67	-31.55	0.03
26	SLE RA 3	-686	4	2627	-0.61	-31.16	0.03
26	SLE RA 4	-698	4	2614	-0.65	-31.59	0.03
26	SLE RA 5	-704	3	2604	-0.67	-31.79	0.03
26	SLE RA 6	-691	4	2642	-0.61	-31.4	0.03
26	SLE RA 7	-703	4	2630	-0.65	-31.83	0.03
26	SLE RA 8	-689	4	2640	-0.61	-31.31	0.03
26	SLE RA 9	-701	4	2628	-0.65	-31.74	0.03
26	SLE RA 10	-746	4	2717	-0.68	-33.67	0.03
26	SLE RA 11	-734	4	2754	-0.61	-33.28	0.03
26	SLE RA 12	-745	4	2742	-0.65	-33.71	0.03
26	SLE RA 13	-751	4	2732	-0.68	-33.91	0.03
26	SLE RA 14	-739	4	2770	-0.62	-33.52	0.03
26	SLE RA 15	-751	4	2758	-0.65	-33.95	0.03
26	SLE RA 16	-737	4	2768	-0.62	-33.43	0.03
26	SLE RA 17	-749	4	2756	-0.65	-33.86	0.03
26	SLE RA 18	-746	4	2792	-0.61	-33.86	0.03
26	SLE RA 19	-758	4	2780	-0.65	-34.29	0.03
26	SLE RA 20	-752	4	2807	-0.62	-34.1	0.03
26	SLE RA 21	-764	4	2795	-0.65	-34.53	0.03
26	SLE FR 1	-679	4	2609	-0.61	-30.84	0.03
26	SLE FR 2	-683	4	2605	-0.62	-30.98	0.03
26	SLE FR 3	-681	4	2616	-0.61	-30.93	0.03
26	SLE FR 4	-703	4	2660	-0.62	-31.89	0.03
26	SLE FR 5	-701	4	2670	-0.61	-31.84	0.03
26	SLE FR 6	-713	4	2701	-0.61	-32.35	0.03
26	SLE QP 1	-679	4	2609	-0.61	-30.84	0.03
26	SLE QP 2	-699	4	2664	-0.61	-31.74	0.03
26	SLD 1	-445	2	1839	-1.36	-18.87	0.02
26	SLD 2	-445	2	1839	-1.36	-18.87	0.02
26	SLD 3	-277	1	1316	2.05	-12.45	0.01
26	SLD 4	-277	1	1316	2.05	-12.45	0.01
26	SLD 5	-877	6	3210	-6.01	-37.62	0.04
26	SLD 6	-877	6	3210	-6.01	-37.62	0.04
26	SLD 7	-319	0	1466	5.36	-16.22	0.01
26	SLD 8	-319	0	1466	5.36	-16.22	0.01
26	SLD 9	-1079	8	3863	-6.58	-47.27	0.05
26	SLD 10	-1079	8	3863	-6.58	-47.27	0.05
26	SLD 11	-521	2	2118	4.79	-25.87	0.02
26	SLD 12	-521	2	2118	4.79	-25.87	0.02
26	SLD 13	-1121	7	4013	-3.27	-51.04	0.04
26	SLD 14	-1121	7	4013	-3.27	-51.04	0.04
26	SLD 15	-953	6	3489	0.14	-44.62	0.03
26	SLD 16	-953	6	3489	0.14	-44.62	0.03
26	SLV 1	-106	0	731	-2.36	-1.71	0.02
26	SLV 2	-106	0	731	-2.36	-1.71	0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
26	SLV 3	286	-4	-490	5.64	13.35	0
26	SLV 4	286	-4	-490	5.64	13.35	0
26	SLV 5	-1117	9	3936	-13.27	-45.58	0.05
26	SLV 6	-1117	9	3936	-13.27	-45.58	0.05
26	SLV 7	192	-5	-134	13.4	4.63	-0.01
26	SLV 8	192	-5	-134	13.4	4.63	-0.01
26	SLV 9	-1590	13	5462	-14.62	-68.12	0.07
26	SLV 10	-1590	13	5462	-14.62	-68.12	0.07
26	SLV 11	-281	-1	1393	12.05	-17.91	0
26	SLV 12	-281	-1	1393	12.05	-17.91	0
26	SLV 13	-1684	12	5818	-6.86	-76.84	0.06
26	SLV 14	-1684	12	5818	-6.86	-76.84	0.06
26	SLV 15	-1292	8	4597	1.13	-61.78	0.04
26	SLV 16	-1292	8	4597	1.13	-61.78	0.04
27	SLU 1	-591	263	3224	6.56	-18.39	0.08
27	SLU 2	-602	252	3191	6.96	-18.99	0.1
27	SLU 3	-599	264	3259	6.95	-18.66	0.08
27	SLU 4	-606	257	3239	7.19	-19.02	0.09
27	SLU 5	-608	253	3221	7.2	-19.19	0.1
27	SLU 6	-606	265	3289	7.18	-18.87	0.09
27	SLU 7	-612	259	3269	7.42	-19.23	0.09
27	SLU 8	-604	266	3284	7.03	-18.8	0.09
27	SLU 9	-610	259	3264	7.27	-19.16	0.09
27	SLU 10	-656	269	3451	8.68	-20.81	0.11
27	SLU 11	-654	281	3518	8.67	-20.49	0.09
27	SLU 12	-660	275	3499	8.91	-20.85	0.1
27	SLU 13	-663	271	3481	8.91	-21.02	0.11
27	SLU 14	-660	283	3548	8.9	-20.69	0.09
27	SLU 15	-666	276	3529	9.14	-21.05	0.1
27	SLU 16	-658	283	3544	8.74	-20.62	0.09
27	SLU 17	-665	277	3524	8.98	-20.98	0.1
27	SLU 18	-669	288	3595	9.01	-20.99	0.1
27	SLU 19	-675	281	3575	9.26	-21.35	0.1
27	SLU 20	-675	289	3625	9.25	-21.2	0.1
27	SLU 21	-682	283	3605	9.49	-21.56	0.1
27	SLU 22	-636	276	3437	8.21	-19.88	0.09
27	SLU 23	-646	265	3405	8.61	-20.48	0.1
27	SLU 24	-644	277	3472	8.6	-20.15	0.09
27	SLU 25	-650	270	3452	8.84	-20.51	0.1
27	SLU 26	-653	266	3435	8.84	-20.68	0.1
27	SLU 27	-650	279	3502	8.83	-20.36	0.09
27	SLU 28	-656	272	3482	9.07	-20.72	0.1
27	SLU 29	-648	279	3497	8.67	-20.29	0.09
27	SLU 30	-655	272	3478	8.92	-20.65	0.1
27	SLU 31	-701	282	3664	10.33	-22.3	0.11
27	SLU 32	-698	295	3732	10.31	-21.98	0.1
27	SLU 33	-704	288	3712	10.56	-22.34	0.11
27	SLU 34	-707	284	3694	10.56	-22.51	0.11
27	SLU 35	-704	296	3762	10.55	-22.19	0.1
27	SLU 36	-711	289	3742	10.79	-22.55	0.11
27	SLU 37	-702	296	3757	10.39	-22.12	0.1
27	SLU 38	-709	290	3737	10.63	-22.48	0.11
27	SLU 39	-713	301	3808	10.66	-22.49	0.1
27	SLU 40	-720	294	3789	10.9	-22.85	0.11
27	SLU 41	-719	302	3838	10.89	-22.69	0.1
27	SLU 42	-726	296	3819	11.14	-23.05	0.11
27	SLU 43	-754	337	4118	7.97	-23.39	0.11
27	SLU 44	-764	326	4085	8.37	-23.99	0.12
27	SLU 45	-762	338	4152	8.35	-23.67	0.11
27	SLU 46	-768	332	4133	8.6	-24.03	0.12
27	SLU 47	-771	328	4115	8.6	-24.2	0.12
27	SLU 48	-768	340	4182	8.59	-23.87	0.11
27	SLU 49	-774	333	4163	8.83	-24.23	0.12
27	SLU 50	-766	340	4178	8.43	-23.8	0.11
27	SLU 51	-773	333	4158	8.67	-24.16	0.12
27	SLU 52	-819	344	4345	10.08	-25.82	0.13
27	SLU 53	-816	356	4412	10.07	-25.49	0.12
27	SLU 54	-822	349	4393	10.31	-25.85	0.12
27	SLU 55	-825	345	4375	10.32	-26.02	0.13
27	SLU 56	-822	357	4442	10.3	-25.7	0.12
27	SLU 57	-829	351	4423	10.54	-26.06	0.13
27	SLU 58	-820	358	4437	10.15	-25.63	0.12
27	SLU 59	-827	351	4418	10.39	-25.99	0.12
27	SLU 60	-831	362	4489	10.42	-26	0.12
27	SLU 61	-838	356	4469	10.66	-26.36	0.13
27	SLU 62	-837	364	4519	10.65	-26.21	0.12
27	SLU 63	-844	357	4499	10.89	-26.57	0.13
27	SLU 64	-798	350	4331	9.61	-24.88	0.11
27	SLU 65	-809	339	4298	10.02	-25.48	0.13
27	SLU 66	-806	351	4366	10	-25.16	0.11
27	SLU 67	-812	345	4346	10.24	-25.52	0.12
27	SLU 68	-815	341	4329	10.25	-25.69	0.13
27	SLU 69	-812	353	4396	10.23	-25.36	0.11
27	SLU 70	-819	346	4376	10.47	-25.72	0.12
27	SLU 71	-810	353	4391	10.08	-25.29	0.11
27	SLU 72	-817	347	4372	10.32	-25.65	0.12
27	SLU 73	-863	357	4558	11.73	-27.31	0.14
27	SLU 74	-860	369	4626	11.72	-26.98	0.12
27	SLU 75	-867	362	4606	11.96	-27.34	0.13
27	SLU 76	-869	358	4588	11.96	-27.51	0.14



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
27	SLU 77	-866	370	4656	11.95	-27.19	0.12
27	SLU 78	-873	364	4636	12.19	-27.55	0.13
27	SLU 79	-865	371	4651	11.79	-27.12	0.12
27	SLU 80	-871	364	4631	12.04	-27.48	0.13
27	SLU 81	-875	375	4702	12.07	-27.49	0.12
27	SLU 82	-882	369	4683	12.31	-27.85	0.13
27	SLU 83	-882	377	4732	12.3	-27.7	0.13
27	SLU 84	-888	370	4713	12.54	-28.06	0.13
27	SLE RA 1	-604	267	3285	7.03	-18.81	0.09
27	SLE RA 2	-611	259	3263	7.3	-19.21	0.09
27	SLE RA 3	-609	267	3308	7.29	-19	0.09
27	SLE RA 4	-614	263	3295	7.45	-19.24	0.09
27	SLE RA 5	-615	260	3283	7.46	-19.35	0.1
27	SLE RA 6	-614	268	3328	7.45	-19.13	0.09
27	SLE RA 7	-618	264	3315	7.61	-19.37	0.09
27	SLE RA 8	-612	269	3325	7.34	-19.09	0.09
27	SLE RA 9	-617	264	3312	7.5	-19.33	0.09
27	SLE RA 10	-647	271	3436	8.45	-20.43	0.1
27	SLE RA 11	-646	279	3481	8.44	-20.21	0.09
27	SLE RA 12	-650	275	3468	8.6	-20.45	0.1
27	SLE RA 13	-651	272	3456	8.6	-20.57	0.1
27	SLE RA 14	-650	280	3501	8.59	-20.35	0.09
27	SLE RA 15	-654	275	3488	8.75	-20.59	0.1
27	SLE RA 16	-649	280	3498	8.49	-20.3	0.09
27	SLE RA 17	-653	276	3485	8.65	-20.54	0.1
27	SLE RA 18	-656	283	3532	8.67	-20.55	0.09
27	SLE RA 19	-660	279	3519	8.83	-20.79	0.1
27	SLE RA 20	-660	284	3552	8.82	-20.69	0.09
27	SLE RA 21	-664	280	3539	8.98	-20.93	0.1
27	SLE FR 1	-604	267	3285	7.03	-18.81	0.09
27	SLE FR 2	-606	265	3280	7.09	-18.89	0.09
27	SLE FR 3	-606	267	3293	7.09	-18.87	0.09
27	SLE FR 4	-621	270	3355	7.58	-19.41	0.09
27	SLE FR 5	-621	272	3367	7.59	-19.39	0.09
27	SLE FR 6	-630	275	3408	7.85	-19.68	0.09
27	SLE QP 1	-604	267	3285	7.03	-18.81	0.09
27	SLE QP 2	-620	272	3359	7.52	-19.33	0.09
27	SLD 1	-372	1	2311	19.28	-11.03	0.06
27	SLD 2	-372	1	2311	19.28	-11.03	0.06
27	SLD 3	-278	223	1483	8.25	-7.59	-0.04
27	SLD 4	-278	223	1483	8.25	-7.59	-0.04
27	SLD 5	-689	-147	4300	27.77	-22.07	0.23
27	SLD 6	-689	-147	4300	27.77	-22.07	0.23
27	SLD 7	-373	594	1541	-8.98	-10.59	-0.11
27	SLD 8	-373	594	1541	-8.98	-10.59	-0.11
27	SLD 9	-866	-51	5178	24.03	-28.08	0.28
27	SLD 10	-866	-51	5178	24.03	-28.08	0.28
27	SLD 11	-550	690	2418	-12.73	-16.6	-0.06
27	SLD 12	-550	690	2418	-12.73	-16.6	-0.06
27	SLD 13	-962	320	5235	6.79	-31.08	0.22
27	SLD 14	-962	320	5235	6.79	-31.08	0.22
27	SLD 15	-867	542	4407	-4.23	-27.64	0.11
27	SLD 16	-867	542	4407	-4.23	-27.64	0.11
27	SLV 1	-42	-362	902	35.62	0.05	0.03
27	SLV 2	-42	-362	902	35.62	0.05	0.03
27	SLV 3	180	157	-1028	8.93	8.13	-0.21
27	SLV 4	180	157	-1028	8.93	8.13	-0.21
27	SLV 5	-783	-706	5548	56.43	-25.78	0.43
27	SLV 6	-783	-706	5548	56.43	-25.78	0.43
27	SLV 7	-43	1025	-884	-32.53	1.16	-0.36
27	SLV 8	-43	1025	-884	-32.53	1.16	-0.36
27	SLV 9	-1196	-482	7602	47.58	-39.83	0.54
27	SLV 10	-1196	-482	7602	47.58	-39.83	0.54
27	SLV 11	-456	1249	1170	-41.38	-12.89	-0.26
27	SLV 12	-456	1249	1170	-41.38	-12.89	-0.26
27	SLV 13	-1420	386	7746	6.12	-46.8	0.39
27	SLV 14	-1420	386	7746	6.12	-46.8	0.39
27	SLV 15	-1198	905	5816	-20.57	-38.71	0.15
27	SLV 16	-1198	905	5816	-20.57	-38.71	0.15
28	SLU 1	4	394	3353	-36	1.37	0.06
28	SLU 2	3	373	3351	-35.99	1.3	0.06
28	SLU 3	4	403	3402	-36.88	1.39	0.06
28	SLU 4	3	390	3400	-36.88	1.34	0.06
28	SLU 5	3	379	3391	-36.62	1.31	0.06
28	SLU 6	4	409	3442	-37.51	1.41	0.06
28	SLU 7	4	396	3440	-37.51	1.36	0.06
28	SLU 8	4	406	3433	-37.26	1.41	0.06
28	SLU 9	4	393	3432	-37.26	1.36	0.06
28	SLU 10	4	431	3667	-40.54	1.47	0.06
28	SLU 11	4	461	3718	-41.43	1.57	0.06
28	SLU 12	4	448	3717	-41.43	1.52	0.06
28	SLU 13	4	437	3707	-41.17	1.49	0.06
28	SLU 14	4	467	3758	-42.06	1.58	0.06
28	SLU 15	4	454	3757	-42.05	1.54	0.06
28	SLU 16	4	464	3749	-41.81	1.58	0.06
28	SLU 17	4	451	3748	-41.8	1.53	0.06
28	SLU 18	4	477	3805	-42.5	1.62	0.06
28	SLU 19	4	464	3804	-42.5	1.58	0.07
28	SLU 20	4	483	3845	-43.13	1.64	0.07
28	SLU 21	4	470	3844	-43.12	1.59	0.07



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
28	SLU 22	4	445	3622	-40.12	1.51	0.06
28	SLU 23	4	424	3619	-40.1	1.43	0.06
28	SLU 24	4	454	3670	-40.99	1.53	0.06
28	SLU 25	4	441	3669	-40.99	1.48	0.06
28	SLU 26	4	430	3659	-40.73	1.45	0.06
28	SLU 27	4	460	3710	-41.62	1.55	0.06
28	SLU 28	4	447	3709	-41.62	1.5	0.06
28	SLU 29	4	457	3702	-41.37	1.54	0.06
28	SLU 30	4	444	3700	-41.37	1.5	0.06
28	SLU 31	4	482	3936	-44.65	1.61	0.07
28	SLU 32	5	512	3987	-45.54	1.71	0.07
28	SLU 33	4	499	3985	-45.54	1.66	0.07
28	SLU 34	4	488	3976	-45.28	1.63	0.07
28	SLU 35	5	518	4027	-46.17	1.72	0.07
28	SLU 36	4	505	4026	-46.16	1.67	0.07
28	SLU 37	5	515	4018	-45.92	1.72	0.07
28	SLU 38	4	502	4017	-45.92	1.67	0.07
28	SLU 39	5	528	4074	-46.61	1.76	0.07
28	SLU 40	4	515	4072	-46.61	1.72	0.07
28	SLU 41	5	534	4114	-47.24	1.78	0.07
28	SLU 42	4	521	4112	-47.24	1.73	0.07
28	SLU 43	5	494	4267	-45.4	1.74	0.07
28	SLU 44	4	474	4264	-45.39	1.66	0.07
28	SLU 45	5	503	4315	-46.28	1.76	0.07
28	SLU 46	4	491	4314	-46.27	1.71	0.07
28	SLU 47	4	480	4304	-46.01	1.68	0.07
28	SLU 48	5	509	4355	-46.9	1.77	0.07
28	SLU 49	5	497	4354	-46.9	1.72	0.07
28	SLU 50	5	506	4347	-46.65	1.77	0.07
28	SLU 51	5	494	4345	-46.65	1.72	0.07
28	SLU 52	5	532	4581	-49.93	1.84	0.08
28	SLU 53	5	561	4632	-50.82	1.93	0.08
28	SLU 54	5	549	4630	-50.82	1.88	0.08
28	SLU 55	5	538	4621	-50.56	1.85	0.08
28	SLU 56	5	567	4672	-51.45	1.95	0.08
28	SLU 57	5	555	4670	-51.45	1.9	0.08
28	SLU 58	5	564	4663	-51.2	1.95	0.08
28	SLU 59	5	552	4662	-51.2	1.9	0.08
28	SLU 60	5	577	4719	-51.89	1.99	0.08
28	SLU 61	5	565	4717	-51.89	1.94	0.08
28	SLU 62	5	583	4759	-52.52	2	0.08
28	SLU 63	5	571	4757	-52.52	1.96	0.08
28	SLU 64	5	545	4535	-49.51	1.88	0.08
28	SLU 65	5	525	4533	-49.5	1.8	0.08
28	SLU 66	5	554	4584	-50.39	1.89	0.08
28	SLU 67	5	542	4583	-50.38	1.85	0.08
28	SLU 68	5	531	4573	-50.13	1.81	0.08
28	SLU 69	5	560	4624	-51.02	1.91	0.08
28	SLU 70	5	548	4623	-51.01	1.86	0.08
28	SLU 71	5	557	4615	-50.77	1.91	0.08
28	SLU 72	5	545	4614	-50.76	1.86	0.08
28	SLU 73	5	583	4850	-54.04	1.97	0.08
28	SLU 74	6	612	4901	-54.93	2.07	0.08
28	SLU 75	5	600	4899	-54.93	2.02	0.08
28	SLU 76	5	589	4890	-54.67	1.99	0.08
28	SLU 77	6	618	4941	-55.56	2.09	0.08
28	SLU 78	5	606	4939	-55.56	2.04	0.08
28	SLU 79	6	615	4932	-55.31	2.08	0.08
28	SLU 80	5	603	4931	-55.31	2.04	0.08
28	SLU 81	6	628	4987	-56	2.13	0.09
28	SLU 82	5	616	4986	-56	2.08	0.09
28	SLU 83	6	634	5028	-56.63	2.14	0.09
28	SLU 84	5	622	5026	-56.63	2.1	0.09
28	SLE RA 1	4	408	3430	-37.18	1.41	0.06
28	SLE RA 2	3	395	3428	-37.17	1.36	0.06
28	SLE RA 3	4	414	3462	-37.76	1.42	0.06
28	SLE RA 4	4	406	3461	-37.76	1.39	0.06
28	SLE RA 5	3	399	3455	-37.59	1.37	0.06
28	SLE RA 6	4	418	3489	-38.18	1.44	0.06
28	SLE RA 7	4	410	3488	-38.18	1.4	0.06
28	SLE RA 8	4	416	3483	-38.02	1.43	0.06
28	SLE RA 9	4	408	3482	-38.01	1.4	0.06
28	SLE RA 10	4	433	3639	-40.2	1.48	0.06
28	SLE RA 11	4	453	3673	-40.8	1.54	0.06
28	SLE RA 12	4	445	3672	-40.79	1.51	0.06
28	SLE RA 13	4	437	3666	-40.62	1.49	0.06
28	SLE RA 14	4	457	3700	-41.22	1.55	0.06
28	SLE RA 15	4	449	3699	-41.21	1.52	0.06
28	SLE RA 16	4	455	3694	-41.05	1.55	0.06
28	SLE RA 17	4	447	3693	-41.05	1.52	0.06
28	SLE RA 18	4	464	3731	-41.51	1.58	0.06
28	SLE RA 19	4	455	3730	-41.51	1.55	0.06
28	SLE RA 20	4	468	3758	-41.93	1.59	0.06
28	SLE RA 21	4	459	3757	-41.93	1.56	0.06
28	SLE FR 1	4	408	3430	-37.18	1.41	0.06
28	SLE FR 2	4	406	3429	-37.18	1.4	0.06
28	SLE FR 3	4	410	3440	-37.35	1.42	0.06
28	SLE FR 4	4	422	3520	-38.48	1.45	0.06
28	SLE FR 5	4	426	3531	-38.65	1.47	0.06
28	SLE FR 6	4	436	3580	-39.34	1.5	0.06



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
28	SLE QP 1	4	408	3430	-37.18	1.41	0.06
28	SLE QP 2	4	425	3520	-38.48	1.46	0.06
28	SLD 1	10	485	4496	-54.23	3.54	0.07
28	SLD 2	10	485	4496	-54.23	3.54	0.07
28	SLD 3	5	145	4069	-37	2.19	0.06
28	SLD 4	5	145	4069	-37	2.19	0.06
28	SLD 5	14	957	4460	-69.34	4.14	0.07
28	SLD 6	14	957	4460	-69.34	4.14	0.07
28	SLD 7	-4	-173	3037	-11.9	-0.37	0.05
28	SLD 8	-4	-173	3037	-11.9	-0.37	0.05
28	SLD 9	12	1023	4003	-65.06	3.3	0.07
28	SLD 10	12	1023	4003	-65.06	3.3	0.07
28	SLD 11	-6	-107	2580	-7.61	-1.22	0.04
28	SLD 12	-6	-107	2580	-7.61	-1.22	0.04
28	SLD 13	3	704	2971	-39.96	0.74	0.05
28	SLD 14	3	704	2971	-39.96	0.74	0.05
28	SLD 15	-2	365	2544	-22.72	-0.62	0.05
28	SLD 16	-2	365	2544	-22.72	-0.62	0.05
28	SLV 1	19	566	5811	-75.34	6.38	0.09
28	SLV 2	19	566	5811	-75.34	6.38	0.09
28	SLV 3	6	-230	4799	-34.97	3.16	0.07
28	SLV 4	6	-230	4799	-34.97	3.16	0.07
28	SLV 5	28	1674	5741	-110.76	7.82	0.09
28	SLV 6	28	1674	5741	-110.76	7.82	0.09
28	SLV 7	-15	-978	2370	23.79	-2.91	0.04
28	SLV 8	-15	-978	2370	23.79	-2.91	0.04
28	SLV 9	23	1828	4670	-100.75	5.84	0.08
28	SLV 10	23	1828	4670	-100.75	5.84	0.08
28	SLV 11	-20	-824	1299	33.8	-4.89	0.02
28	SLV 12	-20	-824	1299	33.8	-4.89	0.02
28	SLV 13	2	1080	2241	-41.99	-0.23	0.05
28	SLV 14	2	1080	2241	-41.99	-0.23	0.05
28	SLV 15	-11	284	1230	-1.62	-3.45	0.03
28	SLV 16	-11	284	1230	-1.62	-3.45	0.03
29	SLU 1	0	1081	3385	-52.38	-0.04	0
29	SLU 2	1	1105	3460	-53.45	0.13	-0.02
29	SLU 3	0	1106	3450	-53.54	-0.04	0
29	SLU 4	1	1120	3495	-54.19	0.06	-0.01
29	SLU 5	1	1122	3507	-54.26	0.13	-0.02
29	SLU 6	0	1123	3497	-54.35	-0.04	0
29	SLU 7	1	1137	3542	-55	0.06	-0.01
29	SLU 8	0	1115	3480	-54	-0.03	0
29	SLU 9	1	1130	3525	-54.65	0.07	-0.01
29	SLU 10	1	1268	3860	-61.14	0.1	-0.01
29	SLU 11	0	1269	3849	-61.23	-0.06	0
29	SLU 12	1	1283	3894	-61.87	0.04	-0.01
29	SLU 13	1	1285	3907	-61.95	0.1	-0.01
29	SLU 14	0	1286	3897	-62.04	-0.06	0
29	SLU 15	1	1301	3942	-62.69	0.04	-0.01
29	SLU 16	0	1279	3879	-61.69	-0.06	0
29	SLU 17	1	1293	3924	-62.33	0.04	-0.01
29	SLU 18	0	1314	3956	-63.36	-0.08	0
29	SLU 19	1	1328	4001	-64.01	0.02	-0.01
29	SLU 20	0	1331	4003	-64.17	-0.07	0
29	SLU 21	1	1346	4048	-64.82	0.03	-0.01
29	SLU 22	0	1202	3698	-58.05	-0.07	0
29	SLU 23	1	1226	3773	-59.13	0.1	-0.01
29	SLU 24	0	1227	3762	-59.21	-0.07	0
29	SLU 25	1	1242	3807	-59.86	0.04	-0.01
29	SLU 26	1	1244	3820	-59.94	0.1	-0.01
29	SLU 27	0	1245	3810	-60.02	-0.06	0
29	SLU 28	1	1259	3855	-60.67	0.04	-0.01
29	SLU 29	0	1237	3793	-59.67	-0.06	0
29	SLU 30	1	1251	3838	-60.32	0.04	-0.01
29	SLU 31	1	1390	4173	-66.81	0.07	-0.01
29	SLU 32	0	1391	4162	-66.9	-0.09	0.01
29	SLU 33	1	1405	4207	-67.55	0.01	0
29	SLU 34	1	1407	4220	-67.63	0.08	-0.01
29	SLU 35	0	1408	4209	-67.71	-0.09	0.01
29	SLU 36	1	1422	4255	-68.36	0.01	0
29	SLU 37	0	1400	4192	-67.36	-0.09	0.01
29	SLU 38	1	1415	4237	-68.01	0.01	0
29	SLU 39	0	1436	4269	-69.03	-0.1	0.01
29	SLU 40	1	1450	4314	-69.68	0	0
29	SLU 41	0	1453	4316	-69.85	-0.1	0.01
29	SLU 42	1	1467	4361	-70.49	0	0
29	SLU 43	0	1363	4293	-66.15	-0.04	0
29	SLU 44	1	1387	4368	-67.22	0.12	-0.02
29	SLU 45	0	1388	4358	-67.31	-0.04	0
29	SLU 46	1	1402	4403	-67.95	0.06	-0.01
29	SLU 47	1	1404	4416	-68.03	0.13	-0.02
29	SLU 48	0	1405	4405	-68.12	-0.04	0
29	SLU 49	1	1420	4450	-68.77	0.06	-0.01
29	SLU 50	0	1398	4388	-67.77	-0.04	0
29	SLU 51	1	1412	4433	-68.41	0.06	-0.01
29	SLU 52	1	1551	4768	-74.91	0.1	-0.01
29	SLU 53	0	1551	4757	-75	-0.07	0
29	SLU 54	1	1566	4802	-75.64	0.03	-0.01
29	SLU 55	1	1568	4815	-75.72	0.1	-0.01
29	SLU 56	0	1569	4805	-75.81	-0.06	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
29	SLU 57	1	1583	4850	-76.45	0.04	-0.01
29	SLU 58	0	1561	4788	-75.46	-0.06	0
29	SLU 59	1	1576	4833	-76.1	0.04	-0.01
29	SLU 60	0	1597	4864	-77.13	-0.08	0
29	SLU 61	1	1611	4909	-77.78	0.02	-0.01
29	SLU 62	0	1614	4912	-77.94	-0.08	0
29	SLU 63	1	1628	4957	-78.59	0.02	-0.01
29	SLU 64	0	1485	4606	-71.82	-0.07	0
29	SLU 65	1	1509	4681	-72.89	0.1	-0.01
29	SLU 66	0	1510	4671	-72.98	-0.07	0
29	SLU 67	1	1524	4716	-73.63	0.03	-0.01
29	SLU 68	1	1526	4729	-73.71	0.1	-0.01
29	SLU 69	0	1527	4718	-73.79	-0.07	0
29	SLU 70	1	1542	4763	-74.44	0.04	-0.01
29	SLU 71	0	1520	4701	-73.44	-0.06	0
29	SLU 72	1	1534	4746	-74.09	0.04	-0.01
29	SLU 73	1	1672	5081	-80.58	0.07	-0.01
29	SLU 74	0	1673	5070	-80.67	-0.09	0.01
29	SLU 75	1	1688	5115	-81.32	0.01	0
29	SLU 76	1	1690	5128	-81.39	0.07	-0.01
29	SLU 77	0	1691	5118	-81.48	-0.09	0.01
29	SLU 78	1	1705	5163	-82.13	0.01	0
29	SLU 79	0	1683	5101	-81.13	-0.09	0.01
29	SLU 80	1	1697	5146	-81.78	0.01	0
29	SLU 81	0	1718	5177	-82.8	-0.11	0.01
29	SLU 82	1	1733	5222	-83.45	-0.01	0
29	SLU 83	0	1736	5224	-83.61	-0.1	0.01
29	SLU 84	1	1750	5269	-84.26	0	0
29	SLE RA 1	0	1115	3474	-54	-0.05	0
29	SLE RA 2	1	1131	3524	-54.72	0.06	-0.01
29	SLE RA 3	0	1132	3517	-54.77	-0.05	0
29	SLE RA 4	0	1142	3547	-55.2	0.02	0
29	SLE RA 5	1	1143	3556	-55.26	0.06	-0.01
29	SLE RA 6	0	1144	3549	-55.31	-0.04	0
29	SLE RA 7	0	1153	3579	-55.74	0.02	0
29	SLE RA 8	0	1139	3538	-55.08	-0.04	0
29	SLE RA 9	0	1148	3568	-55.51	0.02	0
29	SLE RA 10	1	1240	3791	-59.84	0.05	-0.01
29	SLE RA 11	0	1241	3784	-59.9	-0.06	0
29	SLE RA 12	0	1251	3814	-60.33	0	0
29	SLE RA 13	1	1252	3822	-60.38	0.05	-0.01
29	SLE RA 14	0	1253	3815	-60.44	-0.06	0
29	SLE RA 15	0	1262	3845	-60.87	0.01	0
29	SLE RA 16	0	1247	3804	-60.21	-0.06	0
29	SLE RA 17	0	1257	3834	-60.64	0.01	0
29	SLE RA 18	0	1271	3855	-61.32	-0.07	0
29	SLE RA 19	1	1281	3885	-61.75	-0.01	0
29	SLE RA 20	0	1283	3887	-61.86	-0.07	0
29	SLE RA 21	1	1292	3917	-62.29	0	0
29	SLE FR 1	0	1115	3474	-54	-0.05	0
29	SLE FR 2	0	1119	3484	-54.14	-0.03	0
29	SLE FR 3	0	1120	3487	-54.22	-0.05	0
29	SLE FR 4	0	1165	3599	-56.34	-0.03	0
29	SLE FR 5	0	1167	3601	-56.41	-0.05	0
29	SLE FR 6	0	1193	3665	-57.66	-0.06	0
29	SLE QP 1	0	1115	3474	-54	-0.05	0
29	SLE QP 2	0	1162	3589	-56.2	-0.06	0
29	SLD 1	3	1215	3711	-60.17	0.22	0.11
29	SLD 2	3	1215	3711	-60.17	0.22	0.11
29	SLD 3	-1	829	3081	-37.73	0.98	0.04
29	SLD 4	-1	829	3081	-37.73	0.98	0.04
29	SLD 5	7	1763	4581	-91.43	-1.13	0.14
29	SLD 6	7	1763	4581	-91.43	-1.13	0.14
29	SLD 7	-6	478	2480	-16.62	1.42	-0.09
29	SLD 8	-6	478	2480	-16.62	1.42	-0.09
29	SLD 9	6	1847	4697	-95.77	-1.53	0.09
29	SLD 10	6	1847	4697	-95.77	-1.53	0.09
29	SLD 11	-6	562	2596	-20.97	1.02	-0.13
29	SLD 12	-6	562	2596	-20.97	1.02	-0.13
29	SLD 13	1	1495	4096	-74.66	-1.09	-0.04
29	SLD 14	1	1495	4096	-74.66	-1.09	-0.04
29	SLD 15	-2	1110	3466	-52.22	-0.33	-0.1
29	SLD 16	-2	1110	3466	-52.22	-0.33	-0.1
29	SLV 1	6	1285	3878	-65.48	0.59	0.26
29	SLV 2	6	1285	3878	-65.48	0.59	0.26
29	SLV 3	-2	385	2401	-13.12	2.4	0.1
29	SLV 4	-2	385	2401	-13.12	2.4	0.1
29	SLV 5	15	2563	5915	-138.39	-2.61	0.32
29	SLV 6	15	2563	5915	-138.39	-2.61	0.32
29	SLV 7	-13	435	992	36.13	3.42	-0.21
29	SLV 8	-13	435	992	36.13	3.42	-0.21
29	SLV 9	14	2760	6185	-148.52	-3.53	0.21
29	SLV 10	14	2760	6185	-148.52	-3.53	0.21
29	SLV 11	-14	-239	1262	25.99	2.49	-0.31
29	SLV 12	-14	-239	1262	25.99	2.49	-0.31
29	SLV 13	3	1939	4776	-99.27	-2.51	-0.09
29	SLV 14	3	1939	4776	-99.27	-2.51	-0.09
29	SLV 15	-6	1040	3299	-46.91	-0.7	-0.25
29	SLV 16	-6	1040	3299	-46.91	-0.7	-0.25
30	SLU 1	0	1146	3435	-50.77	-0.17	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
30	SLU 2	-1	1171	3510	-51.87	-0.34	0
30	SLU 3	0	1177	3506	-52.11	-0.18	0
30	SLU 4	-1	1191	3551	-52.77	-0.28	0
30	SLU 5	-1	1192	3563	-52.84	-0.34	0
30	SLU 6	0	1199	3559	-53.08	-0.19	0
30	SLU 7	-1	1213	3604	-53.74	-0.28	0
30	SLU 8	0	1190	3542	-52.7	-0.18	0
30	SLU 9	-1	1205	3587	-53.36	-0.28	0
30	SLU 10	-1	1331	3905	-58.97	-0.33	0
30	SLU 11	0	1338	3901	-59.21	-0.18	0
30	SLU 12	-1	1352	3946	-59.87	-0.27	0
30	SLU 13	-1	1353	3958	-59.94	-0.34	0
30	SLU 14	0	1360	3954	-60.17	-0.18	0
30	SLU 15	-1	1374	3999	-60.83	-0.28	0
30	SLU 16	0	1351	3937	-59.8	-0.18	0
30	SLU 17	-1	1366	3982	-60.46	-0.28	0
30	SLU 18	0	1376	3999	-60.91	-0.17	0
30	SLU 19	-1	1390	4044	-61.57	-0.26	0
30	SLU 20	0	1398	4052	-61.87	-0.17	0
30	SLU 21	-1	1412	4097	-62.53	-0.27	0
30	SLU 22	0	1281	3756	-56.68	-0.17	0
30	SLU 23	-1	1305	3831	-57.79	-0.34	0
30	SLU 24	0	1312	3827	-58.02	-0.18	0
30	SLU 25	-1	1326	3872	-58.69	-0.28	0
30	SLU 26	-1	1327	3884	-58.75	-0.34	0
30	SLU 27	0	1334	3880	-58.99	-0.19	0
30	SLU 28	-1	1348	3925	-59.65	-0.28	0
30	SLU 29	0	1325	3863	-58.62	-0.18	0
30	SLU 30	-1	1339	3908	-59.28	-0.28	0
30	SLU 31	-1	1466	4226	-64.88	-0.33	0
30	SLU 32	-1	1472	4222	-65.12	-0.18	0
30	SLU 33	-1	1487	4267	-65.78	-0.27	0
30	SLU 34	-1	1488	4279	-65.85	-0.34	0
30	SLU 35	-1	1494	4275	-66.09	-0.18	0
30	SLU 36	-1	1509	4320	-66.75	-0.28	0
30	SLU 37	-1	1486	4258	-65.71	-0.18	0
30	SLU 38	-1	1500	4303	-66.38	-0.28	0
30	SLU 39	-1	1511	4320	-66.82	-0.17	0
30	SLU 40	-1	1525	4365	-67.48	-0.26	0
30	SLU 41	-1	1532	4374	-67.79	-0.17	0
30	SLU 42	-1	1547	4419	-68.45	-0.27	0
30	SLU 43	-1	1444	4355	-63.97	-0.23	0
30	SLU 44	-1	1468	4430	-65.07	-0.39	0
30	SLU 45	-1	1475	4426	-65.31	-0.23	0
30	SLU 46	-1	1489	4471	-65.97	-0.33	0
30	SLU 47	-1	1490	4484	-66.04	-0.39	0
30	SLU 48	-1	1497	4480	-66.28	-0.24	0
30	SLU 49	-1	1511	4524	-66.94	-0.33	0
30	SLU 50	-1	1488	4462	-65.9	-0.24	0
30	SLU 51	-1	1503	4507	-66.57	-0.33	0
30	SLU 52	-1	1629	4825	-72.17	-0.38	0
30	SLU 53	-1	1635	4821	-72.41	-0.23	0
30	SLU 54	-1	1650	4866	-73.07	-0.32	0
30	SLU 55	-1	1651	4878	-73.14	-0.39	0
30	SLU 56	-1	1657	4874	-73.37	-0.23	0
30	SLU 57	-1	1672	4919	-74.04	-0.33	0
30	SLU 58	-1	1649	4857	-73	-0.23	0
30	SLU 59	-1	1663	4902	-73.66	-0.33	0
30	SLU 60	-1	1674	4919	-74.11	-0.22	0
30	SLU 61	-1	1688	4964	-74.77	-0.32	0
30	SLU 62	-1	1696	4973	-75.07	-0.22	0
30	SLU 63	-1	1710	5018	-75.74	-0.32	0
30	SLU 64	-1	1579	4676	-69.89	-0.23	0
30	SLU 65	-1	1603	4751	-70.99	-0.39	0
30	SLU 66	-1	1609	4747	-71.23	-0.23	0
30	SLU 67	-1	1624	4792	-71.89	-0.33	0
30	SLU 68	-1	1625	4805	-71.96	-0.39	0
30	SLU 69	-1	1631	4801	-72.19	-0.24	0
30	SLU 70	-1	1646	4846	-72.86	-0.34	0
30	SLU 71	-1	1623	4783	-71.82	-0.24	0
30	SLU 72	-1	1637	4828	-72.48	-0.33	0
30	SLU 73	-1	1764	5146	-78.09	-0.38	0
30	SLU 74	-1	1770	5142	-78.32	-0.23	0
30	SLU 75	-1	1785	5187	-78.99	-0.33	0
30	SLU 76	-1	1786	5200	-79.05	-0.39	0
30	SLU 77	-1	1792	5196	-79.29	-0.23	0
30	SLU 78	-1	1807	5241	-79.95	-0.33	0
30	SLU 79	-1	1783	5178	-78.92	-0.23	0
30	SLU 80	-1	1798	5223	-79.58	-0.33	0
30	SLU 81	-1	1808	5240	-80.02	-0.22	0
30	SLU 82	-1	1823	5285	-80.69	-0.32	0
30	SLU 83	-1	1830	5294	-80.99	-0.22	0
30	SLU 84	-1	1845	5339	-81.65	-0.32	0
30	SLE RA 1	0	1185	3527	-52.46	-0.17	0
30	SLE RA 2	-1	1201	3576	-53.19	-0.28	0
30	SLE RA 3	0	1205	3574	-53.35	-0.18	0
30	SLE RA 4	-1	1215	3604	-53.79	-0.24	0
30	SLE RA 5	-1	1216	3612	-53.84	-0.29	0
30	SLE RA 6	0	1220	3609	-54	-0.18	0
30	SLE RA 7	-1	1230	3639	-54.44	-0.25	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
30	SLE RA 8	0	1214	3598	-53.75	-0.18	0
30	SLE RA 9	-1	1224	3628	-54.19	-0.25	0
30	SLE RA 10	-1	1308	3840	-57.93	-0.28	0
30	SLE RA 11	0	1312	3837	-58.08	-0.18	0
30	SLE RA 12	-1	1322	3867	-58.53	-0.24	0
30	SLE RA 13	-1	1323	3875	-58.57	-0.28	0
30	SLE RA 14	0	1327	3873	-58.73	-0.18	0
30	SLE RA 15	-1	1337	3903	-59.17	-0.24	0
30	SLE RA 16	0	1321	3861	-58.48	-0.18	0
30	SLE RA 17	-1	1331	3891	-58.92	-0.24	0
30	SLE RA 18	0	1338	3903	-59.22	-0.17	0
30	SLE RA 19	-1	1348	3933	-59.66	-0.23	0
30	SLE RA 20	0	1353	3938	-59.86	-0.17	0
30	SLE RA 21	-1	1362	3968	-60.3	-0.24	0
30	SLE FR 1	0	1185	3527	-52.46	-0.17	0
30	SLE FR 2	0	1188	3537	-52.61	-0.2	0
30	SLE FR 3	0	1191	3541	-52.72	-0.18	0
30	SLE FR 4	-1	1234	3649	-54.63	-0.19	0
30	SLE FR 5	0	1237	3654	-54.74	-0.17	0
30	SLE FR 6	0	1261	3715	-55.84	-0.17	0
30	SLE QP 1	0	1185	3527	-52.46	-0.17	0
30	SLE QP 2	0	1231	3639	-54.49	-0.17	0
30	SLD 1	-1	1610	4141	-71.62	0.08	-0.01
30	SLD 2	-1	1610	4141	-71.62	0.08	-0.01
30	SLD 3	2	1184	3526	-52.24	0.79	0
30	SLD 4	2	1184	3526	-52.24	0.79	0
30	SLD 5	-6	1990	4722	-89.02	-1.17	-0.01
30	SLD 6	-6	1990	4722	-89.02	-1.17	-0.01
30	SLD 7	5	572	2673	-24.42	1.19	0.01
30	SLD 8	5	572	2673	-24.42	1.19	0.01
30	SLD 9	-6	1890	4606	-84.55	-1.54	-0.01
30	SLD 10	-6	1890	4606	-84.55	-1.54	-0.01
30	SLD 11	5	472	2557	-19.96	0.82	0.02
30	SLD 12	5	472	2557	-19.96	0.82	0.02
30	SLD 13	-3	1277	3753	-56.73	-1.14	0
30	SLD 14	-3	1277	3753	-56.73	-1.14	0
30	SLD 15	0	852	3138	-37.35	-0.43	0.01
30	SLD 16	0	852	3138	-37.35	-0.43	0.01
30	SLV 1	-2	2110	4809	-94.21	0.48	-0.02
30	SLV 2	-2	2110	4809	-94.21	0.48	-0.02
30	SLV 3	5	1122	3371	-49.22	2.16	0
30	SLV 4	5	1122	3371	-49.22	2.16	0
30	SLV 5	-12	2992	6171	-134.63	-2.52	-0.03
30	SLV 6	-12	2992	6171	-134.63	-2.52	-0.03
30	SLV 7	13	-300	1378	15.32	3.08	0.03
30	SLV 8	13	-300	1378	15.32	3.08	0.03
30	SLV 9	-14	2761	5901	-124.3	-3.42	-0.03
30	SLV 10	-14	2761	5901	-124.3	-3.42	-0.03
30	SLV 11	12	-531	1108	25.66	2.18	0.03
30	SLV 12	12	-531	1108	25.66	2.18	0.03
30	SLV 13	-6	1339	3907	-59.75	-2.51	0
30	SLV 14	-6	1339	3907	-59.75	-2.51	0
30	SLV 15	1	352	2469	-14.76	-0.83	0.02
30	SLV 16	1	352	2469	-14.76	-0.83	0.02
31	SLU 1	-5	429	2882	-42.94	-1.38	-0.02
31	SLU 2	-5	407	2927	-41.18	-1.4	-0.02
31	SLU 3	-5	440	2920	-44.19	-1.39	-0.02
31	SLU 4	-5	427	2946	-43.12	-1.41	-0.02
31	SLU 5	-5	415	2956	-42	-1.41	-0.02
31	SLU 6	-5	448	2949	-45.01	-1.41	-0.02
31	SLU 7	-5	435	2976	-43.95	-1.42	-0.02
31	SLU 8	-5	444	2941	-44.6	-1.4	-0.02
31	SLU 9	-5	431	2968	-43.54	-1.42	-0.02
31	SLU 10	-5	479	3206	-48.03	-1.57	-0.02
31	SLU 11	-6	512	3199	-51.04	-1.56	-0.02
31	SLU 12	-6	499	3226	-49.98	-1.58	-0.02
31	SLU 13	-6	487	3236	-48.86	-1.58	-0.02
31	SLU 14	-6	520	3228	-51.87	-1.57	-0.02
31	SLU 15	-6	507	3255	-50.81	-1.59	-0.02
31	SLU 16	-6	516	3221	-51.45	-1.57	-0.02
31	SLU 17	-6	503	3247	-50.39	-1.59	-0.02
31	SLU 18	-6	531	3281	-52.74	-1.62	-0.02
31	SLU 19	-6	518	3308	-51.68	-1.63	-0.02
31	SLU 20	-6	539	3311	-53.56	-1.63	-0.02
31	SLU 21	-6	526	3338	-52.5	-1.64	-0.02
31	SLU 22	-6	493	3118	-49.17	-1.51	-0.02
31	SLU 23	-5	471	3162	-47.4	-1.53	-0.02
31	SLU 24	-6	504	3155	-50.41	-1.53	-0.02
31	SLU 25	-6	492	3182	-49.35	-1.54	-0.02
31	SLU 26	-5	479	3192	-48.23	-1.55	-0.02
31	SLU 27	-6	512	3185	-51.24	-1.54	-0.02
31	SLU 28	-6	499	3212	-50.18	-1.55	-0.02
31	SLU 29	-6	508	3177	-50.82	-1.54	-0.02
31	SLU 30	-6	495	3204	-49.76	-1.55	-0.02
31	SLU 31	-6	543	3442	-54.26	-1.7	-0.02
31	SLU 32	-6	576	3435	-57.27	-1.69	-0.02
31	SLU 33	-6	563	3461	-56.2	-1.71	-0.02
31	SLU 34	-6	551	3471	-55.08	-1.71	-0.02
31	SLU 35	-6	584	3464	-58.09	-1.71	-0.03
31	SLU 36	-6	571	3491	-57.03	-1.72	-0.03



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
31	SLU 37	-6	580	3456	-57.68	-1.7	-0.03
31	SLU 38	-6	567	3483	-56.62	-1.72	-0.03
31	SLU 39	-6	595	3517	-58.96	-1.75	-0.03
31	SLU 40	-6	582	3544	-57.9	-1.76	-0.03
31	SLU 41	-7	603	3547	-59.79	-1.76	-0.03
31	SLU 42	-6	590	3573	-58.73	-1.78	-0.03
31	SLU 43	-6	535	3666	-53.69	-1.74	-0.03
31	SLU 44	-6	514	3711	-51.92	-1.77	-0.03
31	SLU 45	-7	547	3703	-54.93	-1.76	-0.03
31	SLU 46	-6	534	3730	-53.87	-1.78	-0.03
31	SLU 47	-6	522	3740	-52.75	-1.78	-0.03
31	SLU 48	-7	554	3733	-55.76	-1.77	-0.03
31	SLU 49	-6	542	3760	-54.7	-1.79	-0.03
31	SLU 50	-7	551	3725	-55.35	-1.77	-0.03
31	SLU 51	-6	538	3752	-54.29	-1.79	-0.03
31	SLU 52	-7	586	3990	-58.78	-1.94	-0.03
31	SLU 53	-7	618	3983	-61.79	-1.93	-0.03
31	SLU 54	-7	606	4009	-60.73	-1.94	-0.03
31	SLU 55	-7	593	4019	-59.61	-1.95	-0.03
31	SLU 56	-7	626	4012	-62.62	-1.94	-0.03
31	SLU 57	-7	613	4039	-61.56	-1.96	-0.03
31	SLU 58	-7	622	4004	-62.2	-1.94	-0.03
31	SLU 59	-7	609	4031	-61.14	-1.95	-0.03
31	SLU 60	-7	638	4065	-63.49	-1.99	-0.03
31	SLU 61	-7	625	4092	-62.43	-2	-0.03
31	SLU 62	-7	645	4095	-64.31	-2	-0.03
31	SLU 63	-7	632	4121	-63.25	-2.01	-0.03
31	SLU 64	-7	599	3902	-59.91	-1.88	-0.03
31	SLU 65	-7	578	3946	-58.15	-1.9	-0.03
31	SLU 66	-7	611	3939	-61.16	-1.89	-0.03
31	SLU 67	-7	598	3966	-60.1	-1.91	-0.03
31	SLU 68	-7	586	3976	-58.97	-1.91	-0.03
31	SLU 69	-7	619	3969	-61.98	-1.91	-0.03
31	SLU 70	-7	606	3995	-60.92	-1.92	-0.03
31	SLU 71	-7	615	3961	-61.57	-1.9	-0.03
31	SLU 72	-7	602	3987	-60.51	-1.92	-0.03
31	SLU 73	-7	650	4226	-65	-2.07	-0.03
31	SLU 74	-8	683	4219	-68.01	-2.06	-0.03
31	SLU 75	-7	670	4245	-66.95	-2.08	-0.03
31	SLU 76	-7	657	4255	-65.83	-2.08	-0.03
31	SLU 77	-8	690	4248	-68.84	-2.07	-0.03
31	SLU 78	-8	677	4275	-67.78	-2.09	-0.03
31	SLU 79	-8	686	4240	-68.43	-2.07	-0.03
31	SLU 80	-8	674	4267	-67.37	-2.09	-0.03
31	SLU 81	-8	702	4301	-69.71	-2.12	-0.03
31	SLU 82	-8	689	4328	-68.65	-2.13	-0.03
31	SLU 83	-8	709	4330	-70.54	-2.13	-0.03
31	SLU 84	-8	697	4357	-69.48	-2.14	-0.03
31	SLE RA 1	-5	447	2950	-44.72	-1.41	-0.02
31	SLE RA 2	-5	433	2979	-43.54	-1.43	-0.02
31	SLE RA 3	-5	455	2974	-45.55	-1.43	-0.02
31	SLE RA 4	-5	446	2992	-44.84	-1.43	-0.02
31	SLE RA 5	-5	438	2999	-44.09	-1.44	-0.02
31	SLE RA 6	-5	460	2994	-46.1	-1.43	-0.02
31	SLE RA 7	-5	451	3012	-45.39	-1.44	-0.02
31	SLE RA 8	-5	457	2989	-45.82	-1.43	-0.02
31	SLE RA 9	-5	449	3007	-45.12	-1.44	-0.02
31	SLE RA 10	-5	481	3165	-48.11	-1.54	-0.02
31	SLE RA 11	-6	502	3161	-50.12	-1.54	-0.02
31	SLE RA 12	-6	494	3179	-49.41	-1.55	-0.02
31	SLE RA 13	-6	486	3185	-48.66	-1.55	-0.02
31	SLE RA 14	-6	508	3180	-50.67	-1.55	-0.02
31	SLE RA 15	-6	499	3198	-49.96	-1.56	-0.02
31	SLE RA 16	-6	505	3175	-50.39	-1.54	-0.02
31	SLE RA 17	-6	496	3193	-49.69	-1.55	-0.02
31	SLE RA 18	-6	515	3216	-51.25	-1.57	-0.02
31	SLE RA 19	-6	507	3233	-50.54	-1.58	-0.02
31	SLE RA 20	-6	520	3235	-51.8	-1.58	-0.02
31	SLE RA 21	-6	512	3253	-51.09	-1.59	-0.02
31	SLE FR 1	-5	447	2950	-44.72	-1.41	-0.02
31	SLE FR 2	-5	444	2955	-44.48	-1.42	-0.02
31	SLE FR 3	-5	449	2957	-44.94	-1.42	-0.02
31	SLE FR 4	-5	465	3035	-46.44	-1.47	-0.02
31	SLE FR 5	-5	469	3037	-46.9	-1.47	-0.02
31	SLE FR 6	-6	481	3083	-47.99	-1.49	-0.02
31	SLE QP 1	-5	447	2950	-44.72	-1.41	-0.02
31	SLE QP 2	-5	467	3029	-46.68	-1.46	-0.02
31	SLD 1	-5	784	2476	-67.73	-0.61	-0.02
31	SLD 2	-5	784	2476	-67.73	-0.61	-0.02
31	SLD 3	1	428	2062	-42.37	0.81	-0.01
31	SLD 4	1	428	2062	-42.37	0.81	-0.01
31	SLD 5	-14	1102	3491	-91.45	-3.35	-0.03
31	SLD 6	-14	1102	3491	-91.45	-3.35	-0.03
31	SLD 7	5	-84	2111	-6.93	1.36	-0.01
31	SLD 8	5	-84	2111	-6.93	1.36	-0.01
31	SLD 9	-16	1019	3948	-86.43	-4.28	-0.03
31	SLD 10	-16	1019	3948	-86.43	-4.28	-0.03
31	SLD 11	3	-167	2567	-1.91	0.42	-0.02
31	SLD 12	3	-167	2567	-1.91	0.42	-0.02
31	SLD 13	-12	507	3997	-50.99	-3.73	-0.03



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
31	SLD 14	-12	507	3997	-50.99	-3.73	-0.03
31	SLD 15	-6	151	3583	-25.63	-2.32	-0.03
31	SLD 16	-6	151	3583	-25.63	-2.32	-0.03
31	SLV 1	-4	1216	1732	-98.23	0.54	-0.01
31	SLV 2	-4	1216	1732	-98.23	0.54	-0.01
31	SLV 3	10	372	767	-36.01	3.88	0
31	SLV 4	10	372	767	-36.01	3.88	0
31	SLV 5	-25	1972	4104	-156.51	-5.92	-0.03
31	SLV 6	-25	1972	4104	-156.51	-5.92	-0.03
31	SLV 7	19	-841	887	50.89	5.2	0
31	SLV 8	19	-841	887	50.89	5.2	0
31	SLV 9	-30	1776	5172	-144.25	-8.13	-0.05
31	SLV 10	-30	1776	5172	-144.25	-8.13	-0.05
31	SLV 11	14	-1037	1955	63.15	3	-0.01
31	SLV 12	14	-1037	1955	63.15	3	-0.01
31	SLV 13	-21	563	5292	-57.35	-6.8	-0.05
31	SLV 14	-21	563	5292	-57.35	-6.8	-0.05
31	SLV 15	-7	-281	4326	4.87	-3.47	-0.04
31	SLV 16	-7	-281	4326	4.87	-3.47	-0.04
32	SLU 1	5	-118	3329	24.37	1.34	-0.02
32	SLU 2	5	-178	3442	29.21	1.44	-0.02
32	SLU 3	5	-121	3379	25.04	1.35	-0.02
32	SLU 4	5	-157	3447	27.94	1.41	-0.02
32	SLU 5	5	-180	3480	29.68	1.45	-0.02
32	SLU 6	5	-124	3417	25.51	1.36	-0.02
32	SLU 7	5	-160	3485	28.42	1.42	-0.02
32	SLU 8	5	-124	3404	25.32	1.36	-0.02
32	SLU 9	5	-159	3472	28.22	1.42	-0.02
32	SLU 10	6	-178	3828	32.1	1.71	-0.03
32	SLU 11	6	-122	3765	27.93	1.62	-0.02
32	SLU 12	6	-157	3833	30.83	1.68	-0.02
32	SLU 13	6	-181	3866	32.58	1.72	-0.03
32	SLU 14	6	-124	3802	28.41	1.63	-0.02
32	SLU 15	6	-160	3871	31.31	1.69	-0.03
32	SLU 16	6	-124	3789	28.21	1.63	-0.02
32	SLU 17	6	-160	3858	31.12	1.69	-0.03
32	SLU 18	6	-119	3880	28.5	1.72	-0.02
32	SLU 19	7	-155	3948	31.4	1.78	-0.03
32	SLU 20	6	-122	3917	28.98	1.73	-0.02
32	SLU 21	7	-157	3985	31.88	1.79	-0.03
32	SLU 22	6	-121	3655	27.1	1.55	-0.02
32	SLU 23	6	-180	3769	31.94	1.65	-0.03
32	SLU 24	6	-124	3706	27.77	1.56	-0.02
32	SLU 25	6	-159	3774	30.67	1.62	-0.02
32	SLU 26	6	-183	3807	32.41	1.66	-0.03
32	SLU 27	6	-127	3743	28.24	1.57	-0.02
32	SLU 28	6	-162	3812	31.15	1.63	-0.02
32	SLU 29	6	-126	3730	28.05	1.57	-0.02
32	SLU 30	6	-162	3799	30.96	1.63	-0.02
32	SLU 31	7	-180	4155	34.83	1.92	-0.03
32	SLU 32	7	-124	4092	30.66	1.83	-0.03
32	SLU 33	7	-160	4160	33.56	1.89	-0.03
32	SLU 34	7	-183	4192	35.31	1.93	-0.03
32	SLU 35	7	-127	4129	31.14	1.84	-0.03
32	SLU 36	7	-162	4197	34.04	1.9	-0.03
32	SLU 37	7	-127	4116	30.95	1.83	-0.03
32	SLU 38	7	-162	4184	33.85	1.9	-0.03
32	SLU 39	7	-121	4206	31.23	1.93	-0.03
32	SLU 40	8	-157	4275	34.14	1.99	-0.03
32	SLU 41	7	-124	4244	31.71	1.94	-0.03
32	SLU 42	8	-160	4312	34.61	2	-0.03
32	SLU 43	6	-153	4215	30.74	1.67	-0.03
32	SLU 44	7	-212	4329	35.58	1.77	-0.03
32	SLU 45	6	-156	4266	31.41	1.68	-0.03
32	SLU 46	6	-192	4334	34.31	1.74	-0.03
32	SLU 47	7	-215	4367	36.06	1.78	-0.03
32	SLU 48	6	-159	4303	31.89	1.69	-0.03
32	SLU 49	6	-194	4372	34.79	1.75	-0.03
32	SLU 50	6	-158	4290	31.69	1.69	-0.03
32	SLU 51	6	-194	4359	34.6	1.75	-0.03
32	SLU 52	8	-213	4715	38.47	2.04	-0.03
32	SLU 53	7	-156	4651	34.3	1.95	-0.03
32	SLU 54	8	-192	4720	37.21	2.01	-0.03
32	SLU 55	8	-215	4752	38.95	2.05	-0.03
32	SLU 56	7	-159	4689	34.78	1.96	-0.03
32	SLU 57	8	-195	4757	37.68	2.02	-0.03
32	SLU 58	7	-159	4676	34.59	1.95	-0.03
32	SLU 59	8	-194	4744	37.49	2.02	-0.03
32	SLU 60	8	-154	4766	34.87	2.05	-0.03
32	SLU 61	8	-189	4834	37.78	2.11	-0.03
32	SLU 62	8	-156	4804	35.35	2.06	-0.03
32	SLU 63	8	-192	4872	38.25	2.12	-0.03
32	SLU 64	7	-156	4542	33.47	1.88	-0.03
32	SLU 65	7	-215	4656	38.31	1.98	-0.03
32	SLU 66	7	-159	4593	34.14	1.89	-0.03
32	SLU 67	7	-194	4661	37.05	1.95	-0.03
32	SLU 68	7	-217	4693	38.79	1.99	-0.03
32	SLU 69	7	-161	4630	34.62	1.9	-0.03
32	SLU 70	7	-197	4698	37.52	1.96	-0.03
32	SLU 71	7	-161	4617	34.43	1.89	-0.03



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
32	SLU 72	7	-196	4685	37.33	1.96	-0.03
32	SLU 73	8	-215	5041	41.2	2.25	-0.03
32	SLU 74	8	-159	4978	37.03	2.16	-0.03
32	SLU 75	8	-194	5046	39.94	2.22	-0.03
32	SLU 76	8	-218	5079	41.68	2.26	-0.03
32	SLU 77	8	-162	5016	37.51	2.17	-0.03
32	SLU 78	8	-197	5084	40.41	2.23	-0.03
32	SLU 79	8	-161	5003	37.32	2.16	-0.03
32	SLU 80	8	-197	5071	40.22	2.22	-0.03
32	SLU 81	9	-156	5093	37.61	2.26	-0.03
32	SLU 82	9	-192	5161	40.51	2.32	-0.03
32	SLU 83	9	-159	5130	38.08	2.27	-0.03
32	SLU 84	9	-194	5199	40.99	2.33	-0.03
32	SLE RA 1	5	-119	3422	25.15	1.4	-0.02
32	SLE RA 2	5	-159	3498	28.37	1.46	-0.02
32	SLE RA 3	5	-121	3456	25.59	1.4	-0.02
32	SLE RA 4	5	-145	3501	27.53	1.45	-0.02
32	SLE RA 5	6	-160	3523	28.69	1.47	-0.02
32	SLE RA 6	5	-123	3481	25.91	1.41	-0.02
32	SLE RA 7	5	-147	3526	27.85	1.45	-0.02
32	SLE RA 8	5	-123	3472	25.78	1.41	-0.02
32	SLE RA 9	5	-146	3518	27.72	1.45	-0.02
32	SLE RA 10	6	-159	3755	30.3	1.64	-0.02
32	SLE RA 11	6	-121	3713	27.52	1.58	-0.02
32	SLE RA 12	6	-145	3758	29.46	1.62	-0.02
32	SLE RA 13	6	-161	3780	30.62	1.65	-0.02
32	SLE RA 14	6	-123	3738	27.84	1.59	-0.02
32	SLE RA 15	6	-147	3783	29.78	1.63	-0.02
32	SLE RA 16	6	-123	3729	27.71	1.59	-0.02
32	SLE RA 17	6	-147	3775	29.65	1.63	-0.02
32	SLE RA 18	6	-120	3789	27.9	1.65	-0.02
32	SLE RA 19	6	-143	3835	29.84	1.69	-0.02
32	SLE RA 20	6	-121	3814	28.22	1.66	-0.02
32	SLE RA 21	6	-145	3860	30.16	1.7	-0.02
32	SLE FR 1	5	-119	3422	25.15	1.4	-0.02
32	SLE FR 2	5	-127	3437	25.79	1.41	-0.02
32	SLE FR 3	5	-120	3432	25.27	1.4	-0.02
32	SLE FR 4	6	-127	3547	26.62	1.49	-0.02
32	SLE FR 5	6	-120	3542	26.1	1.48	-0.02
32	SLE FR 6	6	-119	3606	26.53	1.53	-0.02
32	SLE QP 1	5	-119	3422	25.15	1.4	-0.02
32	SLE QP 2	6	-119	3532	25.97	1.47	-0.02
32	SLD 1	5	-53	3848	39.71	3.62	-0.02
32	SLD 2	5	-53	3848	39.71	3.62	-0.02
32	SLD 3	1	-401	3624	23.03	2.18	0
32	SLD 4	1	-401	3624	23.03	2.18	0
32	SLD 5	11	428	3967	55.4	4.3	-0.06
32	SLD 6	11	428	3967	55.4	4.3	-0.06
32	SLD 7	-2	-731	3220	-0.21	-0.5	0.03
32	SLD 8	-2	-731	3220	-0.21	-0.5	0.03
32	SLD 9	13	492	3845	52.16	3.45	-0.07
32	SLD 10	13	492	3845	52.16	3.45	-0.07
32	SLD 11	0	-666	3098	-3.45	-1.35	0.02
32	SLD 12	0	-666	3098	-3.45	-1.35	0.02
32	SLD 13	10	162	3441	28.92	0.77	-0.05
32	SLD 14	10	162	3441	28.92	0.77	-0.05
32	SLD 15	6	-185	3217	12.24	-0.67	-0.02
32	SLD 16	6	-185	3217	12.24	-0.67	-0.02
32	SLV 1	4	36	4273	58.51	6.57	-0.03
32	SLV 2	4	36	4273	58.51	6.57	-0.03
32	SLV 3	-6	-782	3747	19.07	3.11	0.04
32	SLV 4	-6	-782	3747	19.07	3.11	0.04
32	SLV 5	19	1168	4553	95.54	8.25	-0.12
32	SLV 6	19	1168	4553	95.54	8.25	-0.12
32	SLV 7	-12	-1558	2798	-35.9	-3.28	0.1
32	SLV 8	-12	-1558	2798	-35.9	-3.28	0.1
32	SLV 9	23	1320	4267	87.85	6.23	-0.14
32	SLV 10	23	1320	4267	87.85	6.23	-0.14
32	SLV 11	-8	-1406	2511	-43.59	-5.3	0.08
32	SLV 12	-8	-1406	2511	-43.59	-5.3	0.08
32	SLV 13	17	543	3318	32.87	-0.16	-0.08
32	SLV 14	17	543	3318	32.87	-0.16	-0.08
32	SLV 15	7	-274	2791	-6.56	-3.62	-0.02
32	SLV 16	7	-274	2791	-6.56	-3.62	-0.02
33	SLU 1	0	942	3797	-50.38	-0.27	0.01
33	SLU 2	1	965	3887	-51.45	-0.11	0.02
33	SLU 3	0	965	3873	-51.53	-0.27	0.01
33	SLU 4	1	979	3927	-52.17	-0.18	0.02
33	SLU 5	1	980	3941	-52.24	-0.11	0.02
33	SLU 6	0	980	3927	-52.32	-0.28	0
33	SLU 7	1	994	3981	-52.96	-0.18	0.01
33	SLU 8	0	973	3906	-51.96	-0.27	0
33	SLU 9	1	986	3960	-52.6	-0.18	0.01
33	SLU 10	1	1127	4375	-59.26	-0.17	0.03
33	SLU 11	0	1127	4361	-59.35	-0.33	0.01
33	SLU 12	1	1140	4415	-59.99	-0.24	0.02
33	SLU 13	1	1142	4429	-60.05	-0.17	0.03
33	SLU 14	0	1142	4416	-60.14	-0.33	0.01
33	SLU 15	1	1155	4469	-60.78	-0.24	0.02
33	SLU 16	0	1134	4394	-59.78	-0.33	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
33	SLU 17	1	1148	4448	-60.42	-0.23	0.02
33	SLU 18	0	1173	4495	-61.55	-0.35	0.02
33	SLU 19	1	1187	4548	-62.19	-0.26	0.03
33	SLU 20	0	1188	4549	-62.34	-0.35	0.02
33	SLU 21	1	1202	4603	-62.98	-0.26	0.03
33	SLU 22	0	1062	4179	-56.17	-0.32	0.01
33	SLU 23	1	1085	4269	-57.23	-0.16	0.03
33	SLU 24	0	1085	4255	-57.32	-0.32	0.01
33	SLU 25	1	1098	4309	-57.96	-0.23	0.02
33	SLU 26	1	1100	4323	-58.02	-0.16	0.03
33	SLU 27	0	1100	4309	-58.11	-0.32	0.01
33	SLU 28	1	1113	4363	-58.75	-0.23	0.02
33	SLU 29	0	1092	4288	-57.75	-0.32	0.01
33	SLU 30	1	1106	4342	-58.39	-0.23	0.02
33	SLU 31	1	1246	4757	-65.05	-0.22	0.04
33	SLU 32	0	1246	4743	-65.14	-0.38	0.02
33	SLU 33	1	1260	4797	-65.78	-0.28	0.03
33	SLU 34	1	1261	4812	-65.84	-0.22	0.04
33	SLU 35	0	1261	4798	-65.93	-0.38	0.02
33	SLU 36	1	1275	4852	-66.57	-0.28	0.03
33	SLU 37	0	1254	4776	-65.56	-0.38	0.02
33	SLU 38	1	1268	4830	-66.2	-0.28	0.03
33	SLU 39	0	1293	4877	-67.33	-0.4	0.03
33	SLU 40	1	1306	4930	-67.97	-0.3	0.04
33	SLU 41	0	1308	4931	-68.12	-0.4	0.03
33	SLU 42	1	1322	4985	-68.76	-0.31	0.04
33	SLU 43	0	1184	4805	-63.51	-0.34	0.01
33	SLU 44	1	1207	4895	-64.58	-0.18	0.02
33	SLU 45	0	1207	4881	-64.66	-0.34	0
33	SLU 46	1	1220	4935	-65.3	-0.24	0.01
33	SLU 47	1	1222	4949	-65.37	-0.18	0.02
33	SLU 48	0	1222	4935	-65.45	-0.34	0
33	SLU 49	1	1235	4989	-66.09	-0.24	0.01
33	SLU 50	0	1214	4914	-65.09	-0.34	0
33	SLU 51	1	1228	4968	-65.73	-0.24	0.01
33	SLU 52	1	1368	5383	-72.39	-0.23	0.03
33	SLU 53	0	1368	5369	-72.48	-0.4	0.01
33	SLU 54	1	1382	5423	-73.12	-0.3	0.02
33	SLU 55	1	1383	5438	-73.18	-0.23	0.03
33	SLU 56	0	1384	5424	-73.27	-0.4	0.01
33	SLU 57	1	1397	5478	-73.91	-0.3	0.02
33	SLU 58	0	1376	5402	-72.91	-0.4	0.01
33	SLU 59	1	1390	5456	-73.54	-0.3	0.02
33	SLU 60	0	1415	5503	-74.68	-0.42	0.02
33	SLU 61	1	1429	5556	-75.32	-0.32	0.03
33	SLU 62	0	1430	5557	-75.47	-0.42	0.02
33	SLU 63	1	1444	5611	-76.1	-0.32	0.03
33	SLU 64	0	1304	5187	-69.3	-0.38	0.01
33	SLU 65	1	1326	5277	-70.36	-0.23	0.03
33	SLU 66	0	1326	5263	-70.45	-0.39	0.01
33	SLU 67	1	1340	5317	-71.09	-0.29	0.02
33	SLU 68	1	1341	5331	-71.15	-0.23	0.03
33	SLU 69	0	1342	5318	-71.24	-0.39	0.01
33	SLU 70	1	1355	5371	-71.88	-0.29	0.02
33	SLU 71	0	1334	5296	-70.88	-0.39	0.01
33	SLU 72	1	1348	5350	-71.52	-0.29	0.02
33	SLU 73	1	1488	5765	-78.18	-0.28	0.04
33	SLU 74	0	1488	5751	-78.27	-0.44	0.02
33	SLU 75	1	1502	5805	-78.91	-0.35	0.03
33	SLU 76	1	1503	5820	-78.97	-0.28	0.04
33	SLU 77	0	1503	5806	-79.06	-0.45	0.02
33	SLU 78	1	1517	5860	-79.7	-0.35	0.03
33	SLU 79	0	1496	5784	-78.69	-0.44	0.02
33	SLU 80	1	1509	5838	-79.33	-0.35	0.03
33	SLU 81	0	1535	5885	-80.46	-0.47	0.03
33	SLU 82	1	1548	5939	-81.1	-0.37	0.04
33	SLU 83	0	1550	5939	-81.25	-0.47	0.03
33	SLU 84	1	1563	5993	-81.89	-0.37	0.04
33	SLE RA 1	0	977	3906	-52.03	-0.29	0.01
33	SLE RA 2	1	992	3966	-52.74	-0.18	0.02
33	SLE RA 3	0	992	3957	-52.8	-0.29	0.01
33	SLE RA 4	0	1001	3993	-53.23	-0.22	0.01
33	SLE RA 5	1	1002	4002	-53.27	-0.18	0.02
33	SLE RA 6	0	1002	3993	-53.33	-0.29	0.01
33	SLE RA 7	0	1011	4029	-53.76	-0.22	0.01
33	SLE RA 8	0	997	3979	-53.09	-0.29	0.01
33	SLE RA 9	0	1006	4015	-53.51	-0.22	0.01
33	SLE RA 10	1	1099	4291	-57.96	-0.22	0.03
33	SLE RA 11	0	1099	4282	-58.01	-0.33	0.01
33	SLE RA 12	0	1108	4318	-58.44	-0.26	0.02
33	SLE RA 13	1	1109	4328	-58.48	-0.22	0.03
33	SLE RA 14	0	1110	4319	-58.54	-0.33	0.01
33	SLE RA 15	0	1119	4354	-58.97	-0.26	0.02
33	SLE RA 16	0	1105	4304	-58.3	-0.32	0.01
33	SLE RA 17	0	1114	4340	-58.72	-0.26	0.02
33	SLE RA 18	0	1131	4371	-59.48	-0.34	0.02
33	SLE RA 19	0	1140	4407	-59.9	-0.28	0.02
33	SLE RA 20	0	1141	4408	-60	-0.34	0.02
33	SLE RA 21	0	1150	4443	-60.43	-0.28	0.02
33	SLE FR 1	0	977	3906	-52.03	-0.29	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
33	SLE FR 2	0	980	3918	-52.18	-0.26	0.01
33	SLE FR 3	0	981	3921	-52.24	-0.29	0.01
33	SLE FR 4	0	1026	4058	-54.41	-0.28	0.01
33	SLE FR 5	0	1027	4060	-54.48	-0.3	0.01
33	SLE FR 6	0	1054	4139	-55.76	-0.31	0.01
33	SLE QP 1	0	977	3906	-52.03	-0.29	0.01
33	SLE QP 2	0	1023	4046	-54.27	-0.3	0.01
33	SLD 1	-4	1055	4028	-58.35	0.18	0.02
33	SLD 2	-4	1055	4028	-58.35	0.18	0.02
33	SLD 3	-1	682	3486	-33.45	0.84	-0.22
33	SLD 4	-1	682	3486	-33.45	0.84	-0.22
33	SLD 5	-4	1598	4862	-93.25	-1.15	0.38
33	SLD 6	-4	1598	4862	-93.25	-1.15	0.38
33	SLD 7	3	355	3057	-10.26	1.03	-0.42
33	SLD 8	3	355	3057	-10.26	1.03	-0.42
33	SLD 9	-3	1690	5035	-98.27	-1.64	0.44
33	SLD 10	-3	1690	5035	-98.27	-1.64	0.44
33	SLD 11	5	448	3230	-15.28	0.55	-0.36
33	SLD 12	5	448	3230	-15.28	0.55	-0.36
33	SLD 13	2	1363	4605	-75.08	-1.44	0.24
33	SLD 14	2	1363	4605	-75.08	-1.44	0.24
33	SLD 15	4	991	4063	-50.18	-0.79	0
33	SLD 16	4	991	4063	-50.18	-0.79	0
33	SLV 1	-9	1098	4008	-63.82	0.9	0.03
33	SLV 2	-9	1098	4008	-63.82	0.9	0.03
33	SLV 3	-4	229	2739	-5.76	2.45	-0.54
33	SLV 4	-4	229	2739	-5.76	2.45	-0.54
33	SLV 5	-10	2363	5960	-145.18	-2.3	0.87
33	SLV 6	-10	2363	5960	-145.18	-2.3	0.87
33	SLV 7	7	-533	1728	48.33	2.88	-1.01
33	SLV 8	7	-533	1728	48.33	2.88	-1.01
33	SLV 9	-6	2578	6363	-156.87	-3.49	1.03
33	SLV 10	-6	2578	6363	-156.87	-3.49	1.03
33	SLV 11	11	-317	2131	36.65	1.7	-0.85
33	SLV 12	11	-317	2131	36.65	1.7	-0.85
33	SLV 13	4	1816	5352	-102.77	-3.05	0.56
33	SLV 14	4	1816	5352	-102.77	-3.05	0.56
33	SLV 15	9	948	4083	-44.72	-1.5	0
33	SLV 16	9	948	4083	-44.72	-1.5	0
34	SLU 1	-2	932	3792	-34.9	-0.23	0.01
34	SLU 2	-3	952	3877	-35.57	-0.44	0.01
34	SLU 3	-2	958	3873	-35.91	-0.25	0.01
34	SLU 4	-3	970	3924	-36.31	-0.37	0.01
34	SLU 5	-3	970	3937	-36.29	-0.45	0.01
34	SLU 6	-2	976	3933	-36.63	-0.25	0.01
34	SLU 7	-3	989	3984	-37.03	-0.38	0.01
34	SLU 8	-2	969	3911	-36.34	-0.25	0.01
34	SLU 9	-3	981	3962	-36.74	-0.37	0.01
34	SLU 10	-3	1094	4346	-40.65	-0.41	0.01
34	SLU 11	-3	1100	4342	-41	-0.22	0.01
34	SLU 12	-3	1112	4393	-41.4	-0.34	0.01
34	SLU 13	-3	1113	4406	-41.37	-0.42	0.01
34	SLU 14	-3	1119	4402	-41.72	-0.23	0.01
34	SLU 15	-3	1131	4453	-42.11	-0.35	0.01
34	SLU 16	-3	1111	4380	-41.42	-0.23	0.01
34	SLU 17	-3	1123	4431	-41.82	-0.35	0.01
34	SLU 18	-3	1135	4462	-42.17	-0.2	0.01
34	SLU 19	-3	1147	4513	-42.57	-0.32	0.01
34	SLU 20	-3	1153	4522	-42.88	-0.21	0.02
34	SLU 21	-3	1165	4573	-43.28	-0.33	0.01
34	SLU 22	-3	1051	4177	-39.17	-0.23	0.01
34	SLU 23	-3	1071	4262	-39.83	-0.43	0.01
34	SLU 24	-3	1077	4258	-40.18	-0.24	0.01
34	SLU 25	-3	1089	4309	-40.58	-0.36	0.01
34	SLU 26	-3	1089	4322	-40.55	-0.44	0.01
34	SLU 27	-3	1095	4318	-40.9	-0.25	0.01
34	SLU 28	-3	1108	4369	-41.3	-0.37	0.01
34	SLU 29	-3	1088	4296	-40.6	-0.25	0.01
34	SLU 30	-3	1100	4347	-41	-0.37	0.01
34	SLU 31	-4	1213	4731	-44.92	-0.41	0.01
34	SLU 32	-3	1219	4727	-45.26	-0.22	0.02
34	SLU 33	-3	1231	4778	-45.66	-0.34	0.01
34	SLU 34	-4	1232	4791	-45.64	-0.42	0.01
34	SLU 35	-3	1238	4787	-45.98	-0.23	0.02
34	SLU 36	-3	1250	4838	-46.38	-0.35	0.01
34	SLU 37	-3	1230	4765	-45.69	-0.22	0.02
34	SLU 38	-3	1242	4816	-46.09	-0.35	0.01
34	SLU 39	-3	1254	4847	-46.43	-0.2	0.02
34	SLU 40	-3	1266	4898	-46.83	-0.32	0.02
34	SLU 41	-3	1272	4907	-47.15	-0.21	0.02
34	SLU 42	-3	1284	4958	-47.55	-0.33	0.02
34	SLU 43	-3	1170	4798	-43.91	-0.3	0.02
34	SLU 44	-4	1190	4883	-44.58	-0.51	0.01
34	SLU 45	-3	1196	4879	-44.92	-0.32	0.02
34	SLU 46	-3	1209	4930	-45.32	-0.44	0.01
34	SLU 47	-4	1209	4942	-45.29	-0.52	0.01
34	SLU 48	-3	1215	4938	-45.64	-0.32	0.02
34	SLU 49	-3	1227	4989	-46.04	-0.45	0.01
34	SLU 50	-3	1207	4917	-45.35	-0.32	0.02
34	SLU 51	-3	1219	4968	-45.74	-0.44	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
34	SLU 52	-4	1333	5352	-49.66	-0.49	0.01
34	SLU 53	-3	1339	5348	-50.01	-0.29	0.02
34	SLU 54	-4	1351	5399	-50.41	-0.42	0.02
34	SLU 55	-4	1351	5411	-50.38	-0.49	0.01
34	SLU 56	-3	1357	5407	-50.72	-0.3	0.02
34	SLU 57	-4	1369	5458	-51.12	-0.42	0.02
34	SLU 58	-3	1349	5386	-50.43	-0.3	0.02
34	SLU 59	-4	1362	5437	-50.83	-0.42	0.02
34	SLU 60	-3	1373	5468	-51.17	-0.27	0.02
34	SLU 61	-4	1385	5519	-51.57	-0.39	0.02
34	SLU 62	-3	1392	5527	-51.89	-0.28	0.02
34	SLU 63	-4	1404	5578	-52.29	-0.4	0.02
34	SLU 64	-3	1289	5183	-48.18	-0.3	0.02
34	SLU 65	-4	1310	5268	-48.84	-0.51	0.01
34	SLU 66	-3	1316	5264	-49.19	-0.31	0.02
34	SLU 67	-4	1328	5315	-49.59	-0.44	0.02
34	SLU 68	-4	1328	5327	-49.56	-0.51	0.01
34	SLU 69	-3	1334	5323	-49.9	-0.32	0.02
34	SLU 70	-4	1346	5374	-50.3	-0.44	0.02
34	SLU 71	-3	1326	5302	-49.61	-0.32	0.02
34	SLU 72	-4	1339	5353	-50.01	-0.44	0.02
34	SLU 73	-4	1452	5737	-53.93	-0.48	0.02
34	SLU 74	-3	1458	5733	-54.27	-0.29	0.02
34	SLU 75	-4	1470	5784	-54.67	-0.41	0.02
34	SLU 76	-4	1470	5796	-54.64	-0.49	0.02
34	SLU 77	-4	1476	5792	-54.99	-0.3	0.02
34	SLU 78	-4	1488	5843	-55.39	-0.42	0.02
34	SLU 79	-4	1469	5771	-54.7	-0.3	0.02
34	SLU 80	-4	1481	5822	-55.1	-0.42	0.02
34	SLU 81	-4	1492	5853	-55.44	-0.27	0.02
34	SLU 82	-4	1505	5904	-55.84	-0.39	0.02
34	SLU 83	-4	1511	5912	-56.16	-0.28	0.02
34	SLU 84	-4	1523	5963	-56.56	-0.4	0.02
34	SLE RA 1	-2	966	3902	-36.12	-0.23	0.01
34	SLE RA 2	-3	979	3959	-36.56	-0.37	0.01
34	SLE RA 3	-2	983	3956	-36.79	-0.24	0.01
34	SLE RA 4	-3	991	3990	-37.06	-0.32	0.01
34	SLE RA 5	-3	991	3999	-37.04	-0.37	0.01
34	SLE RA 6	-2	995	3996	-37.27	-0.25	0.01
34	SLE RA 7	-3	1004	4030	-37.54	-0.33	0.01
34	SLE RA 8	-2	990	3982	-37.08	-0.24	0.01
34	SLE RA 9	-3	998	4016	-37.34	-0.33	0.01
34	SLE RA 10	-3	1074	4271	-39.95	-0.35	0.01
34	SLE RA 11	-3	1078	4269	-40.18	-0.22	0.01
34	SLE RA 12	-3	1086	4303	-40.45	-0.31	0.01
34	SLE RA 13	-3	1086	4311	-40.43	-0.36	0.01
34	SLE RA 14	-3	1090	4309	-40.66	-0.23	0.01
34	SLE RA 15	-3	1098	4343	-40.93	-0.31	0.01
34	SLE RA 16	-3	1085	4294	-40.47	-0.23	0.01
34	SLE RA 17	-3	1093	4328	-40.73	-0.31	0.01
34	SLE RA 18	-3	1101	4349	-40.96	-0.21	0.01
34	SLE RA 19	-3	1109	4383	-41.23	-0.29	0.01
34	SLE RA 20	-3	1113	4388	-41.44	-0.22	0.01
34	SLE RA 21	-3	1121	4422	-41.71	-0.3	0.01
34	SLE FR 1	-2	966	3902	-36.12	-0.23	0.01
34	SLE FR 2	-2	968	3913	-36.21	-0.26	0.01
34	SLE FR 3	-2	971	3918	-36.31	-0.23	0.01
34	SLE FR 4	-3	1009	4047	-37.66	-0.25	0.01
34	SLE FR 5	-2	1011	4052	-37.76	-0.23	0.01
34	SLE FR 6	-2	1033	4125	-38.54	-0.22	0.01
34	SLE QP 1	-2	966	3902	-36.12	-0.23	0.01
34	SLE QP 2	-2	1006	4036	-37.57	-0.23	0.01
34	SLD 1	-7	1381	4562	-53.44	1.4	0.01
34	SLD 2	-7	1381	4562	-53.44	1.4	0.01
34	SLD 3	-5	970	4019	-35.41	0.58	0
34	SLD 4	-5	970	4019	-35.41	0.58	0
34	SLD 5	-8	1742	5018	-69.69	1.51	0.04
34	SLD 6	-8	1742	5018	-69.69	1.51	0.04
34	SLD 7	0	372	3207	-9.57	-1.23	-0.01
34	SLD 8	0	372	3207	-9.57	-1.23	-0.01
34	SLD 9	-5	1641	4865	-65.58	0.78	0.04
34	SLD 10	-5	1641	4865	-65.58	0.78	0.04
34	SLD 11	3	270	3054	-5.46	-1.96	-0.01
34	SLD 12	3	270	3054	-5.46	-1.96	-0.01
34	SLD 13	0	1042	4053	-39.74	-1.03	0.03
34	SLD 14	0	1042	4053	-39.74	-1.03	0.03
34	SLD 15	2	631	3510	-21.7	-1.85	0.01
34	SLD 16	2	631	3510	-21.7	-1.85	0.01
34	SLV 1	-14	1875	5267	-74.32	3.76	0.01
34	SLV 2	-14	1875	5267	-74.32	3.76	0.01
34	SLV 3	-9	922	3994	-32.5	1.79	-0.02
34	SLV 4	-9	922	3994	-32.5	1.79	-0.02
34	SLV 5	-15	2713	6335	-112.02	3.95	0.07
34	SLV 6	-15	2713	6335	-112.02	3.95	0.07
34	SLV 7	4	-465	2093	27.38	-2.6	-0.05
34	SLV 8	4	-465	2093	27.38	-2.6	-0.05
34	SLV 9	-9	2478	5979	-102.52	2.15	0.08
34	SLV 10	-9	2478	5979	-102.52	2.15	0.08
34	SLV 11	10	-701	1737	36.88	-4.4	-0.04
34	SLV 12	10	-701	1737	36.88	-4.4	-0.04



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
34	SLV 13	4	1091	4078	-42.65	-2.25	0.05
34	SLV 14	4	1091	4078	-42.65	-2.25	0.05
34	SLV 15	9	137	2806	-0.83	-4.21	0.01
34	SLV 16	9	137	2806	-0.83	-4.21	0.01
35	SLU 1	1	-182	3004	34.65	0.01	0
35	SLU 2	1	-204	3141	35.93	-0.13	0.01
35	SLU 3	1	-187	3052	35.79	0.02	0
35	SLU 4	1	-201	3134	36.56	-0.06	0.01
35	SLU 5	1	-208	3175	36.67	-0.12	0.01
35	SLU 6	1	-191	3086	36.54	0.03	0
35	SLU 7	1	-204	3168	37.31	-0.05	0.01
35	SLU 8	1	-189	3073	36.14	0.02	0
35	SLU 9	1	-203	3155	36.91	-0.06	0.01
35	SLU 10	1	-225	3499	41.65	-0.17	0.01
35	SLU 11	1	-208	3410	41.52	-0.02	0
35	SLU 12	1	-222	3492	42.29	-0.11	0.01
35	SLU 13	1	-229	3534	42.4	-0.17	0.01
35	SLU 14	1	-212	3445	42.26	-0.02	0.01
35	SLU 15	1	-226	3527	43.03	-0.1	0.01
35	SLU 16	1	-210	3431	41.86	-0.02	0.01
35	SLU 17	1	-224	3513	42.63	-0.11	0.01
35	SLU 18	1	-212	3516	42.82	-0.06	0.01
35	SLU 19	1	-225	3598	43.59	-0.14	0.01
35	SLU 20	1	-216	3551	43.57	-0.05	0.01
35	SLU 21	1	-229	3633	44.34	-0.13	0.01
35	SLU 22	1	-202	3311	39.96	-0.01	0
35	SLU 23	1	-224	3448	41.24	-0.15	0.01
35	SLU 24	1	-208	3359	41.1	0	0
35	SLU 25	1	-221	3441	41.87	-0.08	0.01
35	SLU 26	1	-228	3483	41.98	-0.14	0.01
35	SLU 27	1	-212	3394	41.85	0.01	0
35	SLU 28	1	-225	3476	42.62	-0.07	0.01
35	SLU 29	1	-210	3380	41.45	0	0
35	SLU 30	1	-223	3462	42.22	-0.08	0.01
35	SLU 31	1	-246	3806	46.96	-0.19	0.01
35	SLU 32	1	-229	3717	46.83	-0.04	0.01
35	SLU 33	1	-242	3800	47.6	-0.13	0.01
35	SLU 34	1	-249	3841	47.71	-0.19	0.01
35	SLU 35	1	-233	3752	47.58	-0.04	0.01
35	SLU 36	1	-246	3834	48.34	-0.12	0.01
35	SLU 37	1	-231	3739	47.17	-0.04	0.01
35	SLU 38	1	-245	3821	47.94	-0.12	0.01
35	SLU 39	1	-232	3823	48.14	-0.07	0.01
35	SLU 40	1	-246	3905	48.9	-0.16	0.01
35	SLU 41	1	-236	3858	48.88	-0.07	0.01
35	SLU 42	1	-250	3940	49.65	-0.15	0.01
35	SLU 43	1	-229	3800	43.22	0.02	0.01
35	SLU 44	1	-251	3937	44.5	-0.12	0.01
35	SLU 45	1	-235	3848	44.37	0.03	0.01
35	SLU 46	1	-248	3930	45.14	-0.05	0.01
35	SLU 47	1	-255	3971	45.25	-0.11	0.01
35	SLU 48	2	-238	3882	45.11	0.04	0.01
35	SLU 49	1	-252	3964	45.88	-0.05	0.01
35	SLU 50	2	-237	3869	44.71	0.03	0.01
35	SLU 51	1	-250	3951	45.48	-0.05	0.01
35	SLU 52	1	-272	4295	50.23	-0.17	0.01
35	SLU 53	1	-256	4206	50.09	-0.01	0.01
35	SLU 54	1	-269	4288	50.86	-0.1	0.01
35	SLU 55	1	-276	4330	50.97	-0.16	0.01
35	SLU 56	1	-260	4241	50.84	-0.01	0.01
35	SLU 57	1	-273	4323	51.61	-0.09	0.01
35	SLU 58	1	-258	4227	50.44	-0.01	0.01
35	SLU 59	1	-271	4309	51.21	-0.1	0.01
35	SLU 60	1	-259	4312	51.4	-0.05	0.01
35	SLU 61	1	-272	4394	52.17	-0.13	0.01
35	SLU 62	1	-263	4346	52.14	-0.04	0.01
35	SLU 63	1	-276	4429	52.91	-0.12	0.01
35	SLU 64	1	-250	4107	48.53	0	0.01
35	SLU 65	1	-272	4244	49.81	-0.14	0.01
35	SLU 66	2	-255	4155	49.68	0.01	0.01
35	SLU 67	1	-269	4237	50.45	-0.07	0.01
35	SLU 68	1	-276	4278	50.56	-0.13	0.01
35	SLU 69	2	-259	4189	50.42	0.02	0.01
35	SLU 70	1	-273	4271	51.19	-0.06	0.01
35	SLU 71	2	-257	4176	50.02	0.01	0.01
35	SLU 72	1	-271	4258	50.79	-0.07	0.01
35	SLU 73	1	-293	4602	55.54	-0.18	0.01
35	SLU 74	1	-276	4513	55.4	-0.03	0.01
35	SLU 75	1	-290	4595	56.17	-0.12	0.01
35	SLU 76	1	-297	4637	56.28	-0.18	0.01
35	SLU 77	2	-280	4548	56.15	-0.03	0.01
35	SLU 78	1	-294	4630	56.92	-0.11	0.01
35	SLU 79	2	-279	4535	55.75	-0.03	0.01
35	SLU 80	1	-292	4617	56.52	-0.11	0.01
35	SLU 81	1	-280	4619	56.71	-0.06	0.01
35	SLU 82	1	-293	4701	57.48	-0.15	0.01
35	SLU 83	1	-284	4654	57.45	-0.06	0.01
35	SLU 84	1	-297	4736	58.22	-0.14	0.01
35	SLE RA 1	1	-187	3092	36.16	0	0
35	SLE RA 2	1	-202	3183	37.02	-0.09	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
35	SLE RA 3	1	-191	3124	36.93	0.01	0
35	SLE RA 4	1	-200	3178	37.44	-0.04	0.01
35	SLE RA 5	1	-205	3206	37.52	-0.08	0.01
35	SLE RA 6	1	-194	3147	37.43	0.02	0
35	SLE RA 7	1	-203	3201	37.94	-0.04	0.01
35	SLE RA 8	1	-193	3138	37.16	0.01	0
35	SLE RA 9	1	-202	3193	37.67	-0.04	0.01
35	SLE RA 10	1	-216	3422	40.83	-0.12	0.01
35	SLE RA 11	1	-205	3363	40.74	-0.02	0
35	SLE RA 12	1	-214	3417	41.26	-0.07	0.01
35	SLE RA 13	1	-219	3445	41.33	-0.11	0.01
35	SLE RA 14	1	-208	3386	41.24	-0.01	0
35	SLE RA 15	1	-217	3440	41.76	-0.07	0.01
35	SLE RA 16	1	-207	3377	40.98	-0.02	0
35	SLE RA 17	1	-216	3431	41.49	-0.07	0.01
35	SLE RA 18	1	-208	3433	41.62	-0.04	0.01
35	SLE RA 19	1	-216	3488	42.13	-0.09	0.01
35	SLE RA 20	1	-210	3456	42.11	-0.03	0.01
35	SLE RA 21	1	-219	3511	42.63	-0.09	0.01
35	SLE FR 1	1	-187	3092	36.16	0	0
35	SLE FR 2	1	-190	3110	36.33	-0.01	0
35	SLE FR 3	1	-188	3101	36.36	0.01	0
35	SLE FR 4	1	-196	3213	37.97	-0.03	0.01
35	SLE FR 5	1	-195	3203	38	-0.01	0
35	SLE FR 6	1	-198	3263	38.89	-0.02	0
35	SLE QP 1	1	-187	3092	36.16	0	0
35	SLE QP 2	1	-193	3194	37.8	-0.01	0
35	SLD 1	7	-236	3125	57.91	2.56	0.02
35	SLD 2	7	-236	3125	57.91	2.56	0.02
35	SLD 3	2	97	2905	36.35	0.99	0
35	SLD 4	2	97	2905	36.35	0.99	0
35	SLD 5	10	-711	3506	76.54	3.15	0.03
35	SLD 6	10	-711	3506	76.54	3.15	0.03
35	SLD 7	-5	398	2775	4.66	-2.1	-0.02
35	SLD 8	-5	398	2775	4.66	-2.1	-0.02
35	SLD 9	8	-785	3614	70.94	2.08	0.03
35	SLD 10	8	-785	3614	70.94	2.08	0.03
35	SLD 11	-8	324	2883	-0.94	-3.17	-0.03
35	SLD 12	-8	324	2883	-0.94	-3.17	-0.03
35	SLD 13	0	-484	3483	39.25	-1	0.01
35	SLD 14	0	-484	3483	39.25	-1	0.01
35	SLD 15	-5	-151	3264	17.69	-2.58	-0.01
35	SLD 16	-5	-151	3264	17.69	-2.58	-0.01
35	SLV 1	15	-295	3032	86.41	6.08	0.04
35	SLV 2	15	-295	3032	86.41	6.08	0.04
35	SLV 3	4	485	2515	33.73	2.33	-0.01
35	SLV 4	4	485	2515	33.73	2.33	-0.01
35	SLV 5	22	-1407	3930	132.28	7.51	0.07
35	SLV 6	22	-1407	3930	132.28	7.51	0.07
35	SLV 7	-15	1193	2206	-43.32	-5	-0.06
35	SLV 8	-15	1193	2206	-43.32	-5	-0.06
35	SLV 9	17	-1580	4182	118.92	4.98	0.07
35	SLV 10	17	-1580	4182	118.92	4.98	0.07
35	SLV 11	-20	1020	2459	-56.68	-7.53	-0.07
35	SLV 12	-20	1020	2459	-56.68	-7.53	-0.07
35	SLV 13	-2	-872	3873	41.87	-2.35	0.01
35	SLV 14	-2	-872	3873	41.87	-2.35	0.01
35	SLV 15	-13	-92	3356	-10.81	-6.1	-0.03
35	SLV 16	-13	-92	3356	-10.81	-6.1	-0.03
36	SLU 1	-35	-23	3478	-16.11	-6.3	2.06
36	SLU 2	-34	-67	3703	-15.11	-6.34	2.1
36	SLU 3	-35	-20	3534	-16.72	-6.42	2.1
36	SLU 4	-35	-47	3669	-16.12	-6.44	2.12
36	SLU 5	-34	-66	3741	-15.53	-6.41	2.12
36	SLU 6	-36	-19	3572	-17.14	-6.49	2.13
36	SLU 7	-35	-45	3706	-16.54	-6.51	2.15
36	SLU 8	-35	-21	3553	-16.95	-6.44	2.11
36	SLU 9	-35	-47	3688	-16.35	-6.47	2.13
36	SLU 10	-39	-57	4179	-17.41	-7.16	2.42
36	SLU 11	-40	-10	4010	-19.02	-7.24	2.42
36	SLU 12	-40	-36	4145	-18.42	-7.27	2.44
36	SLU 13	-39	-55	4217	-17.83	-7.24	2.44
36	SLU 14	-40	-9	4048	-19.44	-7.31	2.45
36	SLU 15	-40	-35	4182	-18.84	-7.34	2.47
36	SLU 16	-40	-10	4029	-19.24	-7.27	2.43
36	SLU 17	-40	-36	4164	-18.65	-7.29	2.45
36	SLU 18	-41	-8	4158	-19.39	-7.48	2.52
36	SLU 19	-41	-35	4293	-18.79	-7.5	2.54
36	SLU 20	-42	-7	4196	-19.81	-7.55	2.54
36	SLU 21	-41	-33	4331	-19.21	-7.57	2.56
36	SLU 22	-39	-13	3881	-18.34	-7.03	2.34
36	SLU 23	-38	-56	4106	-17.34	-7.07	2.37
36	SLU 24	-39	-10	3937	-18.95	-7.15	2.38
36	SLU 25	-39	-36	4072	-18.35	-7.17	2.4
36	SLU 26	-38	-55	4143	-17.76	-7.14	2.4
36	SLU 27	-40	-8	3975	-19.37	-7.22	2.4
36	SLU 28	-39	-35	4109	-18.77	-7.24	2.42
36	SLU 29	-40	-10	3956	-19.18	-7.17	2.39
36	SLU 30	-39	-36	4091	-18.58	-7.19	2.41
36	SLU 31	-43	-46	4582	-19.64	-7.89	2.69



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
36	SLU 32	-44	1	4413	-21.24	-7.97	2.69
36	SLU 33	-44	-25	4548	-20.65	-7.99	2.71
36	SLU 34	-43	-44	4619	-20.06	-7.96	2.71
36	SLU 35	-45	2	4451	-21.66	-8.04	2.72
36	SLU 36	-44	-24	4585	-21.07	-8.06	2.74
36	SLU 37	-44	1	4432	-21.47	-7.99	2.7
36	SLU 38	-44	-26	4567	-20.87	-8.02	2.72
36	SLU 39	-46	2	4561	-21.62	-8.21	2.79
36	SLU 40	-45	-24	4696	-21.02	-8.23	2.81
36	SLU 41	-46	4	4599	-22.04	-8.28	2.82
36	SLU 42	-46	-23	4733	-21.44	-8.3	2.84
36	SLU 43	-44	-34	4384	-20.18	-7.94	2.59
36	SLU 44	-43	-78	4608	-19.18	-7.98	2.63
36	SLU 45	-44	-31	4440	-20.79	-8.06	2.63
36	SLU 46	-44	-57	4574	-20.19	-8.08	2.65
36	SLU 47	-43	-76	4646	-19.6	-8.05	2.65
36	SLU 48	-45	-30	4477	-21.21	-8.13	2.65
36	SLU 49	-44	-56	4612	-20.61	-8.15	2.67
36	SLU 50	-44	-31	4459	-21.02	-8.09	2.64
36	SLU 51	-44	-58	4594	-20.42	-8.11	2.66
36	SLU 52	-48	-67	5084	-21.48	-8.81	2.94
36	SLU 53	-49	-21	4915	-23.09	-8.89	2.95
36	SLU 54	-49	-47	5050	-22.49	-8.91	2.97
36	SLU 55	-48	-66	5122	-21.9	-8.88	2.97
36	SLU 56	-49	-19	4953	-23.51	-8.96	2.97
36	SLU 57	-49	-46	5088	-22.91	-8.98	2.99
36	SLU 58	-49	-21	4935	-23.31	-8.91	2.96
36	SLU 59	-49	-47	5069	-22.72	-8.93	2.98
36	SLU 60	-50	-19	5064	-23.46	-9.12	3.04
36	SLU 61	-50	-45	5198	-22.86	-9.15	3.07
36	SLU 62	-51	-18	5101	-23.88	-9.19	3.07
36	SLU 63	-50	-44	5236	-23.28	-9.22	3.09
36	SLU 64	-48	-23	4787	-22.41	-8.67	2.86
36	SLU 65	-47	-67	5011	-21.41	-8.71	2.9
36	SLU 66	-48	-20	4842	-23.02	-8.79	2.9
36	SLU 67	-48	-47	4977	-22.42	-8.81	2.92
36	SLU 68	-47	-66	5049	-21.83	-8.78	2.92
36	SLU 69	-49	-19	4880	-23.44	-8.86	2.93
36	SLU 70	-48	-45	5015	-22.84	-8.88	2.95
36	SLU 71	-49	-21	4862	-23.24	-8.81	2.91
36	SLU 72	-48	-47	4996	-22.65	-8.83	2.93
36	SLU 73	-52	-56	5487	-23.71	-9.53	3.22
36	SLU 74	-53	-10	5318	-25.31	-9.61	3.22
36	SLU 75	-53	-36	5453	-24.72	-9.64	3.24
36	SLU 76	-52	-55	5525	-24.13	-9.6	3.24
36	SLU 77	-54	-9	5356	-25.73	-9.68	3.24
36	SLU 78	-53	-35	5491	-25.14	-9.71	3.26
36	SLU 79	-53	-10	5338	-25.54	-9.64	3.23
36	SLU 80	-53	-36	5472	-24.94	-9.66	3.25
36	SLU 81	-55	-8	5467	-25.69	-9.85	3.32
36	SLU 82	-54	-34	5601	-25.09	-9.87	3.34
36	SLU 83	-55	-7	5504	-26.11	-9.92	3.34
36	SLU 84	-55	-33	5639	-25.51	-9.94	3.36
36	SLE RA 1	-36	-20	3593	-16.75	-6.51	2.14
36	SLE RA 2	-35	-49	3743	-16.08	-6.54	2.17
36	SLE RA 3	-36	-18	3631	-17.15	-6.59	2.17
36	SLE RA 4	-36	-36	3721	-16.76	-6.6	2.18
36	SLE RA 5	-36	-48	3768	-16.36	-6.58	2.18
36	SLE RA 6	-37	-17	3656	-17.43	-6.64	2.18
36	SLE RA 7	-36	-35	3746	-17.04	-6.65	2.2
36	SLE RA 8	-36	-18	3643	-17.3	-6.6	2.17
36	SLE RA 9	-36	-36	3733	-16.91	-6.62	2.19
36	SLE RA 10	-38	-42	4061	-17.61	-7.09	2.38
36	SLE RA 11	-39	-11	3948	-18.68	-7.14	2.38
36	SLE RA 12	-39	-29	4038	-18.29	-7.15	2.39
36	SLE RA 13	-39	-41	4086	-17.89	-7.13	2.39
36	SLE RA 14	-40	-10	3973	-18.96	-7.19	2.4
36	SLE RA 15	-39	-28	4063	-18.57	-7.2	2.41
36	SLE RA 16	-40	-12	3961	-18.84	-7.15	2.39
36	SLE RA 17	-39	-29	4051	-18.44	-7.17	2.4
36	SLE RA 18	-40	-10	4047	-18.93	-7.3	2.45
36	SLE RA 19	-40	-28	4137	-18.53	-7.31	2.46
36	SLE RA 20	-41	-9	4072	-19.21	-7.34	2.46
36	SLE RA 21	-40	-27	4162	-18.81	-7.36	2.48
36	SLE FR 1	-36	-20	3593	-16.75	-6.51	2.14
36	SLE FR 2	-36	-26	3623	-16.61	-6.52	2.15
36	SLE FR 3	-36	-20	3603	-16.86	-6.53	2.15
36	SLE FR 4	-37	-23	3759	-17.27	-6.75	2.24
36	SLE FR 5	-37	-17	3739	-17.51	-6.76	2.24
36	SLE FR 6	-38	-15	3820	-17.84	-6.9	2.29
36	SLE QP 1	-36	-20	3593	-16.75	-6.51	2.14
36	SLE QP 2	-37	-17	3729	-17.4	-6.75	2.23
36	SLD 1	-33	51	3510	-20.07	-5.01	2.11
36	SLD 2	-33	51	3510	-20.07	-5.01	2.11
36	SLD 3	-24	-306	3158	-2.22	-3.54	1.55
36	SLD 4	-24	-306	3158	-2.22	-3.54	1.55
36	SLD 5	-49	544	4197	-45.28	-8.44	3.05
36	SLD 6	-49	544	4197	-45.28	-8.44	3.05
36	SLD 7	-20	-645	3024	14.23	-3.57	1.17
36	SLD 8	-20	-645	3024	14.23	-3.57	1.17



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
36	SLD 9	-54	610	4435	-49.04	-9.92	3.29
36	SLD 10	-54	610	4435	-49.04	-9.92	3.29
36	SLD 11	-25	-579	3262	10.48	-5.05	1.42
36	SLD 12	-25	-579	3262	10.48	-5.05	1.42
36	SLD 13	-50	271	4301	-32.59	-9.95	2.92
36	SLD 14	-50	271	4301	-32.59	-9.95	2.92
36	SLD 15	-42	-85	3949	-14.73	-8.49	2.35
36	SLD 16	-42	-85	3949	-14.73	-8.49	2.35
36	SLV 1	-27	143	3217	-23.7	-2.68	1.96
36	SLV 2	-27	143	3217	-23.7	-2.68	1.96
36	SLV 3	-6	-695	2384	18.17	0.76	0.63
36	SLV 4	-6	-695	2384	18.17	0.76	0.63
36	SLV 5	-65	1302	4839	-82.79	-10.75	4.16
36	SLV 6	-65	1302	4839	-82.79	-10.75	4.16
36	SLV 7	3	-1491	2063	56.77	0.73	-0.25
36	SLV 8	3	-1491	2063	56.77	0.73	-0.25
36	SLV 9	-77	1457	5396	-91.57	-14.22	4.72
36	SLV 10	-77	1457	5396	-91.57	-14.22	4.72
36	SLV 11	-10	-1336	2620	47.98	-2.74	0.31
36	SLV 12	-10	-1336	2620	47.98	-2.74	0.31
36	SLV 13	-68	660	5075	-52.97	-14.25	3.83
36	SLV 14	-68	660	5075	-52.97	-14.25	3.83
36	SLV 15	-48	-178	4242	-11.11	-10.81	2.51
36	SLV 16	-48	-178	4242	-11.11	-10.81	2.51
37	SLU 1	-2	810	4348	-25.69	-0.71	0.56
37	SLU 2	-2	832	4460	-25.76	-0.6	0.56
37	SLU 3	-2	829	4438	-26.39	-0.72	0.57
37	SLU 4	-2	842	4505	-26.44	-0.65	0.57
37	SLU 5	-2	844	4523	-26.25	-0.6	0.57
37	SLU 6	-3	841	4501	-26.88	-0.72	0.58
37	SLU 7	-2	854	4568	-26.93	-0.66	0.58
37	SLU 8	-3	834	4474	-26.67	-0.72	0.58
37	SLU 9	-2	848	4542	-26.71	-0.65	0.58
37	SLU 10	-2	980	5066	-29.4	-0.72	0.63
37	SLU 11	-3	976	5044	-30.04	-0.84	0.64
37	SLU 12	-2	990	5111	-30.08	-0.77	0.64
37	SLU 13	-2	992	5130	-29.89	-0.72	0.64
37	SLU 14	-3	988	5107	-30.53	-0.84	0.65
37	SLU 15	-2	1002	5174	-30.57	-0.78	0.65
37	SLU 16	-3	982	5081	-30.31	-0.84	0.65
37	SLU 17	-2	995	5148	-30.36	-0.77	0.65
37	SLU 18	-2	1021	5214	-30.89	-0.88	0.65
37	SLU 19	-2	1034	5281	-30.94	-0.81	0.66
37	SLU 20	-3	1033	5277	-31.38	-0.88	0.67
37	SLU 21	-2	1046	5345	-31.43	-0.82	0.67
37	SLU 22	-2	922	4824	-28.16	-0.81	0.6
37	SLU 23	-2	944	4936	-28.23	-0.7	0.61
37	SLU 24	-2	941	4914	-28.86	-0.82	0.62
37	SLU 25	-2	954	4981	-28.9	-0.76	0.62
37	SLU 26	-2	957	4999	-28.72	-0.71	0.62
37	SLU 27	-3	953	4977	-29.35	-0.83	0.63
37	SLU 28	-2	967	5044	-29.39	-0.76	0.63
37	SLU 29	-3	947	4950	-29.14	-0.82	0.63
37	SLU 30	-2	960	5018	-29.18	-0.76	0.63
37	SLU 31	-2	1092	5542	-31.87	-0.82	0.68
37	SLU 32	-3	1089	5520	-32.5	-0.94	0.69
37	SLU 33	-2	1102	5587	-32.54	-0.88	0.69
37	SLU 34	-2	1104	5605	-32.36	-0.83	0.69
37	SLU 35	-3	1101	5583	-32.99	-0.95	0.7
37	SLU 36	-2	1114	5650	-33.03	-0.88	0.7
37	SLU 37	-3	1094	5557	-32.78	-0.94	0.69
37	SLU 38	-2	1107	5624	-32.82	-0.88	0.7
37	SLU 39	-2	1133	5690	-33.36	-0.98	0.7
37	SLU 40	-2	1146	5757	-33.4	-0.92	0.71
37	SLU 41	-3	1145	5753	-33.85	-0.99	0.71
37	SLU 42	-2	1158	5821	-33.89	-0.92	0.72
37	SLU 43	-3	1014	5489	-32.55	-0.88	0.7
37	SLU 44	-3	1037	5601	-32.62	-0.77	0.71
37	SLU 45	-3	1033	5579	-33.25	-0.89	0.72
37	SLU 46	-3	1047	5646	-33.3	-0.83	0.72
37	SLU 47	-3	1049	5664	-33.11	-0.78	0.72
37	SLU 48	-3	1045	5642	-33.75	-0.9	0.73
37	SLU 49	-3	1059	5709	-33.79	-0.83	0.73
37	SLU 50	-3	1039	5616	-33.53	-0.89	0.73
37	SLU 51	-3	1052	5683	-33.58	-0.83	0.73
37	SLU 52	-3	1184	6208	-36.26	-0.89	0.78
37	SLU 53	-3	1181	6185	-36.9	-1.01	0.79
37	SLU 54	-3	1194	6253	-36.94	-0.95	0.79
37	SLU 55	-3	1196	6271	-36.76	-0.9	0.79
37	SLU 56	-3	1193	6249	-37.39	-1.02	0.8
37	SLU 57	-3	1206	6316	-37.43	-0.95	0.8
37	SLU 58	-3	1186	6222	-37.18	-1.01	0.8
37	SLU 59	-3	1200	6289	-37.22	-0.95	0.8
37	SLU 60	-3	1225	6356	-37.76	-1.05	0.8
37	SLU 61	-3	1238	6423	-37.8	-0.99	0.81
37	SLU 62	-3	1237	6419	-38.25	-1.06	0.81
37	SLU 63	-3	1251	6486	-38.29	-0.99	0.82
37	SLU 64	-3	1127	5965	-35.02	-0.99	0.75
37	SLU 65	-3	1149	6077	-35.09	-0.88	0.76
37	SLU 66	-3	1146	6055	-35.72	-1	0.77



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
37	SLU 67	-3	1159	6122	-35.76	-0.93	0.77
37	SLU 68	-3	1161	6140	-35.58	-0.89	0.77
37	SLU 69	-3	1158	6118	-36.21	-1	0.78
37	SLU 70	-3	1171	6185	-36.25	-0.94	0.78
37	SLU 71	-3	1151	6092	-36	-1	0.78
37	SLU 72	-3	1164	6159	-36.04	-0.94	0.78
37	SLU 73	-3	1296	6684	-38.73	-1	0.83
37	SLU 74	-3	1293	6661	-39.36	-1.12	0.84
37	SLU 75	-3	1306	6728	-39.4	-1.05	0.84
37	SLU 76	-3	1309	6747	-39.22	-1.01	0.84
37	SLU 77	-3	1305	6724	-39.85	-1.12	0.85
37	SLU 78	-3	1319	6792	-39.9	-1.06	0.85
37	SLU 79	-3	1299	6698	-39.64	-1.12	0.84
37	SLU 80	-3	1312	6765	-39.68	-1.05	0.85
37	SLU 81	-3	1337	6831	-40.22	-1.16	0.85
37	SLU 82	-3	1351	6899	-40.26	-1.09	0.86
37	SLU 83	-3	1350	6895	-40.71	-1.16	0.86
37	SLU 84	-3	1363	6962	-40.75	-1.1	0.87
37	SLE RA 1	-2	842	4484	-26.39	-0.74	0.57
37	SLE RA 2	-2	857	4559	-26.44	-0.66	0.57
37	SLE RA 3	-2	855	4544	-26.86	-0.74	0.58
37	SLE RA 4	-2	863	4589	-26.89	-0.7	0.58
37	SLE RA 5	-2	865	4601	-26.77	-0.67	0.58
37	SLE RA 6	-2	863	4586	-27.19	-0.75	0.59
37	SLE RA 7	-2	872	4631	-27.22	-0.7	0.59
37	SLE RA 8	-2	858	4568	-27.05	-0.74	0.58
37	SLE RA 9	-2	867	4613	-27.08	-0.7	0.59
37	SLE RA 10	-2	955	4963	-28.87	-0.74	0.62
37	SLE RA 11	-2	953	4948	-29.29	-0.82	0.62
37	SLE RA 12	-2	962	4993	-29.32	-0.78	0.63
37	SLE RA 13	-2	963	5005	-29.2	-0.75	0.63
37	SLE RA 14	-3	961	4990	-29.62	-0.83	0.63
37	SLE RA 15	-2	970	5035	-29.65	-0.78	0.63
37	SLE RA 16	-2	957	4972	-29.48	-0.82	0.63
37	SLE RA 17	-2	966	5017	-29.51	-0.78	0.63
37	SLE RA 18	-2	982	5062	-29.86	-0.85	0.64
37	SLE RA 19	-2	991	5106	-29.89	-0.81	0.64
37	SLE RA 20	-2	991	5104	-30.19	-0.85	0.64
37	SLE RA 21	-2	999	5148	-30.22	-0.81	0.64
37	SLE FR 1	-2	842	4484	-26.39	-0.74	0.57
37	SLE FR 2	-2	845	4499	-26.4	-0.72	0.57
37	SLE FR 3	-2	845	4501	-26.53	-0.74	0.57
37	SLE FR 4	-2	887	4672	-27.44	-0.76	0.59
37	SLE FR 5	-2	887	4674	-27.57	-0.77	0.59
37	SLE FR 6	-2	912	4773	-28.13	-0.79	0.6
37	SLE QP 1	-2	842	4484	-26.39	-0.74	0.57
37	SLE QP 2	-2	884	4657	-27.44	-0.77	0.59
37	SLD 1	-9	905	4458	-30.25	-0.19	0.78
37	SLD 2	-9	905	4458	-30.25	-0.19	0.78
37	SLD 3	-6	533	3979	-10.35	0.47	0.7
37	SLD 4	-6	533	3979	-10.35	0.47	0.7
37	SLD 5	-9	1453	5324	-58.47	-1.6	0.77
37	SLD 6	-9	1453	5324	-58.47	-1.6	0.77
37	SLD 7	1	216	3727	7.88	0.6	0.5
37	SLD 8	1	216	3727	7.88	0.6	0.5
37	SLD 9	-6	1552	5588	-62.75	-2.14	0.67
37	SLD 10	-6	1552	5588	-62.75	-2.14	0.67
37	SLD 11	4	315	3991	3.6	0.06	0.41
37	SLD 12	4	315	3991	3.6	0.06	0.41
37	SLD 13	1	1235	5336	-44.52	-2.01	0.48
37	SLD 14	1	1235	5336	-44.52	-2.01	0.48
37	SLD 15	4	864	4857	-24.62	-1.35	0.4
37	SLD 16	4	864	4857	-24.62	-1.35	0.4
37	SLV 1	-17	934	4197	-33.94	0.66	1.03
37	SLV 2	-17	934	4197	-33.94	0.66	1.03
37	SLV 3	-10	69	3072	12.45	2.22	0.85
37	SLV 4	-10	69	3072	12.45	2.22	0.85
37	SLV 5	-18	2211	6224	-99.73	-2.7	1
37	SLV 6	-18	2211	6224	-99.73	-2.7	1
37	SLV 7	6	-672	2477	54.88	2.49	0.39
37	SLV 8	6	-672	2477	54.88	2.49	0.39
37	SLV 9	-11	2441	6838	-109.75	-4.03	0.79
37	SLV 10	-11	2441	6838	-109.75	-4.03	0.79
37	SLV 11	13	-443	3090	44.86	1.16	0.18
37	SLV 12	13	-443	3090	44.86	1.16	0.18
37	SLV 13	6	1699	6242	-67.32	-3.76	0.33
37	SLV 14	6	1699	6242	-67.32	-3.76	0.33
37	SLV 15	13	834	5118	-20.93	-2.2	0.15
37	SLV 16	13	834	5118	-20.93	-2.2	0.15
38	SLU 1	1	908	4425	-39.06	0.43	-0.04
38	SLU 2	0	931	4537	-40.03	0.32	-0.04
38	SLU 3	1	934	4522	-40.15	0.43	-0.04
38	SLU 4	1	948	4589	-40.73	0.37	-0.04
38	SLU 5	0	949	4607	-40.79	0.32	-0.04
38	SLU 6	1	951	4591	-40.91	0.43	-0.04
38	SLU 7	1	965	4659	-41.5	0.37	-0.04
38	SLU 8	1	943	4564	-40.58	0.43	-0.04
38	SLU 9	1	957	4631	-41.17	0.37	-0.04
38	SLU 10	0	1085	5146	-46.43	0.45	-0.04
38	SLU 11	1	1087	5130	-46.55	0.56	-0.04



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
38	SLU 12	1	1101	5198	-47.14	0.49	-0.04
38	SLU 13	0	1102	5215	-47.19	0.45	-0.04
38	SLU 14	1	1104	5200	-47.32	0.56	-0.04
38	SLU 15	1	1119	5267	-47.9	0.49	-0.04
38	SLU 16	1	1097	5172	-46.99	0.56	-0.04
38	SLU 17	1	1111	5240	-47.57	0.49	-0.04
38	SLU 18	1	1127	5294	-48.2	0.61	-0.04
38	SLU 19	1	1141	5362	-48.79	0.54	-0.04
38	SLU 20	1	1144	5363	-48.97	0.61	-0.04
38	SLU 21	1	1159	5431	-49.55	0.55	-0.04
38	SLU 22	1	1035	4927	-44.36	0.52	-0.04
38	SLU 23	0	1059	5040	-45.34	0.41	-0.04
38	SLU 24	1	1061	5024	-45.46	0.52	-0.04
38	SLU 25	0	1075	5091	-46.04	0.45	-0.04
38	SLU 26	0	1076	5109	-46.1	0.41	-0.04
38	SLU 27	1	1078	5093	-46.22	0.52	-0.04
38	SLU 28	0	1093	5161	-46.8	0.46	-0.04
38	SLU 29	1	1071	5066	-45.89	0.52	-0.04
38	SLU 30	0	1085	5134	-46.47	0.45	-0.04
38	SLU 31	0	1212	5648	-51.74	0.53	-0.05
38	SLU 32	1	1214	5632	-51.86	0.64	-0.04
38	SLU 33	0	1228	5700	-52.44	0.58	-0.05
38	SLU 34	0	1230	5717	-52.5	0.54	-0.05
38	SLU 35	1	1232	5702	-52.62	0.64	-0.05
38	SLU 36	0	1246	5769	-53.21	0.58	-0.05
38	SLU 37	1	1224	5674	-52.29	0.64	-0.05
38	SLU 38	0	1238	5742	-52.88	0.58	-0.05
38	SLU 39	1	1254	5796	-53.51	0.69	-0.05
38	SLU 40	0	1268	5864	-54.09	0.63	-0.05
38	SLU 41	1	1272	5866	-54.27	0.7	-0.05
38	SLU 42	0	1286	5933	-54.86	0.63	-0.05
38	SLU 43	1	1137	5580	-48.95	0.53	-0.05
38	SLU 44	1	1160	5693	-49.93	0.42	-0.05
38	SLU 45	1	1162	5677	-50.05	0.53	-0.05
38	SLU 46	1	1176	5745	-50.63	0.47	-0.05
38	SLU 47	1	1178	5762	-50.69	0.42	-0.05
38	SLU 48	1	1180	5747	-50.81	0.53	-0.05
38	SLU 49	1	1194	5814	-51.39	0.47	-0.05
38	SLU 50	1	1172	5719	-50.48	0.53	-0.05
38	SLU 51	1	1186	5787	-51.06	0.47	-0.05
38	SLU 52	1	1313	6301	-56.33	0.55	-0.05
38	SLU 53	1	1315	6285	-56.45	0.66	-0.05
38	SLU 54	1	1330	6353	-57.03	0.59	-0.05
38	SLU 55	1	1331	6371	-57.09	0.55	-0.05
38	SLU 56	1	1333	6355	-57.21	0.66	-0.05
38	SLU 57	1	1347	6422	-57.8	0.59	-0.05
38	SLU 58	1	1325	6328	-56.88	0.66	-0.05
38	SLU 59	1	1339	6395	-57.47	0.59	-0.05
38	SLU 60	1	1356	6449	-58.1	0.71	-0.05
38	SLU 61	1	1370	6517	-58.68	0.64	-0.05
38	SLU 62	1	1373	6519	-58.86	0.71	-0.05
38	SLU 63	1	1387	6586	-59.45	0.65	-0.05
38	SLU 64	1	1264	6082	-54.26	0.61	-0.05
38	SLU 65	1	1287	6195	-55.23	0.51	-0.05
38	SLU 66	1	1290	6179	-55.35	0.62	-0.05
38	SLU 67	1	1304	6247	-55.94	0.55	-0.05
38	SLU 68	1	1305	6264	-56	0.51	-0.05
38	SLU 69	1	1307	6249	-56.12	0.62	-0.05
38	SLU 70	1	1321	6316	-56.7	0.55	-0.05
38	SLU 71	1	1299	6221	-55.79	0.62	-0.05
38	SLU 72	1	1313	6289	-56.37	0.55	-0.05
38	SLU 73	1	1441	6803	-61.64	0.63	-0.06
38	SLU 74	1	1443	6787	-61.76	0.74	-0.05
38	SLU 75	1	1457	6855	-62.34	0.68	-0.06
38	SLU 76	1	1458	6873	-62.4	0.64	-0.06
38	SLU 77	1	1460	6857	-62.52	0.74	-0.05
38	SLU 78	1	1474	6925	-63.1	0.68	-0.06
38	SLU 79	1	1453	6830	-62.19	0.74	-0.05
38	SLU 80	1	1467	6897	-62.77	0.68	-0.06
38	SLU 81	1	1483	6951	-63.41	0.79	-0.06
38	SLU 82	1	1497	7019	-63.99	0.73	-0.06
38	SLU 83	1	1500	7021	-64.17	0.79	-0.06
38	SLU 84	1	1515	7088	-64.75	0.73	-0.06
38	SLE RA 1	1	944	4568	-40.57	0.45	-0.04
38	SLE RA 2	0	960	4643	-41.22	0.38	-0.04
38	SLE RA 3	1	961	4633	-41.3	0.46	-0.04
38	SLE RA 4	1	971	4678	-41.69	0.41	-0.04
38	SLE RA 5	0	972	4690	-41.73	0.38	-0.04
38	SLE RA 6	1	973	4679	-41.81	0.46	-0.04
38	SLE RA 7	1	983	4724	-42.2	0.41	-0.04
38	SLE RA 8	1	968	4661	-41.59	0.46	-0.04
38	SLE RA 9	1	977	4706	-41.98	0.41	-0.04
38	SLE RA 10	1	1062	5049	-45.49	0.47	-0.04
38	SLE RA 11	1	1063	5038	-45.57	0.54	-0.04
38	SLE RA 12	1	1073	5084	-45.96	0.5	-0.04
38	SLE RA 13	1	1074	5095	-46	0.47	-0.04
38	SLE RA 14	1	1075	5085	-46.08	0.54	-0.04
38	SLE RA 15	1	1085	5130	-46.47	0.5	-0.04
38	SLE RA 16	1	1070	5067	-45.86	0.54	-0.04
38	SLE RA 17	1	1079	5112	-46.25	0.5	-0.04



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
38	SLE RA 18	1	1090	5148	-46.67	0.57	-0.04
38	SLE RA 19	1	1100	5193	-47.06	0.53	-0.04
38	SLE RA 20	1	1102	5194	-47.18	0.57	-0.04
38	SLE RA 21	1	1111	5239	-47.57	0.53	-0.04
38	SLE FR 1	1	944	4568	-40.57	0.45	-0.04
38	SLE FR 2	1	947	4583	-40.7	0.44	-0.04
38	SLE FR 3	1	949	4587	-40.78	0.45	-0.04
38	SLE FR 4	1	991	4757	-42.53	0.48	-0.04
38	SLE FR 5	1	993	4761	-42.61	0.49	-0.04
38	SLE FR 6	1	1017	4858	-43.62	0.51	-0.04
38	SLE QP 1	1	944	4568	-40.57	0.45	-0.04
38	SLE QP 2	1	988	4742	-42.4	0.49	-0.04
38	SLD 1	-3	1379	5422	-59.25	1.96	-0.07
38	SLD 2	-3	1379	5422	-59.25	1.96	-0.07
38	SLD 3	-6	972	4908	-41.2	1.3	-0.06
38	SLD 4	-6	972	4908	-41.2	1.3	-0.06
38	SLD 5	4	1723	5725	-74.83	1.93	-0.07
38	SLD 6	4	1723	5725	-74.83	1.93	-0.07
38	SLD 7	-6	366	4012	-14.67	-0.27	-0.02
38	SLD 8	-6	366	4012	-14.67	-0.27	-0.02
38	SLD 9	7	1610	5472	-70.14	1.25	-0.05
38	SLD 10	7	1610	5472	-70.14	1.25	-0.05
38	SLD 11	-2	253	3759	-9.98	-0.95	-0.01
38	SLD 12	-2	253	3759	-9.98	-0.95	-0.01
38	SLD 13	8	1004	4576	-43.61	-0.32	-0.02
38	SLD 14	8	1004	4576	-43.61	-0.32	-0.02
38	SLD 15	5	597	4062	-25.56	-0.98	-0.01
38	SLD 16	5	597	4062	-25.56	-0.98	-0.01
38	SLV 1	-9	1893	6331	-81.4	4.1	-0.12
38	SLV 2	-9	1893	6331	-81.4	4.1	-0.12
38	SLV 3	-16	949	5125	-39.54	2.52	-0.08
38	SLV 4	-16	949	5125	-39.54	2.52	-0.08
38	SLV 5	8	2692	7048	-117.58	3.96	-0.11
38	SLV 6	8	2692	7048	-117.58	3.96	-0.11
38	SLV 7	-15	-456	3028	21.94	-1.29	0
38	SLV 8	-15	-456	3028	21.94	-1.29	0
38	SLV 9	16	2432	6456	-106.74	2.27	-0.07
38	SLV 10	16	2432	6456	-106.74	2.27	-0.07
38	SLV 11	-7	-716	2437	32.77	-2.98	0.03
38	SLV 12	-7	-716	2437	32.77	-2.98	0.03
38	SLV 13	18	1027	4360	-45.27	-1.55	0.01
38	SLV 14	18	1027	4360	-45.27	-1.55	0.01
38	SLV 15	11	83	3154	-3.41	-3.12	0.04
38	SLV 16	11	83	3154	-3.41	-3.12	0.04
39	SLU 1	6	107	3398	-27.96	0.86	-0.04
39	SLU 2	5	71	3638	-25.66	0.62	-0.04
39	SLU 3	7	114	3461	-29.01	0.9	-0.04
39	SLU 4	6	92	3605	-27.62	0.75	-0.04
39	SLU 5	5	75	3681	-26.33	0.64	-0.04
39	SLU 6	7	118	3504	-29.69	0.92	-0.04
39	SLU 7	6	96	3648	-28.3	0.77	-0.04
39	SLU 8	7	115	3483	-29.32	0.9	-0.04
39	SLU 9	6	93	3628	-27.93	0.75	-0.04
39	SLU 10	6	105	4111	-30.85	0.67	-0.04
39	SLU 11	7	148	3934	-34.2	0.95	-0.04
39	SLU 12	7	126	4078	-32.82	0.8	-0.04
39	SLU 13	6	109	4154	-31.53	0.69	-0.04
39	SLU 14	7	152	3977	-34.88	0.97	-0.04
39	SLU 15	7	130	4121	-33.49	0.82	-0.04
39	SLU 16	7	149	3957	-34.51	0.95	-0.04
39	SLU 17	7	128	4101	-33.13	0.8	-0.04
39	SLU 18	7	156	4073	-35.38	0.93	-0.04
39	SLU 19	7	134	4218	-34	0.79	-0.04
39	SLU 20	7	160	4116	-36.06	0.95	-0.04
39	SLU 21	7	138	4261	-34.67	0.81	-0.04
39	SLU 22	7	139	3807	-32.78	0.94	-0.04
39	SLU 23	6	103	4048	-30.48	0.69	-0.04
39	SLU 24	7	146	3870	-33.83	0.97	-0.04
39	SLU 25	7	124	4015	-32.45	0.82	-0.04
39	SLU 26	6	107	4091	-31.15	0.71	-0.04
39	SLU 27	7	150	3913	-34.51	0.99	-0.04
39	SLU 28	7	128	4058	-33.12	0.84	-0.04
39	SLU 29	7	147	3893	-34.14	0.98	-0.04
39	SLU 30	7	125	4037	-32.75	0.83	-0.04
39	SLU 31	7	137	4521	-35.67	0.74	-0.05
39	SLU 32	8	180	4343	-39.02	1.02	-0.05
39	SLU 33	7	158	4488	-37.64	0.87	-0.05
39	SLU 34	7	141	4564	-36.35	0.76	-0.05
39	SLU 35	8	184	4386	-39.7	1.04	-0.05
39	SLU 36	7	162	4531	-38.31	0.89	-0.05
39	SLU 37	8	182	4366	-39.33	1.03	-0.05
39	SLU 38	7	160	4510	-37.95	0.88	-0.05
39	SLU 39	8	188	4483	-40.2	1.01	-0.05
39	SLU 40	7	167	4627	-38.82	0.86	-0.05
39	SLU 41	8	192	4526	-40.88	1.03	-0.05
39	SLU 42	7	171	4670	-39.49	0.88	-0.05
39	SLU 43	8	128	4276	-34.7	1.1	-0.05
39	SLU 44	7	92	4517	-32.39	0.85	-0.05
39	SLU 45	8	135	4340	-35.74	1.13	-0.05
39	SLU 46	8	113	4484	-34.36	0.98	-0.05



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
39	SLU 47	7	96	4560	-33.07	0.87	-0.05
39	SLU 48	9	139	4383	-36.42	1.15	-0.05
39	SLU 49	8	117	4527	-35.04	1	-0.05
39	SLU 50	8	136	4362	-36.05	1.14	-0.05
39	SLU 51	8	114	4507	-34.67	0.99	-0.05
39	SLU 52	8	126	4990	-37.58	0.9	-0.05
39	SLU 53	9	169	4813	-40.94	1.18	-0.05
39	SLU 54	8	147	4957	-39.55	1.03	-0.05
39	SLU 55	8	130	5033	-38.26	0.92	-0.05
39	SLU 56	9	173	4856	-41.61	1.2	-0.05
39	SLU 57	8	151	5000	-40.23	1.05	-0.05
39	SLU 58	9	170	4835	-41.24	1.19	-0.05
39	SLU 59	8	149	4980	-39.86	1.04	-0.05
39	SLU 60	9	177	4952	-42.12	1.17	-0.05
39	SLU 61	8	155	5097	-40.73	1.02	-0.05
39	SLU 62	9	181	4995	-42.79	1.19	-0.05
39	SLU 63	9	159	5140	-41.41	1.04	-0.05
39	SLU 64	9	160	4686	-39.52	1.17	-0.05
39	SLU 65	8	124	4927	-37.21	0.92	-0.05
39	SLU 66	9	167	4749	-40.56	1.21	-0.05
39	SLU 67	8	145	4894	-39.18	1.06	-0.05
39	SLU 68	8	128	4970	-37.89	0.94	-0.05
39	SLU 69	9	171	4792	-41.24	1.22	-0.05
39	SLU 70	9	149	4937	-39.86	1.08	-0.05
39	SLU 71	9	168	4772	-40.87	1.21	-0.05
39	SLU 72	8	146	4916	-39.49	1.06	-0.05
39	SLU 73	8	158	5400	-42.4	0.97	-0.05
39	SLU 74	10	201	5222	-45.76	1.25	-0.06
39	SLU 75	9	179	5367	-44.37	1.11	-0.06
39	SLU 76	8	162	5443	-43.08	0.99	-0.06
39	SLU 77	10	205	5265	-46.43	1.27	-0.06
39	SLU 78	9	183	5410	-45.05	1.13	-0.06
39	SLU 79	10	203	5245	-46.07	1.26	-0.06
39	SLU 80	9	181	5389	-44.68	1.11	-0.06
39	SLU 81	10	209	5362	-46.94	1.24	-0.06
39	SLU 82	9	188	5506	-45.55	1.09	-0.06
39	SLU 83	10	213	5405	-47.61	1.26	-0.06
39	SLU 84	9	192	5549	-46.23	1.11	-0.06
39	SLE RA 1	7	116	3514	-29.34	0.89	-0.04
39	SLE RA 2	6	92	3675	-27.8	0.72	-0.04
39	SLE RA 3	7	121	3557	-30.04	0.91	-0.04
39	SLE RA 4	6	106	3653	-29.11	0.81	-0.04
39	SLE RA 5	6	95	3704	-28.25	0.73	-0.04
39	SLE RA 6	7	123	3585	-30.49	0.92	-0.04
39	SLE RA 7	6	109	3682	-29.57	0.82	-0.04
39	SLE RA 8	7	121	3572	-30.24	0.91	-0.04
39	SLE RA 9	6	107	3668	-29.32	0.81	-0.04
39	SLE RA 10	6	115	3990	-31.26	0.75	-0.04
39	SLE RA 11	7	143	3872	-33.5	0.94	-0.04
39	SLE RA 12	7	129	3968	-32.58	0.84	-0.04
39	SLE RA 13	6	118	4019	-31.72	0.77	-0.04
39	SLE RA 14	7	146	3901	-33.95	0.95	-0.04
39	SLE RA 15	7	132	3997	-33.03	0.85	-0.04
39	SLE RA 16	7	144	3887	-33.7	0.94	-0.04
39	SLE RA 17	7	130	3984	-32.78	0.85	-0.04
39	SLE RA 18	7	149	3965	-34.28	0.93	-0.04
39	SLE RA 19	7	134	4061	-33.36	0.83	-0.04
39	SLE RA 20	7	152	3994	-34.74	0.95	-0.04
39	SLE RA 21	7	137	4090	-33.81	0.85	-0.04
39	SLE FR 1	7	116	3514	-29.34	0.89	-0.04
39	SLE FR 2	7	111	3547	-29.03	0.85	-0.04
39	SLE FR 3	7	117	3526	-29.52	0.89	-0.04
39	SLE FR 4	7	121	3682	-30.52	0.87	-0.04
39	SLE FR 5	7	127	3661	-31	0.9	-0.04
39	SLE FR 6	7	133	3740	-31.81	0.91	-0.04
39	SLE QP 1	7	116	3514	-29.34	0.89	-0.04
39	SLE QP 2	7	126	3650	-30.82	0.9	-0.04
39	SLD 1	14	436	4344	-51.77	3.39	-0.06
39	SLD 2	14	436	4344	-51.77	3.39	-0.06
39	SLD 3	10	90	3844	-26.7	2.32	-0.04
39	SLD 4	10	90	3844	-26.7	2.32	-0.04
39	SLD 5	16	744	4617	-75.13	3.28	-0.07
39	SLD 6	16	744	4617	-75.13	3.28	-0.07
39	SLD 7	1	-410	2950	8.44	-0.31	-0.01
39	SLD 8	1	-410	2950	8.44	-0.31	-0.01
39	SLD 9	13	662	4350	-70.08	2.11	-0.07
39	SLD 10	13	662	4350	-70.08	2.11	-0.07
39	SLD 11	-3	-492	2683	13.48	-1.49	-0.01
39	SLD 12	-3	-492	2683	13.48	-1.49	-0.01
39	SLD 13	4	162	3455	-34.94	-0.52	-0.04
39	SLD 14	4	162	3455	-34.94	-0.52	-0.04
39	SLD 15	-1	-184	2955	-9.87	-1.6	-0.02
39	SLD 16	-1	-184	2955	-9.87	-1.6	-0.02
39	SLV 1	25	859	5280	-82.04	6.82	-0.09
39	SLV 2	25	859	5280	-82.04	6.82	-0.09
39	SLV 3	14	39	4104	-20.65	4.2	-0.05
39	SLV 4	14	39	4104	-20.65	4.2	-0.05
39	SLV 5	29	1590	5922	-139.3	6.65	-0.12
39	SLV 6	29	1590	5922	-139.3	6.65	-0.12
39	SLV 7	-8	-1144	2002	65.34	-2.09	0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
39	SLV 8	-8	-1144	2002	65.34	-2.09	0.02
39	SLV 9	22	1396	5297	-126.98	3.88	-0.1
39	SLV 10	22	1396	5297	-126.98	3.88	-0.1
39	SLV 11	-16	-1338	1377	77.65	-4.85	0.04
39	SLV 12	-16	-1338	1377	77.65	-4.85	0.04
39	SLV 13	0	213	3196	-41	-2.4	-0.03
39	SLV 14	0	213	3196	-41	-2.4	-0.03
39	SLV 15	-11	-607	2020	20.39	-5.02	0.01
39	SLV 16	-11	-607	2020	20.39	-5.02	0.01
40	SLU 1	-5	-18	26	1.33	-1.18	0.22
40	SLU 2	-5	-17	30	1.29	-1.24	0.23
40	SLU 3	-5	-24	9	1.5	-1.2	0.22
40	SLU 4	-5	-23	11	1.48	-1.24	0.23
40	SLU 5	-5	-20	18	1.41	-1.25	0.23
40	SLU 6	-5	-27	-2	1.62	-1.21	0.23
40	SLU 7	-5	-26	0	1.6	-1.24	0.23
40	SLU 8	-5	-25	3	1.56	-1.2	0.22
40	SLU 9	-5	-25	6	1.54	-1.24	0.23
40	SLU 10	-7	-5	101	1.22	-1.92	0.35
40	SLU 11	-7	-12	80	1.43	-1.88	0.35
40	SLU 12	-7	-11	82	1.41	-1.91	0.35
40	SLU 13	-7	-9	89	1.34	-1.93	0.35
40	SLU 14	-7	-16	69	1.55	-1.89	0.35
40	SLU 15	-7	-15	71	1.52	-1.92	0.35
40	SLU 16	-7	-14	74	1.49	-1.88	0.35
40	SLU 17	-7	-13	77	1.47	-1.92	0.35
40	SLU 18	-8	-1	127	1.23	-2.15	0.39
40	SLU 19	-8	-1	130	1.21	-2.19	0.4
40	SLU 20	-8	-5	116	1.35	-2.16	0.4
40	SLU 21	-8	-4	118	1.32	-2.2	0.4
40	SLU 22	-5	-31	-4	1.81	-1.44	0.27
40	SLU 23	-6	-30	0	1.77	-1.5	0.28
40	SLU 24	-6	-36	-21	1.98	-1.46	0.27
40	SLU 25	-6	-36	-18	1.96	-1.5	0.28
40	SLU 26	-6	-33	-11	1.88	-1.51	0.28
40	SLU 27	-6	-40	-32	2.09	-1.47	0.27
40	SLU 28	-6	-39	-30	2.07	-1.5	0.28
40	SLU 29	-6	-38	-26	2.04	-1.46	0.27
40	SLU 30	-6	-37	-24	2.01	-1.5	0.28
40	SLU 31	-8	-18	71	1.7	-2.18	0.4
40	SLU 32	-8	-25	50	1.91	-2.14	0.39
40	SLU 33	-8	-24	53	1.89	-2.17	0.4
40	SLU 34	-8	-22	60	1.81	-2.19	0.4
40	SLU 35	-8	-28	39	2.02	-2.15	0.39
40	SLU 36	-8	-28	41	2	-2.18	0.4
40	SLU 37	-8	-27	45	1.97	-2.14	0.39
40	SLU 38	-8	-26	47	1.94	-2.18	0.4
40	SLU 39	-8	-14	98	1.71	-2.41	0.44
40	SLU 40	-9	-13	100	1.68	-2.45	0.45
40	SLU 41	-8	-18	86	1.82	-2.42	0.44
40	SLU 42	-9	-17	89	1.8	-2.46	0.45
40	SLU 43	-6	-19	44	1.57	-1.45	0.27
40	SLU 44	-6	-18	48	1.53	-1.51	0.28
40	SLU 45	-6	-25	27	1.74	-1.47	0.27
40	SLU 46	-6	-24	29	1.72	-1.5	0.28
40	SLU 47	-6	-21	36	1.64	-1.52	0.28
40	SLU 48	-6	-28	16	1.85	-1.47	0.28
40	SLU 49	-6	-27	18	1.83	-1.51	0.28
40	SLU 50	-6	-26	21	1.8	-1.47	0.27
40	SLU 51	-6	-26	24	1.77	-1.5	0.28
40	SLU 52	-8	-6	119	1.46	-2.19	0.4
40	SLU 53	-8	-13	98	1.67	-2.14	0.4
40	SLU 54	-8	-12	100	1.65	-2.18	0.4
40	SLU 55	-8	-10	107	1.57	-2.2	0.4
40	SLU 56	-8	-17	87	1.78	-2.15	0.4
40	SLU 57	-8	-16	89	1.76	-2.19	0.4
40	SLU 58	-8	-15	92	1.73	-2.15	0.4
40	SLU 59	-8	-14	95	1.7	-2.18	0.4
40	SLU 60	-9	-2	145	1.47	-2.42	0.44
40	SLU 61	-9	-2	148	1.44	-2.45	0.45
40	SLU 62	-9	-6	134	1.58	-2.43	0.45
40	SLU 63	-9	-5	136	1.56	-2.46	0.45
40	SLU 64	-7	-32	14	2.04	-1.71	0.32
40	SLU 65	-7	-31	18	2.01	-1.77	0.33
40	SLU 66	-7	-37	-3	2.22	-1.73	0.32
40	SLU 67	-7	-37	0	2.19	-1.76	0.33
40	SLU 68	-7	-34	7	2.12	-1.78	0.33
40	SLU 69	-7	-41	-14	2.33	-1.74	0.32
40	SLU 70	-7	-40	-12	2.31	-1.77	0.33
40	SLU 71	-7	-39	-8	2.27	-1.73	0.32
40	SLU 72	-7	-38	-6	2.25	-1.76	0.33
40	SLU 73	-9	-19	89	1.94	-2.45	0.45
40	SLU 74	-9	-26	68	2.15	-2.4	0.44
40	SLU 75	-9	-25	71	2.12	-2.44	0.45
40	SLU 76	-9	-23	78	2.05	-2.46	0.45
40	SLU 77	-9	-29	57	2.26	-2.41	0.44
40	SLU 78	-9	-29	59	2.24	-2.45	0.45
40	SLU 79	-9	-28	63	2.2	-2.41	0.44
40	SLU 80	-9	-27	65	2.18	-2.44	0.45
40	SLU 81	-9	-15	116	1.94	-2.68	0.49



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
40	SLU 82	-10	-14	118	1.92	-2.72	0.5
40	SLU 83	-10	-19	104	2.06	-2.69	0.49
40	SLU 84	-10	-18	107	2.03	-2.72	0.5
40	SLE RA 1	-5	-22	17	1.47	-1.26	0.23
40	SLE RA 2	-5	-21	20	1.44	-1.3	0.24
40	SLE RA 3	-5	-25	6	1.58	-1.27	0.24
40	SLE RA 4	-5	-25	8	1.57	-1.29	0.24
40	SLE RA 5	-5	-23	12	1.52	-1.3	0.24
40	SLE RA 6	-5	-28	-1	1.66	-1.28	0.24
40	SLE RA 7	-5	-27	0	1.64	-1.3	0.24
40	SLE RA 8	-5	-27	2	1.62	-1.27	0.24
40	SLE RA 9	-5	-26	4	1.61	-1.29	0.24
40	SLE RA 10	-6	-13	67	1.4	-1.75	0.32
40	SLE RA 11	-6	-18	54	1.54	-1.72	0.32
40	SLE RA 12	-6	-17	55	1.52	-1.74	0.32
40	SLE RA 13	-6	-16	60	1.47	-1.76	0.32
40	SLE RA 14	-6	-20	46	1.61	-1.73	0.32
40	SLE RA 15	-6	-20	48	1.6	-1.75	0.32
40	SLE RA 16	-6	-19	50	1.57	-1.72	0.32
40	SLE RA 17	-6	-18	51	1.56	-1.75	0.32
40	SLE RA 18	-7	-11	85	1.4	-1.9	0.35
40	SLE RA 19	-7	-10	87	1.39	-1.93	0.35
40	SLE RA 20	-7	-13	78	1.48	-1.91	0.35
40	SLE RA 21	-7	-13	79	1.46	-1.93	0.36
40	SLE FR 1	-5	-22	17	1.47	-1.26	0.23
40	SLE FR 2	-5	-21	18	1.46	-1.27	0.24
40	SLE FR 3	-5	-23	14	1.5	-1.26	0.23
40	SLE FR 4	-5	-18	38	1.44	-1.46	0.27
40	SLE FR 5	-5	-19	35	1.48	-1.45	0.27
40	SLE FR 6	-6	-16	51	1.43	-1.58	0.29
40	SLE QP 1	-5	-22	17	1.47	-1.26	0.23
40	SLE QP 2	-5	-18	38	1.45	-1.45	0.27
40	SLD 1	-27	74	307	-1.45	-4.76	0.94
40	SLD 2	-27	74	307	-1.45	-4.76	0.94
40	SLD 3	-23	-16	48	1.38	-4.11	0.81
40	SLD 4	-23	-16	48	1.38	-4.11	0.81
40	SLD 5	-18	145	511	-3.71	-3.43	0.67
40	SLD 6	-18	145	511	-3.71	-3.43	0.67
40	SLD 7	-4	-153	-352	5.71	-1.27	0.23
40	SLD 8	-4	-153	-352	5.71	-1.27	0.23
40	SLD 9	-7	117	427	-2.82	-1.63	0.31
40	SLD 10	-7	117	427	-2.82	-1.63	0.31
40	SLD 11	7	-181	-436	6.6	0.52	-0.13
40	SLD 12	7	-181	-436	6.6	0.52	-0.13
40	SLD 13	12	-21	27	1.52	1.21	-0.27
40	SLD 14	12	-21	27	1.52	1.21	-0.27
40	SLD 15	16	-110	-232	4.34	1.86	-0.4
40	SLD 16	16	-110	-232	4.34	1.86	-0.4
40	SLV 1	-58	196	666	-5.3	-9.47	1.9
40	SLV 2	-58	196	666	-5.3	-9.47	1.9
40	SLV 3	-47	-12	63	1.29	-7.9	1.58
40	SLV 4	-47	-12	63	1.29	-7.9	1.58
40	SLV 5	-37	362	1142	-10.57	-6.23	1.24
40	SLV 6	-37	362	1142	-10.57	-6.23	1.24
40	SLV 7	-2	-333	-871	11.39	-1.02	0.18
40	SLV 8	-2	-333	-871	11.39	-1.02	0.18
40	SLV 9	-9	296	946	-8.5	-1.89	0.36
40	SLV 10	-9	296	946	-8.5	-1.89	0.36
40	SLV 11	26	-399	-1067	13.47	3.32	-0.7
40	SLV 12	26	-399	-1067	13.47	3.32	-0.7
40	SLV 13	36	-24	13	1.61	5	-1.04
40	SLV 14	36	-24	13	1.61	5	-1.04
40	SLV 15	47	-233	-591	8.2	6.56	-1.36
40	SLV 16	47	-233	-591	8.2	6.56	-1.36
41	SLU 1	428	468	2816	-14.11	12.99	-0.02
41	SLU 2	322	517	2596	-17.81	8.15	0.06
41	SLU 3	440	479	2881	-14.43	13.37	-0.02
41	SLU 4	376	508	2750	-16.65	10.47	0.03
41	SLU 5	332	523	2643	-17.97	8.5	0.06
41	SLU 6	450	485	2928	-14.59	13.72	-0.02
41	SLU 7	386	514	2796	-16.81	10.82	0.03
41	SLU 8	448	480	2909	-14.43	13.69	-0.02
41	SLU 9	384	509	2778	-16.65	10.79	0.03
41	SLU 10	387	563	2926	-19.17	10.3	0.05
41	SLU 11	505	525	3211	-15.79	15.52	-0.03
41	SLU 12	441	554	3079	-18.01	12.62	0.02
41	SLU 13	397	569	2972	-19.33	10.65	0.05
41	SLU 14	515	531	3258	-15.95	15.87	-0.03
41	SLU 15	451	560	3126	-18.17	12.97	0.02
41	SLU 16	513	526	3239	-15.79	15.84	-0.03
41	SLU 17	450	555	3107	-18.01	12.94	0.02
41	SLU 18	521	534	3287	-16.05	16.06	-0.03
41	SLU 19	458	563	3155	-18.27	13.16	0.02
41	SLU 20	531	540	3334	-16.21	16.41	-0.04
41	SLU 21	468	569	3202	-18.43	13.51	0.01
41	SLU 22	485	513	3116	-15.46	14.81	-0.03
41	SLU 23	378	562	2896	-19.16	9.98	0.06
41	SLU 24	496	524	3181	-15.78	15.2	-0.03
41	SLU 25	432	553	3050	-18	12.3	0.02
41	SLU 26	388	568	2943	-19.32	10.33	0.05



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
41	SLU 27	506	530	3228	-15.94	15.55	-0.03
41	SLU 28	442	559	3096	-18.16	12.65	0.02
41	SLU 29	504	525	3209	-15.78	15.52	-0.03
41	SLU 30	441	554	3077	-18	12.62	0.02
41	SLU 31	444	608	3226	-20.52	12.13	0.05
41	SLU 32	561	570	3511	-17.14	17.35	-0.04
41	SLU 33	497	599	3379	-19.36	14.45	0.01
41	SLU 34	453	614	3272	-20.68	12.48	0.04
41	SLU 35	571	576	3558	-17.3	17.7	-0.04
41	SLU 36	507	605	3426	-19.52	14.8	0.01
41	SLU 37	569	571	3539	-17.14	17.67	-0.04
41	SLU 38	506	600	3407	-19.36	14.77	0.01
41	SLU 39	578	579	3587	-17.41	17.89	-0.04
41	SLU 40	514	608	3455	-19.62	14.98	0.01
41	SLU 41	587	585	3634	-17.57	18.24	-0.04
41	SLU 42	524	614	3502	-19.79	15.34	0.01
41	SLU 43	538	593	3558	-17.88	16.26	-0.02
41	SLU 44	432	642	3338	-21.57	11.42	0.06
41	SLU 45	549	604	3623	-18.2	16.64	-0.02
41	SLU 46	485	633	3491	-20.42	13.74	0.03
41	SLU 47	441	648	3385	-21.73	11.77	0.06
41	SLU 48	559	610	3670	-18.36	16.99	-0.02
41	SLU 49	495	639	3538	-20.58	14.09	0.02
41	SLU 50	557	605	3651	-18.2	16.96	-0.03
41	SLU 51	494	635	3519	-20.42	14.06	0.02
41	SLU 52	497	688	3668	-22.94	13.57	0.05
41	SLU 53	614	650	3953	-19.56	18.79	-0.03
41	SLU 54	551	679	3821	-21.78	15.89	0.02
41	SLU 55	507	694	3714	-23.1	13.92	0.05
41	SLU 56	624	656	4000	-19.72	19.14	-0.04
41	SLU 57	561	685	3868	-21.94	16.24	0.01
41	SLU 58	623	651	3981	-19.56	19.11	-0.04
41	SLU 59	559	681	3849	-21.78	16.21	0.01
41	SLU 60	631	659	4029	-19.82	19.33	-0.04
41	SLU 61	567	688	3897	-22.04	16.43	0.01
41	SLU 62	641	665	4075	-19.98	19.68	-0.04
41	SLU 63	577	694	3944	-22.2	16.78	0.01
41	SLU 64	594	638	3858	-19.23	18.08	-0.03
41	SLU 65	488	687	3638	-22.93	13.25	0.05
41	SLU 66	605	649	3923	-19.55	18.47	-0.03
41	SLU 67	542	678	3791	-21.77	15.57	0.02
41	SLU 68	498	693	3685	-23.09	13.6	0.05
41	SLU 69	615	655	3970	-19.71	18.82	-0.03
41	SLU 70	551	684	3838	-21.93	15.92	0.02
41	SLU 71	614	650	3951	-19.55	18.79	-0.03
41	SLU 72	550	679	3819	-21.77	15.89	0.02
41	SLU 73	553	733	3968	-24.29	15.4	0.04
41	SLU 74	670	695	4253	-20.91	20.62	-0.04
41	SLU 75	607	724	4121	-23.13	17.72	0.01
41	SLU 76	563	739	4014	-24.45	15.75	0.04
41	SLU 77	680	701	4300	-21.07	20.97	-0.04
41	SLU 78	617	730	4168	-23.29	18.07	0.01
41	SLU 79	679	696	4281	-20.91	20.94	-0.04
41	SLU 80	615	725	4149	-23.13	18.04	0.01
41	SLU 81	687	704	4329	-21.17	21.15	-0.04
41	SLU 82	623	733	4197	-23.39	18.25	0.01
41	SLU 83	697	710	4375	-21.33	21.51	-0.05
41	SLU 84	633	739	4244	-23.55	18.61	0
41	SLE RA 1	444	481	2902	-14.49	13.51	-0.02
41	SLE RA 2	374	514	2755	-16.96	10.29	0.03
41	SLE RA 3	452	488	2945	-14.71	13.76	-0.02
41	SLE RA 4	410	508	2857	-16.19	11.83	0.01
41	SLE RA 5	380	518	2786	-17.07	10.52	0.03
41	SLE RA 6	459	492	2976	-14.82	14	-0.02
41	SLE RA 7	416	512	2889	-16.29	12.07	0.01
41	SLE RA 8	458	489	2964	-14.71	13.98	-0.02
41	SLE RA 9	415	509	2876	-16.19	12.05	0.01
41	SLE RA 10	417	544	2975	-17.87	11.72	0.03
41	SLE RA 11	496	519	3165	-15.62	15.2	-0.03
41	SLE RA 12	453	538	3077	-17.1	13.26	0
41	SLE RA 13	424	548	3006	-17.97	11.95	0.03
41	SLE RA 14	502	523	3196	-15.72	15.43	-0.03
41	SLE RA 15	460	542	3108	-17.2	13.5	0
41	SLE RA 16	501	520	3184	-15.62	15.41	-0.03
41	SLE RA 17	459	539	3096	-17.1	13.48	0
41	SLE RA 18	506	525	3215	-15.79	15.56	-0.03
41	SLE RA 19	464	544	3128	-17.27	13.62	0
41	SLE RA 20	513	529	3247	-15.9	15.79	-0.03
41	SLE RA 21	471	548	3159	-17.38	13.86	0
41	SLE FR 1	444	481	2902	-14.49	13.51	-0.02
41	SLE FR 2	430	488	2872	-14.99	12.86	-0.01
41	SLE FR 3	447	483	2914	-14.54	13.6	-0.02
41	SLE FR 4	449	501	2966	-15.38	13.48	-0.01
41	SLE FR 5	466	496	3008	-14.93	14.22	-0.02
41	SLE FR 6	475	503	3058	-15.14	14.53	-0.03
41	SLE QP 1	444	481	2902	-14.49	13.51	-0.02
41	SLE QP 2	463	494	2996	-14.88	14.12	-0.02
41	SLD 1	826	761	4782	-24.64	28.89	-0.11
41	SLD 2	826	761	4782	-24.64	28.89	-0.11
41	SLD 3	917	535	4123	-15.05	33.12	-0.23



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
41	SLD 4	917	535	4123	-15.05	33.12	-0.23
41	SLD 5	434	917	4531	-32.35	12.13	0.14
41	SLD 6	434	917	4531	-32.35	12.13	0.14
41	SLD 7	737	163	2335	-0.39	26.24	-0.28
41	SLD 8	737	163	2335	-0.39	26.24	-0.28
41	SLD 9	189	825	3657	-29.37	2	0.23
41	SLD 10	189	825	3657	-29.37	2	0.23
41	SLD 11	492	71	1461	2.58	16.12	-0.19
41	SLD 12	492	71	1461	2.58	16.12	-0.19
41	SLD 13	9	454	1869	-14.72	-4.88	0.18
41	SLD 14	9	454	1869	-14.72	-4.88	0.18
41	SLD 15	100	228	1210	-5.13	-0.64	0.06
41	SLD 16	100	228	1210	-5.13	-0.64	0.06
41	SLV 1	1304	1113	7161	-37.67	48.29	-0.21
41	SLV 2	1304	1113	7161	-37.67	48.29	-0.21
41	SLV 3	1531	591	5615	-15.35	58.84	-0.51
41	SLV 4	1531	591	5615	-15.35	58.84	-0.51
41	SLV 5	371	1471	6589	-55.57	8.37	0.37
41	SLV 6	371	1471	6589	-55.57	8.37	0.37
41	SLV 7	1128	-268	1437	18.83	43.53	-0.62
41	SLV 8	1128	-268	1437	18.83	43.53	-0.62
41	SLV 9	-202	1256	4554	-48.59	-15.29	0.58
41	SLV 10	-202	1256	4554	-48.59	-15.29	0.58
41	SLV 11	555	-483	-598	25.8	19.87	-0.42
41	SLV 12	555	-483	-598	25.8	19.87	-0.42
41	SLV 13	-605	397	376	-14.42	-30.59	0.46
41	SLV 14	-605	397	376	-14.42	-30.59	0.46
41	SLV 15	-378	-124	-1170	7.9	-20.04	0.17
41	SLV 16	-378	-124	-1170	7.9	-20.04	0.17
42	SLU 1	433	8	1957	-1.3	27.97	0.13
42	SLU 2	262	8	1781	-4.12	20.01	0
42	SLU 3	445	8	1996	-1.33	28.8	0.13
42	SLU 4	343	8	1890	-3.02	24.03	0.06
42	SLU 5	274	8	1808	-4.14	20.74	0.01
42	SLU 6	457	8	2023	-1.35	29.53	0.14
42	SLU 7	355	8	1917	-3.04	24.75	0.06
42	SLU 8	457	8	2011	-1.34	29.43	0.13
42	SLU 9	354	8	1906	-3.03	24.65	0.06
42	SLU 10	342	9	2011	-4.33	24.68	0.02
42	SLU 11	525	9	2225	-1.54	33.47	0.15
42	SLU 12	423	9	2120	-3.23	28.69	0.07
42	SLU 13	354	9	2038	-4.35	25.41	0.02
42	SLU 14	537	9	2252	-1.56	34.19	0.15
42	SLU 15	435	9	2147	-3.26	29.42	0.07
42	SLU 16	537	9	2241	-1.55	34.09	0.15
42	SLU 17	434	9	2135	-3.24	29.32	0.07
42	SLU 18	547	9	2285	-1.6	34.64	0.15
42	SLU 19	445	9	2180	-3.29	29.86	0.07
42	SLU 20	559	10	2312	-1.62	35.36	0.15
42	SLU 21	457	9	2207	-3.31	30.59	0.08
42	SLU 22	499	9	2160	-1.48	31.99	0.14
42	SLU 23	328	9	1984	-4.3	24.03	0.02
42	SLU 24	512	9	2199	-1.52	32.82	0.15
42	SLU 25	409	9	2093	-3.21	28.04	0.07
42	SLU 26	340	9	2011	-4.32	24.76	0.02
42	SLU 27	524	9	2226	-1.54	33.54	0.15
42	SLU 28	421	9	2120	-3.23	28.77	0.08
42	SLU 29	523	9	2215	-1.53	33.44	0.15
42	SLU 30	421	9	2109	-3.22	28.67	0.07
42	SLU 31	408	10	2214	-4.51	28.69	0.03
42	SLU 32	591	10	2428	-1.73	37.48	0.16
42	SLU 33	489	10	2323	-3.42	32.71	0.09
42	SLU 34	420	10	2241	-4.54	29.42	0.03
42	SLU 35	603	10	2456	-1.75	38.21	0.16
42	SLU 36	501	10	2350	-3.44	33.43	0.09
42	SLU 37	603	10	2444	-1.74	38.1	0.16
42	SLU 38	501	10	2338	-3.43	33.33	0.09
42	SLU 39	613	10	2488	-1.79	38.65	0.16
42	SLU 40	511	10	2383	-3.48	33.88	0.09
42	SLU 41	625	10	2515	-1.81	39.38	0.17
42	SLU 42	523	10	2410	-3.5	34.6	0.09
42	SLU 43	540	10	2475	-1.62	34.99	0.16
42	SLU 44	369	10	2299	-4.44	27.03	0.04
42	SLU 45	553	10	2513	-1.66	35.82	0.17
42	SLU 46	450	10	2408	-3.35	31.04	0.09
42	SLU 47	381	10	2326	-4.46	27.76	0.04
42	SLU 48	565	10	2540	-1.68	36.54	0.17
42	SLU 49	462	10	2435	-3.37	31.77	0.09
42	SLU 50	564	10	2529	-1.67	36.44	0.17
42	SLU 51	462	10	2423	-3.36	31.67	0.09
42	SLU 52	449	11	2528	-4.65	31.7	0.05
42	SLU 53	632	11	2743	-1.87	40.48	0.18
42	SLU 54	530	11	2637	-3.56	35.71	0.11
42	SLU 55	461	11	2555	-4.68	32.42	0.05
42	SLU 56	644	11	2770	-1.89	41.21	0.18
42	SLU 57	542	11	2664	-3.58	36.43	0.11
42	SLU 58	644	11	2759	-1.88	41.11	0.18
42	SLU 59	542	11	2653	-3.57	36.33	0.11
42	SLU 60	654	11	2803	-1.93	41.65	0.18
42	SLU 61	552	11	2697	-3.62	36.88	0.11



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
		x	y	z		x	y	z	
42	SLU 62	666	12	2830	-1.95	42.38		0.18	
42	SLU 63	564	11	2724	-3.64	37.6		0.11	
42	SLU 64	606	11	2678	-1.81	39		0.18	
42	SLU 65	436	11	2502	-4.63	31.04		0.05	
42	SLU 66	619	11	2717	-1.84	39.83		0.18	
42	SLU 67	516	11	2611	-3.53	35.06		0.11	
42	SLU 68	448	11	2529	-4.65	31.77		0.05	
42	SLU 69	631	11	2744	-1.86	40.56		0.18	
42	SLU 70	528	11	2638	-3.55	35.78		0.11	
42	SLU 71	630	11	2732	-1.85	40.46		0.18	
42	SLU 72	528	11	2626	-3.54	35.68		0.11	
42	SLU 73	516	12	2731	-4.84	35.71		0.07	
42	SLU 74	699	12	2946	-2.05	44.5		0.19	
42	SLU 75	596	12	2840	-3.74	39.72		0.12	
42	SLU 76	527	12	2758	-4.86	36.44		0.07	
42	SLU 77	711	12	2973	-2.07	45.22		0.2	
42	SLU 78	608	12	2867	-3.77	40.45		0.12	
42	SLU 79	710	12	2962	-2.06	45.12		0.2	
42	SLU 80	608	12	2856	-3.75	40.35		0.12	
42	SLU 81	720	12	3006	-2.11	45.67		0.2	
42	SLU 82	618	12	2900	-3.8	40.89		0.12	
42	SLU 83	732	13	3033	-2.13	46.39		0.2	
42	SLU 84	630	12	2927	-3.82	41.62		0.12	
42	SLE RA 1	452	8	2015	-1.35	29.12		0.13	
42	SLE RA 2	338	8	1898	-3.23	23.81		0.05	
42	SLE RA 3	460	8	2041	-1.37	29.67		0.14	
42	SLE RA 4	392	8	1971	-2.5	26.49		0.09	
42	SLE RA 5	346	8	1916	-3.24	24.3		0.05	
42	SLE RA 6	468	8	2059	-1.39	30.16		0.14	
42	SLE RA 7	400	8	1989	-2.51	26.97		0.09	
42	SLE RA 8	468	8	2051	-1.38	30.09		0.14	
42	SLE RA 9	400	8	1981	-2.51	26.91		0.09	
42	SLE RA 10	391	9	2051	-3.37	26.92		0.06	
42	SLE RA 11	513	9	2194	-1.51	32.78		0.14	
42	SLE RA 12	445	9	2124	-2.64	29.6		0.09	
42	SLE RA 13	399	9	2069	-3.39	27.41		0.06	
42	SLE RA 14	521	9	2212	-1.53	33.27		0.15	
42	SLE RA 15	453	9	2142	-2.66	30.08		0.1	
42	SLE RA 16	521	9	2204	-1.52	33.2		0.15	
42	SLE RA 17	453	9	2134	-2.65	30.01		0.1	
42	SLE RA 18	528	9	2234	-1.55	33.56		0.15	
42	SLE RA 19	460	9	2163	-2.68	30.38		0.1	
42	SLE RA 20	536	9	2252	-1.57	34.05		0.15	
42	SLE RA 21	468	9	2182	-2.69	30.86		0.1	
42	SLE FR 1	452	8	2015	-1.35	29.12		0.13	
42	SLE FR 2	429	8	1992	-1.73	28.06		0.12	
42	SLE FR 3	455	8	2023	-1.36	29.31		0.13	
42	SLE FR 4	452	8	2057	-1.79	29.39		0.12	
42	SLE FR 5	478	9	2088	-1.42	30.65		0.14	
42	SLE FR 6	490	9	2125	-1.45	31.34		0.14	
42	SLE QP 1	452	8	2015	-1.35	29.12		0.13	
42	SLE QP 2	475	8	2081	-1.41	30.45		0.14	
42	SLD 1	949	15	3026	-6.16	56.32		0.11	
42	SLD 2	949	15	3026	-6.16	56.32		0.11	
42	SLD 3	1116	12	2647	-2.12	64.06		0.31	
42	SLD 4	1116	12	2647	-2.12	64.06		0.31	
42	SLD 5	364	14	2939	-8.95	26.46		-0.17	
42	SLD 6	364	14	2939	-8.95	26.46		-0.17	
42	SLD 7	921	6	1676	4.49	52.29		0.49	
42	SLD 8	921	6	1676	4.49	52.29		0.49	
42	SLD 9	29	11	2486	-7.31	8.62		-0.21	
42	SLD 10	29	11	2486	-7.31	8.62		-0.21	
42	SLD 11	586	3	1223	6.13	34.44		0.44	
42	SLD 12	586	3	1223	6.13	34.44		0.44	
42	SLD 13	-166	5	1515	-0.7	-3.16		-0.04	
42	SLD 14	-166	5	1515	-0.7	-3.16		-0.04	
42	SLD 15	1	2	1136	3.33	4.59		0.16	
42	SLD 16	1	2	1136	3.33	4.59		0.16	
42	SLV 1	1574	23	4285	-13.06	90.19		0.07	
42	SLV 2	1574	23	4285	-13.06	90.19		0.07	
42	SLV 3	1980	17	3396	-2.87	109.49		0.57	
42	SLV 4	1980	17	3396	-2.87	109.49		0.57	
42	SLV 5	189	22	4091	-20.37	19.1		-0.65	
42	SLV 6	189	22	4091	-20.37	19.1		-0.65	
42	SLV 7	1542	2	1126	13.61	83.44		1.03	
42	SLV 8	1542	2	1126	13.61	83.44		1.03	
42	SLV 9	-592	15	3036	-16.44	-22.53		-0.76	
42	SLV 10	-592	15	3036	-16.44	-22.53		-0.76	
42	SLV 11	761	-5	70	17.55	41.8		0.92	
42	SLV 12	761	-5	70	17.55	41.8		0.92	
42	SLV 13	-1031	0	766	0.05	-48.58		-0.3	
42	SLV 14	-1031	0	766	0.05	-48.58		-0.3	
42	SLV 15	-625	-6	-123	10.24	-29.28		0.21	
42	SLV 16	-625	-6	-123	10.24	-29.28		0.21	
43	SLU 1	443	-1	1560	0.94	14.23		-0.02	
43	SLU 2	283	0	1402	-4.99	8.65		0.02	
43	SLU 3	457	-1	1582	0.98	14.73		-0.02	
43	SLU 4	362	0	1487	-2.58	11.39		0	
43	SLU 5	297	0	1416	-4.97	9.14		0.02	
43	SLU 6	471	-1	1597	1	15.22		-0.02	



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
43	SLU 7	376	0	1502	-2.56	11.87	0
43	SLU 8	471	-1	1589	0.98	15.2	-0.02
43	SLU 9	375	0	1494	-2.58	11.85	0.01
43	SLU 10	363	0	1589	-5.01	11.25	0.02
43	SLU 11	537	-1	1770	0.96	17.33	-0.02
43	SLU 12	441	0	1675	-2.6	13.99	0
43	SLU 13	377	0	1604	-4.99	11.74	0.02
43	SLU 14	551	-1	1784	0.98	17.82	-0.02
43	SLU 15	455	0	1690	-2.58	14.47	0
43	SLU 16	550	-1	1777	0.96	17.8	-0.02
43	SLU 17	455	0	1682	-2.6	14.45	0
43	SLU 18	557	-1	1828	0.91	17.94	-0.02
43	SLU 19	461	0	1733	-2.64	14.6	0.01
43	SLU 20	571	-1	1843	0.93	18.43	-0.02
43	SLU 21	475	0	1748	-2.63	15.08	0
43	SLU 22	510	-1	1719	0.97	16.44	-0.02
43	SLU 23	351	0	1560	-4.96	10.87	0.02
43	SLU 24	525	-1	1741	1	16.95	-0.02
43	SLU 25	429	0	1646	-2.55	13.6	0
43	SLU 26	365	0	1575	-4.94	11.35	0.02
43	SLU 27	539	-1	1755	1.02	17.43	-0.02
43	SLU 28	443	0	1660	-2.54	14.08	0
43	SLU 29	538	-1	1748	1.01	17.41	-0.02
43	SLU 30	443	0	1653	-2.55	14.06	0
43	SLU 31	430	0	1748	-4.98	13.46	-0.02
43	SLU 32	605	-1	1928	0.98	19.54	-0.02
43	SLU 33	509	0	1834	-2.58	16.2	0
43	SLU 34	444	0	1763	-4.96	13.95	0.02
43	SLU 35	619	-1	1943	1	20.03	-0.02
43	SLU 36	523	0	1848	-2.56	16.68	0
43	SLU 37	618	-1	1936	0.98	20.01	-0.02
43	SLU 38	522	0	1841	-2.57	16.66	0
43	SLU 39	625	-1	1987	0.94	20.15	-0.02
43	SLU 40	529	0	1892	-2.62	16.81	0
43	SLU 41	639	-1	2002	0.96	20.64	-0.02
43	SLU 42	543	0	1907	-2.6	17.29	0
43	SLU 43	552	-1	1973	1.22	17.74	-0.02
43	SLU 44	392	0	1815	-4.71	12.17	0.02
43	SLU 45	567	-1	1995	1.25	18.24	-0.02
43	SLU 46	471	0	1900	-2.3	14.9	0
43	SLU 47	406	0	1830	-4.69	12.65	0.02
43	SLU 48	581	-1	2010	1.27	18.73	-0.02
43	SLU 49	485	0	1915	-2.29	15.38	0
43	SLU 50	580	-1	2003	1.26	18.71	-0.02
43	SLU 51	484	0	1908	-2.3	15.36	0
43	SLU 52	472	0	2003	-4.73	14.76	0.02
43	SLU 53	647	-1	2183	1.23	20.84	-0.02
43	SLU 54	551	0	2088	-2.33	17.5	0
43	SLU 55	486	0	2018	-4.71	15.25	0.02
43	SLU 56	661	-1	2198	1.25	21.33	-0.02
43	SLU 57	565	0	2103	-2.31	17.98	0
43	SLU 58	660	-1	2191	1.23	21.31	-0.02
43	SLU 59	564	0	2096	-2.32	17.96	0
43	SLU 60	666	-1	2242	1.19	21.45	-0.02
43	SLU 61	570	0	2147	-2.37	18.11	0
43	SLU 62	680	-1	2256	1.21	21.94	-0.02
43	SLU 63	584	0	2162	-2.35	18.59	0
43	SLU 64	620	-1	2132	1.24	19.95	-0.02
43	SLU 65	460	0	1974	-4.69	14.38	0.01
43	SLU 66	635	-1	2154	1.28	20.46	-0.02
43	SLU 67	539	0	2059	-2.28	17.11	0
43	SLU 68	474	0	1989	-4.67	14.86	0.01
43	SLU 69	649	-1	2169	1.3	20.94	-0.02
43	SLU 70	553	0	2074	-2.26	17.59	0
43	SLU 71	648	-1	2162	1.28	20.92	-0.02
43	SLU 72	552	0	2067	-2.28	17.57	0
43	SLU 73	540	0	2162	-4.71	16.98	0.01
43	SLU 74	715	-1	2342	1.26	23.05	-0.02
43	SLU 75	619	0	2247	-2.3	19.71	0
43	SLU 76	554	0	2177	-4.69	17.46	0.01
43	SLU 77	729	-1	2357	1.27	23.54	-0.02
43	SLU 78	633	0	2262	-2.28	20.19	0
43	SLU 79	728	-1	2349	1.26	23.52	-0.02
43	SLU 80	632	0	2255	-2.3	20.17	0
43	SLU 81	734	-1	2400	1.21	23.66	-0.02
43	SLU 82	638	0	2306	-2.34	20.32	0
43	SLU 83	748	-1	2415	1.23	24.15	-0.02
43	SLU 84	652	0	2320	-2.33	20.8	0
43	SLE RA 1	462	-1	1605	0.95	14.86	-0.02
43	SLE RA 2	355	0	1500	-3	11.14	0.01
43	SLE RA 3	472	-1	1620	0.97	15.2	-0.02
43	SLE RA 4	408	0	1557	-1.4	12.97	0
43	SLE RA 5	365	0	1510	-2.99	11.47	0.01
43	SLE RA 6	481	-1	1630	0.99	15.52	-0.02
43	SLE RA 7	417	0	1566	-1.39	13.29	0
43	SLE RA 8	481	-1	1625	0.98	15.51	-0.02
43	SLE RA 9	417	0	1562	-1.4	13.28	0
43	SLE RA 10	409	0	1625	-3.02	12.88	0.01
43	SLE RA 11	525	-1	1745	0.96	16.93	-0.02
43	SLE RA 12	461	0	1682	-1.41	14.7	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
43	SLE RA 13	418	0	1635	-3	13.2	0.01
43	SLE RA 14	534	-1	1755	0.97	17.25	-0.02
43	SLE RA 15	471	0	1692	-1.4	15.02	0
43	SLE RA 16	534	-1	1750	0.96	17.24	-0.02
43	SLE RA 17	470	0	1687	-1.41	15.01	0
43	SLE RA 18	538	-1	1784	0.93	17.34	-0.02
43	SLE RA 19	474	0	1721	-1.44	15.11	0
43	SLE RA 20	547	-1	1794	0.94	17.66	-0.02
43	SLE RA 21	483	0	1731	-1.43	15.43	0
43	SLE FR 1	462	-1	1605	0.95	14.86	-0.02
43	SLE FR 2	441	-1	1584	0.16	14.12	-0.01
43	SLE FR 3	466	-1	1609	0.96	14.99	-0.02
43	SLE FR 4	464	-1	1638	0.15	14.86	-0.01
43	SLE FR 5	489	-1	1663	0.95	15.73	-0.02
43	SLE FR 6	500	-1	1695	0.94	16.1	-0.02
43	SLE QP 1	462	-1	1605	0.95	14.86	-0.02
43	SLE QP 2	485	-1	1659	0.95	15.6	-0.02
43	SLD 1	1100	9	2065	1.4	37.81	0.14
43	SLD 2	1100	9	2065	1.4	37.81	0.14
43	SLD 3	1244	4	1858	10.06	42.76	0.05
43	SLD 4	1244	4	1858	10.06	42.76	0.05
43	SLD 5	452	8	2094	-12.05	14.76	0.17
43	SLD 6	452	8	2094	-12.05	14.76	0.17
43	SLD 7	930	-5	1406	16.81	31.26	-0.14
43	SLD 8	930	-5	1406	16.81	31.26	-0.14
43	SLD 9	40	4	1912	-14.92	-0.05	0.1
43	SLD 10	40	4	1912	-14.92	-0.05	0.1
43	SLD 11	518	-10	1224	13.94	16.45	-0.2
43	SLD 12	518	-10	1224	13.94	16.45	-0.2
43	SLD 13	-274	-6	1459	-8.17	-11.56	-0.08
43	SLD 14	-274	-6	1459	-8.17	-11.56	-0.08
43	SLD 15	-130	-10	1253	0.49	-6.61	-0.17
43	SLD 16	-130	-10	1253	0.49	-6.61	-0.17
43	SLV 1	1914	21	2604	1.48	67.21	0.35
43	SLV 2	1914	21	2604	1.48	67.21	0.35
43	SLV 3	2264	11	2123	23.55	79.31	0.13
43	SLV 4	2264	11	2123	23.55	79.31	0.13
43	SLV 5	382	21	2671	-32.36	12.73	0.43
43	SLV 6	382	21	2671	-32.36	12.73	0.43
43	SLV 7	1550	-12	1069	41.2	53.08	-0.31
43	SLV 8	1550	-12	1069	41.2	53.08	-0.31
43	SLV 9	-581	11	2249	-39.31	-21.87	0.28
43	SLV 10	-581	11	2249	-39.31	-21.87	0.28
43	SLV 11	588	-23	646	34.25	18.48	-0.46
43	SLV 12	588	-23	646	34.25	18.48	-0.46
43	SLV 13	-1295	-13	1195	-21.66	-48.1	-0.16
43	SLV 14	-1295	-13	1195	-21.66	-48.1	-0.16
43	SLV 15	-944	-23	714	0.41	-36	-0.38
43	SLV 16	-944	-23	714	0.41	-36	-0.38
44	SLU 1	467	-7	1441	3.34	15.18	-0.05
44	SLU 2	336	-2	1294	-6.58	11.28	0
44	SLU 3	484	-8	1456	3.45	15.72	-0.05
44	SLU 4	405	-4	1367	-2.5	13.38	-0.02
44	SLU 5	352	-2	1303	-6.51	11.77	-0.01
44	SLU 6	499	-8	1465	3.52	16.21	-0.05
44	SLU 7	421	-4	1376	-2.43	13.87	-0.02
44	SLU 8	498	-8	1459	3.47	16.16	-0.05
44	SLU 9	420	-4	1371	-2.48	13.82	-0.02
44	SLU 10	416	-2	1475	-6.39	13.84	-0.01
44	SLU 11	564	-8	1637	3.64	18.29	-0.06
44	SLU 12	486	-5	1548	-2.31	15.94	-0.03
44	SLU 13	432	-3	1484	-6.32	14.33	-0.01
44	SLU 14	579	-9	1646	3.71	18.78	-0.06
44	SLU 15	501	-5	1557	-2.24	16.44	-0.03
44	SLU 16	578	-8	1641	3.66	18.72	-0.06
44	SLU 17	500	-5	1552	-2.29	16.38	-0.03
44	SLU 18	581	-8	1700	3.61	18.84	-0.06
44	SLU 19	503	-5	1611	-2.34	16.5	-0.03
44	SLU 20	597	-9	1709	3.68	19.33	-0.06
44	SLU 21	519	-5	1620	-2.27	16.99	-0.03
44	SLU 22	536	-8	1589	3.6	17.43	-0.05
44	SLU 23	406	-3	1441	-6.32	13.53	-0.01
44	SLU 24	553	-8	1603	3.71	17.97	-0.06
44	SLU 25	475	-5	1515	-2.24	15.63	-0.03
44	SLU 26	422	-3	1450	-6.25	14.02	-0.01
44	SLU 27	569	-9	1613	3.78	18.46	-0.06
44	SLU 28	491	-5	1524	-2.17	16.12	-0.03
44	SLU 29	568	-9	1607	3.73	18.41	-0.06
44	SLU 30	489	-5	1518	-2.22	16.07	-0.03
44	SLU 31	486	-3	1622	-6.13	16.09	-0.01
44	SLU 32	634	-9	1785	3.9	20.53	-0.06
44	SLU 33	555	-6	1696	-2.05	18.19	-0.03
44	SLU 34	502	-3	1631	-6.06	16.58	-0.01
44	SLU 35	649	-9	1794	3.97	21.02	-0.06
44	SLU 36	571	-6	1705	-1.98	18.68	-0.03
44	SLU 37	648	-9	1788	3.93	20.97	-0.06
44	SLU 38	570	-6	1700	-2.02	18.63	-0.03
44	SLU 39	651	-9	1848	3.87	21.09	-0.06
44	SLU 40	573	-6	1759	-2.08	18.75	-0.03
44	SLU 41	667	-9	1857	3.94	21.58	-0.06



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
44	SLU 42	588	-6	1768	-2.01	19.24	-0.03
44	SLU 43	583	-9	1823	4.25	18.96	-0.06
44	SLU 44	452	-4	1675	-5.67	15.06	-0.02
44	SLU 45	600	-10	1838	4.36	19.51	-0.06
44	SLU 46	521	-6	1749	-1.59	17.17	-0.04
44	SLU 47	468	-4	1684	-5.6	15.55	-0.02
44	SLU 48	615	-10	1847	4.43	20	-0.06
44	SLU 49	537	-6	1758	-1.52	17.66	-0.04
44	SLU 50	614	-10	1841	4.38	19.94	-0.06
44	SLU 51	536	-6	1753	-1.57	17.6	-0.04
44	SLU 52	532	-4	1856	-5.48	17.62	-0.02
44	SLU 53	680	-10	2019	4.55	22.07	-0.07
44	SLU 54	602	-7	1930	-1.4	19.73	-0.04
44	SLU 55	548	-5	1865	-5.41	18.11	-0.02
44	SLU 56	695	-11	2028	4.62	22.56	-0.07
44	SLU 57	617	-7	1939	-1.33	20.22	-0.04
44	SLU 58	694	-10	2022	4.57	22.51	-0.07
44	SLU 59	616	-7	1934	-1.38	20.17	-0.04
44	SLU 60	697	-10	2082	4.52	22.62	-0.07
44	SLU 61	619	-7	1993	-1.43	20.28	-0.04
44	SLU 62	713	-11	2091	4.59	23.11	-0.07
44	SLU 63	635	-7	2002	-1.36	20.77	-0.04
44	SLU 64	653	-10	1971	4.51	21.21	-0.07
44	SLU 65	522	-5	1823	-5.41	17.31	-0.02
44	SLU 66	669	-10	1985	4.62	21.75	-0.07
44	SLU 67	591	-7	1897	-1.33	19.41	-0.04
44	SLU 68	538	-5	1832	-5.34	17.8	-0.02
44	SLU 69	685	-11	1994	4.69	22.25	-0.07
44	SLU 70	607	-7	1906	-1.26	19.91	-0.04
44	SLU 71	684	-11	1989	4.64	22.19	-0.07
44	SLU 72	606	-7	1900	-1.31	19.85	-0.04
44	SLU 73	602	-5	2004	-5.21	19.87	-0.03
44	SLU 74	750	-11	2166	4.81	24.32	-0.07
44	SLU 75	671	-8	2078	-1.14	21.98	-0.05
44	SLU 76	618	-5	2013	-5.15	20.36	-0.03
44	SLU 77	765	-11	2175	4.88	24.81	-0.07
44	SLU 78	687	-8	2087	-1.07	22.47	-0.05
44	SLU 79	764	-11	2170	4.84	24.75	-0.07
44	SLU 80	686	-8	2081	-1.11	22.41	-0.05
44	SLU 81	767	-11	2229	4.78	24.87	-0.07
44	SLU 82	689	-8	2141	-1.17	22.53	-0.05
44	SLU 83	783	-11	2238	4.85	25.36	-0.07
44	SLU 84	704	-8	2150	-1.1	23.02	-0.05
44	SLE RA 1	487	-8	1483	3.41	15.82	-0.05
44	SLE RA 2	400	-4	1385	-3.2	13.22	-0.02
44	SLE RA 3	498	-8	1493	3.49	16.18	-0.05
44	SLE RA 4	446	-6	1434	-0.48	14.62	-0.03
44	SLE RA 5	410	-4	1391	-3.15	13.55	-0.02
44	SLE RA 6	508	-8	1499	3.53	16.51	-0.05
44	SLE RA 7	456	-6	1440	-0.44	14.95	-0.03
44	SLE RA 8	507	-8	1496	3.5	16.48	-0.05
44	SLE RA 9	455	-6	1437	-0.47	14.92	-0.03
44	SLE RA 10	453	-4	1506	-3.07	14.93	-0.02
44	SLE RA 11	551	-8	1614	3.61	17.89	-0.05
44	SLE RA 12	499	-6	1555	-0.35	16.33	-0.04
44	SLE RA 13	463	-4	1512	-3.03	15.26	-0.02
44	SLE RA 14	562	-8	1620	3.66	18.22	-0.06
44	SLE RA 15	510	-6	1561	-0.31	16.66	-0.04
44	SLE RA 16	561	-8	1616	3.63	18.18	-0.05
44	SLE RA 17	509	-6	1557	-0.34	16.62	-0.04
44	SLE RA 18	563	-8	1656	3.59	18.26	-0.05
44	SLE RA 19	511	-6	1597	-0.37	16.7	-0.04
44	SLE RA 20	573	-8	1662	3.64	18.59	-0.06
44	SLE RA 21	521	-6	1603	-0.33	17.03	-0.04
44	SLE FR 1	487	-8	1483	3.41	15.82	-0.05
44	SLE FR 2	469	-7	1464	2.09	15.3	-0.04
44	SLE FR 3	491	-8	1486	3.43	15.95	-0.05
44	SLE FR 4	492	-7	1516	2.14	16.03	-0.05
44	SLE FR 5	514	-8	1538	3.48	16.68	-0.05
44	SLE FR 6	525	-8	1570	3.5	17.04	-0.05
44	SLE QP 1	487	-8	1483	3.41	15.82	-0.05
44	SLE QP 2	509	-8	1535	3.47	16.55	-0.05
44	SLD 1	1184	-11	1742	2.6	36.58	-0.07
44	SLD 2	1184	-11	1742	2.6	36.58	-0.07
44	SLD 3	1314	-22	1596	17.29	40.67	-0.15
44	SLD 4	1314	-22	1596	17.29	40.67	-0.15
44	SLD 5	514	8	1820	-19.08	16.35	0.07
44	SLD 6	514	8	1820	-19.08	16.35	0.07
44	SLD 7	949	-29	1331	29.9	30	-0.21
44	SLD 8	949	-29	1331	29.9	30	-0.21
44	SLD 9	70	13	1739	-22.97	3.11	0.11
44	SLD 10	70	13	1739	-22.97	3.11	0.11
44	SLD 11	505	-24	1251	26.01	16.75	-0.18
44	SLD 12	505	-24	1251	26.01	16.75	-0.18
44	SLD 13	-295	6	1475	-10.36	-7.57	0.05
44	SLD 14	-295	6	1475	-10.36	-7.57	0.05
44	SLD 15	-165	-5	1328	4.33	-3.47	-0.04
44	SLD 16	-165	-5	1328	4.33	-3.47	-0.04
44	SLV 1	2077	-14	2018	0.51	63.05	-0.08
44	SLV 2	2077	-14	2018	0.51	63.05	-0.08



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
44	SLV 3	2394	-42	1678	38.04	73.09	-0.3
44	SLV 4	2394	-42	1678	38.04	73.09	-0.3
44	SLV 5	497	33	2196	-54.35	15.26	0.27
44	SLV 6	497	33	2196	-54.35	15.26	0.27
44	SLV 7	1557	-61	1062	70.76	48.76	-0.46
44	SLV 8	1557	-61	1062	70.76	48.76	-0.46
44	SLV 9	-538	45	2009	-63.83	-15.65	0.36
44	SLV 10	-538	45	2009	-63.83	-15.65	0.36
44	SLV 11	522	-49	874	61.28	17.85	-0.37
44	SLV 12	522	-49	874	61.28	17.85	-0.37
44	SLV 13	-1375	26	1393	-31.11	-39.99	0.2
44	SLV 14	-1375	26	1393	-31.11	-39.99	0.2
44	SLV 15	-1058	-2	1052	6.42	-29.94	-0.02
44	SLV 16	-1058	-2	1052	6.42	-29.94	-0.02
45	SLU 1	418	-10	1406	4.82	10.11	-0.01
45	SLU 2	317	-1	1275	-8.84	7.29	0.01
45	SLU 3	436	-11	1416	4.99	10.56	-0.01
45	SLU 4	375	-5	1338	-3.21	8.87	0
45	SLU 5	334	-1	1282	-8.74	7.72	0.01
45	SLU 6	452	-11	1423	5.09	10.98	-0.01
45	SLU 7	391	-5	1345	-3.11	9.29	0
45	SLU 8	451	-11	1418	5.02	10.96	-0.01
45	SLU 9	390	-5	1340	-3.17	9.27	0
45	SLU 10	386	-2	1458	-8.53	8.98	0.01
45	SLU 11	505	-11	1599	5.3	12.25	-0.01
45	SLU 12	444	-6	1521	-2.9	10.56	0
45	SLU 13	403	-2	1464	-8.43	9.41	0.01
45	SLU 14	521	-12	1605	5.4	12.67	-0.01
45	SLU 15	461	-6	1527	-2.8	10.98	0
45	SLU 16	520	-12	1601	5.33	12.65	-0.01
45	SLU 17	459	-6	1522	-2.86	10.96	0
45	SLU 18	517	-12	1666	5.26	12.53	-0.01
45	SLU 19	456	-6	1588	-2.93	10.84	0
45	SLU 20	533	-12	1672	5.36	12.95	-0.01
45	SLU 21	473	-6	1594	-2.83	11.26	0
45	SLU 22	480	-11	1551	5.22	11.62	-0.01
45	SLU 23	379	-2	1421	-8.44	8.8	0.01
45	SLU 24	497	-12	1562	5.39	12.07	-0.01
45	SLU 25	437	-6	1484	-2.81	10.38	0
45	SLU 26	395	-2	1427	-8.34	9.23	0.01
45	SLU 27	514	-12	1568	5.49	12.49	-0.01
45	SLU 28	453	-6	1490	-2.71	10.8	0
45	SLU 29	513	-12	1564	5.42	12.47	-0.01
45	SLU 30	452	-6	1486	-2.77	10.78	0
45	SLU 31	448	-3	1603	-8.13	10.49	0
45	SLU 32	566	-13	1744	5.7	13.76	-0.01
45	SLU 33	506	-7	1666	-2.5	12.07	0
45	SLU 34	464	-3	1610	-8.03	10.92	0
45	SLU 35	583	-13	1751	5.8	14.18	-0.01
45	SLU 36	522	-7	1673	-2.4	12.49	0
45	SLU 37	582	-13	1746	5.73	14.16	-0.01
45	SLU 38	521	-7	1668	-2.46	12.47	0
45	SLU 39	579	-13	1812	5.66	14.04	-0.01
45	SLU 40	518	-7	1734	-2.53	12.35	0
45	SLU 41	595	-13	1818	5.76	14.46	-0.01
45	SLU 42	534	-7	1740	-2.43	12.77	0
45	SLU 43	522	-13	1777	6.13	12.63	-0.01
45	SLU 44	421	-3	1647	-7.53	9.81	0
45	SLU 45	540	-13	1788	6.3	13.07	-0.01
45	SLU 46	479	-7	1710	-1.9	11.38	0
45	SLU 47	438	-3	1653	-7.43	10.23	0
45	SLU 48	556	-13	1794	6.4	13.5	-0.01
45	SLU 49	496	-8	1716	-1.8	11.81	0
45	SLU 50	555	-13	1790	6.33	13.48	-0.01
45	SLU 51	495	-8	1712	-1.86	11.78	0
45	SLU 52	491	-4	1830	-7.22	11.5	0
45	SLU 53	609	-14	1971	6.6	14.77	-0.01
45	SLU 54	548	-8	1892	-1.59	13.07	0
45	SLU 55	507	-4	1836	-7.12	11.92	0
45	SLU 56	625	-14	1977	6.71	15.19	-0.01
45	SLU 57	565	-9	1899	-1.49	13.5	0
45	SLU 58	624	-14	1972	6.64	15.17	-0.01
45	SLU 59	564	-8	1894	-1.55	13.48	0
45	SLU 60	621	-14	2038	6.57	15.04	-0.01
45	SLU 61	561	-8	1960	-1.62	13.35	0
45	SLU 62	638	-14	2044	6.67	15.47	-0.01
45	SLU 63	577	-9	1966	-1.52	13.78	0
45	SLU 64	584	-14	1923	6.53	14.14	-0.01
45	SLU 65	483	-4	1793	-7.13	11.32	0
45	SLU 66	602	-14	1934	6.7	14.58	-0.01
45	SLU 67	541	-9	1856	-1.5	12.89	0
45	SLU 68	499	-5	1799	-7.03	11.74	0
45	SLU 69	618	-14	1940	6.8	15.01	-0.01
45	SLU 70	557	-9	1862	-1.4	13.32	0
45	SLU 71	617	-14	1935	6.73	14.99	-0.01
45	SLU 72	556	-9	1857	-1.46	13.29	0
45	SLU 73	552	-5	1975	-6.82	13.01	0
45	SLU 74	671	-15	2116	7.01	16.28	-0.01
45	SLU 75	610	-9	2038	-1.19	14.58	0
45	SLU 76	569	-6	1981	-6.72	13.43	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
45	SLU 77	687	-15	2122	7.11	16.7	-0.01
45	SLU 78	627	-10	2044	-1.09	15.01	0
45	SLU 79	686	-15	2118	7.04	16.68	-0.01
45	SLU 80	625	-10	2040	-1.15	14.99	0
45	SLU 81	683	-15	2183	6.97	16.56	-0.01
45	SLU 82	622	-10	2105	-1.22	14.86	0
45	SLU 83	699	-15	2190	7.07	16.98	-0.01
45	SLU 84	639	-10	2112	-1.12	15.29	0
45	SLE RA 1	436	-10	1447	4.94	10.54	-0.01
45	SLE RA 2	368	-4	1360	-4.17	8.66	0
45	SLE RA 3	447	-11	1454	5.05	10.84	-0.01
45	SLE RA 4	407	-7	1402	-0.42	9.71	0
45	SLE RA 5	379	-4	1365	-4.1	8.95	0
45	SLE RA 6	458	-11	1459	5.11	11.12	-0.01
45	SLE RA 7	418	-7	1407	-0.35	10	0
45	SLE RA 8	458	-11	1456	5.07	11.11	-0.01
45	SLE RA 9	417	-7	1403	-0.39	9.98	0
45	SLE RA 10	415	-5	1482	-3.96	9.79	0
45	SLE RA 11	493	-11	1576	5.25	11.97	-0.01
45	SLE RA 12	453	-8	1524	-0.21	10.84	0
45	SLE RA 13	425	-5	1486	-3.9	10.07	0
45	SLE RA 14	504	-11	1580	5.32	12.25	-0.01
45	SLE RA 15	464	-8	1528	-0.14	11.12	0
45	SLE RA 16	504	-11	1577	5.28	12.24	-0.01
45	SLE RA 17	463	-8	1525	-0.19	11.11	0
45	SLE RA 18	502	-11	1621	5.23	12.16	-0.01
45	SLE RA 19	461	-8	1569	-0.23	11.03	0
45	SLE RA 20	512	-12	1625	5.3	12.44	-0.01
45	SLE RA 21	472	-8	1573	-0.17	11.31	0
45	SLE FR 1	436	-10	1447	4.94	10.54	-0.01
45	SLE FR 2	422	-9	1430	3.11	10.17	-0.01
45	SLE FR 3	440	-11	1449	4.96	10.66	-0.01
45	SLE FR 4	442	-9	1482	3.2	10.65	-0.01
45	SLE FR 5	460	-11	1501	5.05	11.14	-0.01
45	SLE FR 6	469	-11	1534	5.08	11.35	-0.01
45	SLE QP 1	436	-10	1447	4.94	10.54	-0.01
45	SLE QP 2	455	-11	1499	5.02	11.03	-0.01
45	SLD 1	1201	-11	1452	2.33	31.17	-0.01
45	SLD 2	1201	-11	1452	2.33	31.17	-0.01
45	SLD 3	1319	-28	1298	22.73	34.35	-0.04
45	SLD 4	1319	-28	1298	22.73	34.35	-0.04
45	SLD 5	499	15	1719	-26.73	12.25	0.03
45	SLD 6	499	15	1719	-26.73	12.25	0.03
45	SLD 7	894	-42	1205	41.29	22.84	-0.06
45	SLD 8	894	-42	1205	41.29	22.84	-0.06
45	SLD 9	17	21	1793	-31.24	-0.79	0.04
45	SLD 10	17	21	1793	-31.24	-0.79	0.04
45	SLD 11	412	-37	1280	36.78	9.81	-0.05
45	SLD 12	412	-37	1280	36.78	9.81	-0.05
45	SLD 13	-408	7	1701	-12.69	-12.29	0.02
45	SLD 14	-408	7	1701	-12.69	-12.29	0.02
45	SLD 15	-290	-11	1547	7.72	-9.11	-0.01
45	SLD 16	-290	-11	1547	7.72	-9.11	-0.01
45	SLV 1	2191	-10	1391	-2.54	57.92	0
45	SLV 2	2191	-10	1391	-2.54	57.92	0
45	SLV 3	2477	-54	1018	49.63	65.62	-0.07
45	SLV 4	2477	-54	1018	49.63	65.62	-0.07
45	SLV 5	541	56	2032	-76.37	13.43	0.1
45	SLV 6	541	56	2032	-76.37	13.43	0.1
45	SLV 7	1497	-90	789	97.53	39.08	-0.14
45	SLV 8	1497	-90	789	97.53	39.08	-0.14
45	SLV 9	-586	69	2209	-87.48	-17.02	0.12
45	SLV 10	-586	69	2209	-87.48	-17.02	0.12
45	SLV 11	369	-78	966	86.42	8.63	-0.12
45	SLV 12	369	-78	966	86.42	8.63	-0.12
45	SLV 13	-1566	33	1980	-39.58	-43.57	0.05
45	SLV 14	-1566	33	1980	-39.58	-43.57	0.05
45	SLV 15	-1280	-12	1607	12.59	-35.87	-0.02
45	SLV 16	-1280	-12	1607	12.59	-35.87	-0.02
46	SLU 1	453	-11	1412	5.55	12.76	0.02
46	SLU 2	379	2	1303	-11.25	10.8	0
46	SLU 3	473	-11	1422	5.74	13.31	0.02
46	SLU 4	429	-3	1357	-4.34	12.13	0.01
46	SLU 5	398	2	1309	-11.13	11.3	0
46	SLU 6	492	-11	1428	5.86	13.81	0.03
46	SLU 7	448	-3	1362	-4.22	12.64	0.01
46	SLU 8	490	-11	1424	5.79	13.76	0.02
46	SLU 9	446	-3	1358	-4.29	12.59	0.01
46	SLU 10	450	1	1489	-10.89	12.76	0.01
46	SLU 11	544	-12	1609	6.09	15.27	0.03
46	SLU 12	499	-4	1543	-3.98	14.09	0.01
46	SLU 13	468	1	1495	-10.77	13.26	0.01
46	SLU 14	562	-12	1614	6.21	15.77	0.03
46	SLU 15	518	-4	1549	-3.86	14.6	0.01
46	SLU 16	561	-12	1610	6.14	15.72	0.03
46	SLU 17	516	-4	1545	-3.93	14.55	0.01
46	SLU 18	554	-12	1678	6.05	15.56	0.03
46	SLU 19	509	-4	1613	-4.02	14.38	0.01
46	SLU 20	572	-12	1684	6.17	16.06	0.03
46	SLU 21	528	-5	1619	-3.9	14.88	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
46	SLU 22	518	-12	1560	6.01	14.56	0.03
46	SLU 23	444	1	1451	-10.79	12.6	0.01
46	SLU 24	538	-12	1570	6.2	15.11	0.03
46	SLU 25	494	-4	1504	-3.88	13.94	0.01
46	SLU 26	462	1	1457	-10.67	13.1	0.01
46	SLU 27	557	-12	1576	6.32	15.62	0.03
46	SLU 28	512	-5	1510	-3.76	14.44	0.01
46	SLU 29	555	-12	1572	6.25	15.56	0.03
46	SLU 30	511	-4	1506	-3.83	14.39	0.01
46	SLU 31	514	0	1637	-10.43	14.56	0.01
46	SLU 32	608	-13	1756	6.55	17.07	0.03
46	SLU 33	564	-5	1691	-3.52	15.9	0.02
46	SLU 34	533	0	1643	-10.31	15.06	0.01
46	SLU 35	627	-13	1762	6.67	17.58	0.03
46	SLU 36	583	-6	1697	-3.4	16.4	0.02
46	SLU 37	625	-13	1758	6.6	17.53	0.03
46	SLU 38	581	-5	1693	-3.47	16.35	0.02
46	SLU 39	618	-13	1826	6.51	17.36	0.03
46	SLU 40	574	-5	1761	-3.56	16.18	0.02
46	SLU 41	637	-13	1832	6.63	17.86	0.03
46	SLU 42	593	-6	1767	-3.44	16.69	0.02
46	SLU 43	567	-13	1785	7.05	15.96	0.03
46	SLU 44	493	-1	1676	-9.74	14	0.01
46	SLU 45	587	-14	1795	7.24	16.52	0.03
46	SLU 46	543	-6	1729	-2.83	15.34	0.02
46	SLU 47	512	-1	1682	-9.62	14.51	0.01
46	SLU 48	606	-14	1801	7.36	17.02	0.03
46	SLU 49	561	-6	1735	-2.71	15.85	0.02
46	SLU 50	604	-14	1797	7.29	16.97	0.03
46	SLU 51	560	-6	1731	-2.78	15.79	0.02
46	SLU 52	563	-2	1862	-9.39	15.97	0.01
46	SLU 53	658	-15	1981	7.6	18.48	0.03
46	SLU 54	613	-7	1916	-2.48	17.3	0.02
46	SLU 55	582	-2	1868	-9.27	16.47	0.01
46	SLU 56	676	-15	1987	7.72	18.98	0.03
46	SLU 57	632	-7	1922	-2.36	17.81	0.02
46	SLU 58	675	-15	1983	7.65	18.93	0.03
46	SLU 59	630	-7	1918	-2.43	17.76	0.02
46	SLU 60	668	-15	2051	7.56	18.76	0.03
46	SLU 61	623	-7	1986	-2.52	17.59	0.02
46	SLU 62	686	-15	2057	7.68	19.27	0.03
46	SLU 63	642	-7	1992	-2.4	18.09	0.02
46	SLU 64	632	-15	1933	7.51	17.77	0.03
46	SLU 65	558	-2	1824	-9.28	15.81	0.01
46	SLU 66	652	-15	1943	7.7	18.32	0.03
46	SLU 67	607	-7	1877	-2.37	17.15	0.02
46	SLU 68	576	-2	1829	-9.16	16.31	0.01
46	SLU 69	670	-15	1949	7.82	18.82	0.03
46	SLU 70	626	-7	1883	-2.25	17.65	0.02
46	SLU 71	669	-15	1944	7.75	18.77	0.03
46	SLU 72	624	-7	1879	-2.32	17.6	0.02
46	SLU 73	628	-3	2010	-8.93	17.77	0.01
46	SLU 74	722	-16	2129	8.06	20.28	0.04
46	SLU 75	678	-8	2064	-2.02	19.11	0.02
46	SLU 76	647	-3	2016	-8.81	18.27	0.01
46	SLU 77	741	-16	2135	8.18	20.78	0.04
46	SLU 78	696	-8	2070	-1.9	19.61	0.02
46	SLU 79	739	-16	2131	8.11	20.73	0.04
46	SLU 80	695	-8	2066	-1.97	19.56	0.02
46	SLU 81	732	-16	2199	8.02	20.57	0.04
46	SLU 82	688	-8	2134	-2.06	19.39	0.02
46	SLU 83	751	-16	2205	8.14	21.07	0.04
46	SLU 84	706	-8	2140	-1.94	19.9	0.02
46	SLE RA 1	472	-11	1454	5.68	13.27	0.02
46	SLE RA 2	422	-2	1381	-5.52	11.96	0.01
46	SLE RA 3	485	-11	1461	5.81	13.64	0.03
46	SLE RA 4	456	-6	1417	-0.91	12.86	0.02
46	SLE RA 5	435	-3	1385	-5.44	12.3	0.01
46	SLE RA 6	498	-11	1465	5.89	13.98	0.03
46	SLE RA 7	468	-6	1421	-0.83	13.19	0.02
46	SLE RA 8	497	-11	1462	5.84	13.94	0.03
46	SLE RA 9	467	-6	1418	-0.88	13.16	0.02
46	SLE RA 10	469	-3	1506	-5.28	13.27	0.01
46	SLE RA 11	532	-12	1585	6.04	14.95	0.03
46	SLE RA 12	503	-7	1542	-0.67	14.16	0.02
46	SLE RA 13	482	-3	1510	-5.2	13.61	0.01
46	SLE RA 14	545	-12	1589	6.12	15.28	0.03
46	SLE RA 15	515	-7	1546	-0.59	14.5	0.02
46	SLE RA 16	543	-12	1586	6.07	15.25	0.03
46	SLE RA 17	514	-7	1543	-0.64	14.46	0.02
46	SLE RA 18	539	-12	1632	6.02	15.14	0.03
46	SLE RA 19	509	-7	1588	-0.7	14.35	0.02
46	SLE RA 20	551	-12	1636	6.1	15.47	0.03
46	SLE RA 21	522	-7	1592	-0.62	14.69	0.02
46	SLE FR 1	472	-11	1454	5.68	13.27	0.02
46	SLE FR 2	462	-9	1440	3.44	13.01	0.02
46	SLE FR 3	477	-11	1456	5.71	13.4	0.02
46	SLE FR 4	482	-9	1493	3.54	13.57	0.02
46	SLE FR 5	497	-11	1509	5.81	13.96	0.03
46	SLE FR 6	505	-11	1543	5.85	14.2	0.03



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
46	SLE QP 1	472	-11	1454	5.68	13.27	0.02
46	SLE QP 2	492	-11	1507	5.78	13.83	0.03
46	SLD 1	1432	-9	1479	1.2	38.66	0.02
46	SLD 2	1432	-9	1479	1.2	38.66	0.02
46	SLD 3	1312	-31	1288	26.5	35.4	0.06
46	SLD 4	1312	-31	1288	26.5	35.4	0.06
46	SLD 5	955	24	1788	-33.97	26.22	-0.03
46	SLD 6	955	24	1788	-33.97	26.22	-0.03
46	SLD 7	556	-52	1152	50.37	15.36	0.09
46	SLD 8	556	-52	1152	50.37	15.36	0.09
46	SLD 9	427	29	1863	-38.82	12.3	-0.04
46	SLD 10	427	29	1863	-38.82	12.3	-0.04
46	SLD 11	28	-46	1227	45.53	1.44	0.08
46	SLD 12	28	-46	1227	45.53	1.44	0.08
46	SLD 13	-328	9	1727	-14.95	-7.74	-0.01
46	SLD 14	-328	9	1727	-14.95	-7.74	-0.01
46	SLD 15	-448	-14	1536	10.36	-11	0.03
46	SLD 16	-448	-14	1536	10.36	-11	0.03
46	SLV 1	2690	-4	1450	-6.43	71.93	0.02
46	SLV 2	2690	-4	1450	-6.43	71.93	0.02
46	SLV 3	2402	-61	974	58.28	64.05	0.11
46	SLV 4	2402	-61	974	58.28	64.05	0.11
46	SLV 5	1589	79	2212	-96.04	43.22	-0.13
46	SLV 6	1589	79	2212	-96.04	43.22	-0.13
46	SLV 7	628	-114	625	119.68	16.93	0.2
46	SLV 8	628	-114	625	119.68	16.93	0.2
46	SLV 9	356	91	2390	-108.13	10.73	-0.15
46	SLV 10	356	91	2390	-108.13	10.73	-0.15
46	SLV 11	-605	-101	803	107.59	-15.56	0.18
46	SLV 12	-605	-101	803	107.59	-15.56	0.18
46	SLV 13	-1418	39	2041	-46.73	-36.39	-0.06
46	SLV 14	-1418	39	2041	-46.73	-36.39	-0.06
46	SLV 15	-1707	-19	1565	17.99	-44.27	0.03
46	SLV 16	-1707	-19	1565	17.99	-44.27	0.03
47	SLU 1	432	-11	1480	6.14	10.17	0.05
47	SLU 2	377	4	1384	-12.88	8.68	-0.01
47	SLU 3	453	-11	1492	6.35	10.68	0.05
47	SLU 4	420	-2	1434	-5.06	9.78	0.01
47	SLU 5	396	4	1392	-12.75	9.15	-0.01
47	SLU 6	472	-11	1500	6.49	11.15	0.05
47	SLU 7	439	-2	1442	-4.93	10.25	0.01
47	SLU 8	470	-11	1495	6.41	11.12	0.05
47	SLU 9	437	-2	1438	-5	10.22	0.01
47	SLU 10	442	3	1582	-12.47	10.22	-0.01
47	SLU 11	518	-12	1690	6.77	12.22	0.05
47	SLU 12	485	-3	1633	-4.65	11.33	0.02
47	SLU 13	461	3	1590	-12.33	10.7	-0.01
47	SLU 14	537	-12	1698	6.9	12.7	0.06
47	SLU 15	504	-3	1641	-4.51	11.8	0.02
47	SLU 16	536	-12	1694	6.82	12.67	0.05
47	SLU 17	503	-3	1636	-4.59	11.77	0.02
47	SLU 18	525	-12	1763	6.73	12.38	0.05
47	SLU 19	492	-3	1706	-4.68	11.49	0.02
47	SLU 20	544	-12	1771	6.87	12.86	0.06
47	SLU 21	511	-3	1713	-4.55	11.96	0.02
47	SLU 22	493	-12	1637	6.66	11.62	0.05
47	SLU 23	438	3	1542	-12.36	10.12	-0.01
47	SLU 24	514	-12	1650	6.87	12.12	0.05
47	SLU 25	481	-3	1592	-4.54	11.22	0.02
47	SLU 26	457	3	1550	-12.23	10.59	-0.01
47	SLU 27	533	-12	1657	7.01	12.59	0.06
47	SLU 28	500	-3	1600	-4.4	11.7	0.02
47	SLU 29	531	-12	1653	6.93	12.56	0.05
47	SLU 30	498	-3	1596	-4.48	11.67	0.02
47	SLU 31	503	2	1740	-11.95	11.67	0
47	SLU 32	579	-13	1848	7.29	13.67	0.06
47	SLU 33	546	-4	1791	-4.13	12.77	0.02
47	SLU 34	522	2	1748	-11.81	12.14	0
47	SLU 35	598	-13	1856	7.42	14.14	0.06
47	SLU 36	565	-4	1798	-3.99	13.24	0.02
47	SLU 37	596	-13	1851	7.35	14.11	0.06
47	SLU 38	563	-4	1794	-4.07	13.21	0.02
47	SLU 39	586	-13	1921	7.25	13.83	0.06
47	SLU 40	553	-4	1863	-4.16	12.93	0.02
47	SLU 41	605	-13	1928	7.39	14.3	0.06
47	SLU 42	572	-4	1871	-4.03	13.4	0.02
47	SLU 43	541	-13	1869	7.8	12.73	0.06
47	SLU 44	486	1	1774	-11.22	11.23	0
47	SLU 45	562	-14	1882	8.01	13.23	0.06
47	SLU 46	529	-5	1824	-3.4	12.34	0.03
47	SLU 47	505	1	1782	-11.09	11.71	0
47	SLU 48	581	-14	1889	8.15	13.71	0.06
47	SLU 49	548	-5	1832	-3.26	12.81	0.03
47	SLU 50	579	-14	1885	8.07	13.68	0.06
47	SLU 51	546	-5	1828	-3.34	12.78	0.03
47	SLU 52	551	0	1972	-10.81	12.78	0
47	SLU 53	627	-15	2080	8.43	14.78	0.07
47	SLU 54	594	-6	2022	-2.98	13.88	0.03
47	SLU 55	570	0	1980	-10.67	13.25	0.01
47	SLU 56	646	-15	2088	8.56	15.25	0.07



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
47	SLU 57	613	-6	2030	-2.85	14.36	0.03
47	SLU 58	644	-15	2083	8.49	15.22	0.07
47	SLU 59	611	-6	2026	-2.93	14.32	0.03
47	SLU 60	634	-15	2153	8.39	14.94	0.07
47	SLU 61	601	-6	2095	-3.02	14.04	0.03
47	SLU 62	653	-15	2160	8.53	15.41	0.07
47	SLU 63	620	-6	2103	-2.88	14.51	0.03
47	SLU 64	602	-14	2027	8.32	14.17	0.07
47	SLU 65	547	0	1932	-10.7	12.68	0
47	SLU 66	622	-15	2039	8.54	14.68	0.07
47	SLU 67	589	-6	1982	-2.88	13.78	0.03
47	SLU 68	566	0	1940	-10.56	13.15	0.01
47	SLU 69	642	-15	2047	8.67	15.15	0.07
47	SLU 70	609	-6	1990	-2.74	14.25	0.03
47	SLU 71	640	-15	2043	8.59	15.12	0.07
47	SLU 72	607	-6	1986	-2.82	14.22	0.03
47	SLU 73	612	-1	2130	-10.29	14.23	0.01
47	SLU 74	688	-16	2238	8.95	16.23	0.07
47	SLU 75	655	-7	2180	-2.46	15.33	0.04
47	SLU 76	631	-1	2138	-10.15	14.7	0.01
47	SLU 77	707	-16	2245	9.09	16.7	0.07
47	SLU 78	674	-7	2188	-2.33	15.8	0.04
47	SLU 79	705	-16	2241	9.01	16.67	0.07
47	SLU 80	672	-7	2184	-2.4	15.77	0.04
47	SLU 81	695	-16	2310	8.91	16.38	0.07
47	SLU 82	662	-7	2253	-2.5	15.49	0.04
47	SLU 83	714	-16	2318	9.05	16.86	0.07
47	SLU 84	681	-7	2261	-2.36	15.96	0.04
47	SLE RA 1	450	-11	1525	6.29	10.59	0.05
47	SLE RA 2	413	-1	1461	-6.39	9.59	0.01
47	SLE RA 3	463	-11	1533	6.43	10.92	0.05
47	SLE RA 4	441	-5	1495	-1.18	10.32	0.03
47	SLE RA 5	426	-1	1466	-6.3	9.9	0.01
47	SLE RA 6	476	-11	1538	6.52	11.24	0.05
47	SLE RA 7	454	-5	1500	-1.09	10.64	0.03
47	SLE RA 8	475	-11	1535	6.47	11.22	0.05
47	SLE RA 9	453	-5	1497	-1.14	10.62	0.03
47	SLE RA 10	456	-2	1593	-6.12	10.62	0.01
47	SLE RA 11	507	-12	1665	6.71	11.95	0.05
47	SLE RA 12	485	-6	1627	-0.9	11.35	0.03
47	SLE RA 13	469	-2	1598	-6.03	10.93	0.01
47	SLE RA 14	519	-12	1670	6.8	12.27	0.05
47	SLE RA 15	498	-6	1632	-0.81	11.67	0.03
47	SLE RA 16	518	-12	1667	6.74	12.25	0.05
47	SLE RA 17	496	-6	1629	-0.86	11.65	0.03
47	SLE RA 18	512	-12	1713	6.68	12.06	0.05
47	SLE RA 19	490	-6	1675	-0.93	11.46	0.03
47	SLE RA 20	524	-12	1719	6.77	12.37	0.05
47	SLE RA 21	502	-6	1681	-0.84	11.78	0.03
47	SLE FR 1	450	-11	1525	6.29	10.59	0.05
47	SLE FR 2	442	-9	1512	3.75	10.39	0.04
47	SLE FR 3	455	-11	1527	6.32	10.71	0.05
47	SLE FR 4	461	-9	1569	3.87	10.83	0.04
47	SLE FR 5	473	-11	1583	6.44	11.15	0.05
47	SLE FR 6	481	-11	1619	6.48	11.32	0.05
47	SLE QP 1	450	-11	1525	6.29	10.59	0.05
47	SLE QP 2	468	-11	1581	6.4	11.03	0.05
47	SLD 1	1446	-6	1793	0.24	35.9	0.03
47	SLD 2	1446	-6	1793	0.24	35.9	0.03
47	SLD 3	1327	-32	1570	29.28	32.9	0.14
47	SLD 4	1327	-32	1570	29.28	32.9	0.14
47	SLD 5	941	30	1982	-39.48	23.03	-0.12
47	SLD 6	941	30	1982	-39.48	23.03	-0.12
47	SLD 7	546	-57	1240	57.3	13.05	0.24
47	SLD 8	546	-57	1240	57.3	13.05	0.24
47	SLD 9	390	35	1922	-44.49	9	-0.14
47	SLD 10	390	35	1922	-44.49	9	-0.14
47	SLD 11	-5	-52	1180	52.29	-0.97	0.22
47	SLD 12	-5	-52	1180	52.29	-0.97	0.22
47	SLD 13	-391	10	1593	-16.47	-10.85	-0.04
47	SLD 14	-391	10	1593	-16.47	-10.85	-0.04
47	SLD 15	-509	-16	1370	12.57	-13.84	0.07
47	SLD 16	-509	-16	1370	12.57	-13.84	0.07
47	SLV 1	2754	2	2102	-9.65	69.18	0
47	SLV 2	2754	2	2102	-9.65	69.18	0
47	SLV 3	2470	-65	1542	64.59	62	0.27
47	SLV 4	2470	-65	1542	64.59	62	0.27
47	SLV 5	1585	94	2587	-111.02	39.37	-0.38
47	SLV 6	1585	94	2587	-111.02	39.37	-0.38
47	SLV 7	638	-129	720	136.47	15.43	0.54
47	SLV 8	638	-129	720	136.47	15.43	0.54
47	SLV 9	299	107	2443	-123.66	6.63	-0.44
47	SLV 10	299	107	2443	-123.66	6.63	-0.44
47	SLV 11	-649	-117	576	123.83	-17.31	0.49
47	SLV 12	-649	-117	576	123.83	-17.31	0.49
47	SLV 13	-1534	43	1621	-51.78	-39.94	-0.17
47	SLV 14	-1534	43	1621	-51.78	-39.94	-0.17
47	SLV 15	-1818	-24	1061	22.46	-47.13	0.1
47	SLV 16	-1818	-24	1061	22.46	-47.13	0.1
48	SLU 1	465	-12	1603	7.23	12.4	0.07



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
48	SLU 2	429	4	1507	-13.01	11.55	-0.01
48	SLU 3	487	-13	1620	7.47	12.99	0.07
48	SLU 4	466	-3	1562	-4.67	12.48	0.02
48	SLU 5	450	3	1519	-12.85	12.09	-0.01
48	SLU 6	507	-13	1631	7.63	13.53	0.07
48	SLU 7	486	-3	1574	-4.51	13.02	0.02
48	SLU 8	505	-13	1626	7.55	13.48	0.07
48	SLU 9	484	-3	1569	-4.59	12.97	0.02
48	SLU 10	497	2	1725	-12.44	13.35	-0.01
48	SLU 11	555	-14	1838	8.04	14.79	0.08
48	SLU 12	534	-4	1780	-4.1	14.28	0.03
48	SLU 13	518	2	1737	-12.28	13.88	0
48	SLU 14	575	-14	1850	8.2	15.32	0.08
48	SLU 15	554	-5	1792	-3.94	14.81	0.03
48	SLU 16	573	-14	1845	8.12	15.27	0.08
48	SLU 17	552	-5	1787	-4.02	14.76	0.03
48	SLU 18	562	-14	1915	8.04	14.97	0.08
48	SLU 19	540	-4	1857	-4.1	14.46	0.03
48	SLU 20	582	-14	1927	8.2	15.5	0.08
48	SLU 21	561	-5	1869	-3.94	14.99	0.03
48	SLU 22	529	-14	1779	7.89	14.1	0.08
48	SLU 23	493	2	1683	-12.34	13.25	-0.01
48	SLU 24	551	-14	1796	8.14	14.69	0.08
48	SLU 25	530	-4	1738	-4	14.18	0.03
48	SLU 26	514	2	1694	-12.18	13.79	0
48	SLU 27	571	-14	1807	8.3	15.23	0.08
48	SLU 28	550	-5	1749	-3.84	14.72	0.03
48	SLU 29	569	-14	1802	8.21	15.17	0.08
48	SLU 30	548	-5	1744	-3.93	14.66	0.03
48	SLU 31	561	1	1901	-11.77	15.04	0
48	SLU 32	619	-15	2014	8.71	16.48	0.09
48	SLU 33	598	-6	1956	-3.43	15.97	0.04
48	SLU 34	582	1	1913	-11.61	15.58	0
48	SLU 35	639	-16	2025	8.87	17.02	0.09
48	SLU 36	618	-6	1968	-3.27	16.51	0.04
48	SLU 37	637	-15	2020	8.78	16.97	0.09
48	SLU 38	616	-6	1963	-3.36	16.46	0.04
48	SLU 39	626	-15	2091	8.71	16.66	0.09
48	SLU 40	605	-6	2033	-3.43	16.15	0.04
48	SLU 41	646	-16	2102	8.87	17.2	0.09
48	SLU 42	625	-6	2045	-3.27	16.69	0.04
48	SLU 43	582	-16	2024	9.17	15.54	0.09
48	SLU 44	547	0	1928	-11.07	14.69	0
48	SLU 45	604	-16	2041	9.41	16.13	0.09
48	SLU 46	583	-6	1983	-2.73	15.62	0.04
48	SLU 47	567	0	1939	-10.91	15.23	0.01
48	SLU 48	624	-16	2052	9.57	16.67	0.09
48	SLU 49	603	-7	1994	-2.57	16.16	0.04
48	SLU 50	623	-16	2047	9.49	16.62	0.09
48	SLU 51	601	-7	1989	-2.65	16.11	0.04
48	SLU 52	615	-1	2146	-10.5	16.49	0.01
48	SLU 53	672	-17	2259	9.98	17.93	0.1
48	SLU 54	651	-8	2201	-2.16	17.42	0.05
48	SLU 55	635	-1	2158	-10.34	17.02	0.01
48	SLU 56	692	-18	2270	10.14	18.46	0.1
48	SLU 57	671	-8	2213	-2	17.95	0.05
48	SLU 58	690	-17	2265	10.06	18.41	0.1
48	SLU 59	669	-8	2208	-2.08	17.9	0.05
48	SLU 60	679	-17	2336	9.98	18.11	0.1
48	SLU 61	658	-8	2278	-2.16	17.6	0.05
48	SLU 62	699	-18	2347	10.14	18.64	0.1
48	SLU 63	678	-8	2290	-2	18.13	0.05
48	SLU 64	646	-17	2200	9.83	17.24	0.1
48	SLU 65	611	-1	2104	-10.4	16.39	0.01
48	SLU 66	668	-17	2217	10.08	17.83	0.1
48	SLU 67	647	-8	2159	-2.06	17.32	0.05
48	SLU 68	631	-1	2115	-10.24	16.93	0.01
48	SLU 69	688	-18	2228	10.24	18.37	0.1
48	SLU 70	667	-8	2170	-1.9	17.86	0.05
48	SLU 71	687	-18	2223	10.15	18.31	0.1
48	SLU 72	665	-8	2165	-1.99	17.8	0.05
48	SLU 73	679	-2	2322	-9.83	18.18	0.02
48	SLU 74	736	-19	2435	10.65	19.62	0.1
48	SLU 75	715	-9	2377	-1.49	19.11	0.05
48	SLU 76	699	-2	2333	-9.67	18.72	0.02
48	SLU 77	756	-19	2446	10.81	20.16	0.11
48	SLU 78	735	-9	2388	-1.33	19.65	0.06
48	SLU 79	755	-19	2441	10.72	20.11	0.11
48	SLU 80	733	-9	2383	-1.42	19.6	0.06
48	SLU 81	743	-19	2512	10.65	19.8	0.11
48	SLU 82	722	-9	2454	-1.49	19.29	0.06
48	SLU 83	763	-19	2523	10.81	20.34	0.11
48	SLU 84	742	-9	2465	-1.33	19.83	0.06
48	SLE RA 1	483	-13	1654	7.42	12.89	0.07
48	SLE RA 2	459	-2	1589	-6.07	12.32	0.02
48	SLE RA 3	498	-13	1665	7.58	13.28	0.07
48	SLE RA 4	484	-7	1626	-0.51	12.94	0.04
48	SLE RA 5	473	-2	1597	-5.97	12.68	0.02
48	SLE RA 6	511	-13	1672	7.69	13.64	0.07
48	SLE RA 7	497	-7	1634	-0.41	13.3	0.04



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
48	SLE RA 8	510	-13	1669	7.63	13.6	0.07
48	SLE RA 9	496	-7	1630	-0.46	13.26	0.04
48	SLE RA 10	505	-3	1735	-5.69	13.52	0.02
48	SLE RA 11	543	-14	1810	7.96	14.48	0.08
48	SLE RA 12	529	-7	1772	-0.13	14.14	0.04
48	SLE RA 13	518	-3	1743	-5.59	13.88	0.02
48	SLE RA 14	556	-14	1818	8.07	14.83	0.08
48	SLE RA 15	542	-8	1779	-0.03	14.49	0.05
48	SLE RA 16	555	-14	1814	8.01	14.8	0.08
48	SLE RA 17	541	-8	1776	-0.08	14.46	0.05
48	SLE RA 18	548	-14	1861	7.96	14.6	0.08
48	SLE RA 19	533	-7	1823	-0.13	14.26	0.05
48	SLE RA 20	561	-14	1869	8.07	14.95	0.08
48	SLE RA 21	547	-8	1831	-0.03	14.61	0.05
48	SLE FR 1	483	-13	1654	7.42	12.89	0.07
48	SLE FR 2	478	-11	1641	4.72	12.78	0.06
48	SLE FR 3	488	-13	1657	7.46	13.03	0.07
48	SLE FR 4	498	-11	1703	4.88	13.29	0.06
48	SLE FR 5	508	-13	1719	7.62	13.54	0.07
48	SLE FR 6	515	-13	1758	7.69	13.74	0.08
48	SLE QP 1	483	-13	1654	7.42	12.89	0.07
48	SLE QP 2	502	-13	1716	7.58	13.4	0.07
48	SLD 1	1506	-7	1971	0.37	39.79	0.04
48	SLD 2	1506	-7	1971	0.37	39.79	0.04
48	SLD 3	1384	-36	1734	31.84	36.59	0.19
48	SLD 4	1384	-36	1734	31.84	36.59	0.19
48	SLD 5	987	34	2151	-42.31	26.17	-0.17
48	SLD 6	987	34	2151	-42.31	26.17	-0.17
48	SLD 7	583	-65	1363	62.58	15.51	0.34
48	SLD 8	583	-65	1363	62.58	15.51	0.34
48	SLD 9	422	39	2069	-47.42	11.29	-0.2
48	SLD 10	422	39	2069	-47.42	11.29	-0.2
48	SLD 11	17	-60	1281	57.47	0.63	0.32
48	SLD 12	17	-60	1281	57.47	0.63	0.32
48	SLD 13	-380	10	1698	-16.68	-9.79	-0.05
48	SLD 14	-380	10	1698	-16.68	-9.79	-0.05
48	SLD 15	-501	-20	1461	14.79	-12.99	0.11
48	SLD 16	-501	-20	1461	14.79	-12.99	0.11
48	SLV 1	2848	4	2336	-11	75.1	-0.01
48	SLV 2	2848	4	2336	-11	75.1	-0.01
48	SLV 3	2558	-72	1740	69.43	67.43	0.38
48	SLV 4	2558	-72	1740	69.43	67.43	0.38
48	SLV 5	1647	106	2806	-119.97	43.55	-0.55
48	SLV 6	1647	106	2806	-119.97	43.55	-0.55
48	SLV 7	678	-145	820	148.11	17.97	0.76
48	SLV 8	678	-145	820	148.11	17.97	0.76
48	SLV 9	327	119	2613	-132.95	8.83	-0.61
48	SLV 10	327	119	2613	-132.95	8.83	-0.61
48	SLV 11	-643	-133	626	135.13	-16.75	0.7
48	SLV 12	-643	-133	626	135.13	-16.75	0.7
48	SLV 13	-1553	45	1692	-54.27	-40.63	-0.23
48	SLV 14	-1553	45	1692	-54.27	-40.63	-0.23
48	SLV 15	-1844	-30	1096	26.16	-48.3	0.16
48	SLV 16	-1844	-30	1096	26.16	-48.3	0.16
49	SLU 1	442	-15	1783	8.91	11.06	0.08
49	SLU 2	428	0	1672	-11.44	10.69	0
49	SLU 3	463	-16	1805	9.21	11.61	0.09
49	SLU 4	455	-6	1738	-3	11.39	0.04
49	SLU 5	448	0	1688	-11.25	11.2	0
49	SLU 6	483	-16	1821	9.4	12.12	0.09
49	SLU 7	474	-7	1754	-2.81	11.9	0.04
49	SLU 8	481	-16	1815	9.3	12.08	0.09
49	SLU 9	473	-7	1748	-2.91	11.86	0.04
49	SLU 10	491	-1	1918	-10.61	12.27	0.01
49	SLU 11	526	-18	2052	10.04	13.2	0.1
49	SLU 12	518	-8	1985	-2.18	12.97	0.05
49	SLU 13	511	-2	1934	-10.42	12.78	0.01
49	SLU 14	546	-18	2068	10.23	13.71	0.1
49	SLU 15	538	-8	2001	-1.98	13.48	0.05
49	SLU 16	544	-18	2061	10.13	13.67	0.1
49	SLU 17	536	-8	1995	-2.08	13.44	0.05
49	SLU 18	532	-18	2135	10.1	13.32	0.1
49	SLU 19	524	-8	2069	-2.12	13.1	0.05
49	SLU 20	551	-18	2151	10.29	13.83	0.1
49	SLU 21	543	-9	2084	-1.92	13.61	0.05
49	SLU 22	502	-17	1984	9.82	12.57	0.09
49	SLU 23	488	-1	1873	-10.54	12.19	0.01
49	SLU 24	523	-18	2007	10.11	13.12	0.1
49	SLU 25	515	-8	1940	-2.1	12.89	0.05
49	SLU 26	507	-2	1889	-10.34	12.71	0.01
49	SLU 27	543	-18	2022	10.3	13.63	0.1
49	SLU 28	534	-9	1956	-1.91	13.41	0.05
49	SLU 29	541	-18	2016	10.2	13.59	0.1
49	SLU 30	533	-8	1949	-2.01	13.37	0.05
49	SLU 31	551	-3	2120	-9.71	13.78	0.02
49	SLU 32	586	-19	2253	10.94	14.7	0.1
49	SLU 33	578	-10	2187	-1.27	14.48	0.06
49	SLU 34	571	-3	2136	-9.52	14.29	0.02
49	SLU 35	606	-20	2269	11.13	15.21	0.11
49	SLU 36	598	-10	2202	-1.08	14.99	0.06



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
49	SLU 37	604	-19	2263	11.03	15.17	0.11
49	SLU 38	596	-10	2196	-1.18	14.95	0.06
49	SLU 39	592	-19	2337	11	14.83	0.11
49	SLU 40	584	-10	2270	-1.21	14.61	0.06
49	SLU 41	611	-20	2353	11.19	15.34	0.11
49	SLU 42	603	-10	2286	-1.02	15.12	0.06
49	SLU 43	553	-19	2249	11.28	13.86	0.11
49	SLU 44	540	-4	2138	-9.07	13.49	0.02
49	SLU 45	575	-20	2271	11.57	14.41	0.11
49	SLU 46	567	-10	2204	-0.64	14.19	0.06
49	SLU 47	559	-4	2153	-8.88	14	0.03
49	SLU 48	594	-20	2287	11.77	14.93	0.11
49	SLU 49	586	-11	2220	-0.45	14.7	0.06
49	SLU 50	593	-20	2280	11.67	14.88	0.11
49	SLU 51	584	-11	2214	-0.55	14.66	0.06
49	SLU 52	603	-5	2384	-8.25	15.07	0.03
49	SLU 53	638	-22	2518	12.4	16	0.12
49	SLU 54	630	-12	2451	0.19	15.78	0.07
49	SLU 55	623	-6	2400	-8.05	15.59	0.04
49	SLU 56	658	-22	2533	12.59	16.51	0.12
49	SLU 57	649	-12	2467	0.38	16.29	0.07
49	SLU 58	656	-22	2527	12.49	16.47	0.12
49	SLU 59	648	-12	2460	0.28	16.25	0.07
49	SLU 60	644	-22	2601	12.46	16.13	0.12
49	SLU 61	636	-12	2534	0.25	15.9	0.07
49	SLU 62	663	-22	2617	12.65	16.64	0.12
49	SLU 63	655	-13	2550	0.44	16.41	0.07
49	SLU 64	613	-21	2450	12.18	15.37	0.11
49	SLU 65	600	-5	2339	-8.17	15	0.03
49	SLU 66	635	-22	2472	12.48	15.92	0.12
49	SLU 67	627	-12	2406	0.26	15.7	0.07
49	SLU 68	619	-6	2355	-7.98	15.51	0.04
49	SLU 69	654	-22	2488	12.67	16.43	0.12
49	SLU 70	646	-13	2421	0.46	16.21	0.07
49	SLU 71	653	-22	2482	12.57	16.39	0.12
49	SLU 72	644	-12	2415	0.36	16.17	0.07
49	SLU 73	663	-7	2586	-7.35	16.58	0.04
49	SLU 74	698	-23	2719	13.3	17.5	0.13
49	SLU 75	690	-14	2652	1.09	17.28	0.08
49	SLU 76	683	-7	2602	-7.15	17.09	0.05
49	SLU 77	718	-24	2735	13.5	18.02	0.13
49	SLU 78	709	-14	2668	1.28	17.79	0.08
49	SLU 79	716	-23	2729	13.39	17.97	0.13
49	SLU 80	708	-14	2662	1.18	17.75	0.08
49	SLU 81	704	-23	2803	13.36	17.63	0.13
49	SLU 82	696	-14	2736	1.15	17.41	0.08
49	SLU 83	723	-24	2818	13.56	18.14	0.13
49	SLU 84	715	-14	2752	1.34	17.92	0.08
49	SLE RA 1	459	-16	1840	9.17	11.49	0.09
49	SLE RA 2	450	-5	1766	-4.4	11.24	0.03
49	SLE RA 3	473	-16	1855	9.37	11.86	0.09
49	SLE RA 4	467	-10	1811	1.23	11.71	0.06
49	SLE RA 5	463	-6	1777	-4.27	11.58	0.03
49	SLE RA 6	486	-16	1866	9.5	12.2	0.09
49	SLE RA 7	481	-10	1821	1.36	12.05	0.06
49	SLE RA 8	485	-16	1862	9.43	12.17	0.09
49	SLE RA 9	479	-10	1817	1.29	12.02	0.06
49	SLE RA 10	492	-7	1931	-3.85	12.3	0.04
49	SLE RA 11	515	-17	2020	9.92	12.91	0.09
49	SLE RA 12	510	-11	1975	1.78	12.77	0.06
49	SLE RA 13	505	-7	1941	-3.72	12.64	0.04
49	SLE RA 14	528	-18	2030	10.05	13.26	0.1
49	SLE RA 15	523	-11	1986	1.91	13.11	0.06
49	SLE RA 16	527	-17	2026	9.98	13.23	0.09
49	SLE RA 17	521	-11	1982	1.84	13.08	0.06
49	SLE RA 18	519	-17	2075	9.96	13	0.09
49	SLE RA 19	513	-11	2031	1.82	12.85	0.06
49	SLE RA 20	532	-18	2086	10.09	13.34	0.1
49	SLE RA 21	526	-11	2042	1.95	13.19	0.06
49	SLE FR 1	459	-16	1840	9.17	11.49	0.09
49	SLE FR 2	457	-14	1826	6.46	11.44	0.08
49	SLE FR 3	464	-16	1845	9.22	11.63	0.09
49	SLE FR 4	475	-14	1896	6.69	11.89	0.08
49	SLE FR 5	482	-16	1915	9.46	12.08	0.09
49	SLE FR 6	489	-17	1958	9.57	12.25	0.09
49	SLE QP 1	459	-16	1840	9.17	11.49	0.09
49	SLE QP 2	477	-16	1911	9.41	11.94	0.09
49	SLD 1	1443	-10	2236	1.85	37.79	0.05
49	SLD 2	1443	-10	2236	1.85	37.79	0.05
49	SLD 3	1326	-40	2002	34.21	34.7	0.21
49	SLD 4	1326	-40	2002	34.21	34.7	0.21
49	SLD 5	944	32	2363	-41.93	24.39	-0.16
49	SLD 6	944	32	2363	-41.93	24.39	-0.16
49	SLD 7	554	-69	1583	65.92	14.08	0.36
49	SLD 8	554	-69	1583	65.92	14.08	0.36
49	SLD 9	400	37	2239	-47.1	9.81	-0.19
49	SLD 10	400	37	2239	-47.1	9.81	-0.19
49	SLD 11	9	-64	1458	60.74	-0.51	0.34
49	SLD 12	9	-64	1458	60.74	-0.51	0.34
49	SLD 13	-372	7	1820	-15.39	-10.81	-0.03



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
49	SLD 14	-372	7	1820	-15.39	-10.81	-0.03
49	SLD 15	-489	-23	1586	16.96	-13.91	0.12
49	SLD 16	-489	-23	1586	16.96	-13.91	0.12
49	SLV 1	2734	1	2691	-10.01	72.36	0
49	SLV 2	2734	1	2691	-10.01	72.36	0
49	SLV 3	2454	-76	2105	72.63	64.97	0.4
49	SLV 4	2454	-76	2105	72.63	64.97	0.4
49	SLV 5	1579	106	3034	-121.77	41.27	-0.55
49	SLV 6	1579	106	3034	-121.77	41.27	-0.55
49	SLV 7	646	-151	1080	153.72	16.65	0.79
49	SLV 8	646	-151	1080	153.72	16.65	0.79
49	SLV 9	308	119	2742	-134.91	7.24	-0.61
49	SLV 10	308	119	2742	-134.91	7.24	-0.61
49	SLV 11	-625	-139	788	140.58	-17.38	0.72
49	SLV 12	-625	-139	788	140.58	-17.38	0.72
49	SLV 13	-1501	43	1717	-53.82	-41.08	-0.22
49	SLV 14	-1501	43	1717	-53.82	-41.08	-0.22
49	SLV 15	-1781	-34	1131	28.83	-48.47	0.18
49	SLV 16	-1781	-34	1131	28.83	-48.47	0.18
50	SLU 1	430	-20	1984	10.93	11.92	0.07
50	SLU 2	449	-5	1856	-8.51	12.55	0.02
50	SLU 3	451	-20	2012	11.28	12.51	0.07
50	SLU 4	462	-11	1935	-0.39	12.89	0.04
50	SLU 5	468	-5	1876	-8.28	13.09	0.02
50	SLU 6	470	-21	2032	11.51	13.05	0.08
50	SLU 7	482	-12	1955	-0.15	13.43	0.04
50	SLU 8	469	-20	2024	11.39	13	0.08
50	SLU 9	480	-12	1947	-0.27	13.38	0.04
50	SLU 10	507	-7	2134	-7.37	14.14	0.03
50	SLU 11	510	-23	2290	12.43	14.1	0.08
50	SLU 12	521	-14	2213	0.76	14.48	0.05
50	SLU 13	526	-8	2154	-7.14	14.69	0.03
50	SLU 14	529	-23	2310	12.66	14.65	0.08
50	SLU 15	540	-14	2233	0.99	15.03	0.05
50	SLU 16	527	-23	2302	12.54	14.6	0.08
50	SLU 17	538	-14	2225	0.87	14.98	0.05
50	SLU 18	514	-23	2381	12.57	14.2	0.08
50	SLU 19	525	-14	2304	0.9	14.58	0.05
50	SLU 20	533	-23	2401	12.8	14.74	0.09
50	SLU 21	544	-15	2324	1.13	15.12	0.05
50	SLU 22	486	-22	2214	12.12	13.46	0.08
50	SLU 23	505	-7	2086	-7.32	14.09	0.03
50	SLU 24	507	-23	2242	12.47	14.05	0.08
50	SLU 25	519	-14	2165	0.8	14.43	0.05
50	SLU 26	524	-8	2106	-7.09	14.63	0.03
50	SLU 27	527	-23	2262	12.7	14.59	0.08
50	SLU 28	538	-14	2185	1.04	14.97	0.05
50	SLU 29	525	-23	2254	12.59	14.55	0.08
50	SLU 30	536	-14	2177	0.92	14.92	0.05
50	SLU 31	563	-10	2364	-6.18	15.69	0.04
50	SLU 32	566	-25	2520	13.62	15.65	0.09
50	SLU 33	577	-16	2443	1.95	16.03	0.06
50	SLU 34	583	-10	2384	-5.95	16.23	0.04
50	SLU 35	585	-25	2540	13.85	16.19	0.09
50	SLU 36	596	-16	2463	2.18	16.57	0.06
50	SLU 37	583	-25	2532	13.73	16.14	0.09
50	SLU 38	594	-16	2455	2.06	16.52	0.06
50	SLU 39	570	-25	2611	13.76	15.74	0.09
50	SLU 40	581	-16	2534	2.09	16.12	0.06
50	SLU 41	589	-26	2631	13.99	16.28	0.09
50	SLU 42	600	-17	2554	2.32	16.66	0.06
50	SLU 43	540	-25	2501	13.8	14.96	0.09
50	SLU 44	559	-10	2372	-5.64	15.59	0.04
50	SLU 45	561	-25	2529	14.15	15.55	0.09
50	SLU 46	572	-17	2452	2.49	15.93	0.06
50	SLU 47	578	-10	2392	-5.41	16.14	0.04
50	SLU 48	580	-26	2549	14.39	16.1	0.1
50	SLU 49	591	-17	2472	2.72	16.48	0.06
50	SLU 50	578	-26	2541	14.27	16.05	0.09
50	SLU 51	590	-17	2464	2.6	16.43	0.06
50	SLU 52	617	-12	2650	-4.5	17.19	0.05
50	SLU 53	619	-28	2807	15.3	17.15	0.1
50	SLU 54	631	-19	2730	3.63	17.53	0.07
50	SLU 55	636	-13	2670	-4.27	17.73	0.05
50	SLU 56	639	-28	2827	15.53	17.69	0.1
50	SLU 57	650	-19	2750	3.86	18.07	0.07
50	SLU 58	637	-28	2819	15.41	17.64	0.1
50	SLU 59	648	-19	2742	3.74	18.02	0.07
50	SLU 60	623	-28	2898	15.44	17.24	0.1
50	SLU 61	635	-19	2821	3.77	17.62	0.07
50	SLU 62	643	-28	2918	15.67	17.78	0.1
50	SLU 63	654	-20	2841	4	18.16	0.07
50	SLU 64	596	-27	2730	14.99	16.5	0.1
50	SLU 65	615	-12	2602	-4.45	17.14	0.05
50	SLU 66	617	-28	2758	15.34	17.1	0.1
50	SLU 67	628	-19	2681	3.68	17.48	0.07
50	SLU 68	634	-13	2622	-4.22	17.68	0.05
50	SLU 69	636	-28	2778	15.58	17.64	0.1
50	SLU 70	648	-19	2701	3.91	18.02	0.07
50	SLU 71	635	-28	2770	15.46	17.59	0.1



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
50	SLU 72	646	-19	2693	3.79	17.97	0.07
50	SLU 73	673	-15	2880	-3.31	18.73	0.05
50	SLU 74	676	-30	3036	16.49	18.69	0.11
50	SLU 75	687	-21	2959	4.82	19.07	0.08
50	SLU 76	692	-15	2900	-3.08	19.28	0.06
50	SLU 77	695	-30	3056	16.72	19.24	0.11
50	SLU 78	706	-22	2979	5.05	19.62	0.08
50	SLU 79	693	-30	3048	16.6	19.19	0.11
50	SLU 80	704	-21	2971	4.93	19.57	0.08
50	SLU 81	680	-30	3128	16.63	18.79	0.11
50	SLU 82	691	-22	3051	4.96	19.16	0.08
50	SLU 83	699	-31	3148	16.86	19.33	0.11
50	SLU 84	710	-22	3071	5.19	19.71	0.08
50	SLE RA 1	446	-20	2050	11.27	12.36	0.07
50	SLE RA 2	459	-10	1964	-1.69	12.78	0.04
50	SLE RA 3	460	-21	2069	11.51	12.75	0.08
50	SLE RA 4	468	-15	2017	3.73	13	0.05
50	SLE RA 5	471	-11	1978	-1.54	13.14	0.04
50	SLE RA 6	473	-21	2082	11.66	13.11	0.08
50	SLE RA 7	480	-15	2030	3.88	13.37	0.06
50	SLE RA 8	472	-21	2077	11.58	13.08	0.08
50	SLE RA 9	479	-15	2025	3.8	13.33	0.06
50	SLE RA 10	498	-12	2150	-0.93	13.84	0.04
50	SLE RA 11	499	-22	2254	12.27	13.82	0.08
50	SLE RA 12	507	-16	2202	4.49	14.07	0.06
50	SLE RA 13	510	-12	2163	-0.77	14.2	0.05
50	SLE RA 14	512	-23	2267	12.42	14.18	0.08
50	SLE RA 15	519	-17	2216	4.64	14.43	0.06
50	SLE RA 16	511	-22	2262	12.34	14.15	0.08
50	SLE RA 17	518	-17	2210	4.57	14.4	0.06
50	SLE RA 18	502	-23	2315	12.36	13.88	0.08
50	SLE RA 19	509	-17	2263	4.58	14.13	0.06
50	SLE RA 20	515	-23	2328	12.52	14.24	0.08
50	SLE RA 21	522	-17	2277	4.74	14.49	0.06
50	SLE FR 1	446	-20	2050	11.27	12.36	0.07
50	SLE FR 2	449	-18	2033	8.68	12.44	0.07
50	SLE FR 3	451	-20	2055	11.33	12.5	0.08
50	SLE FR 4	465	-19	2112	9.01	12.9	0.07
50	SLE FR 5	468	-21	2135	11.66	12.96	0.08
50	SLE FR 6	474	-21	2182	11.82	13.12	0.08
50	SLE QP 1	446	-20	2050	11.27	12.36	0.07
50	SLE QP 2	463	-21	2129	11.6	12.81	0.08
50	SLD 1	1399	-15	2489	4.34	39.63	0.05
50	SLD 2	1399	-15	2489	4.34	39.63	0.05
50	SLD 3	1284	-45	2264	35.99	36.41	0.17
50	SLD 4	1284	-45	2264	35.99	36.41	0.17
50	SLD 5	918	27	2578	-38.59	25.74	-0.1
50	SLD 6	918	27	2578	-38.59	25.74	-0.1
50	SLD 7	535	-74	1829	66.93	15.01	0.27
50	SLD 8	535	-74	1829	66.93	15.01	0.27
50	SLD 9	391	32	2430	-43.73	10.62	-0.12
50	SLD 10	391	32	2430	-43.73	10.62	-0.12
50	SLD 11	7	-69	1680	61.79	-0.12	0.25
50	SLD 12	7	-69	1680	61.79	-0.12	0.25
50	SLD 13	-358	3	1994	-12.79	-10.79	-0.01
50	SLD 14	-358	3	1994	-12.79	-10.79	-0.01
50	SLD 15	-473	-27	1769	18.86	-14.01	0.1
50	SLD 16	-473	-27	1769	18.86	-14.01	0.1
50	SLV 1	2650	-5	2987	-7.12	75.46	0.02
50	SLV 2	2650	-5	2987	-7.12	75.46	0.02
50	SLV 3	2376	-82	2430	73.7	67.8	0.3
50	SLV 4	2376	-82	2430	73.7	67.8	0.3
50	SLV 5	1535	101	3231	-116.59	43.23	-0.37
50	SLV 6	1535	101	3231	-116.59	43.23	-0.37
50	SLV 7	621	-156	1375	152.8	17.68	0.57
50	SLV 8	621	-156	1375	152.8	17.68	0.57
50	SLV 9	305	114	2884	-129.6	7.94	-0.42
50	SLV 10	305	114	2884	-129.6	7.94	-0.42
50	SLV 11	-609	-142	1028	139.79	-17.6	0.53
50	SLV 12	-609	-142	1028	139.79	-17.6	0.53
50	SLV 13	-1450	40	1829	-50.5	-42.17	-0.14
50	SLV 14	-1450	40	1829	-50.5	-42.17	-0.14
50	SLV 15	-1724	-37	1272	30.32	-49.83	0.14
50	SLV 16	-1724	-37	1272	30.32	-49.83	0.14
51	SLU 1	380	-24	2195	12.75	9.98	0.08
51	SLU 2	435	-11	2059	-4.83	11.51	0.04
51	SLU 3	399	-24	2228	13.15	10.5	0.08
51	SLU 4	432	-17	2147	2.6	11.43	0.06
51	SLU 5	452	-11	2083	-4.57	12	0.04
51	SLU 6	417	-25	2252	13.41	11	0.09
51	SLU 7	450	-17	2171	2.86	11.92	0.06
51	SLU 8	416	-25	2242	13.28	10.96	0.08
51	SLU 9	448	-17	2161	2.73	11.88	0.06
51	SLU 10	482	-14	2368	-3.39	12.77	0.05
51	SLU 11	447	-27	2537	14.59	11.76	0.09
51	SLU 12	480	-19	2456	4.04	12.68	0.07
51	SLU 13	500	-14	2392	-3.12	13.26	0.05
51	SLU 14	465	-28	2561	14.86	12.25	0.1
51	SLU 15	498	-20	2480	4.31	13.17	0.07
51	SLU 16	464	-27	2551	14.72	12.21	0.09



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
51	SLU 17	496	-20	2470	4.17	13.13	0.07
51	SLU 18	449	-28	2636	14.81	11.77	0.1
51	SLU 19	481	-20	2555	4.26	12.69	0.07
51	SLU 20	466	-28	2660	15.08	12.26	0.1
51	SLU 21	499	-20	2578	4.53	13.18	0.07
51	SLU 22	427	-26	2453	14.21	11.21	0.09
51	SLU 23	482	-14	2317	-3.37	12.75	0.05
51	SLU 24	447	-27	2486	14.61	11.74	0.09
51	SLU 25	479	-19	2405	4.06	12.66	0.07
51	SLU 26	499	-14	2341	-3.11	13.24	0.05
51	SLU 27	464	-28	2510	14.87	12.23	0.09
51	SLU 28	497	-20	2429	4.32	13.15	0.07
51	SLU 29	463	-27	2500	14.74	12.2	0.09
51	SLU 30	496	-20	2419	4.19	13.12	0.07
51	SLU 31	530	-16	2626	-1.93	14	0.06
51	SLU 32	495	-30	2795	16.05	12.99	0.1
51	SLU 33	527	-22	2714	5.5	13.91	0.08
51	SLU 34	547	-17	2650	-1.66	14.49	0.06
51	SLU 35	512	-31	2819	16.32	13.48	0.1
51	SLU 36	545	-23	2737	5.77	14.4	0.08
51	SLU 37	511	-30	2809	16.18	13.45	0.1
51	SLU 38	544	-23	2728	5.63	14.37	0.08
51	SLU 39	496	-31	2894	16.27	13	0.1
51	SLU 40	528	-23	2812	5.72	13.92	0.08
51	SLU 41	514	-31	2917	16.54	13.49	0.11
51	SLU 42	546	-23	2836	5.99	14.41	0.08
51	SLU 43	478	-30	2765	16.07	12.55	0.1
51	SLU 44	532	-17	2629	-1.51	14.08	0.06
51	SLU 45	497	-30	2798	16.47	13.07	0.1
51	SLU 46	530	-23	2717	5.92	14	0.08
51	SLU 47	550	-17	2653	-1.25	14.57	0.06
51	SLU 48	515	-31	2822	16.74	13.57	0.11
51	SLU 49	548	-23	2741	6.19	14.49	0.08
51	SLU 50	514	-31	2812	16.6	13.53	0.11
51	SLU 51	546	-23	2731	6.05	14.45	0.08
51	SLU 52	580	-20	2938	-0.06	15.33	0.07
51	SLU 53	545	-33	3107	17.92	14.33	0.11
51	SLU 54	578	-26	3026	7.37	15.25	0.09
51	SLU 55	598	-20	2962	0.2	15.83	0.07
51	SLU 56	563	-34	3131	18.18	14.82	0.12
51	SLU 57	596	-26	3050	7.63	15.74	0.09
51	SLU 58	562	-34	3121	18.05	14.78	0.12
51	SLU 59	594	-26	3040	7.5	15.7	0.09
51	SLU 60	546	-34	3206	18.14	14.34	0.12
51	SLU 61	579	-26	3125	7.59	15.26	0.09
51	SLU 62	564	-34	3230	18.4	14.83	0.12
51	SLU 63	597	-27	3148	7.85	15.75	0.09
51	SLU 64	525	-32	3023	17.53	13.78	0.11
51	SLU 65	579	-20	2887	-0.05	15.32	0.07
51	SLU 66	544	-33	3056	17.93	14.31	0.11
51	SLU 67	577	-25	2975	7.38	15.23	0.09
51	SLU 68	597	-20	2911	0.21	15.81	0.07
51	SLU 69	562	-34	3080	18.19	14.8	0.12
51	SLU 70	595	-26	2999	7.65	15.72	0.09
51	SLU 71	561	-33	3070	18.06	14.77	0.11
51	SLU 72	593	-26	2989	7.51	15.69	0.09
51	SLU 73	627	-23	3196	1.4	16.57	0.08
51	SLU 74	592	-36	3365	19.38	15.56	0.12
51	SLU 75	625	-28	3284	8.83	16.48	0.1
51	SLU 76	645	-23	3220	1.66	17.06	0.08
51	SLU 77	610	-37	3389	19.64	16.05	0.13
51	SLU 78	643	-29	3307	9.09	16.97	0.1
51	SLU 79	609	-36	3379	19.51	16.02	0.12
51	SLU 80	641	-29	3298	8.96	16.94	0.1
51	SLU 81	594	-37	3464	19.6	15.57	0.13
51	SLU 82	626	-29	3382	9.05	16.49	0.1
51	SLU 83	611	-37	3487	19.86	16.06	0.13
51	SLU 84	644	-29	3406	9.31	16.98	0.1
51	SLE RA 1	394	-24	2269	13.17	10.33	0.08
51	SLE RA 2	430	-16	2178	1.44	11.35	0.05
51	SLE RA 3	406	-25	2291	13.43	10.68	0.09
51	SLE RA 4	428	-20	2237	6.4	11.3	0.07
51	SLE RA 5	442	-16	2194	1.62	11.68	0.06
51	SLE RA 6	418	-25	2307	13.61	11.01	0.09
51	SLE RA 7	440	-20	2253	6.57	11.62	0.07
51	SLE RA 8	417	-25	2300	13.52	10.99	0.09
51	SLE RA 9	439	-20	2246	6.48	11.6	0.07
51	SLE RA 10	462	-18	2384	2.41	12.19	0.06
51	SLE RA 11	438	-27	2497	14.4	11.52	0.09
51	SLE RA 12	460	-22	2442	7.36	12.13	0.07
51	SLE RA 13	474	-18	2400	2.58	12.52	0.06
51	SLE RA 14	450	-27	2512	14.57	11.84	0.09
51	SLE RA 15	472	-22	2458	7.54	12.46	0.08
51	SLE RA 16	449	-27	2506	14.48	11.82	0.09
51	SLE RA 17	471	-22	2452	7.45	12.43	0.07
51	SLE RA 18	439	-27	2563	14.54	11.52	0.09
51	SLE RA 19	461	-22	2508	7.51	12.14	0.08
51	SLE RA 20	451	-27	2578	14.72	11.85	0.09
51	SLE RA 21	473	-22	2524	7.69	12.46	0.08
51	SLE FR 1	394	-24	2269	13.17	10.33	0.08



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
51	SLE FR 2	401	-23	2250	10.82	10.54	0.08
51	SLE FR 3	398	-24	2275	13.24	10.46	0.08
51	SLE FR 4	414	-23	2339	11.23	10.89	0.08
51	SLE FR 5	412	-25	2363	13.65	10.82	0.09
51	SLE FR 6	416	-26	2416	13.85	10.93	0.09
51	SLE QP 1	394	-24	2269	13.17	10.33	0.08
51	SLE QP 2	407	-25	2357	13.58	10.69	0.09
51	SLD 1	1290	-20	2703	7.11	35.65	0.07
51	SLD 2	1290	-20	2703	7.11	35.65	0.07
51	SLD 3	1178	-48	2482	36.45	32.5	0.17
51	SLD 4	1178	-48	2482	36.45	32.5	0.17
51	SLD 5	843	19	2796	-32.86	22.96	-0.07
51	SLD 6	843	19	2796	-32.86	22.96	-0.07
51	SLD 7	467	-75	2059	64.94	12.45	0.26
51	SLD 8	467	-75	2059	64.94	12.45	0.26
51	SLD 9	347	24	2655	-37.78	8.92	-0.08
51	SLD 10	347	24	2655	-37.78	8.92	-0.08
51	SLD 11	-29	-69	1917	60.02	-1.58	0.24
51	SLD 12	-29	-69	1917	60.02	-1.58	0.24
51	SLD 13	-363	-2	2232	-9.29	-11.13	0.01
51	SLD 14	-363	-2	2232	-9.29	-11.13	0.01
51	SLD 15	-476	-30	2011	20.05	-14.28	0.1
51	SLD 16	-476	-30	2011	20.05	-14.28	0.1
51	SLV 1	2470	-11	3176	-3.2	68.99	0.04
51	SLV 2	2470	-11	3176	-3.2	68.99	0.04
51	SLV 3	2202	-83	2639	71.66	61.49	0.29
51	SLV 4	2202	-83	2639	71.66	61.49	0.29
51	SLV 5	1433	87	3417	-105	39.55	-0.3
51	SLV 6	1433	87	3417	-105	39.55	-0.3
51	SLV 7	539	-151	1626	144.54	14.56	0.52
51	SLV 8	539	-151	1626	144.54	14.56	0.52
51	SLV 9	276	100	3087	-117.39	6.82	-0.35
51	SLV 10	276	100	3087	-117.39	6.82	-0.35
51	SLV 11	-618	-138	1296	132.15	-18.18	0.48
51	SLV 12	-618	-138	1296	132.15	-18.18	0.48
51	SLV 13	-1387	33	2075	-44.5	-40.11	-0.11
51	SLV 14	-1387	33	2075	-44.5	-40.11	-0.11
51	SLV 15	-1655	-39	1537	30.36	-47.61	0.13
51	SLV 16	-1655	-39	1537	30.36	-47.61	0.13
52	SLU 1	337	-25	2400	13.68	9.1	0.09
52	SLU 2	429	-16	2276	-1.16	11.63	0.05
52	SLU 3	356	-26	2439	14.1	9.61	0.09
52	SLU 4	411	-20	2364	5.2	11.13	0.07
52	SLU 5	446	-16	2303	-0.88	12.11	0.05
52	SLU 6	373	-27	2466	14.38	10.09	0.1
52	SLU 7	428	-21	2391	5.48	11.61	0.07
52	SLU 8	372	-26	2454	14.24	10.06	0.09
52	SLU 9	427	-21	2379	5.34	11.58	0.07
52	SLU 10	467	-19	2612	0.47	12.65	0.06
52	SLU 11	394	-29	2775	15.73	10.64	0.11
52	SLU 12	449	-24	2700	6.83	12.15	0.08
52	SLU 13	485	-19	2639	0.75	13.14	0.07
52	SLU 14	411	-30	2802	16.01	11.12	0.11
52	SLU 15	466	-24	2727	7.11	12.63	0.08
52	SLU 16	410	-30	2790	15.87	11.09	0.11
52	SLU 17	465	-24	2715	6.97	12.61	0.08
52	SLU 18	392	-30	2880	16.01	10.56	0.11
52	SLU 19	447	-24	2805	7.11	12.08	0.08
52	SLU 20	409	-31	2907	16.29	11.05	0.11
52	SLU 21	464	-25	2832	7.39	12.56	0.09
52	SLU 22	376	-29	2684	15.3	10.15	0.1
52	SLU 23	468	-19	2559	0.46	12.68	0.06
52	SLU 24	395	-29	2722	15.72	10.66	0.11
52	SLU 25	450	-23	2648	6.82	12.18	0.08
52	SLU 26	485	-19	2586	0.74	13.16	0.07
52	SLU 27	412	-30	2749	16	11.14	0.11
52	SLU 28	467	-24	2675	7.1	12.66	0.08
52	SLU 29	411	-30	2738	15.86	11.11	0.11
52	SLU 30	466	-24	2663	6.95	12.63	0.08
52	SLU 31	506	-22	2895	2.09	13.7	0.08
52	SLU 32	433	-33	3058	17.35	11.68	0.12
52	SLU 33	488	-27	2984	8.45	13.2	0.09
52	SLU 34	523	-22	2922	2.37	14.18	0.08
52	SLU 35	450	-33	3085	17.63	12.16	0.12
52	SLU 36	505	-27	3011	8.72	13.68	0.1
52	SLU 37	449	-33	3074	17.49	12.13	0.12
52	SLU 38	504	-27	2999	8.58	13.65	0.09
52	SLU 39	431	-33	3164	17.63	11.61	0.12
52	SLU 40	486	-27	3089	8.72	13.13	0.1
52	SLU 41	448	-34	3191	17.91	12.09	0.12
52	SLU 42	503	-28	3116	9	13.61	0.1
52	SLU 43	425	-32	3023	17.23	11.47	0.11
52	SLU 44	517	-22	2898	2.39	14	0.08
52	SLU 45	444	-33	3062	17.65	11.98	0.12
52	SLU 46	499	-27	2987	8.75	13.5	0.09
52	SLU 47	534	-23	2925	2.67	14.48	0.08
52	SLU 48	461	-33	3089	17.93	12.46	0.12
52	SLU 49	516	-27	3014	9.03	13.98	0.1
52	SLU 50	460	-33	3077	17.79	12.44	0.12
52	SLU 51	515	-27	3002	8.89	13.95	0.1



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
52	SLU 52	555	-25	3234	4.02	15.03	0.09
52	SLU 53	482	-36	3398	19.28	13.01	0.13
52	SLU 54	537	-30	3323	10.38	14.53	0.11
52	SLU 55	572	-26	3261	4.3	15.51	0.09
52	SLU 56	499	-37	3425	19.56	13.49	0.13
52	SLU 57	554	-31	3350	10.66	15.01	0.11
52	SLU 58	498	-36	3413	19.42	13.46	0.13
52	SLU 59	553	-30	3338	10.51	14.98	0.11
52	SLU 60	480	-37	3503	19.56	12.94	0.13
52	SLU 61	535	-31	3428	10.66	14.45	0.11
52	SLU 62	497	-37	3530	19.84	13.42	0.13
52	SLU 63	552	-31	3455	10.94	14.93	0.11
52	SLU 64	464	-35	3306	18.85	12.52	0.13
52	SLU 65	556	-25	3182	4.01	15.05	0.09
52	SLU 66	483	-36	3345	19.27	13.03	0.13
52	SLU 67	538	-30	3271	10.37	14.55	0.11
52	SLU 68	573	-26	3209	4.29	15.53	0.09
52	SLU 69	500	-36	3372	19.55	13.51	0.13
52	SLU 70	555	-30	3298	10.65	15.03	0.11
52	SLU 71	498	-36	3360	19.41	13.48	0.13
52	SLU 72	554	-30	3286	10.5	15	0.11
52	SLU 73	594	-28	3518	5.64	16.07	0.1
52	SLU 74	521	-39	3681	20.9	14.05	0.14
52	SLU 75	576	-33	3607	12	15.57	0.12
52	SLU 76	611	-29	3545	5.92	16.55	0.1
52	SLU 77	538	-40	3708	21.18	14.54	0.14
52	SLU 78	593	-34	3634	12.27	16.05	0.12
52	SLU 79	537	-39	3696	21.04	14.51	0.14
52	SLU 80	592	-33	3622	12.13	16.02	0.12
52	SLU 81	519	-40	3786	21.18	13.98	0.14
52	SLU 82	574	-34	3712	12.27	15.5	0.12
52	SLU 83	536	-40	3813	21.46	14.46	0.14
52	SLU 84	591	-34	3739	12.55	15.98	0.12
52	SLE RA 1	349	-26	2481	14.14	9.4	0.09
52	SLE RA 2	410	-20	2398	4.25	11.09	0.07
52	SLE RA 3	361	-27	2507	14.42	9.74	0.1
52	SLE RA 4	398	-23	2457	8.49	10.75	0.08
52	SLE RA 5	421	-20	2416	4.44	11.41	0.07
52	SLE RA 6	372	-27	2525	14.61	10.06	0.1
52	SLE RA 7	409	-23	2475	8.67	11.07	0.08
52	SLE RA 8	371	-27	2517	14.52	10.04	0.1
52	SLE RA 9	408	-23	2467	8.58	11.05	0.08
52	SLE RA 10	435	-22	2622	5.34	11.77	0.08
52	SLE RA 11	386	-29	2731	15.51	10.42	0.1
52	SLE RA 12	423	-25	2681	9.58	11.43	0.09
52	SLE RA 13	447	-22	2640	5.52	12.09	0.08
52	SLE RA 14	398	-29	2749	15.7	10.74	0.11
52	SLE RA 15	434	-25	2699	9.76	11.76	0.09
52	SLE RA 16	397	-29	2741	15.6	10.72	0.1
52	SLE RA 17	434	-25	2691	9.67	11.74	0.09
52	SLE RA 18	385	-29	2801	15.7	10.38	0.11
52	SLE RA 19	422	-25	2751	9.76	11.39	0.09
52	SLE RA 20	396	-30	2819	15.88	10.7	0.11
52	SLE RA 21	433	-26	2769	9.95	11.71	0.09
52	SLE FR 1	349	-26	2481	14.14	9.4	0.09
52	SLE FR 2	361	-25	2464	12.17	9.74	0.09
52	SLE FR 3	353	-26	2488	14.22	9.53	0.09
52	SLE FR 4	372	-26	2561	12.63	10.03	0.09
52	SLE FR 5	364	-27	2584	14.68	9.82	0.1
52	SLE FR 6	367	-28	2641	14.92	9.89	0.1
52	SLE QP 1	349	-26	2481	14.14	9.4	0.09
52	SLE QP 2	360	-27	2577	14.61	9.69	0.1
52	SLD 1	1227	-47	2877	9.27	34.8	0.08
52	SLD 2	1227	-47	2877	9.27	34.8	0.08
52	SLD 3	1113	-23	2644	34.7	31.61	0.17
52	SLD 4	1113	-23	2644	34.7	31.61	0.17
52	SLD 5	793	-69	3020	-25.56	22.07	-0.04
52	SLD 6	793	-69	3020	-25.56	22.07	-0.04
52	SLD 7	412	10	2245	59.21	11.42	0.26
52	SLD 8	412	10	2245	59.21	11.42	0.26
52	SLD 9	307	-64	2910	-29.99	7.96	-0.06
52	SLD 10	307	-64	2910	-29.99	7.96	-0.06
52	SLD 11	-74	15	2135	54.78	-2.68	0.24
52	SLD 12	-74	15	2135	54.78	-2.68	0.24
52	SLD 13	-394	-31	2510	-5.48	-12.22	0.02
52	SLD 14	-394	-31	2510	-5.48	-12.22	0.02
52	SLD 15	-508	-7	2278	19.95	-15.41	0.11
52	SLD 16	-508	-7	2278	19.95	-15.41	0.11
52	SLV 1	2386	-77	3283	0.66	68.32	0.06
52	SLV 2	2386	-77	3283	0.66	68.32	0.06
52	SLV 3	2113	-17	2728	65.5	60.7	0.29
52	SLV 4	2113	-17	2728	65.5	60.7	0.29
52	SLV 5	1382	-133	3630	-87.92	38.84	-0.26
52	SLV 6	1382	-133	3630	-87.92	38.84	-0.26
52	SLV 7	471	67	1781	128.22	13.43	0.5
52	SLV 8	471	67	1781	128.22	13.43	0.5
52	SLV 9	248	-121	3373	-99	5.95	-0.3
52	SLV 10	248	-121	3373	-99	5.95	-0.3
52	SLV 11	-663	79	1524	117.13	-19.45	0.45
52	SLV 12	-663	79	1524	117.13	-19.45	0.45



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
52	SLV 13	-1394	-38	2426	-36.28	-41.31	-0.09
52	SLV 14	-1394	-38	2426	-36.28	-41.31	-0.09
52	SLV 15	-1667	23	1872	28.56	-48.93	0.14
52	SLV 16	-1667	23	1872	28.56	-48.93	0.14
53	SLU 1	279	-25	2610	13.26	7.29	0.11
53	SLU 2	403	-19	2519	1.78	10.73	0.08
53	SLU 3	296	-26	2654	13.66	7.75	0.12
53	SLU 4	370	-22	2600	6.78	9.81	0.1
53	SLU 5	419	-19	2549	2.05	11.18	0.08
53	SLU 6	312	-26	2684	13.93	8.19	0.12
53	SLU 7	386	-22	2630	7.05	10.26	0.1
53	SLU 8	311	-26	2670	13.79	8.18	0.12
53	SLU 9	385	-22	2616	6.91	10.24	0.1
53	SLU 10	430	-22	2881	3.41	11.43	0.1
53	SLU 11	323	-29	3015	15.29	8.45	0.13
53	SLU 12	398	-25	2961	8.41	10.51	0.11
53	SLU 13	446	-22	2911	3.68	11.88	0.1
53	SLU 14	339	-29	3046	15.56	8.89	0.13
53	SLU 15	414	-26	2992	8.67	10.96	0.11
53	SLU 16	339	-29	3032	15.42	8.87	0.13
53	SLU 17	413	-25	2978	8.54	10.94	0.11
53	SLU 18	318	-29	3126	15.58	8.29	0.14
53	SLU 19	393	-26	3072	8.7	10.35	0.11
53	SLU 20	334	-30	3156	15.85	8.73	0.14
53	SLU 21	409	-26	3102	8.97	10.8	0.12
53	SLU 22	308	-28	2918	14.86	8.04	0.13
53	SLU 23	432	-22	2828	3.38	11.49	0.09
53	SLU 24	325	-29	2962	15.26	8.5	0.13
53	SLU 25	400	-25	2908	8.38	10.57	0.11
53	SLU 26	448	-22	2858	3.65	11.94	0.1
53	SLU 27	341	-29	2993	15.53	8.95	0.13
53	SLU 28	416	-26	2938	8.64	11.02	0.11
53	SLU 29	341	-29	2979	15.39	8.93	0.13
53	SLU 30	415	-25	2924	8.51	11	0.11
53	SLU 31	460	-25	3189	5.01	12.19	0.11
53	SLU 32	353	-32	3324	16.89	9.2	0.15
53	SLU 33	427	-28	3270	10.01	11.27	0.13
53	SLU 34	476	-26	3219	5.28	12.64	0.11
53	SLU 35	369	-32	3354	17.16	9.65	0.15
53	SLU 36	443	-29	3300	10.27	11.72	0.13
53	SLU 37	368	-32	3340	17.02	9.63	0.15
53	SLU 38	442	-29	3286	10.14	11.7	0.13
53	SLU 39	348	-33	3435	17.18	9.04	0.15
53	SLU 40	422	-29	3380	10.3	11.11	0.13
53	SLU 41	364	-33	3465	17.45	9.49	0.15
53	SLU 42	438	-29	3411	10.57	11.56	0.13
53	SLU 43	353	-31	3287	16.69	9.21	0.14
53	SLU 44	477	-25	3196	5.21	12.66	0.11
53	SLU 45	369	-32	3331	17.09	9.67	0.15
53	SLU 46	444	-28	3277	10.21	11.74	0.13
53	SLU 47	493	-26	3227	5.48	13.1	0.11
53	SLU 48	386	-33	3361	17.36	10.12	0.15
53	SLU 49	460	-29	3307	10.47	12.19	0.13
53	SLU 50	385	-32	3347	17.22	10.1	0.15
53	SLU 51	459	-29	3293	10.34	12.17	0.13
53	SLU 52	504	-28	3558	6.84	13.36	0.12
53	SLU 53	397	-35	3693	18.72	10.37	0.16
53	SLU 54	471	-32	3638	11.84	12.44	0.14
53	SLU 55	520	-29	3588	7.11	13.8	0.13
53	SLU 56	413	-36	3723	18.99	10.82	0.16
53	SLU 57	487	-32	3669	12.1	12.88	0.14
53	SLU 58	412	-36	3709	18.85	10.8	0.16
53	SLU 59	487	-32	3655	11.97	12.87	0.14
53	SLU 60	392	-36	3803	19.01	10.21	0.16
53	SLU 61	466	-32	3749	12.13	12.28	0.14
53	SLU 62	408	-36	3834	19.28	10.66	0.17
53	SLU 63	482	-33	3779	12.4	12.72	0.15
53	SLU 64	382	-34	3595	18.29	9.97	0.16
53	SLU 65	506	-28	3505	6.81	13.42	0.12
53	SLU 66	399	-35	3639	18.69	10.43	0.16
53	SLU 67	473	-31	3585	11.81	12.5	0.14
53	SLU 68	522	-29	3535	7.08	13.86	0.13
53	SLU 69	415	-36	3670	18.96	10.88	0.16
53	SLU 70	489	-32	3615	12.07	12.94	0.14
53	SLU 71	414	-35	3656	18.82	10.86	0.16
53	SLU 72	489	-32	3601	11.94	12.93	0.14
53	SLU 73	533	-31	3866	8.44	14.12	0.14
53	SLU 74	426	-38	4001	20.32	11.13	0.18
53	SLU 75	501	-35	3947	13.43	13.2	0.16
53	SLU 76	550	-32	3897	8.71	14.56	0.14
53	SLU 77	442	-39	4031	20.59	11.57	0.18
53	SLU 78	517	-35	3977	13.7	13.64	0.16
53	SLU 79	442	-39	4017	20.45	11.56	0.18
53	SLU 80	516	-35	3963	13.57	13.63	0.16
53	SLU 81	421	-39	4112	20.61	10.97	0.18
53	SLU 82	496	-35	4057	13.73	13.04	0.16
53	SLU 83	437	-40	4142	20.88	11.41	0.18
53	SLU 84	512	-36	4088	14	13.48	0.16
53	SLE RA 1	287	-26	2698	13.71	7.5	0.12
53	SLE RA 2	370	-22	2637	6.07	9.8	0.1



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
53	SLE RA 3	299	-26	2727	13.98	7.81	0.12
53	SLE RA 4	348	-24	2691	9.39	9.19	0.11
53	SLE RA 5	381	-22	2658	6.24	10.1	0.1
53	SLE RA 6	309	-27	2747	14.16	8.11	0.12
53	SLE RA 7	359	-24	2711	9.57	9.49	0.11
53	SLE RA 8	309	-26	2738	14.07	8.1	0.12
53	SLE RA 9	358	-24	2702	9.48	9.47	0.11
53	SLE RA 10	388	-24	2879	7.15	10.27	0.11
53	SLE RA 11	317	-28	2968	15.07	8.28	0.13
53	SLE RA 12	367	-26	2932	10.48	9.65	0.12
53	SLE RA 13	399	-24	2899	7.33	10.56	0.11
53	SLE RA 14	328	-29	2988	15.25	8.57	0.13
53	SLE RA 15	377	-26	2952	10.66	9.95	0.12
53	SLE RA 16	327	-29	2979	15.16	8.56	0.13
53	SLE RA 17	377	-26	2943	10.57	9.94	0.12
53	SLE RA 18	314	-29	3042	15.27	8.17	0.13
53	SLE RA 19	363	-26	3006	10.68	9.55	0.12
53	SLE RA 20	324	-29	3062	15.44	8.47	0.13
53	SLE RA 21	374	-27	3026	10.85	9.84	0.12
53	SLE FR 1	287	-26	2698	13.71	7.5	0.12
53	SLE FR 2	304	-25	2686	12.18	7.96	0.11
53	SLE FR 3	292	-26	2706	13.79	7.62	0.12
53	SLE FR 4	312	-26	2789	12.65	8.16	0.12
53	SLE FR 5	300	-27	2809	14.25	7.82	0.12
53	SLE FR 6	301	-27	2870	14.49	7.84	0.13
53	SLE QP 1	287	-26	2698	13.71	7.5	0.12
53	SLE QP 2	295	-27	2801	14.18	7.7	0.12
53	SLD 1	1151	-29	3057	10.16	32.16	0.14
53	SLD 2	1151	-29	3057	10.16	32.16	0.14
53	SLD 3	1031	-11	2792	30.45	28.75	0.05
53	SLD 4	1031	-11	2792	30.45	28.75	0.05
53	SLD 5	733	-54	3278	-17.81	20.22	0.26
53	SLD 6	733	-54	3278	-17.81	20.22	0.26
53	SLD 7	334	5	2398	49.84	8.84	-0.04
53	SLD 8	334	5	2398	49.84	8.84	-0.04
53	SLD 9	256	-58	3204	-21.48	6.57	0.28
53	SLD 10	256	-58	3204	-21.48	6.57	0.28
53	SLD 11	-143	1	2324	46.16	-4.81	-0.02
53	SLD 12	-143	1	2324	46.16	-4.81	-0.02
53	SLD 13	-440	-42	2810	-2.09	-13.34	0.2
53	SLD 14	-440	-42	2810	-2.09	-13.34	0.2
53	SLD 15	-560	-24	2546	18.2	-16.75	0.11
53	SLD 16	-560	-24	2546	18.2	-16.75	0.11
53	SLV 1	2293	-33	3401	3.61	64.84	0.16
53	SLV 2	2293	-33	3401	3.61	64.84	0.16
53	SLV 3	2005	12	2778	55.28	56.62	-0.07
53	SLV 4	2005	12	2778	55.28	56.62	-0.07
53	SLV 5	1331	-97	3926	-67.37	37.31	0.48
53	SLV 6	1331	-97	3926	-67.37	37.31	0.48
53	SLV 7	372	53	1849	104.89	9.91	-0.28
53	SLV 8	372	53	1849	104.89	9.91	-0.28
53	SLV 9	219	-106	3753	-76.53	5.5	0.53
53	SLV 10	219	-106	3753	-76.53	5.5	0.53
53	SLV 11	-741	43	1676	95.73	-21.91	-0.23
53	SLV 12	-741	43	1676	95.73	-21.91	-0.23
53	SLV 13	-1415	-65	2824	-26.92	-41.21	0.31
53	SLV 14	-1415	-65	2824	-26.92	-41.21	0.31
53	SLV 15	-1702	-20	2201	24.75	-49.43	0.09
53	SLV 16	-1702	-20	2201	24.75	-49.43	0.09
54	SLU 1	209	-21	2819	10.97	5.52	0.16
54	SLU 2	354	-19	2783	3.13	9.58	0.13
54	SLU 3	224	-22	2869	11.3	5.95	0.16
54	SLU 4	311	-20	2847	6.6	8.38	0.15
54	SLU 5	369	-19	2816	3.35	10.01	0.13
54	SLU 6	239	-22	2902	11.52	6.38	0.16
54	SLU 7	326	-21	2881	6.82	8.81	0.15
54	SLU 8	239	-22	2886	11.41	6.38	0.16
54	SLU 9	326	-20	2864	6.71	8.82	0.15
54	SLU 10	371	-21	3168	4.51	9.99	0.15
54	SLU 11	241	-24	3255	12.68	6.35	0.18
54	SLU 12	328	-23	3233	7.97	8.79	0.17
54	SLU 13	386	-22	3202	4.73	10.42	0.15
54	SLU 14	256	-25	3288	12.9	6.79	0.18
54	SLU 15	343	-23	3266	8.2	9.22	0.17
54	SLU 16	256	-25	3272	12.79	6.79	0.18
54	SLU 17	343	-23	3250	8.08	9.23	0.17
54	SLU 18	233	-25	3370	12.93	6.1	0.19
54	SLU 19	320	-24	3348	8.23	8.54	0.17
54	SLU 20	248	-25	3404	13.15	6.53	0.19
54	SLU 21	335	-24	3382	8.45	8.97	0.17
54	SLU 22	229	-24	3151	12.31	6.01	0.18
54	SLU 23	374	-21	3115	4.47	10.07	0.15
54	SLU 24	244	-24	3201	12.64	6.44	0.18
54	SLU 25	331	-23	3179	7.94	8.87	0.17
54	SLU 26	389	-22	3149	4.69	10.5	0.15
54	SLU 27	259	-25	3235	12.86	6.87	0.18
54	SLU 28	346	-23	3213	8.16	9.3	0.17
54	SLU 29	259	-24	3219	12.75	6.87	0.18
54	SLU 30	346	-23	3197	8.05	9.31	0.17
54	SLU 31	390	-24	3501	5.85	10.47	0.17



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
54	SLU 32	260	-27	3587	14.02	6.84	0.2
54	SLU 33	347	-26	3565	9.31	9.28	0.19
54	SLU 34	405	-25	3535	6.07	10.91	0.17
54	SLU 35	275	-27	3621	14.24	7.27	0.2
54	SLU 36	362	-26	3599	9.53	9.71	0.19
54	SLU 37	275	-27	3604	14.12	7.28	0.2
54	SLU 38	362	-26	3583	9.42	9.71	0.19
54	SLU 39	252	-28	3702	14.27	6.59	0.21
54	SLU 40	339	-26	3681	9.57	9.02	0.19
54	SLU 41	267	-28	3736	14.49	7.02	0.21
54	SLU 42	354	-27	3714	9.79	9.46	0.19
54	SLU 43	265	-26	3550	13.8	7.01	0.2
54	SLU 44	410	-24	3514	5.96	11.07	0.17
54	SLU 45	281	-27	3600	14.14	7.44	0.2
54	SLU 46	367	-26	3579	9.43	9.87	0.19
54	SLU 47	425	-25	3548	6.18	11.5	0.17
54	SLU 48	295	-27	3634	14.36	7.87	0.2
54	SLU 49	382	-26	3612	9.65	10.3	0.19
54	SLU 50	295	-27	3618	14.24	7.87	0.2
54	SLU 51	382	-26	3596	9.54	10.31	0.19
54	SLU 52	427	-27	3900	7.34	11.47	0.19
54	SLU 53	297	-30	3986	15.51	7.84	0.22
54	SLU 54	384	-28	3964	10.81	10.28	0.21
54	SLU 55	442	-27	3934	7.56	11.91	0.19
54	SLU 56	312	-30	4020	15.73	8.27	0.22
54	SLU 57	399	-29	3998	11.03	10.71	0.21
54	SLU 58	312	-30	4004	15.62	8.28	0.22
54	SLU 59	399	-29	3982	10.91	10.72	0.21
54	SLU 60	289	-30	4102	15.76	7.59	0.23
54	SLU 61	376	-29	4080	11.06	10.03	0.21
54	SLU 62	304	-31	4135	15.99	8.02	0.23
54	SLU 63	391	-29	4114	11.28	10.46	0.21
54	SLU 64	285	-29	3883	15.14	7.5	0.22
54	SLU 65	430	-27	3847	7.3	11.56	0.19
54	SLU 66	300	-30	3933	15.48	7.92	0.22
54	SLU 67	387	-28	3911	10.77	10.36	0.21
54	SLU 68	445	-27	3880	7.52	11.99	0.19
54	SLU 69	315	-30	3966	15.7	8.36	0.22
54	SLU 70	402	-29	3945	10.99	10.79	0.21
54	SLU 71	315	-30	3950	15.58	8.36	0.22
54	SLU 72	402	-29	3928	10.88	10.8	0.21
54	SLU 73	446	-29	4233	8.68	11.96	0.21
54	SLU 74	316	-32	4319	16.85	8.33	0.24
54	SLU 75	403	-31	4297	12.15	10.77	0.23
54	SLU 76	461	-30	4266	8.9	12.39	0.21
54	SLU 77	331	-33	4352	17.07	8.76	0.24
54	SLU 78	418	-31	4331	12.37	11.2	0.23
54	SLU 79	331	-33	4336	16.96	8.77	0.24
54	SLU 80	418	-31	4314	12.25	11.2	0.23
54	SLU 81	308	-33	4434	17.1	8.08	0.25
54	SLU 82	395	-32	4412	12.4	10.51	0.23
54	SLU 83	323	-33	4468	17.32	8.51	0.25
54	SLU 84	410	-32	4446	12.62	10.95	0.23
54	SLE RA 1	215	-22	2914	11.35	5.66	0.16
54	SLE RA 2	311	-20	2890	6.13	8.37	0.15
54	SLE RA 3	225	-22	2947	11.58	5.94	0.17
54	SLE RA 4	283	-21	2933	8.44	7.57	0.16
54	SLE RA 5	321	-21	2912	6.27	8.65	0.15
54	SLE RA 6	235	-22	2969	11.72	6.23	0.17
54	SLE RA 7	293	-22	2955	8.59	7.86	0.16
54	SLE RA 8	235	-22	2959	11.65	6.24	0.17
54	SLE RA 9	293	-21	2944	8.51	7.86	0.16
54	SLE RA 10	323	-22	3147	7.04	8.64	0.16
54	SLE RA 11	236	-24	3204	12.49	6.22	0.18
54	SLE RA 12	294	-23	3190	9.36	7.84	0.17
54	SLE RA 13	332	-22	3169	7.19	8.92	0.16
54	SLE RA 14	246	-24	3227	12.64	6.5	0.18
54	SLE RA 15	304	-23	3212	9.5	8.13	0.17
54	SLE RA 16	246	-24	3216	12.56	6.51	0.18
54	SLE RA 17	304	-23	3201	9.43	8.13	0.17
54	SLE RA 18	231	-24	3281	12.66	6.05	0.18
54	SLE RA 19	289	-23	3267	9.53	7.67	0.17
54	SLE RA 20	241	-25	3304	12.81	6.34	0.18
54	SLE RA 21	299	-24	3289	9.67	7.96	0.17
54	SLE FR 1	215	-22	2914	11.35	5.66	0.16
54	SLE FR 2	234	-21	2909	10.31	6.2	0.16
54	SLE FR 3	219	-22	2923	11.41	5.78	0.16
54	SLE FR 4	239	-22	3019	10.7	6.32	0.16
54	SLE FR 5	224	-23	3033	11.8	5.89	0.17
54	SLE FR 6	223	-23	3098	12.01	5.85	0.17
54	SLE QP 1	215	-22	2914	11.35	5.66	0.16
54	SLE QP 2	220	-23	3024	11.75	5.78	0.17
54	SLD 1	1088	-23	3066	-0.01	31.88	0.18
54	SLD 2	1088	-23	3066	-0.01	31.88	0.18
54	SLD 3	964	-12	2755	14.35	28.28	0.08
54	SLD 4	964	-12	2755	14.35	28.28	0.08
54	SLD 5	668	-39	3509	-13.55	19.07	0.31
54	SLD 6	668	-39	3509	-13.55	19.07	0.31
54	SLD 7	255	-3	2472	34.3	7.07	0
54	SLD 8	255	-3	2472	34.3	7.07	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
54	SLD 9	184	-42	3577	-10.81	4.48	0.34
54	SLD 10	184	-42	3577	-10.81	4.48	0.34
54	SLD 11	-229	-6	2540	37.04	-7.51	0.02
54	SLD 12	-229	-6	2540	37.04	-7.51	0.02
54	SLD 13	-525	-33	3293	9.14	-16.73	0.25
54	SLD 14	-525	-33	3293	9.14	-16.73	0.25
54	SLD 15	-649	-22	2982	23.5	-20.33	0.16
54	SLD 16	-649	-22	2982	23.5	-20.33	0.16
54	SLV 1	2250	-25	3123	-17.83	66.79	0.19
54	SLV 2	2250	-25	3123	-17.83	66.79	0.19
54	SLV 3	1950	3	2392	18.66	58.06	-0.04
54	SLV 4	1950	3	2392	18.66	58.06	-0.04
54	SLV 5	1284	-65	4163	-52.47	37.32	0.53
54	SLV 6	1284	-65	4163	-52.47	37.32	0.53
54	SLV 7	283	27	1725	69.16	8.22	-0.25
54	SLV 8	283	27	1725	69.16	8.22	-0.25
54	SLV 9	156	-72	4323	-45.67	3.33	0.59
54	SLV 10	156	-72	4323	-45.67	3.33	0.59
54	SLV 11	-845	20	1885	75.96	-25.76	-0.2
54	SLV 12	-845	20	1885	75.96	-25.76	-0.2
54	SLV 13	-1510	-48	3657	4.83	-46.51	0.38
54	SLV 14	-1510	-48	3657	4.83	-46.51	0.38
54	SLV 15	-1811	-20	2925	41.32	-55.24	0.15
54	SLV 16	-1811	-20	2925	41.32	-55.24	0.15
55	SLU 1	115	-10	3035	6.49	4.09	0.14
55	SLU 2	276	-12	3082	2.06	9.65	0.13
55	SLU 3	128	-11	3092	6.69	4.53	0.14
55	SLU 4	224	-12	3119	4.03	7.87	0.14
55	SLU 5	289	-12	3119	2.2	10.12	0.14
55	SLU 6	142	-11	3129	6.82	5	0.15
55	SLU 7	238	-12	3157	4.16	8.34	0.14
55	SLU 8	143	-11	3110	6.75	5.04	0.14
55	SLU 9	239	-12	3138	4.1	8.37	0.14
55	SLU 10	280	-14	3492	2.89	9.79	0.15
55	SLU 11	132	-12	3502	7.51	4.67	0.16
55	SLU 12	228	-13	3529	4.86	8	0.16
55	SLU 13	294	-14	3529	3.02	10.26	0.15
55	SLU 14	146	-12	3539	7.64	5.14	0.16
55	SLU 15	242	-13	3567	4.99	8.48	0.16
55	SLU 16	147	-12	3520	7.58	5.17	0.16
55	SLU 17	243	-13	3548	4.92	8.51	0.16
55	SLU 18	121	-12	3621	7.67	4.29	0.17
55	SLU 19	218	-13	3649	5.01	7.62	0.16
55	SLU 20	135	-13	3659	7.8	4.76	0.17
55	SLU 21	231	-14	3686	5.14	8.09	0.16
55	SLU 22	123	-12	3393	7.29	4.34	0.16
55	SLU 23	283	-13	3439	2.86	9.9	0.15
55	SLU 24	135	-12	3449	7.49	4.78	0.16
55	SLU 25	232	-13	3476	4.83	8.12	0.16
55	SLU 26	297	-14	3476	2.99	10.37	0.15
55	SLU 27	149	-12	3486	7.62	5.25	0.16
55	SLU 28	245	-13	3514	4.96	8.59	0.16
55	SLU 29	150	-12	3467	7.55	5.29	0.16
55	SLU 30	246	-13	3495	4.89	8.62	0.16
55	SLU 31	287	-15	3849	3.69	10.04	0.17
55	SLU 32	139	-13	3859	8.31	4.92	0.18
55	SLU 33	236	-14	3886	5.65	8.25	0.18
55	SLU 34	301	-15	3886	3.82	10.51	0.17
55	SLU 35	153	-14	3896	8.44	5.39	0.18
55	SLU 36	249	-15	3924	5.78	8.73	0.18
55	SLU 37	154	-14	3877	8.37	5.42	0.18
55	SLU 38	250	-15	3905	5.72	8.76	0.18
55	SLU 39	129	-14	3978	8.46	4.54	0.18
55	SLU 40	225	-15	4006	5.81	7.87	0.18
55	SLU 41	142	-14	4016	8.59	5.01	0.19
55	SLU 42	238	-15	4043	5.94	8.35	0.18
55	SLU 43	148	-13	3824	8.16	5.23	0.17
55	SLU 44	308	-15	3870	3.74	10.79	0.17
55	SLU 45	160	-13	3880	8.36	5.67	0.18
55	SLU 46	256	-14	3908	5.71	9.01	0.18
55	SLU 47	322	-15	3907	3.87	11.26	0.17
55	SLU 48	174	-14	3917	8.49	6.15	0.18
55	SLU 49	270	-15	3945	5.84	9.48	0.18
55	SLU 50	175	-14	3898	8.43	6.18	0.18
55	SLU 51	271	-15	3926	5.77	9.51	0.18
55	SLU 52	312	-16	4280	4.56	10.93	0.19
55	SLU 53	164	-15	4290	9.19	5.81	0.2
55	SLU 54	261	-16	4318	6.53	9.14	0.19
55	SLU 55	326	-16	4317	4.69	11.4	0.19
55	SLU 56	178	-15	4327	9.32	6.28	0.2
55	SLU 57	274	-16	4355	6.66	9.62	0.2
55	SLU 58	179	-15	4308	9.25	6.31	0.2
55	SLU 59	275	-16	4336	6.59	9.65	0.2
55	SLU 60	153	-15	4409	9.34	5.43	0.2
55	SLU 61	250	-16	4437	6.68	8.76	0.2
55	SLU 62	167	-15	4447	9.47	5.9	0.2
55	SLU 63	263	-16	4475	6.82	9.24	0.2
55	SLU 64	155	-14	4181	8.96	5.48	0.19
55	SLU 65	315	-16	4227	4.54	11.04	0.19
55	SLU 66	167	-15	4237	9.16	5.92	0.2



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
55	SLU 67	264	-16	4265	6.5	9.26	0.19
55	SLU 68	329	-16	4265	4.67	11.51	0.19
55	SLU 69	181	-15	4274	9.29	6.4	0.2
55	SLU 70	277	-16	4302	6.63	9.73	0.2
55	SLU 71	182	-15	4255	9.22	6.43	0.2
55	SLU 72	278	-16	4283	6.57	9.76	0.19
55	SLU 73	319	-18	4637	5.36	11.18	0.2
55	SLU 74	172	-16	4647	9.98	6.06	0.21
55	SLU 75	268	-17	4675	7.33	9.4	0.21
55	SLU 76	333	-18	4675	5.49	11.65	0.21
55	SLU 77	185	-16	4684	10.11	6.53	0.22
55	SLU 78	281	-17	4712	7.46	9.87	0.21
55	SLU 79	186	-16	4665	10.05	6.57	0.22
55	SLU 80	282	-17	4693	7.39	9.9	0.21
55	SLU 81	161	-16	4766	10.14	5.68	0.22
55	SLU 82	257	-17	4794	7.48	9.01	0.22
55	SLU 83	174	-17	4804	10.27	6.15	0.22
55	SLU 84	271	-18	4832	7.61	9.49	0.22
55	SLE RA 1	117	-11	3137	6.72	4.16	0.14
55	SLE RA 2	224	-12	3168	3.77	7.87	0.14
55	SLE RA 3	126	-11	3175	6.85	4.46	0.15
55	SLE RA 4	190	-12	3193	5.08	6.68	0.14
55	SLE RA 5	233	-12	3193	3.85	8.18	0.14
55	SLE RA 6	135	-11	3200	6.94	4.77	0.15
55	SLE RA 7	199	-12	3218	5.17	6.99	0.15
55	SLE RA 8	136	-11	3187	6.89	4.79	0.15
55	SLE RA 9	200	-12	3206	5.12	7.02	0.15
55	SLE RA 10	227	-13	3442	4.32	7.96	0.15
55	SLE RA 11	129	-12	3448	7.4	4.55	0.16
55	SLE RA 12	193	-13	3467	5.63	6.77	0.16
55	SLE RA 13	236	-13	3467	4.4	8.27	0.15
55	SLE RA 14	138	-12	3473	7.49	4.86	0.16
55	SLE RA 15	202	-13	3492	5.72	7.09	0.16
55	SLE RA 16	138	-12	3461	7.44	4.88	0.16
55	SLE RA 17	202	-13	3479	5.67	7.11	0.16
55	SLE RA 18	121	-12	3528	7.5	4.29	0.16
55	SLE RA 19	186	-13	3547	5.73	6.52	0.16
55	SLE RA 20	130	-12	3553	7.59	4.61	0.16
55	SLE RA 21	195	-13	3571	5.82	6.83	0.16
55	SLE FR 1	117	-11	3137	6.72	4.16	0.14
55	SLE FR 2	139	-11	3144	6.13	4.9	0.14
55	SLE FR 3	121	-11	3147	6.75	4.29	0.14
55	SLE FR 4	140	-11	3261	6.36	4.94	0.15
55	SLE FR 5	122	-11	3265	6.99	4.33	0.15
55	SLE FR 6	119	-11	3333	7.11	4.23	0.15
55	SLE QP 1	117	-11	3137	6.72	4.16	0.14
55	SLE QP 2	119	-11	3255	6.95	4.2	0.15
55	SLD 1	1019	-9	3256	-0.04	35.65	0.16
55	SLD 2	1019	-9	3256	-0.04	35.65	0.16
55	SLD 3	886	-6	2883	8.16	30.99	0.23
55	SLD 4	886	-6	2883	8.16	30.99	0.23
55	SLD 5	589	-16	3820	-7.58	20.71	0.04
55	SLD 6	589	-16	3820	-7.58	20.71	0.04
55	SLD 7	149	-4	2578	19.75	5.16	0.29
55	SLD 8	149	-4	2578	19.75	5.16	0.29
55	SLD 9	89	-18	3931	-5.85	3.24	0.01
55	SLD 10	89	-18	3931	-5.85	3.24	0.01
55	SLD 11	-352	-6	2689	21.49	-12.31	0.26
55	SLD 12	-352	-6	2689	21.49	-12.31	0.26
55	SLD 13	-649	-16	3626	5.75	-22.58	0.06
55	SLD 14	-649	-16	3626	5.75	-22.58	0.06
55	SLD 15	-781	-13	3254	13.95	-27.25	0.14
55	SLD 16	-781	-13	3254	13.95	-27.25	0.14
55	SLV 1	2223	-7	3255	-10.54	77.76	0.17
55	SLV 2	2223	-7	3255	-10.54	77.76	0.17
55	SLV 3	1900	1	2379	10.25	66.34	0.35
55	SLV 4	1900	1	2379	10.25	66.34	0.35
55	SLV 5	1240	-22	4583	-29.82	43.59	-0.12
55	SLV 6	1240	-22	4583	-29.82	43.59	-0.12
55	SLV 7	163	5	1664	39.47	5.52	0.48
55	SLV 8	163	5	1664	39.47	5.52	0.48
55	SLV 9	74	-27	4846	-25.56	2.88	-0.19
55	SLV 10	74	-27	4846	-25.56	2.88	-0.19
55	SLV 11	-1003	0	1926	43.73	-35.18	0.42
55	SLV 12	-1003	0	1926	43.73	-35.18	0.42
55	SLV 13	-1663	-23	4130	3.66	-57.93	-0.05
55	SLV 14	-1663	-23	4130	3.66	-57.93	-0.05
55	SLV 15	-1986	-15	3254	24.45	-69.35	0.13
55	SLV 16	-1986	-15	3254	24.45	-69.35	0.13
56	SLU 1	16	4	3281	1.44	-1.96	-0.18
56	SLU 2	182	3	3463	-0.97	3.96	-0.03
56	SLU 3	26	4	3345	1.49	-1.61	-0.18
56	SLU 4	125	3	3454	0.04	1.94	-0.09
56	SLU 5	194	3	3505	-0.94	4.43	-0.03
56	SLU 6	37	4	3387	1.52	-1.15	-0.18
56	SLU 7	137	4	3496	0.07	2.41	-0.09
56	SLU 8	39	4	3365	1.5	-1.03	-0.18
56	SLU 9	139	4	3474	0.06	2.53	-0.09
56	SLU 10	176	4	3900	-0.77	3.33	-0.05
56	SLU 11	20	4	3781	1.68	-2.24	-0.2



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
56	SLU 12	119	4	3890	0.24	1.31	-0.11
56	SLU 13	188	4	3942	-0.74	3.8	-0.05
56	SLU 14	31	4	3823	1.71	-1.78	-0.21
56	SLU 15	131	4	3932	0.27	1.78	-0.12
56	SLU 16	33	4	3802	1.69	-1.66	-0.2
56	SLU 17	133	4	3911	0.25	1.9	-0.11
56	SLU 18	8	4	3905	1.72	-2.86	-0.21
56	SLU 19	107	4	4014	0.27	0.69	-0.12
56	SLU 20	19	4	3947	1.75	-2.4	-0.21
56	SLU 21	119	4	4056	0.31	1.16	-0.12
56	SLU 22	13	4	3666	1.62	-2.48	-0.2
56	SLU 23	179	4	3848	-0.78	3.45	-0.05
56	SLU 24	22	4	3729	1.67	-2.13	-0.2
56	SLU 25	122	4	3838	0.23	1.42	-0.11
56	SLU 26	190	4	3890	-0.75	3.91	-0.05
56	SLU 27	34	4	3771	1.7	-1.66	-0.21
56	SLU 28	133	4	3880	0.26	1.89	-0.12
56	SLU 29	35	4	3749	1.68	-1.54	-0.2
56	SLU 30	135	4	3859	0.24	2.01	-0.11
56	SLU 31	172	4	4284	-0.59	2.82	-0.07
56	SLU 32	16	5	4165	1.86	-2.76	-0.22
56	SLU 33	115	4	4274	0.42	0.79	-0.13
56	SLU 34	184	4	4326	-0.56	3.28	-0.07
56	SLU 35	27	5	4207	1.89	-2.29	-0.23
56	SLU 36	127	4	4316	0.45	1.26	-0.14
56	SLU 37	29	5	4186	1.88	-2.17	-0.23
56	SLU 38	129	4	4295	0.43	1.38	-0.14
56	SLU 39	4	5	4289	1.9	-3.38	-0.23
56	SLU 40	103	4	4398	0.46	0.18	-0.14
56	SLU 41	15	5	4331	1.93	-2.91	-0.23
56	SLU 42	115	5	4440	0.49	0.64	-0.14
56	SLU 43	23	5	4134	1.81	-2.38	-0.22
56	SLU 44	189	4	4316	-0.6	3.55	-0.07
56	SLU 45	32	5	4197	1.85	-2.03	-0.23
56	SLU 46	132	4	4306	0.41	1.53	-0.14
56	SLU 47	200	4	4358	-0.57	4.02	-0.07
56	SLU 48	44	5	4239	1.88	-1.56	-0.23
56	SLU 49	143	5	4348	0.44	2	-0.14
56	SLU 50	46	5	4218	1.87	-1.44	-0.23
56	SLU 51	145	4	4327	0.42	2.12	-0.14
56	SLU 52	182	5	4752	-0.4	2.92	-0.09
56	SLU 53	26	5	4634	2.05	-2.66	-0.25
56	SLU 54	126	5	4743	0.61	0.9	-0.16
56	SLU 55	194	5	4794	-0.37	3.39	-0.1
56	SLU 56	37	5	4676	2.08	-2.19	-0.25
56	SLU 57	137	5	4785	0.64	1.37	-0.16
56	SLU 58	39	5	4654	2.06	-2.07	-0.25
56	SLU 59	139	5	4763	0.62	1.49	-0.16
56	SLU 60	14	5	4758	2.09	-3.28	-0.25
56	SLU 61	113	5	4867	0.64	0.28	-0.16
56	SLU 62	25	5	4799	2.12	-2.81	-0.26
56	SLU 63	125	5	4909	0.67	0.75	-0.17
56	SLU 64	19	5	4518	1.99	-2.89	-0.24
56	SLU 65	185	5	4700	-0.41	3.03	-0.09
56	SLU 66	28	5	4582	2.04	-2.54	-0.25
56	SLU 67	128	5	4691	0.59	1.01	-0.16
56	SLU 68	196	5	4742	-0.38	3.5	-0.1
56	SLU 69	40	5	4623	2.07	-2.07	-0.25
56	SLU 70	139	5	4733	0.62	1.48	-0.16
56	SLU 71	42	5	4602	2.05	-1.96	-0.25
56	SLU 72	141	5	4711	0.61	1.6	-0.16
56	SLU 73	179	5	5137	-0.22	2.4	-0.11
56	SLU 74	22	6	5018	2.23	-3.17	-0.27
56	SLU 75	122	5	5127	0.79	0.38	-0.18
56	SLU 76	190	5	5179	-0.19	2.87	-0.12
56	SLU 77	34	6	5060	2.26	-2.7	-0.27
56	SLU 78	133	5	5169	0.82	0.85	-0.18
56	SLU 79	36	6	5039	2.25	-2.59	-0.27
56	SLU 80	135	5	5148	0.8	0.97	-0.18
56	SLU 81	10	6	5142	2.27	-3.79	-0.27
56	SLU 82	110	5	5251	0.83	-0.24	-0.18
56	SLU 83	21	6	5184	2.3	-3.32	-0.28
56	SLU 84	121	5	5293	0.86	0.23	-0.19
56	SLE RA 1	15	4	3391	1.49	-2.11	-0.18
56	SLE RA 2	126	3	3512	-0.11	1.84	-0.08
56	SLE RA 3	22	4	3433	1.52	-1.88	-0.19
56	SLE RA 4	88	4	3506	0.56	0.49	-0.13
56	SLE RA 5	134	4	3540	-0.09	2.15	-0.08
56	SLE RA 6	29	4	3461	1.54	-1.57	-0.19
56	SLE RA 7	96	4	3534	0.58	0.8	-0.13
56	SLE RA 8	31	4	3447	1.53	-1.49	-0.19
56	SLE RA 9	97	4	3520	0.57	0.88	-0.13
56	SLE RA 10	122	4	3803	0.02	1.42	-0.1
56	SLE RA 11	18	4	3724	1.65	-2.3	-0.2
56	SLE RA 12	84	4	3797	0.69	0.07	-0.14
56	SLE RA 13	129	4	3831	0.04	1.73	-0.1
56	SLE RA 14	25	4	3752	1.67	-1.99	-0.2
56	SLE RA 15	92	4	3825	0.71	0.38	-0.14
56	SLE RA 16	26	4	3738	1.66	-1.91	-0.2
56	SLE RA 17	93	4	3811	0.7	0.46	-0.14



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
56	SLE RA 18	9	4	3807	1.68	-2.71	-0.2
56	SLE RA 19	76	4	3880	0.72	-0.34	-0.14
56	SLE RA 20	17	4	3835	1.7	-2.4	-0.21
56	SLE RA 21	83	4	3908	0.74	-0.03	-0.14
56	SLE FR 1	15	4	3391	1.49	-2.11	-0.18
56	SLE FR 2	37	4	3415	1.17	-1.32	-0.16
56	SLE FR 3	18	4	3402	1.5	-1.99	-0.18
56	SLE FR 4	36	4	3540	1.23	-1.5	-0.17
56	SLE FR 5	17	4	3527	1.55	-2.17	-0.19
56	SLE FR 6	12	4	3599	1.58	-2.41	-0.19
56	SLE QP 1	15	4	3391	1.49	-2.11	-0.18
56	SLE QP 2	14	4	3516	1.55	-2.29	-0.19
56	SLD 1	913	3	3461	1.15	39.3	0.03
56	SLD 2	913	3	3461	1.15	39.3	0.03
56	SLD 3	778	-1	2989	5.15	33.6	-0.24
56	SLD 4	778	-1	2989	5.15	33.6	-0.24
56	SLD 5	489	10	4215	-4.64	18.84	0.28
56	SLD 6	489	10	4215	-4.64	18.84	0.28
56	SLD 7	37	-4	2642	8.7	-0.18	-0.61
56	SLD 8	37	-4	2642	8.7	-0.18	-0.61
56	SLD 9	-10	11	4389	-5.6	-4.4	0.23
56	SLD 10	-10	11	4389	-5.6	-4.4	0.23
56	SLD 11	-462	-2	2817	7.73	-23.43	-0.66
56	SLD 12	-462	-2	2817	7.73	-23.43	-0.66
56	SLD 13	-751	9	4043	-2.06	-38.18	-0.14
56	SLD 14	-751	9	4043	-2.06	-38.18	-0.14
56	SLD 15	-886	5	3571	1.94	-43.89	-0.4
56	SLD 16	-886	5	3571	1.94	-43.89	-0.4
56	SLV 1	2118	2	3382	0.42	94.96	0.35
56	SLV 2	2118	2	3382	0.42	94.96	0.35
56	SLV 3	1785	-7	2272	10.48	81.04	-0.33
56	SLV 4	1785	-7	2272	10.48	81.04	-0.33
56	SLV 5	1150	18	5160	-14.06	47.99	1
56	SLV 6	1150	18	5160	-14.06	47.99	1
56	SLV 7	40	-14	1459	19.49	1.6	-1.26
56	SLV 8	40	-14	1459	19.49	1.6	-1.26
56	SLV 9	-13	22	5573	-16.4	-6.18	0.88
56	SLV 10	-13	22	5573	-16.4	-6.18	0.88
56	SLV 11	-1123	-10	1872	17.15	-52.58	-1.38
56	SLV 12	-1123	-10	1872	17.15	-52.58	-1.38
56	SLV 13	-1758	15	4760	-7.39	-85.63	-0.05
56	SLV 14	-1758	15	4760	-7.39	-85.63	-0.05
56	SLV 15	-2091	6	3649	2.68	-99.54	-0.73
56	SLV 16	-2091	6	3649	2.68	-99.54	-0.73
57	SLU 1	-80	511	4752	-10.81	-16.96	3.82
57	SLU 2	38	681	5275	-17.49	-13.45	5.1
57	SLU 3	-74	524	4851	-11.11	-17.01	3.92
57	SLU 4	-4	627	5164	-15.11	-14.9	4.69
57	SLU 5	47	690	5341	-17.7	-13.25	5.17
57	SLU 6	-66	534	4916	-11.31	-16.81	3.98
57	SLU 7	5	636	5230	-15.32	-14.7	4.76
57	SLU 8	-62	529	4883	-11.23	-16.55	3.95
57	SLU 9	8	631	5197	-15.23	-14.45	4.73
57	SLU 10	27	742	5899	-18.66	-15.71	5.56
57	SLU 11	-86	586	5474	-12.27	-19.27	4.37
57	SLU 12	-15	688	5788	-16.28	-17.16	5.15
57	SLU 13	35	752	5964	-18.86	-15.5	5.63
57	SLU 14	-77	595	5539	-12.48	-19.07	4.44
57	SLU 15	-7	697	5853	-16.48	-16.96	5.21
57	SLU 16	-74	591	5506	-12.39	-18.81	4.41
57	SLU 17	-3	693	5820	-16.4	-16.7	5.18
57	SLU 18	-96	598	5643	-12.48	-20.19	4.47
57	SLU 19	-26	701	5957	-16.49	-18.08	5.24
57	SLU 20	-88	608	5708	-12.69	-19.98	4.54
57	SLU 21	-17	710	6022	-16.69	-17.88	5.31
57	SLU 22	-92	570	5310	-12	-19.11	4.26
57	SLU 23	26	741	5833	-18.67	-15.59	5.55
57	SLU 24	-87	584	5409	-12.29	-19.15	4.36
57	SLU 25	-16	686	5723	-16.3	-17.05	5.13
57	SLU 26	34	750	5899	-18.88	-15.39	5.62
57	SLU 27	-78	593	5474	-12.5	-18.95	4.43
57	SLU 28	-7	695	5788	-16.5	-16.84	5.2
57	SLU 29	-75	589	5441	-12.41	-18.7	4.4
57	SLU 30	-4	691	5755	-16.42	-16.59	5.17
57	SLU 31	14	802	6457	-19.84	-17.85	6
57	SLU 32	-98	645	6032	-13.46	-21.41	4.82
57	SLU 33	-28	748	6346	-17.46	-19.3	5.59
57	SLU 34	23	811	6522	-20.05	-17.65	6.07
57	SLU 35	-90	655	6098	-13.66	-21.21	4.88
57	SLU 36	-19	757	6411	-17.67	-19.1	5.66
57	SLU 37	-86	650	6065	-13.58	-20.96	4.85
57	SLU 38	-16	753	6378	-17.58	-18.85	5.62
57	SLU 39	-109	658	6201	-13.66	-22.33	4.91
57	SLU 40	-38	760	6515	-17.67	-20.22	5.68
57	SLU 41	-100	667	6266	-13.87	-22.13	4.98
57	SLU 42	-29	770	6580	-17.88	-20.02	5.75
57	SLU 43	-99	643	5986	-13.65	-21.32	4.81
57	SLU 44	19	814	6510	-20.33	-17.8	6.1
57	SLU 45	-94	657	6085	-13.95	-21.37	4.91
57	SLU 46	-23	759	6399	-17.95	-19.26	5.68



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
57	SLU 47	27	823	6575	-20.53	-17.6	6.16
57	SLU 48	-85	666	6150	-14.15	-21.16	4.98
57	SLU 49	-15	769	6464	-18.16	-19.05	5.75
57	SLU 50	-82	662	6117	-14.07	-20.91	4.94
57	SLU 51	-11	764	6431	-18.07	-18.8	5.72
57	SLU 52	7	875	7133	-21.49	-20.06	6.55
57	SLU 53	-106	718	6708	-15.11	-23.62	5.36
57	SLU 54	-35	821	7022	-19.12	-21.52	6.14
57	SLU 55	16	884	7198	-21.7	-19.86	6.62
57	SLU 56	-97	728	6774	-15.32	-23.42	5.43
57	SLU 57	-26	830	7088	-19.32	-21.31	6.21
57	SLU 58	-94	723	6741	-15.23	-23.17	5.4
57	SLU 59	-23	826	7055	-19.24	-21.06	6.17
57	SLU 60	-116	731	6877	-15.32	-24.54	5.46
57	SLU 61	-45	833	7191	-19.32	-22.43	6.23
57	SLU 62	-107	740	6942	-15.52	-24.34	5.53
57	SLU 63	-36	843	7256	-19.53	-22.23	6.3
57	SLU 64	-112	703	6545	-14.84	-23.46	5.25
57	SLU 65	6	873	7068	-21.51	-19.95	6.54
57	SLU 66	-106	717	6643	-15.13	-23.51	5.35
57	SLU 67	-36	819	6957	-19.13	-21.4	6.13
57	SLU 68	15	883	7133	-21.72	-19.74	6.61
57	SLU 69	-98	726	6708	-15.34	-23.3	5.42
57	SLU 70	-27	828	7022	-19.34	-21.2	6.19
57	SLU 71	-94	722	6675	-15.25	-23.05	5.39
57	SLU 72	-24	824	6989	-19.25	-20.94	6.16
57	SLU 73	-6	935	7691	-22.68	-22.2	7
57	SLU 74	-118	778	7267	-16.3	-25.77	5.81
57	SLU 75	-47	880	7580	-20.3	-23.66	6.58
57	SLU 76	3	944	7757	-22.88	-22	7.06
57	SLU 77	-109	787	7332	-16.5	-25.56	5.88
57	SLU 78	-39	890	7646	-20.51	-23.45	6.65
57	SLU 79	-106	783	7299	-16.41	-25.31	5.84
57	SLU 80	-35	885	7613	-20.42	-23.2	6.62
57	SLU 81	-128	791	7435	-16.5	-26.69	5.9
57	SLU 82	-58	893	7749	-20.51	-24.58	6.68
57	SLU 83	-120	800	7501	-16.71	-26.48	5.97
57	SLU 84	-49	902	7815	-20.71	-24.37	6.74
57	SLE RA 1	-83	528	4912	-11.15	-17.58	3.94
57	SLE RA 2	-5	641	5260	-15.6	-15.23	4.8
57	SLE RA 3	-80	537	4977	-11.35	-17.61	4.01
57	SLE RA 4	-32	605	5186	-14.02	-16.2	4.52
57	SLE RA 5	1	648	5304	-15.74	-15.1	4.85
57	SLE RA 6	-74	543	5021	-11.49	-17.47	4.05
57	SLE RA 7	-27	611	5230	-14.16	-16.07	4.57
57	SLE RA 8	-72	540	4999	-11.43	-17.3	4.03
57	SLE RA 9	-24	608	5208	-14.1	-15.9	4.55
57	SLE RA 10	-12	682	5676	-16.38	-16.74	5.11
57	SLE RA 11	-87	578	5393	-12.13	-19.11	4.31
57	SLE RA 12	-40	646	5602	-14.8	-17.71	4.83
57	SLE RA 13	-7	688	5720	-16.52	-16.6	5.15
57	SLE RA 14	-82	584	5436	-12.26	-18.98	4.36
57	SLE RA 15	-34	652	5646	-14.93	-17.57	4.87
57	SLE RA 16	-79	581	5414	-12.2	-18.81	4.34
57	SLE RA 17	-32	649	5624	-14.87	-17.4	4.85
57	SLE RA 18	-94	586	5505	-12.26	-19.73	4.38
57	SLE RA 19	-47	654	5715	-14.93	-18.32	4.89
57	SLE RA 20	-88	592	5549	-12.4	-19.59	4.42
57	SLE RA 21	-41	660	5758	-15.07	-18.18	4.94
57	SLE FR 1	-83	528	4912	-11.15	-17.58	3.94
57	SLE FR 2	-67	550	4981	-12.04	-17.11	4.11
57	SLE FR 3	-81	530	4929	-11.21	-17.52	3.96
57	SLE FR 4	-71	568	5160	-12.38	-17.75	4.24
57	SLE FR 5	-84	548	5107	-11.54	-18.17	4.09
57	SLE FR 6	-89	557	5209	-11.71	-18.65	4.16
57	SLE QP 1	-83	528	4912	-11.15	-17.58	3.94
57	SLE QP 2	-87	545	5090	-11.49	-18.22	4.07
57	SLD 1	819	547	4980	-11.68	18.05	4.07
57	SLD 2	819	547	4980	-11.68	18.05	4.07
57	SLD 3	683	303	4131	-1.66	25.14	2.19
57	SLD 4	683	303	4131	-1.66	25.14	2.19
57	SLD 5	391	916	6344	-26.73	-18.08	6.91
57	SLD 6	391	916	6344	-26.73	-18.08	6.91
57	SLD 7	-61	102	3515	6.65	5.53	0.67
57	SLD 8	-61	102	3515	6.65	5.53	0.67
57	SLD 9	-112	988	6665	-29.62	-41.97	7.48
57	SLD 10	-112	988	6665	-29.62	-41.97	7.48
57	SLD 11	-564	174	3835	3.76	-18.36	1.23
57	SLD 12	-564	174	3835	3.76	-18.36	1.23
57	SLD 13	-857	787	6049	-21.31	-61.58	5.95
57	SLD 14	-857	787	6049	-21.31	-61.58	5.95
57	SLD 15	-992	543	5200	-11.3	-54.49	4.08
57	SLD 16	-992	543	5200	-11.3	-54.49	4.08
57	SLV 1	2029	550	4825	-11.93	66.24	4.05
57	SLV 2	2029	550	4825	-11.93	66.24	4.05
57	SLV 3	1703	-36	2815	12.15	83	-0.44
57	SLV 4	1703	-36	2815	12.15	83	-0.44
57	SLV 5	1042	1435	8059	-48.15	-18.31	10.88
57	SLV 6	1042	1435	8059	-48.15	-18.31	10.88
57	SLV 7	-43	-518	1359	32.14	37.58	-4.1



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
57	SLV 8	-43	-518	1359	32.14	37.58	-4.1
57	SLV 9	-130	1608	8821	-55.11	-74.02	12.24
57	SLV 10	-130	1608	8821	-55.11	-74.02	12.24
57	SLV 11	-1215	-345	2121	25.18	-18.13	-2.74
57	SLV 12	-1215	-345	2121	25.18	-18.13	-2.74
57	SLV 13	-1876	1127	7365	-35.13	-119.45	8.58
57	SLV 14	-1876	1127	7365	-35.13	-119.45	8.58
57	SLV 15	-2202	541	5355	-11.04	-102.68	4.09
57	SLV 16	-2202	541	5355	-11.04	-102.68	4.09
58	SLU 1	-279	14	3136	-2.7	-12	-0.01
58	SLU 2	-250	13	3413	-2.52	-10.61	-0.03
58	SLU 3	-281	14	3196	-2.78	-12.06	-0.01
58	SLU 4	-263	13	3362	-2.68	-11.23	-0.02
58	SLU 5	-246	13	3452	-2.58	-10.43	-0.03
58	SLU 6	-278	14	3235	-2.84	-11.88	-0.01
58	SLU 7	-260	14	3401	-2.73	-11.05	-0.02
58	SLU 8	-272	14	3215	-2.82	-11.65	-0.01
58	SLU 9	-255	13	3381	-2.71	-10.81	-0.02
58	SLU 10	-276	14	3842	-2.82	-11.77	-0.03
58	SLU 11	-307	16	3625	-3.08	-13.22	-0.01
58	SLU 12	-289	15	3791	-2.97	-12.38	-0.02
58	SLU 13	-272	14	3881	-2.88	-11.59	-0.03
58	SLU 14	-304	16	3664	-3.13	-13.04	-0.01
58	SLU 15	-286	15	3831	-3.03	-12.21	-0.02
58	SLU 16	-299	16	3644	-3.11	-12.81	-0.01
58	SLU 17	-281	15	3810	-3	-11.97	-0.02
58	SLU 18	-317	16	3749	-3.12	-13.66	-0.01
58	SLU 19	-299	15	3915	-3.02	-12.82	-0.02
58	SLU 20	-313	16	3788	-3.18	-13.48	-0.01
58	SLU 21	-295	16	3954	-3.07	-12.64	-0.02
58	SLU 22	-310	15	3511	-3	-13.34	-0.01
58	SLU 23	-280	14	3788	-2.82	-11.95	-0.03
58	SLU 24	-312	16	3571	-3.08	-13.4	-0.01
58	SLU 25	-294	15	3737	-2.97	-12.57	-0.02
58	SLU 26	-277	14	3827	-2.87	-11.77	-0.03
58	SLU 27	-308	16	3611	-3.13	-13.22	-0.01
58	SLU 28	-291	15	3777	-3.03	-12.39	-0.02
58	SLU 29	-303	16	3590	-3.11	-12.99	-0.01
58	SLU 30	-285	15	3756	-3	-12.15	-0.02
58	SLU 31	-306	16	4217	-3.11	-13.11	-0.03
58	SLU 32	-338	17	4000	-3.37	-14.56	-0.01
58	SLU 33	-320	17	4166	-3.26	-13.72	-0.02
58	SLU 34	-303	16	4257	-3.17	-12.93	-0.03
58	SLU 35	-334	18	4040	-3.43	-14.38	-0.01
58	SLU 36	-317	17	4206	-3.32	-13.55	-0.02
58	SLU 37	-329	17	4019	-3.4	-14.15	-0.01
58	SLU 38	-311	17	4185	-3.3	-13.31	-0.02
58	SLU 39	-347	18	4124	-3.42	-15	-0.01
58	SLU 40	-329	17	4290	-3.31	-14.16	-0.03
58	SLU 41	-344	18	4164	-3.47	-14.82	-0.01
58	SLU 42	-326	17	4330	-3.36	-13.98	-0.03
58	SLU 43	-352	17	3948	-3.41	-15.14	-0.01
58	SLU 44	-323	16	4225	-3.24	-13.75	-0.03
58	SLU 45	-354	18	4008	-3.49	-15.2	-0.01
58	SLU 46	-337	17	4174	-3.39	-14.37	-0.02
58	SLU 47	-319	16	4264	-3.29	-13.57	-0.03
58	SLU 48	-351	18	4047	-3.55	-15.03	-0.01
58	SLU 49	-333	17	4213	-3.44	-14.19	-0.02
58	SLU 50	-346	18	4027	-3.53	-14.79	-0.01
58	SLU 51	-328	17	4193	-3.42	-13.95	-0.02
58	SLU 52	-349	18	4654	-3.53	-14.91	-0.03
58	SLU 53	-381	19	4437	-3.79	-16.36	-0.01
58	SLU 54	-363	19	4603	-3.68	-15.53	-0.02
58	SLU 55	-345	18	4693	-3.59	-14.73	-0.03
58	SLU 56	-377	20	4477	-3.84	-16.18	-0.01
58	SLU 57	-359	19	4643	-3.74	-15.35	-0.03
58	SLU 58	-372	19	4456	-3.82	-15.95	-0.01
58	SLU 59	-354	19	4622	-3.71	-15.11	-0.02
58	SLU 60	-390	20	4561	-3.83	-16.8	-0.01
58	SLU 61	-372	19	4727	-3.73	-15.96	-0.03
58	SLU 62	-386	20	4600	-3.89	-16.62	-0.01
58	SLU 63	-369	19	4766	-3.78	-15.79	-0.03
58	SLU 64	-383	19	4323	-3.71	-16.48	-0.01
58	SLU 65	-353	18	4600	-3.53	-15.09	-0.03
58	SLU 66	-385	19	4383	-3.79	-16.54	-0.01
58	SLU 67	-367	19	4549	-3.68	-15.71	-0.02
58	SLU 68	-350	18	4639	-3.58	-14.91	-0.03
58	SLU 69	-382	19	4423	-3.84	-16.37	-0.01
58	SLU 70	-364	19	4589	-3.74	-15.53	-0.02
58	SLU 71	-376	19	4402	-3.82	-16.13	-0.01
58	SLU 72	-358	19	4568	-3.71	-15.29	-0.02
58	SLU 73	-379	19	5029	-3.82	-16.25	-0.04
58	SLU 74	-411	21	4812	-4.08	-17.7	-0.01
58	SLU 75	-393	20	4978	-3.97	-16.87	-0.03
58	SLU 76	-376	20	5069	-3.88	-16.07	-0.04
58	SLU 77	-408	21	4852	-4.14	-17.52	-0.01
58	SLU 78	-390	20	5018	-4.03	-16.69	-0.03
58	SLU 79	-402	21	4831	-4.11	-17.29	-0.01
58	SLU 80	-385	20	4997	-4.01	-16.45	-0.03
58	SLU 81	-420	21	4936	-4.13	-18.14	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
58	SLU 82	-403	21	5102	-4.02	-17.3	-0.03
58	SLU 83	-417	21	4976	-4.18	-17.96	-0.01
58	SLU 84	-399	21	5142	-4.08	-17.13	-0.03
58	SLE RA 1	-288	14	3243	-2.79	-12.39	-0.01
58	SLE RA 2	-268	13	3428	-2.67	-11.46	-0.02
58	SLE RA 3	-289	14	3283	-2.84	-12.43	-0.01
58	SLE RA 4	-277	14	3394	-2.77	-11.87	-0.02
58	SLE RA 5	-266	14	3454	-2.71	-11.34	-0.02
58	SLE RA 6	-287	15	3309	-2.88	-12.31	-0.01
58	SLE RA 7	-275	14	3420	-2.81	-11.75	-0.02
58	SLE RA 8	-283	14	3296	-2.86	-12.15	-0.01
58	SLE RA 9	-272	14	3406	-2.79	-11.59	-0.02
58	SLE RA 10	-286	15	3714	-2.86	-12.23	-0.02
58	SLE RA 11	-307	15	3569	-3.04	-13.2	-0.01
58	SLE RA 12	-295	15	3680	-2.96	-12.64	-0.02
58	SLE RA 13	-283	15	3740	-2.9	-12.11	-0.02
58	SLE RA 14	-304	16	3596	-3.07	-13.08	-0.01
58	SLE RA 15	-293	15	3706	-3	-12.52	-0.02
58	SLE RA 16	-301	16	3582	-3.06	-12.92	-0.01
58	SLE RA 17	-289	15	3693	-2.99	-12.36	-0.02
58	SLE RA 18	-313	16	3652	-3.07	-13.49	-0.01
58	SLE RA 19	-301	15	3762	-3	-12.93	-0.02
58	SLE RA 20	-311	16	3678	-3.1	-13.37	-0.01
58	SLE RA 21	-299	15	3789	-3.03	-12.81	-0.02
58	SLE FR 1	-288	14	3243	-2.79	-12.39	-0.01
58	SLE FR 2	-284	14	3280	-2.76	-12.2	-0.01
58	SLE FR 3	-287	14	3254	-2.8	-12.34	-0.01
58	SLE FR 4	-291	14	3403	-2.85	-12.53	-0.01
58	SLE FR 5	-295	15	3376	-2.89	-12.67	-0.01
58	SLE FR 6	-300	15	3447	-2.93	-12.94	-0.01
58	SLE QP 1	-288	14	3243	-2.79	-12.39	-0.01
58	SLE QP 2	-295	15	3366	-2.87	-12.72	-0.01
58	SLD 1	407	14	3211	-2.72	20.01	-0.01
58	SLD 2	407	14	3211	-2.72	20.01	-0.01
58	SLD 3	598	9	2791	-1.46	28.13	0.03
58	SLD 4	598	9	2791	-1.46	28.13	0.03
58	SLD 5	-375	23	3957	-4.73	-15.22	-0.06
58	SLD 6	-375	23	3957	-4.73	-15.22	-0.06
58	SLD 7	263	5	2556	-0.54	11.86	0.06
58	SLD 8	263	5	2556	-0.54	11.86	0.06
58	SLD 9	-854	24	4176	-5.2	-37.29	-0.07
58	SLD 10	-854	24	4176	-5.2	-37.29	-0.07
58	SLD 11	-216	7	2774	-1.01	-10.21	0.05
58	SLD 12	-216	7	2774	-1.01	-10.21	0.05
58	SLD 13	-1189	21	3941	-4.28	-53.56	-0.04
58	SLD 14	-1189	21	3941	-4.28	-53.56	-0.04
58	SLD 15	-998	15	3520	-3.02	-45.44	-0.01
58	SLD 16	-998	15	3520	-3.02	-45.44	-0.01
58	SLV 1	1341	13	2998	-2.53	63.56	-0.01
58	SLV 2	1341	13	2998	-2.53	63.56	-0.01
58	SLV 3	1790	0	2008	0.59	82.61	0.08
58	SLV 4	1790	0	2008	0.59	82.61	0.08
58	SLV 5	-486	34	4757	-7.49	-18.73	-0.15
58	SLV 6	-486	34	4757	-7.49	-18.73	-0.15
58	SLV 7	1012	-10	1457	2.89	44.78	0.15
58	SLV 8	1012	-10	1457	2.89	44.78	0.15
58	SLV 9	-1602	39	5274	-8.63	-70.21	-0.17
58	SLV 10	-1602	39	5274	-8.63	-70.21	-0.17
58	SLV 11	-105	-5	1974	1.75	-6.7	0.13
58	SLV 12	-105	-5	1974	1.75	-6.7	0.13
58	SLV 13	-2381	29	4723	-6.33	-108.05	-0.1
58	SLV 14	-2381	29	4723	-6.33	-108.05	-0.1
58	SLV 15	-1932	16	3733	-3.22	-88.99	-0.01
58	SLV 16	-1932	16	3733	-3.22	-88.99	-0.01
59	SLU 1	-220	3	3081	-1.28	-11.02	0.03
59	SLU 2	-176	0	3316	-0.5	-8.81	0.03
59	SLU 3	-221	4	3137	-1.33	-11.08	0.03
59	SLU 4	-195	2	3278	-0.86	-9.75	0.03
59	SLU 5	-172	0	3352	-0.53	-8.65	0.04
59	SLU 6	-218	4	3172	-1.37	-10.92	0.03
59	SLU 7	-191	2	3313	-0.9	-9.59	0.03
59	SLU 8	-213	4	3153	-1.35	-10.7	0.03
59	SLU 9	-187	2	3294	-0.88	-9.37	0.03
59	SLU 10	-188	1	3761	-0.58	-9.71	0.04
59	SLU 11	-234	4	3581	-1.41	-11.98	0.03
59	SLU 12	-207	2	3722	-0.94	-10.66	0.04
59	SLU 13	-185	1	3797	-0.62	-9.55	0.04
59	SLU 14	-230	4	3617	-1.45	-11.82	0.03
59	SLU 15	-204	2	3758	-0.98	-10.49	0.04
59	SLU 16	-225	4	3597	-1.44	-11.6	0.03
59	SLU 17	-199	2	3738	-0.97	-10.27	0.04
59	SLU 18	-238	4	3716	-1.4	-12.31	0.03
59	SLU 19	-211	2	3857	-0.93	-10.98	0.04
59	SLU 20	-234	4	3752	-1.43	-12.15	0.03
59	SLU 21	-208	2	3893	-0.96	-10.82	0.04
59	SLU 22	-239	4	3463	-1.38	-12.14	0.03
59	SLU 23	-195	1	3698	-0.6	-9.93	0.04
59	SLU 24	-241	4	3518	-1.43	-12.2	0.03
59	SLU 25	-214	2	3659	-0.96	-10.87	0.04
59	SLU 26	-192	1	3734	-0.63	-9.77	0.04



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
59	SLU 27	-237	4	3554	-1.47	-12.04	0.03
59	SLU 28	-211	2	3695	-1	-10.71	0.04
59	SLU 29	-232	4	3534	-1.45	-11.82	0.03
59	SLU 30	-206	2	3675	-0.98	-10.49	0.04
59	SLU 31	-208	1	4142	-0.68	-10.83	0.04
59	SLU 32	-253	4	3963	-1.51	-13.1	0.03
59	SLU 33	-227	2	4104	-1.04	-11.77	0.04
59	SLU 34	-204	1	4178	-0.71	-10.67	0.04
59	SLU 35	-249	4	3998	-1.55	-12.94	0.03
59	SLU 36	-223	2	4139	-1.08	-11.61	0.04
59	SLU 37	-245	4	3979	-1.53	-12.72	0.03
59	SLU 38	-218	2	4120	-1.07	-11.39	0.04
59	SLU 39	-257	4	4098	-1.5	-13.43	0.03
59	SLU 40	-231	2	4239	-1.03	-12.1	0.04
59	SLU 41	-253	4	4134	-1.53	-13.27	0.04
59	SLU 42	-227	2	4275	-1.06	-11.94	0.04
59	SLU 43	-279	4	3875	-1.63	-13.95	0.04
59	SLU 44	-235	1	4110	-0.85	-11.73	0.04
59	SLU 45	-281	5	3930	-1.68	-14	0.04
59	SLU 46	-254	3	4071	-1.21	-12.68	0.04
59	SLU 47	-232	1	4146	-0.88	-11.57	0.04
59	SLU 48	-277	5	3966	-1.72	-13.84	0.04
59	SLU 49	-251	3	4107	-1.25	-12.51	0.04
59	SLU 50	-272	5	3947	-1.7	-13.62	0.04
59	SLU 51	-246	3	4088	-1.23	-12.29	0.04
59	SLU 52	-248	1	4555	-0.93	-12.63	0.04
59	SLU 53	-293	5	4375	-1.76	-14.91	0.04
59	SLU 54	-267	3	4516	-1.29	-13.58	0.04
59	SLU 55	-244	2	4590	-0.96	-12.47	0.05
59	SLU 56	-290	5	4411	-1.8	-14.75	0.04
59	SLU 57	-263	3	4552	-1.33	-13.42	0.04
59	SLU 58	-285	5	4391	-1.79	-14.52	0.04
59	SLU 59	-258	3	4532	-1.32	-13.2	0.04
59	SLU 60	-297	5	4510	-1.75	-15.24	0.04
59	SLU 61	-271	3	4651	-1.28	-13.91	0.04
59	SLU 62	-294	5	4546	-1.78	-15.07	0.04
59	SLU 63	-267	3	4687	-1.31	-13.74	0.04
59	SLU 64	-299	5	4257	-1.73	-15.07	0.04
59	SLU 65	-255	2	4491	-0.94	-12.85	0.04
59	SLU 66	-300	5	4312	-1.78	-15.12	0.04
59	SLU 67	-274	3	4453	-1.31	-13.8	0.04
59	SLU 68	-251	2	4527	-0.98	-12.69	0.05
59	SLU 69	-297	5	4348	-1.82	-14.96	0.04
59	SLU 70	-270	3	4488	-1.35	-13.63	0.04
59	SLU 71	-292	5	4328	-1.8	-14.74	0.04
59	SLU 72	-265	3	4469	-1.33	-13.41	0.04
59	SLU 73	-267	2	4936	-1.03	-13.75	0.05
59	SLU 74	-312	5	4756	-1.86	-16.03	0.04
59	SLU 75	-286	3	4897	-1.39	-14.7	0.05
59	SLU 76	-263	2	4972	-1.06	-13.59	0.05
59	SLU 77	-309	5	4792	-1.9	-15.86	0.04
59	SLU 78	-282	3	4933	-1.43	-14.54	0.05
59	SLU 79	-304	5	4773	-1.88	-15.64	0.04
59	SLU 80	-278	3	4913	-1.41	-14.32	0.05
59	SLU 81	-316	5	4892	-1.84	-16.36	0.04
59	SLU 82	-290	3	5033	-1.37	-15.03	0.05
59	SLU 83	-313	5	4927	-1.88	-16.19	0.04
59	SLU 84	-286	3	5068	-1.41	-14.86	0.05
59	SLE RA 1	-226	4	3190	-1.31	-11.34	0.03
59	SLE RA 2	-196	1	3347	-0.79	-9.87	0.03
59	SLE RA 3	-226	4	3227	-1.34	-11.38	0.03
59	SLE RA 4	-209	2	3321	-1.03	-10.5	0.03
59	SLE RA 5	-194	1	3371	-0.81	-9.76	0.03
59	SLE RA 6	-224	4	3251	-1.37	-11.27	0.03
59	SLE RA 7	-206	2	3345	-1.05	-10.39	0.03
59	SLE RA 8	-221	4	3238	-1.36	-11.13	0.03
59	SLE RA 9	-203	2	3332	-1.04	-10.24	0.03
59	SLE RA 10	-204	2	3643	-0.84	-10.47	0.03
59	SLE RA 11	-235	4	3524	-1.4	-11.98	0.03
59	SLE RA 12	-217	3	3618	-1.08	-11.1	0.03
59	SLE RA 13	-202	2	3667	-0.86	-10.36	0.04
59	SLE RA 14	-232	4	3547	-1.42	-11.88	0.03
59	SLE RA 15	-215	3	3641	-1.11	-10.99	0.03
59	SLE RA 16	-229	4	3534	-1.41	-11.73	0.03
59	SLE RA 17	-211	3	3628	-1.1	-10.84	0.03
59	SLE RA 18	-237	4	3614	-1.39	-12.2	0.03
59	SLE RA 19	-220	3	3708	-1.07	-11.32	0.03
59	SLE RA 20	-235	4	3638	-1.41	-12.09	0.03
59	SLE RA 21	-217	3	3732	-1.1	-11.21	0.03
59	SLE FR 1	-226	4	3190	-1.31	-11.34	0.03
59	SLE FR 2	-220	3	3222	-1.2	-11.05	0.03
59	SLE FR 3	-225	4	3200	-1.32	-11.3	0.03
59	SLE FR 4	-223	3	3349	-1.23	-11.31	0.03
59	SLE FR 5	-228	4	3327	-1.34	-11.56	0.03
59	SLE FR 6	-231	4	3402	-1.35	-11.77	0.03
59	SLE QP 1	-226	4	3190	-1.31	-11.34	0.03
59	SLE QP 2	-229	4	3317	-1.33	-11.6	0.03
59	SLD 1	415	3	3064	-3.05	18.61	0.04
59	SLD 2	415	3	3064	-3.05	18.61	0.04
59	SLD 3	600	10	2721	-1.4	25.9	0.03



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
59	SLD 4	600	10	2721	-1.4	25.9	0.03
59	SLD 5	-316	-6	3761	-4.35	-13.59	0.05
59	SLD 6	-316	-6	3761	-4.35	-13.59	0.05
59	SLD 7	300	15	2619	1.15	10.7	0.01
59	SLD 8	300	15	2619	1.15	10.7	0.01
59	SLD 9	-758	-8	4016	-3.81	-33.9	0.05
59	SLD 10	-758	-8	4016	-3.81	-33.9	0.05
59	SLD 11	-142	14	2874	1.69	-9.62	0
59	SLD 12	-142	14	2874	1.69	-9.62	0
59	SLD 13	-1058	-3	3914	-1.26	-49.1	0.03
59	SLD 14	-1058	-3	3914	-1.26	-49.1	0.03
59	SLD 15	-873	4	3571	0.39	-41.81	0.02
59	SLD 16	-873	4	3571	0.39	-41.81	0.02
59	SLV 1	1271	3	2721	-5.6	58.76	0.06
59	SLV 2	1271	3	2721	-5.6	58.76	0.06
59	SLV 3	1706	19	1913	-1.44	75.95	0.03
59	SLV 4	1706	19	1913	-1.44	75.95	0.03
59	SLV 5	-438	-22	4364	-8.93	-16.56	0.09
59	SLV 6	-438	-22	4364	-8.93	-16.56	0.09
59	SLV 7	1011	33	1671	4.95	40.73	-0.02
59	SLV 8	1011	33	1671	4.95	40.73	-0.02
59	SLV 9	-1469	-26	4964	-7.61	-63.93	0.08
59	SLV 10	-1469	-26	4964	-7.61	-63.93	0.08
59	SLV 11	-20	29	2271	6.27	-6.65	-0.03
59	SLV 12	-20	29	2271	6.27	-6.65	-0.03
59	SLV 13	-2164	-12	4722	-1.22	-99.15	0.03
59	SLV 14	-2164	-12	4722	-1.22	-99.15	0.03
59	SLV 15	-1729	4	3914	2.94	-81.96	0
59	SLV 16	-1729	4	3914	2.94	-81.96	0
60	SLU 1	-121	-6	3302	0.6	-5.88	-0.01
60	SLU 2	-63	-8	3575	1.21	-3.53	0
60	SLU 3	-121	-6	3358	0.59	-5.85	-0.01
60	SLU 4	-86	-7	3522	0.96	-4.44	-0.01
60	SLU 5	-59	-8	3610	1.2	-3.31	0
60	SLU 6	-117	-6	3394	0.58	-5.63	-0.01
60	SLU 7	-82	-7	3558	0.95	-4.22	-0.01
60	SLU 8	-113	-6	3373	0.58	-5.45	-0.01
60	SLU 9	-78	-7	3537	0.95	-4.04	-0.01
60	SLU 10	-57	-9	4075	1.37	-3.39	0
60	SLU 11	-115	-8	3859	0.75	-5.72	-0.01
60	SLU 12	-80	-8	4023	1.12	-4.31	-0.01
60	SLU 13	-53	-9	4111	1.36	-3.18	0
60	SLU 14	-111	-8	3895	0.74	-5.5	-0.01
60	SLU 15	-76	-8	4059	1.11	-4.09	-0.01
60	SLU 16	-107	-8	3874	0.74	-5.32	-0.01
60	SLU 17	-72	-8	4038	1.11	-3.9	-0.01
60	SLU 18	-113	-8	4017	0.82	-5.69	-0.01
60	SLU 19	-78	-9	4181	1.19	-4.28	-0.01
60	SLU 20	-109	-8	4053	0.82	-5.47	-0.01
60	SLU 21	-74	-9	4217	1.18	-4.06	-0.01
60	SLU 22	-125	-7	3727	0.72	-6.14	-0.01
60	SLU 23	-66	-9	4000	1.33	-3.79	0
60	SLU 24	-125	-7	3784	0.71	-6.11	-0.01
60	SLU 25	-89	-8	3947	1.08	-4.7	-0.01
60	SLU 26	-62	-9	4036	1.32	-3.58	0
60	SLU 27	-120	-7	3819	0.7	-5.9	-0.01
60	SLU 28	-85	-8	3983	1.07	-4.49	-0.01
60	SLU 29	-116	-7	3798	0.7	-5.71	-0.01
60	SLU 30	-81	-8	3962	1.07	-4.3	-0.01
60	SLU 31	-61	-10	4501	1.49	-3.66	-0.01
60	SLU 32	-119	-8	4284	0.87	-5.98	-0.01
60	SLU 33	-84	-9	4448	1.24	-4.57	-0.01
60	SLU 34	-57	-10	4536	1.48	-3.44	-0.01
60	SLU 35	-115	-8	4320	0.86	-5.76	-0.01
60	SLU 36	-80	-9	4484	1.23	-4.35	-0.01
60	SLU 37	-111	-8	4299	0.86	-5.58	-0.01
60	SLU 38	-76	-9	4463	1.23	-4.17	-0.01
60	SLU 39	-117	-9	4442	0.95	-5.95	-0.02
60	SLU 40	-82	-10	4606	1.31	-4.54	-0.01
60	SLU 41	-113	-9	4478	0.94	-5.74	-0.02
60	SLU 42	-78	-10	4642	1.31	-4.33	-0.01
60	SLU 43	-156	-8	4146	0.73	-7.55	-0.01
60	SLU 44	-98	-9	4419	1.35	-5.2	-0.01
60	SLU 45	-156	-8	4203	0.73	-7.52	-0.01
60	SLU 46	-121	-9	4367	1.09	-6.11	-0.01
60	SLU 47	-94	-9	4455	1.34	-4.99	-0.01
60	SLU 48	-152	-8	4239	0.72	-7.31	-0.01
60	SLU 49	-117	-9	4403	1.09	-5.9	-0.01
60	SLU 50	-148	-8	4218	0.72	-7.12	-0.01
60	SLU 51	-113	-9	4382	1.08	-5.71	-0.01
60	SLU 52	-92	-11	4920	1.51	-5.07	-0.01
60	SLU 53	-150	-9	4704	0.89	-7.39	-0.02
60	SLU 54	-115	-10	4868	1.25	-5.98	-0.01
60	SLU 55	-88	-11	4956	1.5	-4.85	-0.01
60	SLU 56	-146	-9	4740	0.88	-7.17	-0.02
60	SLU 57	-111	-10	4904	1.25	-5.76	-0.01
60	SLU 58	-142	-9	4719	0.88	-6.99	-0.02
60	SLU 59	-107	-10	4883	1.25	-5.58	-0.01
60	SLU 60	-149	-10	4862	0.96	-7.36	-0.02
60	SLU 61	-113	-10	5026	1.33	-5.95	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
60	SLU 62	-144	-10	4898	0.95	-7.15	-0.02
60	SLU 63	-109	-10	5061	1.32	-5.74	-0.01
60	SLU 64	-160	-9	4572	0.85	-7.81	-0.02
60	SLU 65	-102	-10	4845	1.47	-5.46	-0.01
60	SLU 66	-160	-9	4628	0.85	-7.79	-0.02
60	SLU 67	-125	-10	4792	1.22	-6.38	-0.01
60	SLU 68	-97	-10	4880	1.46	-5.25	-0.01
60	SLU 69	-155	-9	4664	0.84	-7.57	-0.02
60	SLU 70	-120	-10	4828	1.21	-6.16	-0.01
60	SLU 71	-151	-9	4643	0.84	-7.38	-0.02
60	SLU 72	-116	-10	4807	1.21	-5.97	-0.01
60	SLU 73	-96	-11	5345	1.63	-5.33	-0.01
60	SLU 74	-154	-10	5129	1.01	-7.65	-0.02
60	SLU 75	-119	-11	5293	1.38	-6.24	-0.01
60	SLU 76	-92	-12	5381	1.62	-5.12	-0.01
60	SLU 77	-150	-10	5165	1	-7.44	-0.02
60	SLU 78	-115	-11	5329	1.37	-6.03	-0.01
60	SLU 79	-146	-10	5144	1	-7.25	-0.02
60	SLU 80	-111	-11	5308	1.37	-5.84	-0.01
60	SLU 81	-152	-10	5287	1.08	-7.62	-0.02
60	SLU 82	-117	-11	5451	1.45	-6.21	-0.01
60	SLU 83	-148	-10	5323	1.08	-7.41	-0.02
60	SLU 84	-113	-11	5487	1.44	-6	-0.01
60	SLE RA 1	-122	-7	3423	0.63	-5.95	-0.01
60	SLE RA 2	-83	-8	3605	1.04	-4.39	-0.01
60	SLE RA 3	-122	-7	3461	0.63	-5.93	-0.01
60	SLE RA 4	-99	-7	3570	0.87	-4.99	-0.01
60	SLE RA 5	-80	-8	3629	1.03	-4.24	-0.01
60	SLE RA 6	-119	-7	3485	0.62	-5.79	-0.01
60	SLE RA 7	-96	-7	3594	0.87	-4.85	-0.01
60	SLE RA 8	-117	-7	3471	0.62	-5.67	-0.01
60	SLE RA 9	-93	-7	3580	0.87	-4.73	-0.01
60	SLE RA 10	-80	-8	3939	1.15	-4.3	-0.01
60	SLE RA 11	-118	-7	3795	0.73	-5.85	-0.01
60	SLE RA 12	-95	-8	3904	0.98	-4.91	-0.01
60	SLE RA 13	-77	-8	3963	1.14	-4.15	-0.01
60	SLE RA 14	-116	-7	3819	0.73	-5.7	-0.01
60	SLE RA 15	-92	-8	3928	0.97	-4.76	-0.01
60	SLE RA 16	-113	-7	3805	0.73	-5.58	-0.01
60	SLE RA 17	-90	-8	3914	0.97	-4.64	-0.01
60	SLE RA 18	-117	-8	3900	0.78	-5.83	-0.01
60	SLE RA 19	-94	-8	4009	1.03	-4.89	-0.01
60	SLE RA 20	-114	-8	3924	0.78	-5.68	-0.01
60	SLE RA 21	-91	-8	4033	1.02	-4.74	-0.01
60	SLE FR 1	-122	-7	3423	0.63	-5.95	-0.01
60	SLE FR 2	-114	-7	3460	0.71	-5.64	-0.01
60	SLE FR 3	-121	-7	3433	0.63	-5.9	-0.01
60	SLE FR 4	-113	-7	3603	0.76	-5.6	-0.01
60	SLE FR 5	-120	-7	3576	0.67	-5.86	-0.01
60	SLE FR 6	-120	-7	3662	0.71	-5.89	-0.01
60	SLE QP 1	-122	-7	3423	0.63	-5.95	-0.01
60	SLE QP 2	-121	-7	3566	0.68	-5.91	-0.01
60	SLD 1	442	-6	3152	0.43	22.28	0
60	SLD 2	442	-6	3152	0.43	22.28	0
60	SLD 3	623	-3	2735	-0.47	30	-0.01
60	SLD 4	623	-3	2735	-0.47	30	-0.01
60	SLD 5	-226	-10	4076	1.97	-9.17	0.01
60	SLD 6	-226	-10	4076	1.97	-9.17	0.01
60	SLD 7	377	-2	2683	-1.03	16.58	-0.03
60	SLD 8	377	-2	2683	-1.03	16.58	-0.03
60	SLD 9	-618	-12	4450	2.38	-28.41	0.01
60	SLD 10	-618	-12	4450	2.38	-28.41	0.01
60	SLD 11	-15	-4	3056	-0.62	-2.66	-0.04
60	SLD 12	-15	-4	3056	-0.62	-2.66	-0.04
60	SLD 13	-864	-11	4398	1.82	-41.83	-0.01
60	SLD 14	-864	-11	4398	1.82	-41.83	-0.01
60	SLD 15	-683	-8	3980	0.92	-34.11	-0.03
60	SLD 16	-683	-8	3980	0.92	-34.11	-0.03
60	SLV 1	1189	-4	2600	0.15	59.75	0.03
60	SLV 2	1189	-4	2600	0.15	59.75	0.03
60	SLV 3	1615	2	1610	-2.11	77.98	-0.01
60	SLV 4	1615	2	1610	-2.11	77.98	-0.01
60	SLV 5	-375	-15	4777	3.94	-13.86	0.05
60	SLV 6	-375	-15	4777	3.94	-13.86	0.05
60	SLV 7	1047	5	1478	-3.58	46.89	-0.06
60	SLV 8	1047	5	1478	-3.58	46.89	-0.06
60	SLV 9	-1289	-19	5654	4.94	-58.72	0.04
60	SLV 10	-1289	-19	5654	4.94	-58.72	0.04
60	SLV 11	133	1	2355	-2.59	2.03	-0.08
60	SLV 12	133	1	2355	-2.59	2.03	-0.08
60	SLV 13	-1857	-16	5523	3.46	-89.81	-0.02
60	SLV 14	-1857	-16	5523	3.46	-89.81	-0.02
60	SLV 15	-1430	-10	4533	1.2	-71.58	-0.05
60	SLV 16	-1430	-10	4533	1.2	-71.58	-0.05
61	SLU 1	-430	-593	6742	25.56	-9.11	3.99
61	SLU 2	-405	-666	7345	28.99	-6.73	4.49
61	SLU 3	-435	-603	6853	26.12	-9.15	4.06
61	SLU 4	-420	-647	7215	28.18	-7.72	4.36
61	SLU 5	-404	-674	7411	29.39	-6.56	4.54
61	SLU 6	-434	-611	6919	26.52	-8.98	4.11



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
61	SLU 7	-419	-655	7281	28.58	-7.55	4.41
61	SLU 8	-429	-607	6874	26.35	-8.76	4.09
61	SLU 9	-414	-651	7236	28.41	-7.33	4.39
61	SLU 10	-448	-747	8386	32.35	-7.35	5.04
61	SLU 11	-478	-684	7894	29.49	-9.77	4.6
61	SLU 12	-463	-728	8256	31.55	-8.34	4.91
61	SLU 13	-448	-754	8452	32.75	-7.17	5.09
61	SLU 14	-478	-691	7960	29.88	-9.59	4.66
61	SLU 15	-463	-735	8322	31.94	-8.17	4.96
61	SLU 16	-472	-688	7915	29.71	-9.38	4.63
61	SLU 17	-457	-732	8277	31.77	-7.95	4.94
61	SLU 18	-492	-708	8229	30.36	-9.99	4.76
61	SLU 19	-477	-752	8591	32.42	-8.57	5.07
61	SLU 20	-492	-715	8295	30.76	-9.82	4.82
61	SLU 21	-476	-759	8657	32.82	-8.39	5.12
61	SLU 22	-474	-662	7626	28.55	-9.99	4.45
61	SLU 23	-449	-736	8229	31.98	-7.61	4.96
61	SLU 24	-479	-673	7737	29.12	-10.03	4.53
61	SLU 25	-464	-717	8099	31.18	-8.6	4.83
61	SLU 26	-448	-743	8295	32.38	-7.44	5.01
61	SLU 27	-478	-680	7803	29.51	-9.86	4.58
61	SLU 28	-463	-724	8165	31.57	-8.43	4.88
61	SLU 29	-473	-676	7758	29.34	-9.64	4.56
61	SLU 30	-458	-721	8120	31.4	-8.21	4.86
61	SLU 31	-492	-816	9270	35.35	-8.23	5.51
61	SLU 32	-522	-753	8778	32.48	-10.65	5.07
61	SLU 33	-507	-797	9140	34.54	-9.22	5.38
61	SLU 34	-492	-823	9336	35.74	-8.05	5.56
61	SLU 35	-522	-760	8844	32.88	-10.47	5.12
61	SLU 36	-507	-804	9206	34.94	-9.04	5.43
61	SLU 37	-516	-757	8799	32.71	-10.26	5.1
61	SLU 38	-501	-801	9161	34.77	-8.83	5.41
61	SLU 39	-536	-777	9113	33.36	-10.87	5.23
61	SLU 40	-521	-821	9475	35.42	-9.45	5.54
61	SLU 41	-535	-784	9179	33.75	-10.7	5.28
61	SLU 42	-520	-828	9541	35.81	-9.27	5.59
61	SLU 43	-544	-747	8461	32.2	-11.55	5.02
61	SLU 44	-519	-821	9064	35.63	-9.17	5.53
61	SLU 45	-549	-758	8572	32.77	-11.59	5.09
61	SLU 46	-534	-802	8934	34.83	-10.16	5.4
61	SLU 47	-518	-828	9130	36.03	-8.99	5.58
61	SLU 48	-548	-765	8638	33.16	-11.41	5.15
61	SLU 49	-533	-809	9000	35.22	-9.98	5.45
61	SLU 50	-543	-761	8593	32.99	-11.2	5.12
61	SLU 51	-528	-806	8955	35.05	-9.77	5.43
61	SLU 52	-562	-901	10105	39	-9.78	6.07
61	SLU 53	-592	-838	9613	36.13	-12.2	5.64
61	SLU 54	-577	-882	9975	38.19	-10.77	5.94
61	SLU 55	-562	-908	10171	39.39	-9.61	6.12
61	SLU 56	-592	-845	9679	36.53	-12.03	5.69
61	SLU 57	-577	-889	10041	38.59	-10.6	5.99
61	SLU 58	-586	-842	9634	36.35	-11.81	5.67
61	SLU 59	-571	-886	9996	38.41	-10.38	5.97
61	SLU 60	-606	-862	9948	37	-12.43	5.8
61	SLU 61	-591	-906	10310	39.06	-11	6.1
61	SLU 62	-605	-869	10014	37.4	-12.25	5.85
61	SLU 63	-590	-913	10376	39.46	-10.82	6.15
61	SLU 64	-588	-816	9345	35.19	-12.43	5.49
61	SLU 65	-563	-890	9948	38.62	-10.04	5.99
61	SLU 66	-593	-827	9456	35.76	-12.47	5.56
61	SLU 67	-578	-871	9818	37.82	-11.04	5.87
61	SLU 68	-562	-897	10014	39.02	-9.87	6.05
61	SLU 69	-592	-834	9522	36.15	-12.29	5.61
61	SLU 70	-577	-878	9884	38.21	-10.86	5.92
61	SLU 71	-587	-831	9477	35.98	-12.08	5.59
61	SLU 72	-572	-875	9839	38.04	-10.65	5.9
61	SLU 73	-606	-970	10989	41.99	-10.66	6.54
61	SLU 74	-636	-907	10497	39.12	-13.08	6.11
61	SLU 75	-621	-951	10859	41.18	-11.65	6.41
61	SLU 76	-606	-977	11055	42.38	-10.49	6.59
61	SLU 77	-636	-915	10563	39.52	-12.91	6.16
61	SLU 78	-621	-959	10925	41.58	-11.48	6.46
61	SLU 79	-630	-911	10518	39.35	-12.69	6.14
61	SLU 80	-615	-955	10880	41.41	-11.26	6.44
61	SLU 81	-650	-931	10832	40	-13.31	6.27
61	SLU 82	-635	-975	11194	42.06	-11.88	6.57
61	SLU 83	-649	-939	10899	40.39	-13.13	6.32
61	SLU 84	-634	-983	11260	42.45	-11.7	6.62
61	SLE RA 1	-443	-613	6994	26.41	-9.37	4.12
61	SLE RA 2	-426	-662	7396	28.7	-7.78	4.46
61	SLE RA 3	-446	-620	7068	26.79	-9.39	4.17
61	SLE RA 4	-436	-649	7309	28.16	-8.44	4.37
61	SLE RA 5	-425	-666	7440	28.96	-7.66	4.49
61	SLE RA 6	-446	-624	7112	27.05	-9.27	4.2
61	SLE RA 7	-435	-654	7354	28.43	-8.32	4.41
61	SLE RA 8	-442	-622	7082	26.94	-9.13	4.19
61	SLE RA 9	-432	-652	7324	28.31	-8.18	4.39
61	SLE RA 10	-455	-715	8090	30.94	-8.19	4.82
61	SLE RA 11	-475	-673	7762	29.03	-9.8	4.53
61	SLE RA 12	-465	-703	8004	30.41	-8.85	4.73



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
61	SLE RA 13	-454	-720	8134	31.21	-8.07	4.85
61	SLE RA 14	-474	-678	7806	29.3	-9.69	4.57
61	SLE RA 15	-464	-708	8048	30.67	-8.73	4.77
61	SLE RA 16	-471	-676	7776	29.18	-9.54	4.55
61	SLE RA 17	-461	-705	8018	30.56	-8.59	4.75
61	SLE RA 18	-484	-689	7986	29.62	-9.95	4.64
61	SLE RA 19	-474	-719	8227	30.99	-9	4.84
61	SLE RA 20	-484	-694	8030	29.88	-9.84	4.67
61	SLE RA 21	-473	-724	8271	31.25	-8.88	4.88
61	SLE FR 1	-443	-613	6994	26.41	-9.37	4.12
61	SLE FR 2	-439	-622	7075	26.87	-9.05	4.19
61	SLE FR 3	-442	-615	7012	26.52	-9.32	4.13
61	SLE FR 4	-452	-645	7372	27.83	-9.22	4.34
61	SLE FR 5	-455	-638	7309	27.48	-9.49	4.29
61	SLE FR 6	-463	-651	7490	28.01	-9.66	4.38
61	SLE QP 1	-443	-613	6994	26.41	-9.37	4.12
61	SLE QP 2	-455	-636	7292	27.37	-9.54	4.28
61	SLD 1	129	-650	5807	28.74	20.35	4.46
61	SLD 2	129	-650	5807	28.74	20.35	4.46
61	SLD 3	260	-416	4775	18.08	27.36	2.96
61	SLD 4	260	-416	4775	18.08	27.36	2.96
61	SLD 5	-479	-995	8411	43.96	-11.21	6.6
61	SLD 6	-479	-995	8411	43.96	-11.21	6.6
61	SLD 7	-41	-214	4972	8.41	12.16	1.61
61	SLD 8	-41	-214	4972	8.41	12.16	1.61
61	SLD 9	-869	-1057	9611	46.33	-31.25	6.94
61	SLD 10	-869	-1057	9611	46.33	-31.25	6.94
61	SLD 11	-431	-276	6173	10.79	-7.87	1.95
61	SLD 12	-431	-276	6173	10.79	-7.87	1.95
61	SLD 13	-1170	-856	9808	36.66	-46.44	5.59
61	SLD 14	-1170	-856	9808	36.66	-46.44	5.59
61	SLD 15	-1039	-622	8776	26	-39.43	4.09
61	SLD 16	-1039	-622	8776	26	-39.43	4.09
61	SLV 1	903	-669	3833	30.59	60.01	4.71
61	SLV 2	903	-669	3833	30.59	60.01	4.71
61	SLV 3	1219	-116	1386	5.37	76.7	1.17
61	SLV 4	1219	-116	1386	5.37	76.7	1.17
61	SLV 5	-527	-1484	9966	66.58	-13.99	9.76
61	SLV 6	-527	-1484	9966	66.58	-13.99	9.76
61	SLV 7	527	359	1808	-17.47	41.65	-2.02
61	SLV 8	527	359	1808	-17.47	41.65	-2.02
61	SLV 9	-1437	-1630	12775	72.22	-60.73	10.57
61	SLV 10	-1437	-1630	12775	72.22	-60.73	10.57
61	SLV 11	-383	213	4618	-11.83	-5.09	-1.21
61	SLV 12	-383	213	4618	-11.83	-5.09	-1.21
61	SLV 13	-2129	-1155	13198	49.37	-95.79	7.38
61	SLV 14	-2129	-1155	13198	49.37	-95.79	7.38
61	SLV 15	-1813	-602	10750	24.16	-79.09	3.85
61	SLV 16	-1813	-602	10750	24.16	-79.09	3.85
62	SLU 1	-684	-2	3508	0.95	-16.76	0.08
62	SLU 2	-714	0	3789	0.84	-17.13	0.05
62	SLU 3	-694	-2	3564	0.98	-16.96	0.08
62	SLU 4	-711	-1	3733	0.92	-17.19	0.07
62	SLU 5	-717	-1	3817	0.87	-17.14	0.05
62	SLU 6	-697	-2	3593	1.01	-16.97	0.08
62	SLU 7	-715	-1	3761	0.95	-17.2	0.07
62	SLU 8	-690	-2	3565	1	-16.78	0.08
62	SLU 9	-708	-1	3734	0.94	-17	0.07
62	SLU 10	-809	0	4340	0.88	-19.23	0.05
62	SLU 11	-789	-1	4115	1.02	-19.06	0.08
62	SLU 12	-807	-1	4284	0.96	-19.28	0.06
62	SLU 13	-812	0	4368	0.91	-19.24	0.05
62	SLU 14	-792	-1	4143	1.05	-19.07	0.08
62	SLU 15	-810	-1	4312	0.99	-19.29	0.07
62	SLU 16	-785	-1	4116	1.04	-18.87	0.08
62	SLU 17	-803	-1	4284	0.98	-19.1	0.06
62	SLU 18	-820	-1	4295	1	-19.76	0.07
62	SLU 19	-838	-1	4464	0.94	-19.98	0.06
62	SLU 20	-823	-1	4324	1.03	-19.77	0.07
62	SLU 21	-841	-1	4492	0.97	-19.99	0.06
62	SLU 22	-769	-1	3982	1	-18.74	0.08
62	SLU 23	-799	0	4263	0.89	-19.11	0.05
62	SLU 24	-779	-2	4038	1.03	-18.94	0.08
62	SLU 25	-797	-1	4206	0.97	-19.16	0.06
62	SLU 26	-802	0	4291	0.92	-19.12	0.05
62	SLU 27	-782	-2	4066	1.06	-18.95	0.08
62	SLU 28	-800	-1	4234	1	-19.17	0.07
62	SLU 29	-776	-2	4039	1.05	-18.75	0.08
62	SLU 30	-793	-1	4207	0.99	-18.98	0.07
62	SLU 31	-894	0	4813	0.93	-21.21	0.05
62	SLU 32	-874	-1	4589	1.07	-21.04	0.08
62	SLU 33	-892	-1	4757	1.01	-21.26	0.06
62	SLU 34	-897	0	4842	0.96	-21.22	0.05
62	SLU 35	-877	-1	4617	1.1	-21.05	0.08
62	SLU 36	-895	-1	4785	1.04	-21.27	0.06
62	SLU 37	-871	-1	4590	1.09	-20.85	0.08
62	SLU 38	-889	-1	4758	1.03	-21.08	0.06
62	SLU 39	-905	-1	4769	1.05	-21.73	0.07
62	SLU 40	-923	0	4937	0.99	-21.96	0.05
62	SLU 41	-908	-1	4797	1.08	-21.74	0.07



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
62	SLU 42	-926	-1	4966	1.02	-21.97	0.06
62	SLU 43	-860	-2	4399	1.21	-21.11	0.1
62	SLU 44	-890	-1	4679	1.11	-21.48	0.07
62	SLU 45	-870	-2	4454	1.25	-21.31	0.1
62	SLU 46	-887	-2	4623	1.19	-21.54	0.09
62	SLU 47	-893	-1	4708	1.14	-21.49	0.08
62	SLU 48	-873	-2	4483	1.28	-21.32	0.11
62	SLU 49	-891	-2	4651	1.21	-21.55	0.09
62	SLU 50	-866	-2	4455	1.27	-21.13	0.11
62	SLU 51	-884	-2	4624	1.21	-21.35	0.09
62	SLU 52	-985	-1	5230	1.15	-23.58	0.07
62	SLU 53	-965	-2	5005	1.29	-23.41	0.1
62	SLU 54	-983	-1	5174	1.23	-23.64	0.08
62	SLU 55	-988	-1	5259	1.18	-23.59	0.07
62	SLU 56	-968	-2	5034	1.32	-23.42	0.1
62	SLU 57	-986	-1	5202	1.25	-23.64	0.09
62	SLU 58	-961	-2	5006	1.31	-23.22	0.1
62	SLU 59	-979	-1	5175	1.24	-23.45	0.09
62	SLU 60	-996	-2	5186	1.27	-24.11	0.09
62	SLU 61	-1014	-1	5354	1.21	-24.33	0.08
62	SLU 62	-999	-2	5214	1.3	-24.12	0.1
62	SLU 63	-1017	-1	5382	1.23	-24.34	0.08
62	SLU 64	-945	-2	4872	1.26	-23.09	0.1
62	SLU 65	-975	-1	5153	1.16	-23.46	0.07
62	SLU 66	-955	-2	4928	1.3	-23.29	0.1
62	SLU 67	-973	-1	5096	1.24	-23.51	0.09
62	SLU 68	-978	-1	5181	1.19	-23.47	0.08
62	SLU 69	-958	-2	4956	1.33	-23.3	0.11
62	SLU 70	-976	-1	5125	1.26	-23.52	0.09
62	SLU 71	-952	-2	4929	1.32	-23.1	0.11
62	SLU 72	-969	-1	5097	1.26	-23.33	0.09
62	SLU 73	-1070	-1	5704	1.2	-25.56	0.07
62	SLU 74	-1050	-2	5479	1.34	-25.39	0.1
62	SLU 75	-1068	-1	5647	1.28	-25.61	0.08
62	SLU 76	-1073	-1	5732	1.23	-25.57	0.07
62	SLU 77	-1053	-2	5507	1.36	-25.4	0.1
62	SLU 78	-1071	-1	5676	1.3	-25.62	0.09
62	SLU 79	-1047	-2	5480	1.36	-25.2	0.1
62	SLU 80	-1065	-1	5648	1.29	-25.43	0.09
62	SLU 81	-1081	-2	5659	1.32	-26.08	0.09
62	SLU 82	-1099	-1	5828	1.26	-26.31	0.08
62	SLU 83	-1084	-2	5687	1.35	-26.09	0.1
62	SLU 84	-1102	-1	5856	1.28	-26.32	0.08
62	SLE RA 1	-708	-1	3644	0.96	-17.32	0.08
62	SLE RA 2	-728	-1	3831	0.89	-17.57	0.06
62	SLE RA 3	-715	-2	3681	0.98	-17.46	0.08
62	SLE RA 4	-727	-1	3793	0.94	-17.61	0.07
62	SLE RA 5	-730	-1	3850	0.91	-17.58	0.06
62	SLE RA 6	-717	-2	3700	1	-17.47	0.08
62	SLE RA 7	-729	-1	3812	0.96	-17.61	0.07
62	SLE RA 8	-713	-2	3681	1	-17.34	0.08
62	SLE RA 9	-724	-1	3794	0.96	-17.49	0.07
62	SLE RA 10	-792	-1	4198	0.92	-18.97	0.06
62	SLE RA 11	-778	-1	4048	1.01	-18.86	0.08
62	SLE RA 12	-790	-1	4160	0.97	-19.01	0.07
62	SLE RA 13	-794	-1	4217	0.94	-18.98	0.06
62	SLE RA 14	-780	-1	4067	1.03	-18.86	0.08
62	SLE RA 15	-792	-1	4179	0.99	-19.01	0.07
62	SLE RA 16	-776	-1	4049	1.02	-18.73	0.08
62	SLE RA 17	-788	-1	4161	0.98	-18.88	0.07
62	SLE RA 18	-799	-1	4168	1	-19.32	0.07
62	SLE RA 19	-811	-1	4281	0.96	-19.47	0.06
62	SLE RA 20	-801	-1	4187	1.02	-19.33	0.07
62	SLE RA 21	-813	-1	4300	0.97	-19.48	0.06
62	SLE FR 1	-708	-1	3644	0.96	-17.32	0.08
62	SLE FR 2	-712	-1	3681	0.95	-17.37	0.07
62	SLE FR 3	-709	-2	3651	0.97	-17.33	0.08
62	SLE FR 4	-740	-1	3839	0.96	-17.97	0.07
62	SLE FR 5	-736	-1	3809	0.98	-17.93	0.08
62	SLE FR 6	-754	-1	3906	0.98	-18.32	0.07
62	SLE QP 1	-708	-1	3644	0.96	-17.32	0.08
62	SLE QP 2	-736	-1	3801	0.97	-17.92	0.07
62	SLD 1	-191	-2	2247	1	2.53	0.09
62	SLD 2	-191	-2	2247	1	2.53	0.09
62	SLD 3	-69	-9	1791	2.94	6.28	0.35
62	SLD 4	-69	-9	1791	2.94	6.28	0.35
62	SLD 5	-757	8	4025	-1.96	-17.46	-0.32
62	SLD 6	-757	8	4025	-1.96	-17.46	-0.32
62	SLD 7	-350	-13	2508	4.5	-4.99	0.56
62	SLD 8	-350	-13	2508	4.5	-4.99	0.56
62	SLD 9	-1121	11	5095	-2.56	-30.86	-0.41
62	SLD 10	-1121	11	5095	-2.56	-30.86	-0.41
62	SLD 11	-714	-11	3577	3.9	-18.38	0.47
62	SLD 12	-714	-11	3577	3.9	-18.38	0.47
62	SLD 13	-1402	6	5811	-1	-42.13	-0.2
62	SLD 14	-1402	6	5811	-1	-42.13	-0.2
62	SLD 15	-1280	-1	5356	0.94	-38.38	0.06
62	SLD 16	-1280	-1	5356	0.94	-38.38	0.06
62	SLV 1	531	-3	179	1.04	29.7	0.1
62	SLV 2	531	-3	179	1.04	29.7	0.1



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
62	SLV 3	824	-19	-905	5.66	38.7	0.73
62	SLV 4	824	-19	-905	5.66	38.7	0.73
62	SLV 5	-800	22	4359	-6.02	-17.3	-0.87
62	SLV 6	-800	22	4359	-6.02	-17.3	-0.87
62	SLV 7	177	-30	745	9.39	12.72	1.23
62	SLV 8	177	-30	745	9.39	12.72	1.23
62	SLV 9	-1648	27	6857	-7.45	-48.57	-1.08
62	SLV 10	-1648	27	6857	-7.45	-48.57	-1.08
62	SLV 11	-671	-25	3244	7.96	-18.55	1.02
62	SLV 12	-671	-25	3244	7.96	-18.55	1.02
62	SLV 13	-2295	16	8507	-3.72	-74.55	-0.58
62	SLV 14	-2295	16	8507	-3.72	-74.55	-0.58
62	SLV 15	-2002	0	7423	0.91	-65.55	0.05
62	SLV 16	-2002	0	7423	0.91	-65.55	0.05
63	SLU 1	-226	9	2021	2.75	-31.69	1.86
63	SLU 2	-267	10	1948	2.79	-34.04	1.96
63	SLU 3	-225	9	2079	2.86	-32.09	1.88
63	SLU 4	-249	9	2036	2.88	-33.5	1.94
63	SLU 5	-264	10	1995	2.88	-34.25	1.97
63	SLU 6	-222	9	2127	2.95	-32.3	1.89
63	SLU 7	-247	9	2083	2.97	-33.71	1.94
63	SLU 8	-221	9	2115	2.94	-32.1	1.88
63	SLU 9	-245	9	2072	2.96	-33.52	1.93
63	SLU 10	-354	15	2127	2.7	-41.63	2.46
63	SLU 11	-312	14	2258	2.77	-39.67	2.38
63	SLU 12	-337	14	2214	2.79	-41.09	2.44
63	SLU 13	-352	14	2174	2.8	-41.83	2.47
63	SLU 14	-310	14	2305	2.86	-39.88	2.39
63	SLU 15	-334	14	2262	2.89	-41.29	2.44
63	SLU 16	-308	14	2294	2.85	-39.68	2.38
63	SLU 17	-333	14	2250	2.87	-41.1	2.44
63	SLU 18	-351	16	2276	2.63	-42.52	2.58
63	SLU 19	-375	16	2233	2.65	-43.93	2.64
63	SLU 20	-348	16	2324	2.72	-42.72	2.59
63	SLU 21	-373	16	2280	2.74	-44.14	2.64
63	SLU 22	-303	13	2121	2.6	-37.77	2.28
63	SLU 23	-344	14	2048	2.64	-40.13	2.37
63	SLU 24	-302	13	2180	2.7	-38.17	2.29
63	SLU 25	-326	14	2136	2.73	-39.59	2.35
63	SLU 26	-341	14	2095	2.73	-40.33	2.38
63	SLU 27	-299	13	2227	2.8	-38.38	2.3
63	SLU 28	-324	13	2183	2.82	-39.79	2.36
63	SLU 29	-298	13	2216	2.78	-38.18	2.29
63	SLU 30	-322	13	2172	2.81	-39.6	2.35
63	SLU 31	-431	19	2227	2.55	-47.71	2.87
63	SLU 32	-389	18	2358	2.62	-45.75	2.79
63	SLU 33	-414	18	2315	2.64	-47.17	2.85
63	SLU 34	-429	19	2274	2.65	-47.91	2.88
63	SLU 35	-387	18	2406	2.71	-45.96	2.8
63	SLU 36	-411	18	2362	2.73	-47.38	2.86
63	SLU 37	-385	18	2394	2.7	-45.76	2.79
63	SLU 38	-410	18	2351	2.72	-47.18	2.85
63	SLU 39	-428	20	2377	2.47	-48.6	2.99
63	SLU 40	-452	21	2333	2.5	-50.01	3.05
63	SLU 41	-425	20	2424	2.57	-48.8	3
63	SLU 42	-450	20	2380	2.59	-50.22	3.05
63	SLU 43	-267	11	2593	3.63	-39.11	2.28
63	SLU 44	-308	11	2520	3.67	-41.47	2.38
63	SLU 45	-266	10	2651	3.73	-39.51	2.3
63	SLU 46	-291	11	2608	3.76	-40.93	2.36
63	SLU 47	-306	11	2567	3.76	-41.67	2.38
63	SLU 48	-264	10	2699	3.83	-39.72	2.31
63	SLU 49	-288	11	2655	3.85	-41.13	2.36
63	SLU 50	-262	10	2687	3.81	-39.52	2.3
63	SLU 51	-287	11	2644	3.84	-40.94	2.35
63	SLU 52	-396	16	2699	3.58	-49.05	2.88
63	SLU 53	-353	15	2830	3.65	-47.09	2.8
63	SLU 54	-378	16	2786	3.67	-48.51	2.86
63	SLU 55	-393	16	2746	3.67	-49.25	2.88
63	SLU 56	-351	15	2877	3.74	-47.3	2.81
63	SLU 57	-376	15	2834	3.76	-48.71	2.86
63	SLU 58	-350	15	2866	3.73	-47.1	2.8
63	SLU 59	-374	15	2822	3.75	-48.52	2.85
63	SLU 60	-392	17	2848	3.5	-49.94	3
63	SLU 61	-417	18	2805	3.53	-51.35	3.05
63	SLU 62	-390	17	2896	3.6	-50.14	3
63	SLU 63	-414	18	2852	3.62	-51.56	3.06
63	SLU 64	-344	15	2693	3.47	-45.19	2.69
63	SLU 65	-385	15	2620	3.52	-47.55	2.79
63	SLU 66	-343	15	2752	3.58	-45.59	2.71
63	SLU 67	-368	15	2708	3.6	-47.01	2.77
63	SLU 68	-383	15	2667	3.61	-47.75	2.8
63	SLU 69	-341	15	2799	3.67	-45.8	2.72
63	SLU 70	-365	15	2755	3.7	-47.21	2.77
63	SLU 71	-339	14	2788	3.66	-45.6	2.71
63	SLU 72	-364	15	2744	3.69	-47.02	2.76
63	SLU 73	-473	20	2799	3.43	-55.13	3.29
63	SLU 74	-431	19	2930	3.49	-53.17	3.21
63	SLU 75	-455	20	2887	3.52	-54.59	3.27
63	SLU 76	-470	20	2846	3.52	-55.34	3.3



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
63	SLU 77	-428	19	2978	3.59	-53.38	3.22
63	SLU 78	-453	20	2934	3.61	-54.8	3.27
63	SLU 79	-427	19	2966	3.57	-53.18	3.21
63	SLU 80	-451	20	2923	3.6	-54.6	3.26
63	SLU 81	-469	22	2949	3.35	-56.02	3.41
63	SLU 82	-494	22	2905	3.38	-57.43	3.47
63	SLU 83	-467	21	2996	3.44	-56.23	3.42
63	SLU 84	-491	22	2952	3.47	-57.64	3.47
63	SLE RA 1	-248	10	2050	2.71	-33.42	1.98
63	SLE RA 2	-275	11	2001	2.73	-35	2.05
63	SLE RA 3	-247	10	2089	2.78	-33.69	1.99
63	SLE RA 4	-263	11	2059	2.79	-34.64	2.03
63	SLE RA 5	-273	11	2032	2.8	-35.13	2.05
63	SLE RA 6	-245	10	2120	2.84	-33.83	2
63	SLE RA 7	-262	10	2091	2.86	-34.77	2.04
63	SLE RA 8	-245	10	2113	2.83	-33.7	1.99
63	SLE RA 9	-261	10	2083	2.85	-34.64	2.03
63	SLE RA 10	-333	14	2120	2.68	-40.05	2.38
63	SLE RA 11	-305	14	2208	2.72	-38.75	2.33
63	SLE RA 12	-322	14	2179	2.74	-39.69	2.36
63	SLE RA 13	-332	14	2152	2.74	-40.19	2.38
63	SLE RA 14	-304	13	2239	2.78	-38.88	2.33
63	SLE RA 15	-320	14	2210	2.8	-39.83	2.37
63	SLE RA 16	-303	13	2232	2.77	-38.75	2.32
63	SLE RA 17	-319	14	2203	2.79	-39.7	2.36
63	SLE RA 18	-331	15	2220	2.62	-40.64	2.46
63	SLE RA 19	-348	15	2191	2.64	-41.59	2.5
63	SLE RA 20	-330	15	2251	2.69	-40.78	2.46
63	SLE RA 21	-346	15	2222	2.7	-41.73	2.5
63	SLE FR 1	-248	10	2050	2.71	-33.42	1.98
63	SLE FR 2	-253	11	2040	2.71	-33.74	1.99
63	SLE FR 3	-247	10	2062	2.73	-33.48	1.98
63	SLE FR 4	-278	12	2091	2.69	-35.9	2.14
63	SLE FR 5	-272	12	2113	2.71	-35.64	2.13
63	SLE FR 6	-290	13	2135	2.66	-37.03	2.22
63	SLE QP 1	-248	10	2050	2.71	-33.42	1.98
63	SLE QP 2	-273	12	2101	2.68	-35.59	2.13
63	SLD 1	6	-3	3131	4.89	-21.74	1.36
63	SLD 2	6	-3	3131	4.89	-21.74	1.36
63	SLD 3	61	-17	2889	7.82	-18.58	0.8
63	SLD 4	61	-17	2889	7.82	-18.58	0.8
63	SLD 5	-273	29	2778	-1.11	-36.22	2.74
63	SLD 6	-273	29	2778	-1.11	-36.22	2.74
63	SLD 7	-89	-18	1969	8.67	-25.7	0.89
63	SLD 8	-89	-18	1969	8.67	-25.7	0.89
63	SLD 9	-457	42	2232	-3.31	-45.48	3.36
63	SLD 10	-457	42	2232	-3.31	-45.48	3.36
63	SLD 11	-273	-5	1424	6.47	-34.96	1.51
63	SLD 12	-273	-5	1424	6.47	-34.96	1.51
63	SLD 13	-607	40	1313	-2.46	-52.59	3.45
63	SLD 14	-607	40	1313	-2.46	-52.59	3.45
63	SLD 15	-552	26	1070	0.47	-49.44	2.9
63	SLD 16	-552	26	1070	0.47	-49.44	2.9
63	SLV 1	374	-22	4503	7.9	-3.51	0.34
63	SLV 2	374	-22	4503	7.9	-3.51	0.34
63	SLV 3	506	-55	3931	14.75	4.01	-0.95
63	SLV 4	506	-55	3931	14.75	4.01	-0.95
63	SLV 5	-278	52	3688	-6.16	-37.36	3.56
63	SLV 6	-278	52	3688	-6.16	-37.36	3.56
63	SLV 7	160	-58	1783	16.71	-12.31	-0.77
63	SLV 8	160	-58	1783	16.71	-12.31	-0.77
63	SLV 9	-705	82	2418	-11.34	-58.87	5.02
63	SLV 10	-705	82	2418	-11.34	-58.87	5.02
63	SLV 11	-268	-28	514	11.52	-33.81	0.69
63	SLV 12	-268	-28	514	11.52	-33.81	0.69
63	SLV 13	-1051	79	270	-9.39	-75.18	5.2
63	SLV 14	-1051	79	270	-9.39	-75.18	5.2
63	SLV 15	-920	46	-301	-2.53	-67.67	3.91
63	SLV 16	-920	46	-301	-2.53	-67.67	3.91
64	SLU 1	-830	330	9095	-58.72	-26.51	-8.09
64	SLU 2	-864	332	9321	-59.12	-28.67	-8.45
64	SLU 3	-845	339	9288	-60.14	-26.85	-8.23
64	SLU 4	-865	340	9424	-60.38	-28.15	-8.45
64	SLU 5	-874	338	9456	-60.12	-28.84	-8.54
64	SLU 6	-855	345	9423	-61.15	-27.02	-8.32
64	SLU 7	-875	346	9559	-61.38	-28.32	-8.54
64	SLU 8	-850	342	9365	-60.74	-26.84	-8.27
64	SLU 9	-870	343	9501	-60.97	-28.14	-8.49
64	SLU 10	-1006	382	10683	-67.52	-33.55	-9.82
64	SLU 11	-987	389	10650	-68.54	-31.74	-9.6
64	SLU 12	-1008	390	10786	-68.78	-33.04	-9.82
64	SLU 13	-1016	388	10818	-68.52	-33.72	-9.92
64	SLU 14	-997	395	10785	-69.55	-31.91	-9.69
64	SLU 15	-1017	396	10921	-69.78	-33.2	-9.91
64	SLU 16	-992	392	10728	-69.14	-31.73	-9.65
64	SLU 17	-1012	393	10863	-69.37	-33.03	-9.86
64	SLU 18	-1034	402	11041	-70.72	-33.49	-10.05
64	SLU 19	-1054	403	11177	-70.96	-34.79	-10.27
64	SLU 20	-1043	408	11176	-71.73	-33.66	-10.14
64	SLU 21	-1064	409	11312	-71.97	-34.95	-10.36



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
64	SLU 22	-949	365	10158	-64.91	-31.29	-9.26
64	SLU 23	-983	367	10384	-65.31	-33.45	-9.62
64	SLU 24	-964	374	10351	-66.33	-31.63	-9.4
64	SLU 25	-985	375	10486	-66.56	-32.93	-9.62
64	SLU 26	-993	373	10519	-66.31	-33.61	-9.71
64	SLU 27	-974	380	10486	-67.33	-31.8	-9.49
64	SLU 28	-994	381	10621	-67.57	-33.1	-9.71
64	SLU 29	-969	377	10428	-66.92	-31.62	-9.44
64	SLU 30	-989	378	10563	-67.16	-32.92	-9.66
64	SLU 31	-1126	417	11746	-73.71	-38.33	-10.99
64	SLU 32	-1107	424	11713	-74.73	-36.52	-10.77
64	SLU 33	-1127	425	11848	-74.96	-37.82	-10.99
64	SLU 34	-1136	423	11881	-74.71	-38.5	-11.09
64	SLU 35	-1117	430	11848	-75.73	-36.69	-10.86
64	SLU 36	-1137	431	11983	-75.97	-37.98	-11.08
64	SLU 37	-1112	427	11790	-75.32	-36.51	-10.81
64	SLU 38	-1132	428	11925	-75.56	-37.81	-11.03
64	SLU 39	-1153	437	12104	-76.91	-38.27	-11.22
64	SLU 40	-1173	438	12239	-77.15	-39.56	-11.44
64	SLU 41	-1163	443	12239	-77.92	-38.44	-11.31
64	SLU 42	-1183	444	12374	-78.15	-39.73	-11.53
64	SLU 43	-1038	417	11460	-74.22	-32.82	-10.11
64	SLU 44	-1072	419	11685	-74.61	-34.98	-10.48
64	SLU 45	-1053	426	11653	-75.64	-33.17	-10.25
64	SLU 46	-1073	427	11788	-75.87	-34.46	-10.47
64	SLU 47	-1082	425	11820	-75.62	-35.15	-10.57
64	SLU 48	-1063	433	11787	-76.64	-33.33	-10.35
64	SLU 49	-1083	433	11923	-76.88	-34.63	-10.56
64	SLU 50	-1058	430	11730	-76.23	-33.16	-10.3
64	SLU 51	-1078	430	11865	-76.47	-34.45	-10.51
64	SLU 52	-1214	469	13047	-83.01	-39.87	-11.85
64	SLU 53	-1195	477	13015	-84.04	-38.05	-11.63
64	SLU 54	-1216	477	13150	-84.27	-39.35	-11.85
64	SLU 55	-1224	475	13182	-84.02	-40.04	-11.94
64	SLU 56	-1205	483	13150	-85.04	-38.22	-11.72
64	SLU 57	-1226	483	13285	-85.28	-39.52	-11.94
64	SLU 58	-1200	480	13092	-84.63	-38.04	-11.67
64	SLU 59	-1221	481	13227	-84.87	-39.34	-11.89
64	SLU 60	-1242	489	13406	-86.22	-39.8	-12.07
64	SLU 61	-1262	490	13541	-86.46	-41.1	-12.29
64	SLU 62	-1251	495	13541	-87.23	-39.97	-12.17
64	SLU 63	-1272	496	13676	-87.46	-41.27	-12.39
64	SLU 64	-1158	452	12522	-80.41	-37.6	-11.28
64	SLU 65	-1191	454	12748	-80.8	-39.76	-11.64
64	SLU 66	-1172	461	12715	-81.82	-37.95	-11.42
64	SLU 67	-1193	462	12850	-82.06	-39.24	-11.64
64	SLU 68	-1201	460	12883	-81.81	-39.93	-11.74
64	SLU 69	-1182	467	12850	-82.83	-38.11	-11.51
64	SLU 70	-1203	468	12985	-83.07	-39.41	-11.73
64	SLU 71	-1177	464	12792	-82.42	-37.94	-11.47
64	SLU 72	-1198	465	12928	-82.66	-39.23	-11.68
64	SLU 73	-1334	504	14110	-89.2	-44.65	-13.02
64	SLU 74	-1315	511	14077	-90.22	-42.83	-12.8
64	SLU 75	-1335	512	14213	-90.46	-44.13	-13.01
64	SLU 76	-1344	510	14245	-90.21	-44.82	-13.11
64	SLU 77	-1325	517	14212	-91.23	-43	-12.89
64	SLU 78	-1345	518	14348	-91.46	-44.3	-13.11
64	SLU 79	-1320	514	14154	-90.82	-42.82	-12.84
64	SLU 80	-1340	515	14290	-91.05	-44.12	-13.06
64	SLU 81	-1361	524	14468	-92.41	-44.58	-13.24
64	SLU 82	-1381	525	14604	-92.64	-45.88	-13.46
64	SLU 83	-1371	530	14603	-93.41	-44.75	-13.34
64	SLU 84	-1391	531	14739	-93.65	-46.05	-13.55
64	SLE RA 1	-864	340	9399	-60.49	-27.87	-8.42
64	SLE RA 2	-887	341	9549	-60.75	-29.31	-8.66
64	SLE RA 3	-874	346	9528	-61.44	-28.1	-8.51
64	SLE RA 4	-888	347	9618	-61.59	-28.97	-8.66
64	SLE RA 5	-893	345	9639	-61.42	-29.42	-8.72
64	SLE RA 6	-881	350	9617	-62.11	-28.22	-8.58
64	SLE RA 7	-894	351	9708	-62.26	-29.08	-8.72
64	SLE RA 8	-877	348	9579	-61.83	-28.1	-8.54
64	SLE RA 9	-891	349	9669	-61.99	-28.96	-8.69
64	SLE RA 10	-982	375	10457	-66.35	-32.57	-9.58
64	SLE RA 11	-969	380	10436	-67.04	-31.36	-9.43
64	SLE RA 12	-983	380	10526	-67.19	-32.23	-9.58
64	SLE RA 13	-988	379	10547	-67.02	-32.68	-9.64
64	SLE RA 14	-976	384	10526	-67.71	-31.47	-9.49
64	SLE RA 15	-989	384	10616	-67.86	-32.34	-9.64
64	SLE RA 16	-972	382	10487	-67.43	-31.35	-9.46
64	SLE RA 17	-986	382	10577	-67.59	-32.22	-9.61
64	SLE RA 18	-1000	388	10696	-68.49	-32.53	-9.73
64	SLE RA 19	-1013	389	10787	-68.65	-33.39	-9.87
64	SLE RA 20	-1006	392	10786	-69.16	-32.64	-9.79
64	SLE RA 21	-1020	393	10876	-69.32	-33.5	-9.94
64	SLE FR 1	-864	340	9399	-60.49	-27.87	-8.42
64	SLE FR 2	-869	340	9429	-60.55	-28.16	-8.47
64	SLE FR 3	-867	342	9435	-60.76	-27.92	-8.45
64	SLE FR 4	-909	355	9818	-62.95	-29.56	-8.86
64	SLE FR 5	-908	356	9824	-63.16	-29.31	-8.84
64	SLE FR 6	-932	364	10048	-64.49	-30.2	-9.07



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
64	SLE QP 1	-864	340	9399	-60.49	-27.87	-8.42
64	SLE QP 2	-905	355	9788	-62.89	-29.27	-8.81
64	SLD 1	-764	421	9290	-15.31	-7.16	-7.16
64	SLD 2	-764	421	9290	-66.2	-15.31	-7.16
64	SLD 3	-702	13	8563	-44.97	-12.33	-6.46
64	SLD 4	-702	13	8563	-44.97	-12.33	-6.46
64	SLD 5	-957	994	10742	-96.08	-29.61	-9.39
64	SLD 6	-957	994	10742	-96.08	-29.61	-9.39
64	SLD 7	-750	-367	8318	-25.32	-19.66	-7.04
64	SLD 8	-750	-367	8318	-25.32	-19.66	-7.04
64	SLD 9	-1060	1076	11259	-100.47	-38.88	-10.59
64	SLD 10	-1060	1076	11259	-100.47	-38.88	-10.59
64	SLD 11	-853	-285	8835	-29.7	-28.93	-8.24
64	SLD 12	-853	-285	8835	-29.7	-28.93	-8.24
64	SLD 13	-1108	696	11014	-80.81	-46.21	-11.17
64	SLD 14	-1108	696	11014	-80.81	-46.21	-11.17
64	SLD 15	-1046	288	10287	-59.59	-43.23	-10.46
64	SLD 16	-1046	288	10287	-59.59	-43.23	-10.46
64	SLV 1	-578	510	8633	-70.41	3.14	-4.98
64	SLV 2	-578	510	8633	-70.41	3.14	-4.98
64	SLV 3	-432	-441	6925	-20.9	10.24	-3.31
64	SLV 4	-432	-441	6925	-20.9	10.24	-3.31
64	SLV 5	-1029	1844	12032	-140.22	-30.32	-10.19
64	SLV 6	-1029	1844	12032	-140.22	-30.32	-10.19
64	SLV 7	-541	-1327	6339	24.78	-6.65	-4.63
64	SLV 8	-541	-1327	6339	24.78	-6.65	-4.63
64	SLV 9	-1269	2036	13238	-150.57	-51.89	-12.99
64	SLV 10	-1269	2036	13238	-150.57	-51.89	-12.99
64	SLV 11	-781	-1135	7544	14.44	-28.22	-7.44
64	SLV 12	-781	-1135	7544	14.44	-28.22	-7.44
64	SLV 13	-1378	1150	12652	-104.88	-68.78	-14.32
64	SLV 14	-1378	1150	12652	-104.88	-68.78	-14.32
64	SLV 15	-1232	199	10944	-55.38	-61.68	-12.65
64	SLV 16	-1232	199	10944	-55.38	-61.68	-12.65
65	SLU 1	837	254	8401	-51.66	27.76	7.83
65	SLU 2	872	251	8585	-51.76	29.91	8.2
65	SLU 3	854	266	8589	-53.08	28.28	7.99
65	SLU 4	875	264	8700	-53.14	29.57	8.21
65	SLU 5	883	259	8719	-52.77	30.25	8.31
65	SLU 6	865	274	8723	-54.09	28.62	8.1
65	SLU 7	886	272	8833	-54.15	29.91	8.32
65	SLU 8	860	270	8668	-53.68	28.44	8.05
65	SLU 9	881	269	8779	-53.74	29.73	8.27
65	SLU 10	1023	292	9769	-58.57	36.18	9.67
65	SLU 11	1005	307	9773	-59.89	34.54	9.46
65	SLU 12	1026	305	9883	-59.95	35.84	9.68
65	SLU 13	1035	300	9903	-59.58	36.51	9.78
65	SLU 14	1017	315	9906	-60.9	34.88	9.57
65	SLU 15	1038	313	10017	-60.96	36.17	9.79
65	SLU 16	1012	311	9852	-60.49	34.7	9.52
65	SLU 17	1033	310	9962	-60.55	35.99	9.74
65	SLU 18	1053	313	10093	-61.39	36.71	9.93
65	SLU 19	1074	311	10203	-61.45	38	10.15
65	SLU 20	1065	321	10226	-62.4	37.04	10.04
65	SLU 21	1086	319	10336	-62.46	38.34	10.26
65	SLU 22	961	288	9377	-57.22	33.05	9.05
65	SLU 23	996	285	9561	-57.32	35.21	9.42
65	SLU 24	978	300	9564	-58.64	33.57	9.2
65	SLU 25	999	298	9675	-58.7	34.87	9.43
65	SLU 26	1008	293	9694	-58.33	35.54	9.52
65	SLU 27	990	308	9698	-59.65	33.91	9.31
65	SLU 28	1011	307	9808	-59.71	35.2	9.53
65	SLU 29	985	305	9643	-59.24	33.73	9.26
65	SLU 30	1006	303	9754	-59.3	35.02	9.48
65	SLU 31	1148	326	10744	-64.13	41.47	10.89
65	SLU 32	1130	341	10748	-65.45	39.84	10.67
65	SLU 33	1151	339	10859	-65.51	41.13	10.9
65	SLU 34	1160	334	10878	-65.14	41.81	10.99
65	SLU 35	1141	349	10882	-66.46	40.17	10.78
65	SLU 36	1162	348	10992	-66.53	41.47	11
65	SLU 37	1136	346	10827	-66.05	39.99	10.73
65	SLU 38	1157	344	10938	-66.11	41.28	10.95
65	SLU 39	1178	347	11068	-66.95	42	11.15
65	SLU 40	1199	345	11178	-67.01	43.29	11.37
65	SLU 41	1190	355	11201	-67.96	42.34	11.26
65	SLU 42	1211	353	11312	-68.02	43.63	11.48
65	SLU 43	1045	319	10587	-65.24	34.28	9.77
65	SLU 44	1080	316	10772	-65.35	36.43	10.13
65	SLU 45	1062	331	10775	-66.67	34.8	9.92
65	SLU 46	1083	329	10886	-66.73	36.09	10.14
65	SLU 47	1092	324	10905	-66.36	36.77	10.24
65	SLU 48	1073	339	10909	-67.68	35.13	10.03
65	SLU 49	1094	337	11019	-67.74	36.43	10.25
65	SLU 50	1068	335	10854	-67.27	34.95	9.98
65	SLU 51	1089	333	10965	-67.33	36.24	10.2
65	SLU 52	1232	357	11955	-72.16	42.69	11.6
65	SLU 53	1213	372	11959	-73.48	41.06	11.39
65	SLU 54	1234	370	12070	-73.54	42.35	11.61
65	SLU 55	1243	365	12089	-73.17	43.03	11.71
65	SLU 56	1225	380	12093	-74.49	41.4	11.5



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
65	SLU 57	1246	378	12203	-74.55	42.69	11.72
65	SLU 58	1220	376	12038	-74.08	41.21	11.45
65	SLU 59	1241	374	12149	-74.14	42.5	11.67
65	SLU 60	1262	377	12279	-74.97	43.22	11.87
65	SLU 61	1283	375	12389	-75.04	44.51	12.09
65	SLU 62	1273	385	12412	-75.99	43.56	11.97
65	SLU 63	1294	384	12522	-76.05	44.85	12.19
65	SLU 64	1170	353	11563	-70.81	39.57	10.98
65	SLU 65	1205	350	11747	-70.91	41.72	11.35
65	SLU 66	1187	365	11751	-72.23	40.09	11.14
65	SLU 67	1208	363	11861	-72.29	41.38	11.36
65	SLU 68	1216	358	11880	-71.92	42.06	11.46
65	SLU 69	1198	373	11884	-73.24	40.43	11.25
65	SLU 70	1219	371	11994	-73.3	41.72	11.47
65	SLU 71	1193	369	11830	-72.83	40.24	11.2
65	SLU 72	1214	367	11940	-72.89	41.54	11.42
65	SLU 73	1356	391	12931	-77.72	47.98	12.82
65	SLU 74	1338	406	12934	-79.04	46.35	12.61
65	SLU 75	1359	404	13045	-79.1	47.64	12.83
65	SLU 76	1368	399	13064	-78.73	48.32	12.93
65	SLU 77	1350	414	13068	-80.05	46.69	12.72
65	SLU 78	1371	412	13178	-80.11	47.98	12.94
65	SLU 79	1345	410	13013	-79.64	46.5	12.67
65	SLU 80	1366	408	13124	-79.7	47.8	12.89
65	SLU 81	1386	411	13254	-80.54	48.51	13.08
65	SLU 82	1407	410	13364	-80.6	49.8	13.3
65	SLU 83	1398	420	13387	-81.55	48.85	13.19
65	SLU 84	1419	418	13498	-81.61	50.14	13.41
65	SLE RA 1	872	264	8680	-53.24	29.27	8.18
65	SLE RA 2	896	262	8803	-53.31	30.71	8.43
65	SLE RA 3	884	272	8805	-54.19	29.62	8.28
65	SLE RA 4	898	271	8879	-54.23	30.48	8.43
65	SLE RA 5	903	267	8892	-53.99	30.93	8.5
65	SLE RA 6	891	277	8894	-54.87	29.85	8.36
65	SLE RA 7	905	276	8968	-54.91	30.71	8.5
65	SLE RA 8	888	275	8858	-54.59	29.72	8.32
65	SLE RA 9	902	274	8932	-54.63	30.59	8.47
65	SLE RA 10	997	289	9592	-57.85	34.88	9.41
65	SLE RA 11	985	299	9594	-58.73	33.79	9.26
65	SLE RA 12	999	298	9668	-58.78	34.66	9.41
65	SLE RA 13	1005	295	9681	-58.53	35.11	9.48
65	SLE RA 14	992	305	9683	-59.41	34.02	9.34
65	SLE RA 15	1006	303	9757	-59.45	34.88	9.48
65	SLE RA 16	989	302	9647	-59.13	33.9	9.3
65	SLE RA 17	1003	301	9721	-59.18	34.76	9.45
65	SLE RA 18	1017	303	9807	-59.73	35.24	9.58
65	SLE RA 19	1031	302	9881	-59.77	36.1	9.73
65	SLE RA 20	1025	308	9896	-60.41	35.46	9.65
65	SLE RA 21	1039	307	9970	-60.45	36.32	9.8
65	SLE FR 1	872	264	8680	-53.24	29.27	8.18
65	SLE FR 2	877	263	8705	-53.26	29.56	8.23
65	SLE FR 3	875	266	8716	-53.51	29.36	8.21
65	SLE FR 4	920	275	9043	-55.2	31.35	8.65
65	SLE FR 5	919	278	9054	-55.46	31.15	8.63
65	SLE FR 6	945	283	9244	-56.49	32.25	8.88
65	SLE QP 1	872	264	8680	-53.24	29.27	8.18
65	SLE QP 2	916	276	9018	-55.19	31.06	8.6
65	SLD 1	1101	325	9998	-58.61	46.32	10.79
65	SLD 2	1101	325	9998	-58.61	46.32	10.79
65	SLD 3	1031	-50	9200	-38.45	43.46	10.06
65	SLD 4	1031	-50	9200	-38.45	43.46	10.06
65	SLD 5	1078	860	10522	-86.79	39.98	10.37
65	SLD 6	1078	860	10522	-86.79	39.98	10.37
65	SLD 7	844	-392	7863	-19.59	30.44	7.92
65	SLD 8	844	-392	7863	-19.59	30.44	7.92
65	SLD 9	988	943	10173	-90.79	31.68	9.28
65	SLD 10	988	943	10173	-90.79	31.68	9.28
65	SLD 11	753	-309	7515	-23.59	22.15	6.83
65	SLD 12	753	-309	7515	-23.59	22.15	6.83
65	SLD 13	800	602	8837	-71.93	18.67	7.14
65	SLD 14	800	602	8837	-71.93	18.67	7.14
65	SLD 15	730	226	8039	-51.78	15.81	6.41
65	SLD 16	730	226	8039	-51.78	15.81	6.41
65	SLV 1	1349	392	11311	-63.18	66.67	13.71
65	SLV 2	1349	392	11311	-63.18	66.67	13.71
65	SLV 3	1182	-478	9438	-16.44	59.79	11.97
65	SLV 4	1182	-478	9438	-16.44	59.79	11.97
65	SLV 5	1298	1629	12546	-128.47	52.18	12.77
65	SLV 6	1298	1629	12546	-128.47	52.18	12.77
65	SLV 7	743	-1269	6304	27.32	29.25	6.97
65	SLV 8	743	-1269	6304	27.32	29.25	6.97
65	SLV 9	1089	1820	11732	-137.7	32.88	10.23
65	SLV 10	1089	1820	11732	-137.7	32.88	10.23
65	SLV 11	533	-1078	5490	18.09	9.95	4.42
65	SLV 12	533	-1078	5490	18.09	9.95	4.42
65	SLV 13	650	1029	8598	-93.94	2.34	5.23
65	SLV 14	650	1029	8598	-93.94	2.34	5.23
65	SLV 15	483	159	6726	-47.2	-4.54	3.49
65	SLV 16	483	159	6726	-47.2	-4.54	3.49
66	SLU 1	229	1	2034	4.16	29.02	-1.73



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
66	SLU 2	274	2	1957	4.28	31.52	-1.84
66	SLU 3	231	1	2085	4.28	29.51	-1.75
66	SLU 4	258	1	2039	4.36	31.01	-1.81
66	SLU 5	275	2	1996	4.38	31.83	-1.85
66	SLU 6	231	1	2124	4.37	29.83	-1.76
66	SLU 7	258	1	2078	4.45	31.33	-1.82
66	SLU 8	230	1	2112	4.35	29.64	-1.75
66	SLU 9	257	1	2066	4.42	31.14	-1.82
66	SLU 10	377	7	2069	4.17	38.92	-2.37
66	SLU 11	334	6	2197	4.16	36.91	-2.28
66	SLU 12	361	6	2151	4.24	38.41	-2.35
66	SLU 13	378	6	2108	4.26	39.23	-2.38
66	SLU 14	334	6	2236	4.26	37.22	-2.3
66	SLU 15	361	6	2190	4.33	38.72	-2.36
66	SLU 16	333	6	2224	4.23	37.04	-2.29
66	SLU 17	360	6	2178	4.3	38.54	-2.35
66	SLU 18	376	9	2194	3.99	39.58	-2.49
66	SLU 19	403	9	2148	4.07	41.09	-2.56
66	SLU 20	376	8	2233	4.08	39.9	-2.51
66	SLU 21	404	9	2187	4.16	41.4	-2.57
66	SLU 22	313	5	2121	4.12	35.06	-2.15
66	SLU 23	359	5	2044	4.25	37.56	-2.26
66	SLU 24	315	5	2172	4.24	35.56	-2.17
66	SLU 25	342	5	2126	4.32	37.06	-2.24
66	SLU 26	359	5	2083	4.34	37.88	-2.27
66	SLU 27	315	5	2211	4.34	35.87	-2.18
66	SLU 28	343	5	2165	4.41	37.37	-2.25
66	SLU 29	314	5	2199	4.31	35.69	-2.17
66	SLU 30	341	5	2153	4.38	37.19	-2.24
66	SLU 31	462	10	2156	4.13	44.96	-2.8
66	SLU 32	418	10	2284	4.13	42.95	-2.71
66	SLU 33	445	10	2238	4.2	44.45	-2.77
66	SLU 34	462	10	2195	4.22	45.27	-2.81
66	SLU 35	419	10	2323	4.22	43.27	-2.72
66	SLU 36	446	10	2277	4.29	44.77	-2.79
66	SLU 37	417	10	2311	4.19	43.09	-2.71
66	SLU 38	445	10	2264	4.27	44.59	-2.78
66	SLU 39	460	12	2281	3.95	45.63	-2.92
66	SLU 40	488	12	2235	4.03	47.13	-2.98
66	SLU 41	461	12	2320	4.05	45.94	-2.93
66	SLU 42	488	12	2274	4.12	47.44	-3
66	SLU 43	268	1	2615	5.42	35.65	-2.1
66	SLU 44	314	1	2538	5.54	38.15	-2.21
66	SLU 45	270	0	2666	5.54	36.14	-2.12
66	SLU 46	298	1	2620	5.62	37.65	-2.19
66	SLU 47	314	1	2577	5.64	38.46	-2.22
66	SLU 48	271	0	2704	5.64	36.46	-2.13
66	SLU 49	298	0	2658	5.71	37.96	-2.2
66	SLU 50	269	0	2692	5.61	36.28	-2.12
66	SLU 51	297	0	2646	5.68	37.78	-2.19
66	SLU 52	417	6	2650	5.43	45.55	-2.75
66	SLU 53	373	5	2777	5.42	43.54	-2.66
66	SLU 54	401	6	2731	5.5	45.04	-2.72
66	SLU 55	418	6	2688	5.52	45.86	-2.76
66	SLU 56	374	5	2816	5.52	43.86	-2.67
66	SLU 57	401	5	2770	5.59	45.36	-2.73
66	SLU 58	372	5	2804	5.49	43.67	-2.66
66	SLU 59	400	5	2758	5.56	45.18	-2.73
66	SLU 60	416	8	2775	5.25	46.22	-2.87
66	SLU 61	443	8	2728	5.33	47.72	-2.93
66	SLU 62	416	8	2813	5.34	46.53	-2.88
66	SLU 63	443	8	2767	5.42	48.03	-2.94
66	SLU 64	353	4	2702	5.38	41.69	-2.52
66	SLU 65	398	5	2625	5.51	44.19	-2.63
66	SLU 66	355	4	2753	5.5	42.19	-2.54
66	SLU 67	382	4	2706	5.58	43.69	-2.61
66	SLU 68	399	4	2664	5.6	44.51	-2.64
66	SLU 69	355	4	2791	5.6	42.5	-2.56
66	SLU 70	382	4	2745	5.67	44	-2.62
66	SLU 71	354	4	2779	5.57	42.32	-2.55
66	SLU 72	381	4	2733	5.64	43.82	-2.61
66	SLU 73	502	10	2737	5.39	51.59	-3.17
66	SLU 74	458	9	2864	5.39	49.59	-3.08
66	SLU 75	485	9	2818	5.46	51.09	-3.15
66	SLU 76	502	9	2775	5.48	51.91	-3.18
66	SLU 77	458	9	2903	5.48	49.9	-3.09
66	SLU 78	486	9	2857	5.55	51.4	-3.16
66	SLU 79	457	9	2891	5.45	49.72	-3.08
66	SLU 80	484	9	2845	5.53	51.22	-3.15
66	SLU 81	500	11	2861	5.21	52.26	-3.29
66	SLU 82	527	12	2815	5.29	53.76	-3.36
66	SLU 83	501	11	2900	5.31	52.58	-3.3
66	SLU 84	528	11	2854	5.38	54.08	-3.37
66	SLE RA 1	253	3	2059	4.15	30.74	-1.85
66	SLE RA 2	283	3	2008	4.23	32.41	-1.92
66	SLE RA 3	254	2	2093	4.23	31.07	-1.86
66	SLE RA 4	272	2	2062	4.28	32.07	-1.9
66	SLE RA 5	284	3	2034	4.29	32.62	-1.93
66	SLE RA 6	254	2	2119	4.29	31.28	-1.87
66	SLE RA 7	273	2	2088	4.34	32.28	-1.91



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
66	SLE RA 8	253	2	2111	4.27	31.16	-1.86
66	SLE RA 9	272	2	2080	4.32	32.16	-1.91
66	SLE RA 10	352	6	2082	4.15	37.34	-2.28
66	SLE RA 11	323	6	2168	4.15	36.01	-2.22
66	SLE RA 12	341	6	2137	4.2	37.01	-2.26
66	SLE RA 13	352	6	2108	4.22	37.55	-2.29
66	SLE RA 14	323	6	2193	4.21	36.21	-2.23
66	SLE RA 15	341	6	2163	4.26	37.22	-2.27
66	SLE RA 16	322	6	2185	4.19	36.09	-2.22
66	SLE RA 17	340	6	2155	4.24	37.09	-2.27
66	SLE RA 18	351	7	2166	4.04	37.79	-2.36
66	SLE RA 19	369	7	2135	4.09	38.79	-2.4
66	SLE RA 20	351	7	2191	4.1	38	-2.37
66	SLE RA 21	370	7	2161	4.15	39	-2.41
66	SLE FR 1	253	3	2059	4.15	30.74	-1.85
66	SLE FR 2	259	3	2049	4.17	31.08	-1.86
66	SLE FR 3	253	2	2069	4.17	30.83	-1.85
66	SLE FR 4	288	4	2081	4.13	33.19	-2.02
66	SLE FR 5	282	4	2101	4.14	32.94	-2
66	SLE FR 6	302	5	2112	4.09	34.27	-2.1
66	SLE QP 1	253	3	2059	4.15	30.74	-1.85
66	SLE QP 2	282	4	2091	4.11	32.86	-2
66	SLD 1	600	40	1411	-2.42	49.1	-3.53
66	SLD 2	600	40	1411	-2.42	49.1	-3.53
66	SLD 3	538	24	1146	0.76	45.18	-2.88
66	SLD 4	538	24	1146	0.76	45.18	-2.88
66	SLD 5	471	39	2289	-2.67	43.68	-3.44
66	SLD 6	471	39	2289	-2.67	43.68	-3.44
66	SLD 7	265	-15	1405	7.93	30.61	-1.29
66	SLD 8	265	-15	1405	7.93	30.61	-1.29
66	SLD 9	300	23	2777	0.3	35.11	-2.71
66	SLD 10	300	23	2777	0.3	35.11	-2.71
66	SLD 11	93	-32	1893	10.9	22.04	-0.57
66	SLD 12	93	-32	1893	10.9	22.04	-0.57
66	SLD 13	27	-16	3036	7.47	20.53	-1.12
66	SLD 14	27	-16	3036	7.47	20.53	-1.12
66	SLD 15	-35	-32	2771	10.65	16.61	-0.48
66	SLD 16	-35	-32	2771	10.65	16.61	-0.48
66	SLV 1	1021	91	516	-11.61	70.65	-5.61
66	SLV 2	1021	91	516	-11.61	70.65	-5.61
66	SLV 3	872	53	-105	-4.12	61.29	-4.09
66	SLV 4	872	53	-105	-4.12	61.29	-4.09
66	SLV 5	729	88	2561	-11.95	58.4	-5.39
66	SLV 6	729	88	2561	-11.95	58.4	-5.39
66	SLV 7	234	-39	490	13	27.18	-0.32
66	SLV 8	234	-39	490	13	27.18	-0.32
66	SLV 9	330	47	3692	-4.77	38.53	-3.68
66	SLV 10	330	47	3692	-4.77	38.53	-3.68
66	SLV 11	-164	-80	1622	20.18	7.31	1.38
66	SLV 12	-164	-80	1622	20.18	7.31	1.38
66	SLV 13	-308	-45	4287	12.35	4.43	0.09
66	SLV 14	-308	-45	4287	12.35	4.43	0.09
66	SLV 15	-456	-83	3666	19.84	-4.94	1.6
66	SLV 16	-456	-83	3666	19.84	-4.94	1.6
67	SLU 1	620	-5	2688	1.35	13.24	-0.23
67	SLU 2	648	-4	2874	1.23	13.41	-0.21
67	SLU 3	635	-5	2746	1.4	13.57	-0.24
67	SLU 4	651	-5	2858	1.33	13.67	-0.23
67	SLU 5	657	-4	2911	1.27	13.61	-0.22
67	SLU 6	643	-5	2784	1.44	13.76	-0.25
67	SLU 7	660	-5	2895	1.37	13.86	-0.24
67	SLU 8	638	-5	2762	1.42	13.63	-0.25
67	SLU 9	655	-5	2874	1.35	13.73	-0.23
67	SLU 10	741	-4	3306	1.3	15.21	-0.22
67	SLU 11	728	-5	3178	1.47	15.36	-0.25
67	SLU 12	744	-5	3290	1.4	15.46	-0.24
67	SLU 13	750	-4	3343	1.33	15.4	-0.23
67	SLU 14	736	-6	3216	1.5	15.55	-0.26
67	SLU 15	753	-5	3327	1.43	15.66	-0.25
67	SLU 16	731	-6	3194	1.49	15.42	-0.26
67	SLU 17	748	-5	3306	1.42	15.52	-0.24
67	SLU 18	753	-5	3305	1.44	15.8	-0.25
67	SLU 19	770	-5	3416	1.37	15.9	-0.23
67	SLU 20	762	-5	3342	1.48	15.99	-0.26
67	SLU 21	779	-5	3454	1.41	16.1	-0.24
67	SLU 22	706	-5	3070	1.43	14.99	-0.25
67	SLU 23	733	-4	3256	1.32	15.16	-0.23
67	SLU 24	720	-6	3128	1.49	15.31	-0.26
67	SLU 25	736	-5	3240	1.42	15.42	-0.24
67	SLU 26	742	-5	3293	1.36	15.35	-0.23
67	SLU 27	728	-6	3166	1.52	15.51	-0.27
67	SLU 28	745	-5	3278	1.46	15.61	-0.25
67	SLU 29	723	-6	3144	1.51	15.38	-0.26
67	SLU 30	740	-5	3256	1.44	15.48	-0.25
67	SLU 31	826	-4	3688	1.39	16.95	-0.24
67	SLU 32	813	-6	3560	1.55	17.1	-0.27
67	SLU 33	829	-5	3672	1.49	17.21	-0.25
67	SLU 34	835	-5	3725	1.42	17.15	-0.24
67	SLU 35	822	-6	3598	1.59	17.3	-0.28
67	SLU 36	838	-5	3709	1.52	17.4	-0.26



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
67	SLU 37	816	-6	3576	1.57	17.17	-0.27
67	SLU 38	833	-5	3688	1.5	17.27	-0.26
67	SLU 39	839	-5	3687	1.53	17.55	-0.26
67	SLU 40	855	-5	3798	1.46	17.65	-0.25
67	SLU 41	847	-6	3724	1.57	17.74	-0.27
67	SLU 42	864	-5	3836	1.5	17.85	-0.26
67	SLU 43	777	-7	3363	1.72	16.61	-0.3
67	SLU 44	805	-6	3549	1.61	16.79	-0.28
67	SLU 45	792	-7	3422	1.77	16.94	-0.31
67	SLU 46	808	-6	3533	1.7	17.04	-0.3
67	SLU 47	814	-6	3587	1.64	16.98	-0.28
67	SLU 48	800	-7	3459	1.81	17.13	-0.32
67	SLU 49	817	-6	3571	1.74	17.24	-0.3
67	SLU 50	795	-7	3438	1.79	17	-0.31
67	SLU 51	812	-6	3550	1.72	17.11	-0.3
67	SLU 52	898	-6	3981	1.67	18.58	-0.29
67	SLU 53	885	-7	3853	1.84	18.73	-0.32
67	SLU 54	901	-6	3965	1.77	18.83	-0.31
67	SLU 55	907	-6	4019	1.71	18.77	-0.29
67	SLU 56	893	-7	3891	1.88	18.93	-0.33
67	SLU 57	910	-6	4003	1.81	19.03	-0.31
67	SLU 58	888	-7	3870	1.86	18.79	-0.32
67	SLU 59	905	-6	3981	1.79	18.9	-0.31
67	SLU 60	910	-7	3980	1.82	19.17	-0.31
67	SLU 61	927	-6	4092	1.75	19.28	-0.3
67	SLU 62	919	-7	4017	1.85	19.37	-0.32
67	SLU 63	936	-6	4129	1.78	19.47	-0.31
67	SLU 64	863	-7	3745	1.81	18.36	-0.31
67	SLU 65	890	-6	3931	1.69	18.53	-0.29
67	SLU 66	877	-7	3804	1.86	18.69	-0.32
67	SLU 67	893	-6	3915	1.79	18.79	-0.31
67	SLU 68	899	-6	3969	1.73	18.73	-0.3
67	SLU 69	885	-7	3841	1.9	18.88	-0.33
67	SLU 70	902	-7	3953	1.83	18.98	-0.32
67	SLU 71	880	-7	3820	1.88	18.75	-0.33
67	SLU 72	897	-7	3932	1.81	18.85	-0.31
67	SLU 73	983	-6	4363	1.76	20.33	-0.3
67	SLU 74	970	-7	4235	1.93	20.48	-0.33
67	SLU 75	986	-7	4347	1.86	20.58	-0.32
67	SLU 76	992	-6	4401	1.8	20.52	-0.31
67	SLU 77	978	-7	4273	1.96	20.67	-0.34
67	SLU 78	995	-7	4385	1.9	20.78	-0.33
67	SLU 79	973	-7	4252	1.95	20.54	-0.34
67	SLU 80	990	-7	4363	1.88	20.64	-0.32
67	SLU 81	995	-7	4362	1.9	20.92	-0.33
67	SLU 82	1012	-6	4474	1.83	21.02	-0.31
67	SLU 83	1004	-7	4399	1.94	21.11	-0.34
67	SLU 84	1021	-6	4511	1.87	21.22	-0.32
67	SLE RA 1	645	-5	2797	1.37	13.74	-0.24
67	SLE RA 2	663	-5	2921	1.3	13.85	-0.22
67	SLE RA 3	654	-5	2836	1.41	13.96	-0.24
67	SLE RA 4	665	-5	2910	1.36	14.03	-0.24
67	SLE RA 5	669	-5	2946	1.32	13.98	-0.23
67	SLE RA 6	660	-5	2861	1.43	14.09	-0.25
67	SLE RA 7	671	-5	2935	1.39	14.15	-0.24
67	SLE RA 8	656	-5	2847	1.42	14	-0.25
67	SLE RA 9	667	-5	2921	1.37	14.07	-0.24
67	SLE RA 10	725	-5	3209	1.34	15.05	-0.23
67	SLE RA 11	716	-5	3124	1.45	15.15	-0.25
67	SLE RA 12	727	-5	3198	1.41	15.22	-0.24
67	SLE RA 13	731	-5	3234	1.36	15.18	-0.23
67	SLE RA 14	722	-5	3149	1.48	15.28	-0.26
67	SLE RA 15	733	-5	3223	1.43	15.35	-0.25
67	SLE RA 16	719	-5	3135	1.46	15.19	-0.25
67	SLE RA 17	730	-5	3209	1.42	15.26	-0.24
67	SLE RA 18	733	-5	3208	1.44	15.45	-0.25
67	SLE RA 19	744	-5	3283	1.39	15.52	-0.24
67	SLE RA 20	739	-5	3233	1.46	15.58	-0.25
67	SLE RA 21	750	-5	3308	1.41	15.64	-0.24
67	SLE FR 1	645	-5	2797	1.37	13.74	-0.24
67	SLE FR 2	648	-5	2822	1.36	13.76	-0.24
67	SLE FR 3	647	-5	2807	1.38	13.79	-0.24
67	SLE FR 4	675	-5	2945	1.38	14.27	-0.24
67	SLE FR 5	674	-5	2930	1.4	14.3	-0.24
67	SLE FR 6	689	-5	3002	1.4	14.59	-0.24
67	SLE QP 1	645	-5	2797	1.37	13.74	-0.24
67	SLE QP 2	671	-5	2920	1.39	14.25	-0.24
67	SLD 1	1172	-4	4442	1.13	30.53	-0.19
67	SLD 2	1172	-4	4442	1.13	30.53	-0.19
67	SLD 3	1057	6	4045	-1.16	27.46	0.21
67	SLD 4	1057	6	4045	-1.16	27.46	0.21
67	SLD 5	996	-19	3980	4.79	23.78	-0.84
67	SLD 6	996	-19	3980	4.79	23.78	-0.84
67	SLD 7	613	12	2655	-2.85	13.57	0.5
67	SLD 8	613	12	2655	-2.85	13.57	0.5
67	SLD 9	730	-23	3185	5.63	14.93	-0.99
67	SLD 10	730	-23	3185	5.63	14.93	-0.99
67	SLD 11	347	9	1861	-2	4.73	0.35
67	SLD 12	347	9	1861	-2	4.73	0.35
67	SLD 13	285	-16	1795	3.94	1.04	-0.69



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
67	SLD 14	285	-16	1795	3.94	1.04	-0.69
67	SLD 15	171	-7	1398	1.65	-2.02	-0.29
67	SLD 16	171	-7	1398	1.65	-2.02	-0.29
67	SLV 1	1842	-2	6477	0.72	52.3	-0.11
67	SLV 2	1842	-2	6477	0.72	52.3	-0.11
67	SLV 3	1571	20	5543	-4.66	45.01	0.83
67	SLV 4	1571	20	5543	-4.66	45.01	0.83
67	SLV 5	1433	-38	5404	9.35	36.73	-1.63
67	SLV 6	1433	-38	5404	9.35	36.73	-1.63
67	SLV 7	531	36	2290	-8.58	12.41	1.51
67	SLV 8	531	36	2290	-8.58	12.41	1.51
67	SLV 9	812	-46	3550	11.36	16.09	-2
67	SLV 10	812	-46	3550	11.36	16.09	-2
67	SLV 11	-90	27	436	-6.56	-8.23	1.15
67	SLV 12	-90	27	436	-6.56	-8.23	1.15
67	SLV 13	-228	-31	297	7.44	-16.51	-1.31
67	SLV 14	-228	-31	297	7.44	-16.51	-1.31
67	SLV 15	-499	-9	-637	2.06	-23.8	-0.37
67	SLV 16	-499	-9	-637	2.06	-23.8	-0.37
68	SLU 1	303	-2	4435	1.42	18.23	-0.02
68	SLU 2	281	-2	4782	1.46	17.58	-0.03
68	SLU 3	311	-3	4528	1.46	18.67	-0.02
68	SLU 4	297	-2	4737	1.49	18.28	-0.02
68	SLU 5	285	-2	4842	1.49	17.83	-0.03
68	SLU 6	315	-3	4589	1.49	18.93	-0.02
68	SLU 7	301	-2	4797	1.52	18.53	-0.03
68	SLU 8	312	-3	4556	1.48	18.74	-0.02
68	SLU 9	298	-2	4764	1.5	18.35	-0.02
68	SLU 10	311	-3	5496	1.58	19.83	-0.03
68	SLU 11	341	-3	5243	1.58	20.92	-0.03
68	SLU 12	327	-3	5451	1.61	20.53	-0.03
68	SLU 13	315	-3	5556	1.62	20.08	-0.03
68	SLU 14	345	-3	5303	1.62	21.17	-0.03
68	SLU 15	332	-3	5511	1.64	20.78	-0.03
68	SLU 16	342	-3	5270	1.6	20.99	-0.03
68	SLU 17	328	-3	5478	1.63	20.6	-0.03
68	SLU 18	346	-3	5455	1.59	21.44	-0.03
68	SLU 19	333	-3	5663	1.62	21.05	-0.03
68	SLU 20	351	-3	5516	1.62	21.7	-0.03
68	SLU 21	337	-3	5724	1.65	21.31	-0.03
68	SLU 22	336	-3	5057	1.54	20.5	-0.03
68	SLU 23	314	-3	5404	1.59	19.85	-0.03
68	SLU 24	344	-3	5151	1.59	20.94	-0.03
68	SLU 25	331	-3	5359	1.62	20.55	-0.03
68	SLU 26	318	-3	5465	1.62	20.1	-0.03
68	SLU 27	348	-3	5212	1.62	21.19	-0.03
68	SLU 28	335	-3	5420	1.65	20.8	-0.03
68	SLU 29	345	-3	5179	1.6	21.01	-0.03
68	SLU 30	332	-3	5387	1.63	20.62	-0.03
68	SLU 31	344	-3	6118	1.71	22.09	-0.03
68	SLU 32	374	-3	5865	1.71	23.19	-0.03
68	SLU 33	361	-3	6073	1.74	22.8	-0.03
68	SLU 34	349	-3	6179	1.74	22.35	-0.03
68	SLU 35	379	-3	5926	1.74	23.44	-0.03
68	SLU 36	365	-3	6134	1.77	23.05	-0.03
68	SLU 37	375	-3	5893	1.73	23.26	-0.03
68	SLU 38	362	-3	6101	1.75	22.86	-0.03
68	SLU 39	380	-3	6077	1.72	23.71	-0.03
68	SLU 40	366	-3	6285	1.75	23.32	-0.03
68	SLU 41	384	-3	6138	1.75	23.97	-0.03
68	SLU 42	370	-3	6346	1.78	23.57	-0.03
68	SLU 43	383	-3	5552	1.8	22.92	-0.03
68	SLU 44	360	-3	5899	1.84	22.27	-0.03
68	SLU 45	390	-3	5645	1.84	23.36	-0.03
68	SLU 46	377	-3	5854	1.87	22.97	-0.03
68	SLU 47	364	-3	5959	1.87	22.52	-0.03
68	SLU 48	394	-3	5706	1.87	23.62	-0.03
68	SLU 49	381	-3	5914	1.9	23.22	-0.03
68	SLU 50	391	-3	5673	1.86	23.43	-0.03
68	SLU 51	378	-3	5881	1.88	23.04	-0.03
68	SLU 52	390	-3	6613	1.97	24.52	-0.03
68	SLU 53	420	-4	6360	1.97	25.61	-0.03
68	SLU 54	407	-3	6568	1.99	25.22	-0.03
68	SLU 55	395	-3	6673	2	24.77	-0.04
68	SLU 56	425	-4	6420	2	25.87	-0.03
68	SLU 57	411	-3	6628	2.02	25.47	-0.03
68	SLU 58	421	-4	6387	1.98	25.68	-0.03
68	SLU 59	408	-3	6595	2.01	25.29	-0.03
68	SLU 60	426	-4	6572	1.97	26.14	-0.03
68	SLU 61	412	-4	6780	2	25.74	-0.04
68	SLU 62	430	-4	6632	2	26.39	-0.03
68	SLU 63	417	-4	6841	2.03	26	-0.04
68	SLU 64	416	-3	6174	1.92	25.19	-0.03
68	SLU 65	394	-3	6521	1.97	24.54	-0.03
68	SLU 66	423	-3	6268	1.97	25.63	-0.03
68	SLU 67	410	-3	6476	2	25.24	-0.03
68	SLU 68	398	-3	6582	2	24.79	-0.03
68	SLU 69	428	-3	6329	2	25.89	-0.03
68	SLU 70	414	-3	6537	2.03	25.49	-0.03
68	SLU 71	424	-3	6296	1.98	25.7	-0.03



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
68	SLU 72	411	-3	6504	2.01	25.31	-0.03
68	SLU 73	424	-4	7235	2.09	26.79	-0.04
68	SLU 74	454	-4	6982	2.09	27.88	-0.04
68	SLU 75	440	-4	7190	2.12	27.49	-0.04
68	SLU 76	428	-4	7296	2.12	27.04	-0.04
68	SLU 77	458	-4	7043	2.12	28.13	-0.04
68	SLU 78	445	-4	7251	2.15	27.74	-0.04
68	SLU 79	455	-4	7010	2.11	27.95	-0.04
68	SLU 80	441	-4	7218	2.14	27.56	-0.04
68	SLU 81	459	-4	7194	2.1	28.4	-0.04
68	SLU 82	446	-4	7402	2.13	28.01	-0.04
68	SLU 83	463	-4	7255	2.13	28.66	-0.04
68	SLU 84	450	-4	7463	2.16	28.27	-0.04
68	SLE RA 1	313	-3	4613	1.45	18.88	-0.02
68	SLE RA 2	298	-2	4844	1.48	18.44	-0.03
68	SLE RA 3	318	-3	4675	1.48	19.17	-0.02
68	SLE RA 4	309	-3	4814	1.5	18.91	-0.02
68	SLE RA 5	301	-2	4884	1.5	18.61	-0.03
68	SLE RA 6	320	-3	4716	1.5	19.34	-0.02
68	SLE RA 7	312	-3	4854	1.52	19.08	-0.03
68	SLE RA 8	318	-3	4694	1.49	19.22	-0.02
68	SLE RA 9	309	-3	4832	1.51	18.96	-0.03
68	SLE RA 10	318	-3	5320	1.56	19.94	-0.03
68	SLE RA 11	338	-3	5151	1.56	20.67	-0.03
68	SLE RA 12	329	-3	5290	1.58	20.41	-0.03
68	SLE RA 13	321	-3	5360	1.59	20.11	-0.03
68	SLE RA 14	341	-3	5192	1.58	20.84	-0.03
68	SLE RA 15	332	-3	5330	1.6	20.58	-0.03
68	SLE RA 16	338	-3	5170	1.57	20.72	-0.03
68	SLE RA 17	330	-3	5308	1.59	20.46	-0.03
68	SLE RA 18	341	-3	5293	1.57	21.02	-0.03
68	SLE RA 19	332	-3	5431	1.59	20.76	-0.03
68	SLE RA 20	344	-3	5333	1.59	21.19	-0.03
68	SLE RA 21	335	-3	5472	1.61	20.93	-0.03
68	SLE FR 1	313	-3	4613	1.45	18.88	-0.02
68	SLE FR 2	310	-3	4659	1.46	18.79	-0.02
68	SLE FR 3	314	-3	4629	1.46	18.95	-0.02
68	SLE FR 4	318	-3	4863	1.49	19.44	-0.02
68	SLE FR 5	322	-3	4833	1.5	19.59	-0.02
68	SLE FR 6	327	-3	4953	1.51	19.95	-0.03
68	SLE QP 1	313	-3	4613	1.45	18.88	-0.02
68	SLE QP 2	321	-3	4817	1.49	19.52	-0.02
68	SLD 1	853	-3	6615	3.77	47.66	-0.04
68	SLD 2	853	-3	6615	3.77	47.66	-0.04
68	SLD 3	737	-5	5989	1.63	41.48	-0.03
68	SLD 4	737	-5	5989	1.63	41.48	-0.03
68	SLD 5	656	-1	6304	5.43	37.34	-0.05
68	SLD 6	656	-1	6304	5.43	37.34	-0.05
68	SLD 7	271	-6	4220	-1.72	16.74	0
68	SLD 8	271	-6	4220	-1.72	16.74	0
68	SLD 9	372	0	5413	4.7	22.31	-0.05
68	SLD 10	372	0	5413	4.7	22.31	-0.05
68	SLD 11	-13	-5	3329	-2.45	1.71	0
68	SLD 12	-13	-5	3329	-2.45	1.71	0
68	SLD 13	-95	-1	3644	1.35	-2.43	-0.02
68	SLD 14	-95	-1	3644	1.35	-2.43	-0.02
68	SLD 15	-210	-2	3019	-0.8	-8.61	-0.01
68	SLD 16	-210	-2	3019	-0.8	-8.61	-0.01
68	SLV 1	1567	-4	9024	6.88	85.37	-0.06
68	SLV 2	1567	-4	9024	6.88	85.37	-0.06
68	SLV 3	1287	-8	7552	1.86	70.59	-0.03
68	SLV 4	1287	-8	7552	1.86	70.59	-0.03
68	SLV 5	1118	3	8312	10.72	61.7	-0.09
68	SLV 6	1118	3	8312	10.72	61.7	-0.09
68	SLV 7	188	-10	3404	-6.02	12.42	0.03
68	SLV 8	188	-10	3404	-6.02	12.42	0.03
68	SLV 9	455	5	6229	8.99	26.63	-0.08
68	SLV 10	455	5	6229	8.99	26.63	-0.08
68	SLV 11	-476	-8	1321	-7.75	-22.65	0.04
68	SLV 12	-476	-8	1321	-7.75	-22.65	0.04
68	SLV 13	-645	3	2082	1.11	-31.54	-0.02
68	SLV 14	-645	3	2082	1.11	-31.54	-0.02
68	SLV 15	-924	-1	609	-3.91	-46.32	0.01
68	SLV 16	-924	-1	609	-3.91	-46.32	0.01
70	SLU 1	125	-596	5632	28.41	469.05	131.87
70	SLU 2	70	-651	6095	30.37	506.62	143.84
70	SLU 3	130	-609	5747	29.19	478.65	134.78
70	SLU 4	96	-642	6025	30.37	501.19	141.96
70	SLU 5	72	-660	6171	30.89	512.9	145.79
70	SLU 6	132	-618	5822	29.71	484.93	136.72
70	SLU 7	98	-651	6101	30.88	507.47	143.9
70	SLU 8	129	-613	5783	29.44	481.61	135.76
70	SLU 9	96	-647	6061	30.62	504.16	142.94
70	SLU 10	67	-738	6962	34.87	575.73	162.99
70	SLU 11	127	-696	6614	33.69	547.76	153.92
70	SLU 12	94	-729	6892	34.87	570.3	161.11
70	SLU 13	69	-747	7038	35.39	582.01	164.94
70	SLU 14	129	-705	6690	34.21	554.04	155.87
70	SLU 15	96	-738	6968	35.38	576.58	163.05
70	SLU 16	127	-701	6650	33.94	550.72	154.91



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
70	SLU 17	94	-734	6928	35.12	573.26	162.09
70	SLU 18	122	-720	6871	34.84	567.78	159.23
70	SLU 19	88	-754	7149	36.01	590.32	166.41
70	SLU 20	124	-729	6946	35.35	574.06	161.17
70	SLU 21	90	-762	7224	36.53	596.6	168.35
70	SLU 22	133	-673	6384	32.47	529.71	148.74
70	SLU 23	78	-728	6847	34.43	567.28	160.72
70	SLU 24	138	-686	6499	33.25	539.31	151.65
70	SLU 25	104	-719	6777	34.43	561.85	158.83
70	SLU 26	80	-737	6923	34.94	573.56	162.66
70	SLU 27	140	-695	6574	33.77	545.59	153.59
70	SLU 28	106	-728	6852	34.94	568.13	160.78
70	SLU 29	137	-690	6535	33.5	542.27	152.63
70	SLU 30	104	-723	6813	34.68	564.81	159.82
70	SLU 31	75	-815	7714	38.93	636.39	179.86
70	SLU 32	135	-773	7366	37.75	608.42	170.8
70	SLU 33	102	-806	7644	38.93	630.96	177.98
70	SLU 34	77	-824	7790	39.44	642.67	181.81
70	SLU 35	137	-782	7441	38.27	614.7	172.74
70	SLU 36	104	-815	7719	39.44	637.24	179.92
70	SLU 37	135	-777	7402	38	611.38	171.78
70	SLU 38	101	-811	7680	39.18	633.92	178.96
70	SLU 39	130	-797	7622	38.9	628.44	176.1
70	SLU 40	96	-831	7900	40.07	650.98	183.28
70	SLU 41	132	-806	7698	39.41	634.72	178.04
70	SLU 42	98	-839	7976	40.59	657.26	185.23
70	SLU 43	160	-748	7064	35.54	588.97	165.65
70	SLU 44	104	-804	7527	37.5	626.54	177.62
70	SLU 45	164	-761	7179	36.32	598.57	168.55
70	SLU 46	131	-795	7457	37.5	621.11	175.74
70	SLU 47	106	-812	7603	38.02	632.82	179.57
70	SLU 48	166	-770	7254	36.84	604.85	170.5
70	SLU 49	133	-803	7532	38.01	627.39	177.68
70	SLU 50	164	-766	7215	36.57	601.53	169.54
70	SLU 51	131	-799	7493	37.75	624.07	176.72
70	SLU 52	102	-891	8394	42	695.65	196.77
70	SLU 53	162	-849	8046	40.82	667.68	187.7
70	SLU 54	129	-882	8324	42	690.22	194.88
70	SLU 55	104	-900	8470	42.52	701.93	198.71
70	SLU 56	164	-857	8121	41.34	673.96	189.64
70	SLU 57	131	-891	8400	42.51	696.5	196.83
70	SLU 58	162	-853	8082	41.07	670.64	188.68
70	SLU 59	128	-886	8360	42.25	693.18	195.87
70	SLU 60	156	-873	8302	41.97	687.7	193
70	SLU 61	123	-906	8581	43.15	710.24	200.19
70	SLU 62	159	-882	8378	42.49	693.98	194.95
70	SLU 63	125	-915	8656	43.66	716.52	202.13
70	SLU 64	168	-825	7815	39.6	649.63	182.52
70	SLU 65	112	-880	8279	41.56	687.2	194.49
70	SLU 66	172	-838	7930	40.38	659.23	185.42
70	SLU 67	139	-871	8209	41.56	681.77	192.61
70	SLU 68	114	-889	8354	42.08	693.48	196.44
70	SLU 69	174	-847	8006	40.9	665.51	187.37
70	SLU 70	141	-880	8284	42.07	688.05	194.55
70	SLU 71	172	-843	7967	40.63	662.19	186.41
70	SLU 72	139	-876	8245	41.81	684.73	193.59
70	SLU 73	110	-968	9146	46.06	756.31	213.64
70	SLU 74	170	-925	8798	44.88	728.34	204.57
70	SLU 75	137	-959	9076	46.06	750.88	211.76
70	SLU 76	112	-976	9222	46.58	762.59	215.59
70	SLU 77	172	-934	8873	45.4	734.62	206.52
70	SLU 78	139	-967	9151	46.57	757.16	213.7
70	SLU 79	170	-930	8834	45.13	731.3	205.56
70	SLU 80	136	-963	9112	46.31	753.84	212.74
70	SLU 81	164	-950	9054	46.03	748.36	209.87
70	SLU 82	131	-983	9332	47.21	770.9	217.06
70	SLU 83	166	-958	9130	46.54	754.64	211.82
70	SLU 84	133	-992	9408	47.72	777.18	219
70	SLE RA 1	127	-618	5847	29.57	486.38	136.69
70	SLE RA 2	90	-655	6156	30.88	511.43	144.67
70	SLE RA 3	130	-627	5923	30.09	492.78	138.63
70	SLE RA 4	108	-649	6109	30.87	507.81	143.42
70	SLE RA 5	92	-661	6206	31.22	515.62	145.97
70	SLE RA 6	132	-632	5974	30.43	496.97	139.92
70	SLE RA 7	110	-655	6159	31.22	512	144.71
70	SLE RA 8	130	-629	5947	30.26	494.76	139.28
70	SLE RA 9	108	-652	6133	31.04	509.79	144.07
70	SLE RA 10	89	-713	6734	33.88	557.5	157.44
70	SLE RA 11	129	-685	6501	33.09	538.85	151.39
70	SLE RA 12	107	-707	6687	33.87	553.88	156.18
70	SLE RA 13	90	-719	6784	34.22	561.69	158.74
70	SLE RA 14	130	-691	6552	33.43	543.04	152.69
70	SLE RA 15	108	-713	6737	34.22	558.07	157.48
70	SLE RA 16	128	-688	6525	33.26	540.83	152.05
70	SLE RA 17	106	-710	6711	34.04	555.86	156.84
70	SLE RA 18	125	-701	6672	33.86	552.2	154.93
70	SLE RA 19	103	-723	6858	34.64	567.23	159.72
70	SLE RA 20	126	-707	6723	34.2	556.39	156.22
70	SLE RA 21	104	-729	6908	34.98	571.42	161.01
70	SLE FR 1	127	-618	5847	29.57	486.38	136.69



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
70	SLE FR 2	120	-625	5908	29.83	491.39	138.29
70	SLE FR 3	128	-620	5867	29.71	488.06	137.21
70	SLE FR 4	119	-650	6156	31.12	511.14	143.76
70	SLE FR 5	127	-645	6115	30.99	507.81	142.68
70	SLE FR 6	126	-659	6260	31.71	519.29	145.81
70	SLE QP 1	127	-618	5847	29.57	486.38	136.69
70	SLE QP 2	127	-643	6094	30.86	506.13	142.16
70	SLD 1	782	-874	7787	41.78	701.23	194.49
70	SLD 2	782	-874	7787	41.78	701.23	194.49
70	SLD 3	655	-641	6797	30.57	586.72	141.9
70	SLD 4	655	-641	6797	30.57	586.72	141.9
70	SLD 5	516	-1065	8105	51.14	738.34	237.62
70	SLD 6	516	-1065	8105	51.14	738.34	237.62
70	SLD 7	93	-289	4803	13.77	356.63	62.33
70	SLD 8	93	-289	4803	13.77	356.63	62.33
70	SLD 9	160	-996	7386	47.94	655.63	222
70	SLD 10	160	-996	7386	47.94	655.63	222
70	SLD 11	-262	-220	4084	10.58	273.92	46.71
70	SLD 12	-262	-220	4084	10.58	273.92	46.71
70	SLD 13	-402	-644	5392	31.14	425.54	142.43
70	SLD 14	-402	-644	5392	31.14	425.54	142.43
70	SLD 15	-529	-412	4401	19.93	311.03	89.84
70	SLD 16	-529	-412	4401	19.93	311.03	89.84
70	SLV 1	1664	-1184	10064	56.95	962.75	264.64
70	SLV 2	1664	-1184	10064	56.95	962.75	264.64
70	SLV 3	1351	-640	7737	29.92	694.67	141.78
70	SLV 4	1351	-640	7737	29.92	694.67	141.78
70	SLV 5	1062	-1630	10814	79.68	1049.71	365.24
70	SLV 6	1062	-1630	10814	79.68	1049.71	365.24
70	SLV 7	20	183	3059	-10.42	156.09	-44.28
70	SLV 8	20	183	3059	-10.42	156.09	-44.28
70	SLV 9	233	-1469	9130	72.13	856.17	328.61
70	SLV 10	233	-1469	9130	72.13	856.17	328.61
70	SLV 11	-808	345	1375	-17.97	-37.45	-80.91
70	SLV 12	-808	345	1375	-17.97	-37.45	-80.91
70	SLV 13	-1098	-646	4452	31.8	317.59	142.55
70	SLV 14	-1098	-646	4452	31.8	317.59	142.55
70	SLV 15	-1410	-102	2125	4.76	49.51	19.69
70	SLV 16	-1410	-102	2125	4.76	49.51	19.69
71	SLU 1	89	6	3013	-1.23	6.42	-0.05
71	SLU 2	41	4	3237	-0.67	4.64	-0.06
71	SLU 3	93	6	3075	-1.28	6.66	-0.05
71	SLU 4	65	5	3209	-0.94	5.59	-0.06
71	SLU 5	43	5	3277	-0.7	4.76	-0.06
71	SLU 6	95	6	3116	-1.31	6.78	-0.05
71	SLU 7	66	5	3250	-0.97	5.71	-0.06
71	SLU 8	93	6	3095	-1.29	6.65	-0.05
71	SLU 9	64	5	3228	-0.96	5.58	-0.06
71	SLU 10	37	5	3689	-0.75	4.9	-0.06
71	SLU 11	88	7	3528	-1.36	6.92	-0.06
71	SLU 12	60	6	3662	-1.02	5.85	-0.06
71	SLU 13	38	5	3730	-0.78	5.02	-0.06
71	SLU 14	90	7	3569	-1.39	7.03	-0.06
71	SLU 15	61	6	3703	-1.06	5.97	-0.06
71	SLU 16	88	7	3547	-1.38	6.91	-0.06
71	SLU 17	59	6	3681	-1.04	5.84	-0.06
71	SLU 18	82	7	3660	-1.35	6.79	-0.06
71	SLU 19	53	6	3794	-1.01	5.72	-0.06
71	SLU 20	84	7	3701	-1.38	6.9	-0.06
71	SLU 21	55	6	3835	-1.04	5.84	-0.06
71	SLU 22	95	7	3407	-1.33	7.09	-0.06
71	SLU 23	47	5	3630	-0.77	5.32	-0.06
71	SLU 24	99	7	3469	-1.38	7.33	-0.06
71	SLU 25	70	6	3603	-1.04	6.26	-0.06
71	SLU 26	49	5	3671	-0.8	5.43	-0.06
71	SLU 27	101	7	3509	-1.41	7.45	-0.06
71	SLU 28	72	6	3643	-1.07	6.38	-0.06
71	SLU 29	98	7	3488	-1.39	7.32	-0.06
71	SLU 30	70	6	3622	-1.06	6.25	-0.06
71	SLU 31	42	6	4083	-0.85	5.57	-0.07
71	SLU 32	94	7	3922	-1.46	7.59	-0.06
71	SLU 33	65	6	4056	-1.12	6.52	-0.07
71	SLU 34	44	6	4123	-0.88	5.69	-0.07
71	SLU 35	96	8	3962	-1.49	7.7	-0.07
71	SLU 36	67	7	4096	-1.16	6.64	-0.07
71	SLU 37	93	7	3941	-1.48	7.58	-0.06
71	SLU 38	65	7	4075	-1.14	6.51	-0.07
71	SLU 39	88	7	4054	-1.45	7.46	-0.07
71	SLU 40	59	6	4188	-1.11	6.39	-0.07
71	SLU 41	90	8	4095	-1.48	7.57	-0.07
71	SLU 42	61	7	4228	-1.14	6.51	-0.07
71	SLU 43	114	7	3783	-1.56	8.12	-0.06
71	SLU 44	66	6	4006	-1	6.34	-0.07
71	SLU 45	118	8	3844	-1.61	8.36	-0.06
71	SLU 46	89	7	3978	-1.27	7.29	-0.07
71	SLU 47	68	6	4046	-1.03	6.46	-0.07
71	SLU 48	120	8	3885	-1.64	8.47	-0.06
71	SLU 49	91	7	4019	-1.31	7.41	-0.07
71	SLU 50	117	8	3864	-1.63	8.35	-0.06
71	SLU 51	89	7	3998	-1.29	7.28	-0.07



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
71	SLU 52	61	7	4459	-1.08	6.6	-0.08
71	SLU 53	113	8	4297	-1.69	8.62	-0.07
71	SLU 54	84	7	4431	-1.36	7.55	-0.07
71	SLU 55	63	7	4499	-1.12	6.71	-0.08
71	SLU 56	115	8	4338	-1.73	8.73	-0.07
71	SLU 57	86	8	4472	-1.39	7.66	-0.08
71	SLU 58	112	8	4317	-1.71	8.61	-0.07
71	SLU 59	84	7	4450	-1.37	7.54	-0.08
71	SLU 60	107	8	4430	-1.68	8.49	-0.07
71	SLU 61	78	7	4563	-1.34	7.42	-0.08
71	SLU 62	109	9	4470	-1.71	8.6	-0.07
71	SLU 63	80	8	4604	-1.38	7.53	-0.08
71	SLU 64	120	8	4176	-1.66	8.79	-0.07
71	SLU 65	72	7	4399	-1.1	7.01	-0.08
71	SLU 66	124	8	4238	-1.71	9.03	-0.07
71	SLU 67	95	7	4372	-1.37	7.96	-0.07
71	SLU 68	74	7	4440	-1.13	7.13	-0.08
71	SLU 69	125	9	4279	-1.74	9.14	-0.07
71	SLU 70	97	8	4412	-1.41	8.08	-0.08
71	SLU 71	123	8	4257	-1.73	9.02	-0.07
71	SLU 72	94	7	4391	-1.39	7.95	-0.08
71	SLU 73	67	7	4852	-1.18	7.27	-0.08
71	SLU 74	119	9	4691	-1.79	9.29	-0.08
71	SLU 75	90	8	4825	-1.46	8.22	-0.08
71	SLU 76	69	7	4893	-1.22	7.38	-0.08
71	SLU 77	120	9	4731	-1.83	9.4	-0.08
71	SLU 78	92	8	4865	-1.49	8.33	-0.08
71	SLU 79	118	9	4710	-1.81	9.28	-0.08
71	SLU 80	90	8	4844	-1.48	8.21	-0.08
71	SLU 81	113	9	4823	-1.78	9.16	-0.08
71	SLU 82	84	8	4957	-1.44	8.09	-0.08
71	SLU 83	114	9	4864	-1.81	9.27	-0.08
71	SLU 84	86	8	4997	-1.48	8.21	-0.08
71	SLE RA 1	91	6	3126	-1.26	6.61	-0.05
71	SLE RA 2	59	5	3275	-0.88	5.43	-0.06
71	SLE RA 3	93	6	3167	-1.29	6.77	-0.05
71	SLE RA 4	74	6	3256	-1.06	6.06	-0.06
71	SLE RA 5	60	5	3302	-0.9	5.5	-0.06
71	SLE RA 6	95	6	3194	-1.31	6.85	-0.05
71	SLE RA 7	76	6	3283	-1.09	6.14	-0.06
71	SLE RA 8	93	6	3180	-1.3	6.77	-0.05
71	SLE RA 9	74	6	3269	-1.08	6.05	-0.06
71	SLE RA 10	56	5	3577	-0.94	5.6	-0.06
71	SLE RA 11	90	7	3469	-1.34	6.95	-0.06
71	SLE RA 12	71	6	3558	-1.12	6.23	-0.06
71	SLE RA 13	57	6	3604	-0.96	5.68	-0.06
71	SLE RA 14	91	7	3496	-1.37	7.02	-0.06
71	SLE RA 15	72	6	3585	-1.14	6.31	-0.06
71	SLE RA 16	90	7	3482	-1.36	6.94	-0.06
71	SLE RA 17	71	6	3571	-1.13	6.23	-0.06
71	SLE RA 18	86	7	3557	-1.33	6.86	-0.06
71	SLE RA 19	67	6	3646	-1.11	6.15	-0.06
71	SLE RA 20	87	7	3584	-1.36	6.94	-0.06
71	SLE RA 21	68	6	3673	-1.13	6.22	-0.06
71	SLE FR 1	91	6	3126	-1.26	6.61	-0.05
71	SLE FR 2	84	6	3156	-1.18	6.38	-0.05
71	SLE FR 3	91	6	3137	-1.26	6.65	-0.05
71	SLE FR 4	83	6	3285	-1.2	6.45	-0.05
71	SLE FR 5	90	6	3266	-1.29	6.72	-0.05
71	SLE FR 6	88	6	3342	-1.3	6.74	-0.05
71	SLE QP 1	91	6	3126	-1.26	6.61	-0.05
71	SLE QP 2	89	6	3255	-1.28	6.69	-0.05
71	SLD 1	743	5	3885	-0.86	37.43	-0.09
71	SLD 2	743	5	3885	-0.86	37.43	-0.09
71	SLD 3	624	0	3519	0.56	32.35	-0.06
71	SLD 4	624	0	3519	0.56	32.35	-0.06
71	SLD 5	467	13	3999	-3.3	23.61	-0.11
71	SLD 6	467	13	3999	-3.3	23.61	-0.11
71	SLD 7	69	-3	2779	1.41	6.69	-0.01
71	SLD 8	69	-3	2779	1.41	6.69	-0.01
71	SLD 9	110	16	3731	-3.97	6.69	-0.1
71	SLD 10	110	16	3731	-3.97	6.69	-0.1
71	SLD 11	-288	-1	2511	0.74	-10.23	0
71	SLD 12	-288	-1	2511	0.74	-10.23	0
71	SLD 13	-445	13	2992	-3.11	-18.97	-0.05
71	SLD 14	-445	13	2992	-3.11	-18.97	-0.05
71	SLD 15	-565	8	2626	-1.7	-24.05	-0.02
71	SLD 16	-565	8	2626	-1.7	-24.05	-0.02
71	SLV 1	1621	3	4736	-0.27	78.66	-0.13
71	SLV 2	1621	3	4736	-0.27	78.66	-0.13
71	SLV 3	1329	-9	3873	3.24	66.23	-0.06
71	SLV 4	1329	-9	3873	3.24	66.23	-0.06
71	SLV 5	992	24	5009	-6.3	47.14	-0.18
71	SLV 6	992	24	5009	-6.3	47.14	-0.18
71	SLV 7	18	-17	2131	5.4	5.69	0.05
71	SLV 8	18	-17	2131	5.4	5.69	0.05
71	SLV 9	161	29	4379	-7.96	7.68	-0.16
71	SLV 10	161	29	4379	-7.96	7.68	-0.16
71	SLV 11	-813	-11	1502	3.74	-33.76	0.08
71	SLV 12	-813	-11	1502	3.74	-33.76	0.08



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
71	SLV 13	-1151	22	2638	-5.8	-52.85	-0.05
71	SLV 14	-1151	22	2638	-5.8	-52.85	-0.05
71	SLV 15	-1443	10	1775	-2.29	-65.29	0.02
71	SLV 16	-1443	10	1775	-2.29	-65.29	0.02
72	SLU 1	97	6	2926	-2.07	2.92	-0.01
72	SLU 2	56	4	3148	-1.57	0.54	-0.01
72	SLU 3	101	6	2987	-2.14	3.06	-0.01
72	SLU 4	77	5	3120	-1.84	1.63	-0.01
72	SLU 5	58	4	3188	-1.62	0.59	-0.01
72	SLU 6	103	6	3027	-2.19	3.1	-0.01
72	SLU 7	78	5	3160	-1.89	1.68	-0.01
72	SLU 8	101	6	3006	-2.17	3.01	-0.01
72	SLU 9	76	5	3139	-1.87	1.58	-0.01
72	SLU 10	56	4	3569	-1.78	0.37	-0.01
72	SLU 11	101	7	3409	-2.35	2.89	-0.01
72	SLU 12	76	6	3542	-2.05	1.46	-0.01
72	SLU 13	58	5	3609	-1.82	0.42	-0.01
72	SLU 14	103	7	3449	-2.4	2.93	-0.01
72	SLU 15	78	6	3582	-2.09	1.51	-0.01
72	SLU 16	100	7	3428	-2.37	2.84	-0.01
72	SLU 17	76	6	3561	-2.07	1.41	-0.01
72	SLU 18	97	7	3529	-2.37	2.67	-0.01
72	SLU 19	72	6	3661	-2.07	1.25	-0.01
72	SLU 20	99	7	3569	-2.41	2.72	-0.01
72	SLU 21	74	6	3701	-2.11	1.29	-0.01
72	SLU 22	107	7	3296	-2.29	3.18	-0.01
72	SLU 23	66	4	3518	-1.79	0.8	-0.01
72	SLU 24	111	7	3357	-2.36	3.32	-0.01
72	SLU 25	86	6	3490	-2.06	1.9	-0.01
72	SLU 26	67	5	3558	-1.83	0.85	-0.01
72	SLU 27	113	7	3397	-2.41	3.37	-0.01
72	SLU 28	88	6	3530	-2.11	1.94	-0.01
72	SLU 29	110	7	3376	-2.38	3.27	-0.01
72	SLU 30	86	6	3509	-2.08	1.85	-0.01
72	SLU 31	65	5	3939	-1.99	0.63	-0.01
72	SLU 32	111	8	3779	-2.56	3.15	-0.01
72	SLU 33	86	6	3912	-2.26	1.72	-0.01
72	SLU 34	67	5	3979	-2.04	0.68	-0.01
72	SLU 35	112	8	3819	-2.61	3.2	-0.01
72	SLU 36	88	6	3952	-2.31	1.77	-0.01
72	SLU 37	110	8	3798	-2.59	3.1	-0.01
72	SLU 38	85	6	3931	-2.29	1.68	-0.01
72	SLU 39	106	8	3899	-2.58	2.94	-0.01
72	SLU 40	82	6	4031	-2.28	1.51	-0.01
72	SLU 41	108	8	3938	-2.63	2.98	-0.01
72	SLU 42	83	6	4071	-2.33	1.56	-0.01
72	SLU 43	123	8	3677	-2.62	3.7	-0.01
72	SLU 44	82	5	3899	-2.12	1.32	-0.02
72	SLU 45	127	8	3738	-2.69	3.84	-0.01
72	SLU 46	103	7	3871	-2.39	2.41	-0.01
72	SLU 47	84	6	3939	-2.17	1.37	-0.02
72	SLU 48	129	8	3778	-2.74	3.89	-0.01
72	SLU 49	104	7	3911	-2.44	2.46	-0.01
72	SLU 50	127	8	3757	-2.72	3.79	-0.01
72	SLU 51	102	7	3890	-2.41	2.37	-0.01
72	SLU 52	82	6	4320	-2.33	1.15	-0.02
72	SLU 53	127	9	4160	-2.9	3.67	-0.01
72	SLU 54	102	7	4293	-2.6	2.24	-0.01
72	SLU 55	84	6	4360	-2.37	1.2	-0.02
72	SLU 56	129	9	4200	-2.94	3.72	-0.01
72	SLU 57	104	7	4333	-2.64	2.29	-0.01
72	SLU 58	126	9	4179	-2.92	3.62	-0.01
72	SLU 59	102	7	4312	-2.62	2.2	-0.01
72	SLU 60	123	9	4280	-2.92	3.46	-0.01
72	SLU 61	98	7	4412	-2.62	2.03	-0.01
72	SLU 62	124	9	4320	-2.96	3.5	-0.01
72	SLU 63	100	7	4452	-2.66	2.08	-0.01
72	SLU 64	133	8	4047	-2.84	3.97	-0.01
72	SLU 65	92	6	4269	-2.34	1.59	-0.02
72	SLU 66	137	9	4108	-2.91	4.11	-0.01
72	SLU 67	112	7	4241	-2.61	2.68	-0.01
72	SLU 68	93	6	4308	-2.38	1.64	-0.02
72	SLU 69	139	9	4148	-2.95	4.15	-0.01
72	SLU 70	114	7	4281	-2.65	2.73	-0.01
72	SLU 71	136	9	4127	-2.93	4.06	-0.01
72	SLU 72	111	7	4260	-2.63	2.63	-0.01
72	SLU 73	91	7	4690	-2.54	1.42	-0.02
72	SLU 74	136	9	4530	-3.11	3.94	-0.01
72	SLU 75	112	8	4663	-2.81	2.51	-0.01
72	SLU 76	93	7	4730	-2.59	1.46	-0.02
72	SLU 77	138	9	4570	-3.16	3.98	-0.01
72	SLU 78	114	8	4703	-2.86	2.56	-0.01
72	SLU 79	136	9	4549	-3.14	3.89	-0.01
72	SLU 80	111	8	4682	-2.83	2.46	-0.01
72	SLU 81	132	9	4649	-3.13	3.72	-0.01
72	SLU 82	108	8	4782	-2.83	2.3	-0.01
72	SLU 83	134	9	4689	-3.18	3.77	-0.01
72	SLU 84	109	8	4822	-2.88	2.34	-0.01
72	SLE RA 1	100	6	3032	-2.14	2.99	-0.01
72	SLE RA 2	73	5	3179	-1.8	1.41	-0.01



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
72	SLE RA 3	103	6	3072	-2.18	3.09	-0.01
72	SLE RA 4	86	6	3161	-1.98	2.14	-0.01
72	SLE RA 5	74	5	3206	-1.83	1.44	-0.01
72	SLE RA 6	104	6	3099	-2.21	3.12	-0.01
72	SLE RA 7	87	6	3188	-2.01	2.17	-0.01
72	SLE RA 8	102	6	3085	-2.2	3.05	-0.01
72	SLE RA 9	86	6	3174	-2	2.1	-0.01
72	SLE RA 10	72	5	3461	-1.94	1.29	-0.01
72	SLE RA 11	102	7	3354	-2.32	2.97	-0.01
72	SLE RA 12	86	6	3442	-2.12	2.02	-0.01
72	SLE RA 13	74	5	3487	-1.97	1.33	-0.01
72	SLE RA 14	104	7	3380	-2.35	3	-0.01
72	SLE RA 15	87	6	3469	-2.15	2.05	-0.01
72	SLE RA 16	102	7	3366	-2.33	2.94	-0.01
72	SLE RA 17	86	6	3455	-2.13	1.99	-0.01
72	SLE RA 18	100	7	3433	-2.33	2.83	-0.01
72	SLE RA 19	83	6	3522	-2.13	1.88	-0.01
72	SLE RA 20	101	7	3460	-2.36	2.86	-0.01
72	SLE RA 21	84	6	3549	-2.16	1.91	-0.01
72	SLE FR 1	100	6	3032	-2.14	2.99	-0.01
72	SLE FR 2	94	6	3061	-2.07	2.68	-0.01
72	SLE FR 3	100	6	3042	-2.15	3.01	-0.01
72	SLE FR 4	94	6	3182	-2.13	2.63	-0.01
72	SLE FR 5	100	6	3163	-2.21	2.96	-0.01
72	SLE FR 6	100	7	3233	-2.23	2.91	-0.01
72	SLE QP 1	100	6	3032	-2.14	2.99	-0.01
72	SLE QP 2	100	6	3152	-2.19	2.94	-0.01
72	SLD 1	788	13	3686	-1.8	34.99	-0.01
72	SLD 2	788	13	3686	-1.8	34.99	-0.01
72	SLD 3	674	7	3327	-0.18	30.08	0
72	SLD 4	674	7	3327	-0.18	30.08	0
72	SLD 5	479	17	3857	-4.54	20	-0.02
72	SLD 6	479	17	3857	-4.54	20	-0.02
72	SLD 7	100	-2	2660	0.87	3.64	0.01
72	SLD 8	100	-2	2660	0.87	3.64	0.01
72	SLD 9	100	15	3645	-5.26	2.25	-0.03
72	SLD 10	100	15	3645	-5.26	2.25	-0.03
72	SLD 11	-279	-4	2448	0.15	-14.11	0
72	SLD 12	-279	-4	2448	0.15	-14.11	0
72	SLD 13	-475	6	2978	-4.21	-24.19	-0.02
72	SLD 14	-475	6	2978	-4.21	-24.19	-0.02
72	SLD 15	-588	0	2619	-2.59	-29.1	-0.01
72	SLD 16	-588	0	2619	-2.59	-29.1	-0.01
72	SLV 1	1710	23	4410	-1.25	77.94	0
72	SLV 2	1710	23	4410	-1.25	77.94	0
72	SLV 3	1433	9	3563	2.8	65.91	0.02
72	SLV 4	1433	9	3563	2.8	65.91	0.02
72	SLV 5	1003	33	4814	-8.06	43.68	-0.04
72	SLV 6	1003	33	4814	-8.06	43.68	-0.04
72	SLV 7	80	-15	1991	5.45	3.6	0.03
72	SLV 8	80	-15	1991	5.45	3.6	0.03
72	SLV 9	120	28	4314	-9.84	2.29	-0.05
72	SLV 10	120	28	4314	-9.84	2.29	-0.05
72	SLV 11	-803	-20	1490	3.67	-37.79	0.02
72	SLV 12	-803	-20	1490	3.67	-37.79	0.02
72	SLV 13	-1234	4	2742	-7.19	-60.03	-0.04
72	SLV 14	-1234	4	2742	-7.19	-60.03	-0.04
72	SLV 15	-1511	-10	1895	-3.14	-72.05	-0.02
72	SLV 16	-1511	-10	1895	-3.14	-72.05	-0.02
73	SLU 1	146	12	2998	-2.76	7.2	0.01
73	SLU 2	115	12	3274	-2.87	5.44	0.01
73	SLU 3	151	13	3063	-2.84	7.43	0.01
73	SLU 4	133	13	3229	-2.91	6.38	0.01
73	SLU 5	118	13	3317	-2.93	5.55	0.01
73	SLU 6	153	13	3105	-2.9	7.54	0.01
73	SLU 7	135	13	3271	-2.96	6.49	0.01
73	SLU 8	151	13	3083	-2.87	7.41	0.01
73	SLU 9	132	13	3248	-2.93	6.36	0.01
73	SLU 10	128	14	3690	-3.18	6.2	0.02
73	SLU 11	164	14	3479	-3.15	8.19	0.02
73	SLU 12	145	14	3644	-3.22	7.14	0.02
73	SLU 13	130	14	3732	-3.24	6.31	0.02
73	SLU 14	166	14	3521	-3.21	8.3	0.02
73	SLU 15	148	14	3686	-3.28	7.25	0.02
73	SLU 16	163	14	3499	-3.18	8.17	0.02
73	SLU 17	145	14	3664	-3.25	7.12	0.02
73	SLU 18	164	14	3592	-3.2	8.28	0.02
73	SLU 19	145	15	3758	-3.27	7.23	0.02
73	SLU 20	166	15	3634	-3.26	8.39	0.02
73	SLU 21	148	15	3800	-3.33	7.33	0.02
73	SLU 22	166	14	3368	-3.07	8.25	0.02
73	SLU 23	135	14	3644	-3.19	6.49	0.02
73	SLU 24	171	14	3433	-3.16	8.49	0.02
73	SLU 25	153	14	3598	-3.22	7.43	0.02
73	SLU 26	138	14	3686	-3.24	6.6	0.02
73	SLU 27	173	14	3475	-3.21	8.6	0.02
73	SLU 28	155	14	3641	-3.28	7.54	0.02
73	SLU 29	171	14	3453	-3.18	8.47	0.02
73	SLU 30	152	14	3618	-3.25	7.41	0.02
73	SLU 31	148	15	4060	-3.5	7.25	0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
73	SLU 32	183	16	3849	-3.47	9.25	0.02
73	SLU 33	165	16	4014	-3.54	8.19	0.02
73	SLU 34	150	16	4102	-3.55	7.36	0.02
73	SLU 35	186	16	3891	-3.52	9.36	0.02
73	SLU 36	167	16	4056	-3.59	8.3	0.02
73	SLU 37	183	16	3868	-3.49	9.23	0.02
73	SLU 38	165	16	4034	-3.56	8.17	0.02
73	SLU 39	184	16	3962	-3.52	9.34	0.02
73	SLU 40	165	16	4128	-3.59	8.28	0.02
73	SLU 41	186	16	4004	-3.57	9.45	0.02
73	SLU 42	168	16	4170	-3.64	8.39	0.02
73	SLU 43	183	15	3771	-3.48	8.99	0.02
73	SLU 44	152	16	4047	-3.59	7.23	0.02
73	SLU 45	188	16	3836	-3.56	9.23	0.02
73	SLU 46	170	16	4001	-3.63	8.17	0.02
73	SLU 47	155	16	4089	-3.65	7.34	0.02
73	SLU 48	190	16	3878	-3.62	9.34	0.02
73	SLU 49	172	16	4043	-3.68	8.28	0.02
73	SLU 50	188	16	3856	-3.59	9.21	0.02
73	SLU 51	169	16	4021	-3.66	8.16	0.02
73	SLU 52	165	17	4463	-3.9	7.99	0.02
73	SLU 53	201	17	4251	-3.87	9.99	0.02
73	SLU 54	182	17	4417	-3.94	8.93	0.02
73	SLU 55	167	17	4505	-3.96	8.1	0.02
73	SLU 56	203	18	4294	-3.93	10.1	0.02
73	SLU 57	185	18	4459	-4	9.04	0.02
73	SLU 58	200	17	4271	-3.9	9.97	0.02
73	SLU 59	182	18	4437	-3.97	8.92	0.02
73	SLU 60	201	18	4365	-3.93	10.08	0.02
73	SLU 61	182	18	4530	-3.99	9.02	0.02
73	SLU 62	203	18	4407	-3.98	10.19	0.02
73	SLU 63	185	18	4573	-4.05	9.13	0.02
73	SLU 64	203	17	4141	-3.79	10.05	0.02
73	SLU 65	172	17	4417	-3.91	8.29	0.02
73	SLU 66	208	17	4206	-3.88	10.29	0.02
73	SLU 67	190	17	4371	-3.94	9.23	0.02
73	SLU 68	175	17	4459	-3.96	8.4	0.02
73	SLU 69	210	18	4248	-3.93	10.39	0.02
73	SLU 70	192	18	4413	-4	9.34	0.02
73	SLU 71	208	17	4226	-3.9	10.27	0.02
73	SLU 72	189	17	4391	-3.97	9.21	0.02
73	SLU 73	185	19	4832	-4.22	9.05	0.02
73	SLU 74	220	19	4621	-4.19	11.04	0.02
73	SLU 75	202	19	4787	-4.26	9.99	0.02
73	SLU 76	187	19	4875	-4.27	9.16	0.02
73	SLU 77	223	19	4663	-4.24	11.15	0.02
73	SLU 78	204	19	4829	-4.31	10.1	0.02
73	SLU 79	220	19	4641	-4.21	11.03	0.02
73	SLU 80	202	19	4807	-4.28	9.97	0.02
73	SLU 81	221	19	4735	-4.24	11.13	0.02
73	SLU 82	202	19	4900	-4.31	10.08	0.02
73	SLU 83	223	19	4777	-4.29	11.24	0.02
73	SLU 84	205	19	4943	-4.36	10.19	0.02
73	SLE RA 1	152	13	3104	-2.85	7.5	0.01
73	SLE RA 2	131	13	3288	-2.92	6.33	0.01
73	SLE RA 3	155	13	3147	-2.9	7.66	0.01
73	SLE RA 4	143	13	3257	-2.95	6.95	0.01
73	SLE RA 5	133	13	3316	-2.96	6.4	0.01
73	SLE RA 6	157	13	3175	-2.94	7.73	0.01
73	SLE RA 7	144	13	3286	-2.99	7.02	0.01
73	SLE RA 8	155	13	3160	-2.92	7.64	0.01
73	SLE RA 9	143	13	3271	-2.97	6.94	0.01
73	SLE RA 10	140	14	3565	-3.13	6.83	0.02
73	SLE RA 11	163	14	3424	-3.11	8.16	0.02
73	SLE RA 12	151	14	3535	-3.16	7.46	0.02
73	SLE RA 13	141	14	3593	-3.17	6.9	0.02
73	SLE RA 14	165	14	3452	-3.15	8.23	0.02
73	SLE RA 15	153	14	3563	-3.19	7.53	0.02
73	SLE RA 16	163	14	3437	-3.13	8.15	0.02
73	SLE RA 17	151	14	3548	-3.17	7.45	0.02
73	SLE RA 18	164	14	3500	-3.15	8.22	0.02
73	SLE RA 19	151	14	3610	-3.19	7.52	0.02
73	SLE RA 20	165	14	3528	-3.18	8.29	0.02
73	SLE RA 21	153	14	3638	-3.23	7.59	0.02
73	SLE FR 1	152	13	3104	-2.85	7.5	0.01
73	SLE FR 2	148	13	3141	-2.86	7.26	0.01
73	SLE FR 3	152	13	3115	-2.86	7.53	0.01
73	SLE FR 4	151	13	3260	-2.95	7.48	0.01
73	SLE FR 5	156	13	3234	-2.95	7.74	0.01
73	SLE FR 6	158	13	3302	-3	7.86	0.02
73	SLE QP 1	152	13	3104	-2.85	7.5	0.01
73	SLE QP 2	155	13	3223	-2.94	7.72	0.01
73	SLD 1	879	19	3774	-4.53	41.74	0.02
73	SLD 2	879	19	3774	-4.53	41.74	0.02
73	SLD 3	765	14	3336	-3.23	36.68	0.02
73	SLD 4	765	14	3336	-3.23	36.68	0.02
73	SLD 5	546	22	4052	-5.39	25.59	0.03
73	SLD 6	546	22	4052	-5.39	25.59	0.03
73	SLD 7	165	6	2593	-1.05	8.73	0
73	SLD 8	165	6	2593	-1.05	8.73	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
73	SLD 9	146	20	3852	-4.82	6.7	0.03
73	SLD 10	146	20	3852	-4.82	6.7	0.03
73	SLD 11	-235	4	2394	-0.49	-10.16	0
73	SLD 12	-235	4	2394	-0.49	-10.16	0
73	SLD 13	-454	12	3109	-2.64	-21.25	0.01
73	SLD 14	-454	12	3109	-2.64	-21.25	0.01
73	SLD 15	-568	7	2672	-1.34	-26.31	0.01
73	SLD 16	-568	7	2672	-1.34	-26.31	0.01
73	SLV 1	1846	28	4525	-6.84	87.24	0.04
73	SLV 2	1846	28	4525	-6.84	87.24	0.04
73	SLV 3	1571	15	3492	-3.67	74.99	0.02
73	SLV 4	1571	15	3492	-3.67	74.99	0.02
73	SLV 5	1080	36	5181	-8.92	50.15	0.05
73	SLV 6	1080	36	5181	-8.92	50.15	0.05
73	SLV 7	163	-5	1736	1.66	9.32	-0.01
73	SLV 8	163	-5	1736	1.66	9.32	-0.01
73	SLV 9	148	31	4710	-7.53	6.11	0.04
73	SLV 10	148	31	4710	-7.53	6.11	0.04
73	SLV 11	-770	-10	1264	3.05	-34.72	-0.02
73	SLV 12	-770	-10	1264	3.05	-34.72	-0.02
73	SLV 13	-1261	11	2954	-2.21	-59.56	0.01
73	SLV 14	-1261	11	2954	-2.21	-59.56	0.01
73	SLV 15	-1536	-1	1920	0.97	-71.81	-0.01
73	SLV 16	-1536	-1	1920	0.97	-71.81	-0.01
74	SLU 1	-18	538	5149	-11.4	-1.2	0.03
74	SLU 2	-135	727	5751	-19.12	-6.09	0.04
74	SLU 3	-19	553	5266	-11.7	-1.24	0.03
74	SLU 4	-89	666	5627	-16.33	-4.18	0.04
74	SLU 5	-137	736	5827	-19.31	-6.17	0.04
74	SLU 6	-21	562	5342	-11.88	-1.32	0.03
74	SLU 7	-91	675	5703	-16.52	-4.26	0.04
74	SLU 8	-22	557	5301	-11.77	-1.36	0.03
74	SLU 9	-92	670	5662	-16.41	-4.29	0.04
74	SLU 10	-136	793	6443	-20.3	-6.26	0.05
74	SLU 11	-21	619	5958	-12.87	-1.41	0.04
74	SLU 12	-91	732	6319	-17.51	-4.34	0.04
74	SLU 13	-138	802	6519	-20.48	-6.34	0.05
74	SLU 14	-22	628	6034	-13.06	-1.49	0.04
74	SLU 15	-92	741	6395	-17.69	-4.42	0.04
74	SLU 16	-23	623	5993	-12.95	-1.52	0.04
74	SLU 17	-93	736	6354	-17.58	-4.46	0.04
74	SLU 18	-20	632	6137	-13.08	-1.43	0.04
74	SLU 19	-90	745	6499	-17.71	-4.37	0.04
74	SLU 20	-22	642	6214	-13.27	-1.51	0.04
74	SLU 21	-92	755	6575	-17.9	-4.45	0.04
74	SLU 22	-15	602	5777	-12.62	-1.11	0.03
74	SLU 23	-131	791	6379	-20.34	-6	0.05
74	SLU 24	-15	617	5894	-12.91	-1.15	0.04
74	SLU 25	-85	730	6255	-17.54	-4.09	0.04
74	SLU 26	-133	800	6455	-20.52	-6.08	0.05
74	SLU 27	-17	626	5970	-13.1	-1.23	0.04
74	SLU 28	-87	739	6331	-17.73	-4.17	0.04
74	SLU 29	-18	621	5929	-12.99	-1.27	0.04
74	SLU 30	-88	734	6290	-17.62	-4.2	0.04
74	SLU 31	-133	857	7071	-21.51	-6.17	0.05
74	SLU 32	-17	683	6586	-14.09	-1.32	0.04
74	SLU 33	-87	796	6947	-18.72	-4.26	0.05
74	SLU 34	-134	866	7147	-21.7	-6.25	0.05
74	SLU 35	-19	692	6662	-14.27	-1.4	0.04
74	SLU 36	-88	805	7023	-18.91	-4.34	0.05
74	SLU 37	-19	687	6621	-14.16	-1.43	0.04
74	SLU 38	-89	800	6982	-18.8	-4.37	0.05
74	SLU 39	-17	697	6765	-14.3	-1.35	0.04
74	SLU 40	-87	810	7127	-18.93	-4.28	0.05
74	SLU 41	-18	706	6841	-14.48	-1.43	0.04
74	SLU 42	-88	819	7203	-19.11	-4.36	0.05
74	SLU 43	-25	678	6478	-14.41	-1.59	0.04
74	SLU 44	-142	866	7081	-22.13	-6.48	0.05
74	SLU 45	-26	692	6595	-14.7	-1.63	0.04
74	SLU 46	-96	805	6957	-19.34	-4.57	0.05
74	SLU 47	-143	875	7157	-22.31	-6.56	0.05
74	SLU 48	-28	701	6671	-14.89	-1.71	0.04
74	SLU 49	-98	814	7033	-19.52	-4.65	0.05
74	SLU 50	-29	696	6631	-14.78	-1.75	0.04
74	SLU 51	-98	809	6992	-19.41	-4.68	0.05
74	SLU 52	-143	932	7773	-23.3	-6.65	0.05
74	SLU 53	-28	758	7287	-15.88	-1.8	0.04
74	SLU 54	-97	871	7649	-20.51	-4.73	0.05
74	SLU 55	-145	941	7849	-23.49	-6.73	0.06
74	SLU 56	-29	767	7363	-16.06	-1.88	0.04
74	SLU 57	-99	880	7725	-20.7	-4.81	0.05
74	SLU 58	-30	762	7322	-15.95	-1.91	0.04
74	SLU 59	-100	875	7684	-20.59	-4.85	0.05
74	SLU 60	-27	772	7467	-16.09	-1.82	0.04
74	SLU 61	-97	885	7828	-20.72	-4.76	0.05
74	SLU 62	-29	781	7543	-16.27	-1.9	0.05
74	SLU 63	-99	894	7904	-20.9	-4.84	0.05
74	SLU 64	-21	742	7106	-15.62	-1.5	0.04
74	SLU 65	-138	930	7709	-23.34	-6.39	0.05
74	SLU 66	-22	756	7223	-15.92	-1.54	0.04



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
74	SLU 67	-92	869	7584	-20.55	-4.48	0.05
74	SLU 68	-140	939	7785	-23.53	-6.47	0.05
74	SLU 69	-24	765	7299	-16.1	-1.62	0.04
74	SLU 70	-94	879	7660	-20.73	-4.56	0.05
74	SLU 71	-25	760	7258	-15.99	-1.66	0.04
74	SLU 72	-95	873	7620	-20.62	-4.59	0.05
74	SLU 73	-139	996	8400	-24.52	-6.56	0.06
74	SLU 74	-24	822	7915	-17.09	-1.71	0.05
74	SLU 75	-94	935	8276	-21.73	-4.65	0.05
74	SLU 76	-141	1005	8477	-24.7	-6.64	0.06
74	SLU 77	-25	832	7991	-17.28	-1.79	0.05
74	SLU 78	-95	945	8352	-21.91	-4.73	0.05
74	SLU 79	-26	826	7950	-17.17	-1.82	0.05
74	SLU 80	-96	939	8312	-21.8	-4.76	0.05
74	SLU 81	-23	836	8095	-17.3	-1.73	0.05
74	SLU 82	-93	949	8456	-21.93	-4.67	0.06
74	SLU 83	-25	845	8171	-17.49	-1.81	0.05
74	SLU 84	-95	958	8532	-22.12	-4.75	0.06
74	SLE RA 1	-17	557	5328	-11.75	-1.17	0.03
74	SLE RA 2	-95	682	5730	-16.9	-4.43	0.04
74	SLE RA 3	-18	566	5406	-11.95	-1.2	0.03
74	SLE RA 4	-64	641	5647	-15.03	-3.16	0.04
74	SLE RA 5	-96	688	5781	-17.02	-4.49	0.04
74	SLE RA 6	-19	572	5457	-12.07	-1.25	0.03
74	SLE RA 7	-66	648	5698	-15.16	-3.21	0.04
74	SLE RA 8	-20	569	5430	-12	-1.28	0.03
74	SLE RA 9	-66	644	5671	-15.08	-3.23	0.04
74	SLE RA 10	-96	726	6191	-17.68	-4.54	0.04
74	SLE RA 11	-19	610	5867	-12.73	-1.31	0.04
74	SLE RA 12	-65	685	6108	-15.82	-3.27	0.04
74	SLE RA 13	-97	732	6242	-17.8	-4.6	0.04
74	SLE RA 14	-20	616	5918	-12.85	-1.37	0.04
74	SLE RA 15	-67	692	6159	-15.94	-3.32	0.04
74	SLE RA 16	-20	613	5891	-12.78	-1.39	0.04
74	SLE RA 17	-67	688	6132	-15.87	-3.35	0.04
74	SLE RA 18	-19	619	5987	-12.87	-1.33	0.04
74	SLE RA 19	-65	695	6228	-15.96	-3.29	0.04
74	SLE RA 20	-20	626	6038	-12.99	-1.38	0.04
74	SLE RA 21	-66	701	6279	-16.08	-3.34	0.04
74	SLE FR 1	-17	557	5328	-11.75	-1.17	0.03
74	SLE FR 2	-33	582	5409	-12.78	-1.82	0.03
74	SLE FR 3	-18	559	5349	-11.8	-1.19	0.03
74	SLE FR 4	-33	600	5606	-13.11	-1.87	0.03
74	SLE FR 5	-18	578	5546	-12.14	-1.24	0.03
74	SLE FR 6	-18	588	5658	-12.31	-1.25	0.03
74	SLE QP 1	-17	557	5328	-11.75	-1.17	0.03
74	SLE QP 2	-18	575	5526	-12.09	-1.22	0.03
74	SLD 1	671	821	6579	-22.35	30.17	-0.02
74	SLD 2	671	821	6579	-22.35	30.17	-0.02
74	SLD 3	786	570	5637	-11.61	35.34	-0.03
74	SLD 4	786	570	5637	-11.61	35.34	-0.03
74	SLD 5	14	1030	7272	-31.46	0.35	0.04
74	SLD 6	14	1030	7272	-31.46	0.35	0.04
74	SLD 7	398	193	4129	4.35	17.6	0
74	SLD 8	398	193	4129	4.35	17.6	0
74	SLD 9	-434	958	6923	-28.52	-20.04	0.07
74	SLD 10	-434	958	6923	-28.52	-20.04	0.07
74	SLD 11	-49	121	3780	7.29	-2.78	0.03
74	SLD 12	-49	121	3780	7.29	-2.78	0.03
74	SLD 13	-822	581	5415	-12.56	-37.78	0.09
74	SLD 14	-822	581	5415	-12.56	-37.78	0.09
74	SLD 15	-706	330	4473	-1.82	-32.6	0.08
74	SLD 16	-706	330	4473	-1.82	-32.6	0.08
74	SLV 1	1578	1161	8021	-36.58	71.56	-0.08
74	SLV 2	1578	1161	8021	-36.58	71.56	-0.08
74	SLV 3	1862	561	5790	-10.87	84.28	-0.11
74	SLV 4	1862	561	5790	-10.87	84.28	-0.11
74	SLV 5	31	1662	9659	-58.42	1.32	0.04
74	SLV 6	31	1662	9659	-58.42	1.32	0.04
74	SLV 7	976	-340	2221	27.27	43.72	-0.05
74	SLV 8	976	-340	2221	27.27	43.72	-0.05
74	SLV 9	-1012	1490	8831	-51.44	-46.16	0.12
74	SLV 10	-1012	1490	8831	-51.44	-46.16	0.12
74	SLV 11	-66	-511	1393	34.25	-3.76	0.02
74	SLV 12	-66	-511	1393	34.25	-3.76	0.02
74	SLV 13	-1897	590	5262	-13.3	-86.72	0.18
74	SLV 14	-1897	590	5262	-13.3	-86.72	0.18
74	SLV 15	-1614	-10	3031	12.4	-74	0.15
74	SLV 16	-1614	-10	3031	12.4	-74	0.15
75	SLU 1	-191	4	3854	2.08	-4.88	-0.04
75	SLU 2	-393	3	4113	-0.57	-12.43	-0.05
75	SLU 3	-199	4	3937	2.15	-5.09	-0.04
75	SLU 4	-320	4	4092	0.56	-9.62	-0.04
75	SLU 5	-399	3	4167	-0.53	-12.62	-0.05
75	SLU 6	-205	4	3991	2.2	-5.28	-0.04
75	SLU 7	-326	4	4146	0.61	-9.81	-0.05
75	SLU 8	-203	4	3962	2.18	-5.26	-0.04
75	SLU 9	-324	4	4118	0.59	-9.78	-0.04
75	SLU 10	-409	4	4638	-0.27	-12.65	-0.05
75	SLU 11	-214	5	4462	2.46	-5.31	-0.04



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
75	SLU 12	-336	4	4618	0.86	-9.84	-0.05
75	SLU 13	-415	4	4693	-0.22	-12.83	-0.05
75	SLU 14	-220	5	4516	2.5	-5.5	-0.04
75	SLU 15	-341	4	4672	0.91	-10.02	-0.05
75	SLU 16	-219	5	4487	2.48	-5.48	-0.04
75	SLU 17	-340	4	4643	0.89	-10	-0.05
75	SLU 18	-214	5	4604	2.51	-5.19	-0.04
75	SLU 19	-335	4	4760	0.92	-9.72	-0.05
75	SLU 20	-220	5	4658	2.56	-5.38	-0.04
75	SLU 21	-341	4	4814	0.97	-9.91	-0.05
75	SLU 22	-205	5	4323	2.37	-5	-0.04
75	SLU 23	-406	4	4583	-0.28	-12.55	-0.05
75	SLU 24	-212	5	4406	2.44	-5.21	-0.04
75	SLU 25	-333	4	4562	0.85	-9.74	-0.05
75	SLU 26	-412	4	4637	-0.23	-12.73	-0.05
75	SLU 27	-218	5	4460	2.49	-5.4	-0.04
75	SLU 28	-339	4	4616	0.9	-9.92	-0.05
75	SLU 29	-216	5	4432	2.47	-5.38	-0.04
75	SLU 30	-338	4	4587	0.88	-9.9	-0.05
75	SLU 31	-422	4	5108	0.02	-12.77	-0.06
75	SLU 32	-228	5	4932	2.75	-5.43	-0.05
75	SLU 33	-349	5	5087	1.15	-9.96	-0.05
75	SLU 34	-428	4	5162	0.07	-12.95	-0.06
75	SLU 35	-234	5	4986	2.8	-5.62	-0.05
75	SLU 36	-355	5	5142	1.2	-10.14	-0.05
75	SLU 37	-232	5	4957	2.77	-5.6	-0.05
75	SLU 38	-353	5	5113	1.18	-10.12	-0.05
75	SLU 39	-227	5	5074	2.8	-5.31	-0.05
75	SLU 40	-348	5	5230	1.21	-9.84	-0.06
75	SLU 41	-233	6	5128	2.85	-5.5	-0.05
75	SLU 42	-354	5	5284	1.26	-10.03	-0.06
75	SLU 43	-244	5	4849	2.6	-6.31	-0.05
75	SLU 44	-446	4	5108	-0.05	-13.85	-0.06
75	SLU 45	-252	5	4932	2.68	-6.51	-0.05
75	SLU 46	-373	5	5087	1.09	-11.04	-0.05
75	SLU 47	-452	4	5162	0	-14.04	-0.06
75	SLU 48	-257	5	4986	2.73	-6.7	-0.05
75	SLU 49	-379	5	5142	1.14	-11.23	-0.05
75	SLU 50	-256	5	4957	2.7	-6.68	-0.05
75	SLU 51	-377	5	5113	1.11	-11.21	-0.05
75	SLU 52	-462	5	5634	0.25	-14.07	-0.06
75	SLU 53	-267	6	5457	2.98	-6.73	-0.05
75	SLU 54	-388	5	5613	1.39	-11.26	-0.06
75	SLU 55	-468	5	5688	0.3	-14.26	-0.06
75	SLU 56	-273	6	5511	3.03	-6.92	-0.05
75	SLU 57	-394	5	5667	1.44	-11.45	-0.06
75	SLU 58	-272	6	5482	3	-6.9	-0.05
75	SLU 59	-393	5	5638	1.41	-11.43	-0.06
75	SLU 60	-267	6	5599	3.03	-6.62	-0.05
75	SLU 61	-388	5	5755	1.44	-11.15	-0.06
75	SLU 62	-273	6	5653	3.08	-6.81	-0.05
75	SLU 63	-394	5	5809	1.49	-11.33	-0.06
75	SLU 64	-258	6	5318	2.89	-6.42	-0.05
75	SLU 65	-459	5	5578	0.24	-13.97	-0.06
75	SLU 66	-265	6	5401	2.97	-6.63	-0.05
75	SLU 67	-386	5	5557	1.38	-11.16	-0.06
75	SLU 68	-465	5	5632	0.29	-14.16	-0.06
75	SLU 69	-271	6	5456	3.02	-6.82	-0.05
75	SLU 70	-392	5	5611	1.43	-11.35	-0.06
75	SLU 71	-269	6	5427	2.99	-6.8	-0.05
75	SLU 72	-390	5	5582	1.4	-11.33	-0.06
75	SLU 73	-475	5	6103	0.54	-14.19	-0.07
75	SLU 74	-281	6	5927	3.27	-6.85	-0.06
75	SLU 75	-402	6	6082	1.68	-11.38	-0.06
75	SLU 76	-481	5	6157	0.59	-14.38	-0.07
75	SLU 77	-286	6	5981	3.32	-7.04	-0.06
75	SLU 78	-408	6	6137	1.73	-11.57	-0.06
75	SLU 79	-285	6	5952	3.29	-7.02	-0.06
75	SLU 80	-406	6	6108	1.7	-11.55	-0.06
75	SLU 81	-280	7	6069	3.32	-6.74	-0.06
75	SLU 82	-401	6	6225	1.73	-11.26	-0.06
75	SLU 83	-286	7	6123	3.37	-6.93	-0.06
75	SLU 84	-407	6	6279	1.78	-11.45	-0.07
75	SLE RA 1	-195	4	3988	2.16	-4.92	-0.04
75	SLE RA 2	-330	4	4161	0.39	-9.95	-0.05
75	SLE RA 3	-200	4	4043	2.21	-5.05	-0.04
75	SLE RA 4	-281	4	4147	1.15	-8.07	-0.04
75	SLE RA 5	-334	4	4197	0.43	-10.07	-0.05
75	SLE RA 6	-204	4	4079	2.24	-5.18	-0.04
75	SLE RA 7	-285	4	4183	1.18	-8.2	-0.04
75	SLE RA 8	-203	4	4060	2.23	-5.17	-0.04
75	SLE RA 9	-284	4	4164	1.17	-8.18	-0.04
75	SLE RA 10	-340	4	4511	0.59	-10.09	-0.05
75	SLE RA 11	-211	5	4393	2.41	-5.2	-0.04
75	SLE RA 12	-291	4	4497	1.35	-8.22	-0.05
75	SLE RA 13	-344	4	4547	0.63	-10.22	-0.05
75	SLE RA 14	-214	5	4430	2.45	-5.33	-0.04
75	SLE RA 15	-295	4	4533	1.38	-8.34	-0.05
75	SLE RA 16	-214	5	4410	2.43	-5.31	-0.04
75	SLE RA 17	-294	4	4514	1.37	-8.33	-0.05



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
75	SLE RA 18	-210	5	4488	2.45	-5.12	-0.04
75	SLE RA 19	-291	4	4592	1.39	-8.14	-0.05
75	SLE RA 20	-214	5	4524	2.48	-5.25	-0.04
75	SLE RA 21	-295	4	4628	1.42	-8.27	-0.05
75	SLE FR 1	-195	4	3988	2.16	-4.92	-0.04
75	SLE FR 2	-222	4	4022	1.81	-5.92	-0.04
75	SLE FR 3	-197	4	4002	2.18	-4.97	-0.04
75	SLE FR 4	-227	4	4173	1.89	-5.98	-0.04
75	SLE FR 5	-201	4	4152	2.26	-5.03	-0.04
75	SLE FR 6	-203	5	4238	2.31	-5.02	-0.04
75	SLE QP 1	-195	4	3988	2.16	-4.92	-0.04
75	SLE QP 2	-200	4	4138	2.25	-4.98	-0.04
75	SLD 1	527	9	4749	-2.24	27.8	-0.06
75	SLD 2	527	9	4749	-2.24	27.8	-0.06
75	SLD 3	704	5	4162	2.21	34.79	-0.05
75	SLD 4	704	5	4162	2.21	34.79	-0.05
75	SLD 5	-251	12	5212	-5.85	-5.74	-0.06
75	SLD 6	-251	12	5212	-5.85	-5.74	-0.06
75	SLD 7	341	-2	3255	8.99	17.55	-0.03
75	SLD 8	341	-2	3255	8.99	17.55	-0.03
75	SLD 9	-740	11	5021	-4.49	-27.51	-0.05
75	SLD 10	-740	11	5021	-4.49	-27.51	-0.05
75	SLD 11	-148	-3	3064	10.34	-4.21	-0.02
75	SLD 12	-148	-3	3064	10.34	-4.21	-0.02
75	SLD 13	-1104	4	4114	2.29	-44.75	-0.03
75	SLD 14	-1104	4	4114	2.29	-44.75	-0.03
75	SLD 15	-926	0	3527	6.74	-37.76	-0.02
75	SLD 16	-926	0	3527	6.74	-37.76	-0.02
75	SLV 1	1482	16	5584	-8.78	70.95	-0.08
75	SLV 2	1482	16	5584	-8.78	70.95	-0.08
75	SLV 3	1914	6	4201	2.38	87.98	-0.06
75	SLV 4	1914	6	4201	2.38	87.98	-0.06
75	SLV 5	-351	23	6670	-17.98	-8.02	-0.09
75	SLV 6	-351	23	6670	-17.98	-8.02	-0.09
75	SLV 7	1090	-10	2059	19.2	48.73	-0.01
75	SLV 8	1090	-10	2059	19.2	48.73	-0.01
75	SLV 9	-1490	19	6217	-14.71	-58.69	-0.07
75	SLV 10	-1490	19	6217	-14.71	-58.69	-0.07
75	SLV 11	-48	-14	1606	22.47	-1.94	0.01
75	SLV 12	-48	-14	1606	22.47	-1.94	0.01
75	SLV 13	-2314	3	4075	2.12	-97.93	-0.02
75	SLV 14	-2314	3	4075	2.12	-97.93	-0.02
75	SLV 15	-1881	-7	2692	13.27	-80.91	0
75	SLV 16	-1881	-7	2692	13.27	-80.91	0
76	SLU 1	-319	-15	3565	8.61	-13.53	-0.03
76	SLU 2	-513	-17	3667	3.49	-21.36	-0.02
76	SLU 3	-331	-16	3639	8.89	-14.02	-0.03
76	SLU 4	-447	-17	3700	5.81	-18.71	-0.02
76	SLU 5	-522	-18	3715	3.67	-21.73	-0.02
76	SLU 6	-340	-16	3687	9.07	-14.39	-0.03
76	SLU 7	-456	-17	3748	5.99	-19.08	-0.02
76	SLU 8	-337	-16	3661	8.97	-14.27	-0.03
76	SLU 9	-453	-17	3722	5.89	-18.97	-0.02
76	SLU 10	-546	-19	4160	4.64	-22.78	-0.02
76	SLU 11	-363	-18	4132	10.04	-15.44	-0.04
76	SLU 12	-480	-19	4193	6.97	-20.14	-0.03
76	SLU 13	-555	-20	4209	4.82	-23.15	-0.02
76	SLU 14	-372	-18	4181	10.22	-15.81	-0.04
76	SLU 15	-488	-19	4241	7.15	-20.51	-0.03
76	SLU 16	-369	-18	4155	10.13	-15.7	-0.04
76	SLU 17	-486	-19	4216	7.05	-20.39	-0.03
76	SLU 18	-365	-18	4270	10.26	-15.57	-0.04
76	SLU 19	-482	-19	4331	7.19	-20.26	-0.03
76	SLU 20	-374	-18	4319	10.44	-15.94	-0.04
76	SLU 21	-491	-20	4379	7.37	-20.63	-0.03
76	SLU 22	-350	-17	4002	9.74	-14.85	-0.04
76	SLU 23	-544	-19	4103	4.61	-22.67	-0.02
76	SLU 24	-361	-18	4075	10.01	-15.33	-0.04
76	SLU 25	-478	-19	4136	6.94	-20.03	-0.03
76	SLU 26	-552	-20	4151	4.79	-23.04	-0.02
76	SLU 27	-370	-18	4123	10.19	-15.7	-0.04
76	SLU 28	-486	-19	4184	7.12	-20.4	-0.03
76	SLU 29	-367	-18	4098	10.1	-15.59	-0.04
76	SLU 30	-484	-19	4159	7.02	-20.28	-0.03
76	SLU 31	-576	-21	4597	5.77	-24.1	-0.03
76	SLU 32	-393	-20	4569	11.17	-16.76	-0.04
76	SLU 33	-510	-21	4630	8.1	-21.45	-0.03
76	SLU 34	-585	-22	4645	5.95	-24.47	-0.03
76	SLU 35	-402	-20	4617	11.35	-17.13	-0.04
76	SLU 36	-519	-21	4678	8.28	-21.82	-0.03
76	SLU 37	-399	-20	4592	11.25	-17.01	-0.04
76	SLU 38	-516	-21	4652	8.18	-21.71	-0.03
76	SLU 39	-396	-20	4707	11.39	-16.88	-0.04
76	SLU 40	-512	-21	4768	8.32	-21.58	-0.03
76	SLU 41	-404	-20	4755	11.57	-17.25	-0.04
76	SLU 42	-521	-22	4816	8.5	-21.95	-0.03
76	SLU 43	-405	-19	4485	10.81	-17.14	-0.04
76	SLU 44	-599	-21	4587	5.68	-24.97	-0.02
76	SLU 45	-416	-19	4559	11.08	-17.63	-0.04
76	SLU 46	-533	-21	4619	8.01	-22.32	-0.03



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
76	SLU 47	-608	-21	4635	5.86	-25.34	-0.03
76	SLU 48	-425	-20	4607	11.26	-18	-0.04
76	SLU 49	-541	-21	4668	8.19	-22.69	-0.03
76	SLU 50	-422	-20	4581	11.16	-17.88	-0.04
76	SLU 51	-539	-21	4642	8.09	-22.57	-0.03
76	SLU 52	-631	-23	5080	6.84	-26.39	-0.03
76	SLU 53	-449	-21	5052	12.24	-19.05	-0.05
76	SLU 54	-565	-23	5113	9.17	-23.75	-0.04
76	SLU 55	-640	-23	5128	7.02	-26.76	-0.03
76	SLU 56	-457	-22	5100	12.42	-19.42	-0.05
76	SLU 57	-574	-23	5161	9.35	-24.12	-0.04
76	SLU 58	-454	-22	5075	12.32	-19.3	-0.05
76	SLU 59	-571	-23	5136	9.25	-24	-0.04
76	SLU 60	-451	-22	5190	12.46	-19.18	-0.05
76	SLU 61	-567	-23	5251	9.39	-23.87	-0.04
76	SLU 62	-460	-22	5238	12.64	-19.55	-0.05
76	SLU 63	-576	-23	5299	9.56	-24.24	-0.04
76	SLU 64	-435	-21	4921	11.93	-18.46	-0.04
76	SLU 65	-629	-23	5023	6.81	-26.28	-0.03
76	SLU 66	-446	-21	4995	12.21	-18.94	-0.05
76	SLU 67	-563	-23	5056	9.14	-23.64	-0.04
76	SLU 68	-638	-23	5071	6.99	-26.65	-0.03
76	SLU 69	-455	-22	5043	12.39	-19.31	-0.05
76	SLU 70	-572	-23	5104	9.32	-24.01	-0.04
76	SLU 71	-452	-22	5018	12.29	-19.19	-0.05
76	SLU 72	-569	-23	5079	9.22	-23.89	-0.04
76	SLU 73	-661	-25	5517	7.97	-27.71	-0.03
76	SLU 74	-479	-23	5489	13.37	-20.37	-0.05
76	SLU 75	-595	-25	5550	10.29	-25.06	-0.04
76	SLU 76	-670	-25	5565	8.15	-28.08	-0.03
76	SLU 77	-488	-24	5537	13.55	-20.74	-0.05
76	SLU 78	-604	-25	5598	10.47	-25.43	-0.04
76	SLU 79	-485	-24	5511	13.45	-20.62	-0.05
76	SLU 80	-601	-25	5572	10.38	-25.32	-0.04
76	SLU 81	-481	-24	5627	13.59	-20.49	-0.05
76	SLU 82	-598	-25	5688	10.51	-25.19	-0.04
76	SLU 83	-490	-24	5675	13.77	-20.86	-0.05
76	SLU 84	-606	-25	5736	10.69	-25.56	-0.04
76	SLE RA 1	-328	-16	3690	8.93	-13.91	-0.03
76	SLE RA 2	-457	-17	3757	5.52	-19.13	-0.02
76	SLE RA 3	-336	-16	3739	9.12	-14.23	-0.03
76	SLE RA 4	-413	-17	3779	7.07	-17.36	-0.03
76	SLE RA 5	-463	-17	3790	5.64	-19.37	-0.02
76	SLE RA 6	-341	-16	3771	9.24	-14.48	-0.03
76	SLE RA 7	-419	-17	3812	7.19	-17.61	-0.03
76	SLE RA 8	-340	-16	3754	9.17	-14.4	-0.03
76	SLE RA 9	-417	-17	3795	7.12	-17.53	-0.03
76	SLE RA 10	-479	-18	4087	6.29	-20.08	-0.03
76	SLE RA 11	-357	-17	4068	9.89	-15.18	-0.04
76	SLE RA 12	-435	-18	4109	7.84	-18.31	-0.03
76	SLE RA 13	-485	-19	4119	6.41	-20.32	-0.03
76	SLE RA 14	-363	-18	4100	10.01	-15.43	-0.04
76	SLE RA 15	-441	-18	4141	7.96	-18.56	-0.03
76	SLE RA 16	-361	-17	4083	9.94	-15.35	-0.04
76	SLE RA 17	-439	-18	4124	7.89	-18.48	-0.03
76	SLE RA 18	-359	-18	4160	10.03	-15.27	-0.04
76	SLE RA 19	-436	-18	4201	7.98	-18.4	-0.03
76	SLE RA 20	-365	-18	4192	10.15	-15.51	-0.04
76	SLE RA 21	-442	-19	4233	8.1	-18.64	-0.03
76	SLE FR 1	-328	-16	3690	8.93	-13.91	-0.03
76	SLE FR 2	-354	-16	3703	8.25	-14.95	-0.03
76	SLE FR 3	-330	-16	3703	8.98	-14.01	-0.03
76	SLE FR 4	-363	-17	3844	8.58	-15.36	-0.03
76	SLE FR 5	-339	-16	3844	9.31	-14.41	-0.03
76	SLE FR 6	-343	-17	3925	9.48	-14.59	-0.04
76	SLE QP 1	-328	-16	3690	8.93	-13.91	-0.03
76	SLE QP 2	-337	-16	3831	9.26	-14.32	-0.03
76	SLD 1	363	-23	4256	-0.3	16.41	-0.03
76	SLD 2	363	-23	4256	-0.3	16.41	-0.03
76	SLD 3	533	-18	3787	9.54	23.51	-0.07
76	SLD 4	533	-18	3787	9.54	23.51	-0.07
76	SLD 5	-384	-25	4670	-8.53	-15.86	0.02
76	SLD 6	-384	-25	4670	-8.53	-15.86	0.02
76	SLD 7	181	-10	3106	24.27	7.79	-0.1
76	SLD 8	181	-10	3106	24.27	7.79	-0.1
76	SLD 9	-855	-23	4555	-5.74	-36.42	0.03
76	SLD 10	-855	-23	4555	-5.74	-36.42	0.03
76	SLD 11	-290	-7	2992	27.05	-12.77	-0.09
76	SLD 12	-290	-7	2992	27.05	-12.77	-0.09
76	SLD 13	-1207	-14	3874	8.99	-52.14	0
76	SLD 14	-1207	-14	3874	8.99	-52.14	0
76	SLD 15	-1038	-10	3405	18.82	-45.05	-0.04
76	SLD 16	-1038	-10	3405	18.82	-45.05	-0.04
76	SLV 1	1286	-32	4839	-14.44	56.93	-0.03
76	SLV 2	1286	-32	4839	-14.44	56.93	-0.03
76	SLV 3	1695	-21	3737	10.37	74.02	-0.11
76	SLV 4	1695	-21	3737	10.37	74.02	-0.11
76	SLV 5	-469	-37	5805	-35.48	-18.85	0.1
76	SLV 6	-469	-37	5805	-35.48	-18.85	0.1
76	SLV 7	892	-1	2131	47.22	38.1	-0.19



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
76	SLV 8	892	-1	2131	47.22	38.1	-0.19
76	SLV 9	-1566	-31	5531	-28.7	-66.73	0.12
76	SLV 10	-1566	-31	5531	-28.7	-66.73	0.12
76	SLV 11	-205	5	1857	54	-9.78	-0.17
76	SLV 12	-205	5	1857	54	-9.78	-0.17
76	SLV 13	-2369	-12	3925	8.15	-102.65	0.04
76	SLV 14	-2369	-12	3925	8.15	-102.65	0.04
76	SLV 15	-1961	-1	2823	32.96	-85.56	-0.04
76	SLV 16	-1961	-1	2823	32.96	-85.56	-0.04
77	SLU 1	-393	-27	3317	13.67	-14.73	-0.08
77	SLU 2	-565	-25	3328	4.71	-21.67	-0.05
77	SLU 3	-407	-28	3383	14.11	-15.26	-0.08
77	SLU 4	-510	-26	3389	8.73	-19.42	-0.07
77	SLU 5	-576	-25	3370	4.99	-22.07	-0.06
77	SLU 6	-417	-28	3426	14.39	-15.66	-0.08
77	SLU 7	-521	-27	3432	9.01	-19.82	-0.07
77	SLU 8	-414	-28	3403	14.23	-15.52	-0.08
77	SLU 9	-517	-27	3409	8.86	-19.69	-0.07
77	SLU 10	-608	-28	3793	6.53	-23.23	-0.07
77	SLU 11	-450	-31	3848	15.92	-16.82	-0.09
77	SLU 12	-554	-30	3854	10.55	-20.98	-0.08
77	SLU 13	-619	-29	3836	6.81	-23.62	-0.07
77	SLU 14	-461	-32	3891	16.2	-17.22	-0.09
77	SLU 15	-564	-31	3897	10.83	-21.38	-0.08
77	SLU 16	-457	-31	3869	16.05	-17.08	-0.09
77	SLU 17	-560	-30	3875	10.67	-21.25	-0.08
77	SLU 18	-455	-32	3982	16.26	-16.96	-0.09
77	SLU 19	-558	-31	3988	10.89	-21.12	-0.08
77	SLU 20	-465	-32	4025	16.55	-17.35	-0.09
77	SLU 21	-568	-31	4031	11.17	-21.52	-0.08
77	SLU 22	-434	-30	3725	15.44	-16.2	-0.09
77	SLU 23	-606	-28	3735	6.49	-23.14	-0.06
77	SLU 24	-448	-31	3790	15.88	-16.73	-0.09
77	SLU 25	-551	-30	3796	10.51	-20.9	-0.08
77	SLU 26	-617	-29	3778	6.77	-23.54	-0.07
77	SLU 27	-459	-32	3833	16.16	-17.13	-0.09
77	SLU 28	-562	-30	3839	10.79	-21.3	-0.08
77	SLU 29	-455	-31	3810	16.01	-17	-0.09
77	SLU 30	-558	-30	3817	10.63	-21.16	-0.08
77	SLU 31	-649	-32	4200	8.3	-24.7	-0.08
77	SLU 32	-491	-35	4256	17.7	-18.29	-0.1
77	SLU 33	-595	-34	4262	12.32	-22.46	-0.09
77	SLU 34	-660	-32	4243	8.58	-25.1	-0.08
77	SLU 35	-502	-35	4299	17.98	-18.69	-0.1
77	SLU 36	-605	-34	4305	12.6	-22.85	-0.09
77	SLU 37	-498	-35	4276	17.82	-18.56	-0.1
77	SLU 38	-601	-34	4282	12.45	-22.72	-0.09
77	SLU 39	-496	-35	4390	18.04	-18.43	-0.1
77	SLU 40	-599	-34	4396	12.66	-22.59	-0.09
77	SLU 41	-506	-36	4432	18.32	-18.83	-0.1
77	SLU 42	-609	-35	4439	12.94	-22.99	-0.09
77	SLU 43	-497	-33	4173	17.16	-18.64	-0.09
77	SLU 44	-669	-32	4183	8.2	-25.58	-0.07
77	SLU 45	-511	-34	4239	17.6	-19.17	-0.1
77	SLU 46	-614	-33	4245	12.22	-23.34	-0.08
77	SLU 47	-679	-32	4226	8.49	-25.98	-0.08
77	SLU 48	-521	-35	4282	17.88	-19.57	-0.1
77	SLU 49	-625	-34	4288	12.51	-23.74	-0.09
77	SLU 50	-518	-35	4259	17.73	-19.44	-0.1
77	SLU 51	-621	-33	4265	12.35	-23.6	-0.09
77	SLU 52	-712	-35	4649	10.02	-27.14	-0.08
77	SLU 53	-554	-38	4704	19.42	-20.73	-0.11
77	SLU 54	-657	-37	4710	14.04	-24.9	-0.1
77	SLU 55	-723	-36	4692	10.3	-27.54	-0.09
77	SLU 56	-565	-39	4747	19.7	-21.13	-0.11
77	SLU 57	-668	-37	4753	14.32	-25.29	-0.1
77	SLU 58	-561	-38	4724	19.54	-21	-0.11
77	SLU 59	-664	-37	4730	14.17	-25.16	-0.1
77	SLU 60	-559	-39	4838	19.76	-20.87	-0.11
77	SLU 61	-662	-38	4844	14.38	-25.03	-0.1
77	SLU 62	-569	-39	4881	20.04	-21.27	-0.11
77	SLU 63	-672	-38	4887	14.66	-25.43	-0.1
77	SLU 64	-538	-37	4580	18.94	-20.12	-0.1
77	SLU 65	-710	-35	4590	9.98	-27.06	-0.08
77	SLU 66	-552	-38	4646	19.37	-20.65	-0.11
77	SLU 67	-655	-37	4652	14	-24.81	-0.09
77	SLU 68	-720	-36	4633	10.26	-27.45	-0.09
77	SLU 69	-562	-38	4689	19.66	-21.05	-0.11
77	SLU 70	-666	-37	4695	14.28	-25.21	-0.1
77	SLU 71	-559	-38	4666	19.5	-20.91	-0.11
77	SLU 72	-662	-37	4672	14.12	-25.08	-0.1
77	SLU 73	-753	-39	5056	11.79	-28.62	-0.09
77	SLU 74	-595	-42	5111	21.19	-22.21	-0.12
77	SLU 75	-698	-40	5117	15.81	-26.37	-0.11
77	SLU 76	-764	-39	5099	12.07	-29.01	-0.1
77	SLU 77	-606	-42	5154	21.47	-22.6	-0.12
77	SLU 78	-709	-41	5160	16.09	-26.77	-0.11
77	SLU 79	-602	-42	5131	21.32	-22.47	-0.12
77	SLU 80	-705	-41	5138	15.94	-26.63	-0.11
77	SLU 81	-600	-42	5245	21.53	-22.34	-0.12



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
77	SLU 82	-703	-41	5251	16.16	-26.51	-0.11
77	SLU 83	-610	-43	5288	21.81	-22.74	-0.12
77	SLU 84	-713	-42	5294	16.44	-26.9	-0.11
77	SLE RA 1	-405	-28	3434	14.18	-15.15	-0.08
77	SLE RA 2	-520	-26	3441	8.2	-19.78	-0.06
77	SLE RA 3	-414	-28	3477	14.47	-15.5	-0.08
77	SLE RA 4	-483	-27	3482	10.88	-18.28	-0.07
77	SLE RA 5	-526	-27	3469	8.39	-20.04	-0.07
77	SLE RA 6	-421	-29	3506	14.66	-15.77	-0.08
77	SLE RA 7	-490	-28	3510	11.07	-18.55	-0.07
77	SLE RA 8	-419	-28	3491	14.55	-15.68	-0.08
77	SLE RA 9	-487	-28	3495	10.97	-18.46	-0.07
77	SLE RA 10	-548	-29	3751	9.41	-20.82	-0.07
77	SLE RA 11	-443	-31	3788	15.68	-16.54	-0.09
77	SLE RA 12	-512	-30	3792	12.09	-19.32	-0.08
77	SLE RA 13	-555	-29	3779	9.6	-21.08	-0.07
77	SLE RA 14	-450	-31	3816	15.87	-16.81	-0.09
77	SLE RA 15	-519	-30	3820	12.28	-19.58	-0.08
77	SLE RA 16	-447	-31	3801	15.76	-16.72	-0.09
77	SLE RA 17	-516	-30	3805	12.18	-19.5	-0.08
77	SLE RA 18	-446	-31	3877	15.91	-16.63	-0.09
77	SLE RA 19	-515	-30	3881	12.32	-19.41	-0.08
77	SLE RA 20	-453	-32	3906	16.09	-16.9	-0.09
77	SLE RA 21	-522	-31	3910	12.51	-19.68	-0.08
77	SLE FR 1	-405	-28	3434	14.18	-15.15	-0.08
77	SLE FR 2	-428	-27	3435	12.98	-16.08	-0.08
77	SLE FR 3	-408	-28	3445	14.25	-15.26	-0.08
77	SLE FR 4	-440	-28	3568	13.5	-16.52	-0.08
77	SLE FR 5	-420	-29	3578	14.77	-15.7	-0.08
77	SLE FR 6	-426	-29	3655	15.04	-15.89	-0.08
77	SLE QP 1	-405	-28	3434	14.18	-15.15	-0.08
77	SLE QP 2	-417	-29	3567	14.7	-15.6	-0.08
77	SLD 1	271	-28	3646	-1.11	14.79	-0.13
77	SLD 2	271	-28	3646	-1.11	14.79	-0.13
77	SLD 3	433	-15	3250	15.67	21.5	-0.08
77	SLD 4	433	-15	3250	15.67	21.5	-0.08
77	SLD 5	-456	-48	4191	-15.49	-16.66	-0.18
77	SLD 6	-456	-48	4191	-15.49	-16.66	-0.18
77	SLD 7	83	-5	2872	40.44	5.71	0
77	SLD 8	83	-5	2872	40.44	5.71	0
77	SLD 9	-918	-53	4262	-11.05	-36.91	-0.17
77	SLD 10	-918	-53	4262	-11.05	-36.91	-0.17
77	SLD 11	-379	-9	2943	44.89	-14.53	0.02
77	SLD 12	-379	-9	2943	44.89	-14.53	0.02
77	SLD 13	-1268	-42	3883	13.72	-52.69	-0.08
77	SLD 14	-1268	-42	3883	13.72	-52.69	-0.08
77	SLD 15	-1106	-29	3487	30.5	-45.98	-0.03
77	SLD 16	-1106	-29	3487	30.5	-45.98	-0.03
77	SLV 1	1181	-28	3747	-24.68	54.92	-0.21
77	SLV 2	1181	-28	3747	-24.68	54.92	-0.21
77	SLV 3	1566	4	2818	17.76	70.93	-0.07
77	SLV 4	1566	4	2818	17.76	70.93	-0.07
77	SLV 5	-522	-77	5030	-61.47	-18.73	-0.33
77	SLV 6	-522	-77	5030	-61.47	-18.73	-0.33
77	SLV 7	762	30	1933	79.97	34.65	0.13
77	SLV 8	762	30	1933	79.97	34.65	0.13
77	SLV 9	-1597	-87	5200	-50.58	-65.84	-0.29
77	SLV 10	-1597	-87	5200	-50.58	-65.84	-0.29
77	SLV 11	-312	20	2104	90.87	-12.46	0.17
77	SLV 12	-312	20	2104	90.87	-12.46	0.17
77	SLV 13	-2401	-62	4315	11.64	-102.12	-0.09
77	SLV 14	-2401	-62	4315	11.64	-102.12	-0.09
77	SLV 15	-2015	-30	3386	54.07	-86.11	0.05
77	SLV 16	-2015	-30	3386	54.07	-86.11	0.05
78	SLU 1	-470	-32	3077	16.24	-19.61	-0.11
78	SLU 2	-608	-25	3030	3.03	-25.39	-0.07
78	SLU 3	-486	-33	3135	16.76	-20.28	-0.11
78	SLU 4	-569	-29	3107	8.83	-23.75	-0.09
78	SLU 5	-620	-26	3068	3.36	-25.88	-0.07
78	SLU 6	-497	-34	3173	17.09	-20.77	-0.11
78	SLU 7	-581	-29	3145	9.16	-24.24	-0.09
78	SLU 8	-493	-33	3153	16.9	-20.59	-0.11
78	SLU 9	-576	-29	3125	8.98	-24.06	-0.09
78	SLU 10	-665	-29	3467	5.15	-27.8	-0.09
78	SLU 11	-543	-37	3571	18.87	-22.69	-0.13
78	SLU 12	-626	-33	3543	10.95	-26.16	-0.1
78	SLU 13	-677	-30	3505	5.48	-28.29	-0.09
78	SLU 14	-555	-38	3609	19.21	-23.18	-0.13
78	SLU 15	-638	-34	3581	11.28	-26.65	-0.11
78	SLU 16	-550	-37	3589	19.02	-23	-0.13
78	SLU 17	-633	-33	3561	11.09	-26.47	-0.11
78	SLU 18	-551	-38	3700	19.26	-23.05	-0.13
78	SLU 19	-635	-34	3672	11.34	-26.52	-0.11
78	SLU 20	-563	-39	3738	19.6	-23.54	-0.13
78	SLU 21	-646	-35	3710	11.67	-27.01	-0.11
78	SLU 22	-523	-36	3455	18.32	-21.86	-0.12
78	SLU 23	-662	-29	3408	5.11	-27.65	-0.09
78	SLU 24	-540	-37	3513	18.84	-22.53	-0.13
78	SLU 25	-623	-33	3485	10.91	-26	-0.1
78	SLU 26	-674	-30	3446	5.44	-28.14	-0.09



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
78	SLU 27	-551	-38	3551	19.17	-23.02	-0.13
78	SLU 28	-634	-34	3523	11.24	-26.49	-0.11
78	SLU 29	-547	-37	3531	18.98	-22.84	-0.13
78	SLU 30	-630	-33	3503	11.06	-26.31	-0.11
78	SLU 31	-719	-34	3844	7.23	-30.05	-0.1
78	SLU 32	-597	-41	3949	20.95	-24.94	-0.14
78	SLU 33	-680	-37	3921	13.03	-28.41	-0.12
78	SLU 34	-731	-34	3882	7.56	-30.54	-0.1
78	SLU 35	-608	-42	3987	21.29	-25.43	-0.14
78	SLU 36	-691	-38	3959	13.36	-28.9	-0.12
78	SLU 37	-604	-42	3967	21.1	-25.25	-0.14
78	SLU 38	-687	-38	3939	13.18	-28.72	-0.12
78	SLU 39	-605	-42	4078	21.34	-25.3	-0.14
78	SLU 40	-688	-38	4050	13.42	-28.77	-0.12
78	SLU 41	-617	-43	4116	21.68	-25.79	-0.15
78	SLU 42	-700	-39	4088	13.75	-29.26	-0.12
78	SLU 43	-592	-40	3870	20.4	-24.72	-0.14
78	SLU 44	-731	-33	3824	7.19	-30.51	-0.1
78	SLU 45	-608	-41	3928	20.91	-25.39	-0.14
78	SLU 46	-691	-37	3900	12.99	-28.86	-0.12
78	SLU 47	-743	-34	3862	7.52	-30.99	-0.1
78	SLU 48	-620	-42	3966	21.25	-25.88	-0.14
78	SLU 49	-703	-38	3938	13.32	-29.35	-0.12
78	SLU 50	-616	-41	3946	21.06	-25.7	-0.14
78	SLU 51	-699	-37	3918	13.14	-29.17	-0.12
78	SLU 52	-788	-37	4260	9.3	-32.91	-0.11
78	SLU 53	-665	-45	4365	23.03	-27.8	-0.15
78	SLU 54	-749	-41	4337	15.11	-31.27	-0.13
78	SLU 55	-800	-38	4298	9.64	-33.4	-0.12
78	SLU 56	-677	-46	4403	23.36	-28.29	-0.16
78	SLU 57	-760	-42	4375	15.44	-31.76	-0.13
78	SLU 58	-673	-46	4383	23.18	-28.11	-0.15
78	SLU 59	-756	-41	4355	15.25	-31.58	-0.13
78	SLU 60	-674	-46	4494	23.42	-28.16	-0.16
78	SLU 61	-757	-42	4466	15.5	-31.63	-0.14
78	SLU 62	-686	-47	4532	23.75	-28.65	-0.16
78	SLU 63	-769	-43	4504	15.83	-32.12	-0.14
78	SLU 64	-646	-44	4248	22.48	-26.97	-0.15
78	SLU 65	-785	-37	4202	9.27	-32.76	-0.11
78	SLU 66	-662	-45	4306	22.99	-27.64	-0.15
78	SLU 67	-745	-41	4278	15.07	-31.11	-0.13
78	SLU 68	-796	-38	4239	9.6	-33.25	-0.12
78	SLU 69	-674	-46	4344	23.33	-28.13	-0.16
78	SLU 70	-757	-42	4316	15.4	-31.6	-0.13
78	SLU 71	-669	-45	4324	23.14	-27.95	-0.15
78	SLU 72	-752	-41	4296	15.22	-31.42	-0.13
78	SLU 73	-842	-42	4638	11.38	-35.16	-0.13
78	SLU 74	-719	-49	4743	25.11	-30.05	-0.17
78	SLU 75	-802	-45	4715	17.19	-33.52	-0.15
78	SLU 76	-853	-42	4676	11.72	-35.65	-0.13
78	SLU 77	-731	-50	4781	25.44	-30.54	-0.17
78	SLU 78	-814	-46	4753	17.52	-34.01	-0.15
78	SLU 79	-726	-50	4761	25.26	-30.36	-0.17
78	SLU 80	-810	-46	4733	17.33	-33.83	-0.15
78	SLU 81	-728	-50	4872	25.5	-30.41	-0.17
78	SLU 82	-811	-46	4844	17.58	-33.88	-0.15
78	SLU 83	-739	-51	4910	25.83	-30.9	-0.17
78	SLU 84	-822	-47	4882	17.91	-34.37	-0.15
78	SLE RA 1	-485	-33	3185	16.83	-20.25	-0.11
78	SLE RA 2	-578	-28	3154	8.03	-24.11	-0.09
78	SLE RA 3	-496	-34	3223	17.18	-20.7	-0.11
78	SLE RA 4	-551	-31	3205	11.89	-23.01	-0.1
78	SLE RA 5	-585	-29	3179	8.25	-24.44	-0.09
78	SLE RA 6	-504	-34	3249	17.4	-21.03	-0.12
78	SLE RA 7	-559	-31	3230	12.12	-23.34	-0.1
78	SLE RA 8	-501	-34	3235	17.28	-20.91	-0.11
78	SLE RA 9	-556	-31	3217	11.99	-23.22	-0.1
78	SLE RA 10	-616	-31	3445	9.44	-25.71	-0.1
78	SLE RA 11	-534	-37	3514	18.59	-22.31	-0.12
78	SLE RA 12	-589	-34	3496	13.31	-24.62	-0.11
78	SLE RA 13	-623	-32	3470	9.66	-26.04	-0.1
78	SLE RA 14	-542	-37	3540	18.81	-22.63	-0.13
78	SLE RA 15	-597	-34	3521	13.53	-24.94	-0.11
78	SLE RA 16	-539	-37	3526	18.69	-22.51	-0.12
78	SLE RA 17	-594	-34	3508	13.4	-24.82	-0.11
78	SLE RA 18	-540	-37	3600	18.85	-22.55	-0.13
78	SLE RA 19	-595	-34	3582	13.57	-24.86	-0.11
78	SLE RA 20	-547	-38	3626	19.07	-22.87	-0.13
78	SLE RA 21	-603	-35	3607	13.79	-25.19	-0.11
78	SLE FR 1	-485	-33	3185	16.83	-20.25	-0.11
78	SLE FR 2	-504	-32	3179	15.07	-21.03	-0.11
78	SLE FR 3	-488	-33	3195	16.92	-20.38	-0.11
78	SLE FR 4	-520	-33	3303	15.68	-21.71	-0.11
78	SLE FR 5	-505	-34	3320	17.53	-21.07	-0.12
78	SLE FR 6	-512	-35	3393	17.84	-21.4	-0.12
78	SLE QP 1	-485	-33	3185	16.83	-20.25	-0.11
78	SLE QP 2	-501	-34	3309	17.44	-20.94	-0.12
78	SLD 1	182	-35	3335	-4.45	8.87	-0.12
78	SLD 2	182	-35	3335	-4.45	8.87	-0.12
78	SLD 3	339	-13	2996	19.18	15.58	-0.03



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
78	SLD 4	339	-13	2996	19.18	15.58	-0.03
78	SLD 5	-536	-67	3831	-24.97	-22.17	-0.25
78	SLD 6	-536	-67	3831	-24.97	-22.17	-0.25
78	SLD 7	-10	4	2701	53.8	0.19	0.04
78	SLD 8	-10	4	2701	53.8	0.19	0.04
78	SLD 9	-993	-73	3918	-18.92	-42.08	-0.28
78	SLD 10	-993	-73	3918	-18.92	-42.08	-0.28
78	SLD 11	-467	-2	2788	59.84	-19.71	0.02
78	SLD 12	-467	-2	2788	59.84	-19.71	0.02
78	SLD 13	-1342	-55	3623	15.7	-57.47	-0.2
78	SLD 14	-1342	-55	3623	15.7	-57.47	-0.2
78	SLD 15	-1184	-34	3284	39.32	-50.76	-0.11
78	SLD 16	-1184	-34	3284	39.32	-50.76	-0.11
78	SLV 1	1086	-36	3370	-37.3	48.35	-0.13
78	SLV 2	1086	-36	3370	-37.3	48.35	-0.13
78	SLV 3	1458	17	2573	22.59	64.2	0.09
78	SLV 4	1458	17	2573	22.59	64.2	0.09
78	SLV 5	-590	-116	4537	-89.82	-24.2	-0.46
78	SLV 6	-590	-116	4537	-89.82	-24.2	-0.46
78	SLV 7	651	62	1879	109.82	28.65	0.29
78	SLV 8	651	62	1879	109.82	28.65	0.29
78	SLV 9	-1654	-130	4740	-74.94	-70.53	-0.52
78	SLV 10	-1654	-130	4740	-74.94	-70.53	-0.52
78	SLV 11	-413	47	2082	124.69	-17.68	0.23
78	SLV 12	-413	47	2082	124.69	-17.68	0.23
78	SLV 13	-2461	-86	4046	12.28	-106.09	-0.32
78	SLV 14	-2461	-86	4046	12.28	-106.09	-0.32
78	SLV 15	-2088	-32	3249	72.17	-90.23	-0.1
78	SLV 16	-2088	-32	3249	72.17	-90.23	-0.1
79	SLU 1	-491	-32	2843	16.43	-19.46	-0.12
79	SLU 2	-583	-21	2771	-0.68	-23.31	-0.07
79	SLU 3	-508	-33	2894	16.96	-20.12	-0.13
79	SLU 4	-563	-26	2851	6.69	-22.43	-0.09
79	SLU 5	-595	-21	2805	-0.34	-23.8	-0.07
79	SLU 6	-520	-33	2927	17.29	-20.6	-0.13
79	SLU 7	-575	-27	2884	7.03	-22.91	-0.1
79	SLU 8	-515	-33	2910	17.1	-20.42	-0.13
79	SLU 9	-570	-26	2867	6.84	-22.74	-0.1
79	SLU 10	-647	-25	3177	1.4	-25.83	-0.09
79	SLU 11	-572	-37	3299	19.04	-22.63	-0.14
79	SLU 12	-627	-30	3256	8.77	-24.94	-0.11
79	SLU 13	-659	-25	3210	1.74	-26.31	-0.09
79	SLU 14	-584	-38	3333	19.38	-23.11	-0.15
79	SLU 15	-639	-31	3290	9.11	-25.43	-0.11
79	SLU 16	-579	-37	3315	19.19	-22.94	-0.14
79	SLU 17	-634	-31	3272	8.92	-25.25	-0.11
79	SLU 18	-583	-38	3422	19.41	-23.05	-0.15
79	SLU 19	-638	-31	3379	9.14	-25.36	-0.11
79	SLU 20	-595	-38	3455	19.74	-23.53	-0.15
79	SLU 21	-650	-32	3412	9.47	-25.85	-0.12
79	SLU 22	-550	-36	3191	18.5	-21.78	-0.14
79	SLU 23	-643	-25	3119	1.38	-25.64	-0.09
79	SLU 24	-567	-37	3241	19.02	-22.44	-0.14
79	SLU 25	-622	-30	3199	8.75	-24.75	-0.11
79	SLU 26	-655	-25	3152	1.72	-26.12	-0.09
79	SLU 27	-579	-37	3275	19.36	-22.92	-0.15
79	SLU 28	-634	-31	3232	9.09	-25.24	-0.11
79	SLU 29	-574	-37	3257	19.17	-22.75	-0.14
79	SLU 30	-630	-30	3214	8.9	-25.06	-0.11
79	SLU 31	-707	-29	3524	3.46	-28.15	-0.1
79	SLU 32	-631	-41	3647	21.1	-24.96	-0.16
79	SLU 33	-686	-34	3604	10.84	-27.27	-0.13
79	SLU 34	-719	-30	3558	3.8	-28.63	-0.1
79	SLU 35	-643	-42	3680	21.44	-25.44	-0.16
79	SLU 36	-698	-35	3637	11.17	-27.75	-0.13
79	SLU 37	-639	-41	3663	21.25	-25.26	-0.16
79	SLU 38	-694	-35	3620	10.98	-27.57	-0.13
79	SLU 39	-642	-42	3770	21.47	-25.38	-0.16
79	SLU 40	-697	-35	3727	11.2	-27.69	-0.13
79	SLU 41	-654	-43	3803	21.8	-25.86	-0.16
79	SLU 42	-709	-36	3760	11.54	-28.17	-0.13
79	SLU 43	-618	-40	3577	20.66	-24.5	-0.15
79	SLU 44	-710	-29	3505	3.54	-28.36	-0.1
79	SLU 45	-635	-41	3627	21.18	-25.16	-0.16
79	SLU 46	-690	-34	3585	10.91	-27.47	-0.13
79	SLU 47	-722	-29	3538	3.88	-28.84	-0.1
79	SLU 48	-647	-41	3661	21.52	-25.64	-0.16
79	SLU 49	-702	-35	3618	11.25	-27.95	-0.13
79	SLU 50	-642	-41	3643	21.33	-25.46	-0.16
79	SLU 51	-697	-34	3600	11.06	-27.78	-0.13
79	SLU 52	-774	-33	3910	5.62	-30.87	-0.12
79	SLU 53	-699	-45	4033	23.26	-27.67	-0.17
79	SLU 54	-754	-38	3990	12.99	-29.99	-0.14
79	SLU 55	-786	-34	3944	5.96	-31.35	-0.12
79	SLU 56	-711	-46	4066	23.6	-28.15	-0.18
79	SLU 57	-766	-39	4023	13.33	-30.47	-0.14
79	SLU 58	-706	-45	4049	23.41	-27.98	-0.18
79	SLU 59	-761	-39	4006	13.14	-30.29	-0.14
79	SLU 60	-710	-46	4156	23.63	-28.09	-0.18
79	SLU 61	-765	-39	4113	13.36	-30.41	-0.15



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
79	SLU 62	-722	-46	4189	23.96	-28.57	-0.18
79	SLU 63	-777	-40	4146	13.7	-30.89	-0.15
79	SLU 64	-677	-44	3924	22.72	-26.82	-0.17
79	SLU 65	-770	-33	3853	5.61	-30.68	-0.12
79	SLU 66	-694	-45	3975	23.24	-27.48	-0.17
79	SLU 67	-749	-38	3932	12.98	-29.79	-0.14
79	SLU 68	-782	-33	3886	5.94	-31.16	-0.12
79	SLU 69	-706	-46	4008	23.58	-27.96	-0.18
79	SLU 70	-761	-39	3966	13.31	-30.28	-0.14
79	SLU 71	-701	-45	3991	23.39	-27.79	-0.17
79	SLU 72	-757	-39	3948	13.12	-30.1	-0.14
79	SLU 73	-834	-37	4258	7.69	-33.19	-0.13
79	SLU 74	-758	-49	4381	25.33	-30	-0.19
79	SLU 75	-813	-43	4338	15.06	-32.31	-0.16
79	SLU 76	-846	-38	4291	8.02	-33.68	-0.14
79	SLU 77	-770	-50	4414	25.66	-30.48	-0.19
79	SLU 78	-825	-43	4371	15.39	-32.79	-0.16
79	SLU 79	-766	-49	4396	25.47	-30.3	-0.19
79	SLU 80	-821	-43	4353	15.2	-32.62	-0.16
79	SLU 81	-769	-50	4503	25.69	-30.42	-0.19
79	SLU 82	-824	-43	4460	15.42	-32.73	-0.16
79	SLU 83	-781	-51	4537	26.03	-30.9	-0.2
79	SLU 84	-836	-44	4494	15.76	-33.21	-0.16
79	SLE RA 1	-508	-33	2942	17.02	-20.12	-0.13
79	SLE RA 2	-570	-25	2895	5.61	-22.69	-0.09
79	SLE RA 3	-519	-34	2976	17.37	-20.56	-0.13
79	SLE RA 4	-556	-29	2948	10.53	-22.1	-0.11
79	SLE RA 5	-578	-26	2917	5.84	-23.01	-0.09
79	SLE RA 6	-527	-34	2998	17.6	-20.88	-0.13
79	SLE RA 7	-564	-30	2970	10.75	-22.42	-0.11
79	SLE RA 8	-524	-34	2987	17.47	-20.77	-0.13
79	SLE RA 9	-561	-29	2958	10.63	-22.31	-0.11
79	SLE RA 10	-612	-28	3165	7	-24.37	-0.1
79	SLE RA 11	-562	-36	3246	18.76	-22.24	-0.14
79	SLE RA 12	-599	-32	3218	11.92	-23.78	-0.12
79	SLE RA 13	-620	-29	3187	7.23	-24.69	-0.1
79	SLE RA 14	-570	-37	3269	18.98	-22.56	-0.14
79	SLE RA 15	-607	-32	3240	12.14	-24.1	-0.12
79	SLE RA 16	-567	-37	3257	18.86	-22.44	-0.14
79	SLE RA 17	-604	-32	3228	12.01	-23.98	-0.12
79	SLE RA 18	-569	-37	3328	19	-22.52	-0.14
79	SLE RA 19	-606	-32	3300	12.16	-24.06	-0.12
79	SLE RA 20	-577	-37	3351	19.23	-22.84	-0.14
79	SLE RA 21	-614	-33	3322	12.38	-24.38	-0.12
79	SLE FR 1	-508	-33	2942	17.02	-20.12	-0.13
79	SLE FR 2	-520	-31	2933	14.74	-20.64	-0.12
79	SLE FR 3	-511	-33	2951	17.11	-20.25	-0.13
79	SLE FR 4	-539	-33	3049	15.34	-21.36	-0.12
79	SLE FR 5	-530	-34	3067	17.71	-20.97	-0.13
79	SLE FR 6	-539	-35	3135	18.01	-21.32	-0.13
79	SLE QP 1	-508	-33	2942	17.02	-20.12	-0.13
79	SLE QP 2	-526	-34	3058	17.62	-20.84	-0.13
79	SLD 1	170	-35	2995	-9.33	9.54	-0.14
79	SLD 2	170	-35	2995	-9.33	9.54	-0.14
79	SLD 3	320	-8	2690	20.08	15.8	-0.02
79	SLD 4	320	-8	2690	20.08	15.8	-0.02
79	SLD 5	-547	-76	3501	-35.07	-21.23	-0.32
79	SLD 6	-547	-76	3501	-35.07	-21.23	-0.32
79	SLD 7	-44	16	2485	62.96	-0.35	0.09
79	SLD 8	-44	16	2485	62.96	-0.35	0.09
79	SLD 9	-1009	-84	3631	-27.72	-41.33	-0.35
79	SLD 10	-1009	-84	3631	-27.72	-41.33	-0.35
79	SLD 11	-506	8	2615	70.3	-20.46	0.06
79	SLD 12	-506	8	2615	70.3	-20.46	0.06
79	SLD 13	-1373	-61	3426	15.15	-57.49	-0.25
79	SLD 14	-1373	-61	3426	15.15	-57.49	-0.25
79	SLD 15	-1222	-33	3121	44.56	-51.23	-0.12
79	SLD 16	-1222	-33	3121	44.56	-51.23	-0.12
79	SLV 1	1092	-38	2916	-49.95	49.82	-0.16
79	SLV 2	1092	-38	2916	-49.95	49.82	-0.16
79	SLV 3	1447	31	2192	24.7	64.54	0.15
79	SLV 4	1447	31	2192	24.7	64.54	0.15
79	SLV 5	-579	-141	4114	-115.88	-21.96	-0.61
79	SLV 6	-579	-141	4114	-115.88	-21.96	-0.61
79	SLV 7	603	91	1700	132.97	27.09	0.42
79	SLV 8	603	91	1700	132.97	27.09	0.42
79	SLV 9	-1656	-159	4417	-97.73	-68.77	-0.69
79	SLV 10	-1656	-159	4417	-97.73	-68.77	-0.69
79	SLV 11	-474	73	2002	151.11	-19.73	0.35
79	SLV 12	-474	73	2002	151.11	-19.73	0.35
79	SLV 13	-2499	-100	3924	10.53	-106.22	-0.42
79	SLV 14	-2499	-100	3924	10.53	-106.22	-0.42
79	SLV 15	-2145	-30	3200	85.18	-91.51	-0.11
79	SLV 16	-2145	-30	3200	85.18	-91.51	-0.11
80	SLU 1	-506	-28	2633	14.95	-21.24	-0.11
80	SLU 2	-550	-14	2566	-5.24	-23.28	-0.05
80	SLU 3	-523	-29	2678	15.44	-21.94	-0.12
80	SLU 4	-549	-20	2637	3.32	-23.16	-0.08
80	SLU 5	-562	-14	2595	-4.93	-23.79	-0.05
80	SLU 6	-535	-29	2707	15.74	-22.46	-0.12



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
80	SLU 7	-561	-21	2667	3.63	-23.68	-0.08
80	SLU 8	-531	-29	2691	15.56	-22.27	-0.12
80	SLU 9	-557	-21	2651	3.45	-23.49	-0.08
80	SLU 10	-621	-17	2940	-3.43	-26.26	-0.06
80	SLU 11	-594	-33	3052	17.24	-24.92	-0.13
80	SLU 12	-620	-24	3012	5.13	-26.14	-0.09
80	SLU 13	-634	-18	2970	-3.13	-26.77	-0.06
80	SLU 14	-606	-33	3082	17.55	-25.44	-0.13
80	SLU 15	-633	-25	3041	5.43	-26.66	-0.09
80	SLU 16	-602	-33	3066	17.37	-25.25	-0.13
80	SLU 17	-628	-24	3026	5.26	-26.47	-0.09
80	SLU 18	-608	-33	3168	17.54	-25.5	-0.13
80	SLU 19	-634	-25	3128	5.42	-26.72	-0.09
80	SLU 20	-620	-34	3197	17.84	-26.02	-0.14
80	SLU 21	-647	-25	3157	5.73	-27.24	-0.1
80	SLU 22	-571	-32	2952	16.77	-23.95	-0.13
80	SLU 23	-615	-17	2885	-3.42	-25.99	-0.06
80	SLU 24	-588	-32	2997	17.25	-24.65	-0.13
80	SLU 25	-614	-24	2956	5.14	-25.87	-0.09
80	SLU 26	-627	-18	2914	-3.12	-26.5	-0.06
80	SLU 27	-600	-33	3026	17.56	-25.17	-0.13
80	SLU 28	-626	-24	2986	5.44	-26.39	-0.09
80	SLU 29	-596	-33	3010	17.38	-24.98	-0.13
80	SLU 30	-622	-24	2970	5.27	-26.2	-0.09
80	SLU 31	-686	-21	3259	-1.61	-28.97	-0.08
80	SLU 32	-659	-36	3371	19.06	-27.63	-0.15
80	SLU 33	-685	-28	3331	6.95	-28.85	-0.11
80	SLU 34	-698	-21	3289	-1.31	-29.48	-0.08
80	SLU 35	-671	-37	3400	19.37	-28.15	-0.15
80	SLU 36	-697	-28	3360	7.25	-29.37	-0.11
80	SLU 37	-667	-36	3385	19.19	-27.96	-0.15
80	SLU 38	-693	-28	3345	7.07	-29.18	-0.11
80	SLU 39	-673	-37	3487	19.35	-28.21	-0.15
80	SLU 40	-699	-28	3447	7.24	-29.43	-0.11
80	SLU 41	-685	-37	3516	19.66	-28.73	-0.15
80	SLU 42	-711	-29	3476	7.54	-29.95	-0.11
80	SLU 43	-636	-35	3313	18.82	-26.69	-0.14
80	SLU 44	-680	-21	3246	-1.38	-28.72	-0.08
80	SLU 45	-653	-36	3358	19.3	-27.38	-0.15
80	SLU 46	-679	-27	3318	7.18	-28.61	-0.11
80	SLU 47	-692	-21	3276	-1.07	-29.23	-0.08
80	SLU 48	-665	-37	3388	19.6	-27.9	-0.15
80	SLU 49	-691	-28	3347	7.49	-29.12	-0.11
80	SLU 50	-660	-36	3372	19.43	-27.71	-0.15
80	SLU 51	-687	-28	3332	7.31	-28.93	-0.11
80	SLU 52	-751	-24	3621	0.43	-31.7	-0.09
80	SLU 53	-724	-40	3733	21.11	-30.37	-0.16
80	SLU 54	-750	-31	3693	8.99	-31.59	-0.12
80	SLU 55	-763	-25	3650	0.74	-32.22	-0.09
80	SLU 56	-736	-40	3762	21.41	-30.88	-0.16
80	SLU 57	-762	-32	3722	9.3	-32.1	-0.12
80	SLU 58	-732	-40	3746	21.23	-30.7	-0.16
80	SLU 59	-758	-31	3706	9.12	-31.92	-0.12
80	SLU 60	-738	-40	3848	21.4	-30.95	-0.16
80	SLU 61	-764	-32	3808	9.28	-32.17	-0.12
80	SLU 62	-750	-41	3878	21.7	-31.46	-0.17
80	SLU 63	-776	-32	3838	9.59	-32.68	-0.13
80	SLU 64	-701	-39	3632	20.63	-29.4	-0.16
80	SLU 65	-745	-24	3565	0.44	-31.43	-0.09
80	SLU 66	-717	-40	3677	21.12	-30.1	-0.16
80	SLU 67	-744	-31	3637	9	-31.32	-0.12
80	SLU 68	-757	-25	3595	0.75	-31.94	-0.09
80	SLU 69	-730	-40	3706	21.42	-30.61	-0.16
80	SLU 70	-756	-32	3666	9.31	-31.83	-0.12
80	SLU 71	-725	-40	3691	21.24	-30.42	-0.16
80	SLU 72	-751	-31	3651	9.13	-31.64	-0.12
80	SLU 73	-816	-28	3940	2.25	-34.41	-0.11
80	SLU 74	-789	-43	4052	22.92	-33.08	-0.18
80	SLU 75	-815	-35	4011	10.81	-34.3	-0.14
80	SLU 76	-828	-29	3969	2.56	-34.93	-0.11
80	SLU 77	-801	-44	4081	23.23	-33.59	-0.18
80	SLU 78	-827	-35	4041	11.11	-34.81	-0.14
80	SLU 79	-796	-44	4065	23.05	-33.41	-0.18
80	SLU 80	-823	-35	4025	10.94	-34.63	-0.14
80	SLU 81	-803	-44	4167	23.22	-33.66	-0.18
80	SLU 82	-829	-35	4127	11.1	-34.88	-0.14
80	SLU 83	-815	-45	4197	23.52	-34.17	-0.18
80	SLU 84	-841	-36	4156	11.41	-35.39	-0.14
80	SLE RA 1	-525	-29	2724	15.47	-22.02	-0.12
80	SLE RA 2	-554	-19	2679	2.01	-23.37	-0.07
80	SLE RA 3	-536	-30	2754	15.79	-22.48	-0.12
80	SLE RA 4	-553	-24	2727	7.72	-23.3	-0.09
80	SLE RA 5	-562	-20	2699	2.22	-23.72	-0.08
80	SLE RA 6	-544	-30	2773	16	-22.83	-0.12
80	SLE RA 7	-562	-24	2747	7.92	-23.64	-0.1
80	SLE RA 8	-541	-30	2763	15.88	-22.7	-0.12
80	SLE RA 9	-559	-24	2736	7.8	-23.52	-0.09
80	SLE RA 10	-602	-22	2929	3.22	-25.36	-0.08
80	SLE RA 11	-583	-32	3004	17	-24.47	-0.13
80	SLE RA 12	-601	-26	2977	8.92	-25.28	-0.1



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
80	SLE RA 13	-610	-22	2948	3.42	-25.7	-0.08
80	SLE RA 14	-592	-32	3023	17.2	-24.81	-0.13
80	SLE RA 15	-609	-27	2996	9.13	-25.63	-0.1
80	SLE RA 16	-589	-32	3013	17.08	-24.69	-0.13
80	SLE RA 17	-606	-26	2986	9.01	-25.5	-0.1
80	SLE RA 18	-593	-32	3081	17.19	-24.86	-0.13
80	SLE RA 19	-610	-27	3054	9.12	-25.67	-0.11
80	SLE RA 20	-601	-33	3100	17.4	-25.2	-0.13
80	SLE RA 21	-618	-27	3073	9.32	-26.01	-0.11
80	SLE FR 1	-525	-29	2724	15.47	-22.02	-0.12
80	SLE FR 2	-531	-27	2715	12.78	-22.29	-0.11
80	SLE FR 3	-528	-29	2732	15.55	-22.15	-0.12
80	SLE FR 4	-551	-28	2822	13.3	-23.14	-0.11
80	SLE FR 5	-548	-30	2839	16.07	-23.01	-0.12
80	SLE FR 6	-559	-31	2902	16.33	-23.44	-0.12
80	SLE QP 1	-525	-29	2724	15.47	-22.02	-0.12
80	SLE QP 2	-545	-30	2831	15.99	-22.87	-0.12
80	SLD 1	178	-32	2714	-14.54	8.65	-0.13
80	SLD 2	178	-32	2714	-14.54	8.65	-0.13
80	SLD 3	326	0	2416	19.05	14.94	0.01
80	SLD 4	326	0	2416	19.05	14.94	0.01
80	SLD 5	-554	-79	3249	-44.12	-22.96	-0.34
80	SLD 6	-554	-79	3249	-44.12	-22.96	-0.34
80	SLD 7	-58	27	2253	67.86	-1.98	0.13
80	SLD 8	-58	27	2253	67.86	-1.98	0.13
80	SLD 9	-1032	-87	3409	-35.88	-43.76	-0.38
80	SLD 10	-1032	-87	3409	-35.88	-43.76	-0.38
80	SLD 11	-537	19	2413	76.1	-22.78	0.1
80	SLD 12	-537	19	2413	76.1	-22.78	0.1
80	SLD 13	-1417	-60	3246	12.93	-60.68	-0.25
80	SLD 14	-1417	-60	3246	12.93	-60.68	-0.25
80	SLD 15	-1268	-28	2948	46.52	-54.39	-0.11
80	SLD 16	-1268	-28	2948	46.52	-54.39	-0.11
80	SLV 1	1136	-36	2570	-60.72	50.46	-0.16
80	SLV 2	1136	-36	2570	-60.72	50.46	-0.16
80	SLV 3	1486	44	1847	24.64	65.24	0.2
80	SLV 4	1486	44	1847	24.64	65.24	0.2
80	SLV 5	-571	-154	3849	-136.48	-23.28	-0.67
80	SLV 6	-571	-154	3849	-136.48	-23.28	-0.67
80	SLV 7	594	114	1439	148.04	25.97	0.52
80	SLV 8	594	114	1439	148.04	25.97	0.52
80	SLV 9	-1685	-174	4223	-116.07	-71.71	-0.76
80	SLV 10	-1685	-174	4223	-116.07	-71.71	-0.76
80	SLV 11	-519	93	1813	168.46	-22.46	0.43
80	SLV 12	-519	93	1813	168.46	-22.46	0.43
80	SLV 13	-2576	-104	3815	7.34	-110.97	-0.45
80	SLV 14	-2576	-104	3815	7.34	-110.97	-0.45
80	SLV 15	-2227	-24	3092	92.69	-96.2	-0.09
80	SLV 16	-2227	-24	3092	92.69	-96.2	-0.09
81	SLU 1	-470	-23	2455	12.81	-19.24	-0.09
81	SLU 2	-466	-6	2414	-9.35	-19.13	-0.02
81	SLU 3	-486	-24	2495	13.23	-19.87	-0.09
81	SLU 4	-483	-14	2470	-0.07	-19.81	-0.05
81	SLU 5	-477	-7	2440	-9.09	-19.6	-0.02
81	SLU 6	-497	-24	2521	13.49	-20.35	-0.09
81	SLU 7	-494	-14	2496	0.19	-20.28	-0.05
81	SLU 8	-493	-24	2507	13.33	-20.19	-0.09
81	SLU 9	-491	-14	2482	0.04	-20.12	-0.05
81	SLU 10	-536	-9	2759	-7.9	-21.99	-0.03
81	SLU 11	-556	-27	2840	14.68	-22.74	-0.1
81	SLU 12	-553	-17	2815	1.38	-22.67	-0.06
81	SLU 13	-548	-10	2785	-7.64	-22.47	-0.03
81	SLU 14	-567	-27	2866	14.94	-23.21	-0.1
81	SLU 15	-565	-17	2841	1.64	-23.14	-0.06
81	SLU 16	-564	-27	2852	14.78	-23.05	-0.1
81	SLU 17	-561	-17	2827	1.48	-22.99	-0.06
81	SLU 18	-571	-27	2948	14.88	-23.33	-0.1
81	SLU 19	-568	-17	2923	1.58	-23.27	-0.06
81	SLU 20	-582	-28	2974	15.14	-23.81	-0.1
81	SLU 21	-580	-18	2949	1.84	-23.74	-0.06
81	SLU 22	-533	-26	2747	14.3	-21.8	-0.1
81	SLU 23	-529	-9	2707	-7.86	-21.69	-0.03
81	SLU 24	-548	-27	2787	14.72	-22.43	-0.1
81	SLU 25	-546	-17	2763	1.42	-22.36	-0.06
81	SLU 26	-540	-10	2732	-7.6	-22.16	-0.03
81	SLU 27	-560	-27	2813	14.98	-22.9	-0.1
81	SLU 28	-557	-17	2789	1.68	-22.84	-0.06
81	SLU 29	-556	-27	2799	14.82	-22.75	-0.1
81	SLU 30	-553	-17	2775	1.52	-22.68	-0.06
81	SLU 31	-599	-12	3052	-6.42	-24.55	-0.04
81	SLU 32	-619	-29	3132	16.16	-25.29	-0.11
81	SLU 33	-616	-20	3108	2.87	-25.23	-0.07
81	SLU 34	-610	-13	3078	-6.16	-25.02	-0.04
81	SLU 35	-630	-30	3158	16.42	-25.77	-0.11
81	SLU 36	-628	-20	3134	3.13	-25.7	-0.07
81	SLU 37	-627	-30	3144	16.27	-25.61	-0.11
81	SLU 38	-624	-20	3120	2.97	-25.54	-0.07
81	SLU 39	-634	-30	3240	16.37	-25.89	-0.11
81	SLU 40	-631	-20	3216	3.07	-25.82	-0.07
81	SLU 41	-645	-30	3266	16.63	-26.36	-0.11



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
81	SLU 42	-642	-20	3242	3.33	-26.3	-0.08
81	SLU 43	-590	-29	3091	16.15	-24.14	-0.11
81	SLU 44	-585	-12	3050	-6.02	-24.02	-0.04
81	SLU 45	-605	-30	3131	16.56	-24.77	-0.11
81	SLU 46	-602	-20	3107	3.27	-24.7	-0.07
81	SLU 47	-597	-13	3076	-5.76	-24.5	-0.05
81	SLU 48	-617	-30	3157	16.82	-25.24	-0.11
81	SLU 49	-614	-20	3132	3.53	-25.18	-0.07
81	SLU 50	-613	-30	3143	16.67	-25.09	-0.11
81	SLU 51	-610	-20	3118	3.37	-25.02	-0.07
81	SLU 52	-656	-15	3395	-4.57	-26.89	-0.05
81	SLU 53	-676	-33	3476	18.01	-27.63	-0.12
81	SLU 54	-673	-23	3452	4.71	-27.57	-0.08
81	SLU 55	-667	-16	3421	-4.31	-27.36	-0.06
81	SLU 56	-687	-33	3502	18.27	-28.11	-0.12
81	SLU 57	-684	-23	3478	4.97	-28.04	-0.09
81	SLU 58	-683	-33	3488	18.11	-27.95	-0.12
81	SLU 59	-680	-23	3463	4.82	-27.88	-0.08
81	SLU 60	-690	-33	3584	18.21	-28.23	-0.12
81	SLU 61	-688	-23	3560	4.91	-28.16	-0.09
81	SLU 62	-702	-33	3610	18.47	-28.7	-0.13
81	SLU 63	-699	-24	3586	5.17	-28.64	-0.09
81	SLU 64	-653	-32	3384	17.63	-26.69	-0.12
81	SLU 65	-648	-15	3343	-4.53	-26.58	-0.05
81	SLU 66	-668	-33	3424	18.05	-27.32	-0.12
81	SLU 67	-665	-23	3399	4.75	-27.26	-0.08
81	SLU 68	-660	-16	3369	-4.27	-27.06	-0.06
81	SLU 69	-679	-33	3449	18.31	-27.8	-0.12
81	SLU 70	-677	-23	3425	5.01	-27.73	-0.09
81	SLU 71	-676	-33	3435	18.15	-27.64	-0.12
81	SLU 72	-673	-23	3411	4.86	-27.58	-0.08
81	SLU 73	-718	-18	3688	-3.08	-29.45	-0.07
81	SLU 74	-738	-35	3769	19.5	-30.19	-0.13
81	SLU 75	-736	-25	3744	6.2	-30.12	-0.09
81	SLU 76	-730	-19	3714	-2.82	-29.92	-0.07
81	SLU 77	-750	-36	3795	19.76	-30.66	-0.14
81	SLU 78	-747	-26	3770	6.46	-30.6	-0.1
81	SLU 79	-746	-36	3780	19.6	-30.51	-0.13
81	SLU 80	-743	-26	3756	6.3	-30.44	-0.1
81	SLU 81	-753	-36	3877	19.7	-30.78	-0.14
81	SLU 82	-750	-26	3852	6.4	-30.72	-0.1
81	SLU 83	-765	-36	3903	19.96	-31.26	-0.14
81	SLU 84	-762	-26	3878	6.66	-31.19	-0.1
81	SLE RA 1	-488	-24	2538	13.24	-19.97	-0.09
81	SLE RA 2	-485	-13	2511	-1.54	-19.9	-0.05
81	SLE RA 3	-498	-24	2565	13.52	-20.39	-0.09
81	SLE RA 4	-497	-18	2549	4.65	-20.35	-0.07
81	SLE RA 5	-493	-13	2528	-1.36	-20.21	-0.05
81	SLE RA 6	-506	-25	2582	13.69	-20.71	-0.09
81	SLE RA 7	-504	-18	2566	4.82	-20.66	-0.07
81	SLE RA 8	-504	-24	2573	13.58	-20.6	-0.09
81	SLE RA 9	-502	-18	2557	4.72	-20.56	-0.07
81	SLE RA 10	-532	-15	2741	-0.57	-21.81	-0.05
81	SLE RA 11	-545	-26	2795	14.48	-22.3	-0.1
81	SLE RA 12	-544	-20	2779	5.61	-22.26	-0.07
81	SLE RA 13	-540	-15	2759	-0.4	-22.12	-0.05
81	SLE RA 14	-553	-27	2812	14.65	-22.62	-0.1
81	SLE RA 15	-551	-20	2796	5.79	-22.57	-0.07
81	SLE RA 16	-550	-26	2803	14.55	-22.51	-0.1
81	SLE RA 17	-549	-20	2787	5.68	-22.47	-0.07
81	SLE RA 18	-555	-27	2867	14.61	-22.7	-0.1
81	SLE RA 19	-553	-20	2851	5.75	-22.65	-0.07
81	SLE RA 20	-563	-27	2884	14.79	-23.02	-0.1
81	SLE RA 21	-561	-20	2868	5.92	-22.97	-0.08
81	SLE FR 1	-488	-24	2538	13.24	-19.97	-0.09
81	SLE FR 2	-488	-22	2533	10.28	-19.96	-0.08
81	SLE FR 3	-491	-24	2545	13.31	-20.1	-0.09
81	SLE FR 4	-508	-22	2632	10.7	-20.77	-0.08
81	SLE FR 5	-511	-25	2644	13.72	-20.92	-0.09
81	SLE FR 6	-522	-25	2703	13.93	-21.33	-0.09
81	SLE QP 1	-488	-24	2538	13.24	-19.97	-0.09
81	SLE QP 2	-508	-25	2637	13.65	-20.79	-0.09
81	SLD 1	239	7	2517	-18.84	11.37	0.03
81	SLD 2	239	7	2517	-18.84	11.37	0.03
81	SLD 3	384	-27	2204	17.09	17.43	-0.1
81	SLD 4	384	-27	2204	17.09	17.43	-0.1
81	SLD 5	-504	36	3076	-50.58	-20.34	0.14
81	SLD 6	-504	36	3076	-50.58	-20.34	0.14
81	SLD 7	-21	-77	2033	69.16	-0.12	-0.3
81	SLD 8	-21	-77	2033	69.16	-0.12	-0.3
81	SLD 9	-996	28	3242	-41.86	-41.46	0.11
81	SLD 10	-996	28	3242	-41.86	-41.46	0.11
81	SLD 11	-513	-85	2199	77.88	-21.24	-0.33
81	SLD 12	-513	-85	2199	77.88	-21.24	-0.33
81	SLD 13	-1401	-22	3071	10.22	-59.01	-0.08
81	SLD 14	-1401	-22	3071	10.22	-59.01	-0.08
81	SLD 15	-1256	-56	2758	46.14	-52.94	-0.21
81	SLD 16	-1256	-56	2758	46.14	-52.94	-0.21
81	SLV 1	1229	54	2372	-68.09	53.98	0.21
81	SLV 2	1229	54	2372	-68.09	53.98	0.21



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
81	SLV 3	1572	-32	1602	23.25	68.31	-0.12
81	SLV 4	1572	-32	1602	23.25	68.31	-0.12
81	SLV 5	-507	129	3727	-149.39	-20.09	0.5
81	SLV 6	-507	129	3727	-149.39	-20.09	0.5
81	SLV 7	636	-157	1158	155.05	27.67	-0.61
81	SLV 8	636	-157	1158	155.05	27.67	-0.61
81	SLV 9	-1653	107	4117	-127.75	-69.25	0.42
81	SLV 10	-1653	107	4117	-127.75	-69.25	0.42
81	SLV 11	-509	-178	1548	176.69	-21.48	-0.69
81	SLV 12	-509	-178	1548	176.69	-21.48	-0.69
81	SLV 13	-2589	-17	3673	4.05	-109.88	-0.06
81	SLV 14	-2589	-17	3673	4.05	-109.88	-0.06
81	SLV 15	-2246	-103	2902	95.39	-95.55	-0.4
81	SLV 16	-2246	-103	2902	95.39	-95.55	-0.4
82	SLU 1	-393	-19	2358	11.04	-16.94	-0.06
82	SLU 2	-352	-2	2350	-11.8	-15.51	-0.01
82	SLU 3	-406	-20	2396	11.4	-17.5	-0.07
82	SLU 4	-381	-9	2391	-2.3	-16.64	-0.03
82	SLU 5	-362	-2	2374	-11.58	-15.94	-0.01
82	SLU 6	-416	-20	2419	11.62	-17.94	-0.07
82	SLU 7	-392	-10	2415	-2.08	-17.07	-0.03
82	SLU 8	-413	-20	2406	11.48	-17.81	-0.07
82	SLU 9	-389	-9	2401	-2.22	-16.95	-0.03
82	SLU 10	-415	-4	2676	-10.66	-18.18	-0.02
82	SLU 11	-469	-22	2722	12.55	-20.17	-0.07
82	SLU 12	-444	-11	2717	-1.16	-19.31	-0.04
82	SLU 13	-425	-4	2700	-10.43	-18.61	-0.02
82	SLU 14	-479	-22	2745	12.77	-20.6	-0.07
82	SLU 15	-454	-12	2740	-0.93	-19.74	-0.04
82	SLU 16	-476	-22	2732	12.63	-20.48	-0.07
82	SLU 17	-452	-12	2727	-1.07	-19.62	-0.04
82	SLU 18	-483	-22	2824	12.68	-20.75	-0.07
82	SLU 19	-458	-12	2819	-1.03	-19.89	-0.04
82	SLU 20	-493	-23	2848	12.9	-21.19	-0.07
82	SLU 21	-468	-12	2843	-0.8	-20.33	-0.04
82	SLU 22	-448	-21	2634	12.25	-19.28	-0.07
82	SLU 23	-407	-4	2627	-10.59	-17.85	-0.02
82	SLU 24	-461	-22	2672	12.61	-19.84	-0.07
82	SLU 25	-436	-11	2667	-1.09	-18.98	-0.04
82	SLU 26	-417	-4	2650	-10.37	-18.28	-0.02
82	SLU 27	-471	-22	2695	12.84	-20.27	-0.07
82	SLU 28	-446	-12	2691	-0.87	-19.41	-0.04
82	SLU 29	-468	-22	2682	12.7	-20.15	-0.07
82	SLU 30	-444	-12	2677	-1.01	-19.29	-0.04
82	SLU 31	-470	-6	2952	-9.44	-20.51	-0.02
82	SLU 32	-524	-24	2998	13.76	-22.5	-0.08
82	SLU 33	-499	-14	2993	0.06	-21.64	-0.05
82	SLU 34	-480	-6	2976	-9.22	-20.95	-0.03
82	SLU 35	-534	-25	3021	13.99	-22.94	-0.08
82	SLU 36	-509	-14	3017	0.28	-22.08	-0.05
82	SLU 37	-531	-24	3008	13.84	-22.81	-0.08
82	SLU 38	-506	-14	3003	0.14	-21.95	-0.05
82	SLU 39	-537	-24	3100	13.89	-23.09	-0.08
82	SLU 40	-513	-14	3095	0.19	-22.23	-0.05
82	SLU 41	-548	-25	3124	14.11	-23.52	-0.08
82	SLU 42	-523	-14	3119	0.41	-22.66	-0.05
82	SLU 43	-492	-24	2971	13.93	-21.22	-0.08
82	SLU 44	-451	-7	2963	-8.91	-19.79	-0.03
82	SLU 45	-505	-25	3009	14.3	-21.78	-0.08
82	SLU 46	-481	-14	3004	0.59	-20.92	-0.05
82	SLU 47	-461	-7	2987	-8.69	-20.22	-0.03
82	SLU 48	-515	-25	3032	14.52	-22.22	-0.08
82	SLU 49	-491	-15	3028	0.81	-21.36	-0.05
82	SLU 50	-512	-25	3019	14.38	-22.09	-0.08
82	SLU 51	-488	-14	3014	0.67	-21.23	-0.05
82	SLU 52	-514	-9	3289	-7.76	-22.46	-0.03
82	SLU 53	-568	-27	3334	15.44	-24.45	-0.09
82	SLU 54	-543	-16	3330	1.74	-23.59	-0.06
82	SLU 55	-524	-9	3313	-7.54	-22.89	-0.03
82	SLU 56	-578	-27	3358	15.67	-24.88	-0.09
82	SLU 57	-553	-17	3353	1.96	-24.02	-0.06
82	SLU 58	-575	-27	3345	15.53	-24.76	-0.09
82	SLU 59	-551	-16	3340	1.82	-23.9	-0.06
82	SLU 60	-582	-27	3437	15.57	-25.03	-0.09
82	SLU 61	-557	-17	3432	1.87	-24.17	-0.06
82	SLU 62	-592	-28	3460	15.79	-25.47	-0.09
82	SLU 63	-567	-17	3456	2.09	-24.61	-0.06
82	SLU 64	-547	-26	3247	15.15	-23.56	-0.09
82	SLU 65	-506	-9	3239	-7.69	-22.13	-0.03
82	SLU 66	-560	-27	3285	15.51	-24.12	-0.09
82	SLU 67	-535	-16	3280	1.81	-23.26	-0.06
82	SLU 68	-516	-9	3263	-7.47	-22.56	-0.03
82	SLU 69	-570	-27	3308	15.73	-24.55	-0.09
82	SLU 70	-546	-17	3304	2.03	-23.69	-0.06
82	SLU 71	-567	-27	3295	15.59	-24.43	-0.09
82	SLU 72	-543	-17	3290	1.89	-23.57	-0.06
82	SLU 73	-569	-11	3565	-6.55	-24.79	-0.04
82	SLU 74	-623	-29	3610	16.66	-26.79	-0.1
82	SLU 75	-598	-19	3606	2.95	-25.92	-0.06
82	SLU 76	-579	-11	3589	-6.32	-25.23	-0.04



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
82	SLU 77	-633	-29	3634	16.88	-27.22	-0.1
82	SLU 78	-608	-19	3629	3.18	-26.36	-0.07
82	SLU 79	-630	-29	3621	16.74	-27.1	-0.1
82	SLU 80	-605	-19	3616	3.04	-26.24	-0.06
82	SLU 81	-637	-29	3713	16.79	-27.37	-0.1
82	SLU 82	-612	-19	3708	3.08	-26.51	-0.07
82	SLU 83	-647	-30	3736	17.01	-27.8	-0.1
82	SLU 84	-622	-19	3732	3.3	-26.94	-0.07
82	SLE RA 1	-409	-20	2437	11.38	-17.61	-0.07
82	SLE RA 2	-381	-8	2432	-3.84	-16.65	-0.03
82	SLE RA 3	-417	-20	2462	11.63	-17.98	-0.07
82	SLE RA 4	-401	-13	2459	2.49	-17.41	-0.04
82	SLE RA 5	-388	-8	2448	-3.69	-16.94	-0.03
82	SLE RA 6	-424	-20	2478	11.77	-18.27	-0.07
82	SLE RA 7	-408	-13	2475	2.64	-17.7	-0.05
82	SLE RA 8	-422	-20	2469	11.68	-18.19	-0.07
82	SLE RA 9	-406	-13	2466	2.54	-17.62	-0.05
82	SLE RA 10	-423	-10	2649	-3.08	-18.43	-0.03
82	SLE RA 11	-459	-22	2679	12.39	-19.76	-0.07
82	SLE RA 12	-443	-15	2676	3.26	-19.19	-0.05
82	SLE RA 13	-430	-10	2665	-2.93	-18.72	-0.04
82	SLE RA 14	-466	-22	2695	12.54	-20.05	-0.07
82	SLE RA 15	-450	-15	2692	3.4	-19.48	-0.05
82	SLE RA 16	-464	-22	2686	12.45	-19.97	-0.07
82	SLE RA 17	-448	-15	2683	3.31	-19.39	-0.05
82	SLE RA 18	-468	-22	2748	12.48	-20.15	-0.07
82	SLE RA 19	-452	-15	2744	3.34	-19.58	-0.05
82	SLE RA 20	-475	-22	2763	12.63	-20.44	-0.07
82	SLE RA 21	-459	-15	2760	3.49	-19.87	-0.05
82	SLE FR 1	-409	-20	2437	11.38	-17.61	-0.07
82	SLE FR 2	-403	-17	2436	8.34	-17.42	-0.06
82	SLE FR 3	-411	-20	2444	11.44	-17.73	-0.07
82	SLE FR 4	-421	-18	2529	8.67	-18.18	-0.06
82	SLE FR 5	-429	-20	2537	11.77	-18.49	-0.07
82	SLE FR 6	-439	-21	2592	11.93	-18.88	-0.07
82	SLE QP 1	-409	-20	2437	11.38	-17.61	-0.07
82	SLE QP 2	-427	-20	2530	11.71	-18.37	-0.07
82	SLD 1	334	11	2439	-21.15	14.46	0.03
82	SLD 2	334	11	2439	-21.15	14.46	0.03
82	SLD 3	472	-23	2106	15.16	20.32	-0.07
82	SLD 4	472	-23	2106	15.16	20.32	-0.07
82	SLD 5	-408	41	3008	-53.22	-17.4	0.12
82	SLD 6	-408	41	3008	-53.22	-17.4	0.12
82	SLD 7	53	-73	1898	67.82	2.12	-0.23
82	SLD 8	53	-73	1898	67.82	2.12	-0.23
82	SLD 9	-906	32	3163	-44.4	-38.86	0.1
82	SLD 10	-906	32	3163	-44.4	-38.86	0.1
82	SLD 11	-445	-81	2052	76.65	-19.34	-0.26
82	SLD 12	-445	-81	2052	76.65	-19.34	-0.26
82	SLD 13	-1325	-18	2955	8.26	-57.06	-0.06
82	SLD 14	-1325	-18	2955	8.26	-57.06	-0.06
82	SLD 15	-1187	-52	2621	44.58	-51.21	-0.17
82	SLD 16	-1187	-52	2621	44.58	-51.21	-0.17
82	SLV 1	1340	58	2337	-71.03	57.93	0.18
82	SLV 2	1340	58	2337	-71.03	57.93	0.18
82	SLV 3	1670	-28	1509	21.34	71.85	-0.09
82	SLV 4	1670	-28	1509	21.34	71.85	-0.09
82	SLV 5	-396	134	3728	-153.19	-16.59	0.41
82	SLV 6	-396	134	3728	-153.19	-16.59	0.41
82	SLV 7	701	-153	969	154.69	29.8	-0.48
82	SLV 8	701	-153	969	154.69	29.8	-0.48
82	SLV 9	-1555	112	4092	-131.26	-66.54	0.34
82	SLV 10	-1555	112	4092	-131.26	-66.54	0.34
82	SLV 11	-458	-174	1333	176.62	-20.15	-0.55
82	SLV 12	-458	-174	1333	176.62	-20.15	-0.55
82	SLV 13	-2523	-13	3552	2.09	-108.59	-0.05
82	SLV 14	-2523	-13	3552	2.09	-108.59	-0.05
82	SLV 15	-2194	-99	2724	94.45	-94.67	-0.31
82	SLV 16	-2194	-99	2724	94.45	-94.67	-0.31
83	SLU 1	-260	-18	2402	10.27	-11.67	-0.04
83	SLU 2	-183	-1	2422	-11.86	-8.29	-0.01
83	SLU 3	-269	-18	2440	10.61	-12.05	-0.04
83	SLU 4	-222	-8	2453	-2.67	-10.03	-0.02
83	SLU 5	-190	-1	2446	-11.65	-8.62	-0.01
83	SLU 6	-276	-19	2464	10.81	-12.38	-0.05
83	SLU 7	-230	-9	2477	-2.46	-10.36	-0.03
83	SLU 8	-275	-19	2450	10.68	-12.32	-0.05
83	SLU 9	-229	-8	2462	-2.6	-10.3	-0.02
83	SLU 10	-229	-3	2748	-10.85	-10.34	-0.01
83	SLU 11	-315	-20	2766	11.62	-14.11	-0.05
83	SLU 12	-269	-10	2779	-1.66	-12.08	-0.03
83	SLU 13	-237	-3	2772	-10.64	-10.67	-0.02
83	SLU 14	-323	-21	2790	11.83	-14.44	-0.05
83	SLU 15	-276	-11	2803	-1.45	-12.41	-0.03
83	SLU 16	-322	-21	2776	11.69	-14.38	-0.05
83	SLU 17	-275	-10	2788	-1.59	-12.35	-0.03
83	SLU 18	-327	-21	2867	11.72	-14.6	-0.05
83	SLU 19	-280	-11	2880	-1.56	-12.57	-0.03
83	SLU 20	-334	-21	2891	11.92	-14.93	-0.05
83	SLU 21	-288	-11	2904	-1.36	-12.9	-0.03



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
83	SLU 22	-299	-20	2680	11.36	-13.39	-0.05
83	SLU 23	-221	-3	2700	-10.77	-10.01	-0.01
83	SLU 24	-307	-21	2718	11.7	-13.78	-0.05
83	SLU 25	-261	-10	2731	-1.58	-11.75	-0.03
83	SLU 26	-229	-3	2724	-10.56	-10.34	-0.02
83	SLU 27	-315	-21	2742	11.91	-14.1	-0.05
83	SLU 28	-269	-11	2755	-1.37	-12.08	-0.03
83	SLU 29	-314	-21	2728	11.77	-14.04	-0.05
83	SLU 30	-267	-10	2740	-1.51	-12.02	-0.03
83	SLU 31	-268	-5	3027	-9.75	-12.06	-0.02
83	SLU 32	-354	-23	3045	12.71	-15.83	-0.06
83	SLU 33	-308	-12	3057	-0.56	-13.8	-0.03
83	SLU 34	-276	-5	3050	-9.55	-12.39	-0.02
83	SLU 35	-362	-23	3068	12.92	-16.16	-0.06
83	SLU 36	-315	-13	3081	-0.36	-14.13	-0.04
83	SLU 37	-360	-23	3054	12.78	-16.1	-0.06
83	SLU 38	-314	-12	3066	-0.49	-14.07	-0.03
83	SLU 39	-365	-23	3146	12.81	-16.32	-0.06
83	SLU 40	-319	-13	3158	-0.47	-14.3	-0.04
83	SLU 41	-373	-23	3170	13.01	-16.65	-0.06
83	SLU 42	-327	-13	3182	-0.26	-14.62	-0.04
83	SLU 43	-324	-23	3027	12.98	-14.57	-0.05
83	SLU 44	-247	-6	3048	-9.15	-11.2	-0.02
83	SLU 45	-333	-23	3066	13.32	-14.96	-0.06
83	SLU 46	-287	-13	3078	0.04	-12.94	-0.04
83	SLU 47	-255	-6	3071	-8.95	-11.52	-0.02
83	SLU 48	-341	-23	3089	13.52	-15.29	-0.06
83	SLU 49	-294	-13	3102	0.24	-13.26	-0.04
83	SLU 50	-339	-23	3075	13.39	-15.23	-0.06
83	SLU 51	-293	-13	3087	0.11	-13.2	-0.04
83	SLU 52	-294	-8	3374	-8.14	-13.25	-0.03
83	SLU 53	-380	-25	3392	14.33	-17.02	-0.06
83	SLU 54	-334	-15	3404	1.05	-14.99	-0.04
83	SLU 55	-301	-8	3398	-7.93	-13.58	-0.03
83	SLU 56	-387	-25	3416	14.53	-17.35	-0.06
83	SLU 57	-341	-15	3428	1.26	-15.32	-0.04
83	SLU 58	-386	-25	3401	14.4	-17.29	-0.06
83	SLU 59	-340	-15	3413	1.12	-15.26	-0.04
83	SLU 60	-391	-25	3493	14.42	-17.51	-0.06
83	SLU 61	-345	-15	3505	1.15	-15.48	-0.04
83	SLU 62	-399	-26	3517	14.63	-17.84	-0.06
83	SLU 63	-352	-16	3529	1.35	-15.81	-0.04
83	SLU 64	-363	-25	3305	14.07	-16.3	-0.06
83	SLU 65	-286	-8	3326	-8.06	-12.92	-0.03
83	SLU 66	-372	-25	3344	14.41	-16.69	-0.06
83	SLU 67	-326	-15	3356	1.13	-14.66	-0.04
83	SLU 68	-294	-8	3350	-7.86	-13.25	-0.03
83	SLU 69	-380	-26	3368	14.61	-17.01	-0.06
83	SLU 70	-333	-15	3380	1.34	-14.99	-0.04
83	SLU 71	-378	-25	3353	14.48	-16.95	-0.06
83	SLU 72	-332	-15	3365	1.2	-14.93	-0.04
83	SLU 73	-333	-10	3652	-7.05	-14.97	-0.03
83	SLU 74	-419	-27	3670	15.42	-18.74	-0.07
83	SLU 75	-372	-17	3682	2.14	-16.71	-0.05
83	SLU 76	-340	-10	3676	-6.84	-15.3	-0.03
83	SLU 77	-426	-28	3694	15.62	-19.07	-0.07
83	SLU 78	-380	-17	3706	2.35	-17.04	-0.05
83	SLU 79	-425	-27	3679	15.49	-19.01	-0.07
83	SLU 80	-379	-17	3691	2.21	-16.98	-0.05
83	SLU 81	-430	-27	3771	15.51	-19.23	-0.07
83	SLU 82	-384	-17	3783	2.24	-17.2	-0.05
83	SLU 83	-438	-28	3795	15.72	-19.56	-0.07
83	SLU 84	-391	-18	3807	2.44	-17.53	-0.05
83	SLE RA 1	-271	-18	2481	10.58	-12.16	-0.05
83	SLE RA 2	-219	-7	2495	-4.17	-9.91	-0.02
83	SLE RA 3	-277	-19	2507	10.81	-12.42	-0.05
83	SLE RA 4	-246	-12	2515	1.96	-11.07	-0.03
83	SLE RA 5	-224	-7	2511	-4.03	-10.12	-0.02
83	SLE RA 6	-282	-19	2523	10.94	-12.64	-0.05
83	SLE RA 7	-251	-12	2531	2.09	-11.28	-0.03
83	SLE RA 8	-281	-19	2513	10.85	-12.6	-0.05
83	SLE RA 9	-250	-12	2521	2	-11.24	-0.03
83	SLE RA 10	-251	-8	2712	-3.5	-11.27	-0.03
83	SLE RA 11	-308	-20	2724	11.48	-13.79	-0.05
83	SLE RA 12	-277	-13	2733	2.63	-12.43	-0.04
83	SLE RA 13	-256	-9	2728	-3.36	-11.49	-0.03
83	SLE RA 14	-313	-20	2740	11.62	-14	-0.05
83	SLE RA 15	-282	-14	2749	2.77	-12.65	-0.04
83	SLE RA 16	-312	-20	2730	11.53	-13.96	-0.05
83	SLE RA 17	-281	-13	2739	2.68	-12.61	-0.04
83	SLE RA 18	-315	-20	2792	11.55	-14.11	-0.05
83	SLE RA 19	-285	-14	2800	2.69	-12.76	-0.04
83	SLE RA 20	-320	-21	2808	11.68	-14.33	-0.05
83	SLE RA 21	-290	-14	2816	2.83	-12.98	-0.04
83	SLE FR 1	-271	-18	2481	10.58	-12.16	-0.05
83	SLE FR 2	-261	-16	2484	7.63	-11.71	-0.04
83	SLE FR 3	-273	-19	2488	10.64	-12.25	-0.05
83	SLE FR 4	-274	-17	2577	7.92	-12.29	-0.04
83	SLE FR 5	-286	-19	2581	10.93	-12.83	-0.05
83	SLE FR 6	-293	-19	2636	11.06	-13.14	-0.05



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
83	SLE QP 1	-271	-18	2481	10.58	-12.16	-0.05
83	SLE QP 2	-284	-19	2574	10.87	-12.74	-0.05
83	SLD 1	576	12	2501	-20.91	24.17	0.02
83	SLD 2	576	12	2501	-20.91	24.17	0.02
83	SLD 3	446	-21	2152	13.88	18.49	-0.05
83	SLD 4	446	-21	2152	13.88	18.49	-0.05
83	SLD 5	170	39	3081	-51.44	6.94	0.07
83	SLD 6	170	39	3081	-51.44	6.94	0.07
83	SLD 7	-262	-69	1919	64.55	-11.99	-0.15
83	SLD 8	-262	-69	1919	64.55	-11.99	-0.15
83	SLD 9	-307	31	3230	-42.81	-13.5	0.05
83	SLD 10	-307	31	3230	-42.81	-13.5	0.05
83	SLD 11	-739	-78	2067	73.18	-32.43	-0.17
83	SLD 12	-739	-78	2067	73.18	-32.43	-0.17
83	SLD 13	-1015	-17	2996	7.86	-43.98	-0.04
83	SLD 14	-1015	-17	2996	7.86	-43.98	-0.04
83	SLD 15	-1144	-50	2648	42.65	-49.66	-0.11
83	SLD 16	-1144	-50	2648	42.65	-49.66	-0.11
83	SLV 1	1722	57	2421	-69.11	73.42	0.11
83	SLV 2	1722	57	2421	-69.11	73.42	0.11
83	SLV 3	1410	-25	1556	19.4	59.7	-0.06
83	SLV 4	1410	-25	1556	19.4	59.7	-0.06
83	SLV 5	792	128	3841	-147.38	33.9	0.25
83	SLV 6	792	128	3841	-147.38	33.9	0.25
83	SLV 7	-250	-145	956	147.68	-11.81	-0.3
83	SLV 8	-250	-145	956	147.68	-11.81	-0.3
83	SLV 9	-319	107	4193	-125.94	-13.68	0.21
83	SLV 10	-319	107	4193	-125.94	-13.68	0.21
83	SLV 11	-1360	-166	1307	169.12	-59.39	-0.35
83	SLV 12	-1360	-166	1307	169.12	-59.39	-0.35
83	SLV 13	-1979	-13	3593	2.34	-85.19	-0.04
83	SLV 14	-1979	-13	3593	2.34	-85.19	-0.04
83	SLV 15	-2291	-95	2727	90.86	-98.9	-0.2
83	SLV 16	-2291	-95	2727	90.86	-98.9	-0.2
84	SLU 1	-121	-19	2632	10.35	-7.23	-0.03
84	SLU 2	-15	-4	2672	-9.68	-2.93	-0.02
84	SLU 3	-124	-20	2678	10.7	-7.45	-0.03
84	SLU 4	-61	-11	2702	-1.33	-4.88	-0.02
84	SLU 5	-20	-5	2700	-9.48	-3.16	-0.02
84	SLU 6	-129	-20	2705	10.9	-7.68	-0.03
84	SLU 7	-66	-11	2730	-1.12	-5.1	-0.02
84	SLU 8	-129	-20	2688	10.76	-7.68	-0.03
84	SLU 9	-66	-11	2712	-1.26	-5.11	-0.02
84	SLU 10	-46	-6	3025	-8.65	-4.5	-0.02
84	SLU 11	-155	-22	3030	11.72	-9.02	-0.04
84	SLU 12	-92	-13	3054	-0.3	-6.44	-0.03
84	SLU 13	-50	-7	3052	-8.45	-4.73	-0.02
84	SLU 14	-159	-23	3058	11.93	-9.24	-0.04
84	SLU 15	-96	-13	3082	-0.1	-6.67	-0.03
84	SLU 16	-160	-22	3040	11.79	-9.25	-0.04
84	SLU 17	-97	-13	3064	-0.23	-6.67	-0.03
84	SLU 18	-164	-22	3135	11.82	-9.46	-0.04
84	SLU 19	-101	-13	3160	-0.2	-6.89	-0.03
84	SLU 20	-169	-23	3163	12.02	-9.69	-0.04
84	SLU 21	-105	-14	3187	0	-7.11	-0.03
84	SLU 22	-143	-22	2937	11.46	-8.44	-0.03
84	SLU 23	-38	-6	2977	-8.58	-4.14	-0.02
84	SLU 24	-147	-22	2983	11.8	-8.66	-0.04
84	SLU 25	-84	-13	3007	-0.22	-6.09	-0.03
84	SLU 26	-42	-7	3005	-8.37	-4.37	-0.02
84	SLU 27	-151	-23	3011	12	-8.89	-0.04
84	SLU 28	-88	-14	3035	-0.02	-6.31	-0.03
84	SLU 29	-152	-22	2993	11.87	-8.89	-0.04
84	SLU 30	-89	-13	3017	-0.16	-6.32	-0.03
84	SLU 31	-68	-9	3330	-7.55	-5.71	-0.02
84	SLU 32	-177	-24	3335	12.83	-10.23	-0.04
84	SLU 33	-114	-15	3359	0.8	-7.65	-0.03
84	SLU 34	-73	-9	3357	-7.35	-5.94	-0.03
84	SLU 35	-182	-25	3363	13.03	-10.45	-0.04
84	SLU 36	-118	-16	3387	1.01	-7.88	-0.03
84	SLU 37	-182	-25	3345	12.89	-10.46	-0.04
84	SLU 38	-119	-15	3369	0.87	-7.88	-0.03
84	SLU 39	-186	-25	3440	12.93	-10.67	-0.04
84	SLU 40	-123	-16	3465	0.9	-8.1	-0.03
84	SLU 41	-191	-25	3468	13.13	-10.9	-0.04
84	SLU 42	-128	-16	3492	1.11	-8.32	-0.03
84	SLU 43	-149	-24	3317	13.08	-8.98	-0.04
84	SLU 44	-44	-9	3357	-6.95	-4.69	-0.03
84	SLU 45	-153	-25	3363	13.42	-9.2	-0.04
84	SLU 46	-90	-16	3387	1.4	-6.63	-0.03
84	SLU 47	-48	-10	3385	-6.75	-4.91	-0.03
84	SLU 48	-157	-25	3391	13.63	-9.43	-0.04
84	SLU 49	-94	-16	3415	1.61	-6.86	-0.03
84	SLU 50	-158	-25	3373	13.49	-9.43	-0.04
84	SLU 51	-95	-16	3397	1.47	-6.86	-0.03
84	SLU 52	-74	-11	3710	-5.93	-6.25	-0.03
84	SLU 53	-183	-27	3715	14.45	-10.77	-0.04
84	SLU 54	-120	-18	3739	2.43	-8.19	-0.04
84	SLU 55	-79	-12	3737	-5.72	-6.48	-0.03
84	SLU 56	-188	-28	3743	14.65	-11	-0.04



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
84	SLU 57	-125	-19	3767	2.63	-8.42	-0.04
84	SLU 58	-188	-27	3725	14.52	-11	-0.04
84	SLU 59	-125	-18	3749	2.49	-8.42	-0.04
84	SLU 60	-193	-27	3820	14.55	-11.21	-0.04
84	SLU 61	-129	-18	3845	2.53	-8.64	-0.04
84	SLU 62	-197	-28	3848	14.75	-11.44	-0.04
84	SLU 63	-134	-19	3872	2.73	-8.87	-0.04
84	SLU 64	-171	-27	3622	14.19	-10.19	-0.04
84	SLU 65	-66	-12	3662	-5.85	-5.9	-0.03
84	SLU 66	-175	-27	3668	14.53	-10.41	-0.04
84	SLU 67	-112	-18	3692	2.51	-7.84	-0.04
84	SLU 68	-71	-12	3690	-5.65	-6.12	-0.03
84	SLU 69	-180	-28	3696	14.73	-10.64	-0.04
84	SLU 70	-116	-19	3720	2.71	-8.07	-0.04
84	SLU 71	-180	-27	3678	14.59	-10.64	-0.04
84	SLU 72	-117	-18	3702	2.57	-8.07	-0.04
84	SLU 73	-97	-14	4015	-4.82	-7.46	-0.03
84	SLU 74	-206	-29	4020	15.55	-11.98	-0.05
84	SLU 75	-143	-20	4044	3.53	-9.4	-0.04
84	SLU 76	-101	-14	4042	-4.62	-7.69	-0.03
84	SLU 77	-210	-30	4048	15.76	-12.21	-0.05
84	SLU 78	-147	-21	4072	3.74	-9.63	-0.04
84	SLU 79	-211	-30	4030	15.62	-12.21	-0.05
84	SLU 80	-148	-20	4054	3.6	-9.63	-0.04
84	SLU 81	-215	-30	4125	15.65	-12.42	-0.05
84	SLU 82	-152	-21	4150	3.63	-9.85	-0.04
84	SLU 83	-219	-30	4153	15.86	-12.65	-0.05
84	SLU 84	-156	-21	4177	3.84	-10.08	-0.04
84	SLE RA 1	-127	-20	2719	10.67	-7.57	-0.03
84	SLE RA 2	-57	-10	2746	-2.69	-4.71	-0.02
84	SLE RA 3	-129	-20	2750	10.9	-7.72	-0.03
84	SLE RA 4	-87	-14	2766	2.88	-6	-0.03
84	SLE RA 5	-60	-10	2764	-2.55	-4.86	-0.02
84	SLE RA 6	-132	-21	2768	11.03	-7.87	-0.03
84	SLE RA 7	-90	-15	2784	3.02	-6.16	-0.03
84	SLE RA 8	-133	-20	2756	10.94	-7.87	-0.03
84	SLE RA 9	-91	-14	2772	2.93	-6.16	-0.03
84	SLE RA 10	-77	-11	2981	-2	-5.75	-0.03
84	SLE RA 11	-150	-22	2985	11.58	-8.77	-0.04
84	SLE RA 12	-108	-16	3001	3.57	-7.05	-0.03
84	SLE RA 13	-80	-12	2999	-1.87	-5.91	-0.03
84	SLE RA 14	-153	-22	3003	11.72	-8.92	-0.04
84	SLE RA 15	-111	-16	3019	3.7	-7.2	-0.03
84	SLE RA 16	-153	-22	2991	11.63	-8.92	-0.04
84	SLE RA 17	-111	-16	3007	3.61	-7.2	-0.03
84	SLE RA 18	-156	-22	3055	11.65	-9.06	-0.04
84	SLE RA 19	-114	-16	3071	3.63	-7.35	-0.03
84	SLE RA 20	-159	-22	3073	11.78	-9.21	-0.04
84	SLE RA 21	-117	-16	3089	3.77	-7.5	-0.03
84	SLE FR 1	-127	-20	2719	10.67	-7.57	-0.03
84	SLE FR 2	-113	-18	2725	8	-7	-0.03
84	SLE FR 3	-128	-20	2727	10.72	-7.63	-0.03
84	SLE FR 4	-122	-19	2825	8.29	-7.45	-0.03
84	SLE FR 5	-137	-21	2827	11.02	-8.08	-0.03
84	SLE FR 6	-141	-21	2887	11.16	-8.32	-0.03
84	SLE QP 1	-127	-20	2719	10.67	-7.57	-0.03
84	SLE QP 2	-136	-21	2820	10.96	-8.02	-0.03
84	SLD 1	652	8	2704	-18.38	26.23	-0.03
84	SLD 2	652	8	2704	-18.38	26.23	-0.03
84	SLD 3	532	-21	2340	13.09	20.99	0
84	SLD 4	532	-21	2340	13.09	20.99	0
84	SLD 5	283	33	3337	-45.56	10.2	-0.08
84	SLD 6	283	33	3337	-45.56	10.2	-0.08
84	SLD 7	-118	-65	2124	59.32	-7.26	0.02
84	SLD 8	-118	-65	2124	59.32	-7.26	0.02
84	SLD 9	-153	24	3516	-37.39	-8.78	-0.09
84	SLD 10	-153	24	3516	-37.39	-8.78	-0.09
84	SLD 11	-554	-74	2303	67.49	-26.23	0.01
84	SLD 12	-554	-74	2303	67.49	-26.23	0.01
84	SLD 13	-803	-20	3300	8.84	-37.03	-0.06
84	SLD 14	-803	-20	3300	8.84	-37.03	-0.06
84	SLD 15	-923	-50	2936	40.31	-42.27	-0.03
84	SLD 16	-923	-50	2936	40.31	-42.27	-0.03
84	SLV 1	1703	51	2564	-62.76	71.91	-0.03
84	SLV 2	1703	51	2564	-62.76	71.91	-0.03
84	SLV 3	1410	-23	1673	17.26	59.19	0.04
84	SLV 4	1410	-23	1673	17.26	59.19	0.04
84	SLV 5	859	113	4095	-132.52	35.25	-0.15
84	SLV 6	859	113	4095	-132.52	35.25	-0.15
84	SLV 7	-115	-133	1124	134.22	-7.15	0.1
84	SLV 8	-115	-133	1124	134.22	-7.15	0.1
84	SLV 9	-156	92	4516	-112.29	-8.89	-0.17
84	SLV 10	-156	92	4516	-112.29	-8.89	-0.17
84	SLV 11	-1130	-154	1545	154.44	-51.29	0.08
84	SLV 12	-1130	-154	1545	154.44	-51.29	0.08
84	SLV 13	-1682	-19	3967	4.66	-75.23	-0.11
84	SLV 14	-1682	-19	3967	4.66	-75.23	-0.11
84	SLV 15	-1974	-93	3076	84.68	-87.95	-0.04
84	SLV 16	-1974	-93	3076	84.68	-87.95	-0.04
85	SLU 1	3	-21	3062	10.33	-2.2	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
85	SLU 2	145	-9	3118	-6.41	3.89	-0.02
85	SLU 3	4	-22	3121	10.67	-2.24	-0.01
85	SLU 4	89	-14	3155	0.62	1.42	-0.02
85	SLU 5	143	-9	3153	-6.21	3.79	-0.02
85	SLU 6	2	-22	3157	10.87	-2.34	-0.01
85	SLU 7	87	-15	3190	0.82	1.31	-0.02
85	SLU 8	0	-22	3134	10.73	-2.41	-0.01
85	SLU 9	85	-15	3167	0.69	1.24	-0.02
85	SLU 10	127	-11	3523	-5.35	2.87	-0.02
85	SLU 11	-14	-24	3527	11.73	-3.26	-0.02
85	SLU 12	71	-17	3560	1.69	0.4	-0.02
85	SLU 13	126	-12	3559	-5.15	2.76	-0.02
85	SLU 14	-15	-24	3562	11.93	-3.36	-0.02
85	SLU 15	70	-17	3596	1.89	0.29	-0.02
85	SLU 16	-18	-24	3539	11.79	-3.43	-0.02
85	SLU 17	67	-17	3572	1.75	0.22	-0.02
85	SLU 18	-22	-24	3641	11.85	-3.66	-0.02
85	SLU 19	63	-17	3674	1.8	-0.01	-0.02
85	SLU 20	-24	-25	3677	12.05	-3.77	-0.02
85	SLU 21	61	-18	3710	2.01	-0.11	-0.02
85	SLU 22	-6	-23	3420	11.46	-2.83	-0.01
85	SLU 23	136	-12	3475	-5.28	3.26	-0.02
85	SLU 24	-5	-24	3479	11.79	-2.87	-0.02
85	SLU 25	80	-17	3512	1.75	0.78	-0.02
85	SLU 26	135	-12	3511	-5.08	3.15	-0.02
85	SLU 27	-6	-24	3515	12	-2.98	-0.02
85	SLU 28	79	-17	3548	1.95	0.68	-0.02
85	SLU 29	-9	-24	3491	11.86	-3.05	-0.02
85	SLU 30	77	-17	3524	1.82	0.61	-0.02
85	SLU 31	119	-14	3881	-4.22	2.23	-0.02
85	SLU 32	-22	-26	3884	12.86	-3.89	-0.02
85	SLU 33	63	-19	3918	2.81	-0.24	-0.02
85	SLU 34	117	-14	3916	-4.02	2.13	-0.02
85	SLU 35	-24	-27	3920	13.06	-4	-0.02
85	SLU 36	61	-20	3953	3.02	-0.34	-0.02
85	SLU 37	-26	-27	3896	12.92	-4.07	-0.02
85	SLU 38	59	-19	3930	2.88	-0.41	-0.02
85	SLU 39	-31	-27	3999	12.98	-4.3	-0.02
85	SLU 40	54	-20	4032	2.93	-0.64	-0.02
85	SLU 41	-32	-27	4034	13.18	-4.4	-0.02
85	SLU 42	53	-20	4068	3.13	-0.75	-0.02
85	SLU 43	6	-26	3858	13.04	-2.64	-0.02
85	SLU 44	148	-14	3914	-3.7	3.45	-0.02
85	SLU 45	7	-27	3917	13.38	-2.68	-0.02
85	SLU 46	93	-20	3951	3.33	0.98	-0.02
85	SLU 47	147	-15	3949	-3.5	3.34	-0.02
85	SLU 48	6	-27	3953	13.58	-2.78	-0.02
85	SLU 49	91	-20	3986	3.54	0.87	-0.02
85	SLU 50	4	-27	3930	13.44	-2.85	-0.02
85	SLU 51	89	-20	3963	3.4	0.8	-0.02
85	SLU 52	131	-17	4319	-2.64	2.43	-0.02
85	SLU 53	-10	-29	4323	14.44	-3.7	-0.02
85	SLU 54	75	-22	4356	4.4	-0.05	-0.02
85	SLU 55	129	-17	4355	-2.44	2.32	-0.02
85	SLU 56	-12	-30	4358	14.64	-3.81	-0.02
85	SLU 57	73	-23	4392	4.6	-0.15	-0.02
85	SLU 58	-14	-30	4335	14.51	-3.88	-0.02
85	SLU 59	71	-22	4368	4.46	-0.22	-0.02
85	SLU 60	-19	-30	4437	14.56	-4.1	-0.02
85	SLU 61	66	-23	4470	4.52	-0.45	-0.02
85	SLU 62	-20	-30	4473	14.76	-4.21	-0.02
85	SLU 63	65	-23	4506	4.72	-0.55	-0.02
85	SLU 64	-2	-29	4216	14.17	-3.28	-0.02
85	SLU 65	140	-17	4271	-2.57	2.81	-0.02
85	SLU 66	-1	-29	4275	14.51	-3.31	-0.02
85	SLU 67	84	-22	4308	4.46	0.34	-0.02
85	SLU 68	139	-17	4307	-2.37	2.71	-0.02
85	SLU 69	-2	-30	4311	14.71	-3.42	-0.02
85	SLU 70	83	-23	4344	4.66	0.24	-0.02
85	SLU 71	-5	-30	4287	14.57	-3.49	-0.02
85	SLU 72	80	-22	4320	4.53	0.17	-0.02
85	SLU 73	122	-19	4677	-1.51	1.79	-0.02
85	SLU 74	-19	-32	4680	15.57	-4.34	-0.02
85	SLU 75	66	-25	4714	5.53	-0.68	-0.02
85	SLU 76	121	-20	4712	-1.31	1.69	-0.02
85	SLU 77	-20	-32	4716	15.77	-4.44	-0.02
85	SLU 78	65	-25	4749	5.73	-0.79	-0.02
85	SLU 79	-23	-32	4692	15.63	-4.51	-0.02
85	SLU 80	63	-25	4726	5.59	-0.86	-0.02
85	SLU 81	-27	-32	4795	15.69	-4.74	-0.02
85	SLU 82	58	-25	4828	5.64	-1.08	-0.02
85	SLU 83	-29	-33	4830	15.89	-4.84	-0.02
85	SLU 84	57	-26	4864	5.84	-1.19	-0.02
85	SLE RA 1	0	-22	3164	10.65	-2.38	-0.01
85	SLE RA 2	95	-14	3201	-0.51	1.68	-0.02
85	SLE RA 3	1	-22	3204	10.88	-2.41	-0.01
85	SLE RA 4	58	-17	3226	4.18	0.03	-0.02
85	SLE RA 5	94	-14	3225	-0.38	1.61	-0.02
85	SLE RA 6	0	-22	3228	11.01	-2.48	-0.01
85	SLE RA 7	57	-18	3250	4.31	-0.04	-0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
85	SLE RA 8	-2	-22	3212	10.92	-2.52	-0.01
85	SLE RA 9	55	-17	3234	4.22	-0.09	-0.02
85	SLE RA 10	83	-15	3472	0.2	1	-0.02
85	SLE RA 11	-11	-24	3474	11.59	-3.09	-0.01
85	SLE RA 12	46	-19	3496	4.89	-0.65	-0.02
85	SLE RA 13	82	-16	3495	0.33	0.93	-0.02
85	SLE RA 14	-12	-24	3498	11.72	-3.16	-0.02
85	SLE RA 15	45	-19	3520	5.02	-0.72	-0.02
85	SLE RA 16	-13	-24	3482	11.63	-3.2	-0.02
85	SLE RA 17	43	-19	3504	4.93	-0.77	-0.02
85	SLE RA 18	-17	-24	3550	11.66	-3.35	-0.02
85	SLE RA 19	40	-19	3572	4.97	-0.92	-0.02
85	SLE RA 20	-17	-24	3574	11.8	-3.43	-0.02
85	SLE RA 21	39	-19	3596	5.1	-0.99	-0.02
85	SLE FR 1	0	-22	3164	10.65	-2.38	-0.01
85	SLE FR 2	19	-20	3172	8.42	-1.57	-0.01
85	SLE FR 3	0	-22	3174	10.7	-2.41	-0.01
85	SLE FR 4	14	-21	3288	8.72	-1.86	-0.01
85	SLE FR 5	-5	-22	3290	11.01	-2.7	-0.01
85	SLE FR 6	-8	-23	3357	11.16	-2.87	-0.01
85	SLE QP 1	0	-22	3164	10.65	-2.38	-0.01
85	SLE QP 2	-5	-22	3280	10.95	-2.67	-0.01
85	SLD 1	698	-20	3034	-14.64	28.2	-0.02
85	SLD 2	698	-20	3034	-14.64	28.2	-0.02
85	SLD 3	575	4	2630	11.83	22.72	-0.02
85	SLD 4	575	4	2630	11.83	22.72	-0.02
85	SLD 5	392	-59	3820	-36.87	14.9	-0.02
85	SLD 6	392	-59	3820	-36.87	14.9	-0.02
85	SLD 7	-16	23	2472	51.36	-3.37	-0.01
85	SLD 8	-16	23	2472	51.36	-3.37	-0.01
85	SLD 9	7	-67	4089	-29.45	-1.98	-0.02
85	SLD 10	7	-67	4089	-29.45	-1.98	-0.02
85	SLD 11	-401	14	2740	58.78	-20.24	0
85	SLD 12	-401	14	2740	58.78	-20.24	0
85	SLD 13	-585	-49	3930	10.08	-28.06	-0.01
85	SLD 14	-585	-49	3930	10.08	-28.06	-0.01
85	SLD 15	-707	-24	3526	36.55	-33.54	-0.01
85	SLD 16	-707	-24	3526	36.55	-33.54	-0.01
85	SLV 1	1636	-19	2715	-53.16	69.47	-0.03
85	SLV 2	1636	-19	2715	-53.16	69.47	-0.03
85	SLV 3	1335	43	1747	14.11	55.94	-0.02
85	SLV 4	1335	43	1747	14.11	55.94	-0.02
85	SLV 5	944	-114	4578	-110.3	39.49	-0.04
85	SLV 6	944	-114	4578	-110.3	39.49	-0.04
85	SLV 7	-59	90	1353	113.92	-5.61	0
85	SLV 8	-59	90	1353	113.92	-5.61	0
85	SLV 9	50	-135	5207	-92.02	0.26	-0.03
85	SLV 10	50	-135	5207	-92.02	0.26	-0.03
85	SLV 11	-953	70	1982	132.21	-44.83	0.01
85	SLV 12	-953	70	1982	132.21	-44.83	0.01
85	SLV 13	-1345	-87	4813	7.8	-61.29	-0.01
85	SLV 14	-1345	-87	4813	7.8	-61.29	-0.01
85	SLV 15	-1645	-26	3846	75.06	-74.82	0.01
85	SLV 16	-1645	-26	3846	75.06	-74.82	0.01
86	SLU 1	43	-19	3671	8.98	-2.17	0
86	SLU 2	213	-11	3747	-3.61	4.8	-0.01
86	SLU 3	46	-20	3750	9.28	-2.14	0
86	SLU 4	149	-15	3796	1.72	2.04	-0.01
86	SLU 5	214	-12	3795	-3.43	4.74	-0.01
86	SLU 6	47	-20	3797	9.45	-2.2	0
86	SLU 7	149	-16	3843	1.9	1.98	0
86	SLU 8	43	-20	3766	9.33	-2.3	0
86	SLU 9	146	-15	3812	1.78	1.89	0
86	SLU 10	196	-14	4227	-2.65	3.57	-0.01
86	SLU 11	29	-22	4229	10.23	-3.37	0
86	SLU 12	131	-17	4275	2.68	0.81	0
86	SLU 13	196	-14	4274	-2.48	3.51	-0.01
86	SLU 14	29	-22	4276	10.41	-3.44	0
86	SLU 15	132	-18	4322	2.85	0.75	0
86	SLU 16	26	-22	4245	10.29	-3.53	0
86	SLU 17	128	-18	4291	2.74	0.66	0
86	SLU 18	18	-22	4355	10.35	-3.93	0
86	SLU 19	120	-18	4401	2.79	0.26	0
86	SLU 20	18	-23	4403	10.52	-3.99	0
86	SLU 21	121	-18	4449	2.97	0.19	0
86	SLU 22	37	-21	4102	9.99	-2.9	0
86	SLU 23	208	-14	4179	-2.6	4.07	-0.01
86	SLU 24	41	-22	4181	10.28	-2.88	0
86	SLU 25	143	-17	4227	2.73	1.31	0
86	SLU 26	208	-14	4227	-2.43	4	-0.01
86	SLU 27	41	-22	4229	10.46	-2.94	0
86	SLU 28	143	-18	4275	2.9	1.24	0
86	SLU 29	37	-22	4197	10.34	-3.03	0
86	SLU 30	140	-18	4243	2.78	1.15	0
86	SLU 31	190	-16	4658	-1.65	2.84	-0.01
86	SLU 32	23	-24	4661	11.24	-4.11	0
86	SLU 33	126	-20	4707	3.68	0.08	0
86	SLU 34	191	-16	4706	-1.47	2.77	-0.01
86	SLU 35	24	-25	4708	11.41	-4.17	0
86	SLU 36	126	-20	4754	3.86	0.01	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
86	SLU 37	20	-24	4677	11.29	-4.26	0
86	SLU 38	123	-20	4723	3.74	-0.08	0
86	SLU 39	12	-25	4787	11.35	-4.66	0
86	SLU 40	115	-20	4833	3.8	-0.48	0
86	SLU 41	13	-25	4835	11.53	-4.73	0
86	SLU 42	115	-21	4881	3.97	-0.54	0
86	SLU 43	57	-24	4624	11.34	-2.57	0
86	SLU 44	228	-16	4700	-1.26	4.4	-0.01
86	SLU 45	61	-25	4703	11.63	-2.54	0
86	SLU 46	163	-20	4749	4.07	1.64	0
86	SLU 47	228	-17	4748	-1.08	4.34	-0.01
86	SLU 48	61	-25	4750	11.8	-2.6	0
86	SLU 49	164	-20	4796	4.25	1.58	0
86	SLU 50	58	-25	4719	11.69	-2.69	0
86	SLU 51	160	-20	4765	4.13	1.49	0
86	SLU 52	211	-19	5180	-0.3	3.17	-0.01
86	SLU 53	44	-27	5182	12.58	-3.77	0
86	SLU 54	146	-22	5228	5.03	0.41	0
86	SLU 55	211	-19	5227	-0.13	3.11	-0.01
86	SLU 56	44	-27	5230	12.76	-3.83	0
86	SLU 57	147	-23	5276	5.2	0.35	0
86	SLU 58	41	-27	5198	12.64	-3.93	0
86	SLU 59	143	-23	5244	5.09	0.26	0
86	SLU 60	33	-27	5308	12.7	-4.32	0
86	SLU 61	135	-23	5354	5.15	-0.14	0
86	SLU 62	33	-28	5356	12.88	-4.39	0
86	SLU 63	135	-23	5402	5.32	-0.21	0
86	SLU 64	52	-26	5056	12.34	-3.3	0
86	SLU 65	222	-19	5132	-0.25	3.67	-0.01
86	SLU 66	55	-27	5135	12.63	-3.27	0
86	SLU 67	158	-22	5181	5.08	0.91	0
86	SLU 68	223	-19	5180	-0.08	3.6	-0.01
86	SLU 69	56	-27	5182	12.81	-3.34	0
86	SLU 70	158	-23	5228	5.25	0.84	0
86	SLU 71	52	-27	5151	12.69	-3.43	0
86	SLU 72	155	-23	5197	5.13	0.75	0
86	SLU 73	205	-21	5611	0.7	2.44	-0.01
86	SLU 74	38	-29	5614	13.59	-4.5	0
86	SLU 75	140	-25	5660	6.03	-0.32	0
86	SLU 76	205	-21	5659	0.88	2.37	-0.01
86	SLU 77	38	-30	5661	13.76	-4.57	0
86	SLU 78	141	-25	5707	6.21	-0.39	0
86	SLU 79	35	-29	5630	13.64	-4.66	0
86	SLU 80	137	-25	5676	6.09	-0.48	0
86	SLU 81	27	-30	5740	13.7	-5.06	0
86	SLU 82	129	-25	5786	6.15	-0.88	0
86	SLU 83	27	-30	5788	13.88	-5.12	0
86	SLU 84	130	-25	5834	6.32	-0.94	0
86	SLE RA 1	41	-20	3794	9.27	-2.38	0
86	SLE RA 2	155	-15	3845	0.88	2.27	-0.01
86	SLE RA 3	43	-20	3847	9.47	-2.36	0
86	SLE RA 4	112	-17	3877	4.43	0.43	0
86	SLE RA 5	155	-15	3877	0.99	2.23	-0.01
86	SLE RA 6	44	-20	3878	9.58	-2.4	0
86	SLE RA 7	112	-17	3909	4.55	0.39	0
86	SLE RA 8	41	-20	3857	9.5	-2.46	0
86	SLE RA 9	110	-17	3888	4.47	0.32	0
86	SLE RA 10	143	-16	4165	1.51	1.45	-0.01
86	SLE RA 11	32	-22	4166	10.1	-3.18	0
86	SLE RA 12	100	-19	4197	5.07	-0.39	0
86	SLE RA 13	144	-16	4196	1.63	1.41	-0.01
86	SLE RA 14	32	-22	4198	10.22	-3.22	0
86	SLE RA 15	100	-19	4229	5.18	-0.43	0
86	SLE RA 16	30	-22	4177	10.14	-3.28	0
86	SLE RA 17	98	-19	4207	5.1	-0.5	0
86	SLE RA 18	25	-22	4250	10.18	-3.55	0
86	SLE RA 19	93	-19	4281	5.14	-0.76	0
86	SLE RA 20	25	-22	4282	10.3	-3.59	0
86	SLE RA 21	93	-19	4313	5.26	-0.8	0
86	SLE FR 1	41	-20	3794	9.27	-2.38	0
86	SLE FR 2	64	-19	3804	7.59	-1.45	0
86	SLE FR 3	41	-20	3807	9.32	-2.4	0
86	SLE FR 4	59	-19	3941	7.86	-1.8	0
86	SLE FR 5	36	-21	3944	9.59	-2.75	0
86	SLE FR 6	33	-21	4022	9.73	-2.96	0
86	SLE QP 1	41	-20	3794	9.27	-2.38	0
86	SLE QP 2	36	-20	3931	9.54	-2.73	0
86	SLD 1	669	-16	3461	-11.06	25.51	-0.01
86	SLD 2	669	-16	3461	-11.06	25.51	-0.01
86	SLD 3	542	2	2961	9.05	20.08	0
86	SLD 4	542	2	2961	9.05	20.08	0
86	SLD 5	418	-46	4549	-27.13	13.98	-0.02
86	SLD 6	418	-46	4549	-27.13	13.98	-0.02
86	SLD 7	-4	13	2881	39.89	-4.12	0.02
86	SLD 8	-4	13	2881	39.89	-4.12	0.02
86	SLD 9	76	-54	4981	-20.8	-1.34	-0.02
86	SLD 10	76	-54	4981	-20.8	-1.34	-0.02
86	SLD 11	-346	5	3313	46.22	-19.44	0.03
86	SLD 12	-346	5	3313	46.22	-19.44	0.03
86	SLD 13	-470	-43	4901	10.04	-25.54	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
86	SLD 14	-470	-43	4901	10.04	-25.54	0
86	SLD 15	-597	-25	4400	30.14	-30.97	0.02
86	SLD 16	-597	-25	4400	30.14	-30.97	0.02
86	SLV 1	1515	-10	2834	-41.83	63.28	-0.04
86	SLV 2	1515	-10	2834	-41.83	63.28	-0.04
86	SLV 3	1202	35	1659	9.22	49.79	0
86	SLV 4	1202	35	1659	9.22	49.79	0
86	SLV 5	955	-84	5384	-83.29	37.53	-0.06
86	SLV 6	955	-84	5384	-83.29	37.53	-0.06
86	SLV 7	-89	63	1467	86.87	-7.43	0.05
86	SLV 8	-89	63	1467	86.87	-7.43	0.05
86	SLV 9	161	-104	6394	-67.78	1.97	-0.05
86	SLV 10	161	-104	6394	-67.78	1.97	-0.05
86	SLV 11	-882	43	2478	102.38	-42.99	0.06
86	SLV 12	-882	43	2478	102.38	-42.99	0.06
86	SLV 13	-1130	-75	6202	9.87	-55.25	0
86	SLV 14	-1130	-75	6202	9.87	-55.25	0
86	SLV 15	-1443	-31	5028	60.92	-68.74	0.04
86	SLV 16	-1443	-31	5028	60.92	-68.74	0.04
87	SLU 1	-12	-12	4423	5.57	-3.99	0
87	SLU 2	182	-9	4527	-2.56	4.1	-0.01
87	SLU 3	-8	-12	4527	5.75	-3.97	0
87	SLU 4	108	-10	4590	0.87	0.89	-0.01
87	SLU 5	182	-9	4590	-2.45	4.04	-0.01
87	SLU 6	-8	-12	4590	5.86	-4.03	0
87	SLU 7	108	-10	4653	0.98	0.83	-0.01
87	SLU 8	-11	-12	4548	5.79	-4.11	0
87	SLU 9	105	-10	4611	0.91	0.74	-0.01
87	SLU 10	154	-10	5097	-1.97	2.54	-0.01
87	SLU 11	-36	-14	5097	6.34	-5.53	0
87	SLU 12	81	-12	5160	1.46	-0.67	-0.01
87	SLU 13	155	-10	5160	-1.86	2.48	-0.01
87	SLU 14	-35	-14	5160	6.45	-5.59	0
87	SLU 15	81	-12	5222	1.58	-0.73	-0.01
87	SLU 16	-39	-14	5118	6.38	-5.68	0
87	SLU 17	78	-12	5181	1.5	-0.82	-0.01
87	SLU 18	-51	-14	5237	6.41	-6.22	0
87	SLU 19	65	-12	5300	1.53	-1.37	-0.01
87	SLU 20	-51	-14	5300	6.52	-6.28	0
87	SLU 21	65	-12	5362	1.64	-1.43	-0.01
87	SLU 22	-25	-13	4946	6.19	-4.98	0
87	SLU 23	168	-10	5050	-1.94	3.11	-0.01
87	SLU 24	-22	-14	5050	6.37	-4.96	0
87	SLU 25	94	-12	5113	1.5	-0.1	-0.01
87	SLU 26	169	-10	5113	-1.83	3.05	-0.01
87	SLU 27	-21	-14	5113	6.48	-5.02	0
87	SLU 28	95	-12	5176	1.61	-0.16	-0.01
87	SLU 29	-25	-14	5072	6.41	-5.11	0
87	SLU 30	92	-12	5134	1.53	-0.25	-0.01
87	SLU 31	141	-11	5620	-1.35	1.55	-0.01
87	SLU 32	-49	-15	5620	6.97	-6.52	0
87	SLU 33	67	-13	5683	2.09	-1.67	-0.01
87	SLU 34	141	-12	5683	-1.24	1.48	-0.01
87	SLU 35	-49	-15	5683	7.08	-6.58	0
87	SLU 36	67	-13	5745	2.2	-1.73	-0.01
87	SLU 37	-52	-15	5641	7	-6.67	0
87	SLU 38	64	-13	5704	2.13	-1.81	-0.01
87	SLU 39	-65	-15	5760	7.03	-7.22	0
87	SLU 40	51	-13	5823	2.16	-2.36	-0.01
87	SLU 41	-64	-16	5823	7.15	-7.28	0
87	SLU 42	52	-14	5885	2.27	-2.42	-0.01
87	SLU 43	-10	-15	5571	7.02	-4.85	0
87	SLU 44	183	-12	5675	-1.11	3.24	-0.01
87	SLU 45	-7	-15	5675	7.21	-4.82	0
87	SLU 46	109	-13	5737	2.33	0.03	-0.01
87	SLU 47	184	-12	5738	-1	3.18	-0.01
87	SLU 48	-7	-15	5738	7.32	-4.88	0
87	SLU 49	110	-14	5800	2.44	-0.03	-0.01
87	SLU 50	-10	-15	5696	7.24	-4.97	0
87	SLU 51	106	-13	5759	2.36	-0.11	-0.01
87	SLU 52	156	-13	6245	-0.52	1.68	-0.01
87	SLU 53	-34	-17	6245	7.8	-6.38	0
87	SLU 54	82	-15	6307	2.92	-1.53	-0.01
87	SLU 55	156	-13	6308	-0.4	1.62	-0.01
87	SLU 56	-34	-17	6307	7.91	-6.45	0
87	SLU 57	82	-15	6370	3.03	-1.59	-0.01
87	SLU 58	-37	-17	6266	7.83	-6.53	0
87	SLU 59	79	-15	6328	2.96	-1.68	-0.01
87	SLU 60	-50	-17	6385	7.87	-7.08	0
87	SLU 61	66	-15	6447	2.99	-2.23	-0.01
87	SLU 62	-49	-17	6447	7.98	-7.14	0
87	SLU 63	67	-15	6510	3.1	-2.29	-0.01
87	SLU 64	-24	-16	6094	7.64	-5.84	0
87	SLU 65	170	-13	6198	-0.48	2.25	-0.01
87	SLU 66	-21	-17	6198	7.83	-5.82	0
87	SLU 67	96	-15	6261	2.95	-0.96	-0.01
87	SLU 68	170	-13	6261	-0.37	2.19	-0.01
87	SLU 69	-20	-17	6261	7.94	-5.88	0
87	SLU 70	96	-15	6323	3.06	-1.02	-0.01
87	SLU 71	-23	-17	6219	7.87	-5.96	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
87	SLU 72	93	-15	6282	2.99	-1.11	-0.01
87	SLU 73	142	-14	6768	0.11	0.69	-0.01
87	SLU 74	-48	-18	6768	8.42	-7.38	0
87	SLU 75	68	-16	6830	3.54	-2.52	-0.01
87	SLU 76	142	-15	6831	0.22	0.63	-0.01
87	SLU 77	-48	-18	6830	8.53	-7.44	0
87	SLU 78	68	-16	6893	3.65	-2.58	-0.01
87	SLU 79	-51	-18	6789	8.46	-7.52	0
87	SLU 80	65	-16	6852	3.58	-2.67	-0.01
87	SLU 81	-64	-18	6908	8.49	-8.07	0
87	SLU 82	53	-16	6970	3.61	-3.22	-0.01
87	SLU 83	-63	-19	6970	8.6	-8.13	0
87	SLU 84	53	-17	7033	3.72	-3.28	-0.01
87	SLE RA 1	-16	-12	4573	5.74	-4.28	0
87	SLE RA 2	114	-10	4642	0.32	1.12	-0.01
87	SLE RA 3	-13	-12	4642	5.87	-4.26	0
87	SLE RA 4	64	-11	4684	2.62	-1.02	-0.01
87	SLE RA 5	114	-10	4684	0.4	1.08	-0.01
87	SLE RA 6	-13	-13	4684	5.94	-4.3	0
87	SLE RA 7	65	-11	4726	2.69	-1.06	-0.01
87	SLE RA 8	-15	-13	4656	5.89	-4.36	0
87	SLE RA 9	62	-11	4698	2.64	-1.12	-0.01
87	SLE RA 10	95	-11	5022	0.72	0.08	-0.01
87	SLE RA 11	-32	-13	5022	6.26	-5.3	0
87	SLE RA 12	46	-12	5064	3.01	-2.06	-0.01
87	SLE RA 13	95	-11	5064	0.79	0.04	-0.01
87	SLE RA 14	-31	-14	5064	6.33	-5.34	0
87	SLE RA 15	46	-12	5105	3.08	-2.1	-0.01
87	SLE RA 16	-33	-14	5036	6.29	-5.4	0
87	SLE RA 17	44	-12	5078	3.03	-2.16	-0.01
87	SLE RA 18	-42	-14	5115	6.31	-5.76	0
87	SLE RA 19	36	-12	5157	3.06	-2.53	-0.01
87	SLE RA 20	-42	-14	5157	6.38	-5.8	0
87	SLE RA 21	36	-12	5199	3.13	-2.57	-0.01
87	SLE FR 1	-16	-12	4573	5.74	-4.28	0
87	SLE FR 2	10	-12	4586	4.66	-3.2	0
87	SLE FR 3	-15	-12	4589	5.77	-4.29	0
87	SLE FR 4	2	-12	4749	4.83	-3.64	0
87	SLE FR 5	-23	-13	4752	5.94	-4.74	0
87	SLE FR 6	-29	-13	4844	6.03	-5.02	0
87	SLE QP 1	-16	-12	4573	5.74	-4.28	0
87	SLE QP 2	-23	-13	4735	5.91	-4.72	0
87	SLD 1	569	-5	3956	-8.58	21.89	-0.02
87	SLD 2	569	-5	3956	-8.58	21.89	-0.02
87	SLD 3	435	5	3296	4.42	15.98	0
87	SLD 4	435	5	3296	4.42	15.98	0
87	SLD 5	358	-25	5504	-18.15	12.23	-0.03
87	SLD 6	358	-25	5504	-18.15	12.23	-0.03
87	SLD 7	-90	7	3301	25.18	-7.47	0.02
87	SLD 8	-90	7	3301	25.18	-7.47	0.02
87	SLD 9	43	-32	6169	-13.35	-1.97	-0.03
87	SLD 10	43	-32	6169	-13.35	-1.97	-0.03
87	SLD 11	-405	-1	3967	29.97	-21.67	0.03
87	SLD 12	-405	-1	3967	29.97	-21.67	0.03
87	SLD 13	-481	-30	6175	7.4	-25.43	0
87	SLD 14	-481	-30	6175	7.4	-25.43	0
87	SLD 15	-616	-21	5514	20.4	-31.34	0.02
87	SLD 16	-616	-21	5514	20.4	-31.34	0.02
87	SLV 1	1362	6	2910	-30.03	57.63	-0.05
87	SLV 2	1362	6	2910	-30.03	57.63	-0.05
87	SLV 3	1027	29	1368	2.94	42.81	0
87	SLV 4	1027	29	1368	2.94	42.81	0
87	SLV 5	900	-43	6527	-54.87	36.46	-0.08
87	SLV 6	900	-43	6527	-54.87	36.46	-0.08
87	SLV 7	-216	36	1385	55.02	-12.94	0.07
87	SLV 8	-216	36	1385	55.02	-12.94	0.07
87	SLV 9	169	-61	8085	-43.2	3.5	-0.07
87	SLV 10	169	-61	8085	-43.2	3.5	-0.07
87	SLV 11	-947	18	2943	66.7	-45.9	0.08
87	SLV 12	-947	18	2943	66.7	-45.9	0.08
87	SLV 13	-1074	-55	8103	8.88	-52.25	0
87	SLV 14	-1074	-55	8103	8.88	-52.25	0
87	SLV 15	-1409	-31	6560	41.85	-67.07	0.04
87	SLV 16	-1409	-31	6560	41.85	-67.07	0.04
88	SLU 1	-193	6	5546	0.1	-17.56	0.04
88	SLU 2	0	6	5680	-3.93	-9.77	0.04
88	SLU 3	-194	6	5686	0.11	-17.86	0.04
88	SLU 4	-78	6	5767	-2.3	-13.19	0.04
88	SLU 5	-2	7	5764	-3.92	-10.03	0.04
88	SLU 6	-196	6	5771	0.12	-18.12	0.04
88	SLU 7	-80	6	5851	-2.3	-13.45	0.04
88	SLU 8	-197	6	5715	0.12	-18.08	0.04
88	SLU 9	-82	6	5796	-2.3	-13.41	0.04
88	SLU 10	-52	7	6389	-3.97	-13.19	0.05
88	SLU 11	-246	6	6396	0.08	-21.28	0.05
88	SLU 12	-130	7	6476	-2.34	-16.61	0.05
88	SLU 13	-54	7	6474	-3.96	-13.45	0.05
88	SLU 14	-248	6	6481	0.09	-21.54	0.05
88	SLU 15	-132	7	6561	-2.33	-16.87	0.05
88	SLU 16	-249	6	6425	0.09	-21.49	0.05



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
88	SLU 17	-134	7	6505	-2.33	-16.82	0.05
88	SLU 18	-268	6	6560	0.05	-22.44	0.05
88	SLU 19	-152	7	6640	-2.37	-17.77	0.05
88	SLU 20	-270	7	6644	0.06	-22.7	0.05
88	SLU 21	-154	7	6725	-2.36	-18.03	0.05
88	SLU 22	-229	6	6207	0.09	-20.25	0.05
88	SLU 23	-36	7	6341	-3.94	-12.47	0.05
88	SLU 24	-230	6	6348	0.11	-20.55	0.05
88	SLU 25	-114	7	6428	-2.31	-15.88	0.05
88	SLU 26	-38	7	6426	-3.93	-12.73	0.05
88	SLU 27	-232	6	6432	0.12	-20.81	0.05
88	SLU 28	-116	7	6513	-2.3	-16.14	0.05
88	SLU 29	-233	6	6377	0.11	-20.77	0.05
88	SLU 30	-117	7	6457	-2.31	-16.1	0.05
88	SLU 31	-88	8	7051	-3.97	-15.88	0.05
88	SLU 32	-282	7	7057	0.07	-23.97	0.06
88	SLU 33	-166	8	7138	-2.35	-19.3	0.06
88	SLU 34	-90	8	7135	-3.96	-16.14	0.05
88	SLU 35	-284	7	7142	0.08	-24.23	0.06
88	SLU 36	-168	8	7222	-2.34	-19.56	0.06
88	SLU 37	-285	7	7086	0.08	-24.19	0.06
88	SLU 38	-170	8	7167	-2.34	-19.52	0.06
88	SLU 39	-304	7	7221	0.05	-25.13	0.06
88	SLU 40	-188	8	7301	-2.37	-20.46	0.06
88	SLU 41	-306	7	7306	0.06	-25.39	0.06
88	SLU 42	-190	8	7386	-2.36	-20.72	0.06
88	SLU 43	-239	7	6983	0.13	-21.9	0.05
88	SLU 44	-46	8	7117	-3.9	-14.11	0.05
88	SLU 45	-239	7	7123	0.15	-22.2	0.06
88	SLU 46	-124	8	7204	-2.27	-17.53	0.06
88	SLU 47	-48	8	7201	-3.89	-14.37	0.05
88	SLU 48	-241	7	7208	0.16	-22.46	0.06
88	SLU 49	-126	8	7288	-2.26	-17.79	0.06
88	SLU 50	-243	7	7152	0.15	-22.42	0.06
88	SLU 51	-127	8	7233	-2.27	-17.75	0.06
88	SLU 52	-98	9	7826	-3.93	-17.53	0.06
88	SLU 53	-291	8	7833	0.12	-25.62	0.06
88	SLU 54	-176	8	7913	-2.3	-20.95	0.06
88	SLU 55	-100	9	7911	-3.92	-17.79	0.06
88	SLU 56	-293	8	7918	0.12	-25.88	0.06
88	SLU 57	-178	8	7998	-2.29	-21.21	0.06
88	SLU 58	-295	8	7862	0.12	-25.84	0.06
88	SLU 59	-179	8	7942	-2.3	-21.17	0.06
88	SLU 60	-313	8	7997	0.09	-26.78	0.06
88	SLU 61	-198	9	8077	-2.33	-22.11	0.06
88	SLU 62	-315	8	8081	0.1	-27.04	0.06
88	SLU 63	-200	9	8162	-2.32	-22.37	0.06
88	SLU 64	-275	8	7644	0.12	-24.59	0.06
88	SLU 65	-82	9	7778	-3.91	-16.81	0.06
88	SLU 66	-275	8	7785	0.14	-24.9	0.06
88	SLU 67	-160	8	7865	-2.28	-20.23	0.06
88	SLU 68	-84	9	7863	-3.9	-17.07	0.06
88	SLU 69	-277	8	7869	0.15	-25.16	0.06
88	SLU 70	-162	8	7950	-2.27	-20.49	0.06
88	SLU 71	-279	8	7814	0.14	-25.11	0.06
88	SLU 72	-163	8	7894	-2.28	-20.44	0.06
88	SLU 73	-134	9	8488	-3.94	-20.23	0.06
88	SLU 74	-327	8	8494	0.11	-28.32	0.07
88	SLU 75	-212	9	8575	-2.31	-23.65	0.07
88	SLU 76	-136	9	8572	-3.93	-20.49	0.07
88	SLU 77	-329	9	8579	0.12	-28.58	0.07
88	SLU 78	-214	9	8659	-2.3	-23.91	0.07
88	SLU 79	-331	8	8523	0.11	-28.53	0.07
88	SLU 80	-215	9	8604	-2.31	-23.86	0.07
88	SLU 81	-349	9	8658	0.08	-29.48	0.07
88	SLU 82	-233	9	8738	-2.34	-24.81	0.07
88	SLU 83	-351	9	8743	0.09	-29.74	0.07
88	SLU 84	-236	9	8823	-2.33	-25.07	0.07
88	SLE RA 1	-203	6	5735	0.1	-18.32	0.04
88	SLE RA 2	-75	6	5824	-2.59	-13.14	0.04
88	SLE RA 3	-204	6	5828	0.11	-18.53	0.05
88	SLE RA 4	-127	6	5882	-1.51	-15.42	0.05
88	SLE RA 5	-76	6	5880	-2.58	-13.31	0.04
88	SLE RA 6	-205	6	5885	0.11	-18.7	0.05
88	SLE RA 7	-128	6	5938	-1.5	-15.59	0.05
88	SLE RA 8	-206	6	5848	0.11	-18.67	0.05
88	SLE RA 9	-129	6	5901	-1.5	-15.56	0.05
88	SLE RA 10	-110	7	6297	-2.61	-15.42	0.05
88	SLE RA 11	-238	6	6302	0.09	-20.81	0.05
88	SLE RA 12	-161	7	6355	-1.53	-17.69	0.05
88	SLE RA 13	-111	7	6354	-2.61	-15.59	0.05
88	SLE RA 14	-240	6	6358	0.09	-20.98	0.05
88	SLE RA 15	-163	7	6412	-1.52	-17.87	0.05
88	SLE RA 16	-241	6	6321	0.09	-20.95	0.05
88	SLE RA 17	-164	7	6374	-1.52	-17.84	0.05
88	SLE RA 18	-253	6	6411	0.07	-21.58	0.05
88	SLE RA 19	-176	7	6464	-1.55	-18.47	0.05
88	SLE RA 20	-254	6	6467	0.07	-21.75	0.05
88	SLE RA 21	-177	7	6521	-1.54	-18.64	0.05
88	SLE FR 1	-203	6	5735	0.1	-18.32	0.04



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
88	SLE FR 2	-178	6	5753	-0.44	-17.29	0.04
88	SLE FR 3	-204	6	5757	0.1	-18.39	0.04
88	SLE FR 4	-193	6	5955	-0.45	-18.26	0.05
88	SLE FR 5	-219	6	5960	0.09	-19.37	0.05
88	SLE FR 6	-228	6	6073	0.08	-19.95	0.05
88	SLE QP 1	-203	6	5735	0.1	-18.32	0.04
88	SLE QP 2	-218	6	5937	0.09	-19.3	0.05
88	SLD 1	362	-1	4703	-7.36	9.06	0.03
88	SLD 2	362	-1	4703	-7.36	9.06	0.03
88	SLD 3	222	-5	3765	-1.13	2.86	0.02
88	SLD 4	222	-5	3765	-1.13	2.86	0.02
88	SLD 5	167	9	6989	-11.6	-1.38	0.05
88	SLD 6	167	9	6989	-11.6	-1.38	0.05
88	SLD 7	-297	-3	3864	9.18	-22.06	0.03
88	SLD 8	-297	-3	3864	9.18	-22.06	0.03
88	SLD 9	-139	14	8011	-9	-16.54	0.06
88	SLD 10	-139	14	8011	-9	-16.54	0.06
88	SLD 11	-604	3	4886	11.78	-37.22	0.04
88	SLD 12	-604	3	4886	11.78	-37.22	0.04
88	SLD 13	-659	16	8110	1.3	-41.46	0.07
88	SLD 14	-659	16	8110	1.3	-41.46	0.07
88	SLD 15	-798	13	7172	7.54	-47.67	0.06
88	SLD 16	-798	13	7172	7.54	-47.67	0.06
88	SLV 1	1141	-10	3045	-18.3	47.18	0.01
88	SLV 2	1141	-10	3045	-18.3	47.18	0.01
88	SLV 3	792	-19	856	-2.53	31.64	-0.01
88	SLV 4	792	-19	856	-2.53	31.64	-0.01
88	SLV 5	718	14	8390	-29.35	24.22	0.06
88	SLV 6	718	14	8390	-29.35	24.22	0.06
88	SLV 7	-444	-15	1093	23.23	-27.6	0
88	SLV 8	-444	-15	1093	23.23	-27.6	0
88	SLV 9	8	26	10782	-23.05	-11.01	0.09
88	SLV 10	8	26	10782	-23.05	-11.01	0.09
88	SLV 11	-1155	-2	3485	29.53	-62.82	0.03
88	SLV 12	-1155	-2	3485	29.53	-62.82	0.03
88	SLV 13	-1228	31	11019	2.7	-70.24	0.1
88	SLV 14	-1228	31	11019	2.7	-70.24	0.1
88	SLV 15	-1577	22	8830	18.48	-85.79	0.09
88	SLV 16	-1577	22	8830	18.48	-85.79	0.09
89	SLU 1	-711	1200	7432	-32.06	-17.1	-0.18
89	SLU 2	-631	1304	7609	-36.25	-12.69	-0.26
89	SLU 3	-727	1234	7630	-32.98	-17.47	-0.19
89	SLU 4	-679	1297	7736	-35.49	-14.82	-0.23
89	SLU 5	-642	1324	7729	-36.77	-12.95	-0.26
89	SLU 6	-738	1254	7749	-33.5	-17.73	-0.19
89	SLU 7	-690	1317	7855	-36.02	-15.08	-0.24
89	SLU 8	-732	1240	7671	-33.11	-17.62	-0.19
89	SLU 9	-684	1303	7778	-35.63	-14.97	-0.23
89	SLU 10	-736	1450	8561	-40.06	-15.46	-0.27
89	SLU 11	-832	1379	8581	-36.79	-20.24	-0.2
89	SLU 12	-784	1442	8687	-39.31	-17.59	-0.25
89	SLU 13	-747	1470	8680	-40.59	-15.72	-0.28
89	SLU 14	-843	1399	8701	-37.32	-20.5	-0.21
89	SLU 15	-795	1462	8807	-39.84	-17.85	-0.25
89	SLU 16	-837	1385	8623	-36.93	-20.39	-0.2
89	SLU 17	-789	1448	8729	-39.44	-17.74	-0.25
89	SLU 18	-861	1408	8792	-37.51	-21.05	-0.2
89	SLU 19	-813	1470	8898	-40.02	-18.41	-0.25
89	SLU 20	-872	1428	8911	-38.03	-21.32	-0.21
89	SLU 21	-824	1490	9017	-40.55	-18.67	-0.25
89	SLU 22	-803	1341	8327	-35.81	-19.44	-0.2
89	SLU 23	-723	1446	8504	-40	-15.03	-0.28
89	SLU 24	-819	1376	8524	-36.73	-19.81	-0.21
89	SLU 25	-771	1438	8630	-39.24	-17.16	-0.25
89	SLU 26	-734	1466	8623	-40.53	-15.29	-0.28
89	SLU 27	-830	1396	8643	-37.26	-20.07	-0.21
89	SLU 28	-782	1458	8749	-39.77	-17.43	-0.26
89	SLU 29	-825	1381	8566	-36.86	-19.96	-0.21
89	SLU 30	-777	1444	8672	-39.38	-17.32	-0.25
89	SLU 31	-828	1591	9455	-43.81	-17.8	-0.29
89	SLU 32	-924	1521	9475	-40.54	-22.58	-0.22
89	SLU 33	-876	1583	9582	-43.06	-19.94	-0.27
89	SLU 34	-839	1611	9575	-44.34	-18.06	-0.3
89	SLU 35	-935	1541	9595	-41.07	-22.84	-0.22
89	SLU 36	-887	1604	9701	-43.59	-20.2	-0.27
89	SLU 37	-930	1527	9517	-40.68	-22.73	-0.22
89	SLU 38	-882	1589	9623	-43.19	-20.09	-0.27
89	SLU 39	-953	1549	9686	-41.26	-23.4	-0.22
89	SLU 40	-905	1612	9792	-43.77	-20.75	-0.27
89	SLU 41	-964	1569	9805	-41.78	-23.66	-0.22
89	SLU 42	-916	1632	9912	-44.3	-21.01	-0.27
89	SLU 43	-892	1511	9355	-40.39	-21.42	-0.23
89	SLU 44	-812	1616	9532	-44.58	-17.01	-0.31
89	SLU 45	-909	1545	9553	-41.31	-21.79	-0.24
89	SLU 46	-861	1608	9659	-43.82	-19.15	-0.28
89	SLU 47	-823	1636	9652	-45.11	-17.27	-0.31
89	SLU 48	-920	1565	9672	-41.84	-22.05	-0.24
89	SLU 49	-872	1628	9778	-44.35	-19.41	-0.29
89	SLU 50	-914	1551	9594	-41.44	-21.95	-0.24
89	SLU 51	-866	1614	9701	-43.96	-19.3	-0.28



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
89	SLU 52	-917	1761	10484	-48.39	-19.78	-0.32
89	SLU 53	-1014	1691	10504	-45.12	-24.56	-0.25
89	SLU 54	-966	1753	10610	-47.64	-21.92	-0.3
89	SLU 55	-928	1781	10604	-48.92	-20.04	-0.33
89	SLU 56	-1025	1711	10624	-45.65	-24.83	-0.25
89	SLU 57	-977	1773	10730	-48.17	-22.18	-0.3
89	SLU 58	-1019	1697	10546	-45.26	-24.72	-0.25
89	SLU 59	-971	1759	10652	-47.77	-22.07	-0.3
89	SLU 60	-1042	1719	10715	-45.84	-25.38	-0.25
89	SLU 61	-994	1782	10821	-48.35	-22.73	-0.3
89	SLU 62	-1053	1739	10834	-46.36	-25.64	-0.25
89	SLU 63	-1005	1802	10941	-48.88	-23	-0.3
89	SLU 64	-984	1653	10250	-44.14	-23.77	-0.25
89	SLU 65	-905	1757	10427	-48.33	-19.35	-0.33
89	SLU 66	-1001	1687	10447	-45.06	-24.14	-0.25
89	SLU 67	-953	1750	10553	-47.57	-21.49	-0.3
89	SLU 68	-915	1777	10546	-48.86	-19.62	-0.33
89	SLU 69	-1012	1707	10566	-45.59	-24.4	-0.26
89	SLU 70	-964	1770	10673	-48.1	-21.75	-0.3
89	SLU 71	-1006	1693	10489	-45.19	-24.29	-0.25
89	SLU 72	-958	1755	10595	-47.71	-21.64	-0.3
89	SLU 73	-1010	1902	11378	-52.14	-22.13	-0.34
89	SLU 74	-1106	1832	11398	-48.87	-26.91	-0.27
89	SLU 75	-1058	1895	11505	-51.39	-24.26	-0.32
89	SLU 76	-1020	1923	11498	-52.67	-22.39	-0.34
89	SLU 77	-1117	1852	11518	-49.4	-27.17	-0.27
89	SLU 78	-1069	1915	11624	-51.92	-24.52	-0.32
89	SLU 79	-1111	1838	11440	-49.01	-27.06	-0.27
89	SLU 80	-1063	1901	11546	-51.52	-24.41	-0.32
89	SLU 81	-1135	1860	11609	-49.59	-27.72	-0.27
89	SLU 82	-1087	1923	11715	-52.1	-25.08	-0.32
89	SLU 83	-1145	1880	11729	-50.12	-27.99	-0.27
89	SLU 84	-1097	1943	11835	-52.63	-25.34	-0.32
89	SLE RA 1	-737	1240	7688	-33.13	-17.77	-0.19
89	SLE RA 2	-684	1310	7806	-35.92	-14.83	-0.24
89	SLE RA 3	-748	1263	7819	-33.74	-18.01	-0.19
89	SLE RA 4	-716	1305	7890	-35.42	-16.25	-0.22
89	SLE RA 5	-691	1323	7886	-36.27	-15	-0.24
89	SLE RA 6	-755	1276	7899	-34.09	-18.19	-0.19
89	SLE RA 7	-723	1318	7970	-35.77	-16.42	-0.22
89	SLE RA 8	-751	1267	7847	-33.83	-18.11	-0.19
89	SLE RA 9	-720	1309	7918	-35.51	-16.35	-0.22
89	SLE RA 10	-754	1407	8440	-38.47	-16.67	-0.25
89	SLE RA 11	-818	1360	8454	-36.29	-19.86	-0.2
89	SLE RA 12	-786	1402	8525	-37.96	-18.1	-0.23
89	SLE RA 13	-761	1420	8520	-38.82	-16.85	-0.25
89	SLE RA 14	-825	1373	8533	-36.64	-20.03	-0.2
89	SLE RA 15	-793	1415	8604	-38.31	-18.27	-0.23
89	SLE RA 16	-822	1364	8482	-36.37	-19.96	-0.2
89	SLE RA 17	-790	1406	8552	-38.05	-18.2	-0.23
89	SLE RA 18	-837	1379	8594	-36.76	-20.4	-0.2
89	SLE RA 19	-805	1420	8665	-38.44	-18.64	-0.23
89	SLE RA 20	-844	1392	8674	-37.11	-20.58	-0.2
89	SLE RA 21	-812	1434	8745	-38.79	-18.82	-0.23
89	SLE FR 1	-737	1240	7688	-33.13	-17.77	-0.19
89	SLE FR 2	-726	1254	7711	-33.69	-17.18	-0.2
89	SLE FR 3	-740	1246	7720	-33.27	-17.84	-0.19
89	SLE FR 4	-756	1296	7983	-34.78	-17.97	-0.2
89	SLE FR 5	-770	1287	7992	-34.36	-18.63	-0.19
89	SLE FR 6	-787	1309	8141	-34.94	-19.09	-0.19
89	SLE QP 1	-737	1240	7688	-33.13	-17.77	-0.19
89	SLE QP 2	-767	1282	7960	-34.22	-18.56	-0.19
89	SLD 1	-399	1103	6070	-31.49	-1.04	-0.36
89	SLD 2	-399	1103	6070	-31.49	-1.04	-0.36
89	SLD 3	-274	816	4707	-21.19	-5.54	-0.26
89	SLD 4	-274	816	4707	-21.19	-5.54	-0.26
89	SLD 5	-846	1664	9460	-49.02	-6.48	-0.39
89	SLD 6	-846	1664	9460	-49.02	-6.48	-0.39
89	SLD 7	-430	706	4917	-14.69	-21.48	-0.06
89	SLD 8	-430	706	4917	-14.69	-21.48	-0.06
89	SLD 9	-1104	1858	11003	-53.75	-15.64	-0.32
89	SLD 10	-1104	1858	11003	-53.75	-15.64	-0.32
89	SLD 11	-688	899	6460	-19.41	-30.64	0.01
89	SLD 12	-688	899	6460	-19.41	-30.64	0.01
89	SLD 13	-1260	1748	11213	-47.25	-31.57	-0.12
89	SLD 14	-1260	1748	11213	-47.25	-31.57	-0.12
89	SLD 15	-1135	1460	9850	-36.95	-36.07	-0.02
89	SLD 16	-1135	1460	9850	-36.95	-36.07	-0.02
89	SLV 1	86	863	3532	-27.9	22.62	-0.59
89	SLV 2	86	863	3532	-27.9	22.62	-0.59
89	SLV 3	387	193	351	-3.8	11.4	-0.35
89	SLV 4	387	193	351	-3.8	11.4	-0.35
89	SLV 5	-966	2173	11457	-68.87	10.81	-0.68
89	SLV 6	-966	2173	11457	-68.87	10.81	-0.68
89	SLV 7	34	-62	852	11.45	-26.58	0.12
89	SLV 8	34	-62	852	11.45	-26.58	0.12
89	SLV 9	-1569	2626	15068	-79.89	-10.53	-0.51
89	SLV 10	-1569	2626	15068	-79.89	-10.53	-0.51
89	SLV 11	-568	390	4463	0.43	-47.92	0.29
89	SLV 12	-568	390	4463	0.43	-47.92	0.29



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
89	SLV 13	-1921	2371	15569	-64.64	-48.52	-0.03
89	SLV 14	-1921	2371	15569	-64.64	-48.52	-0.03
89	SLV 15	-1620	1700	12387	-40.54	-59.73	0.21
89	SLV 16	-1620	1700	12387	-40.54	-59.73	0.21
90	SLU 1	-3	-55	219	3.55	-1.41	-0.01
90	SLU 2	-3	-54	223	3.48	-1.48	-0.01
90	SLU 3	-3	-61	198	3.86	-1.42	-0.01
90	SLU 4	-3	-60	201	3.82	-1.46	-0.01
90	SLU 5	-3	-58	210	3.69	-1.48	-0.01
90	SLU 6	-3	-65	184	4.07	-1.43	-0.01
90	SLU 7	-3	-64	187	4.03	-1.47	-0.01
90	SLU 8	-3	-63	191	3.97	-1.42	-0.01
90	SLU 9	-3	-62	194	3.92	-1.46	-0.01
90	SLU 10	-5	-63	368	3.96	-2.48	-0.01
90	SLU 11	-5	-70	343	4.34	-2.43	-0.01
90	SLU 12	-5	-69	346	4.3	-2.47	-0.01
90	SLU 13	-5	-67	355	4.17	-2.49	-0.01
90	SLU 14	-5	-74	329	4.55	-2.43	-0.01
90	SLU 15	-5	-73	332	4.51	-2.47	-0.01
90	SLU 16	-5	-72	336	4.45	-2.43	-0.01
90	SLU 17	-5	-71	339	4.41	-2.47	-0.01
90	SLU 18	-5	-68	426	4.23	-2.85	-0.02
90	SLU 19	-5	-67	429	4.19	-2.89	-0.02
90	SLU 20	-5	-72	412	4.44	-2.85	-0.02
90	SLU 21	-5	-71	415	4.4	-2.89	-0.02
90	SLU 22	-3	-74	198	4.58	-1.77	-0.01
90	SLU 23	-3	-73	203	4.51	-1.84	-0.01
90	SLU 24	-3	-79	177	4.9	-1.78	-0.01
90	SLU 25	-3	-79	180	4.85	-1.82	-0.01
90	SLU 26	-3	-76	189	4.72	-1.84	-0.01
90	SLU 27	-3	-83	163	5.11	-1.79	-0.01
90	SLU 28	-3	-82	166	5.06	-1.83	-0.01
90	SLU 29	-3	-81	170	5	-1.78	-0.01
90	SLU 30	-3	-80	173	4.96	-1.82	-0.01
90	SLU 31	-5	-82	347	4.99	-2.84	-0.02
90	SLU 32	-5	-88	322	5.38	-2.79	-0.02
90	SLU 33	-5	-88	325	5.34	-2.83	-0.02
90	SLU 34	-5	-85	334	5.2	-2.85	-0.02
90	SLU 35	-5	-92	308	5.59	-2.79	-0.02
90	SLU 36	-5	-91	311	5.55	-2.83	-0.02
90	SLU 37	-5	-90	315	5.48	-2.79	-0.02
90	SLU 38	-5	-90	318	5.44	-2.83	-0.02
90	SLU 39	-6	-87	405	5.27	-3.21	-0.02
90	SLU 40	-6	-86	408	5.23	-3.25	-0.02
90	SLU 41	-6	-91	391	5.48	-3.21	-0.02
90	SLU 42	-6	-90	394	5.44	-3.25	-0.02
90	SLU 43	-3	-65	292	4.26	-1.71	-0.01
90	SLU 44	-3	-64	296	4.19	-1.78	-0.01
90	SLU 45	-3	-71	271	4.57	-1.72	-0.01
90	SLU 46	-3	-70	274	4.53	-1.76	-0.01
90	SLU 47	-3	-68	282	4.4	-1.78	-0.01
90	SLU 48	-3	-75	257	4.78	-1.73	-0.01
90	SLU 49	-3	-74	260	4.74	-1.77	-0.01
90	SLU 50	-3	-73	264	4.68	-1.72	-0.01
90	SLU 51	-3	-72	267	4.63	-1.76	-0.01
90	SLU 52	-5	-73	441	4.67	-2.78	-0.02
90	SLU 53	-5	-80	416	5.05	-2.73	-0.02
90	SLU 54	-5	-79	419	5.01	-2.77	-0.02
90	SLU 55	-5	-77	427	4.88	-2.79	-0.02
90	SLU 56	-5	-84	402	5.26	-2.73	-0.02
90	SLU 57	-5	-83	405	5.22	-2.77	-0.02
90	SLU 58	-5	-82	409	5.16	-2.73	-0.02
90	SLU 59	-5	-81	412	5.12	-2.77	-0.02
90	SLU 60	-6	-78	499	4.94	-3.15	-0.02
90	SLU 61	-6	-78	501	4.9	-3.19	-0.02
90	SLU 62	-6	-82	485	5.15	-3.15	-0.02
90	SLU 63	-6	-81	488	5.11	-3.19	-0.02
90	SLU 64	-4	-84	271	5.29	-2.07	-0.01
90	SLU 65	-4	-83	275	5.22	-2.14	-0.01
90	SLU 66	-4	-90	250	5.61	-2.08	-0.01
90	SLU 67	-4	-89	253	5.56	-2.12	-0.01
90	SLU 68	-4	-86	262	5.43	-2.14	-0.01
90	SLU 69	-4	-93	236	5.82	-2.09	-0.01
90	SLU 70	-4	-93	239	5.77	-2.13	-0.01
90	SLU 71	-4	-91	243	5.71	-2.08	-0.01
90	SLU 72	-4	-91	246	5.67	-2.12	-0.01
90	SLU 73	-6	-92	420	5.7	-3.14	-0.02
90	SLU 74	-6	-99	395	6.09	-3.09	-0.02
90	SLU 75	-6	-98	398	6.05	-3.13	-0.02
90	SLU 76	-6	-96	406	5.91	-3.15	-0.02
90	SLU 77	-6	-102	381	6.3	-3.09	-0.02
90	SLU 78	-6	-102	384	6.26	-3.13	-0.02
90	SLU 79	-6	-101	388	6.19	-3.09	-0.02
90	SLU 80	-6	-100	391	6.15	-3.13	-0.02
90	SLU 81	-7	-97	478	5.98	-3.51	-0.02
90	SLU 82	-7	-96	481	5.94	-3.55	-0.02
90	SLU 83	-7	-101	464	6.19	-3.51	-0.02
90	SLU 84	-7	-100	467	6.15	-3.55	-0.02
90	SLE RA 1	-3	-61	213	3.84	-1.51	-0.01
90	SLE RA 2	-3	-60	216	3.8	-1.56	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
90	SLE RA 3	-3	-64	199	4.05	-1.52	-0.01
90	SLE RA 4	-3	-64	201	4.02	-1.55	-0.01
90	SLE RA 5	-3	-62	207	3.94	-1.56	-0.01
90	SLE RA 6	-3	-67	190	4.19	-1.53	-0.01
90	SLE RA 7	-3	-66	192	4.16	-1.55	-0.01
90	SLE RA 8	-3	-65	194	4.12	-1.52	-0.01
90	SLE RA 9	-3	-65	196	4.09	-1.55	-0.01
90	SLE RA 10	-4	-66	313	4.12	-2.23	-0.01
90	SLE RA 11	-4	-70	296	4.37	-2.19	-0.01
90	SLE RA 12	-4	-70	298	4.35	-2.22	-0.01
90	SLE RA 13	-4	-68	303	4.26	-2.23	-0.01
90	SLE RA 14	-4	-73	286	4.51	-2.2	-0.01
90	SLE RA 15	-4	-72	288	4.49	-2.22	-0.01
90	SLE RA 16	-4	-72	291	4.44	-2.19	-0.01
90	SLE RA 17	-4	-71	293	4.42	-2.22	-0.01
90	SLE RA 18	-5	-69	351	4.3	-2.47	-0.01
90	SLE RA 19	-5	-69	353	4.27	-2.5	-0.01
90	SLE RA 20	-5	-72	342	4.44	-2.48	-0.01
90	SLE RA 21	-5	-71	343	4.41	-2.5	-0.01
90	SLE FR 1	-3	-61	213	3.84	-1.51	-0.01
90	SLE FR 2	-3	-60	213	3.83	-1.52	-0.01
90	SLE FR 3	-3	-62	209	3.9	-1.52	-0.01
90	SLE FR 4	-3	-63	255	3.97	-1.81	-0.01
90	SLE FR 5	-3	-64	251	4.04	-1.8	-0.01
90	SLE FR 6	-4	-65	282	4.07	-1.99	-0.01
90	SLE QP 1	-3	-61	213	3.84	-1.51	-0.01
90	SLE QP 2	-3	-63	254	3.98	-1.8	-0.01
90	SLD 1	-10	38	572	-1.71	0.11	-0.05
90	SLD 2	-10	38	572	-1.71	0.11	-0.05
90	SLD 3	-9	-63	272	4	0.54	-0.04
90	SLD 4	-9	-63	272	4	0.54	-0.04
90	SLD 5	-7	121	804	-6.4	-1.89	-0.03
90	SLD 6	-7	121	804	-6.4	-1.89	-0.03
90	SLD 7	-3	-217	-195	12.66	-0.44	-0.01
90	SLD 8	-3	-217	-195	12.66	-0.44	-0.01
90	SLD 9	-4	91	703	-4.7	-3.16	-0.01
90	SLD 10	-4	91	703	-4.7	-3.16	-0.01
90	SLD 11	0	-247	-295	14.36	-1.72	0.01
90	SLD 12	0	-247	-295	14.36	-1.72	0.01
90	SLD 13	2	-63	236	3.96	-4.15	0.02
90	SLD 14	2	-63	236	3.96	-4.15	0.02
90	SLD 15	3	-164	-63	9.67	-3.72	0.02
90	SLD 16	3	-164	-63	9.67	-3.72	0.02
90	SLV 1	-19	173	995	-9.3	2.67	-0.1
90	SLV 2	-19	173	995	-9.3	2.67	-0.1
90	SLV 3	-16	-63	297	4.03	3.69	-0.08
90	SLV 4	-16	-63	297	4.03	3.69	-0.08
90	SLV 5	-12	366	1536	-20.22	-2	-0.07
90	SLV 6	-12	366	1536	-20.22	-2	-0.07
90	SLV 7	-3	-421	-792	24.21	1.38	-0.01
90	SLV 8	-3	-421	-792	24.21	1.38	-0.01
90	SLV 9	-4	295	1301	-16.25	-4.99	-0.02
90	SLV 10	-4	295	1301	-16.25	-4.99	-0.02
90	SLV 11	5	-492	-1027	28.18	-1.61	0.04
90	SLV 12	5	-492	-1027	28.18	-1.61	0.04
90	SLV 13	9	-63	212	3.93	-7.29	0.06
90	SLV 14	9	-63	212	3.93	-7.29	0.06
90	SLV 15	12	-299	-486	17.26	-6.28	0.08
90	SLV 16	12	-299	-486	17.26	-6.28	0.08
91	SLU 1	4	150	4339	-10.62	2	0.03
91	SLU 2	5	136	4431	-10.25	2.22	0.04
91	SLU 3	4	160	4441	-11.12	2.05	0.03
91	SLU 4	5	151	4496	-10.89	2.18	0.03
91	SLU 5	5	142	4502	-10.59	2.26	0.04
91	SLU 6	4	167	4512	-11.46	2.08	0.03
91	SLU 7	5	158	4567	-11.23	2.22	0.03
91	SLU 8	4	164	4481	-11.3	2.07	0.03
91	SLU 9	5	155	4537	-11.08	2.2	0.03
91	SLU 10	6	149	5052	-11.61	2.53	0.04
91	SLU 11	5	174	5062	-12.47	2.36	0.04
91	SLU 12	6	165	5117	-12.25	2.49	0.04
91	SLU 13	6	156	5123	-11.95	2.56	0.05
91	SLU 14	6	181	5133	-12.81	2.39	0.04
91	SLU 15	6	172	5189	-12.59	2.52	0.04
91	SLU 16	6	178	5102	-12.66	2.37	0.04
91	SLU 17	6	169	5158	-12.44	2.51	0.04
91	SLU 18	6	170	5226	-12.56	2.44	0.04
91	SLU 19	6	161	5281	-12.34	2.57	0.05
91	SLU 20	6	177	5297	-12.9	2.47	0.04
91	SLU 21	6	168	5353	-12.68	2.6	0.05
91	SLU 22	5	161	4852	-11.73	2.31	0.04
91	SLU 23	6	147	4945	-11.35	2.54	0.04
91	SLU 24	5	171	4955	-12.22	2.36	0.04
91	SLU 25	6	162	5010	-11.99	2.5	0.04
91	SLU 26	6	153	5016	-11.69	2.57	0.04
91	SLU 27	5	178	5026	-12.56	2.4	0.04
91	SLU 28	6	169	5081	-12.33	2.53	0.04
91	SLU 29	5	175	4995	-12.41	2.38	0.04
91	SLU 30	6	166	5050	-12.18	2.51	0.04
91	SLU 31	7	160	5566	-12.71	2.84	0.05



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
91	SLU 32	6	185	5576	-13.57	2.67	0.05
91	SLU 33	7	176	5631	-13.35	2.8	0.05
91	SLU 34	7	167	5637	-13.05	2.88	0.05
91	SLU 35	6	191	5647	-13.91	2.7	0.05
91	SLU 36	7	183	5702	-13.69	2.84	0.05
91	SLU 37	6	188	5616	-13.76	2.69	0.05
91	SLU 38	7	180	5672	-13.54	2.82	0.05
91	SLU 39	7	181	5740	-13.66	2.75	0.05
91	SLU 40	7	172	5795	-13.44	2.89	0.05
91	SLU 41	7	188	5811	-14	2.78	0.05
91	SLU 42	7	179	5866	-13.78	2.92	0.05
91	SLU 43	5	192	5464	-13.44	2.49	0.03
91	SLU 44	6	177	5556	-13.06	2.72	0.04
91	SLU 45	5	202	5566	-13.93	2.54	0.03
91	SLU 46	6	193	5622	-13.7	2.68	0.04
91	SLU 47	6	184	5628	-13.4	2.75	0.04
91	SLU 48	5	208	5637	-14.27	2.58	0.03
91	SLU 49	6	200	5693	-14.04	2.71	0.04
91	SLU 50	5	205	5607	-14.11	2.56	0.03
91	SLU 51	6	196	5662	-13.89	2.69	0.04
91	SLU 52	7	191	6178	-14.42	3.02	0.05
91	SLU 53	6	215	6187	-15.28	2.85	0.04
91	SLU 54	7	207	6243	-15.06	2.98	0.05
91	SLU 55	7	198	6249	-14.76	3.06	0.05
91	SLU 56	7	222	6259	-15.62	2.88	0.04
91	SLU 57	7	213	6314	-15.4	3.02	0.05
91	SLU 58	6	219	6228	-15.47	2.86	0.04
91	SLU 59	7	210	6283	-15.25	3	0.05
91	SLU 60	7	211	6351	-15.37	2.93	0.05
91	SLU 61	7	203	6407	-15.15	3.06	0.05
91	SLU 62	7	218	6423	-15.71	2.96	0.05
91	SLU 63	7	209	6478	-15.49	3.1	0.05
91	SLU 64	6	203	5978	-14.54	2.81	0.04
91	SLU 65	7	188	6070	-14.16	3.03	0.05
91	SLU 66	6	212	6080	-15.03	2.86	0.04
91	SLU 67	7	204	6135	-14.8	2.99	0.05
91	SLU 68	7	195	6141	-14.5	3.06	0.05
91	SLU 69	6	219	6151	-15.37	2.89	0.04
91	SLU 70	7	210	6207	-15.14	3.02	0.05
91	SLU 71	6	216	6120	-15.22	2.87	0.04
91	SLU 72	7	207	6176	-14.99	3.01	0.05
91	SLU 73	8	202	6691	-15.52	3.34	0.06
91	SLU 74	7	226	6701	-16.38	3.16	0.05
91	SLU 75	8	217	6756	-16.16	3.3	0.06
91	SLU 76	8	208	6763	-15.86	3.37	0.06
91	SLU 77	7	233	6772	-16.72	3.19	0.05
91	SLU 78	8	224	6828	-16.5	3.33	0.06
91	SLU 79	7	230	6742	-16.57	3.18	0.05
91	SLU 80	8	221	6797	-16.35	3.31	0.06
91	SLU 81	8	222	6865	-16.47	3.24	0.05
91	SLU 82	8	213	6921	-16.25	3.38	0.06
91	SLU 83	8	229	6936	-16.81	3.28	0.06
91	SLU 84	8	220	6992	-16.59	3.41	0.06
91	SLE RA 1	5	154	4485	-10.94	2.09	0.03
91	SLE RA 2	5	144	4547	-10.69	2.24	0.04
91	SLE RA 3	5	160	4553	-11.27	2.12	0.03
91	SLE RA 4	5	154	4590	-11.12	2.21	0.03
91	SLE RA 5	5	148	4595	-10.92	2.26	0.04
91	SLE RA 6	5	165	4601	-11.49	2.14	0.03
91	SLE RA 7	5	159	4638	-11.34	2.23	0.03
91	SLE RA 8	5	162	4581	-11.39	2.13	0.03
91	SLE RA 9	5	157	4617	-11.24	2.22	0.03
91	SLE RA 10	6	153	4961	-11.59	2.44	0.04
91	SLE RA 11	5	169	4968	-12.17	2.33	0.04
91	SLE RA 12	6	163	5005	-12.02	2.42	0.04
91	SLE RA 13	6	157	5009	-11.82	2.47	0.04
91	SLE RA 14	5	174	5015	-12.4	2.35	0.04
91	SLE RA 15	6	168	5052	-12.25	2.44	0.04
91	SLE RA 16	5	172	4995	-12.3	2.34	0.04
91	SLE RA 17	6	166	5032	-12.15	2.43	0.04
91	SLE RA 18	6	167	5077	-12.23	2.38	0.04
91	SLE RA 19	6	161	5114	-12.08	2.47	0.04
91	SLE RA 20	6	171	5125	-12.46	2.4	0.04
91	SLE RA 21	6	165	5161	-12.31	2.49	0.04
91	SLE FR 1	5	154	4485	-10.94	2.09	0.03
91	SLE FR 2	5	152	4498	-10.89	2.12	0.03
91	SLE FR 3	5	155	4504	-11.03	2.1	0.03
91	SLE FR 4	5	155	4675	-11.28	2.21	0.03
91	SLE FR 5	5	159	4682	-11.42	2.19	0.03
91	SLE FR 6	5	160	4781	-11.58	2.24	0.03
91	SLE QP 1	5	154	4485	-10.94	2.09	0.03
91	SLE QP 2	5	157	4663	-11.33	2.18	0.03
91	SLD 1	10	194	5239	-13.43	5.43	0.07
91	SLD 2	10	194	5239	-13.43	5.43	0.07
91	SLD 3	7	-172	4873	3.17	4.5	0.05
91	SLD 4	7	-172	4873	3.17	4.5	0.05
91	SLD 5	10	723	5390	-37.13	4.57	0.07
91	SLD 6	10	723	5390	-37.13	4.57	0.07
91	SLD 7	2	-496	4172	18.19	1.46	0.01
91	SLD 8	2	-496	4172	18.19	1.46	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
91	SLD 9	8	811	5154	-40.85	2.9	0.06
91	SLD 10	8	811	5154	-40.85	2.9	0.06
91	SLD 11	0	-408	3936	14.47	-0.22	-0.01
91	SLD 12	0	-408	3936	14.47	-0.22	-0.01
91	SLD 13	3	486	4452	-25.82	-0.15	0.01
91	SLD 14	3	486	4452	-25.82	-0.15	0.01
91	SLD 15	0	121	4087	-9.23	-1.08	0
91	SLD 16	0	121	4087	-9.23	-1.08	0
91	SLV 1	16	243	6010	-16.23	10.16	0.12
91	SLV 2	16	243	6010	-16.23	10.16	0.12
91	SLV 3	10	-603	5151	22.18	7.91	0.08
91	SLV 4	10	-603	5151	22.18	7.91	0.08
91	SLV 5	17	1467	6370	-71.05	7.98	0.13
91	SLV 6	17	1467	6370	-71.05	7.98	0.13
91	SLV 7	-2	-1354	3506	56.98	0.49	-0.02
91	SLV 8	-2	-1354	3506	56.98	0.49	-0.02
91	SLV 9	12	1669	5819	-79.63	3.87	0.09
91	SLV 10	12	1669	5819	-79.63	3.87	0.09
91	SLV 11	-7	-1152	2956	48.4	-3.62	-0.06
91	SLV 12	-7	-1152	2956	48.4	-3.62	-0.06
91	SLV 13	-1	918	4175	-44.83	-3.55	-0.01
91	SLV 14	-1	918	4175	-44.83	-3.55	-0.01
91	SLV 15	-6	72	3316	-6.42	-5.8	-0.06
91	SLV 16	-6	72	3316	-6.42	-5.8	-0.06
92	SLU 1	0	-97	361	4.79	-0.16	0
92	SLU 2	0	-95	364	4.72	-0.16	0
92	SLU 3	0	-103	348	5.09	-0.15	0
92	SLU 4	0	-102	350	5.05	-0.15	0
92	SLU 5	0	-100	355	4.92	-0.15	0
92	SLU 6	0	-107	339	5.3	-0.14	0
92	SLU 7	0	-106	341	5.26	-0.14	0
92	SLU 8	0	-105	344	5.2	-0.14	0
92	SLU 9	0	-104	345	5.16	-0.14	0
92	SLU 10	-1	-118	510	5.68	-0.67	0
92	SLU 11	-1	-126	494	6.05	-0.66	0
92	SLU 12	-1	-125	496	6.01	-0.66	0
92	SLU 13	-1	-122	501	5.88	-0.66	0
92	SLU 14	-1	-130	486	6.26	-0.65	0
92	SLU 15	-1	-129	488	6.22	-0.65	0
92	SLU 16	-1	-128	490	6.16	-0.65	0
92	SLU 17	-1	-127	492	6.11	-0.65	0
92	SLU 18	-1	-129	570	6.16	-0.89	0
92	SLU 19	-1	-128	572	6.12	-0.89	0
92	SLU 20	-1	-133	561	6.36	-0.88	0
92	SLU 21	-1	-133	563	6.32	-0.88	0
92	SLU 22	0	-121	363	5.93	-0.3	0
92	SLU 23	0	-120	366	5.86	-0.3	0
92	SLU 24	0	-127	350	6.23	-0.29	0
92	SLU 25	0	-126	352	6.19	-0.29	0
92	SLU 26	0	-124	357	6.06	-0.29	0
92	SLU 27	0	-131	342	6.44	-0.28	0
92	SLU 28	0	-131	343	6.39	-0.28	0
92	SLU 29	0	-129	346	6.33	-0.28	0
92	SLU 30	0	-128	347	6.29	-0.28	0
92	SLU 31	-1	-142	512	6.82	-0.81	0
92	SLU 32	-1	-150	497	7.19	-0.8	0
92	SLU 33	-1	-149	498	7.15	-0.8	0
92	SLU 34	-1	-147	504	7.02	-0.8	0
92	SLU 35	-1	-154	488	7.39	-0.79	0
92	SLU 36	-1	-153	490	7.35	-0.79	0
92	SLU 37	-1	-152	492	7.29	-0.79	0
92	SLU 38	-1	-151	494	7.25	-0.79	0
92	SLU 39	-1	-153	572	7.3	-1.03	0
92	SLU 40	-1	-153	574	7.26	-1.03	0
92	SLU 41	-1	-158	564	7.5	-1.02	0
92	SLU 42	-1	-157	565	7.46	-1.02	0
92	SLU 43	0	-117	468	5.83	-0.16	0
92	SLU 44	0	-116	471	5.77	-0.16	0
92	SLU 45	0	-124	455	6.14	-0.15	0
92	SLU 46	0	-123	457	6.1	-0.15	0
92	SLU 47	0	-120	462	5.97	-0.15	0
92	SLU 48	0	-128	447	6.34	-0.14	0
92	SLU 49	0	-127	448	6.3	-0.14	0
92	SLU 50	0	-126	451	6.24	-0.14	0
92	SLU 51	0	-125	453	6.2	-0.14	0
92	SLU 52	-1	-139	617	6.73	-0.67	0
92	SLU 53	-1	-147	602	7.1	-0.66	0
92	SLU 54	-1	-146	604	7.06	-0.66	0
92	SLU 55	-1	-143	609	6.93	-0.66	0
92	SLU 56	-1	-151	593	7.3	-0.65	0
92	SLU 57	-1	-150	595	7.26	-0.65	0
92	SLU 58	-1	-149	597	7.2	-0.65	0
92	SLU 59	-1	-148	599	7.16	-0.65	0
92	SLU 60	-1	-150	677	7.2	-0.89	0
92	SLU 61	-1	-149	679	7.16	-0.89	0
92	SLU 62	-1	-154	669	7.41	-0.88	0
92	SLU 63	-1	-153	671	7.37	-0.88	0
92	SLU 64	0	-142	470	6.97	-0.31	0
92	SLU 65	0	-140	473	6.9	-0.3	0
92	SLU 66	0	-148	458	7.28	-0.29	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
92	SLU 67	0	-147	459	7.24	-0.29	0
92	SLU 68	0	-144	465	7.11	-0.29	0
92	SLU 69	0	-152	449	7.48	-0.28	0
92	SLU 70	0	-151	451	7.44	-0.28	0
92	SLU 71	0	-150	453	7.38	-0.28	0
92	SLU 72	0	-149	455	7.34	-0.28	0
92	SLU 73	-1	-163	620	7.86	-0.81	0
92	SLU 74	-1	-171	604	8.24	-0.8	0
92	SLU 75	-1	-170	606	8.2	-0.8	0
92	SLU 76	-1	-167	611	8.07	-0.8	0
92	SLU 77	-1	-175	595	8.44	-0.79	0
92	SLU 78	-1	-174	597	8.4	-0.79	0
92	SLU 79	-1	-173	600	8.34	-0.79	0
92	SLU 80	-1	-172	601	8.3	-0.79	0
92	SLU 81	-1	-174	680	8.34	-1.03	0
92	SLU 82	-1	-173	681	8.3	-1.03	0
92	SLU 83	-1	-178	671	8.55	-1.02	0
92	SLU 84	-1	-178	673	8.51	-1.02	0
92	SLE RA 1	0	-104	361	5.11	-0.2	0
92	SLE RA 2	0	-103	363	5.07	-0.2	0
92	SLE RA 3	0	-108	353	5.32	-0.19	0
92	SLE RA 4	0	-107	354	5.29	-0.19	0
92	SLE RA 5	0	-106	358	5.2	-0.2	0
92	SLE RA 6	0	-111	347	5.45	-0.19	0
92	SLE RA 7	0	-110	348	5.43	-0.19	0
92	SLE RA 8	0	-109	350	5.39	-0.19	0
92	SLE RA 9	0	-109	351	5.36	-0.19	0
92	SLE RA 10	0	-118	461	5.71	-0.54	0
92	SLE RA 11	0	-123	450	5.96	-0.53	0
92	SLE RA 12	0	-122	452	5.93	-0.53	0
92	SLE RA 13	0	-121	455	5.84	-0.54	0
92	SLE RA 14	0	-126	445	6.09	-0.53	0
92	SLE RA 15	0	-125	446	6.07	-0.53	0
92	SLE RA 16	0	-124	448	6.02	-0.53	0
92	SLE RA 17	0	-124	449	6	-0.53	0
92	SLE RA 18	-1	-125	501	6.03	-0.69	0
92	SLE RA 19	-1	-125	502	6	-0.69	0
92	SLE RA 20	-1	-128	495	6.16	-0.68	0
92	SLE RA 21	-1	-128	496	6.14	-0.68	0
92	SLE FR 1	0	-104	361	5.11	-0.2	0
92	SLE FR 2	0	-103	362	5.1	-0.2	0
92	SLE FR 3	0	-105	359	5.17	-0.2	0
92	SLE FR 4	0	-110	404	5.38	-0.35	0
92	SLE FR 5	0	-111	401	5.44	-0.35	0
92	SLE FR 6	0	-115	431	5.57	-0.45	0
92	SLE QP 1	0	-104	361	5.11	-0.2	0
92	SLE QP 2	0	-110	403	5.39	-0.35	0
92	SLD 1	4	9	589	-0.3	3.48	-0.01
92	SLD 2	4	9	589	-0.3	3.48	-0.01
92	SLD 3	5	-112	419	5.45	4.47	-0.01
92	SLD 4	5	-112	419	5.45	4.47	-0.01
92	SLD 5	-1	110	717	-5.03	-0.7	-0.01
92	SLD 6	-1	110	717	-5.03	-0.7	-0.01
92	SLD 7	3	-295	150	14.12	2.6	0
92	SLD 8	3	-295	150	14.12	2.6	0
92	SLD 9	-4	75	656	-3.34	-3.29	0
92	SLD 10	-4	75	656	-3.34	-3.29	0
92	SLD 11	0	-331	89	15.81	0	0
92	SLD 12	0	-331	89	15.81	0	0
92	SLD 13	-6	-108	387	5.33	-5.17	0
92	SLD 14	-6	-108	387	5.33	-5.17	0
92	SLD 15	-4	-230	217	11.07	-4.18	0
92	SLD 16	-4	-230	217	11.07	-4.18	0
92	SLV 1	10	169	838	-7.87	8.99	-0.02
92	SLV 2	10	169	838	-7.87	8.99	-0.02
92	SLV 3	12	-115	441	5.53	11.39	-0.01
92	SLV 4	12	-115	441	5.53	11.39	-0.01
92	SLV 5	-2	404	1135	-18.91	-1.19	-0.01
92	SLV 6	-2	404	1135	-18.91	-1.19	-0.01
92	SLV 7	8	-542	-187	25.74	6.82	0
92	SLV 8	8	-542	-187	25.74	6.82	0
92	SLV 9	-8	322	993	-14.97	-7.52	0
92	SLV 10	-8	322	993	-14.97	-7.52	0
92	SLV 11	1	-624	-329	29.68	0.49	0.01
92	SLV 12	1	-624	-329	29.68	0.49	0.01
92	SLV 13	-13	-105	365	5.25	-12.09	0.01
92	SLV 14	-13	-105	365	5.25	-12.09	0.01
92	SLV 15	-10	-389	-32	18.64	-9.69	0.01
92	SLV 16	-10	-389	-32	18.64	-9.69	0.01
93	SLU 1	6	571	1975	-30.4	-1.06	0.02
93	SLU 2	0	685	1826	-33.71	-4.19	0.03
93	SLU 3	6	585	2018	-31.15	-1.1	0.02
93	SLU 4	2	653	1928	-33.14	-2.97	0.03
93	SLU 5	0	691	1856	-34.11	-4.21	0.03
93	SLU 6	6	591	2048	-31.54	-1.12	0.02
93	SLU 7	3	659	1958	-33.53	-2.99	0.03
93	SLU 8	6	584	2035	-31.19	-1.1	0.02
93	SLU 9	3	652	1946	-33.17	-2.97	0.03
93	SLU 10	1	737	2029	-36.75	-4.35	0.03
93	SLU 11	7	636	2221	-34.19	-1.26	0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
93	SLU 12	3	704	2131	-36.18	-3.14	0.03
93	SLU 13	1	743	2059	-37.14	-4.37	0.03
93	SLU 14	7	642	2250	-34.58	-1.28	0.02
93	SLU 15	3	711	2161	-36.57	-3.16	0.03
93	SLU 16	7	635	2238	-34.23	-1.26	0.02
93	SLU 17	3	703	2148	-36.21	-3.14	0.03
93	SLU 18	7	645	2265	-34.74	-1.29	0.03
93	SLU 19	3	713	2176	-36.73	-3.17	0.03
93	SLU 20	7	651	2295	-35.13	-1.31	0.03
93	SLU 21	3	719	2206	-37.12	-3.19	0.03
93	SLU 22	6	624	2162	-33.44	-1.23	0.02
93	SLU 23	1	738	2013	-36.75	-4.36	0.03
93	SLU 24	6	637	2205	-34.19	-1.26	0.02
93	SLU 25	3	706	2115	-36.17	-3.14	0.03
93	SLU 26	1	744	2043	-37.14	-4.37	0.03
93	SLU 27	7	644	2235	-34.58	-1.28	0.02
93	SLU 28	3	712	2145	-36.57	-3.16	0.03
93	SLU 29	7	636	2222	-34.22	-1.26	0.02
93	SLU 30	3	705	2133	-36.21	-3.14	0.03
93	SLU 31	1	790	2216	-39.79	-4.52	0.03
93	SLU 32	7	689	2408	-37.23	-1.43	0.03
93	SLU 33	4	757	2318	-39.21	-3.31	0.03
93	SLU 34	1	796	2246	-40.18	-4.54	0.03
93	SLU 35	7	695	2437	-37.62	-1.45	0.03
93	SLU 36	4	763	2348	-39.6	-3.33	0.03
93	SLU 37	7	688	2425	-37.26	-1.43	0.03
93	SLU 38	4	756	2335	-39.25	-3.31	0.03
93	SLU 39	7	698	2452	-37.78	-1.46	0.03
93	SLU 40	4	766	2363	-39.76	-3.34	0.03
93	SLU 41	7	704	2482	-38.17	-1.48	0.03
93	SLU 42	4	772	2393	-40.16	-3.36	0.03
93	SLU 43	7	725	2504	-38.48	-1.32	0.03
93	SLU 44	1	839	2355	-41.79	-4.45	0.03
93	SLU 45	7	738	2546	-39.23	-1.36	0.03
93	SLU 46	4	806	2457	-41.22	-3.23	0.03
93	SLU 47	2	845	2385	-42.19	-4.47	0.03
93	SLU 48	7	744	2576	-39.62	-1.38	0.03
93	SLU 49	4	812	2487	-41.61	-3.25	0.03
93	SLU 50	7	737	2563	-39.27	-1.36	0.03
93	SLU 51	4	805	2474	-41.25	-3.23	0.03
93	SLU 52	2	890	2558	-44.83	-4.61	0.04
93	SLU 53	8	789	2749	-42.27	-1.52	0.03
93	SLU 54	5	858	2660	-44.26	-3.4	0.03
93	SLU 55	2	896	2587	-45.22	-4.63	0.04
93	SLU 56	8	795	2779	-42.66	-1.54	0.03
93	SLU 57	5	864	2689	-44.65	-3.42	0.03
93	SLU 58	8	788	2766	-42.31	-1.52	0.03
93	SLU 59	5	857	2677	-44.29	-3.4	0.03
93	SLU 60	8	798	2794	-42.82	-1.55	0.03
93	SLU 61	5	866	2704	-44.81	-3.43	0.03
93	SLU 62	8	804	2823	-43.21	-1.57	0.03
93	SLU 63	5	873	2734	-45.2	-3.45	0.03
93	SLU 64	8	777	2691	-41.52	-1.49	0.03
93	SLU 65	2	891	2542	-44.83	-4.62	0.04
93	SLU 66	8	791	2733	-42.27	-1.52	0.03
93	SLU 67	5	859	2644	-44.25	-3.4	0.03
93	SLU 68	2	898	2572	-45.22	-4.63	0.04
93	SLU 69	8	797	2763	-42.66	-1.54	0.03
93	SLU 70	5	865	2674	-44.65	-3.42	0.03
93	SLU 71	8	790	2750	-42.3	-1.52	0.03
93	SLU 72	5	858	2661	-44.29	-3.4	0.03
93	SLU 73	3	943	2745	-47.87	-4.78	0.04
93	SLU 74	9	842	2936	-45.31	-1.69	0.03
93	SLU 75	5	911	2847	-47.29	-3.57	0.04
93	SLU 76	3	949	2774	-48.26	-4.8	0.04
93	SLU 77	9	848	2966	-45.7	-1.71	0.03
93	SLU 78	5	917	2876	-47.68	-3.59	0.04
93	SLU 79	9	841	2953	-45.34	-1.69	0.03
93	SLU 80	5	910	2864	-47.33	-3.57	0.04
93	SLU 81	9	851	2981	-45.86	-1.72	0.03
93	SLU 82	5	919	2891	-47.84	-3.6	0.04
93	SLU 83	9	857	3010	-46.25	-1.74	0.03
93	SLU 84	5	925	2921	-48.24	-3.62	0.04
93	SLE RA 1	6	586	2029	-31.27	-1.11	0.02
93	SLE RA 2	2	662	1929	-33.48	-3.19	0.03
93	SLE RA 3	6	595	2057	-31.77	-1.13	0.02
93	SLE RA 4	4	641	1997	-33.09	-2.38	0.02
93	SLE RA 5	2	667	1949	-33.74	-3.21	0.03
93	SLE RA 6	6	599	2077	-32.03	-1.14	0.02
93	SLE RA 7	4	645	2017	-33.36	-2.4	0.03
93	SLE RA 8	6	595	2069	-31.79	-1.13	0.02
93	SLE RA 9	4	640	2009	-33.12	-2.38	0.03
93	SLE RA 10	3	697	2065	-35.5	-3.3	0.03
93	SLE RA 11	6	630	2192	-33.79	-1.24	0.02
93	SLE RA 12	4	675	2133	-35.12	-2.49	0.03
93	SLE RA 13	3	701	2084	-35.76	-3.31	0.03
93	SLE RA 14	6	634	2212	-34.06	-1.25	0.02
93	SLE RA 15	4	679	2153	-35.38	-2.51	0.03
93	SLE RA 16	6	629	2204	-33.82	-1.24	0.02
93	SLE RA 17	4	674	2144	-35.14	-2.49	0.03



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
		x	y	z		x	y	z	
93	SLE RA 18	6	635	2222		-34.16	-1.26	0.02	
93	SLE RA 19	4	681	2162		-35.49	-2.51	0.03	
93	SLE RA 20	7	639	2242		-34.42	-1.27	0.02	
93	SLE RA 21	4	685	2182		-35.75	-2.53	0.03	
93	SLE FR 1	6	586	2029		-31.27	-1.11	0.02	
93	SLE FR 2	5	602	2009		-31.71	-1.52	0.02	
93	SLE FR 3	6	588	2037		-31.37	-1.11	0.02	
93	SLE FR 4	5	616	2067		-32.58	-1.57	0.02	
93	SLE FR 5	6	603	2095		-32.24	-1.16	0.02	
93	SLE FR 6	6	611	2125		-32.72	-1.18	0.02	
93	SLE QP 1	6	586	2029		-31.27	-1.11	0.02	
93	SLE QP 2	6	601	2087		-32.14	-1.15	0.02	
93	SLD 1	7	604	3170		-50.03	1.2	0.03	
93	SLD 2	7	604	3170		-50.03	1.2	0.03	
93	SLD 3	15	231	2776		-33.29	4.86	0.03	
93	SLD 4	15	231	2776		-33.29	4.86	0.03	
93	SLD 5	-6	1169	3010		-62.89	-6	0.04	
93	SLD 6	-6	1169	3010		-62.89	-6	0.04	
93	SLD 7	21	-76	1695		-7.1	6.21	0.01	
93	SLD 8	21	-76	1695		-7.1	6.21	0.01	
93	SLD 9	-9	1279	2478		-57.17	-8.51	0.03	
93	SLD 10	-9	1279	2478		-57.17	-8.51	0.03	
93	SLD 11	18	34	1163		-1.39	3.7	0.01	
93	SLD 12	18	34	1163		-1.39	3.7	0.01	
93	SLD 13	-3	971	1398		-30.98	-7.17	0.02	
93	SLD 14	-3	971	1398		-30.98	-7.17	0.02	
93	SLD 15	5	598	1003		-14.25	-3.51	0.01	
93	SLD 16	5	598	1003		-14.25	-3.51	0.01	
93	SLV 1	7	603	4623		-73.69	4.08	0.05	
93	SLV 2	7	603	4623		-73.69	4.08	0.05	
93	SLV 3	28	-262	3681		-35.06	13.45	0.03	
93	SLV 4	28	-262	3681		-35.06	13.45	0.03	
93	SLV 5	-25	1914	4276		-103.19	-13.8	0.06	
93	SLV 6	-25	1914	4276		-103.19	-13.8	0.06	
93	SLV 7	44	-970	1137		25.57	17.44	0	
93	SLV 8	44	-970	1137		25.57	17.44	0	
93	SLV 9	-32	2172	3036		-89.85	-19.75	0.05	
93	SLV 10	-32	2172	3036		-89.85	-19.75	0.05	
93	SLV 11	37	-711	-102		38.91	11.49	-0.01	
93	SLV 12	37	-711	-102		38.91	11.49	-0.01	
93	SLV 13	-16	1464	492		-29.22	-15.76	0.01	
93	SLV 14	-16	1464	492		-29.22	-15.76	0.01	
93	SLV 15	5	599	-450		9.41	-6.39	0	
93	SLV 16	5	599	-450		9.41	-6.39	0	
94	SLU 1	0	751	2620		-45.46	1.69	0.01	
94	SLU 2	-8	1069	2898		-61.27	1.41	-0.55	
94	SLU 3	0	774	2681		-46.83	1.7	-0.01	
94	SLU 4	-5	965	2847		-56.32	1.53	-0.34	
94	SLU 5	-8	1085	2938		-62.2	1.42	-0.56	
94	SLU 6	0	790	2721		-47.77	1.71	-0.02	
94	SLU 7	-5	981	2887		-57.25	1.54	-0.35	
94	SLU 8	0	783	2700		-47.33	1.71	-0.01	
94	SLU 9	-5	973	2867		-56.81	1.54	-0.35	
94	SLU 10	-8	1157	3239		-66.76	1.67	-0.51	
94	SLU 11	0	862	3022		-52.33	1.96	0.03	
94	SLU 12	-5	1053	3189		-61.81	1.8	-0.3	
94	SLU 13	-8	1173	3279		-67.69	1.68	-0.52	
94	SLU 14	0	878	3062		-53.26	1.97	0.02	
94	SLU 15	-5	1069	3229		-62.74	1.81	-0.31	
94	SLU 16	0	871	3041		-52.82	1.97	0.03	
94	SLU 17	-5	1062	3208		-62.3	1.8	-0.31	
94	SLU 18	1	877	3107		-53.31	2.06	0.06	
94	SLU 19	-4	1067	3274		-62.79	1.9	-0.27	
94	SLU 20	1	893	3148		-54.24	2.07	0.05	
94	SLU 21	-4	1083	3314		-63.73	1.91	-0.28	
94	SLU 22	0	840	2933		-50.93	1.89	0.02	
94	SLU 23	-8	1158	3211		-66.74	1.61	-0.54	
94	SLU 24	0	864	2994		-52.3	1.9	0	
94	SLU 25	-5	1054	3161		-61.78	1.73	-0.33	
94	SLU 26	-8	1174	3251		-67.67	1.62	-0.55	
94	SLU 27	0	880	3034		-53.23	1.91	-0.01	
94	SLU 28	-5	1070	3201		-62.72	1.74	-0.34	
94	SLU 29	0	872	3013		-52.8	1.91	0	
94	SLU 30	-5	1063	3180		-62.28	1.74	-0.34	
94	SLU 31	-8	1247	3552		-72.23	1.87	-0.5	
94	SLU 32	0	952	3335		-57.8	2.16	0.04	
94	SLU 33	-5	1143	3502		-67.28	2	-0.29	
94	SLU 34	-8	1262	3593		-73.16	1.88	-0.51	
94	SLU 35	0	968	3375		-58.73	2.17	0.03	
94	SLU 36	-5	1159	3542		-68.21	2.01	-0.3	
94	SLU 37	0	960	3355		-58.29	2.17	0.03	
94	SLU 38	-5	1151	3521		-67.77	2	-0.3	
94	SLU 39	1	966	3421		-58.78	2.26	0.07	
94	SLU 40	-4	1157	3588		-68.26	2.1	-0.26	
94	SLU 41	1	982	3461		-59.71	2.27	0.06	
94	SLU 42	-4	1173	3628		-69.2	2.1	-0.27	
94	SLU 43	0	945	3298		-57.22	2.13	0.01	
94	SLU 44	-8	1263	3576		-73.03	1.85	-0.55	
94	SLU 45	0	968	3359		-58.59	2.14	-0.01	
94	SLU 46	-5	1159	3526		-68.08	1.97	-0.34	



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
94	SLU 47	-8	1279	3616	-73.96	1.86	-0.56
94	SLU 48	0	984	3399	-59.53	2.15	-0.02
94	SLU 49	-5	1175	3566	-69.01	1.98	-0.35
94	SLU 50	0	977	3379	-59.09	2.14	-0.01
94	SLU 51	-5	1168	3545	-68.57	1.98	-0.35
94	SLU 52	-8	1351	3918	-78.52	2.11	-0.51
94	SLU 53	0	1057	3701	-64.09	2.4	0.03
94	SLU 54	-5	1247	3867	-73.57	2.23	-0.3
94	SLU 55	-8	1367	3958	-79.46	2.12	-0.52
94	SLU 56	0	1073	3741	-65.02	2.41	0.02
94	SLU 57	-5	1263	3907	-74.51	2.24	-0.31
94	SLU 58	0	1065	3720	-64.58	2.41	0.02
94	SLU 59	-5	1256	3887	-74.07	2.24	-0.31
94	SLU 60	1	1071	3786	-65.07	2.5	0.06
94	SLU 61	-4	1262	3953	-74.56	2.33	-0.27
94	SLU 62	1	1087	3826	-66.01	2.51	0.05
94	SLU 63	-4	1278	3993	-75.49	2.34	-0.28
94	SLU 64	0	1035	3612	-62.69	2.32	0.02
94	SLU 65	-8	1353	3890	-78.5	2.05	-0.54
94	SLU 66	0	1058	3672	-64.06	2.34	0
94	SLU 67	-5	1249	3839	-73.55	2.17	-0.33
94	SLU 68	-8	1369	3930	-79.43	2.06	-0.55
94	SLU 69	0	1074	3713	-65	2.35	-0.01
94	SLU 70	-5	1265	3879	-74.48	2.18	-0.34
94	SLU 71	0	1067	3692	-64.56	2.34	0
94	SLU 72	-5	1257	3859	-74.04	2.18	-0.34
94	SLU 73	-8	1441	4231	-83.99	2.31	-0.5
94	SLU 74	0	1146	4014	-69.56	2.6	0.04
94	SLU 75	-5	1337	4181	-79.04	2.43	-0.29
94	SLU 76	-8	1457	4271	-84.93	2.32	-0.51
94	SLU 77	0	1162	4054	-70.49	2.61	0.03
94	SLU 78	-5	1353	4221	-79.98	2.44	-0.3
94	SLU 79	0	1155	4033	-70.05	2.61	0.03
94	SLU 80	-5	1346	4200	-79.54	2.44	-0.3
94	SLU 81	1	1161	4099	-70.54	2.7	0.07
94	SLU 82	-4	1352	4266	-80.02	2.53	-0.26
94	SLU 83	1	1177	4139	-71.47	2.71	0.06
94	SLU 84	-4	1368	4306	-80.96	2.54	-0.27
94	SLE RA 1	0	776	2709	-47.02	1.74	0.01
94	SLE RA 2	-5	988	2895	-57.56	1.56	-0.36
94	SLE RA 3	0	792	2750	-47.94	1.75	0
94	SLE RA 4	-3	919	2861	-54.26	1.64	-0.22
94	SLE RA 5	-6	999	2921	-58.18	1.57	-0.37
94	SLE RA 6	0	802	2777	-48.56	1.76	0
94	SLE RA 7	-3	930	2888	-54.88	1.65	-0.23
94	SLE RA 8	0	798	2763	-48.27	1.76	0
94	SLE RA 9	-3	925	2874	-54.59	1.65	-0.22
94	SLE RA 10	-5	1047	3122	-61.22	1.73	-0.33
94	SLE RA 11	0	851	2977	-51.6	1.93	0.03
94	SLE RA 12	-3	978	3089	-57.92	1.82	-0.2
94	SLE RA 13	-5	1058	3149	-61.85	1.74	-0.34
94	SLE RA 14	0	861	3004	-52.22	1.94	0.02
94	SLE RA 15	-3	988	3115	-58.54	1.82	-0.2
94	SLE RA 16	0	856	2990	-51.93	1.93	0.02
94	SLE RA 17	-3	984	3102	-58.25	1.82	-0.2
94	SLE RA 18	1	860	3034	-52.26	1.99	0.05
94	SLE RA 19	-3	987	3146	-58.58	1.88	-0.18
94	SLE RA 20	0	871	3061	-52.88	2	0.04
94	SLE RA 21	-3	998	3172	-59.2	1.89	-0.18
94	SLE FR 1	0	776	2709	-47.02	1.74	0.01
94	SLE FR 2	-1	819	2746	-49.13	1.71	-0.06
94	SLE FR 3	0	781	2720	-47.27	1.75	0.01
94	SLE FR 4	-1	844	2844	-50.7	1.78	-0.05
94	SLE FR 5	0	806	2818	-48.84	1.82	0.02
94	SLE FR 6	0	818	2872	-49.64	1.87	0.03
94	SLE QP 1	0	776	2709	-47.02	1.74	0.01
94	SLE QP 2	0	801	2807	-48.59	1.82	0.02
94	SLD 1	0	824	2781	-49.61	2.64	-0.02
94	SLD 2	0	824	2781	-49.61	2.64	-0.02
94	SLD 3	12	384	2384	-28.4	3.46	0.75
94	SLD 4	12	384	2384	-28.4	3.46	0.75
94	SLD 5	-19	1475	3401	-81.07	0.82	-1.16
94	SLD 6	-19	1475	3401	-81.07	0.82	-1.16
94	SLD 7	23	10	2078	-10.36	3.56	1.41
94	SLD 8	23	10	2078	-10.36	3.56	1.41
94	SLD 9	-22	1593	3536	-86.83	0.08	-1.36
94	SLD 10	-22	1593	3536	-86.83	0.08	-1.36
94	SLD 11	19	128	2213	-16.11	2.82	1.2
94	SLD 12	19	128	2213	-16.11	2.82	1.2
94	SLD 13	-11	1219	3230	-68.79	0.18	-0.7
94	SLD 14	-11	1219	3230	-68.79	0.18	-0.7
94	SLD 15	1	779	2833	-47.57	1	0.07
94	SLD 16	1	779	2833	-47.57	1	0.07
94	SLV 1	-1	855	2747	-51.04	3.79	-0.08
94	SLV 2	-1	855	2747	-51.04	3.79	-0.08
94	SLV 3	29	-206	1799	0.12	5.71	1.78
94	SLV 4	29	-206	1799	0.12	5.71	1.78
94	SLV 5	-46	2426	4226	-126.92	-0.5	-2.84
94	SLV 6	-46	2426	4226	-126.92	-0.5	-2.84
94	SLV 7	54	-1110	1067	43.61	5.9	3.38



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
94	SLV 8	54	-1110	1067	43.61	5.9	3.38
94	SLV 9	-54	2712	4547	-140.8	-2.26	-3.33
94	SLV 10	-54	2712	4547	-140.8	-2.26	-3.33
94	SLV 11	46	-824	1387	29.73	4.14	2.88
94	SLV 12	46	-824	1387	29.73	4.14	2.88
94	SLV 13	-28	1809	3815	-97.3	-2.07	-1.74
94	SLV 14	-28	1809	3815	-97.3	-2.07	-1.74
94	SLV 15	2	748	2867	-46.14	-0.15	0.13
94	SLV 16	2	748	2867	-46.14	-0.15	0.13
95	SLU 1	-7	-106	4616	-8.99	-0.76	0.03
95	SLU 2	-8	-136	4715	-8.64	-0.98	0.01
95	SLU 3	-7	-101	4723	-9.33	-0.76	0.03
95	SLU 4	-7	-119	4782	-9.12	-0.89	0.02
95	SLU 5	-8	-133	4789	-8.86	-0.98	0.01
95	SLU 6	-7	-98	4797	-9.55	-0.76	0.03
95	SLU 7	-7	-116	4856	-9.34	-0.89	0.02
95	SLU 8	-7	-99	4764	-9.43	-0.76	0.03
95	SLU 9	-7	-117	4824	-9.22	-0.89	0.02
95	SLU 10	-9	-171	5382	-9.82	-1.15	-0.01
95	SLU 11	-8	-136	5390	-10.5	-0.93	0.01
95	SLU 12	-9	-154	5449	-10.29	-1.06	0
95	SLU 13	-9	-168	5456	-10.04	-1.15	-0.01
95	SLU 14	-8	-133	5464	-10.72	-0.93	0.01
95	SLU 15	-9	-151	5523	-10.51	-1.06	0
95	SLU 16	-8	-134	5431	-10.6	-0.93	0.01
95	SLU 17	-9	-152	5490	-10.39	-1.06	0
95	SLU 18	-9	-157	5568	-10.67	-1.01	0
95	SLU 19	-9	-175	5628	-10.46	-1.14	-0.01
95	SLU 20	-9	-153	5642	-10.89	-1	0
95	SLU 21	-9	-171	5702	-10.68	-1.13	-0.01
95	SLU 22	-8	-138	5140	-9.8	-0.92	0.01
95	SLU 23	-9	-168	5239	-9.45	-1.14	-0.01
95	SLU 24	-8	-133	5247	-10.13	-0.92	0.01
95	SLU 25	-9	-151	5306	-9.92	-1.06	0
95	SLU 26	-9	-164	5313	-9.67	-1.14	-0.01
95	SLU 27	-8	-129	5321	-10.35	-0.92	0.01
95	SLU 28	-9	-147	5380	-10.14	-1.05	0
95	SLU 29	-8	-130	5288	-10.24	-0.92	0.01
95	SLU 30	-9	-148	5348	-10.03	-1.05	0
95	SLU 31	-10	-203	5906	-10.62	-1.31	-0.03
95	SLU 32	-10	-168	5913	-11.31	-1.09	-0.01
95	SLU 33	-10	-186	5973	-11.1	-1.23	-0.02
95	SLU 34	-10	-199	5980	-10.84	-1.31	-0.03
95	SLU 35	-10	-164	5988	-11.53	-1.09	-0.01
95	SLU 36	-10	-182	6047	-11.32	-1.22	-0.02
95	SLU 37	-10	-166	5955	-11.41	-1.09	-0.01
95	SLU 38	-10	-184	6014	-11.2	-1.22	-0.02
95	SLU 39	-10	-188	6092	-11.48	-1.17	-0.02
95	SLU 40	-11	-206	6152	-11.27	-1.3	-0.03
95	SLU 41	-10	-184	6166	-11.69	-1.16	-0.02
95	SLU 42	-11	-202	6226	-11.48	-1.3	-0.03
95	SLU 43	-8	-127	5821	-11.42	-0.94	0.04
95	SLU 44	-9	-157	5920	-11.07	-1.16	0.02
95	SLU 45	-8	-122	5928	-11.75	-0.94	0.04
95	SLU 46	-9	-140	5987	-11.54	-1.07	0.03
95	SLU 47	-9	-154	5994	-11.28	-1.15	0.02
95	SLU 48	-9	-119	6002	-11.97	-0.93	0.04
95	SLU 49	-9	-137	6061	-11.76	-1.07	0.03
95	SLU 50	-8	-120	5969	-11.85	-0.93	0.04
95	SLU 51	-9	-138	6029	-11.64	-1.06	0.03
95	SLU 52	-11	-193	6587	-12.24	-1.33	0
95	SLU 53	-10	-158	6595	-12.92	-1.11	0.02
95	SLU 54	-10	-175	6654	-12.71	-1.24	0.01
95	SLU 55	-11	-189	6661	-12.46	-1.32	0
95	SLU 56	-10	-154	6669	-13.14	-1.1	0.02
95	SLU 57	-11	-172	6728	-12.93	-1.23	0.01
95	SLU 58	-10	-155	6636	-13.03	-1.1	0.02
95	SLU 59	-10	-173	6695	-12.82	-1.23	0.01
95	SLU 60	-10	-178	6774	-13.09	-1.18	0.01
95	SLU 61	-11	-196	6833	-12.88	-1.31	0
95	SLU 62	-10	-174	6848	-13.31	-1.18	0.01
95	SLU 63	-11	-192	6907	-13.1	-1.31	0
95	SLU 64	-10	-159	6345	-12.22	-1.1	0.02
95	SLU 65	-10	-189	6444	-11.87	-1.32	0
95	SLU 66	-10	-154	6452	-12.56	-1.1	0.02
95	SLU 67	-10	-172	6511	-12.35	-1.23	0.01
95	SLU 68	-10	-185	6518	-12.09	-1.32	0.01
95	SLU 69	-10	-150	6526	-12.77	-1.09	0.03
95	SLU 70	-10	-168	6585	-12.56	-1.23	0.02
95	SLU 71	-10	-152	6493	-12.66	-1.09	0.03
95	SLU 72	-10	-170	6553	-12.45	-1.22	0.02
95	SLU 73	-12	-224	7111	-13.04	-1.49	-0.02
95	SLU 74	-11	-189	7119	-13.73	-1.27	0.01
95	SLU 75	-12	-207	7178	-13.52	-1.4	-0.01
95	SLU 76	-12	-220	7185	-13.26	-1.49	-0.01
95	SLU 77	-11	-185	7193	-13.95	-1.26	0.01
95	SLU 78	-12	-203	7252	-13.74	-1.4	0
95	SLU 79	-11	-187	7160	-13.83	-1.26	0.01
95	SLU 80	-12	-205	7219	-13.62	-1.39	0
95	SLU 81	-12	-209	7297	-13.9	-1.34	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
95	SLU 82	-12	-227	7357	-13.69	-1.47	-0.02
95	SLU 83	-12	-205	7372	-14.12	-1.34	0
95	SLU 84	-12	-223	7431	-13.91	-1.47	-0.01
95	SLE RA 1	-7	-115	4766	-9.22	-0.81	0.02
95	SLE RA 2	-8	-135	4832	-8.99	-0.96	0.01
95	SLE RA 3	-7	-112	4837	-9.45	-0.81	0.02
95	SLE RA 4	-8	-124	4876	-9.31	-0.9	0.01
95	SLE RA 5	-8	-133	4881	-9.14	-0.95	0.01
95	SLE RA 6	-7	-109	4886	-9.59	-0.81	0.02
95	SLE RA 7	-8	-121	4926	-9.45	-0.89	0.02
95	SLE RA 8	-7	-110	4864	-9.52	-0.81	0.02
95	SLE RA 9	-8	-122	4904	-9.38	-0.89	0.02
95	SLE RA 10	-9	-159	5276	-9.77	-1.07	0
95	SLE RA 11	-8	-135	5281	-10.23	-0.92	0.01
95	SLE RA 12	-8	-147	5321	-10.09	-1.01	0
95	SLE RA 13	-9	-156	5325	-9.92	-1.07	0
95	SLE RA 14	-8	-133	5331	-10.37	-0.92	0.01
95	SLE RA 15	-9	-145	5370	-10.23	-1.01	0
95	SLE RA 16	-8	-134	5309	-10.3	-0.92	0.01
95	SLE RA 17	-8	-146	5349	-10.16	-1.01	0
95	SLE RA 18	-8	-149	5401	-10.34	-0.97	0
95	SLE RA 19	-9	-161	5440	-10.2	-1.06	0
95	SLE RA 20	-9	-146	5450	-10.49	-0.97	0
95	SLE RA 21	-9	-158	5490	-10.35	-1.06	0
95	SLE FR 1	-7	-115	4766	-9.22	-0.81	0.02
95	SLE FR 2	-7	-119	4779	-9.18	-0.84	0.02
95	SLE FR 3	-7	-114	4785	-9.28	-0.81	0.02
95	SLE FR 4	-8	-129	4969	-9.51	-0.89	0.01
95	SLE FR 5	-8	-124	4976	-9.62	-0.86	0.02
95	SLE FR 6	-8	-132	5083	-9.78	-0.89	0.01
95	SLE QP 1	-7	-115	4766	-9.22	-0.81	0.02
95	SLE QP 2	-8	-125	4956	-9.56	-0.86	0.02
95	SLD 1	-4	233	4594	-12.54	1.01	0.19
95	SLD 2	-4	233	4594	-12.54	1.01	0.19
95	SLD 3	-1	-76	4341	8.25	1.98	0.23
95	SLD 4	-1	-76	4341	8.25	1.98	0.23
95	SLD 5	-11	450	5231	-41.99	-1.77	0.01
95	SLD 6	-11	450	5231	-41.99	-1.77	0.01
95	SLD 7	-1	-579	4388	27.32	1.47	0.14
95	SLD 8	-1	-579	4388	27.32	1.47	0.14
95	SLD 9	-14	328	5524	-46.43	-3.19	-0.11
95	SLD 10	-14	328	5524	-46.43	-3.19	-0.11
95	SLD 11	-4	-701	4681	22.87	0.06	0.02
95	SLD 12	-4	-701	4681	22.87	0.06	0.02
95	SLD 13	-14	-175	5571	-27.37	-3.7	-0.2
95	SLD 14	-14	-175	5571	-27.37	-3.7	-0.2
95	SLD 15	-11	-484	5318	-6.58	-2.72	-0.16
95	SLD 16	-11	-484	5318	-6.58	-2.72	-0.16
95	SLV 1	0	710	4113	-16.47	3.72	0.44
95	SLV 2	0	710	4113	-16.47	3.72	0.44
95	SLV 3	7	-9	3517	31.93	6.03	0.54
95	SLV 4	7	-9	3517	31.93	6.03	0.54
95	SLV 5	-15	1215	5607	-85.05	-2.99	0
95	SLV 6	-15	1215	5607	-85.05	-2.99	0
95	SLV 7	7	-1180	3621	76.3	4.72	0.32
95	SLV 8	7	-1180	3621	76.3	4.72	0.32
95	SLV 9	-22	929	6292	-95.42	-6.43	-0.29
95	SLV 10	-22	929	6292	-95.42	-6.43	-0.29
95	SLV 11	0	-1466	4305	65.93	1.28	0.03
95	SLV 12	0	-1466	4305	65.93	1.28	0.03
95	SLV 13	-22	-242	6395	-51.05	-7.75	-0.51
95	SLV 14	-22	-242	6395	-51.05	-7.75	-0.51
95	SLV 15	-15	-961	5799	-2.64	-5.44	-0.41
95	SLV 16	-15	-961	5799	-2.64	-5.44	-0.41
96	SLU 1	2	769	2867	-46.31	0.41	0
96	SLU 2	1	1114	3129	-63.96	-0.07	0
96	SLU 3	2	792	2938	-47.72	0.42	0
96	SLU 4	2	999	3095	-58.31	0.14	0
96	SLU 5	1	1129	3174	-64.87	-0.06	0
96	SLU 6	2	807	2984	-48.64	0.43	0
96	SLU 7	2	1014	3140	-59.23	0.15	0
96	SLU 8	2	799	2959	-48.14	0.43	0
96	SLU 9	2	1006	3115	-58.73	0.14	0
96	SLU 10	2	1207	3518	-69.73	-0.02	0
96	SLU 11	2	885	3328	-53.49	0.47	0
96	SLU 12	2	1092	3484	-64.08	0.19	0
96	SLU 13	2	1222	3564	-70.64	-0.01	0
96	SLU 14	2	900	3373	-54.41	0.48	0
96	SLU 15	2	1107	3530	-65	0.2	0
96	SLU 16	2	891	3348	-53.9	0.48	0
96	SLU 17	2	1099	3505	-64.49	0.19	0
96	SLU 18	2	901	3424	-54.55	0.48	0
96	SLU 19	2	1108	3581	-65.14	0.2	0
96	SLU 20	2	916	3470	-55.46	0.49	0
96	SLU 21	2	1123	3626	-66.05	0.2	0
96	SLU 22	2	863	3227	-52.06	0.46	0
96	SLU 23	2	1208	3489	-69.71	-0.01	0
96	SLU 24	2	886	3298	-53.48	0.48	0
96	SLU 25	2	1093	3455	-64.07	0.19	0
96	SLU 26	2	1223	3534	-70.63	-0.01	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
96	SLU 27	2	901	3343	-54.39	0.48	0
96	SLU 28	2	1108	3500	-64.98	0.2	0
96	SLU 29	2	893	3319	-53.89	0.48	0
96	SLU 30	2	1100	3475	-64.48	0.19	0
96	SLU 31	2	1301	3878	-75.48	0.04	0
96	SLU 32	3	979	3687	-59.25	0.53	0
96	SLU 33	2	1186	3844	-69.84	0.24	0
96	SLU 34	2	1316	3924	-76.39	0.04	0
96	SLU 35	3	994	3733	-60.16	0.53	0
96	SLU 36	2	1201	3890	-70.75	0.25	0
96	SLU 37	3	985	3708	-59.66	0.53	0
96	SLU 38	2	1193	3865	-70.25	0.24	0
96	SLU 39	3	995	3784	-60.3	0.53	0
96	SLU 40	2	1202	3941	-70.89	0.25	0
96	SLU 41	3	1010	3829	-61.22	0.54	0
96	SLU 42	2	1217	3986	-71.81	0.26	0
96	SLU 43	3	967	3604	-58.23	0.52	0
96	SLU 44	2	1312	3866	-75.88	0.04	0
96	SLU 45	3	990	3675	-59.64	0.53	0
96	SLU 46	2	1198	3832	-70.23	0.24	0
96	SLU 47	2	1327	3911	-76.79	0.05	0
96	SLU 48	3	1005	3720	-60.56	0.54	0
96	SLU 49	2	1213	3877	-71.15	0.25	0
96	SLU 50	3	997	3695	-60.06	0.53	0
96	SLU 51	2	1204	3852	-70.65	0.25	0
96	SLU 52	2	1405	4255	-81.65	0.09	0
96	SLU 53	3	1083	4064	-65.41	0.58	0
96	SLU 54	2	1290	4221	-76	0.29	0
96	SLU 55	2	1420	4301	-82.56	0.1	0
96	SLU 56	3	1098	4110	-66.33	0.59	0
96	SLU 57	3	1305	4267	-76.92	0.3	0
96	SLU 58	3	1090	4085	-65.82	0.58	0
96	SLU 59	2	1297	4242	-76.41	0.3	0
96	SLU 60	3	1099	4161	-66.47	0.59	0
96	SLU 61	3	1307	4318	-77.06	0.3	0
96	SLU 62	3	1114	4206	-67.38	0.59	0
96	SLU 63	3	1322	4363	-77.97	0.31	0
96	SLU 64	3	1061	3964	-63.98	0.57	0
96	SLU 65	2	1406	4225	-81.63	0.09	0
96	SLU 66	3	1084	4035	-65.4	0.58	0
96	SLU 67	2	1292	4191	-75.99	0.3	0
96	SLU 68	2	1421	4271	-82.55	0.1	0
96	SLU 69	3	1099	4080	-66.31	0.59	0
96	SLU 70	3	1307	4237	-76.9	0.3	0
96	SLU 71	3	1091	4055	-65.81	0.58	0
96	SLU 72	2	1298	4212	-76.4	0.3	0
96	SLU 73	2	1499	4615	-87.4	0.14	0
96	SLU 74	3	1177	4424	-71.17	0.63	0
96	SLU 75	3	1384	4581	-81.76	0.35	0
96	SLU 76	2	1514	4661	-88.31	0.15	0
96	SLU 77	3	1192	4470	-72.08	0.64	0
96	SLU 78	3	1399	4627	-82.67	0.35	0
96	SLU 79	3	1184	4445	-71.58	0.63	0
96	SLU 80	3	1391	4602	-82.17	0.35	0
96	SLU 81	3	1193	4521	-72.22	0.64	0
96	SLU 82	3	1401	4677	-82.81	0.35	0
96	SLU 83	3	1208	4566	-73.14	0.65	0
96	SLU 84	3	1416	4723	-83.73	0.36	0
96	SLE RA 1	2	795	2970	-47.95	0.43	0
96	SLE RA 2	2	1026	3144	-59.72	0.11	0
96	SLE RA 3	2	811	3017	-48.9	0.43	0
96	SLE RA 4	2	949	3122	-55.96	0.24	0
96	SLE RA 5	2	1036	3175	-60.33	0.11	0
96	SLE RA 6	2	821	3048	-49.51	0.44	0
96	SLE RA 7	2	959	3152	-56.57	0.25	0
96	SLE RA 8	2	815	3031	-49.17	0.44	0
96	SLE RA 9	2	954	3136	-56.23	0.25	0
96	SLE RA 10	2	1087	3404	-63.56	0.14	0
96	SLE RA 11	2	873	3277	-52.74	0.47	0
96	SLE RA 12	2	1011	3381	-59.8	0.28	0
96	SLE RA 13	2	1097	3435	-64.17	0.15	0
96	SLE RA 14	2	883	3307	-53.35	0.47	0
96	SLE RA 15	2	1021	3412	-60.41	0.28	0
96	SLE RA 16	2	877	3291	-53.02	0.47	0
96	SLE RA 17	2	1015	3395	-60.08	0.28	0
96	SLE RA 18	2	884	3341	-53.45	0.47	0
96	SLE RA 19	2	1022	3446	-60.51	0.28	0
96	SLE RA 20	2	894	3372	-54.06	0.48	0
96	SLE RA 21	2	1032	3476	-61.12	0.29	0
96	SLE FR 1	2	795	2970	-47.95	0.43	0
96	SLE FR 2	2	841	3005	-50.31	0.36	0
96	SLE FR 3	2	799	2982	-48.2	0.43	0
96	SLE FR 4	2	868	3116	-51.95	0.38	0
96	SLE FR 5	2	826	3094	-49.84	0.44	0
96	SLE FR 6	2	840	3156	-50.7	0.45	0
96	SLE QP 1	2	795	2970	-47.95	0.43	0
96	SLE QP 2	2	822	3082	-49.6	0.44	0
96	SLD 1	0	1234	3555	-69.97	1.14	0.01
96	SLD 2	0	1234	3555	-69.97	1.14	0.01
96	SLD 3	-2	793	3154	-48.11	2.01	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
96	SLD 4	-2	793	3154	-48.11	2.01	0
96	SLD 5	4	1614	3831	-88.87	-0.67	0.01
96	SLD 6	4	1614	3831	-88.87	-0.67	0.01
96	SLD 7	-2	144	2496	-16	2.23	0
96	SLD 8	-2	144	2496	-16	2.23	0
96	SLD 9	6	1499	3667	-83.2	-1.35	0
96	SLD 10	6	1499	3667	-83.2	-1.35	0
96	SLD 11	0	29	2332	-10.34	1.55	0
96	SLD 12	0	29	2332	-10.34	1.55	0
96	SLD 13	6	851	3009	-51.09	-1.13	0
96	SLD 14	6	851	3009	-51.09	-1.13	0
96	SLD 15	4	410	2609	-29.23	-0.26	0
96	SLD 16	4	410	2609	-29.23	-0.26	0
96	SLV 1	-3	1807	4199	-98.33	2.04	0.01
96	SLV 2	-3	1807	4199	-98.33	2.04	0.01
96	SLV 3	-7	749	3252	-45.83	4.24	0.01
96	SLV 4	-7	749	3252	-45.83	4.24	0.01
96	SLV 5	7	2723	4855	-143.84	-2.43	0.01
96	SLV 6	7	2723	4855	-143.84	-2.43	0.01
96	SLV 7	-7	-805	1695	31.15	4.93	0
96	SLV 8	-7	-805	1695	31.15	4.93	0
96	SLV 9	11	2449	4468	-130.35	-4.05	0.01
96	SLV 10	11	2449	4468	-130.35	-4.05	0.01
96	SLV 11	-2	-1079	1309	44.64	3.31	-0.01
96	SLV 12	-2	-1079	1309	44.64	3.31	-0.01
96	SLV 13	12	895	2912	-53.37	-3.36	-0.01
96	SLV 14	12	895	2912	-53.37	-3.36	-0.01
96	SLV 15	8	-163	1964	-0.87	-1.16	-0.01
96	SLV 16	8	-163	1964	-0.87	-1.16	-0.01
97	SLU 1	-13	1254	6212	-63.5	-2.92	-0.04
97	SLU 2	-8	1449	6439	-72.29	0.56	-0.04
97	SLU 3	-13	1292	6380	-65.42	-3.01	-0.04
97	SLU 4	-10	1409	6516	-70.69	-0.92	-0.04
97	SLU 5	-8	1471	6542	-73.39	0.51	-0.04
97	SLU 6	-13	1314	6482	-66.53	-3.06	-0.04
97	SLU 7	-10	1431	6618	-71.8	-0.97	-0.04
97	SLU 8	-13	1298	6416	-65.72	-3.02	-0.04
97	SLU 9	-10	1415	6553	-70.99	-0.93	-0.04
97	SLU 10	-9	1595	7210	-79.92	0.18	-0.05
97	SLU 11	-15	1438	7150	-73.05	-3.38	-0.04
97	SLU 12	-12	1555	7287	-78.32	-1.29	-0.05
97	SLU 13	-9	1617	7312	-81.03	0.13	-0.05
97	SLU 14	-15	1460	7252	-74.16	-3.43	-0.04
97	SLU 15	-12	1577	7389	-79.43	-1.34	-0.05
97	SLU 16	-15	1444	7187	-73.35	-3.4	-0.04
97	SLU 17	-12	1561	7323	-78.62	-1.31	-0.05
97	SLU 18	-15	1463	7312	-74.41	-3.46	-0.04
97	SLU 19	-12	1580	7449	-79.68	-1.37	-0.05
97	SLU 20	-15	1485	7414	-75.52	-3.51	-0.04
97	SLU 21	-12	1602	7551	-80.79	-1.42	-0.05
97	SLU 22	-14	1401	6944	-71.08	-3.28	-0.04
97	SLU 23	-9	1596	7172	-79.86	0.21	-0.05
97	SLU 24	-15	1439	7112	-72.99	-3.36	-0.04
97	SLU 25	-12	1556	7249	-78.26	-1.27	-0.05
97	SLU 26	-9	1618	7274	-80.97	0.16	-0.05
97	SLU 27	-15	1461	7214	-74.1	-3.41	-0.04
97	SLU 28	-12	1578	7351	-79.37	-1.32	-0.05
97	SLU 29	-15	1445	7149	-73.29	-3.38	-0.04
97	SLU 30	-12	1562	7285	-78.56	-1.29	-0.05
97	SLU 31	-11	1742	7942	-87.5	-0.17	-0.05
97	SLU 32	-16	1585	7882	-80.63	-3.74	-0.05
97	SLU 33	-13	1702	8019	-85.9	-1.65	-0.05
97	SLU 34	-11	1764	8044	-88.6	-0.22	-0.05
97	SLU 35	-17	1607	7985	-81.74	-3.79	-0.05
97	SLU 36	-13	1724	8121	-87.01	-1.7	-0.05
97	SLU 37	-17	1591	7919	-80.93	-3.75	-0.05
97	SLU 38	-13	1708	8056	-86.2	-1.66	-0.05
97	SLU 39	-17	1609	8045	-81.99	-3.82	-0.05
97	SLU 40	-14	1726	8181	-87.26	-1.73	-0.05
97	SLU 41	-17	1631	8147	-83.09	-3.87	-0.05
97	SLU 42	-14	1748	8284	-88.36	-1.78	-0.05
97	SLU 43	-16	1580	7824	-79.96	-3.68	-0.05
97	SLU 44	-11	1775	8052	-88.74	-0.2	-0.05
97	SLU 45	-17	1618	7992	-81.87	-3.76	-0.05
97	SLU 46	-13	1735	8129	-87.14	-1.67	-0.05
97	SLU 47	-11	1797	8154	-89.85	-0.25	-0.05
97	SLU 48	-17	1640	8094	-82.98	-3.81	-0.05
97	SLU 49	-14	1757	8231	-88.25	-1.72	-0.05
97	SLU 50	-17	1624	8029	-82.17	-3.78	-0.05
97	SLU 51	-13	1741	8165	-87.44	-1.69	-0.05
97	SLU 52	-12	1921	8822	-96.37	-0.57	-0.06
97	SLU 53	-18	1764	8762	-89.5	-4.14	-0.05
97	SLU 54	-15	1881	8899	-94.77	-2.05	-0.06
97	SLU 55	-13	1943	8924	-97.48	-0.62	-0.06
97	SLU 56	-18	1786	8865	-90.61	-4.19	-0.05
97	SLU 57	-15	1903	9001	-95.88	-2.1	-0.06
97	SLU 58	-18	1770	8799	-89.81	-4.16	-0.05
97	SLU 59	-15	1887	8936	-95.08	-2.07	-0.06
97	SLU 60	-19	1789	8925	-90.86	-4.22	-0.05
97	SLU 61	-15	1906	9061	-96.13	-2.13	-0.06



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
97	SLU 62	-19	1811	9027	-91.97	-4.27	-0.05
97	SLU 63	-16	1928	9164	-97.24	-2.18	-0.06
97	SLU 64	-18	1727	8556	-87.53	-4.03	-0.05
97	SLU 65	-12	1922	8784	-96.32	-0.55	-0.06
97	SLU 66	-18	1765	8724	-89.45	-4.12	-0.05
97	SLU 67	-15	1882	8861	-94.72	-2.03	-0.06
97	SLU 68	-13	1944	8886	-97.42	-0.6	-0.06
97	SLU 69	-18	1787	8827	-90.56	-4.17	-0.05
97	SLU 70	-15	1904	8963	-95.82	-2.07	-0.06
97	SLU 71	-18	1771	8761	-89.75	-4.13	-0.05
97	SLU 72	-15	1888	8898	-95.02	-2.04	-0.06
97	SLU 73	-14	2068	9555	-103.95	-0.93	-0.06
97	SLU 74	-20	1911	9495	-97.08	-4.49	-0.06
97	SLU 75	-17	2028	9631	-102.35	-2.4	-0.06
97	SLU 76	-14	2090	9657	-105.06	-0.98	-0.06
97	SLU 77	-20	1933	9597	-98.19	-4.54	-0.06
97	SLU 78	-17	2050	9734	-103.46	-2.45	-0.06
97	SLU 79	-20	1917	9531	-97.38	-4.51	-0.06
97	SLU 80	-17	2034	9668	-102.65	-2.42	-0.06
97	SLU 81	-20	1935	9657	-98.44	-4.57	-0.06
97	SLU 82	-17	2052	9794	-103.71	-2.48	-0.06
97	SLU 83	-20	1957	9759	-99.55	-4.62	-0.06
97	SLU 84	-17	2074	9896	-104.82	-2.53	-0.06
97	SLE RA 1	-13	1296	6421	-65.67	-3.03	-0.04
97	SLE RA 2	-10	1426	6573	-71.52	-0.7	-0.04
97	SLE RA 3	-14	1322	6533	-66.94	-3.08	-0.04
97	SLE RA 4	-11	1400	6624	-70.46	-1.69	-0.04
97	SLE RA 5	-10	1441	6641	-72.26	-0.74	-0.04
97	SLE RA 6	-14	1336	6601	-67.68	-3.11	-0.04
97	SLE RA 7	-12	1414	6692	-71.2	-1.72	-0.04
97	SLE RA 8	-14	1325	6557	-67.14	-3.09	-0.04
97	SLE RA 9	-11	1403	6648	-70.66	-1.7	-0.04
97	SLE RA 10	-11	1523	7086	-76.61	-0.95	-0.05
97	SLE RA 11	-15	1419	7046	-72.03	-3.33	-0.04
97	SLE RA 12	-13	1497	7138	-75.55	-1.94	-0.04
97	SLE RA 13	-11	1538	7155	-77.35	-0.99	-0.05
97	SLE RA 14	-15	1433	7115	-72.77	-3.36	-0.04
97	SLE RA 15	-13	1511	7206	-76.29	-1.97	-0.04
97	SLE RA 16	-15	1423	7071	-72.23	-3.34	-0.04
97	SLE RA 17	-13	1501	7162	-75.75	-1.95	-0.04
97	SLE RA 18	-15	1435	7155	-72.94	-3.38	-0.04
97	SLE RA 19	-13	1513	7246	-76.45	-1.99	-0.05
97	SLE RA 20	-15	1450	7223	-73.68	-3.42	-0.04
97	SLE RA 21	-13	1528	7314	-77.19	-2.02	-0.05
97	SLE FR 1	-13	1296	6421	-65.67	-3.03	-0.04
97	SLE FR 2	-13	1322	6451	-66.84	-2.56	-0.04
97	SLE FR 3	-13	1302	6448	-65.96	-3.04	-0.04
97	SLE FR 4	-13	1364	6671	-69.02	-2.67	-0.04
97	SLE FR 5	-14	1344	6668	-68.14	-3.15	-0.04
97	SLE FR 6	-14	1366	6788	-69.3	-3.2	-0.04
97	SLE QP 1	-13	1296	6421	-65.67	-3.03	-0.04
97	SLE QP 2	-14	1338	6641	-67.85	-3.13	-0.04
97	SLD 1	-12	1224	5115	-60.97	4.98	-0.03
97	SLD 2	-12	1224	5115	-60.97	4.98	-0.03
97	SLD 3	-2	830	4127	-42.22	0.04	-0.02
97	SLD 4	-2	830	4127	-42.22	0.04	-0.02
97	SLD 5	-28	1901	7681	-94.23	6.79	-0.05
97	SLD 6	-28	1901	7681	-94.23	6.79	-0.05
97	SLD 7	4	589	4389	-31.72	-9.67	-0.02
97	SLD 8	4	589	4389	-31.72	-9.67	-0.02
97	SLD 9	-32	2087	8893	-103.98	3.41	-0.06
97	SLD 10	-32	2087	8893	-103.98	3.41	-0.06
97	SLD 11	0	775	5601	-41.47	-13.06	-0.03
97	SLD 12	0	775	5601	-41.47	-13.06	-0.03
97	SLD 13	-25	1845	9155	-93.48	-6.3	-0.06
97	SLD 14	-25	1845	9155	-93.48	-6.3	-0.06
97	SLD 15	-16	1452	8167	-74.72	-11.24	-0.05
97	SLD 16	-16	1452	8167	-74.72	-11.24	-0.05
97	SLV 1	-10	1077	3067	-51.92	16.64	-0.02
97	SLV 2	-10	1077	3067	-51.92	16.64	-0.02
97	SLV 3	15	153	757	-7.96	4.01	0
97	SLV 4	15	153	757	-7.96	4.01	0
97	SLV 5	-49	2662	9073	-129.73	21.95	-0.07
97	SLV 6	-49	2662	9073	-129.73	21.95	-0.07
97	SLV 7	31	-420	1372	16.78	-20.14	0.01
97	SLV 8	31	-420	1372	16.78	-20.14	0.01
97	SLV 9	-59	3095	11910	-152.48	13.88	-0.09
97	SLV 10	-59	3095	11910	-152.48	13.88	-0.09
97	SLV 11	22	14	4209	-5.97	-28.21	-0.01
97	SLV 12	22	14	4209	-5.97	-28.21	-0.01
97	SLV 13	-42	2523	12525	-127.74	-10.28	-0.08
97	SLV 14	-42	2523	12525	-127.74	-10.28	-0.08
97	SLV 15	-18	1598	10215	-83.78	-22.9	-0.06
97	SLV 16	-18	1598	10215	-83.78	-22.9	-0.06
98	SLU 1	3	34	4089	-1.04	2.11	0.03
98	SLU 2	4	20	4153	-0.48	2.32	0.03
98	SLU 3	3	41	4191	-1.29	2.17	0.03
98	SLU 4	3	32	4229	-0.95	2.3	0.03
98	SLU 5	4	25	4223	-0.65	2.36	0.03
98	SLU 6	3	45	4261	-1.46	2.21	0.03



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
98	SLU 7	4	37	4299	-1.12	2.34	0.03
98	SLU 8	3	43	4229	-1.38	2.19	0.03
98	SLU 9	4	34	4268	-1.04	2.32	0.03
98	SLU 10	4	25	4727	-0.58	2.47	0.03
98	SLU 11	3	45	4764	-1.39	2.32	0.03
98	SLU 12	4	37	4803	-1.05	2.44	0.03
98	SLU 13	4	29	4797	-0.74	2.51	0.03
98	SLU 14	4	49	4834	-1.56	2.36	0.03
98	SLU 15	4	41	4873	-1.22	2.48	0.03
98	SLU 16	3	47	4803	-1.47	2.34	0.03
98	SLU 17	4	38	4842	-1.13	2.46	0.03
98	SLU 18	3	40	4909	-1.18	2.32	0.03
98	SLU 19	4	32	4947	-0.84	2.44	0.03
98	SLU 20	4	45	4979	-1.35	2.36	0.03
98	SLU 21	4	36	5017	-1.01	2.49	0.03
98	SLU 22	4	37	4564	-1.09	2.37	0.03
98	SLU 23	4	23	4628	-0.53	2.58	0.03
98	SLU 24	4	44	4665	-1.34	2.43	0.03
98	SLU 25	4	35	4704	-1.01	2.56	0.03
98	SLU 26	4	28	4698	-0.7	2.62	0.03
98	SLU 27	4	48	4735	-1.51	2.47	0.03
98	SLU 28	4	40	4774	-1.17	2.6	0.03
98	SLU 29	4	46	4704	-1.43	2.45	0.03
98	SLU 30	4	37	4742	-1.09	2.58	0.03
98	SLU 31	4	28	5202	-0.63	2.72	0.04
98	SLU 32	4	48	5239	-1.44	2.58	0.03
98	SLU 33	4	40	5278	-1.1	2.7	0.04
98	SLU 34	4	32	5272	-0.79	2.77	0.04
98	SLU 35	4	52	5309	-1.61	2.62	0.03
98	SLU 36	4	44	5348	-1.27	2.74	0.04
98	SLU 37	4	50	5278	-1.52	2.6	0.03
98	SLU 38	4	41	5316	-1.19	2.72	0.04
98	SLU 39	4	43	5384	-1.23	2.58	0.04
98	SLU 40	4	35	5422	-0.89	2.7	0.04
98	SLU 41	4	48	5454	-1.4	2.62	0.04
98	SLU 42	4	39	5492	-1.06	2.75	0.04
98	SLU 43	4	44	5153	-1.34	2.65	0.03
98	SLU 44	4	30	5217	-0.77	2.86	0.04
98	SLU 45	4	50	5255	-1.59	2.71	0.03
98	SLU 46	4	42	5293	-1.25	2.84	0.04
98	SLU 47	4	34	5287	-0.94	2.9	0.04
98	SLU 48	4	54	5325	-1.75	2.76	0.03
98	SLU 49	4	46	5363	-1.42	2.88	0.04
98	SLU 50	4	52	5293	-1.67	2.74	0.03
98	SLU 51	4	44	5332	-1.33	2.86	0.04
98	SLU 52	5	34	5791	-0.87	3.01	0.04
98	SLU 53	4	54	5828	-1.68	2.86	0.04
98	SLU 54	5	46	5867	-1.35	2.99	0.04
98	SLU 55	5	38	5861	-1.04	3.05	0.04
98	SLU 56	4	58	5898	-1.85	2.9	0.04
98	SLU 57	5	50	5937	-1.51	3.03	0.04
98	SLU 58	4	56	5867	-1.77	2.88	0.04
98	SLU 59	5	48	5906	-1.43	3.01	0.04
98	SLU 60	4	50	5973	-1.48	2.86	0.04
98	SLU 61	5	41	6011	-1.14	2.99	0.04
98	SLU 62	4	54	6043	-1.64	2.9	0.04
98	SLU 63	5	45	6081	-1.31	3.03	0.04
98	SLU 64	4	47	5628	-1.39	2.91	0.04
98	SLU 65	5	33	5692	-0.83	3.12	0.04
98	SLU 66	4	53	5729	-1.64	2.97	0.04
98	SLU 67	5	45	5768	-1.3	3.1	0.04
98	SLU 68	5	37	5762	-0.99	3.16	0.04
98	SLU 69	4	57	5799	-1.8	3.01	0.04
98	SLU 70	5	49	5838	-1.47	3.14	0.04
98	SLU 71	4	55	5768	-1.72	2.99	0.04
98	SLU 72	5	47	5806	-1.38	3.12	0.04
98	SLU 73	5	37	6266	-0.92	3.27	0.04
98	SLU 74	5	57	6303	-1.74	3.12	0.04
98	SLU 75	5	49	6342	-1.4	3.25	0.04
98	SLU 76	5	41	6336	-1.09	3.31	0.04
98	SLU 77	5	61	6373	-1.9	3.16	0.04
98	SLU 78	5	53	6412	-1.56	3.29	0.04
98	SLU 79	5	59	6342	-1.82	3.14	0.04
98	SLU 80	5	51	6380	-1.48	3.27	0.04
98	SLU 81	5	53	6448	-1.53	3.12	0.04
98	SLU 82	5	44	6486	-1.19	3.25	0.04
98	SLU 83	5	57	6518	-1.69	3.16	0.04
98	SLU 84	5	48	6556	-1.36	3.29	0.04
98	SLE RA 1	3	35	4225	-1.06	2.18	0.03
98	SLE RA 2	4	26	4268	-0.68	2.32	0.03
98	SLE RA 3	3	40	4292	-1.22	2.22	0.03
98	SLE RA 4	3	34	4318	-1	2.31	0.03
98	SLE RA 5	4	29	4314	-0.79	2.35	0.03
98	SLE RA 6	3	42	4339	-1.33	2.25	0.03
98	SLE RA 7	4	37	4365	-1.11	2.34	0.03
98	SLE RA 8	3	41	4318	-1.28	2.24	0.03
98	SLE RA 9	4	35	4344	-1.05	2.32	0.03
98	SLE RA 10	4	29	4650	-0.75	2.42	0.03
98	SLE RA 11	3	42	4675	-1.29	2.32	0.03
98	SLE RA 12	4	37	4701	-1.06	2.41	0.03



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
98	SLE RA 13	4	31	4697	-0.86	2.45	0.03
98	SLE RA 14	4	45	4722	-1.4	2.35	0.03
98	SLE RA 15	4	39	4747	-1.17	2.43	0.03
98	SLE RA 16	3	44	4701	-1.34	2.34	0.03
98	SLE RA 17	4	38	4726	-1.12	2.42	0.03
98	SLE RA 18	3	39	4771	-1.15	2.32	0.03
98	SLE RA 19	4	34	4797	-0.92	2.41	0.03
98	SLE RA 20	4	42	4818	-1.26	2.35	0.03
98	SLE RA 21	4	36	4844	-1.04	2.43	0.03
98	SLE FR 1	3	35	4225	-1.06	2.18	0.03
98	SLE FR 2	3	33	4233	-0.98	2.21	0.03
98	SLE FR 3	3	36	4244	-1.1	2.19	0.03
98	SLE FR 4	3	35	4397	-1.01	2.25	0.03
98	SLE FR 5	3	38	4408	-1.13	2.24	0.03
98	SLE FR 6	3	37	4498	-1.1	2.25	0.03
98	SLE QP 1	3	35	4225	-1.06	2.18	0.03
98	SLE QP 2	3	37	4389	-1.08	2.22	0.03
98	SLD 1	9	74	4817	-2.88	9.55	0.06
98	SLD 2	9	74	4817	-2.88	9.55	0.06
98	SLD 3	6	-289	4533	13.57	7.85	0.04
98	SLD 4	6	-289	4533	13.57	7.85	0.04
98	SLD 5	9	600	4948	-26.56	7	0.06
98	SLD 6	9	600	4948	-26.56	7	0.06
98	SLD 7	0	-613	4002	28.25	1.34	0.01
98	SLD 8	0	-613	4002	28.25	1.34	0.01
98	SLD 9	6	686	4776	-30.42	3.11	0.05
98	SLD 10	6	686	4776	-30.42	3.11	0.05
98	SLD 11	-2	-527	3830	24.39	-2.55	-0.01
98	SLD 12	-2	-527	3830	24.39	-2.55	-0.01
98	SLD 13	0	362	4245	-15.74	-3.4	0.02
98	SLD 14	0	362	4245	-15.74	-3.4	0.02
98	SLD 15	-2	-1	3961	0.71	-5.1	0
98	SLD 16	-2	-1	3961	0.71	-5.1	0
98	SLV 1	17	124	5391	-5.26	20.17	0.1
98	SLV 2	17	124	5391	-5.26	20.17	0.1
98	SLV 3	11	-717	4724	32.79	16.05	0.06
98	SLV 4	11	-717	4724	32.79	16.05	0.06
98	SLV 5	16	1339	5701	-60.04	13.86	0.11
98	SLV 6	16	1339	5701	-60.04	13.86	0.11
98	SLV 7	-3	-1466	3478	66.78	0.12	-0.02
98	SLV 8	-3	-1466	3478	66.78	0.12	-0.02
98	SLV 9	10	1539	5300	-68.95	4.33	0.08
98	SLV 10	10	1539	5300	-68.95	4.33	0.08
98	SLV 11	-10	-1266	3077	57.87	-9.41	-0.05
98	SLV 12	-10	-1266	3077	57.87	-9.41	-0.05
98	SLV 13	-4	790	4054	-34.96	-11.6	0
98	SLV 14	-4	790	4054	-34.96	-11.6	0
98	SLV 15	-10	-51	3387	3.09	-15.72	-0.04
98	SLV 16	-10	-51	3387	3.09	-15.72	-0.04
99	SLU 1	2	-119	442	5.92	0.92	0
99	SLU 2	2	-117	444	5.85	0.97	0
99	SLU 3	2	-125	434	6.24	0.95	0
99	SLU 4	2	-124	435	6.2	0.99	0
99	SLU 5	2	-122	439	6.06	1	0
99	SLU 6	2	-129	428	6.45	0.98	0
99	SLU 7	2	-129	429	6.41	1.01	0
99	SLU 8	2	-127	431	6.35	0.97	0
99	SLU 9	2	-126	432	6.3	1	0
99	SLU 10	2	-147	583	7.22	0.9	-0.01
99	SLU 11	2	-154	573	7.61	0.88	-0.01
99	SLU 12	2	-153	574	7.57	0.92	-0.01
99	SLU 13	2	-151	578	7.43	0.93	-0.01
99	SLU 14	2	-158	567	7.83	0.91	-0.01
99	SLU 15	2	-158	568	7.78	0.94	-0.01
99	SLU 16	2	-156	570	7.72	0.9	-0.01
99	SLU 17	2	-156	571	7.68	0.93	-0.01
99	SLU 18	2	-160	641	7.88	0.82	-0.01
99	SLU 19	2	-160	642	7.84	0.85	-0.01
99	SLU 20	2	-165	635	8.09	0.84	-0.01
99	SLU 21	2	-164	636	8.05	0.88	-0.01
99	SLU 22	2	-145	455	7.21	0.97	0
99	SLU 23	2	-143	457	7.14	1.03	0
99	SLU 24	2	-151	446	7.53	1.01	0
99	SLU 25	2	-150	447	7.49	1.04	0
99	SLU 26	2	-148	451	7.35	1.05	0
99	SLU 27	2	-155	440	7.74	1.03	0
99	SLU 28	2	-155	441	7.7	1.06	0
99	SLU 29	2	-153	443	7.64	1.02	0
99	SLU 30	2	-152	444	7.6	1.05	0
99	SLU 31	2	-173	596	8.51	0.96	-0.01
99	SLU 32	2	-180	585	8.9	0.94	-0.01
99	SLU 33	2	-179	586	8.86	0.97	-0.01
99	SLU 34	2	-177	590	8.73	0.98	-0.01
99	SLU 35	2	-184	579	9.12	0.96	-0.01
99	SLU 36	3	-184	580	9.07	1	-0.01
99	SLU 37	2	-182	582	9.01	0.95	-0.01
99	SLU 38	2	-182	583	8.97	0.99	-0.01
99	SLU 39	2	-186	653	9.17	0.87	-0.01
99	SLU 40	2	-186	654	9.13	0.91	-0.01
99	SLU 41	2	-191	647	9.38	0.9	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
99	SLU 42	3	-190	649	9.34	0.93	-0.01
99	SLU 43	2	-146	571	7.25	1.17	0
99	SLU 44	3	-144	573	7.18	1.23	0
99	SLU 45	2	-152	562	7.57	1.21	0
99	SLU 46	3	-151	563	7.53	1.24	0
99	SLU 47	3	-148	567	7.39	1.26	0
99	SLU 48	3	-156	556	7.79	1.23	0
99	SLU 49	3	-155	558	7.74	1.27	0
99	SLU 50	3	-154	559	7.68	1.22	0
99	SLU 51	3	-153	561	7.64	1.26	0
99	SLU 52	3	-173	712	8.55	1.16	-0.01
99	SLU 53	3	-181	701	8.94	1.14	-0.01
99	SLU 54	3	-180	702	8.9	1.17	-0.01
99	SLU 55	3	-177	706	8.77	1.19	-0.01
99	SLU 56	3	-185	695	9.16	1.16	-0.01
99	SLU 57	3	-184	697	9.12	1.2	-0.01
99	SLU 58	3	-183	698	9.05	1.15	-0.01
99	SLU 59	3	-182	699	9.01	1.19	-0.01
99	SLU 60	3	-187	769	9.21	1.08	-0.01
99	SLU 61	3	-186	771	9.17	1.11	-0.01
99	SLU 62	3	-191	764	9.43	1.1	-0.01
99	SLU 63	3	-190	765	9.38	1.13	-0.01
99	SLU 64	3	-172	583	8.54	1.23	0
99	SLU 65	3	-170	585	8.47	1.28	0
99	SLU 66	3	-178	575	8.86	1.26	0
99	SLU 67	3	-177	576	8.82	1.3	0
99	SLU 68	3	-174	579	8.69	1.31	0
99	SLU 69	3	-182	569	9.08	1.29	0
99	SLU 70	3	-181	570	9.04	1.32	0
99	SLU 71	3	-180	572	8.97	1.28	0
99	SLU 72	3	-179	573	8.93	1.31	0
99	SLU 73	3	-199	724	9.84	1.22	-0.01
99	SLU 74	3	-207	713	10.24	1.19	-0.01
99	SLU 75	3	-206	715	10.19	1.23	-0.01
99	SLU 76	3	-203	718	10.06	1.24	-0.01
99	SLU 77	3	-211	708	10.45	1.22	-0.01
99	SLU 78	3	-210	709	10.41	1.25	-0.01
99	SLU 79	3	-209	711	10.34	1.21	-0.01
99	SLU 80	3	-208	712	10.3	1.24	-0.01
99	SLU 81	3	-213	782	10.5	1.13	-0.01
99	SLU 82	3	-212	783	10.46	1.16	-0.01
99	SLU 83	3	-217	776	10.72	1.15	-0.01
99	SLU 84	3	-217	777	10.67	1.19	-0.01
99	SLE RA 1	2	-126	446	6.29	0.93	0
99	SLE RA 2	2	-125	447	6.24	0.97	0
99	SLE RA 3	2	-130	440	6.5	0.96	0
99	SLE RA 4	2	-130	441	6.47	0.98	0
99	SLE RA 5	2	-128	443	6.38	0.99	0
99	SLE RA 6	2	-133	436	6.64	0.97	0
99	SLE RA 7	2	-133	437	6.62	0.99	0
99	SLE RA 8	2	-132	438	6.57	0.97	0
99	SLE RA 9	2	-131	439	6.54	0.99	0
99	SLE RA 10	2	-145	540	7.16	0.92	0
99	SLE RA 11	2	-150	533	7.42	0.91	0
99	SLE RA 12	2	-149	534	7.39	0.93	0
99	SLE RA 13	2	-148	536	7.3	0.94	0
99	SLE RA 14	2	-153	529	7.56	0.93	0
99	SLE RA 15	2	-152	530	7.53	0.95	0
99	SLE RA 16	2	-151	531	7.49	0.92	0
99	SLE RA 17	2	-151	532	7.46	0.94	0
99	SLE RA 18	2	-154	578	7.59	0.87	-0.01
99	SLE RA 19	2	-153	579	7.57	0.89	-0.01
99	SLE RA 20	2	-157	574	7.74	0.88	-0.01
99	SLE RA 21	2	-156	575	7.71	0.91	-0.01
99	SLE FR 1	2	-126	446	6.29	0.93	0
99	SLE FR 2	2	-126	446	6.28	0.94	0
99	SLE FR 3	2	-127	444	6.35	0.94	0
99	SLE FR 4	2	-134	486	6.67	0.92	0
99	SLE FR 5	2	-136	484	6.74	0.92	0
99	SLE FR 6	2	-140	512	6.94	0.9	0
99	SLE QP 1	2	-126	446	6.29	0.93	0
99	SLE QP 2	2	-135	486	6.68	0.91	0
99	SLD 1	12	-2	609	0.1	8.67	0.01
99	SLD 2	12	-2	609	0.1	8.67	0.01
99	SLD 3	15	-141	499	6.96	10.62	0.01
99	SLD 4	15	-141	499	6.96	10.62	0.01
99	SLD 5	1	117	689	-5.7	0.27	0
99	SLD 6	1	117	689	-5.7	0.27	0
99	SLD 7	10	-348	324	17.18	6.79	0.01
99	SLD 8	10	-348	324	17.18	6.79	0.01
99	SLD 9	-6	79	648	-3.81	-4.97	-0.01
99	SLD 10	-6	79	648	-3.81	-4.97	-0.01
99	SLD 11	3	-386	283	19.06	1.55	0
99	SLD 12	3	-386	283	19.06	1.55	0
99	SLD 13	-11	-128	472	6.4	-8.8	-0.02
99	SLD 14	-11	-128	472	6.4	-8.8	-0.02
99	SLD 15	-8	-267	362	13.26	-6.84	-0.02
99	SLD 16	-8	-267	362	13.26	-6.84	-0.02
99	SLV 1	27	175	773	-8.66	19.9	0.03
99	SLV 2	27	175	773	-8.66	19.9	0.03



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
99	SLV 3	34	-150	518	7.34	24.66	0.03
99	SLV 4	34	-150	518	7.34	24.66	0.03
99	SLV 5	-1	451	959	-22.2	-0.62	-0.01
99	SLV 6	-1	451	959	-22.2	-0.62	-0.01
99	SLV 7	22	-632	108	31.15	15.27	0.02
99	SLV 8	22	-632	108	31.15	15.27	0.02
99	SLV 9	-18	362	863	-17.79	-13.44	-0.03
99	SLV 10	-18	362	863	-17.79	-13.44	-0.03
99	SLV 11	5	-720	12	35.56	2.45	0
99	SLV 12	5	-720	12	35.56	2.45	0
99	SLV 13	-30	-120	453	6.02	-22.84	-0.04
99	SLV 14	-30	-120	453	6.02	-22.84	-0.04
99	SLV 15	-23	-444	198	22.02	-18.07	-0.03
99	SLV 16	-23	-444	198	22.02	-18.07	-0.03
100	SLU 1	-6	571	1614	-22.02	-5.63	0.01
100	SLU 2	-13	710	1499	-28.76	-10.55	0.01
100	SLU 3	-6	585	1644	-22.56	-5.81	0.01
100	SLU 4	-10	669	1576	-26.6	-8.77	0.01
100	SLU 5	-13	717	1520	-29.01	-10.67	0.01
100	SLU 6	-6	592	1665	-22.81	-5.93	0.01
100	SLU 7	-11	675	1596	-26.85	-8.89	0.01
100	SLU 8	-6	585	1655	-22.52	-5.86	0.01
100	SLU 9	-11	668	1587	-26.57	-8.82	0.01
100	SLU 10	-14	769	1640	-31.08	-11.35	0.01
100	SLU 11	-7	644	1784	-24.88	-6.61	0.01
100	SLU 12	-11	727	1716	-28.92	-9.57	0.01
100	SLU 13	-14	775	1660	-31.33	-11.47	0.01
100	SLU 14	-7	651	1805	-25.13	-6.73	0.01
100	SLU 15	-11	734	1736	-29.18	-9.69	0.01
100	SLU 16	-7	644	1795	-24.85	-6.66	0.01
100	SLU 17	-11	727	1727	-28.89	-9.62	0.01
100	SLU 18	-7	655	1814	-25.34	-6.77	0.01
100	SLU 19	-12	739	1745	-29.38	-9.72	0.01
100	SLU 20	-7	662	1835	-25.59	-6.89	0.01
100	SLU 21	-12	745	1766	-29.63	-9.84	0.01
100	SLU 22	-6	630	1745	-24.33	-6.4	0.01
100	SLU 23	-14	769	1630	-31.07	-11.33	0.01
100	SLU 24	-7	644	1775	-24.87	-6.59	0.01
100	SLU 25	-11	727	1706	-28.91	-9.54	0.01
100	SLU 26	-14	776	1651	-31.32	-11.44	0.01
100	SLU 27	-7	651	1796	-25.12	-6.71	0.01
100	SLU 28	-11	734	1727	-29.17	-9.66	0.01
100	SLU 29	-7	644	1786	-24.84	-6.64	0.01
100	SLU 30	-11	727	1718	-28.88	-9.59	0.01
100	SLU 31	-15	828	1771	-33.39	-12.13	0.01
100	SLU 32	-8	703	1915	-27.19	-7.39	0.01
100	SLU 33	-12	786	1847	-31.24	-10.34	0.01
100	SLU 34	-15	834	1791	-33.65	-12.24	0.01
100	SLU 35	-8	710	1936	-27.45	-7.51	0.01
100	SLU 36	-12	793	1867	-31.49	-10.46	0.01
100	SLU 37	-8	703	1926	-27.16	-7.44	0.01
100	SLU 38	-12	786	1858	-31.2	-10.39	0.01
100	SLU 39	-8	714	1945	-27.65	-7.54	0.01
100	SLU 40	-12	797	1876	-31.69	-10.5	0.01
100	SLU 41	-8	721	1966	-27.9	-7.66	0.01
100	SLU 42	-13	804	1897	-31.95	-10.62	0.01
100	SLU 43	-7	723	2053	-27.83	-7.05	0.01
100	SLU 44	-15	861	1939	-34.57	-11.97	0.01
100	SLU 45	-7	737	2083	-28.37	-7.23	0.01
100	SLU 46	-12	820	2015	-32.41	-10.19	0.01
100	SLU 47	-15	868	1959	-34.82	-12.09	0.01
100	SLU 48	-7	743	2104	-28.62	-7.35	0.01
100	SLU 49	-12	826	2035	-32.66	-10.31	0.01
100	SLU 50	-7	736	2094	-28.34	-7.28	0.01
100	SLU 51	-12	819	2026	-32.38	-10.24	0.01
100	SLU 52	-16	920	2079	-36.89	-12.77	0.01
100	SLU 53	-8	795	2223	-30.69	-8.03	0.01
100	SLU 54	-13	879	2155	-34.74	-10.99	0.02
100	SLU 55	-16	927	2100	-37.15	-12.89	0.02
100	SLU 56	-8	802	2244	-30.95	-8.15	0.02
100	SLU 57	-13	885	2176	-34.99	-11.11	0.02
100	SLU 58	-8	795	2234	-30.66	-8.08	0.01
100	SLU 59	-13	878	2166	-34.7	-11.04	0.02
100	SLU 60	-8	807	2253	-31.15	-8.19	0.02
100	SLU 61	-13	890	2184	-35.19	-11.15	0.02
100	SLU 62	-8	813	2274	-31.4	-8.31	0.02
100	SLU 63	-13	897	2205	-35.45	-11.26	0.02
100	SLU 64	-8	781	2184	-30.14	-7.82	0.01
100	SLU 65	-16	920	2070	-36.88	-12.75	0.01
100	SLU 66	-8	796	2214	-30.68	-8.01	0.01
100	SLU 67	-13	879	2146	-34.72	-10.96	0.02
100	SLU 68	-16	927	2090	-37.13	-12.87	0.02
100	SLU 69	-8	802	2235	-30.93	-8.13	0.02
100	SLU 70	-13	885	2166	-34.98	-11.08	0.02
100	SLU 71	-8	795	2225	-30.65	-8.06	0.02
100	SLU 72	-13	878	2157	-34.69	-11.02	0.02
100	SLU 73	-16	979	2210	-39.2	-13.55	0.02
100	SLU 74	-9	854	2354	-33.01	-8.81	0.02
100	SLU 75	-14	938	2286	-37.05	-11.76	0.02
100	SLU 76	-17	986	2231	-39.46	-13.67	0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
100	SLU 77	-9	861	2375	-33.26	-8.93	0.02
100	SLU 78	-14	944	2307	-37.3	-11.88	0.02
100	SLU 79	-9	854	2365	-32.97	-8.86	0.02
100	SLU 80	-14	937	2297	-37.02	-11.82	0.02
100	SLU 81	-9	866	2384	-33.46	-8.97	0.02
100	SLU 82	-14	949	2315	-37.51	-11.92	0.02
100	SLU 83	-9	872	2405	-33.72	-9.09	0.02
100	SLU 84	-14	955	2336	-37.76	-12.04	0.02
100	SLE RA 1	-6	588	1651	-22.68	-5.85	0.01
100	SLE RA 2	-11	681	1575	-27.17	-9.13	0.01
100	SLE RA 3	-6	598	1671	-23.04	-5.97	0.01
100	SLE RA 4	-9	653	1626	-25.73	-7.94	0.01
100	SLE RA 5	-11	685	1589	-27.34	-9.21	0.01
100	SLE RA 6	-6	602	1685	-23.21	-6.05	0.01
100	SLE RA 7	-9	657	1639	-25.9	-8.02	0.01
100	SLE RA 8	-6	597	1679	-23.02	-6.01	0.01
100	SLE RA 9	-9	653	1633	-25.71	-7.98	0.01
100	SLE RA 10	-12	720	1668	-28.72	-9.66	0.01
100	SLE RA 11	-7	637	1765	-24.59	-6.51	0.01
100	SLE RA 12	-10	692	1719	-27.28	-8.47	0.01
100	SLE RA 13	-12	724	1682	-28.89	-9.74	0.01
100	SLE RA 14	-7	641	1779	-24.76	-6.58	0.01
100	SLE RA 15	-10	697	1733	-27.45	-8.55	0.01
100	SLE RA 16	-7	636	1772	-24.57	-6.54	0.01
100	SLE RA 17	-10	692	1726	-27.26	-8.51	0.01
100	SLE RA 18	-7	644	1784	-24.89	-6.61	0.01
100	SLE RA 19	-10	700	1739	-27.59	-8.58	0.01
100	SLE RA 20	-7	649	1798	-25.06	-6.69	0.01
100	SLE RA 21	-10	704	1753	-27.76	-8.66	0.01
100	SLE FR 1	-6	588	1651	-22.68	-5.85	0.01
100	SLE FR 2	-7	607	1636	-23.58	-6.5	0.01
100	SLE FR 3	-6	590	1657	-22.75	-5.88	0.01
100	SLE FR 4	-7	623	1676	-24.24	-6.73	0.01
100	SLE FR 5	-6	607	1697	-23.41	-6.11	0.01
100	SLE FR 6	-6	616	1718	-23.78	-6.23	0.01
100	SLE QP 1	-6	588	1651	-22.68	-5.85	0.01
100	SLE QP 2	-6	605	1691	-23.34	-6.08	0.01
100	SLD 1	-19	1021	2398	-41.3	-1.83	0
100	SLD 2	-19	1021	2398	-41.3	-1.83	0
100	SLD 3	-9	608	2145	-23.16	3.77	-0.01
100	SLD 4	-9	608	2145	-23.16	3.77	-0.01
100	SLD 5	-25	1357	2288	-56.24	-13.3	0.02
100	SLD 6	-25	1357	2288	-56.24	-13.3	0.02
100	SLD 7	8	-21	1443	4.23	5.37	0
100	SLD 8	8	-21	1443	4.23	5.37	0
100	SLD 9	-20	1231	1939	-50.91	-17.53	0.03
100	SLD 10	-20	1231	1939	-50.91	-17.53	0.03
100	SLD 11	13	-147	1094	9.56	1.15	0.01
100	SLD 12	13	-147	1094	9.56	1.15	0.01
100	SLD 13	-3	602	1237	-23.52	-15.92	0.03
100	SLD 14	-3	602	1237	-23.52	-15.92	0.03
100	SLD 15	7	189	984	-5.38	-10.32	0.02
100	SLD 16	7	189	984	-5.38	-10.32	0.02
100	SLV 1	-38	1575	3358	-65.26	3.49	-0.01
100	SLV 2	-38	1575	3358	-65.26	3.49	-0.01
100	SLV 3	-12	615	2735	-23	17.79	-0.03
100	SLV 4	-12	615	2735	-23	17.79	-0.03
100	SLV 5	-55	2352	3136	-100.01	-24.9	0.03
100	SLV 6	-55	2352	3136	-100.01	-24.9	0.03
100	SLV 7	31	-848	1059	40.86	22.78	-0.02
100	SLV 8	31	-848	1059	40.86	22.78	-0.02
100	SLV 9	-43	2058	2323	-87.54	-34.93	0.05
100	SLV 10	-43	2058	2323	-87.54	-34.93	0.05
100	SLV 11	42	-1142	246	53.33	12.75	0
100	SLV 12	42	-1142	246	53.33	12.75	0
100	SLV 13	0	595	647	-23.69	-29.94	0.05
100	SLV 14	0	595	647	-23.69	-29.94	0.05
100	SLV 15	26	-365	24	18.57	-15.64	0.04
100	SLV 16	26	-365	24	18.57	-15.64	0.04
101	SLU 1	-5	275	2955	0.56	-0.91	-0.03
101	SLU 2	-3	562	3184	-11.37	0.02	-0.03
101	SLU 3	-5	285	3028	0.49	-0.93	-0.03
101	SLU 4	-4	458	3166	-6.67	-0.37	-0.03
101	SLU 5	-3	570	3232	-11.45	0.01	-0.03
101	SLU 6	-5	293	3076	0.41	-0.93	-0.03
101	SLU 7	-4	465	3214	-6.75	-0.38	-0.03
101	SLU 8	-5	290	3051	0.41	-0.93	-0.03
101	SLU 9	-4	462	3188	-6.75	-0.37	-0.03
101	SLU 10	-4	590	3574	-10.89	-0.1	-0.03
101	SLU 11	-6	313	3418	0.97	-1.04	-0.04
101	SLU 12	-5	485	3556	-6.19	-0.49	-0.03
101	SLU 13	-4	598	3622	-10.96	-0.11	-0.03
101	SLU 14	-6	320	3466	0.9	-1.05	-0.04
101	SLU 15	-5	493	3604	-6.26	-0.49	-0.03
101	SLU 16	-6	317	3441	0.89	-1.05	-0.04
101	SLU 17	-5	490	3578	-6.27	-0.49	-0.03
101	SLU 18	-6	314	3512	1.25	-1.08	-0.04
101	SLU 19	-5	487	3650	-5.91	-0.52	-0.03
101	SLU 20	-6	322	3560	1.18	-1.09	-0.04
101	SLU 21	-5	494	3698	-5.98	-0.53	-0.03



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
101	SLU 22	-5	306	3317	0.8	-1.01	-0.03
101	SLU 23	-4	594	3547	-11.13	-0.08	-0.03
101	SLU 24	-6	317	3391	0.73	-1.03	-0.04
101	SLU 25	-4	490	3528	-6.43	-0.47	-0.03
101	SLU 26	-4	602	3594	-11.21	-0.09	-0.03
101	SLU 27	-6	325	3438	0.65	-1.03	-0.04
101	SLU 28	-5	497	3576	-6.51	-0.48	-0.03
101	SLU 29	-6	322	3413	0.65	-1.03	-0.04
101	SLU 30	-4	494	3551	-6.51	-0.47	-0.03
101	SLU 31	-4	622	3937	-10.65	-0.2	-0.03
101	SLU 32	-6	345	3781	1.21	-1.15	-0.04
101	SLU 33	-5	517	3918	-5.95	-0.59	-0.04
101	SLU 34	-4	630	3985	-10.72	-0.21	-0.03
101	SLU 35	-6	352	3829	1.14	-1.15	-0.04
101	SLU 36	-5	525	3966	-6.02	-0.6	-0.04
101	SLU 37	-6	349	3803	1.13	-1.15	-0.04
101	SLU 38	-5	522	3941	-6.03	-0.59	-0.04
101	SLU 39	-6	346	3874	1.49	-1.18	-0.04
101	SLU 40	-5	519	4012	-5.67	-0.63	-0.04
101	SLU 41	-6	353	3922	1.41	-1.19	-0.04
101	SLU 42	-5	526	4060	-5.74	-0.63	-0.04
101	SLU 43	-6	346	3717	0.65	-1.15	-0.04
101	SLU 44	-4	634	3946	-11.29	-0.22	-0.03
101	SLU 45	-6	357	3790	0.57	-1.16	-0.04
101	SLU 46	-5	529	3928	-6.58	-0.61	-0.04
101	SLU 47	-4	641	3994	-11.36	-0.23	-0.03
101	SLU 48	-6	364	3838	0.5	-1.17	-0.04
101	SLU 49	-5	537	3976	-6.66	-0.61	-0.04
101	SLU 50	-6	361	3813	0.49	-1.16	-0.04
101	SLU 51	-5	534	3951	-6.66	-0.61	-0.04
101	SLU 52	-5	662	4337	-10.8	-0.34	-0.04
101	SLU 53	-7	384	4181	1.06	-1.28	-0.04
101	SLU 54	-6	557	4318	-6.1	-0.72	-0.04
101	SLU 55	-5	669	4384	-10.88	-0.35	-0.04
101	SLU 56	-7	392	4228	0.98	-1.29	-0.04
101	SLU 57	-6	564	4366	-6.18	-0.73	-0.04
101	SLU 58	-7	389	4203	0.98	-1.28	-0.04
101	SLU 59	-6	561	4341	-6.18	-0.73	-0.04
101	SLU 60	-7	385	4274	1.34	-1.32	-0.04
101	SLU 61	-6	558	4412	-5.82	-0.76	-0.04
101	SLU 62	-7	393	4322	1.26	-1.33	-0.05
101	SLU 63	-6	566	4460	-5.9	-0.77	-0.04
101	SLU 64	-7	378	4079	0.88	-1.25	-0.04
101	SLU 65	-5	666	4309	-11.05	-0.32	-0.04
101	SLU 66	-7	388	4153	0.81	-1.27	-0.04
101	SLU 67	-6	561	4290	-6.35	-0.71	-0.04
101	SLU 68	-5	673	4357	-11.12	-0.33	-0.04
101	SLU 69	-7	396	4201	0.74	-1.27	-0.04
101	SLU 70	-6	569	4338	-6.42	-0.72	-0.04
101	SLU 71	-7	393	4175	0.73	-1.27	-0.04
101	SLU 72	-6	566	4313	-6.43	-0.71	-0.04
101	SLU 73	-6	693	4699	-10.56	-0.44	-0.04
101	SLU 74	-8	416	4543	1.3	-1.38	-0.05
101	SLU 75	-6	589	4680	-5.86	-0.83	-0.04
101	SLU 76	-6	701	4747	-10.64	-0.45	-0.04
101	SLU 77	-8	424	4591	1.22	-1.39	-0.05
101	SLU 78	-6	596	4728	-5.94	-0.83	-0.04
101	SLU 79	-8	421	4565	1.22	-1.39	-0.05
101	SLU 80	-6	593	4703	-5.94	-0.83	-0.04
101	SLU 81	-8	417	4637	1.58	-1.42	-0.05
101	SLU 82	-7	590	4774	-5.58	-0.86	-0.05
101	SLU 83	-8	425	4685	1.5	-1.43	-0.05
101	SLU 84	-7	598	4822	-5.66	-0.87	-0.05
101	SLE RA 1	-5	284	3058	0.63	-0.94	-0.03
101	SLE RA 2	-4	476	3211	-7.33	-0.32	-0.03
101	SLE RA 3	-5	291	3107	0.58	-0.95	-0.03
101	SLE RA 4	-4	406	3199	-4.19	-0.58	-0.03
101	SLE RA 5	-4	481	3243	-7.38	-0.33	-0.03
101	SLE RA 6	-5	296	3139	0.53	-0.95	-0.03
101	SLE RA 7	-4	411	3231	-4.24	-0.58	-0.03
101	SLE RA 8	-5	294	3122	0.53	-0.95	-0.03
101	SLE RA 9	-4	409	3214	-4.25	-0.58	-0.03
101	SLE RA 10	-4	494	3471	-7	-0.4	-0.03
101	SLE RA 11	-6	309	3367	0.9	-1.03	-0.04
101	SLE RA 12	-5	424	3459	-3.87	-0.66	-0.03
101	SLE RA 13	-4	499	3503	-7.05	-0.4	-0.03
101	SLE RA 14	-6	314	3399	0.85	-1.03	-0.04
101	SLE RA 15	-5	429	3491	-3.92	-0.66	-0.03
101	SLE RA 16	-6	312	3382	0.85	-1.03	-0.04
101	SLE RA 17	-5	427	3474	-3.92	-0.66	-0.03
101	SLE RA 18	-6	310	3430	1.09	-1.05	-0.04
101	SLE RA 19	-5	425	3522	-3.68	-0.68	-0.03
101	SLE RA 20	-6	315	3462	1.04	-1.06	-0.04
101	SLE RA 21	-5	430	3554	-3.73	-0.69	-0.03
101	SLE FR 1	-5	284	3058	0.63	-0.94	-0.03
101	SLE FR 2	-5	322	3089	-0.96	-0.82	-0.03
101	SLE FR 3	-5	286	3071	0.61	-0.94	-0.03
101	SLE FR 4	-5	330	3200	-0.83	-0.85	-0.03
101	SLE FR 5	-5	294	3183	0.75	-0.98	-0.03
101	SLE FR 6	-5	297	3244	0.86	-1	-0.03



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
101	SLE QP 1	-5	284	3058	0.63	-0.94	-0.03
101	SLE QP 2	-5	292	3170	0.77	-0.97	-0.03
101	SLD 1	-6	320	3127	-0.36	2.77	-0.04
101	SLD 2	-6	320	3127	-0.36	2.77	-0.04
101	SLD 3	-9	-106	2789	18.49	0.99	-0.05
101	SLD 4	-9	-106	2789	18.49	0.99	-0.05
101	SLD 5	-1	946	3670	-28.15	2.85	-0.02
101	SLD 6	-1	946	3670	-28.15	2.85	-0.02
101	SLD 7	-11	-474	2543	34.66	-3.09	-0.06
101	SLD 8	-11	-474	2543	34.66	-3.09	-0.06
101	SLD 9	0	1057	3797	-33.12	1.14	-0.01
101	SLD 10	0	1057	3797	-33.12	1.14	-0.01
101	SLD 11	-9	-363	2670	29.68	-4.79	-0.05
101	SLD 12	-9	-363	2670	29.68	-4.79	-0.05
101	SLD 13	-2	690	3551	-16.95	-2.93	-0.01
101	SLD 14	-2	690	3551	-16.95	-2.93	-0.01
101	SLD 15	-5	264	3213	1.89	-4.71	-0.03
101	SLD 16	-5	264	3213	1.89	-4.71	-0.03
101	SLV 1	-7	361	3069	-2.08	8.11	-0.05
101	SLV 2	-7	361	3069	-2.08	8.11	-0.05
101	SLV 3	-14	-669	2265	43.46	3.6	-0.08
101	SLV 4	-14	-669	2265	43.46	3.6	-0.08
101	SLV 5	5	1875	4359	-69.17	8.59	0
101	SLV 6	5	1875	4359	-69.17	8.59	0
101	SLV 7	-19	-1559	1679	82.65	-6.44	-0.09
101	SLV 8	-19	-1559	1679	82.65	-6.44	-0.09
101	SLV 9	9	2142	4661	-81.12	4.49	0.02
101	SLV 10	9	2142	4661	-81.12	4.49	0.02
101	SLV 11	-16	-1292	1980	70.7	-10.54	-0.07
101	SLV 12	-16	-1292	1980	70.7	-10.54	-0.07
101	SLV 13	4	1252	4075	-41.93	-5.54	0.01
101	SLV 14	4	1252	4075	-41.93	-5.54	0.01
101	SLV 15	-4	222	3270	3.61	-10.05	-0.02
101	SLV 16	-4	222	3270	3.61	-10.05	-0.02
102	SLU 1	0	-47	4495	1.87	1.23	-0.16
102	SLU 2	0	-64	4575	2.51	1.07	-0.17
102	SLU 3	0	-44	4605	1.8	1.28	-0.17
102	SLU 4	0	-54	4653	2.18	1.18	-0.17
102	SLU 5	0	-62	4651	2.47	1.1	-0.17
102	SLU 6	0	-42	4682	1.75	1.32	-0.17
102	SLU 7	0	-53	4730	2.14	1.22	-0.17
102	SLU 8	0	-43	4648	1.78	1.3	-0.17
102	SLU 9	0	-54	4696	2.17	1.21	-0.17
102	SLU 10	0	-81	5219	3.18	1.26	-0.2
102	SLU 11	0	-61	5249	2.46	1.47	-0.19
102	SLU 12	0	-71	5297	2.85	1.37	-0.2
102	SLU 13	0	-79	5295	3.14	1.29	-0.2
102	SLU 14	0	-59	5326	2.42	1.51	-0.2
102	SLU 15	0	-69	5374	2.81	1.41	-0.2
102	SLU 16	0	-60	5292	2.45	1.49	-0.2
102	SLU 17	0	-70	5340	2.83	1.4	-0.2
102	SLU 18	0	-71	5415	2.82	1.5	-0.2
102	SLU 19	0	-81	5463	3.21	1.4	-0.21
102	SLU 20	0	-69	5491	2.78	1.54	-0.21
102	SLU 21	0	-79	5539	3.16	1.44	-0.21
102	SLU 22	0	-61	5002	2.45	1.37	-0.19
102	SLU 23	0	-78	5082	3.1	1.2	-0.19
102	SLU 24	0	-58	5113	2.38	1.42	-0.19
102	SLU 25	0	-68	5161	2.77	1.32	-0.19
102	SLU 26	0	-76	5159	3.05	1.24	-0.2
102	SLU 27	0	-56	5190	2.33	1.45	-0.19
102	SLU 28	0	-66	5238	2.72	1.36	-0.2
102	SLU 29	0	-57	5156	2.36	1.44	-0.19
102	SLU 30	0	-67	5204	2.75	1.34	-0.2
102	SLU 31	0	-95	5726	3.76	1.39	-0.22
102	SLU 32	0	-75	5757	3.05	1.61	-0.22
102	SLU 33	0	-85	5805	3.43	1.51	-0.22
102	SLU 34	0	-93	5803	3.72	1.43	-0.22
102	SLU 35	1	-73	5834	3	1.64	-0.22
102	SLU 36	0	-83	5882	3.39	1.55	-0.22
102	SLU 37	1	-74	5800	3.03	1.63	-0.22
102	SLU 38	0	-84	5848	3.42	1.53	-0.22
102	SLU 39	0	-85	5922	3.4	1.64	-0.23
102	SLU 40	0	-95	5970	3.79	1.54	-0.23
102	SLU 41	1	-83	5999	3.36	1.67	-0.23
102	SLU 42	0	-93	6047	3.75	1.58	-0.23
102	SLU 43	0	-56	5669	2.23	1.55	-0.2
102	SLU 44	0	-73	5749	2.88	1.39	-0.21
102	SLU 45	0	-54	5780	2.16	1.6	-0.21
102	SLU 46	0	-64	5828	2.55	1.51	-0.21
102	SLU 47	0	-72	5826	2.83	1.43	-0.21
102	SLU 48	0	-52	5856	2.11	1.64	-0.21
102	SLU 49	0	-62	5904	2.5	1.54	-0.21
102	SLU 50	0	-53	5822	2.14	1.63	-0.21
102	SLU 51	0	-63	5870	2.53	1.53	-0.21
102	SLU 52	0	-90	6393	3.54	1.58	-0.24
102	SLU 53	1	-70	6424	2.82	1.79	-0.24
102	SLU 54	0	-81	6472	3.21	1.7	-0.24
102	SLU 55	0	-88	6470	3.5	1.62	-0.24
102	SLU 56	1	-69	6500	2.78	1.83	-0.24



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
102	SLU 57	0	-79	6548	3.17	1.73	-0.24
102	SLU 58	1	-70	6466	2.81	1.81	-0.24
102	SLU 59	0	-80	6514	3.2	1.72	-0.24
102	SLU 60	1	-80	6589	3.18	1.82	-0.24
102	SLU 61	0	-90	6637	3.57	1.73	-0.25
102	SLU 62	1	-78	6666	3.14	1.86	-0.25
102	SLU 63	0	-89	6714	3.53	1.76	-0.25
102	SLU 64	0	-70	6177	2.81	1.69	-0.23
102	SLU 65	0	-87	6257	3.46	1.53	-0.23
102	SLU 66	0	-67	6287	2.74	1.74	-0.23
102	SLU 67	0	-78	6335	3.13	1.64	-0.23
102	SLU 68	0	-85	6333	3.41	1.56	-0.24
102	SLU 69	1	-66	6364	2.7	1.78	-0.23
102	SLU 70	0	-76	6412	3.08	1.68	-0.24
102	SLU 71	0	-67	6330	2.72	1.76	-0.23
102	SLU 72	0	-77	6378	3.11	1.66	-0.24
102	SLU 73	0	-104	6901	4.12	1.72	-0.26
102	SLU 74	1	-84	6931	3.41	1.93	-0.26
102	SLU 75	0	-94	6979	3.79	1.83	-0.26
102	SLU 76	0	-102	6977	4.08	1.75	-0.26
102	SLU 77	1	-82	7008	3.36	1.97	-0.26
102	SLU 78	0	-93	7056	3.75	1.87	-0.27
102	SLU 79	1	-83	6974	3.39	1.95	-0.26
102	SLU 80	0	-94	7022	3.78	1.85	-0.26
102	SLU 81	1	-94	7097	3.76	1.96	-0.27
102	SLU 82	0	-104	7145	4.15	1.86	-0.27
102	SLU 83	1	-92	7173	3.72	2	-0.27
102	SLU 84	0	-102	7221	4.11	1.9	-0.27
102	SLE RA 1	0	-51	4640	2.04	1.27	-0.17
102	SLE RA 2	0	-62	4693	2.47	1.16	-0.17
102	SLE RA 3	0	-49	4714	1.99	1.3	-0.17
102	SLE RA 4	0	-56	4746	2.25	1.24	-0.17
102	SLE RA 5	0	-61	4744	2.44	1.19	-0.18
102	SLE RA 6	0	-48	4765	1.96	1.33	-0.17
102	SLE RA 7	0	-55	4797	2.22	1.26	-0.18
102	SLE RA 8	0	-49	4742	1.98	1.32	-0.17
102	SLE RA 9	0	-55	4774	2.23	1.25	-0.18
102	SLE RA 10	0	-73	5122	2.91	1.29	-0.19
102	SLE RA 11	0	-60	5143	2.43	1.43	-0.19
102	SLE RA 12	0	-67	5175	2.69	1.36	-0.19
102	SLE RA 13	0	-72	5174	2.88	1.31	-0.19
102	SLE RA 14	0	-59	5194	2.4	1.45	-0.19
102	SLE RA 15	0	-66	5226	2.66	1.39	-0.2
102	SLE RA 16	0	-60	5171	2.42	1.44	-0.19
102	SLE RA 17	0	-67	5203	2.68	1.38	-0.19
102	SLE RA 18	0	-67	5253	2.67	1.45	-0.2
102	SLE RA 19	0	-74	5285	2.93	1.38	-0.2
102	SLE RA 20	0	-66	5304	2.64	1.47	-0.2
102	SLE RA 21	0	-72	5336	2.9	1.41	-0.2
102	SLE FR 1	0	-51	4640	2.04	1.27	-0.17
102	SLE FR 2	0	-53	4650	2.12	1.25	-0.17
102	SLE FR 3	0	-50	4660	2.02	1.28	-0.17
102	SLE FR 4	0	-58	4834	2.31	1.3	-0.18
102	SLE FR 5	0	-55	4844	2.21	1.33	-0.18
102	SLE FR 6	0	-59	4946	2.35	1.36	-0.18
102	SLE QP 1	0	-51	4640	2.04	1.27	-0.17
102	SLE QP 2	0	-56	4824	2.23	1.32	-0.18
102	SLD 1	-2	279	4446	-13.74	5.47	-0.38
102	SLD 2	-2	279	4446	-13.74	5.47	-0.38
102	SLD 3	-4	-83	4291	4.07	6.84	-0.34
102	SLD 4	-4	-83	4291	4.07	6.84	-0.34
102	SLD 5	3	593	4946	-29.57	0.49	-0.29
102	SLD 6	3	593	4946	-29.57	0.49	-0.29
102	SLD 7	-4	-612	4428	29.79	5.06	-0.17
102	SLD 8	-4	-612	4428	29.79	5.06	-0.17
102	SLD 9	5	501	5219	-25.33	-2.42	-0.19
102	SLD 10	5	501	5219	-25.33	-2.42	-0.19
102	SLD 11	-2	-704	4701	34.02	2.16	-0.06
102	SLD 12	-2	-704	4701	34.02	2.16	-0.06
102	SLD 13	5	-29	5356	0.39	-4.2	-0.02
102	SLD 14	5	-29	5356	0.39	-4.2	-0.02
102	SLD 15	2	-390	5201	18.19	-2.83	0.02
102	SLD 16	2	-390	5201	18.19	-2.83	0.02
102	SLV 1	-4	724	3943	-34.99	11.52	-0.66
102	SLV 2	-4	724	3943	-34.99	11.52	-0.66
102	SLV 3	-10	-117	3575	6.45	14.82	-0.57
102	SLV 4	-10	-117	3575	6.45	14.82	-0.57
102	SLV 5	7	1454	5118	-71.8	-0.62	-0.46
102	SLV 6	7	1454	5118	-71.8	-0.62	-0.46
102	SLV 7	-11	-1350	3891	66.36	10.37	-0.15
102	SLV 8	-11	-1350	3891	66.36	10.37	-0.15
102	SLV 9	11	1239	5757	-61.91	-7.73	-0.2
102	SLV 10	11	1239	5757	-61.91	-7.73	-0.2
102	SLV 11	-6	-1565	4529	76.26	3.26	0.11
102	SLV 12	-6	-1565	4529	76.26	3.26	0.11
102	SLV 13	10	6	6072	-2	-12.18	0.21
102	SLV 14	10	6	6072	-2	-12.18	0.21
102	SLV 15	5	-835	5704	39.45	-8.88	0.31
102	SLV 16	5	-835	5704	39.45	-8.88	0.31
103	SLU 1	1	268	3148	2.55	0.34	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
103	SLU 2	0	563	3372	-8.89	-0.45	0
103	SLU 3	2	277	3229	2.63	0.35	0
103	SLU 4	1	454	3364	-4.23	-0.12	0
103	SLU 5	1	568	3424	-8.82	-0.44	0
103	SLU 6	2	282	3282	2.7	0.36	0
103	SLU 7	1	459	3416	-4.16	-0.11	0
103	SLU 8	2	279	3252	2.69	0.36	0
103	SLU 9	1	455	3387	-4.18	-0.12	0
103	SLU 10	1	588	3808	-7.94	-0.41	0
103	SLU 11	2	302	3666	3.58	0.39	0
103	SLU 12	1	479	3800	-3.28	-0.08	0
103	SLU 13	1	593	3861	-7.87	-0.4	0
103	SLU 14	2	307	3718	3.65	0.4	0
103	SLU 15	1	484	3853	-3.21	-0.08	0
103	SLU 16	2	304	3689	3.64	0.39	0
103	SLU 17	1	481	3823	-3.23	-0.08	0
103	SLU 18	2	304	3771	3.9	0.4	0
103	SLU 19	1	481	3906	-2.96	-0.08	0
103	SLU 20	2	309	3824	3.97	0.4	0
103	SLU 21	1	486	3958	-2.89	-0.07	0
103	SLU 22	2	297	3555	3.26	0.38	0
103	SLU 23	1	592	3779	-8.18	-0.41	0
103	SLU 24	2	306	3636	3.34	0.39	0
103	SLU 25	1	483	3771	-3.52	-0.08	0
103	SLU 26	1	597	3831	-8.11	-0.4	0
103	SLU 27	2	311	3689	3.41	0.4	0
103	SLU 28	1	488	3823	-3.46	-0.07	0
103	SLU 29	2	308	3660	3.39	0.4	0
103	SLU 30	1	485	3794	-3.47	-0.08	0
103	SLU 31	1	617	4216	-7.23	-0.37	0
103	SLU 32	2	331	4073	4.29	0.43	0
103	SLU 33	1	508	4207	-2.58	-0.04	0
103	SLU 34	1	622	4268	-7.17	-0.36	0
103	SLU 35	2	336	4125	4.36	0.44	0
103	SLU 36	1	513	4260	-2.51	-0.04	0
103	SLU 37	2	333	4096	4.34	0.43	0
103	SLU 38	1	510	4231	-2.52	-0.04	0
103	SLU 39	2	333	4178	4.61	0.44	0
103	SLU 40	1	510	4313	-2.25	-0.04	0
103	SLU 41	2	338	4231	4.68	0.44	0
103	SLU 42	1	515	4365	-2.18	-0.03	0
103	SLU 43	2	339	3952	3.07	0.43	0
103	SLU 44	1	633	4177	-8.37	-0.36	0
103	SLU 45	2	347	4034	3.15	0.44	0
103	SLU 46	1	524	4168	-3.71	-0.03	0
103	SLU 47	1	638	4229	-8.3	-0.35	0
103	SLU 48	2	353	4086	3.22	0.45	0
103	SLU 49	1	529	4221	-3.64	-0.02	0
103	SLU 50	2	349	4057	3.21	0.45	0
103	SLU 51	1	526	4192	-3.65	-0.03	0
103	SLU 52	1	658	4613	-7.42	-0.32	0
103	SLU 53	2	373	4470	4.1	0.48	0
103	SLU 54	2	549	4605	-2.76	0.01	0.01
103	SLU 55	1	663	4665	-7.35	-0.31	0.01
103	SLU 56	2	378	4523	4.17	0.49	0.01
103	SLU 57	2	554	4657	-2.69	0.01	0.01
103	SLU 58	2	374	4494	4.16	0.48	0.01
103	SLU 59	2	551	4628	-2.7	0.01	0.01
103	SLU 60	2	375	4576	4.43	0.49	0.01
103	SLU 61	2	551	4710	-2.44	0.01	0.01
103	SLU 62	2	380	4628	4.5	0.49	0.01
103	SLU 63	2	556	4763	-2.37	0.02	0.01
103	SLU 64	2	368	4360	3.78	0.47	0
103	SLU 65	1	662	4584	-7.66	-0.32	0
103	SLU 66	2	376	4441	3.86	0.48	0
103	SLU 67	2	553	4576	-3	0.01	0.01
103	SLU 68	1	667	4636	-7.59	-0.31	0.01
103	SLU 69	2	382	4493	3.93	0.49	0.01
103	SLU 70	2	558	4628	-2.93	0.02	0.01
103	SLU 71	2	378	4464	3.92	0.48	0.01
103	SLU 72	2	555	4599	-2.95	0.01	0.01
103	SLU 73	1	687	5020	-6.71	-0.28	0.01
103	SLU 74	2	402	4878	4.81	0.52	0.01
103	SLU 75	2	578	5012	-2.05	0.05	0.01
103	SLU 76	1	693	5073	-6.64	-0.27	0.01
103	SLU 77	2	407	4930	4.88	0.53	0.01
103	SLU 78	2	584	5064	-1.98	0.05	0.01
103	SLU 79	2	404	4901	4.87	0.52	0.01
103	SLU 80	2	580	5035	-2	0.05	0.01
103	SLU 81	2	404	4983	5.13	0.53	0.01
103	SLU 82	2	580	5118	-1.73	0.05	0.01
103	SLU 83	2	409	5035	5.2	0.53	0.01
103	SLU 84	2	586	5170	-1.66	0.06	0.01
103	SLE RA 1	2	277	3264	2.75	0.35	0
103	SLE RA 2	1	473	3414	-4.87	-0.17	0
103	SLE RA 3	2	282	3318	2.81	0.36	0
103	SLE RA 4	1	400	3408	-1.77	0.05	0
103	SLE RA 5	1	476	3448	-4.83	-0.17	0
103	SLE RA 6	2	286	3353	2.85	0.37	0
103	SLE RA 7	1	404	3443	-1.72	0.05	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
103	SLE RA 8	2	284	3334	2.84	0.36	0
103	SLE RA 9	1	401	3424	-1.73	0.05	0
103	SLE RA 10	1	489	3705	-4.24	-0.15	0
103	SLE RA 11	2	299	3609	3.44	0.39	0
103	SLE RA 12	1	417	3699	-1.14	0.07	0
103	SLE RA 13	1	493	3739	-4.2	-0.14	0
103	SLE RA 14	2	303	3644	3.48	0.39	0
103	SLE RA 15	1	420	3734	-1.09	0.08	0
103	SLE RA 16	2	300	3625	3.48	0.39	0
103	SLE RA 17	1	418	3714	-1.1	0.07	0
103	SLE RA 18	2	300	3680	3.65	0.39	0
103	SLE RA 19	1	418	3769	-0.92	0.07	0
103	SLE RA 20	2	304	3715	3.7	0.39	0
103	SLE RA 21	1	422	3804	-0.88	0.08	0
103	SLE FR 1	2	277	3264	2.75	0.35	0
103	SLE FR 2	1	316	3294	1.23	0.25	0
103	SLE FR 3	2	278	3278	2.77	0.36	0
103	SLE FR 4	1	323	3419	1.5	0.26	0
103	SLE FR 5	2	285	3403	3.04	0.37	0
103	SLE FR 6	2	288	3472	3.2	0.37	0
103	SLE QP 1	2	277	3264	2.75	0.35	0
103	SLE QP 2	2	284	3389	3.02	0.37	0
103	SLD 1	-1	656	3815	-12.77	2.46	0
103	SLD 2	-1	656	3815	-12.77	2.46	0
103	SLD 3	1	247	3464	4.55	4.2	-0.01
103	SLD 4	1	247	3464	4.55	4.2	-0.01
103	SLD 5	-2	1016	4050	-27.99	-1.66	0.01
103	SLD 6	-2	1016	4050	-27.99	-1.66	0.01
103	SLD 7	4	-347	2878	29.75	4.16	0
103	SLD 8	4	-347	2878	29.75	4.16	0
103	SLD 9	-1	915	3899	-23.7	-3.43	0.01
103	SLD 10	-1	915	3899	-23.7	-3.43	0.01
103	SLD 11	5	-448	2728	34.03	2.39	0
103	SLD 12	5	-448	2728	34.03	2.39	0
103	SLD 13	2	320	3314	1.5	-3.47	0.01
103	SLD 14	2	320	3314	1.5	-3.47	0.01
103	SLD 15	4	-89	2962	18.82	-1.73	0.01
103	SLD 16	4	-89	2962	18.82	-1.73	0.01
103	SLV 1	-5	1173	4395	-34.65	5.29	-0.01
103	SLV 2	-5	1173	4395	-34.65	5.29	-0.01
103	SLV 3	0	193	3564	6.74	9.66	-0.02
103	SLV 4	0	193	3564	6.74	9.66	-0.02
103	SLV 5	-8	2037	4951	-71.07	-4.79	0.01
103	SLV 6	-8	2037	4951	-71.07	-4.79	0.01
103	SLV 7	8	-1230	2180	66.92	9.79	-0.02
103	SLV 8	8	-1230	2180	66.92	9.79	-0.02
103	SLV 9	-5	1797	4597	-60.88	-9.06	0.02
103	SLV 10	-5	1797	4597	-60.88	-9.06	0.02
103	SLV 11	11	-1470	1826	77.11	5.52	0
103	SLV 12	11	-1470	1826	77.11	5.52	0
103	SLV 13	4	374	3214	-0.7	-8.93	0.03
103	SLV 14	4	374	3214	-0.7	-8.93	0.03
103	SLV 15	8	-606	2383	40.7	-4.56	0.02
103	SLV 16	8	-606	2383	40.7	-4.56	0.02
104	SLU 1	-5	848	5937	-29.88	-1.47	0
104	SLU 2	3	995	6215	-35.06	4.26	0
104	SLU 3	-5	874	6100	-30.78	-1.51	0
104	SLU 4	-1	963	6267	-33.89	1.92	0
104	SLU 5	3	1010	6315	-35.56	4.23	0
104	SLU 6	-5	889	6200	-31.28	-1.53	0
104	SLU 7	-1	977	6367	-34.39	1.9	0
104	SLU 8	-5	878	6137	-30.87	-1.52	0
104	SLU 9	-1	966	6304	-33.98	1.92	0
104	SLU 10	2	1095	6932	-38.58	4.11	0
104	SLU 11	-6	974	6817	-34.3	-1.66	0
104	SLU 12	-1	1062	6984	-37.41	1.78	0
104	SLU 13	2	1110	7032	-39.07	4.09	0
104	SLU 14	-6	989	6917	-34.79	-1.68	0
104	SLU 15	-1	1077	7084	-37.9	1.75	0
104	SLU 16	-6	977	6854	-34.38	-1.66	0
104	SLU 17	-1	1065	7021	-37.49	1.77	0
104	SLU 18	-6	990	6961	-34.9	-1.68	0
104	SLU 19	-1	1079	7128	-38.01	1.76	0
104	SLU 20	-6	1005	7061	-35.39	-1.7	0
104	SLU 21	-1	1093	7228	-38.5	1.73	0
104	SLU 22	-6	949	6625	-33.41	-1.62	0
104	SLU 23	2	1096	6903	-38.59	4.11	0
104	SLU 24	-6	975	6788	-34.31	-1.66	0
104	SLU 25	-1	1063	6955	-37.42	1.77	0
104	SLU 26	2	1110	7003	-39.09	4.08	0
104	SLU 27	-6	990	6889	-34.81	-1.69	0
104	SLU 28	-1	1078	7055	-37.92	1.75	0
104	SLU 29	-6	978	6826	-34.4	-1.67	0
104	SLU 30	-1	1066	6992	-37.51	1.77	0
104	SLU 31	2	1195	7620	-42.11	3.96	0
104	SLU 32	-6	1074	7505	-37.83	-1.81	0
104	SLU 33	-2	1163	7672	-40.94	1.63	0
104	SLU 34	1	1210	7720	-42.6	3.94	0
104	SLU 35	-6	1089	7606	-38.32	-1.83	0
104	SLU 36	-2	1177	7772	-41.43	1.6	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
104	SLU 37	-6	1078	7543	-37.91	-1.81	0
104	SLU 38	-2	1166	7709	-41.02	1.62	0
104	SLU 39	-6	1091	7650	-38.43	-1.83	0
104	SLU 40	-2	1179	7816	-41.54	1.61	0
104	SLU 41	-6	1105	7750	-38.92	-1.85	0
104	SLU 42	-2	1194	7917	-42.03	1.58	0
104	SLU 43	-6	1068	7482	-37.63	-1.85	0
104	SLU 44	1	1215	7760	-42.82	3.87	0
104	SLU 45	-6	1094	7645	-38.54	-1.9	0
104	SLU 46	-2	1183	7812	-41.65	1.54	0
104	SLU 47	1	1230	7860	-43.31	3.85	0
104	SLU 48	-7	1109	7745	-39.03	-1.92	0
104	SLU 49	-2	1197	7912	-42.14	1.51	0
104	SLU 50	-6	1098	7682	-38.62	-1.9	0
104	SLU 51	-2	1186	7849	-41.73	1.53	0
104	SLU 52	1	1315	8477	-46.33	3.72	0
104	SLU 53	-7	1194	8362	-42.05	-2.05	0
104	SLU 54	-2	1282	8529	-45.16	1.39	0
104	SLU 55	1	1330	8577	-46.82	3.7	0
104	SLU 56	-7	1209	8462	-42.54	-2.07	0
104	SLU 57	-2	1297	8629	-45.65	1.36	0
104	SLU 58	-7	1197	8399	-42.13	-2.05	0
104	SLU 59	-2	1285	8566	-45.25	1.38	0
104	SLU 60	-7	1210	8506	-42.65	-2.07	0
104	SLU 61	-2	1299	8673	-45.76	1.37	0
104	SLU 62	-7	1225	8606	-43.14	-2.09	0
104	SLU 63	-3	1313	8773	-46.26	1.35	0
104	SLU 64	-7	1169	8170	-41.16	-2	0
104	SLU 65	1	1316	8448	-46.35	3.72	0
104	SLU 66	-7	1195	8333	-42.07	-2.05	0
104	SLU 67	-2	1283	8500	-45.18	1.39	0
104	SLU 68	1	1330	8548	-46.84	3.7	0
104	SLU 69	-7	1210	8434	-42.56	-2.07	0
104	SLU 70	-3	1298	8600	-45.67	1.36	0
104	SLU 71	-7	1198	8371	-42.15	-2.05	0
104	SLU 72	-2	1286	8537	-45.26	1.38	0
104	SLU 73	0	1415	9165	-49.86	3.57	0
104	SLU 74	-8	1294	9050	-45.58	-2.2	0
104	SLU 75	-3	1383	9217	-48.69	1.24	0
104	SLU 76	0	1430	9265	-50.35	3.55	0
104	SLU 77	-8	1309	9151	-46.07	-2.22	0
104	SLU 78	-3	1397	9317	-49.19	1.21	0
104	SLU 79	-8	1298	9088	-45.66	-2.2	0
104	SLU 80	-3	1386	9254	-48.78	1.23	0
104	SLU 81	-8	1311	9195	-46.18	-2.22	0
104	SLU 82	-3	1399	9361	-49.29	1.22	0
104	SLU 83	-8	1325	9295	-46.67	-2.24	0
104	SLU 84	-3	1414	9462	-49.79	1.19	0
104	SLE RA 1	-5	877	6133	-30.89	-1.51	0
104	SLE RA 2	0	975	6319	-34.34	2.31	0
104	SLE RA 3	-5	894	6242	-31.49	-1.54	0
104	SLE RA 4	-2	953	6353	-33.56	0.75	0
104	SLE RA 5	0	985	6386	-34.67	2.29	0
104	SLE RA 6	-5	904	6309	-31.82	-1.55	0
104	SLE RA 7	-2	963	6420	-33.89	0.73	0
104	SLE RA 8	-5	897	6267	-31.55	-1.54	0
104	SLE RA 9	-2	955	6378	-33.62	0.75	0
104	SLE RA 10	0	1041	6797	-36.69	2.21	0
104	SLE RA 11	-6	961	6720	-33.83	-1.64	0
104	SLE RA 12	-3	1020	6831	-35.91	0.65	0
104	SLE RA 13	0	1051	6864	-37.02	2.19	0
104	SLE RA 14	-6	971	6787	-34.16	-1.65	0
104	SLE RA 15	-3	1029	6898	-36.24	0.64	0
104	SLE RA 16	-6	963	6745	-33.89	-1.64	0
104	SLE RA 17	-3	1022	6856	-35.96	0.65	0
104	SLE RA 18	-6	972	6816	-34.23	-1.65	0
104	SLE RA 19	-3	1030	6928	-36.31	0.64	0
104	SLE RA 20	-6	981	6883	-34.56	-1.67	0
104	SLE RA 21	-3	1040	6994	-36.64	0.62	0
104	SLE FR 1	-5	877	6133	-30.89	-1.51	0
104	SLE FR 2	-4	896	6171	-31.58	-0.75	0
104	SLE FR 3	-5	881	6160	-31.02	-1.52	0
104	SLE FR 4	-4	925	6375	-32.58	-0.79	0
104	SLE FR 5	-5	909	6365	-32.02	-1.56	0
104	SLE FR 6	-5	924	6475	-32.56	-1.58	0
104	SLE QP 1	-5	877	6133	-30.89	-1.51	0
104	SLE QP 2	-5	905	6338	-31.89	-1.55	0
104	SLD 1	11	877	4936	-31.76	13.13	-0.02
104	SLD 2	11	877	4936	-31.76	13.13	-0.02
104	SLD 3	-2	488	4135	-15.13	5.05	-0.01
104	SLD 4	-2	488	4135	-15.13	5.05	-0.01
104	SLD 5	18	1486	7133	-57.06	15.1	-0.02
104	SLD 6	18	1486	7133	-57.06	15.1	-0.02
104	SLD 7	-23	190	4462	-1.65	-11.82	0.01
104	SLD 8	-23	190	4462	-1.65	-11.82	0.01
104	SLD 9	12	1620	8215	-62.13	8.72	-0.01
104	SLD 10	12	1620	8215	-62.13	8.72	-0.01
104	SLD 11	-29	324	5543	-6.72	-18.2	0.02
104	SLD 12	-29	324	5543	-6.72	-18.2	0.02
104	SLD 13	-9	1323	8542	-48.65	-8.16	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
104	SLD 14	-9	1323	8542	-48.65	-8.16	0.01
104	SLD 15	-21	934	7740	-32.02	-16.23	0.02
104	SLD 16	-21	934	7740	-32.02	-16.23	0.02
104	SLV 1	34	843	3057	-31.72	34.16	-0.04
104	SLV 2	34	843	3057	-31.72	34.16	-0.04
104	SLV 3	2	-67	1179	7.08	13.49	-0.03
104	SLV 4	2	-67	1179	7.08	13.49	-0.03
104	SLV 5	54	2267	8202	-90.69	40.51	-0.04
104	SLV 6	54	2267	8202	-90.69	40.51	-0.04
104	SLV 7	-50	-767	1942	38.65	-28.38	0.02
104	SLV 8	-50	-767	1942	38.65	-28.38	0.02
104	SLV 9	40	2577	10734	-102.43	25.28	-0.02
104	SLV 10	40	2577	10734	-102.43	25.28	-0.02
104	SLV 11	-64	-456	4475	26.91	-43.61	0.04
104	SLV 12	-64	-456	4475	26.91	-43.61	0.04
104	SLV 13	-13	1878	11498	-70.86	-16.6	0.02
104	SLV 14	-13	1878	11498	-70.86	-16.6	0.02
104	SLV 15	-44	968	9620	-32.06	-37.26	0.04
104	SLV 16	-44	968	9620	-32.06	-37.26	0.04
105	SLU 1	3	-33	3981	0.31	2.26	0.02
105	SLU 2	3	-46	4030	0.81	2.43	0.02
105	SLU 3	3	-29	4084	0.12	2.34	0.02
105	SLU 4	3	-37	4113	0.42	2.43	0.02
105	SLU 5	3	-44	4100	0.69	2.47	0.02
105	SLU 6	3	-27	4154	0.01	2.39	0.02
105	SLU 7	3	-35	4183	0.31	2.48	0.02
105	SLU 8	3	-28	4121	0.07	2.36	0.02
105	SLU 9	3	-36	4150	0.37	2.46	0.02
105	SLU 10	3	-48	4593	0.79	2.45	0.02
105	SLU 11	3	-31	4647	0.11	2.36	0.01
105	SLU 12	3	-39	4676	0.41	2.46	0.02
105	SLU 13	3	-46	4663	0.67	2.5	0.02
105	SLU 14	3	-29	4717	-0.01	2.41	0.02
105	SLU 15	3	-37	4746	0.29	2.51	0.02
105	SLU 16	3	-30	4685	0.06	2.39	0.01
105	SLU 17	3	-38	4714	0.36	2.49	0.02
105	SLU 18	2	-36	4786	0.29	2.3	0.01
105	SLU 19	3	-44	4815	0.59	2.4	0.01
105	SLU 20	2	-34	4856	0.17	2.35	0.01
105	SLU 21	3	-42	4885	0.47	2.45	0.02
105	SLU 22	3	-34	4448	0.27	2.49	0.02
105	SLU 23	3	-48	4496	0.77	2.65	0.02
105	SLU 24	3	-30	4551	0.08	2.57	0.02
105	SLU 25	3	-38	4580	0.38	2.66	0.02
105	SLU 26	3	-45	4566	0.65	2.7	0.02
105	SLU 27	3	-28	4621	-0.04	2.62	0.02
105	SLU 28	3	-36	4650	0.26	2.71	0.02
105	SLU 29	3	-30	4588	0.03	2.59	0.02
105	SLU 30	3	-38	4617	0.33	2.69	0.02
105	SLU 31	3	-50	5060	0.75	2.68	0.02
105	SLU 32	3	-33	5114	0.07	2.59	0.02
105	SLU 33	3	-41	5143	0.37	2.69	0.02
105	SLU 34	3	-47	5130	0.63	2.73	0.02
105	SLU 35	3	-30	5184	-0.05	2.64	0.02
105	SLU 36	3	-38	5213	0.25	2.74	0.02
105	SLU 37	3	-32	5152	0.02	2.62	0.02
105	SLU 38	3	-40	5181	0.32	2.71	0.02
105	SLU 39	3	-37	5253	0.24	2.53	0.02
105	SLU 40	3	-45	5282	0.54	2.63	0.02
105	SLU 41	3	-35	5323	0.13	2.58	0.02
105	SLU 42	3	-43	5352	0.43	2.68	0.02
105	SLU 43	3	-42	5016	0.41	2.87	0.02
105	SLU 44	4	-56	5064	0.91	3.03	0.02
105	SLU 45	3	-39	5118	0.23	2.94	0.02
105	SLU 46	4	-47	5147	0.53	3.04	0.02
105	SLU 47	4	-53	5134	0.8	3.08	0.02
105	SLU 48	4	-36	5188	0.11	2.99	0.02
105	SLU 49	4	-44	5217	0.41	3.09	0.02
105	SLU 50	4	-38	5156	0.18	2.96	0.02
105	SLU 51	4	-46	5185	0.48	3.06	0.02
105	SLU 52	3	-58	5627	0.9	3.05	0.02
105	SLU 53	3	-41	5682	0.22	2.96	0.02
105	SLU 54	3	-49	5711	0.52	3.06	0.02
105	SLU 55	3	-56	5697	0.78	3.1	0.02
105	SLU 56	3	-38	5752	0.1	3.01	0.02
105	SLU 57	3	-46	5781	0.4	3.11	0.02
105	SLU 58	3	-40	5719	0.16	2.99	0.02
105	SLU 59	3	-48	5748	0.46	3.09	0.02
105	SLU 60	3	-45	5821	0.39	2.9	0.02
105	SLU 61	3	-53	5850	0.69	3	0.02
105	SLU 62	3	-43	5891	0.27	2.95	0.02
105	SLU 63	3	-51	5920	0.57	3.05	0.02
105	SLU 64	4	-44	5482	0.37	3.09	0.02
105	SLU 65	4	-57	5531	0.87	3.25	0.02
105	SLU 66	4	-40	5585	0.19	3.17	0.02
105	SLU 67	4	-48	5614	0.49	3.26	0.02
105	SLU 68	4	-55	5601	0.75	3.3	0.02
105	SLU 69	4	-37	5655	0.07	3.22	0.02
105	SLU 70	4	-45	5684	0.37	3.31	0.02
105	SLU 71	4	-39	5622	0.14	3.19	0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
105	SLU 72	4	-47	5651	0.44	3.29	0.02
105	SLU 73	4	-59	6094	0.86	3.28	0.02
105	SLU 74	3	-42	6148	0.17	3.19	0.02
105	SLU 75	4	-50	6177	0.47	3.29	0.02
105	SLU 76	4	-57	6164	0.74	3.33	0.02
105	SLU 77	4	-40	6219	0.06	3.24	0.02
105	SLU 78	4	-48	6248	0.36	3.34	0.02
105	SLU 79	4	-41	6186	0.12	3.22	0.02
105	SLU 80	4	-49	6215	0.42	3.32	0.02
105	SLU 81	3	-47	6287	0.35	3.13	0.02
105	SLU 82	3	-55	6316	0.65	3.23	0.02
105	SLU 83	3	-44	6357	0.23	3.18	0.02
105	SLU 84	3	-52	6386	0.53	3.28	0.02
105	SLE RA 1	3	-33	4115	0.3	2.33	0.02
105	SLE RA 2	3	-42	4147	0.63	2.44	0.02
105	SLE RA 3	3	-31	4183	0.17	2.38	0.02
105	SLE RA 4	3	-36	4202	0.37	2.44	0.02
105	SLE RA 5	3	-41	4193	0.55	2.47	0.02
105	SLE RA 6	3	-29	4230	0.09	2.41	0.02
105	SLE RA 7	3	-35	4249	0.29	2.48	0.02
105	SLE RA 8	3	-30	4208	0.14	2.4	0.02
105	SLE RA 9	3	-36	4227	0.34	2.46	0.02
105	SLE RA 10	3	-44	4522	0.62	2.45	0.02
105	SLE RA 11	3	-32	4559	0.16	2.4	0.02
105	SLE RA 12	3	-38	4578	0.36	2.46	0.02
105	SLE RA 13	3	-42	4569	0.54	2.49	0.02
105	SLE RA 14	3	-31	4605	0.08	2.43	0.02
105	SLE RA 15	3	-36	4625	0.28	2.49	0.02
105	SLE RA 16	3	-32	4584	0.13	2.41	0.02
105	SLE RA 17	3	-37	4603	0.33	2.48	0.02
105	SLE RA 18	3	-35	4651	0.28	2.35	0.01
105	SLE RA 19	3	-41	4671	0.48	2.42	0.02
105	SLE RA 20	3	-34	4698	0.2	2.39	0.01
105	SLE RA 21	3	-39	4717	0.4	2.45	0.02
105	SLE FR 1	3	-33	4115	0.3	2.33	0.02
105	SLE FR 2	3	-35	4121	0.36	2.35	0.02
105	SLE FR 3	3	-33	4133	0.26	2.34	0.02
105	SLE FR 4	3	-36	4282	0.36	2.36	0.02
105	SLE FR 5	3	-33	4294	0.26	2.35	0.02
105	SLE FR 6	3	-34	4383	0.29	2.34	0.01
105	SLE QP 1	3	-33	4115	0.3	2.33	0.02
105	SLE QP 2	3	-34	4276	0.29	2.34	0.02
105	SLD 1	17	4	4637	-1.53	14.18	0.07
105	SLD 2	17	4	4637	-1.53	14.18	0.07
105	SLD 3	13	-358	4422	14.92	11.73	0.06
105	SLD 4	13	-358	4422	14.92	11.73	0.06
105	SLD 5	12	525	4710	-25.2	9.6	0.06
105	SLD 6	12	525	4710	-25.2	9.6	0.06
105	SLD 7	1	-679	3994	29.63	1.44	0
105	SLD 8	1	-679	3994	29.63	1.44	0
105	SLD 9	4	611	4558	-29.05	3.23	0.03
105	SLD 10	4	611	4558	-29.05	3.23	0.03
105	SLD 11	-6	-593	3841	25.78	-4.93	-0.03
105	SLD 12	-6	-593	3841	25.78	-4.93	-0.03
105	SLD 13	-8	290	4129	-14.34	-7.05	-0.03
105	SLD 14	-8	290	4129	-14.34	-7.05	-0.03
105	SLD 15	-11	-72	3914	2.11	-9.5	-0.04
105	SLD 16	-11	-72	3914	2.11	-9.5	-0.04
105	SLV 1	36	54	5124	-3.95	31.29	0.16
105	SLV 2	36	54	5124	-3.95	31.29	0.16
105	SLV 3	29	-782	4618	34.11	25.32	0.12
105	SLV 4	29	-782	4618	34.11	25.32	0.12
105	SLV 5	25	1260	5296	-58.7	20.07	0.12
105	SLV 6	25	1260	5296	-58.7	20.07	0.12
105	SLV 7	-1	-1526	3612	68.16	0.19	-0.01
105	SLV 8	-1	-1526	3612	68.16	0.19	-0.01
105	SLV 9	7	1458	4939	-67.58	4.49	0.04
105	SLV 10	7	1458	4939	-67.58	4.49	0.04
105	SLV 11	-19	-1328	3255	59.29	-15.4	-0.09
105	SLV 12	-19	-1328	3255	59.29	-15.4	-0.09
105	SLV 13	-23	714	3933	-33.53	-20.65	-0.09
105	SLV 14	-23	714	3933	-33.53	-20.65	-0.09
105	SLV 15	-31	-122	3427	4.53	-26.61	-0.13
105	SLV 16	-31	-122	3427	4.53	-26.61	-0.13
106	SLU 1	3	-96	514	6.56	1.67	0
106	SLU 2	3	-94	515	6.48	1.76	0
106	SLU 3	3	-100	509	6.89	1.72	0
106	SLU 4	3	-100	509	6.85	1.77	0
106	SLU 5	3	-98	511	6.71	1.79	0
106	SLU 6	3	-104	505	7.11	1.75	0
106	SLU 7	3	-103	506	7.07	1.8	0
106	SLU 8	3	-102	507	7	1.73	0
106	SLU 9	3	-101	508	6.96	1.79	0
106	SLU 10	4	-119	648	7.78	2.01	0
106	SLU 11	4	-125	641	8.18	1.96	0
106	SLU 12	4	-124	642	8.14	2.02	0
106	SLU 13	4	-122	644	8	2.04	0
106	SLU 14	4	-128	638	8.4	2	0
106	SLU 15	4	-127	639	8.36	2.05	0
106	SLU 16	4	-126	640	8.29	1.98	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
106	SLU 17	4	-126	640	8.25	2.04	0
106	SLU 18	4	-130	703	8.4	2.02	0
106	SLU 19	4	-130	704	8.36	2.08	0
106	SLU 20	4	-134	700	8.63	2.06	0
106	SLU 21	4	-133	701	8.58	2.11	0
106	SLU 22	3	-116	534	7.87	1.86	0
106	SLU 23	4	-115	536	7.79	1.95	0
106	SLU 24	4	-121	529	8.2	1.91	0
106	SLU 25	4	-120	530	8.15	1.96	0
106	SLU 26	4	-118	532	8.01	1.99	0
106	SLU 27	4	-124	526	8.42	1.94	0
106	SLU 28	4	-124	527	8.38	2	0
106	SLU 29	4	-123	528	8.31	1.93	0
106	SLU 30	4	-122	528	8.26	1.98	0
106	SLU 31	4	-140	669	9.08	2.2	0
106	SLU 32	4	-145	662	9.49	2.16	0
106	SLU 33	4	-145	663	9.45	2.21	0
106	SLU 34	4	-143	665	9.31	2.23	0
106	SLU 35	4	-149	659	9.71	2.19	0
106	SLU 36	4	-148	660	9.67	2.24	0
106	SLU 37	4	-147	660	9.6	2.17	0
106	SLU 38	4	-146	661	9.56	2.23	0
106	SLU 39	4	-151	724	9.71	2.21	0
106	SLU 40	5	-150	725	9.67	2.27	0
106	SLU 41	5	-154	721	9.93	2.25	0
106	SLU 42	5	-154	722	9.89	2.3	0
106	SLU 43	4	-117	661	8.08	2.1	-0.01
106	SLU 44	4	-116	662	8	2.2	-0.01
106	SLU 45	4	-122	655	8.41	2.15	-0.01
106	SLU 46	4	-121	656	8.37	2.21	-0.01
106	SLU 47	4	-119	658	8.23	2.23	-0.01
106	SLU 48	4	-125	652	8.63	2.18	-0.01
106	SLU 49	4	-125	653	8.59	2.24	-0.01
106	SLU 50	4	-124	654	8.52	2.17	-0.01
106	SLU 51	4	-123	655	8.48	2.22	-0.01
106	SLU 52	5	-141	795	9.3	2.44	0
106	SLU 53	5	-146	788	9.7	2.4	0
106	SLU 54	5	-146	789	9.66	2.46	0
106	SLU 55	5	-144	791	9.52	2.48	0
106	SLU 56	5	-150	785	9.92	2.43	0
106	SLU 57	5	-149	786	9.88	2.49	0
106	SLU 58	5	-148	787	9.81	2.42	0
106	SLU 59	5	-147	787	9.77	2.47	0
106	SLU 60	5	-152	850	9.92	2.46	0
106	SLU 61	5	-151	851	9.88	2.51	0
106	SLU 62	5	-155	847	10.15	2.49	0
106	SLU 63	5	-155	848	10.1	2.55	0
106	SLU 64	4	-138	681	9.39	2.3	0
106	SLU 65	4	-137	683	9.31	2.39	-0.01
106	SLU 66	4	-143	676	9.72	2.34	-0.01
106	SLU 67	4	-142	677	9.67	2.4	-0.01
106	SLU 68	4	-140	679	9.53	2.42	-0.01
106	SLU 69	4	-146	673	9.94	2.38	-0.01
106	SLU 70	4	-145	674	9.89	2.43	-0.01
106	SLU 71	4	-144	675	9.83	2.36	-0.01
106	SLU 72	4	-144	675	9.78	2.42	-0.01
106	SLU 73	5	-161	815	10.6	2.64	0
106	SLU 74	5	-167	809	11.01	2.59	0
106	SLU 75	5	-166	810	10.97	2.65	0
106	SLU 76	5	-164	812	10.82	2.67	0
106	SLU 77	5	-170	806	11.23	2.62	0
106	SLU 78	5	-170	806	11.19	2.68	0
106	SLU 79	5	-169	807	11.12	2.61	0
106	SLU 80	5	-168	808	11.08	2.66	0
106	SLU 81	5	-173	871	11.23	2.65	0
106	SLU 82	5	-172	872	11.19	2.71	0
106	SLU 83	5	-176	868	11.45	2.68	0
106	SLU 84	5	-175	868	11.41	2.74	0
106	SLE RA 1	3	-101	520	6.93	1.72	0
106	SLE RA 2	3	-101	520	6.88	1.79	0
106	SLE RA 3	3	-105	516	7.15	1.76	0
106	SLE RA 4	3	-104	517	7.12	1.79	0
106	SLE RA 5	3	-103	518	7.03	1.81	0
106	SLE RA 6	3	-107	514	7.3	1.78	0
106	SLE RA 7	3	-106	514	7.27	1.81	0
106	SLE RA 8	3	-106	515	7.23	1.77	0
106	SLE RA 9	3	-105	516	7.2	1.8	0
106	SLE RA 10	4	-117	609	7.74	1.95	0
106	SLE RA 11	4	-121	605	8.02	1.92	0
106	SLE RA 12	4	-121	605	7.99	1.96	0
106	SLE RA 13	4	-119	607	7.89	1.97	0
106	SLE RA 14	4	-123	602	8.16	1.94	0
106	SLE RA 15	4	-123	603	8.13	1.98	0
106	SLE RA 16	4	-122	604	8.09	1.93	0
106	SLE RA 17	4	-122	604	8.06	1.97	0
106	SLE RA 18	4	-125	646	8.16	1.96	0
106	SLE RA 19	4	-124	647	8.13	2	0
106	SLE RA 20	4	-127	644	8.31	1.98	0
106	SLE RA 21	4	-126	644	8.28	2.02	0
106	SLE FR 1	3	-101	520	6.93	1.72	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
106	SLE FR 2	3	-101	520	6.92	1.74	0
106	SLE FR 3	3	-102	519	6.99	1.73	0
106	SLE FR 4	3	-108	558	7.29	1.81	0
106	SLE FR 5	3	-109	557	7.36	1.8	0
106	SLE FR 6	3	-113	583	7.55	1.84	0
106	SLE QP 1	3	-101	520	6.93	1.72	0
106	SLE QP 2	3	-108	558	7.3	1.79	0
106	SLD 1	17	19	639	-0.22	12.56	-0.03
106	SLD 2	17	19	639	-0.22	12.56	-0.03
106	SLD 3	20	-121	564	7.85	15.24	-0.04
106	SLD 4	20	-121	564	7.85	15.24	-0.04
106	SLD 5	2	142	696	-7.19	0.97	0.01
106	SLD 6	2	142	696	-7.19	0.97	0.01
106	SLD 7	14	-325	445	19.7	9.88	-0.03
106	SLD 8	14	-325	445	19.7	9.88	-0.03
106	SLD 9	-7	108	670	-5.1	-6.29	0.03
106	SLD 10	-7	108	670	-5.1	-6.29	0.03
106	SLD 11	5	-359	419	21.79	2.62	-0.01
106	SLD 12	5	-359	419	21.79	2.62	-0.01
106	SLD 13	-14	-95	551	6.75	-11.65	0.04
106	SLD 14	-14	-95	551	6.75	-11.65	0.04
106	SLD 15	-10	-236	476	14.82	-8.98	0.02
106	SLD 16	-10	-236	476	14.82	-8.98	0.02
106	SLV 1	37	188	749	-10.22	28.17	-0.07
106	SLV 2	37	188	749	-10.22	28.17	-0.07
106	SLV 3	45	-139	573	8.58	34.69	-0.09
106	SLV 4	45	-139	573	8.58	34.69	-0.09
106	SLV 5	0	476	881	-26.48	-0.18	0.02
106	SLV 6	0	476	881	-26.48	-0.18	0.02
106	SLV 7	29	-614	296	36.21	21.55	-0.07
106	SLV 8	29	-614	296	36.21	21.55	-0.07
106	SLV 9	-22	397	819	-21.61	-17.96	0.06
106	SLV 10	-22	397	819	-21.61	-17.96	0.06
106	SLV 11	6	-693	234	41.08	3.77	-0.02
106	SLV 12	6	-693	234	41.08	3.77	-0.02
106	SLV 13	-38	-78	542	6.02	-31.1	0.09
106	SLV 14	-38	-78	542	6.02	-31.1	0.09
106	SLV 15	-30	-405	366	24.83	-24.58	0.06
106	SLV 16	-30	-405	366	24.83	-24.58	0.06
107	SLU 1	-15	669	1557	-30.89	-10.08	0.01
107	SLU 2	-23	786	1467	-34.8	-15.84	0
107	SLU 3	-15	687	1585	-31.73	-10.41	0.01
107	SLU 4	-20	757	1531	-34.08	-13.87	0.01
107	SLU 5	-23	795	1485	-35.25	-16.05	0
107	SLU 6	-16	697	1603	-32.19	-10.63	0.01
107	SLU 7	-20	766	1549	-34.53	-14.08	0.01
107	SLU 8	-15	688	1594	-31.8	-10.51	0.01
107	SLU 9	-20	758	1540	-34.15	-13.96	0.01
107	SLU 10	-25	864	1590	-38.41	-17.22	0
107	SLU 11	-17	765	1708	-35.34	-11.8	0.01
107	SLU 12	-22	835	1654	-37.69	-15.25	0.01
107	SLU 13	-25	873	1609	-38.86	-17.44	0
107	SLU 14	-18	774	1726	-35.8	-12.01	0.01
107	SLU 15	-22	844	1672	-38.14	-15.47	0.01
107	SLU 16	-17	766	1717	-35.42	-11.89	0.01
107	SLU 17	-22	836	1663	-37.76	-15.35	0.01
107	SLU 18	-18	780	1734	-36.05	-12.06	0.01
107	SLU 19	-22	850	1679	-38.4	-15.51	0.01
107	SLU 20	-18	790	1752	-36.51	-12.27	0.01
107	SLU 21	-23	859	1698	-38.85	-15.73	0.01
107	SLU 22	-17	745	1674	-34.43	-11.43	0.01
107	SLU 23	-25	862	1584	-38.33	-17.19	0
107	SLU 24	-17	763	1702	-35.27	-11.76	0.01
107	SLU 25	-22	833	1648	-37.61	-15.22	0.01
107	SLU 26	-25	871	1602	-38.79	-17.4	0
107	SLU 27	-18	773	1720	-35.73	-11.98	0.01
107	SLU 28	-22	843	1666	-38.07	-15.43	0.01
107	SLU 29	-17	764	1711	-35.34	-11.86	0.01
107	SLU 30	-22	834	1656	-37.68	-15.31	0.01
107	SLU 31	-27	940	1707	-41.95	-18.57	0.01
107	SLU 32	-19	841	1825	-38.88	-13.15	0.01
107	SLU 33	-24	911	1771	-41.23	-16.6	0.01
107	SLU 34	-27	949	1725	-42.4	-18.79	0.01
107	SLU 35	-20	850	1843	-39.34	-13.36	0.01
107	SLU 36	-24	920	1789	-41.68	-16.82	0.01
107	SLU 37	-19	842	1834	-38.95	-13.24	0.01
107	SLU 38	-24	912	1780	-41.3	-16.7	0.01
107	SLU 39	-20	856	1850	-39.59	-13.41	0.01
107	SLU 40	-24	926	1796	-41.93	-16.86	0.01
107	SLU 41	-20	866	1869	-40.05	-13.62	0.01
107	SLU 42	-25	936	1814	-42.39	-17.08	0.01
107	SLU 43	-19	844	1985	-38.95	-12.64	0.01
107	SLU 44	-26	961	1894	-42.85	-18.4	0.01
107	SLU 45	-19	862	2012	-39.79	-12.97	0.01
107	SLU 46	-24	932	1958	-42.13	-16.43	0.01
107	SLU 47	-27	970	1913	-43.31	-18.61	0.01
107	SLU 48	-19	871	2030	-40.24	-13.19	0.01
107	SLU 49	-24	941	1976	-42.59	-16.64	0.01
107	SLU 50	-19	863	2021	-39.86	-13.07	0.01
107	SLU 51	-24	933	1967	-42.2	-16.52	0.01



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
		x	y	z		x	y	z	
107	SLU 52	-28	1038	2018		-46.46	-19.78	0.01	
107	SLU 53	-21	939	2135		-43.4	-14.36	0.01	
107	SLU 54	-26	1009	2081		-45.74	-17.81	0.01	
107	SLU 55	-29	1048	2036		-46.92	-20	0.01	
107	SLU 56	-21	949	2154		-43.86	-14.57	0.01	
107	SLU 57	-26	1019	2099		-46.2	-18.03	0.01	
107	SLU 58	-21	940	2144		-43.47	-14.45	0.01	
107	SLU 59	-26	1010	2090		-45.81	-17.91	0.01	
107	SLU 60	-22	955	2161		-44.11	-14.62	0.01	
107	SLU 61	-26	1025	2107		-46.45	-18.07	0.01	
107	SLU 62	-22	964	2179		-44.56	-14.83	0.01	
107	SLU 63	-27	1034	2125		-46.91	-18.29	0.01	
107	SLU 64	-21	920	2101		-42.49	-13.99	0.01	
107	SLU 65	-28	1037	2011		-46.39	-19.75	0.01	
107	SLU 66	-21	938	2129		-43.33	-14.32	0.01	
107	SLU 67	-26	1008	2075		-45.67	-17.78	0.01	
107	SLU 68	-29	1046	2029		-46.85	-19.96	0.01	
107	SLU 69	-21	947	2147		-43.78	-14.54	0.01	
107	SLU 70	-26	1017	2093		-46.12	-17.99	0.01	
107	SLU 71	-21	939	2138		-43.4	-14.42	0.01	
107	SLU 72	-26	1009	2084		-45.74	-17.87	0.01	
107	SLU 73	-30	1114	2134		-50	-21.13	0.01	
107	SLU 74	-23	1016	2252		-46.94	-15.71	0.01	
107	SLU 75	-28	1086	2198		-49.28	-19.16	0.01	
107	SLU 76	-31	1124	2153		-50.46	-21.35	0.01	
107	SLU 77	-23	1025	2270		-47.39	-15.92	0.01	
107	SLU 78	-28	1095	2216		-49.74	-19.38	0.01	
107	SLU 79	-23	1016	2261		-47.01	-15.8	0.01	
107	SLU 80	-28	1086	2207		-49.35	-19.26	0.01	
107	SLU 81	-24	1031	2278		-47.65	-15.97	0.01	
107	SLU 82	-28	1101	2223		-49.99	-19.42	0.01	
107	SLU 83	-24	1040	2296		-48.1	-16.18	0.01	
107	SLU 84	-29	1110	2242		-50.44	-19.64	0.01	
107	SLE RA 1	-15	691	1591		-31.9	-10.46	0.01	
107	SLE RA 2	-21	769	1531		-34.51	-14.3	0	
107	SLE RA 3	-16	703	1609		-32.46	-10.69	0.01	
107	SLE RA 4	-19	750	1573		-34.03	-12.99	0.01	
107	SLE RA 5	-21	775	1543		-34.81	-14.45	0.01	
107	SLE RA 6	-16	709	1621		-32.77	-10.83	0.01	
107	SLE RA 7	-19	756	1585		-34.33	-13.13	0.01	
107	SLE RA 8	-16	704	1615		-32.51	-10.75	0.01	
107	SLE RA 9	-19	750	1579		-34.07	-13.05	0.01	
107	SLE RA 10	-22	821	1613		-36.91	-15.23	0.01	
107	SLE RA 11	-17	755	1691		-34.87	-11.61	0.01	
107	SLE RA 12	-20	801	1655		-36.43	-13.91	0.01	
107	SLE RA 13	-22	827	1625		-37.22	-15.37	0.01	
107	SLE RA 14	-17	761	1704		-35.18	-11.75	0.01	
107	SLE RA 15	-20	808	1667		-36.74	-14.06	0.01	
107	SLE RA 16	-17	755	1697		-34.92	-11.67	0.01	
107	SLE RA 17	-20	802	1661		-36.48	-13.98	0.01	
107	SLE RA 18	-17	765	1708		-35.34	-11.78	0.01	
107	SLE RA 19	-20	812	1672		-36.91	-14.09	0.01	
107	SLE RA 20	-18	771	1720		-35.65	-11.93	0.01	
107	SLE RA 21	-21	818	1684		-37.21	-14.23	0.01	
107	SLE FR 1	-15	691	1591		-31.9	-10.46	0.01	
107	SLE FR 2	-16	707	1579		-32.42	-11.23	0.01	
107	SLE FR 3	-15	694	1596		-32.02	-10.52	0.01	
107	SLE FR 4	-17	729	1614		-33.46	-11.63	0.01	
107	SLE FR 5	-16	716	1631		-33.06	-10.92	0.01	
107	SLE FR 6	-16	728	1650		-33.62	-11.12	0.01	
107	SLE QP 1	-15	691	1591		-31.9	-10.46	0.01	
107	SLE QP 2	-16	713	1626		-32.94	-10.86	0.01	
107	SLD 1	-32	1177	2219		-53.2	-23.79	0	
107	SLD 2	-32	1177	2219		-53.2	-23.79	0	
107	SLD 3	-23	750	2023		-35.25	-17.52	-0.01	
107	SLD 4	-23	750	2023		-35.25	-17.52	-0.01	
107	SLD 5	-35	1500	2101		-66.24	-24.26	0.01	
107	SLD 6	-35	1500	2101		-66.24	-24.26	0.01	
107	SLD 7	-4	76	1448		-6.41	-3.34	0	
107	SLD 8	-4	76	1448		-6.41	-3.34	0	
107	SLD 9	-28	1350	1804		-59.46	-18.38	0.02	
107	SLD 10	-28	1350	1804		-59.46	-18.38	0.02	
107	SLD 11	3	-74	1151		0.36	2.54	0	
107	SLD 12	3	-74	1151		0.36	2.54	0	
107	SLD 13	-9	676	1229		-30.62	-4.2	0.02	
107	SLD 14	-9	676	1229		-30.62	-4.2	0.02	
107	SLD 15	1	249	1033		-12.67	2.07	0.01	
107	SLD 16	1	249	1033		-12.67	2.07	0.01	
107	SLV 1	-56	1792	3028		-79.98	-42.07	-0.01	
107	SLV 2	-56	1792	3028		-79.98	-42.07	-0.01	
107	SLV 3	-32	802	2538		-38.5	-26.09	-0.02	
107	SLV 4	-32	802	2538		-38.5	-26.09	-0.02	
107	SLV 5	-64	2538	2790		-109.96	-44.45	0.02	
107	SLV 6	-64	2538	2790		-109.96	-44.45	0.02	
107	SLV 7	15	-761	1156		28.31	8.8	-0.02	
107	SLV 8	15	-761	1156		28.31	8.8	-0.02	
107	SLV 9	-47	2188	2096		-94.18	-30.52	0.03	
107	SLV 10	-47	2188	2096		-94.18	-30.52	0.03	
107	SLV 11	32	-1112	462		22.73	-0.01	-0.01	
107	SLV 12	32	-1112	462		22.73	-0.01	-0.01	



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
107	SLV 13	0	624	715	-27.37	4.37	0.03
107	SLV 14	0	624	715	-27.37	4.37	0.03
107	SLV 15	24	-365	224	14.11	20.35	0.02
107	SLV 16	24	-365	224	14.11	20.35	0.02
108	SLU 1	1	331	3114	-25.18	0.27	0.02
108	SLU 2	3	637	3296	-40.47	1.26	0.02
108	SLU 3	1	344	3195	-26.04	0.28	0.02
108	SLU 4	2	528	3304	-35.21	0.88	0.02
108	SLU 5	3	647	3349	-41.07	1.27	0.02
108	SLU 6	1	353	3248	-26.64	0.29	0.02
108	SLU 7	2	537	3357	-35.82	0.88	0.02
108	SLU 8	1	349	3219	-26.38	0.29	0.02
108	SLU 9	2	533	3328	-35.56	0.88	0.02
108	SLU 10	3	675	3714	-43.45	1.3	0.03
108	SLU 11	1	381	3613	-29.01	0.32	0.02
108	SLU 12	2	565	3723	-38.19	0.92	0.03
108	SLU 13	3	684	3767	-44.05	1.31	0.03
108	SLU 14	2	390	3666	-29.62	0.33	0.02
108	SLU 15	2	574	3775	-38.79	0.93	0.03
108	SLU 16	2	387	3638	-29.36	0.33	0.02
108	SLU 17	2	570	3747	-38.53	0.92	0.03
108	SLU 18	2	384	3711	-29.43	0.33	0.02
108	SLU 19	2	568	3821	-38.6	0.93	0.03
108	SLU 20	2	393	3764	-30.03	0.34	0.03
108	SLU 21	2	577	3874	-39.21	0.93	0.03
108	SLU 22	1	372	3505	-28.25	0.31	0.02
108	SLU 23	3	678	3687	-43.55	1.3	0.03
108	SLU 24	1	385	3586	-29.12	0.33	0.02
108	SLU 25	2	568	3696	-38.29	0.92	0.03
108	SLU 26	3	687	3740	-44.15	1.31	0.03
108	SLU 27	2	394	3639	-29.72	0.33	0.02
108	SLU 28	2	577	3748	-38.89	0.93	0.03
108	SLU 29	1	390	3611	-29.46	0.33	0.02
108	SLU 30	2	574	3720	-38.63	0.92	0.03
108	SLU 31	3	716	4106	-46.53	1.35	0.03
108	SLU 32	2	422	4005	-32.09	0.37	0.03
108	SLU 33	2	606	4114	-41.27	0.96	0.03
108	SLU 34	3	725	4158	-47.13	1.35	0.03
108	SLU 35	2	431	4058	-32.69	0.38	0.03
108	SLU 36	3	615	4167	-41.87	0.97	0.03
108	SLU 37	2	427	4029	-32.43	0.37	0.03
108	SLU 38	2	611	4138	-41.61	0.97	0.03
108	SLU 39	2	425	4103	-32.51	0.37	0.03
108	SLU 40	3	609	4212	-41.68	0.97	0.03
108	SLU 41	2	434	4156	-33.11	0.38	0.03
108	SLU 42	3	618	4265	-42.29	0.98	0.03
108	SLU 43	2	416	3913	-31.67	0.34	0.03
108	SLU 44	3	723	4096	-46.97	1.33	0.03
108	SLU 45	2	429	3995	-32.53	0.35	0.03
108	SLU 46	2	613	4104	-41.71	0.94	0.03
108	SLU 47	3	732	4148	-47.57	1.34	0.03
108	SLU 48	2	438	4048	-33.14	0.36	0.03
108	SLU 49	2	622	4157	-42.31	0.95	0.03
108	SLU 50	2	434	4019	-32.88	0.35	0.03
108	SLU 51	2	618	4128	-42.05	0.95	0.03
108	SLU 52	3	760	4514	-49.94	1.37	0.03
108	SLU 53	2	466	4413	-35.51	0.39	0.03
108	SLU 54	3	650	4522	-44.69	0.98	0.03
108	SLU 55	3	769	4567	-50.55	1.38	0.03
108	SLU 56	2	475	4466	-36.11	0.4	0.03
108	SLU 57	3	659	4575	-45.29	0.99	0.03
108	SLU 58	2	472	4438	-35.85	0.4	0.03
108	SLU 59	3	656	4547	-45.03	0.99	0.03
108	SLU 60	2	470	4511	-35.93	0.4	0.03
108	SLU 61	3	654	4621	-45.1	0.99	0.03
108	SLU 62	2	479	4564	-36.53	0.41	0.03
108	SLU 63	3	663	4673	-45.7	1	0.03
108	SLU 64	2	457	4305	-34.75	0.38	0.03
108	SLU 65	3	764	4487	-50.05	1.37	0.03
108	SLU 66	2	470	4386	-35.61	0.39	0.03
108	SLU 67	3	654	4495	-44.79	0.99	0.03
108	SLU 68	3	773	4540	-50.65	1.38	0.03
108	SLU 69	2	479	4439	-36.21	0.4	0.03
108	SLU 70	3	663	4548	-45.39	0.99	0.03
108	SLU 71	2	475	4410	-35.96	0.4	0.03
108	SLU 72	3	659	4520	-45.13	0.99	0.03
108	SLU 73	3	801	4905	-53.02	1.41	0.03
108	SLU 74	2	507	4805	-38.59	0.43	0.03
108	SLU 75	3	691	4914	-47.77	1.03	0.03
108	SLU 76	3	810	4958	-53.62	1.42	0.03
108	SLU 77	2	516	4857	-39.19	0.44	0.03
108	SLU 78	3	700	4967	-48.37	1.04	0.03
108	SLU 79	2	513	4829	-38.93	0.44	0.03
108	SLU 80	3	697	4938	-48.11	1.03	0.03
108	SLU 81	2	511	4903	-39	0.44	0.03
108	SLU 82	3	694	5012	-48.18	1.04	0.03
108	SLU 83	2	520	4956	-39.61	0.45	0.03
108	SLU 84	3	703	5065	-48.78	1.04	0.03
108	SLE RA 1	1	343	3225	-26.06	0.28	0.02
108	SLE RA 2	2	547	3347	-36.25	0.94	0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
108	SLE RA 3	1	351	3280	-26.63	0.29	0.02
108	SLE RA 4	2	474	3352	-32.75	0.69	0.02
108	SLE RA 5	2	553	3382	-36.65	0.95	0.02
108	SLE RA 6	1	357	3315	-27.03	0.3	0.02
108	SLE RA 7	2	480	3388	-33.15	0.69	0.02
108	SLE RA 8	1	355	3296	-26.86	0.29	0.02
108	SLE RA 9	2	477	3369	-32.98	0.69	0.02
108	SLE RA 10	2	572	3626	-38.24	0.97	0.03
108	SLE RA 11	1	376	3559	-28.61	0.32	0.02
108	SLE RA 12	2	499	3631	-34.73	0.72	0.02
108	SLE RA 13	2	578	3661	-38.64	0.98	0.03
108	SLE RA 14	1	382	3594	-29.01	0.32	0.02
108	SLE RA 15	2	505	3667	-35.13	0.72	0.02
108	SLE RA 16	1	380	3575	-28.84	0.32	0.02
108	SLE RA 17	2	502	3648	-34.96	0.72	0.02
108	SLE RA 18	2	378	3624	-28.89	0.32	0.02
108	SLE RA 19	2	501	3697	-35.01	0.72	0.03
108	SLE RA 20	2	384	3659	-29.29	0.33	0.02
108	SLE RA 21	2	507	3732	-35.41	0.73	0.03
108	SLE FR 1	1	343	3225	-26.06	0.28	0.02
108	SLE FR 2	2	384	3250	-28.09	0.42	0.02
108	SLE FR 3	1	345	3239	-26.22	0.29	0.02
108	SLE FR 4	2	394	3369	-28.95	0.43	0.02
108	SLE FR 5	1	356	3359	-27.07	0.3	0.02
108	SLE FR 6	1	360	3425	-27.47	0.3	0.02
108	SLE QP 1	1	343	3225	-26.06	0.28	0.02
108	SLE QP 2	1	353	3345	-26.91	0.3	0.02
108	SLD 1	-2	381	3313	-28.28	7.09	0.02
108	SLD 2	-2	381	3313	-28.28	7.09	0.02
108	SLD 3	-5	-63	3033	-7.14	4.47	0.01
108	SLD 4	-5	-63	3033	-7.14	4.47	0.01
108	SLD 5	4	1035	3760	-59.39	6.31	0.03
108	SLD 6	4	1035	3760	-59.39	6.31	0.03
108	SLD 7	-4	-445	2827	11.09	-2.43	0.01
108	SLD 8	-4	-445	2827	11.09	-2.43	0.01
108	SLD 9	7	1152	3863	-64.9	3.02	0.03
108	SLD 10	7	1152	3863	-64.9	3.02	0.03
108	SLD 11	-1	-328	2930	5.57	-5.72	0.02
108	SLD 12	-1	-328	2930	5.57	-5.72	0.02
108	SLD 13	7	769	3657	-46.67	-3.88	0.03
108	SLD 14	7	769	3657	-46.67	-3.88	0.03
108	SLD 15	5	325	3377	-25.53	-6.5	0.03
108	SLD 16	5	325	3377	-25.53	-6.5	0.03
108	SLV 1	-7	424	3270	-30.33	16.77	0.01
108	SLV 2	-7	424	3270	-30.33	16.77	0.01
108	SLV 3	-13	-651	2606	20.86	10.2	0
108	SLV 4	-13	-651	2606	20.86	10.2	0
108	SLV 5	9	2004	4330	-105.56	15.2	0.03
108	SLV 6	9	2004	4330	-105.56	15.2	0.03
108	SLV 7	-13	-1578	2115	65.05	-6.7	0
108	SLV 8	-13	-1578	2115	65.05	-6.7	0
108	SLV 9	15	2285	4575	-118.86	7.29	0.04
108	SLV 10	15	2285	4575	-118.86	7.29	0.04
108	SLV 11	-6	-1298	2359	51.75	-14.61	0.01
108	SLV 12	-6	-1298	2359	51.75	-14.61	0.01
108	SLV 13	16	1358	4084	-74.67	-9.61	0.04
108	SLV 14	16	1358	4084	-74.67	-9.61	0.04
108	SLV 15	9	283	3420	-23.49	-16.17	0.03
108	SLV 16	9	283	3420	-23.49	-16.17	0.03
109	SLU 1	4	-184	4369	6.14	3.21	-0.02
109	SLU 2	4	-201	4430	6.81	3.11	-0.01
109	SLU 3	5	-186	4484	6.19	3.32	-0.02
109	SLU 4	4	-196	4521	6.59	3.26	-0.01
109	SLU 5	4	-203	4509	6.85	3.19	-0.01
109	SLU 6	5	-188	4564	6.23	3.4	-0.02
109	SLU 7	5	-198	4600	6.63	3.33	-0.01
109	SLU 8	5	-187	4528	6.22	3.36	-0.02
109	SLU 9	5	-197	4564	6.62	3.3	-0.01
109	SLU 10	5	-234	5056	8.01	3.64	-0.01
109	SLU 11	5	-219	5110	7.39	3.85	-0.02
109	SLU 12	5	-229	5147	7.79	3.79	-0.02
109	SLU 13	5	-236	5135	8.05	3.71	-0.01
109	SLU 14	5	-220	5189	7.43	3.92	-0.02
109	SLU 15	5	-230	5226	7.83	3.86	-0.02
109	SLU 16	5	-220	5154	7.42	3.89	-0.02
109	SLU 17	5	-230	5190	7.82	3.83	-0.02
109	SLU 18	5	-231	5263	7.86	3.97	-0.02
109	SLU 19	5	-241	5300	8.25	3.91	-0.02
109	SLU 20	6	-233	5342	7.89	4.04	-0.02
109	SLU 21	5	-243	5379	8.29	3.98	-0.02
109	SLU 22	5	-210	4867	7.1	3.63	-0.02
109	SLU 23	5	-227	4928	7.77	3.52	-0.01
109	SLU 24	5	-211	4982	7.15	3.73	-0.02
109	SLU 25	5	-222	5019	7.55	3.67	-0.01
109	SLU 26	5	-228	5008	7.81	3.6	-0.01
109	SLU 27	5	-213	5062	7.19	3.81	-0.02
109	SLU 28	5	-223	5098	7.59	3.75	-0.02
109	SLU 29	5	-212	5026	7.18	3.77	-0.02
109	SLU 30	5	-223	5063	7.58	3.71	-0.02
109	SLU 31	6	-259	5554	8.97	4.05	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
109	SLU 32	6	-244	5608	8.35	4.26	-0.02
109	SLU 33	6	-254	5645	8.75	4.2	-0.02
109	SLU 34	6	-261	5633	9	4.13	-0.01
109	SLU 35	6	-246	5688	8.39	4.33	-0.02
109	SLU 36	6	-256	5724	8.79	4.27	-0.02
109	SLU 37	6	-245	5652	8.38	4.3	-0.02
109	SLU 38	6	-255	5688	8.78	4.24	-0.02
109	SLU 39	6	-256	5761	8.82	4.38	-0.02
109	SLU 40	6	-267	5798	9.21	4.32	-0.02
109	SLU 41	6	-258	5841	8.85	4.45	-0.02
109	SLU 42	6	-268	5877	9.25	4.39	-0.02
109	SLU 43	6	-231	5509	7.66	4.04	-0.02
109	SLU 44	5	-248	5570	8.32	3.94	-0.01
109	SLU 45	6	-233	5624	7.71	4.14	-0.02
109	SLU 46	6	-243	5661	8.1	4.08	-0.02
109	SLU 47	5	-249	5649	8.36	4.01	-0.02
109	SLU 48	6	-234	5704	7.74	4.22	-0.02
109	SLU 49	6	-244	5740	8.14	4.16	-0.02
109	SLU 50	6	-234	5668	7.74	4.19	-0.02
109	SLU 51	6	-244	5704	8.13	4.12	-0.02
109	SLU 52	6	-281	6196	9.52	4.46	-0.02
109	SLU 53	6	-265	6250	8.9	4.67	-0.02
109	SLU 54	6	-276	6286	9.3	4.61	-0.02
109	SLU 55	6	-282	6275	9.56	4.54	-0.02
109	SLU 56	6	-267	6329	8.94	4.75	-0.02
109	SLU 57	6	-277	6366	9.34	4.68	-0.02
109	SLU 58	6	-267	6294	8.93	4.71	-0.02
109	SLU 59	6	-277	6330	9.33	4.65	-0.02
109	SLU 60	7	-278	6403	9.37	4.79	-0.02
109	SLU 61	6	-288	6439	9.77	4.73	-0.02
109	SLU 62	7	-279	6482	9.41	4.86	-0.02
109	SLU 63	7	-289	6519	9.81	4.8	-0.02
109	SLU 64	6	-256	6007	8.62	4.45	-0.02
109	SLU 65	6	-273	6068	9.28	4.35	-0.02
109	SLU 66	6	-258	6122	8.67	4.56	-0.02
109	SLU 67	6	-268	6159	9.06	4.5	-0.02
109	SLU 68	6	-275	6148	9.32	4.42	-0.02
109	SLU 69	6	-259	6202	8.7	4.63	-0.02
109	SLU 70	6	-270	6238	9.1	4.57	-0.02
109	SLU 71	6	-259	6166	8.7	4.6	-0.02
109	SLU 72	6	-269	6203	9.09	4.54	-0.02
109	SLU 73	7	-306	6694	10.48	4.87	-0.02
109	SLU 74	7	-291	6748	9.86	5.08	-0.02
109	SLU 75	7	-301	6785	10.26	5.02	-0.02
109	SLU 76	7	-307	6773	10.52	4.95	-0.02
109	SLU 77	7	-292	6827	9.9	5.16	-0.03
109	SLU 78	7	-302	6864	10.3	5.1	-0.02
109	SLU 79	7	-292	6792	9.89	5.12	-0.03
109	SLU 80	7	-302	6828	10.29	5.06	-0.02
109	SLU 81	7	-303	6901	10.33	5.2	-0.02
109	SLU 82	7	-313	6938	10.73	5.14	-0.02
109	SLU 83	7	-304	6980	10.37	5.28	-0.03
109	SLU 84	7	-315	7017	10.77	5.22	-0.02
109	SLE RA 1	5	-192	4511	6.42	3.33	-0.02
109	SLE RA 2	4	-203	4552	6.86	3.26	-0.01
109	SLE RA 3	5	-193	4588	6.45	3.4	-0.02
109	SLE RA 4	5	-200	4613	6.72	3.36	-0.01
109	SLE RA 5	5	-204	4605	6.89	3.31	-0.01
109	SLE RA 6	5	-194	4641	6.48	3.45	-0.02
109	SLE RA 7	5	-201	4666	6.74	3.41	-0.02
109	SLE RA 8	5	-193	4617	6.47	3.43	-0.02
109	SLE RA 9	5	-200	4642	6.74	3.39	-0.02
109	SLE RA 10	5	-225	4969	7.66	3.62	-0.01
109	SLE RA 11	5	-215	5005	7.25	3.76	-0.02
109	SLE RA 12	5	-221	5030	7.51	3.71	-0.02
109	SLE RA 13	5	-226	5022	7.69	3.66	-0.01
109	SLE RA 14	5	-215	5058	7.27	3.8	-0.02
109	SLE RA 15	5	-222	5083	7.54	3.76	-0.02
109	SLE RA 16	5	-215	5034	7.27	3.78	-0.02
109	SLE RA 17	5	-222	5059	7.53	3.74	-0.02
109	SLE RA 18	5	-223	5107	7.56	3.83	-0.02
109	SLE RA 19	5	-230	5132	7.83	3.79	-0.02
109	SLE RA 20	5	-224	5160	7.59	3.88	-0.02
109	SLE RA 21	5	-231	5185	7.85	3.84	-0.02
109	SLE FR 1	5	-192	4511	6.42	3.33	-0.02
109	SLE FR 2	5	-194	4520	6.51	3.32	-0.02
109	SLE FR 3	5	-192	4533	6.43	3.35	-0.02
109	SLE FR 4	5	-203	4698	6.85	3.47	-0.02
109	SLE FR 5	5	-201	4711	6.77	3.5	-0.02
109	SLE FR 6	5	-207	4809	6.99	3.58	-0.02
109	SLE QP 1	5	-192	4511	6.42	3.33	-0.02
109	SLE QP 2	5	-201	4690	6.76	3.48	-0.02
109	SLD 1	14	124	4269	-7.73	10.83	-0.1
109	SLD 2	14	124	4269	-7.73	10.83	-0.1
109	SLD 3	12	-234	4202	8.33	12.7	-0.13
109	SLD 4	12	-234	4202	8.33	12.7	-0.13
109	SLD 5	11	440	4665	-21.95	2.84	0.02
109	SLD 6	11	440	4665	-21.95	2.84	0.02
109	SLD 7	3	-754	4443	31.59	9.09	-0.11
109	SLD 8	3	-754	4443	31.59	9.09	-0.11



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
109	SLD 9	6	352	4938	-18.07	-2.13	0.08
109	SLD 10	6	352	4938	-18.07	-2.13	0.08
109	SLD 11	-2	-842	4715	35.47	4.12	-0.05
109	SLD 12	-2	-842	4715	35.47	4.12	-0.05
109	SLD 13	-2	-168	5178	5.19	-5.74	0.1
109	SLD 14	-2	-168	5178	5.19	-5.74	0.1
109	SLD 15	-5	-526	5112	21.25	-3.86	0.06
109	SLD 16	-5	-526	5112	21.25	-3.86	0.06
109	SLV 1	27	557	3707	-27.01	21.51	-0.21
109	SLV 2	27	557	3707	-27.01	21.51	-0.21
109	SLV 3	22	-277	3545	10.37	26.06	-0.3
109	SLV 4	22	-277	3545	10.37	26.06	-0.3
109	SLV 5	20	1291	4641	-60.06	1.99	0.07
109	SLV 6	20	1291	4641	-60.06	1.99	0.07
109	SLV 7	2	-1488	4101	64.53	17.16	-0.24
109	SLV 8	2	-1488	4101	64.53	17.16	-0.24
109	SLV 9	8	1086	5279	-51.01	-10.19	0.21
109	SLV 10	8	1086	5279	-51.01	-10.19	0.21
109	SLV 11	-10	-1693	4740	73.58	4.98	-0.1
109	SLV 12	-10	-1693	4740	73.58	4.98	-0.1
109	SLV 13	-12	-125	5836	3.15	-19.1	0.26
109	SLV 14	-12	-125	5836	3.15	-19.1	0.26
109	SLV 15	-18	-959	5674	40.53	-14.55	0.17
109	SLV 16	-18	-959	5674	40.53	-14.55	0.17
110	SLU 1	1	325	3332	-25.9	0.05	0
110	SLU 2	-1	634	3525	-41.69	-0.92	0
110	SLU 3	1	336	3422	-26.74	0.05	0
110	SLU 4	0	521	3537	-36.21	-0.53	0
110	SLU 5	-1	641	3582	-42.23	-0.92	0
110	SLU 6	1	342	3479	-27.28	0.05	0
110	SLU 7	0	528	3594	-36.75	-0.53	0
110	SLU 8	1	338	3446	-26.98	0.05	0
110	SLU 9	0	524	3562	-36.45	-0.53	0
110	SLU 10	-1	670	3997	-44.83	-0.92	0
110	SLU 11	1	372	3894	-29.89	0.05	0
110	SLU 12	0	557	4009	-39.36	-0.53	0
110	SLU 13	-1	677	4054	-45.37	-0.92	0
110	SLU 14	1	379	3951	-30.43	0.05	0
110	SLU 15	0	564	4066	-39.9	-0.53	0
110	SLU 16	1	375	3918	-30.12	0.05	0
110	SLU 17	0	560	4034	-39.6	-0.53	0
110	SLU 18	1	377	4007	-30.39	0.05	0
110	SLU 19	0	562	4122	-39.87	-0.53	0
110	SLU 20	1	383	4064	-30.93	0.05	0
110	SLU 21	0	569	4179	-40.41	-0.53	0
110	SLU 22	1	364	3775	-29.12	0.05	0
110	SLU 23	-1	673	3968	-44.91	-0.92	0
110	SLU 24	1	375	3864	-29.96	0.05	0
110	SLU 25	0	560	3980	-39.44	-0.53	0
110	SLU 26	-1	680	4025	-45.45	-0.92	0
110	SLU 27	1	382	3921	-30.5	0.05	0
110	SLU 28	0	567	4037	-39.98	-0.53	0
110	SLU 29	1	378	3889	-30.2	0.05	0
110	SLU 30	0	563	4005	-39.68	-0.53	0
110	SLU 31	-1	709	4440	-48.06	-0.92	0
110	SLU 32	1	411	4336	-33.11	0.05	0
110	SLU 33	0	597	4452	-42.59	-0.53	0
110	SLU 34	-1	716	4497	-48.6	-0.92	0
110	SLU 35	1	418	4393	-33.65	0.05	0
110	SLU 36	0	604	4509	-43.13	-0.53	0
110	SLU 37	1	414	4361	-33.35	0.05	0
110	SLU 38	0	600	4477	-42.82	-0.53	0
110	SLU 39	1	416	4449	-33.62	0.05	0
110	SLU 40	0	601	4565	-43.09	-0.53	0
110	SLU 41	1	423	4506	-34.16	0.05	0
110	SLU 42	0	608	4622	-43.63	-0.53	0
110	SLU 43	1	408	4180	-32.56	0.07	0
110	SLU 44	0	718	4373	-48.35	-0.9	0
110	SLU 45	1	420	4270	-33.4	0.07	0
110	SLU 46	0	605	4385	-42.88	-0.51	0
110	SLU 47	0	725	4430	-48.89	-0.9	0
110	SLU 48	1	426	4327	-33.94	0.07	0
110	SLU 49	0	612	4442	-43.42	-0.51	0
110	SLU 50	1	422	4294	-33.64	0.07	0
110	SLU 51	0	608	4410	-43.11	-0.51	0
110	SLU 52	0	754	4845	-51.5	-0.9	0
110	SLU 53	1	456	4742	-36.55	0.06	0
110	SLU 54	0	641	4857	-46.02	-0.52	0
110	SLU 55	0	761	4902	-52.04	-0.9	0
110	SLU 56	1	463	4799	-37.09	0.06	0
110	SLU 57	0	648	4914	-46.56	-0.52	0
110	SLU 58	1	459	4766	-36.79	0.06	0
110	SLU 59	0	644	4882	-46.26	-0.52	0
110	SLU 60	1	460	4855	-37.05	0.06	0
110	SLU 61	0	646	4970	-46.53	-0.52	0
110	SLU 62	1	467	4912	-37.59	0.06	0
110	SLU 63	0	653	5027	-47.07	-0.52	0
110	SLU 64	1	448	4623	-35.78	0.06	0
110	SLU 65	0	757	4816	-51.58	-0.9	0
110	SLU 66	1	459	4712	-36.63	0.07	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
110	SLU 67	0	644	4828	-46.1	-0.51	0
110	SLU 68	0	764	4873	-52.12	-0.9	0
110	SLU 69	1	466	4769	-37.17	0.07	0
110	SLU 70	0	651	4885	-46.64	-0.51	0
110	SLU 71	1	462	4737	-36.86	0.06	0
110	SLU 72	0	647	4852	-46.34	-0.51	0
110	SLU 73	0	793	5288	-54.72	-0.9	0
110	SLU 74	1	495	5184	-39.77	0.06	0
110	SLU 75	0	681	5300	-49.25	-0.52	0
110	SLU 76	0	800	5345	-55.26	-0.9	0
110	SLU 77	1	502	5241	-40.31	0.06	0
110	SLU 78	0	688	5357	-49.79	-0.52	0
110	SLU 79	1	498	5209	-40.01	0.06	0
110	SLU 80	0	683	5324	-49.49	-0.52	0
110	SLU 81	1	500	5297	-40.28	0.06	0
110	SLU 82	0	685	5413	-49.75	-0.52	0
110	SLU 83	1	507	5354	-40.82	0.06	0
110	SLU 84	0	692	5470	-50.29	-0.52	0
110	SLE RA 1	1	336	3459	-26.82	0.05	0
110	SLE RA 2	0	542	3587	-37.35	-0.59	0
110	SLE RA 3	1	343	3518	-27.38	0.05	0
110	SLE RA 4	0	467	3595	-33.7	-0.34	0
110	SLE RA 5	0	547	3625	-37.7	-0.59	0
110	SLE RA 6	1	348	3556	-27.74	0.05	0
110	SLE RA 7	0	471	3633	-34.06	-0.34	0
110	SLE RA 8	1	345	3535	-27.54	0.05	0
110	SLE RA 9	0	469	3612	-33.85	-0.34	0
110	SLE RA 10	0	566	3902	-39.44	-0.6	0
110	SLE RA 11	1	367	3833	-29.48	0.05	0
110	SLE RA 12	0	491	3910	-35.79	-0.34	0
110	SLE RA 13	0	571	3940	-39.8	-0.6	0
110	SLE RA 14	1	372	3871	-29.84	0.05	0
110	SLE RA 15	0	496	3948	-36.15	-0.34	0
110	SLE RA 16	1	369	3849	-29.64	0.05	0
110	SLE RA 17	0	493	3927	-35.95	-0.34	0
110	SLE RA 18	1	370	3908	-29.81	0.05	0
110	SLE RA 19	0	494	3985	-36.13	-0.34	0
110	SLE RA 20	1	375	3946	-30.17	0.05	0
110	SLE RA 21	0	499	4023	-36.49	-0.34	0
110	SLE FR 1	1	336	3459	-26.82	0.05	0
110	SLE FR 2	0	377	3485	-28.92	-0.08	0
110	SLE FR 3	1	338	3474	-26.96	0.05	0
110	SLE FR 4	0	387	3619	-29.82	-0.08	0
110	SLE FR 5	1	348	3609	-27.86	0.05	0
110	SLE FR 6	1	353	3684	-28.32	0.05	0
110	SLE QP 1	1	336	3459	-26.82	0.05	0
110	SLE QP 2	1	346	3594	-27.72	0.05	0
110	SLD 1	4	726	3972	-46.19	4.25	0
110	SLD 2	4	726	3972	-46.19	4.25	0
110	SLD 3	7	303	3660	-25.68	6.96	-0.01
110	SLD 4	7	303	3660	-25.68	6.96	-0.01
110	SLD 5	-2	1102	4181	-64.36	-2.79	0
110	SLD 6	-2	1102	4181	-64.36	-2.79	0
110	SLD 7	6	-309	3140	4	6.22	0
110	SLD 8	6	-309	3140	4	6.22	0
110	SLD 9	-5	1001	4047	-59.43	-6.13	0.01
110	SLD 10	-5	1001	4047	-59.43	-6.13	0.01
110	SLD 11	4	-410	3007	8.93	2.89	0
110	SLD 12	4	-410	3007	8.93	2.89	0
110	SLD 13	-6	390	3527	-29.76	-6.86	0.01
110	SLD 14	-6	390	3527	-29.76	-6.86	0.01
110	SLD 15	-3	-34	3215	-9.25	-4.15	0.01
110	SLD 16	-3	-34	3215	-9.25	-4.15	0.01
110	SLV 1	9	1255	4486	-71.93	10.07	-0.01
110	SLV 2	9	1255	4486	-71.93	10.07	-0.01
110	SLV 3	15	240	3748	-22.67	16.76	-0.02
110	SLV 4	15	240	3748	-22.67	16.76	-0.02
110	SLV 5	-7	2159	4981	-115.69	-7.09	0.01
110	SLV 6	-7	2159	4981	-115.69	-7.09	0.01
110	SLV 7	15	-1226	2520	48.5	15.21	-0.01
110	SLV 8	15	-1226	2520	48.5	15.21	-0.01
110	SLV 9	-14	1919	4667	-103.94	-15.11	0.02
110	SLV 10	-14	1919	4667	-103.94	-15.11	0.02
110	SLV 11	8	-1467	2207	60.25	7.19	0
110	SLV 12	8	-1467	2207	60.25	7.19	0
110	SLV 13	-14	453	3440	-32.76	-16.67	0.02
110	SLV 14	-14	453	3440	-32.76	-16.67	0.02
110	SLV 15	-8	-563	2702	16.5	-9.97	0.01
110	SLV 16	-8	-563	2702	16.5	-9.97	0.01
111	SLU 1	-1	732	5889	-36.17	0.02	0
111	SLU 2	7	863	6190	-42.33	6.96	0
111	SLU 3	-1	755	6053	-37.32	0.02	0
111	SLU 4	4	834	6234	-41.01	4.18	0
111	SLU 5	7	876	6292	-42.97	6.96	0
111	SLU 6	-1	769	6155	-37.96	0.02	0
111	SLU 7	4	847	6336	-41.65	4.19	0
111	SLU 8	-1	758	6092	-37.46	0.03	0
111	SLU 9	4	837	6273	-41.16	4.19	0
111	SLU 10	7	953	6891	-46.84	7.01	0
111	SLU 11	-1	846	6754	-41.83	0.07	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
111	SLU 12	4	924	6935	-45.52	4.23	0
111	SLU 13	7	966	6993	-47.49	7.01	0
111	SLU 14	-1	859	6855	-42.48	0.08	0
111	SLU 15	4	937	7036	-46.17	4.24	0
111	SLU 16	-1	849	6793	-41.98	0.08	0
111	SLU 17	4	927	6974	-45.67	4.24	0
111	SLU 18	-1	861	6890	-42.62	0.1	0
111	SLU 19	4	940	7070	-46.32	4.26	0
111	SLU 20	-1	874	6991	-43.27	0.1	0
111	SLU 21	4	953	7172	-46.96	4.26	0
111	SLU 22	-1	823	6566	-40.68	0.06	0
111	SLU 23	7	954	6867	-46.83	7	0
111	SLU 24	-1	846	6730	-41.82	0.06	0
111	SLU 25	4	925	6911	-45.51	4.22	0
111	SLU 26	7	967	6969	-47.48	7	0
111	SLU 27	-1	859	6832	-42.47	0.06	0
111	SLU 28	4	938	7013	-46.16	4.22	0
111	SLU 29	-1	849	6769	-41.97	0.07	0
111	SLU 30	4	928	6950	-45.66	4.23	0
111	SLU 31	7	1044	7568	-51.35	7.05	0
111	SLU 32	-1	936	7431	-46.34	0.11	0
111	SLU 33	4	1015	7612	-50.03	4.27	0
111	SLU 34	7	1057	7670	-51.99	7.05	0
111	SLU 35	-1	949	7532	-46.98	0.11	0
111	SLU 36	4	1028	7713	-50.67	4.28	0
111	SLU 37	-1	939	7470	-46.48	0.12	0
111	SLU 38	4	1018	7651	-50.17	4.28	0
111	SLU 39	-1	952	7567	-47.13	0.13	0
111	SLU 40	4	1030	7748	-50.82	4.3	0
111	SLU 41	-1	965	7668	-47.77	0.14	0
111	SLU 42	4	1043	7849	-51.46	4.3	0
111	SLU 43	-1	921	7423	-45.48	0.02	0
111	SLU 44	7	1052	7724	-51.64	6.95	0
111	SLU 45	-1	944	7587	-46.62	0.01	0
111	SLU 46	3	1023	7768	-50.32	4.18	0
111	SLU 47	7	1065	7826	-52.28	6.95	0
111	SLU 48	-1	957	7689	-47.27	0.02	0
111	SLU 49	3	1036	7870	-50.96	4.18	0
111	SLU 50	-1	947	7626	-46.77	0.02	0
111	SLU 51	3	1026	7807	-50.46	4.18	0
111	SLU 52	6	1142	8425	-56.15	7	0
111	SLU 53	-1	1034	8288	-51.14	0.07	0
111	SLU 54	3	1113	8469	-54.83	4.23	0
111	SLU 55	6	1155	8527	-56.8	7.01	0
111	SLU 56	-2	1047	8390	-51.78	0.07	0
111	SLU 57	3	1126	8571	-55.48	4.23	0
111	SLU 58	-1	1037	8327	-51.29	0.07	0
111	SLU 59	3	1116	8508	-54.98	4.23	0
111	SLU 60	-1	1049	8424	-51.93	0.09	0
111	SLU 61	3	1128	8605	-55.62	4.25	0
111	SLU 62	-1	1063	8526	-52.58	0.09	0
111	SLU 63	3	1141	8707	-56.27	4.25	0
111	SLU 64	-1	1011	8100	-49.98	0.05	0
111	SLU 65	6	1142	8402	-56.14	6.99	0
111	SLU 66	-2	1035	8264	-51.13	0.05	0
111	SLU 67	3	1113	8445	-54.82	4.21	0
111	SLU 68	6	1155	8503	-56.78	6.99	0
111	SLU 69	-2	1048	8366	-51.77	0.06	0
111	SLU 70	3	1126	8547	-55.47	4.22	0
111	SLU 71	-2	1037	8304	-51.27	0.06	0
111	SLU 72	3	1116	8485	-54.97	4.22	0
111	SLU 73	6	1232	9102	-60.65	7.04	0
111	SLU 74	-2	1125	8965	-55.64	0.1	0
111	SLU 75	3	1203	9146	-59.34	4.27	0
111	SLU 76	6	1246	9204	-61.3	7.04	0
111	SLU 77	-2	1138	9067	-56.29	0.11	0
111	SLU 78	3	1217	9248	-59.98	4.27	0
111	SLU 79	-2	1128	9004	-55.79	0.11	0
111	SLU 80	3	1206	9185	-59.48	4.27	0
111	SLU 81	-2	1140	9101	-56.43	0.13	0
111	SLU 82	3	1219	9282	-60.13	4.29	0
111	SLU 83	-2	1153	9203	-57.08	0.13	0
111	SLU 84	3	1232	9384	-60.77	4.29	0
111	SLE RA 1	-1	758	6082	-37.46	0.03	0
111	SLE RA 2	4	845	6283	-41.56	4.66	0
111	SLE RA 3	-1	774	6192	-38.22	0.03	0
111	SLE RA 4	2	826	6312	-40.68	2.81	0
111	SLE RA 5	4	854	6351	-41.99	4.66	0
111	SLE RA 6	-1	782	6259	-38.65	0.03	0
111	SLE RA 7	2	835	6380	-41.11	2.81	0
111	SLE RA 8	-1	775	6218	-38.32	0.04	0
111	SLE RA 9	2	828	6338	-40.78	2.81	0
111	SLE RA 10	4	905	6750	-44.57	4.69	0
111	SLE RA 11	-1	834	6659	-41.23	0.07	0
111	SLE RA 12	2	886	6779	-43.69	2.84	0
111	SLE RA 13	4	914	6818	-45	4.69	0
111	SLE RA 14	-1	842	6727	-41.66	0.07	0
111	SLE RA 15	2	895	6847	-44.12	2.84	0
111	SLE RA 16	-1	836	6685	-41.33	0.07	0
111	SLE RA 17	2	888	6805	-43.79	2.85	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
111	SLE RA 18	-1	844	6749	-41.76	0.08	0
111	SLE RA 19	2	896	6870	-44.22	2.86	0
111	SLE RA 20	-1	853	6817	-42.19	0.08	0
111	SLE RA 21	2	905	6938	-44.65	2.86	0
111	SLE FR 1	-1	758	6082	-37.46	0.03	0
111	SLE FR 2	0	775	6122	-38.28	0.96	0
111	SLE FR 3	-1	761	6109	-37.63	0.03	0
111	SLE FR 4	0	801	6322	-39.57	0.97	0
111	SLE FR 5	-1	787	6309	-38.92	0.05	0
111	SLE FR 6	-1	801	6416	-39.61	0.06	0
111	SLE QP 1	-1	758	6082	-37.46	0.03	0
111	SLE QP 2	-1	784	6282	-38.75	0.05	0
111	SLD 1	22	775	4914	-37.46	20.85	-0.01
111	SLD 2	22	775	4914	-37.46	20.85	-0.01
111	SLD 3	10	379	4221	-20.16	10.95	-0.01
111	SLD 4	10	379	4221	-20.16	10.95	-0.01
111	SLD 5	24	1382	6923	-64.6	21.31	0
111	SLD 6	24	1382	6923	-64.6	21.31	0
111	SLD 7	-17	61	4613	-6.94	-11.7	-0.01
111	SLD 8	-17	61	4613	-6.94	-11.7	-0.01
111	SLD 9	14	1506	7952	-70.56	11.79	0.01
111	SLD 10	14	1506	7952	-70.56	11.79	0.01
111	SLD 11	-27	186	5641	-12.9	-21.21	-0.01
111	SLD 12	-27	186	5641	-12.9	-21.21	-0.01
111	SLD 13	-12	1189	8343	-57.34	-10.86	0.01
111	SLD 14	-12	1189	8343	-57.34	-10.86	0.01
111	SLD 15	-24	793	7650	-40.04	-20.76	0.01
111	SLD 16	-24	793	7650	-40.04	-20.76	0.01
111	SLV 1	54	766	3081	-35.86	50.43	-0.02
111	SLV 2	54	766	3081	-35.86	50.43	-0.02
111	SLV 3	23	-159	1456	4.55	25.13	-0.03
111	SLV 4	23	-159	1456	4.55	25.13	-0.03
111	SLV 5	63	2182	7787	-99.17	53.53	0.01
111	SLV 6	63	2182	7787	-99.17	53.53	0.01
111	SLV 7	-42	-902	2369	35.53	-30.8	-0.03
111	SLV 8	-42	-902	2369	35.53	-30.8	-0.03
111	SLV 9	39	2470	10196	-113.03	30.89	0.02
111	SLV 10	39	2470	10196	-113.03	30.89	0.02
111	SLV 11	-66	-614	4777	21.67	-53.44	-0.01
111	SLV 12	-66	-614	4777	21.67	-53.44	-0.01
111	SLV 13	-25	1726	11109	-82.05	-25.04	0.03
111	SLV 14	-25	1726	11109	-82.05	-25.04	0.03
111	SLV 15	-57	801	9483	-41.64	-50.34	0.02
111	SLV 16	-57	801	9483	-41.64	-50.34	0.02
112	SLU 1	3	-116	3916	5.48	2.52	0.01
112	SLU 2	3	-130	3952	6.07	2.63	0.01
112	SLU 3	3	-115	4020	5.46	2.6	0.01
112	SLU 4	3	-124	4042	5.81	2.67	0.01
112	SLU 5	3	-130	4023	6.06	2.69	0.01
112	SLU 6	3	-115	4091	5.45	2.66	0.01
112	SLU 7	3	-123	4113	5.8	2.73	0.01
112	SLU 8	3	-116	4056	5.47	2.63	0.01
112	SLU 9	3	-124	4078	5.82	2.7	0.01
112	SLU 10	3	-143	4516	6.7	2.63	0.01
112	SLU 11	3	-128	4584	6.09	2.6	0.01
112	SLU 12	3	-136	4606	6.44	2.67	0.01
112	SLU 13	3	-142	4587	6.69	2.69	0.01
112	SLU 14	3	-127	4655	6.08	2.66	0.01
112	SLU 15	3	-136	4677	6.43	2.73	0.01
112	SLU 16	3	-128	4621	6.1	2.63	0.01
112	SLU 17	3	-136	4643	6.45	2.7	0.01
112	SLU 18	3	-134	4722	6.38	2.52	0.01
112	SLU 19	3	-142	4744	6.73	2.59	0.01
112	SLU 20	3	-134	4792	6.38	2.57	0.01
112	SLU 21	3	-142	4814	6.73	2.64	0.01
112	SLU 22	3	-125	4384	5.98	2.76	0.01
112	SLU 23	3	-139	4421	6.57	2.87	0.01
112	SLU 24	3	-124	4489	5.96	2.84	0.01
112	SLU 25	3	-133	4511	6.31	2.91	0.01
112	SLU 26	3	-139	4491	6.56	2.93	0.01
112	SLU 27	3	-124	4559	5.95	2.9	0.01
112	SLU 28	3	-132	4581	6.3	2.97	0.01
112	SLU 29	3	-125	4525	5.97	2.87	0.01
112	SLU 30	3	-133	4547	6.32	2.94	0.01
112	SLU 31	3	-152	4985	7.2	2.87	0.01
112	SLU 32	3	-137	5053	6.59	2.84	0.01
112	SLU 33	3	-145	5075	6.94	2.91	0.01
112	SLU 34	3	-151	5055	7.19	2.93	0.01
112	SLU 35	3	-136	5123	6.58	2.9	0.01
112	SLU 36	3	-145	5145	6.93	2.97	0.01
112	SLU 37	3	-137	5089	6.6	2.87	0.01
112	SLU 38	3	-145	5111	6.95	2.94	0.01
112	SLU 39	3	-143	5190	6.89	2.76	0.01
112	SLU 40	3	-151	5212	7.24	2.83	0.01
112	SLU 41	3	-143	5261	6.88	2.82	0.01
112	SLU 42	3	-151	5283	7.23	2.89	0.01
112	SLU 43	4	-148	4930	6.96	3.19	0.01
112	SLU 44	4	-162	4966	7.54	3.3	0.01
112	SLU 45	4	-147	5034	6.93	3.27	0.01
112	SLU 46	4	-155	5056	7.28	3.34	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
112	SLU 47	4	-162	5037	7.53	3.36	0.01
112	SLU 48	4	-147	5105	6.92	3.33	0.01
112	SLU 49	4	-155	5127	7.27	3.4	0.01
112	SLU 50	4	-147	5070	6.94	3.3	0.01
112	SLU 51	4	-156	5092	7.29	3.37	0.01
112	SLU 52	4	-174	5530	8.17	3.3	0.01
112	SLU 53	4	-159	5598	7.56	3.27	0.01
112	SLU 54	4	-168	5620	7.91	3.34	0.01
112	SLU 55	4	-174	5601	8.16	3.36	0.01
112	SLU 56	4	-159	5669	7.55	3.33	0.01
112	SLU 57	4	-167	5691	7.9	3.4	0.01
112	SLU 58	4	-160	5635	7.57	3.3	0.01
112	SLU 59	4	-168	5657	7.92	3.37	0.01
112	SLU 60	3	-166	5736	7.86	3.19	0.01
112	SLU 61	3	-174	5758	8.21	3.26	0.01
112	SLU 62	3	-165	5806	7.85	3.25	0.01
112	SLU 63	4	-174	5828	8.2	3.31	0.01
112	SLU 64	4	-157	5398	7.46	3.43	0.01
112	SLU 65	4	-171	5435	8.04	3.54	0.01
112	SLU 66	4	-156	5503	7.43	3.52	0.01
112	SLU 67	4	-164	5525	7.78	3.58	0.01
112	SLU 68	4	-171	5505	8.03	3.6	0.02
112	SLU 69	4	-156	5573	7.42	3.57	0.01
112	SLU 70	4	-164	5595	7.78	3.64	0.02
112	SLU 71	4	-156	5539	7.44	3.54	0.01
112	SLU 72	4	-165	5561	7.79	3.61	0.02
112	SLU 73	4	-183	5999	8.67	3.54	0.01
112	SLU 74	4	-168	6067	8.06	3.52	0.01
112	SLU 75	4	-177	6089	8.41	3.58	0.01
112	SLU 76	4	-183	6070	8.67	3.6	0.01
112	SLU 77	4	-168	6137	8.06	3.57	0.01
112	SLU 78	4	-176	6159	8.41	3.64	0.01
112	SLU 79	4	-169	6103	8.08	3.55	0.01
112	SLU 80	4	-177	6125	8.43	3.61	0.01
112	SLU 81	4	-175	6204	8.36	3.43	0.01
112	SLU 82	4	-183	6226	8.71	3.5	0.01
112	SLU 83	4	-174	6275	8.35	3.49	0.01
112	SLU 84	4	-183	6297	8.7	3.56	0.01
112	SLE RA 1	3	-119	4050	5.63	2.59	0.01
112	SLE RA 2	3	-128	4074	6.02	2.66	0.01
112	SLE RA 3	3	-118	4119	5.61	2.64	0.01
112	SLE RA 4	3	-124	4134	5.84	2.69	0.01
112	SLE RA 5	3	-128	4121	6.01	2.7	0.01
112	SLE RA 6	3	-118	4166	5.6	2.68	0.01
112	SLE RA 7	3	-124	4181	5.84	2.73	0.01
112	SLE RA 8	3	-118	4143	5.62	2.66	0.01
112	SLE RA 9	3	-124	4158	5.85	2.71	0.01
112	SLE RA 10	3	-136	4450	6.44	2.66	0.01
112	SLE RA 11	3	-126	4495	6.03	2.64	0.01
112	SLE RA 12	3	-132	4510	6.26	2.69	0.01
112	SLE RA 13	3	-136	4497	6.43	2.7	0.01
112	SLE RA 14	3	-126	4542	6.03	2.68	0.01
112	SLE RA 15	3	-132	4557	6.26	2.73	0.01
112	SLE RA 16	3	-127	4520	6.04	2.66	0.01
112	SLE RA 17	3	-132	4534	6.27	2.71	0.01
112	SLE RA 18	3	-131	4587	6.23	2.59	0.01
112	SLE RA 19	3	-136	4602	6.46	2.63	0.01
112	SLE RA 20	3	-130	4634	6.22	2.62	0.01
112	SLE RA 21	3	-136	4648	6.46	2.67	0.01
112	SLE FR 1	3	-119	4050	5.63	2.59	0.01
112	SLE FR 2	3	-121	4054	5.7	2.6	0.01
112	SLE FR 3	3	-119	4068	5.62	2.6	0.01
112	SLE FR 4	3	-124	4216	5.88	2.6	0.01
112	SLE FR 5	3	-122	4230	5.8	2.6	0.01
112	SLE FR 6	3	-125	4318	5.93	2.59	0.01
112	SLE QP 1	3	-119	4050	5.63	2.59	0.01
112	SLE QP 2	3	-122	4211	5.81	2.59	0.01
112	SLD 1	19	-85	4536	4.08	14.95	0.06
112	SLD 2	19	-85	4536	4.08	14.95	0.06
112	SLD 3	23	-445	4385	20.54	17.96	0.05
112	SLD 4	23	-445	4385	20.54	17.96	0.05
112	SLD 5	2	433	4537	-19.68	1.73	0.04
112	SLD 6	2	433	4537	-19.68	1.73	0.04
112	SLD 7	15	-764	4034	35.2	11.76	0
112	SLD 8	15	-764	4034	35.2	11.76	0
112	SLD 9	-9	519	4388	-23.58	-6.59	0.02
112	SLD 10	-9	519	4388	-23.58	-6.59	0.02
112	SLD 11	4	-678	3884	31.29	3.44	-0.02
112	SLD 12	4	-678	3884	31.29	3.44	-0.02
112	SLD 13	-17	200	4037	-8.93	-12.79	-0.03
112	SLD 14	-17	200	4037	-8.93	-12.79	-0.03
112	SLD 15	-13	-160	3885	7.54	-9.78	-0.04
112	SLD 16	-13	-160	3885	7.54	-9.78	-0.04
112	SLV 1	42	-36	4976	1.78	32.81	0.13
112	SLV 2	42	-36	4976	1.78	32.81	0.13
112	SLV 3	52	-867	4620	39.86	40.16	0.11
112	SLV 4	52	-867	4620	39.86	40.16	0.11
112	SLV 5	0	1164	4980	-53.17	0.51	0.09
112	SLV 6	0	1164	4980	-53.17	0.51	0.09
112	SLV 7	32	-1606	3793	73.79	25	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
112	SLV 8	32	-1606	3793	73.79	25	-0.01
112	SLV 9	-27	1361	4628	-62.17	-19.83	0.03
112	SLV 10	-27	1361	4628	-62.17	-19.83	0.03
112	SLV 11	6	-1409	3441	64.78	4.66	-0.07
112	SLV 12	6	-1409	3441	64.78	4.66	-0.07
112	SLV 13	-46	622	3802	-28.25	-34.99	-0.08
112	SLV 14	-46	622	3802	-28.25	-34.99	-0.08
112	SLV 15	-36	-209	3446	9.84	-27.64	-0.11
112	SLV 16	-36	-209	3446	9.84	-27.64	-0.11
113	SLU 1	4	-86	587	4.81	2.05	-0.09
113	SLU 2	4	-85	587	4.75	2.16	-0.09
113	SLU 3	4	-90	586	5.03	2.1	-0.09
113	SLU 4	4	-90	586	5	2.17	-0.09
113	SLU 5	4	-88	587	4.91	2.2	-0.09
113	SLU 6	4	-93	585	5.19	2.14	-0.09
113	SLU 7	4	-92	585	5.16	2.2	-0.09
113	SLU 8	4	-91	585	5.11	2.12	-0.09
113	SLU 9	4	-91	586	5.08	2.19	-0.09
113	SLU 10	5	-103	720	5.69	2.59	-0.11
113	SLU 11	5	-109	718	5.97	2.53	-0.11
113	SLU 12	5	-108	718	5.94	2.6	-0.11
113	SLU 13	5	-106	719	5.84	2.62	-0.11
113	SLU 14	5	-111	717	6.12	2.56	-0.11
113	SLU 15	5	-111	717	6.09	2.63	-0.12
113	SLU 16	5	-110	717	6.04	2.55	-0.11
113	SLU 17	5	-109	718	6.01	2.61	-0.12
113	SLU 18	6	-112	776	6.14	2.66	-0.12
113	SLU 19	6	-112	776	6.11	2.73	-0.12
113	SLU 20	6	-115	775	6.29	2.69	-0.12
113	SLU 21	6	-114	775	6.26	2.76	-0.12
113	SLU 22	5	-103	618	5.72	2.31	-0.1
113	SLU 23	5	-102	619	5.67	2.43	-0.1
113	SLU 24	5	-107	617	5.94	2.37	-0.1
113	SLU 25	5	-107	617	5.91	2.43	-0.1
113	SLU 26	5	-105	618	5.82	2.46	-0.11
113	SLU 27	5	-110	616	6.1	2.4	-0.1
113	SLU 28	5	-109	617	6.07	2.47	-0.11
113	SLU 29	5	-109	617	6.02	2.39	-0.1
113	SLU 30	5	-108	617	5.99	2.45	-0.11
113	SLU 31	6	-121	751	6.6	2.85	-0.13
113	SLU 32	6	-126	749	6.88	2.79	-0.12
113	SLU 33	6	-125	749	6.85	2.86	-0.13
113	SLU 34	6	-123	750	6.75	2.89	-0.13
113	SLU 35	6	-128	748	7.03	2.83	-0.13
113	SLU 36	6	-128	749	7	2.9	-0.13
113	SLU 37	6	-127	749	6.95	2.81	-0.13
113	SLU 38	6	-126	749	6.92	2.88	-0.13
113	SLU 39	6	-129	807	7.05	2.92	-0.13
113	SLU 40	6	-129	807	7.02	2.99	-0.13
113	SLU 41	6	-132	806	7.2	2.96	-0.13
113	SLU 42	6	-132	807	7.17	3.03	-0.14
113	SLU 43	5	-106	752	5.93	2.57	-0.11
113	SLU 44	5	-105	753	5.88	2.68	-0.11
113	SLU 45	5	-110	751	6.16	2.62	-0.11
113	SLU 46	5	-109	751	6.13	2.69	-0.11
113	SLU 47	5	-108	752	6.04	2.72	-0.11
113	SLU 48	5	-113	750	6.32	2.66	-0.11
113	SLU 49	5	-112	750	6.28	2.73	-0.12
113	SLU 50	5	-111	751	6.24	2.64	-0.11
113	SLU 51	5	-111	751	6.21	2.71	-0.11
113	SLU 52	6	-123	885	6.82	3.11	-0.14
113	SLU 53	6	-128	883	7.1	3.05	-0.13
113	SLU 54	6	-128	883	7.06	3.12	-0.14
113	SLU 55	6	-126	884	6.97	3.15	-0.14
113	SLU 56	6	-131	882	7.25	3.09	-0.14
113	SLU 57	6	-131	883	7.22	3.15	-0.14
113	SLU 58	6	-130	883	7.17	3.07	-0.13
113	SLU 59	6	-129	883	7.14	3.14	-0.14
113	SLU 60	6	-132	941	7.27	3.18	-0.14
113	SLU 61	7	-132	941	7.24	3.25	-0.14
113	SLU 62	7	-135	940	7.42	3.22	-0.14
113	SLU 63	7	-134	940	7.39	3.28	-0.15
113	SLU 64	5	-123	784	6.85	2.84	-0.12
113	SLU 65	6	-122	784	6.8	2.95	-0.13
113	SLU 66	6	-127	782	7.07	2.89	-0.12
113	SLU 67	6	-127	783	7.04	2.96	-0.13
113	SLU 68	6	-125	783	6.95	2.99	-0.13
113	SLU 69	6	-130	782	7.23	2.93	-0.13
113	SLU 70	6	-129	782	7.2	2.99	-0.13
113	SLU 71	6	-129	782	7.15	2.91	-0.12
113	SLU 72	6	-128	782	7.12	2.98	-0.13
113	SLU 73	7	-140	916	7.73	3.38	-0.15
113	SLU 74	7	-146	915	8.01	3.32	-0.15
113	SLU 75	7	-145	915	7.98	3.38	-0.15
113	SLU 76	7	-143	915	7.88	3.41	-0.15
113	SLU 77	7	-148	914	8.16	3.35	-0.15
113	SLU 78	7	-148	914	8.13	3.42	-0.15
113	SLU 79	7	-147	914	8.08	3.34	-0.15
113	SLU 80	7	-146	914	8.05	3.4	-0.15
113	SLU 81	7	-149	972	8.18	3.45	-0.15



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
113	SLU 82	7	-149	973	8.15	3.51	-0.16
113	SLU 83	7	-152	972	8.33	3.48	-0.16
113	SLU 84	7	-151	972	8.3	3.55	-0.16
113	SLE RA 1	4	-91	596	5.07	2.12	-0.09
113	SLE RA 2	4	-90	596	5.03	2.2	-0.09
113	SLE RA 3	4	-94	595	5.22	2.16	-0.09
113	SLE RA 4	4	-93	595	5.2	2.2	-0.09
113	SLE RA 5	4	-92	596	5.13	2.22	-0.09
113	SLE RA 6	4	-95	595	5.32	2.18	-0.09
113	SLE RA 7	4	-95	595	5.3	2.23	-0.09
113	SLE RA 8	4	-95	595	5.27	2.17	-0.09
113	SLE RA 9	4	-94	595	5.25	2.22	-0.09
113	SLE RA 10	5	-102	684	5.65	2.48	-0.11
113	SLE RA 11	5	-106	683	5.84	2.44	-0.11
113	SLE RA 12	5	-106	683	5.82	2.49	-0.11
113	SLE RA 13	5	-104	684	5.75	2.51	-0.11
113	SLE RA 14	5	-108	683	5.94	2.47	-0.11
113	SLE RA 15	5	-107	683	5.92	2.51	-0.11
113	SLE RA 16	5	-107	683	5.89	2.46	-0.11
113	SLE RA 17	5	-106	683	5.87	2.5	-0.11
113	SLE RA 18	5	-108	722	5.95	2.53	-0.11
113	SLE RA 19	5	-108	722	5.93	2.58	-0.11
113	SLE RA 20	5	-110	721	6.05	2.55	-0.11
113	SLE RA 21	5	-110	721	6.03	2.6	-0.12
113	SLE FR 1	4	-91	596	5.07	2.12	-0.09
113	SLE FR 2	4	-91	596	5.06	2.14	-0.09
113	SLE FR 3	4	-92	596	5.11	2.13	-0.09
113	SLE FR 4	4	-96	634	5.33	2.26	-0.1
113	SLE FR 5	4	-97	634	5.37	2.26	-0.1
113	SLE FR 6	5	-100	659	5.51	2.33	-0.1
113	SLE QP 1	4	-91	596	5.07	2.12	-0.09
113	SLE QP 2	4	-96	634	5.33	2.25	-0.1
113	SLD 1	22	43	683	-1.45	15.11	-0.53
113	SLD 2	22	43	683	-1.45	15.11	-0.53
113	SLD 3	27	-116	630	6.19	18.24	-0.63
113	SLD 4	27	-116	630	6.19	18.24	-0.63
113	SLD 5	3	187	728	-8.29	1.35	-0.06
113	SLD 6	3	187	728	-8.29	1.35	-0.06
113	SLD 7	18	-343	553	17.18	11.8	-0.42
113	SLD 8	18	-343	553	17.18	11.8	-0.42
113	SLD 9	-9	151	714	-6.51	-7.31	0.23
113	SLD 10	-9	151	714	-6.51	-7.31	0.23
113	SLD 11	6	-379	540	18.96	3.14	-0.13
113	SLD 12	6	-379	540	18.96	3.14	-0.13
113	SLD 13	-18	-76	637	4.47	-13.75	0.44
113	SLD 14	-18	-76	637	4.47	-13.75	0.44
113	SLD 15	-13	-235	585	12.12	-10.61	0.33
113	SLD 16	-13	-235	585	12.12	-10.61	0.33
113	SLV 1	48	228	748	-10.48	33.75	-1.15
113	SLV 2	48	228	748	-10.48	33.75	-1.15
113	SLV 3	59	-142	626	7.34	41.39	-1.41
113	SLV 4	59	-142	626	7.34	41.39	-1.41
113	SLV 5	1	563	853	-26.44	0.09	-0.01
113	SLV 6	1	563	853	-26.44	0.09	-0.01
113	SLV 7	37	-672	446	32.96	25.59	-0.89
113	SLV 8	37	-672	446	32.96	25.59	-0.89
113	SLV 9	-28	480	821	-22.3	-21.1	0.69
113	SLV 10	-28	480	821	-22.3	-21.1	0.69
113	SLV 11	8	-755	414	37.1	4.4	-0.18
113	SLV 12	8	-755	414	37.1	4.4	-0.18
113	SLV 13	-50	-50	641	3.32	-36.9	1.21
113	SLV 14	-50	-50	641	3.32	-36.9	1.21
113	SLV 15	-39	-420	519	21.14	-29.25	0.95
113	SLV 16	-39	-420	519	21.14	-29.25	0.95
114	SLU 1	-21	647	1619	-23.95	-13.34	0
114	SLU 2	-28	775	1548	-29.98	-19.14	0
114	SLU 3	-21	665	1648	-24.61	-13.78	0
114	SLU 4	-26	742	1605	-28.23	-17.26	0
114	SLU 5	-28	785	1567	-30.31	-19.42	0
114	SLU 6	-22	674	1667	-24.94	-14.07	0
114	SLU 7	-26	751	1624	-28.56	-17.55	0
114	SLU 8	-22	666	1656	-24.62	-13.91	0
114	SLU 9	-26	743	1613	-28.24	-17.39	0
114	SLU 10	-30	858	1676	-33.08	-20.93	0
114	SLU 11	-24	748	1776	-27.71	-15.58	0
114	SLU 12	-28	825	1733	-31.33	-19.06	0
114	SLU 13	-31	868	1694	-33.42	-21.22	0
114	SLU 14	-25	757	1794	-28.05	-15.86	0
114	SLU 15	-29	834	1751	-31.66	-19.34	0
114	SLU 16	-24	749	1784	-27.72	-15.71	0
114	SLU 17	-29	826	1741	-31.34	-19.19	0
114	SLU 18	-25	765	1802	-28.39	-15.91	0
114	SLU 19	-29	842	1759	-32	-19.38	0
114	SLU 20	-25	775	1820	-28.72	-16.19	0
114	SLU 21	-29	852	1777	-32.34	-19.67	0
114	SLU 22	-23	727	1741	-26.94	-15.1	0
114	SLU 23	-30	855	1670	-32.97	-20.9	0
114	SLU 24	-24	745	1770	-27.6	-15.54	0
114	SLU 25	-28	822	1727	-31.22	-19.02	0
114	SLU 26	-31	865	1688	-33.3	-21.18	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
114	SLU 27	-25	754	1788	-27.93	-15.83	0
114	SLU 28	-29	831	1745	-31.55	-19.3	0
114	SLU 29	-24	746	1778	-27.61	-15.67	0
114	SLU 30	-29	823	1735	-31.23	-19.15	0
114	SLU 31	-33	938	1797	-36.07	-22.69	0
114	SLU 32	-27	828	1897	-30.7	-17.34	0
114	SLU 33	-31	905	1855	-34.32	-20.81	0
114	SLU 34	-34	948	1816	-36.41	-22.98	0
114	SLU 35	-27	837	1916	-31.04	-17.62	0
114	SLU 36	-32	914	1873	-34.66	-21.1	0
114	SLU 37	-27	829	1905	-30.71	-17.47	0
114	SLU 38	-31	906	1863	-34.33	-20.95	0
114	SLU 39	-27	845	1923	-31.38	-17.66	0
114	SLU 40	-32	922	1881	-34.99	-21.14	0
114	SLU 41	-28	855	1942	-31.71	-17.95	0
114	SLU 42	-32	932	1899	-35.33	-21.43	0
114	SLU 43	-26	814	2064	-30.11	-16.74	0
114	SLU 44	-33	942	1992	-36.14	-22.54	0
114	SLU 45	-27	832	2092	-30.77	-17.18	0
114	SLU 46	-31	909	2049	-34.39	-20.66	0
114	SLU 47	-33	951	2011	-36.47	-22.82	0
114	SLU 48	-27	841	2111	-31.1	-17.47	0
114	SLU 49	-31	918	2068	-34.72	-20.94	0
114	SLU 50	-27	832	2100	-30.78	-17.31	0
114	SLU 51	-31	910	2058	-34.4	-20.79	0
114	SLU 52	-36	1025	2120	-39.24	-24.33	0
114	SLU 53	-29	914	2220	-33.87	-18.98	0
114	SLU 54	-34	992	2177	-37.49	-22.45	0
114	SLU 55	-36	1034	2138	-39.58	-24.62	0
114	SLU 56	-30	924	2238	-34.21	-19.26	0
114	SLU 57	-34	1001	2195	-37.82	-22.74	0
114	SLU 58	-30	915	2228	-33.88	-19.11	0
114	SLU 59	-34	992	2185	-37.5	-22.59	0
114	SLU 60	-30	932	2246	-34.55	-19.3	0
114	SLU 61	-34	1009	2203	-38.16	-22.78	0
114	SLU 62	-30	941	2264	-34.88	-19.59	0
114	SLU 63	-35	1018	2221	-38.5	-23.07	0
114	SLU 64	-29	894	2185	-33.1	-18.5	0
114	SLU 65	-36	1022	2114	-39.13	-24.29	0
114	SLU 66	-29	912	2214	-33.76	-18.94	0
114	SLU 67	-34	989	2171	-37.38	-22.42	0
114	SLU 68	-36	1032	2132	-39.46	-24.58	0
114	SLU 69	-30	921	2232	-34.09	-19.22	0
114	SLU 70	-34	998	2190	-37.71	-22.7	0
114	SLU 71	-30	912	2222	-33.77	-19.07	0
114	SLU 72	-34	990	2179	-37.39	-22.55	0
114	SLU 73	-38	1105	2242	-42.23	-26.09	0
114	SLU 74	-32	994	2342	-36.86	-20.73	0
114	SLU 75	-36	1072	2299	-40.48	-24.21	0
114	SLU 76	-39	1114	2260	-42.57	-26.38	0
114	SLU 77	-33	1004	2360	-37.2	-21.02	0
114	SLU 78	-37	1081	2317	-40.82	-24.5	0
114	SLU 79	-32	995	2350	-36.87	-20.87	0
114	SLU 80	-37	1072	2307	-40.49	-24.34	0
114	SLU 81	-33	1012	2368	-37.54	-21.06	0
114	SLU 82	-37	1089	2325	-41.15	-24.54	0
114	SLU 83	-33	1021	2386	-37.87	-21.35	0
114	SLU 84	-37	1098	2343	-41.49	-24.83	0
114	SLE RA 1	-21	670	1654	-24.81	-13.84	0
114	SLE RA 2	-26	755	1607	-28.82	-17.71	0
114	SLE RA 3	-22	682	1673	-25.24	-14.14	0
114	SLE RA 4	-25	733	1645	-27.66	-16.45	0
114	SLE RA 5	-26	762	1619	-29.05	-17.9	0
114	SLE RA 6	-22	688	1686	-25.47	-14.33	0
114	SLE RA 7	-25	739	1657	-27.88	-16.65	0
114	SLE RA 8	-22	682	1679	-25.25	-14.22	0
114	SLE RA 9	-25	734	1650	-27.66	-16.54	0
114	SLE RA 10	-28	811	1692	-30.89	-18.9	0
114	SLE RA 11	-24	737	1758	-27.31	-15.33	0
114	SLE RA 12	-27	788	1730	-29.73	-17.65	0
114	SLE RA 13	-28	817	1704	-31.12	-19.1	0
114	SLE RA 14	-24	743	1771	-27.54	-15.52	0
114	SLE RA 15	-27	795	1742	-29.95	-17.84	0
114	SLE RA 16	-24	738	1764	-27.32	-15.42	0
114	SLE RA 17	-27	789	1735	-29.73	-17.74	0
114	SLE RA 18	-24	749	1776	-27.76	-15.55	0
114	SLE RA 19	-27	800	1747	-30.17	-17.87	0
114	SLE RA 20	-24	755	1788	-27.98	-15.74	0
114	SLE RA 21	-27	806	1759	-30.4	-18.06	0
114	SLE FR 1	-21	670	1654	-24.81	-13.84	0
114	SLE FR 2	-22	687	1645	-25.61	-14.61	0
114	SLE FR 3	-22	672	1659	-24.89	-13.92	0
114	SLE FR 4	-23	711	1681	-26.5	-15.13	0
114	SLE FR 5	-22	696	1696	-25.78	-14.43	0
114	SLE FR 6	-23	709	1715	-26.28	-14.7	0
114	SLE QP 1	-21	670	1654	-24.81	-13.84	0
114	SLE QP 2	-22	693	1691	-25.69	-14.35	0
114	SLD 1	-41	1181	2261	-45.75	-29.14	0
114	SLD 2	-41	1181	2261	-45.75	-29.14	0
114	SLD 3	-33	736	2097	-26.75	-22.98	-0.01



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
114	SLD 4	-33	736	2097	-26.75	-22.98	-0.01
114	SLD 5	-40	1514	2111	-60.54	-28.13	0.01
114	SLD 6	-40	1514	2111	-60.54	-28.13	0.01
114	SLD 7	-13	32	1564	2.82	-7.6	-0.01
114	SLD 8	-13	32	1564	2.82	-7.6	-0.01
114	SLD 9	-31	1355	1818	-54.2	-21.11	0.01
114	SLD 10	-31	1355	1818	-54.2	-21.11	0.01
114	SLD 11	-5	-127	1271	9.15	-0.58	0
114	SLD 12	-5	-127	1271	9.15	-0.58	0
114	SLD 13	-12	651	1284	-24.64	-5.72	0.01
114	SLD 14	-12	651	1284	-24.64	-5.72	0.01
114	SLD 15	-4	206	1120	-5.63	0.43	0.01
114	SLD 16	-4	206	1120	-5.63	0.43	0.01
114	SLV 1	-66	1827	3041	-72.37	-49.91	-0.01
114	SLV 2	-66	1827	3041	-72.37	-49.91	-0.01
114	SLV 3	-46	795	2626	-28.17	-34.28	-0.02
114	SLV 4	-46	795	2626	-28.17	-34.28	-0.02
114	SLV 5	-66	2600	2725	-106.73	-48.73	0.01
114	SLV 6	-66	2600	2725	-106.73	-48.73	0.01
114	SLV 7	1	-842	1342	40.59	3.38	-0.02
114	SLV 8	1	-842	1342	40.59	3.38	-0.02
114	SLV 9	-46	2229	2040	-91.98	-32.09	0.02
114	SLV 10	-46	2229	2040	-91.98	-32.09	0.02
114	SLV 11	21	-1213	656	55.34	20.02	-0.01
114	SLV 12	21	-1213	656	55.34	20.02	-0.01
114	SLV 13	2	592	756	-23.21	5.57	0.02
114	SLV 14	2	592	756	-23.21	5.57	0.02
114	SLV 15	22	-440	340	20.98	21.2	0.01
114	SLV 16	22	-440	340	20.98	21.2	0.01
115	SLU 1	0	-8	3230	10.67	0.36	0
115	SLU 2	1	257	3374	-0.34	1.24	0
115	SLU 3	0	-5	3318	10.88	0.38	0
115	SLU 4	1	154	3405	4.27	0.9	0
115	SLU 5	1	260	3431	-0.23	1.25	0
115	SLU 6	0	-3	3375	10.98	0.38	0
115	SLU 7	1	156	3462	4.38	0.91	0
115	SLU 8	0	-3	3344	10.88	0.38	0
115	SLU 9	1	156	3431	4.28	0.91	0
115	SLU 10	1	254	3818	1.22	1.3	0
115	SLU 11	0	-8	3762	12.43	0.43	0
115	SLU 12	1	151	3849	5.83	0.96	0
115	SLU 13	1	257	3876	1.32	1.31	0
115	SLU 14	0	-6	3819	12.54	0.44	0
115	SLU 15	1	153	3906	5.94	0.97	0
115	SLU 16	0	-6	3788	12.44	0.44	0
115	SLU 17	1	153	3875	5.83	0.96	0
115	SLU 18	0	-13	3865	12.9	0.44	0
115	SLU 19	1	147	3951	6.29	0.97	0
115	SLU 20	0	-10	3922	13	0.45	0
115	SLU 21	1	149	4008	6.4	0.98	0
115	SLU 22	0	-7	3647	12.01	0.42	0
115	SLU 23	1	258	3791	1	1.3	0
115	SLU 24	0	-5	3735	12.22	0.43	0
115	SLU 25	1	155	3822	5.61	0.96	0
115	SLU 26	1	260	3848	1.11	1.3	0
115	SLU 27	0	-2	3792	12.32	0.44	0
115	SLU 28	1	157	3879	5.72	0.97	0
115	SLU 29	0	-3	3761	12.22	0.43	0
115	SLU 30	1	157	3848	5.62	0.96	0
115	SLU 31	1	255	4235	2.56	1.35	0
115	SLU 32	0	-8	4179	13.77	0.49	0
115	SLU 33	1	151	4266	7.17	1.01	0
115	SLU 34	1	257	4293	2.66	1.36	0
115	SLU 35	0	-6	4236	13.88	0.5	0
115	SLU 36	1	154	4323	7.28	1.02	0
115	SLU 37	0	-6	4205	13.78	0.49	0
115	SLU 38	1	153	4292	7.17	1.02	0
115	SLU 39	0	-12	4282	14.24	0.5	0
115	SLU 40	1	147	4368	7.63	1.03	0
115	SLU 41	0	-10	4339	14.34	0.51	0
115	SLU 42	1	150	4425	7.74	1.03	0
115	SLU 43	0	-11	4056	13.41	0.45	0
115	SLU 44	1	255	4201	2.4	1.33	0
115	SLU 45	0	-8	4144	13.62	0.47	0
115	SLU 46	1	151	4231	7.01	0.99	0
115	SLU 47	1	257	4258	2.51	1.34	0
115	SLU 48	0	-5	4202	13.72	0.47	0
115	SLU 49	1	154	4288	7.12	1	0
115	SLU 50	0	-6	4171	13.62	0.47	0
115	SLU 51	1	154	4257	7.02	1	0
115	SLU 52	1	252	4645	3.96	1.39	0
115	SLU 53	0	-11	4589	15.18	0.52	0
115	SLU 54	1	148	4675	8.57	1.05	0
115	SLU 55	1	254	4702	4.07	1.4	0
115	SLU 56	0	-9	4646	15.28	0.53	0
115	SLU 57	1	151	4732	8.68	1.06	0
115	SLU 58	0	-9	4615	15.18	0.53	0
115	SLU 59	1	150	4701	8.58	1.05	0
115	SLU 60	0	-15	4691	15.64	0.53	0
115	SLU 61	1	144	4777	9.03	1.06	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
115	SLU 62	0	-13	4748	15.74	0.54	0
115	SLU 63	1	147	4834	9.14	1.07	0
115	SLU 64	0	-10	4473	14.75	0.51	0
115	SLU 65	1	255	4617	3.74	1.39	0
115	SLU 66	0	-7	4561	14.96	0.52	0
115	SLU 67	1	152	4648	8.35	1.05	0
115	SLU 68	1	258	4675	3.85	1.39	0
115	SLU 69	0	-5	4619	15.06	0.53	0
115	SLU 70	1	154	4705	8.46	1.06	0
115	SLU 71	0	-5	4587	14.96	0.52	0
115	SLU 72	1	154	4674	8.36	1.05	0
115	SLU 73	1	252	5062	5.3	1.44	0
115	SLU 74	1	-11	5005	16.52	0.58	0
115	SLU 75	1	149	5092	9.91	1.1	0
115	SLU 76	1	255	5119	5.41	1.45	0
115	SLU 77	1	-8	5063	16.62	0.59	0
115	SLU 78	1	151	5149	10.02	1.11	0
115	SLU 79	1	-8	5032	16.52	0.58	0
115	SLU 80	1	151	5118	9.92	1.11	0
115	SLU 81	1	-15	5108	16.98	0.59	0
115	SLU 82	1	145	5194	10.37	1.12	0
115	SLU 83	1	-12	5165	17.08	0.6	0
115	SLU 84	1	147	5251	10.48	1.12	0
115	SLE RA 1	0	-8	3349	11.05	0.38	0
115	SLE RA 2	1	169	3445	3.71	0.96	0
115	SLE RA 3	0	-6	3408	11.19	0.39	0
115	SLE RA 4	1	100	3466	6.79	0.74	0
115	SLE RA 5	1	171	3484	3.78	0.97	0
115	SLE RA 6	0	-4	3446	11.26	0.39	0
115	SLE RA 7	1	102	3504	6.86	0.74	0
115	SLE RA 8	0	-5	3425	11.19	0.39	0
115	SLE RA 9	1	102	3483	6.79	0.74	0
115	SLE RA 10	1	167	3742	4.75	1	0
115	SLE RA 11	0	-8	3704	12.23	0.43	0
115	SLE RA 12	1	98	3762	7.82	0.78	0
115	SLE RA 13	1	169	3780	4.82	1.01	0
115	SLE RA 14	0	-7	3742	12.3	0.43	0
115	SLE RA 15	1	100	3800	7.9	0.78	0
115	SLE RA 16	0	-7	3722	12.23	0.43	0
115	SLE RA 17	1	99	3779	7.83	0.78	0
115	SLE RA 18	0	-11	3772	12.54	0.43	0
115	SLE RA 19	1	95	3830	8.13	0.78	0
115	SLE RA 20	0	-9	3810	12.61	0.44	0
115	SLE RA 21	1	97	3868	8.2	0.79	0
115	SLE FR 1	0	-8	3349	11.05	0.38	0
115	SLE FR 2	0	28	3369	9.58	0.5	0
115	SLE FR 3	0	-7	3365	11.08	0.38	0
115	SLE FR 4	0	27	3495	10.03	0.51	0
115	SLE FR 5	0	-8	3491	11.53	0.4	0
115	SLE FR 6	0	-9	3561	11.79	0.41	0
115	SLE QP 1	0	-8	3349	11.05	0.38	0
115	SLE QP 2	0	-9	3476	11.5	0.4	0
115	SLD 1	11	11	3470	10.78	10.05	0
115	SLD 2	11	11	3470	10.78	10.05	0
115	SLD 3	8	-407	3239	29.16	6.56	0
115	SLD 4	8	-407	3239	29.16	6.56	0
115	SLD 5	9	630	3824	-16.59	8.58	0
115	SLD 6	9	630	3824	-16.59	8.58	0
115	SLD 7	-3	-761	3055	44.67	-3.05	0
115	SLD 8	-3	-761	3055	44.67	-3.05	0
115	SLD 9	4	744	3898	-21.68	3.84	0
115	SLD 10	4	744	3898	-21.68	3.84	0
115	SLD 11	-8	-648	3128	39.59	-7.79	0
115	SLD 12	-8	-648	3128	39.59	-7.79	0
115	SLD 13	-7	389	3714	-6.16	-5.77	0
115	SLD 14	-7	389	3714	-6.16	-5.77	0
115	SLD 15	-10	-28	3483	12.22	-9.26	0
115	SLD 16	-10	-28	3483	12.22	-9.26	0
115	SLV 1	26	42	3461	9.58	23.79	-0.01
115	SLV 2	26	42	3461	9.58	23.79	-0.01
115	SLV 3	17	-966	2913	53.9	15.13	-0.01
115	SLV 4	17	-966	2913	53.9	15.13	-0.01
115	SLV 5	21	1535	4303	-56.29	20.55	-0.01
115	SLV 6	21	1535	4303	-56.29	20.55	-0.01
115	SLV 7	-8	-1825	2476	91.43	-8.32	0
115	SLV 8	-8	-1825	2476	91.43	-8.32	0
115	SLV 9	9	1808	4476	-68.44	9.11	0
115	SLV 10	9	1808	4476	-68.44	9.11	0
115	SLV 11	-21	-1553	2650	79.29	-19.76	0.01
115	SLV 12	-21	-1553	2650	79.29	-19.76	0.01
115	SLV 13	-17	949	4039	-30.91	-14.34	0
115	SLV 14	-17	949	4039	-30.91	-14.34	0
115	SLV 15	-26	-59	3491	13.41	-23	0.01
115	SLV 16	-26	-59	3491	13.41	-23	0.01
116	SLU 1	7	-227	4284	9.21	4.69	0.04
116	SLU 2	7	-244	4333	9.83	4.64	0.04
116	SLU 3	7	-230	4403	9.38	4.84	0.04
116	SLU 4	7	-241	4432	9.75	4.81	0.04
116	SLU 5	7	-247	4414	9.95	4.75	0.04
116	SLU 6	8	-233	4484	9.5	4.94	0.04



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
116	SLU 7	7	-243	4513	9.87	4.91	0.04
116	SLU 8	7	-232	4447	9.46	4.89	0.04
116	SLU 9	7	-242	4476	9.82	4.87	0.04
116	SLU 10	8	-281	4952	11.33	5.41	0.05
116	SLU 11	9	-267	5022	10.88	5.61	0.05
116	SLU 12	9	-277	5051	11.25	5.58	0.05
116	SLU 13	8	-283	5033	11.45	5.52	0.05
116	SLU 14	9	-269	5104	11	5.71	0.05
116	SLU 15	9	-279	5133	11.37	5.68	0.05
116	SLU 16	9	-268	5066	10.96	5.66	0.05
116	SLU 17	9	-279	5095	11.33	5.63	0.05
116	SLU 18	9	-279	5169	11.36	5.79	0.05
116	SLU 19	9	-289	5198	11.73	5.76	0.05
116	SLU 20	9	-282	5251	11.48	5.89	0.05
116	SLU 21	9	-292	5280	11.85	5.86	0.05
116	SLU 22	8	-255	4782	10.4	5.3	0.05
116	SLU 23	8	-272	4831	11.01	5.26	0.05
116	SLU 24	8	-258	4901	10.56	5.45	0.05
116	SLU 25	8	-269	4930	10.93	5.42	0.05
116	SLU 26	8	-275	4912	11.13	5.36	0.05
116	SLU 27	8	-261	4982	10.68	5.55	0.05
116	SLU 28	8	-271	5011	11.05	5.53	0.05
116	SLU 29	8	-260	4945	10.64	5.5	0.05
116	SLU 30	8	-270	4974	11.01	5.48	0.05
116	SLU 31	9	-309	5450	12.51	6.03	0.05
116	SLU 32	9	-295	5520	12.07	6.22	0.06
116	SLU 33	9	-305	5549	12.43	6.19	0.06
116	SLU 34	9	-311	5531	12.63	6.13	0.06
116	SLU 35	10	-297	5602	12.19	6.32	0.06
116	SLU 36	10	-307	5630	12.55	6.3	0.06
116	SLU 37	10	-296	5564	12.14	6.27	0.06
116	SLU 38	10	-307	5593	12.51	6.25	0.06
116	SLU 39	10	-307	5667	12.55	6.4	0.06
116	SLU 40	10	-317	5696	12.91	6.37	0.06
116	SLU 41	10	-310	5749	12.67	6.5	0.06
116	SLU 42	10	-320	5778	13.03	6.48	0.06
116	SLU 43	9	-286	5399	11.57	5.88	0.05
116	SLU 44	9	-303	5447	12.18	5.84	0.05
116	SLU 45	9	-289	5517	11.74	6.03	0.05
116	SLU 46	9	-299	5546	12.11	6.01	0.05
116	SLU 47	9	-305	5529	12.31	5.94	0.05
116	SLU 48	9	-291	5599	11.86	6.13	0.06
116	SLU 49	9	-302	5628	12.23	6.11	0.05
116	SLU 50	9	-291	5561	11.81	6.09	0.05
116	SLU 51	9	-301	5590	12.18	6.06	0.05
116	SLU 52	10	-339	6067	13.69	6.61	0.06
116	SLU 53	10	-325	6137	13.24	6.8	0.06
116	SLU 54	10	-335	6166	13.61	6.78	0.06
116	SLU 55	10	-342	6148	13.81	6.71	0.06
116	SLU 56	10	-328	6218	13.36	6.9	0.06
116	SLU 57	10	-338	6247	13.73	6.88	0.06
116	SLU 58	10	-327	6181	13.32	6.86	0.06
116	SLU 59	10	-337	6210	13.69	6.83	0.06
116	SLU 60	11	-338	6284	13.72	6.98	0.06
116	SLU 61	11	-348	6313	14.09	6.96	0.06
116	SLU 62	11	-340	6365	13.84	7.08	0.06
116	SLU 63	11	-350	6394	14.21	7.06	0.06
116	SLU 64	10	-314	5897	12.76	6.5	0.06
116	SLU 65	10	-331	5945	13.37	6.45	0.06
116	SLU 66	10	-317	6015	12.92	6.65	0.06
116	SLU 67	10	-327	6044	13.29	6.62	0.06
116	SLU 68	10	-333	6026	13.49	6.55	0.06
116	SLU 69	10	-319	6097	13.04	6.75	0.06
116	SLU 70	10	-330	6126	13.41	6.72	0.06
116	SLU 71	10	-319	6059	13	6.7	0.06
116	SLU 72	10	-329	6088	13.36	6.67	0.06
116	SLU 73	11	-367	6565	14.87	7.22	0.06
116	SLU 74	11	-353	6635	14.43	7.42	0.07
116	SLU 75	11	-364	6664	14.79	7.39	0.07
116	SLU 76	11	-370	6646	14.99	7.32	0.07
116	SLU 77	11	-356	6716	14.55	7.52	0.07
116	SLU 78	11	-366	6745	14.91	7.49	0.07
116	SLU 79	11	-355	6679	14.5	7.47	0.07
116	SLU 80	11	-365	6708	14.87	7.44	0.07
116	SLU 81	12	-366	6782	14.9	7.6	0.07
116	SLU 82	12	-376	6811	15.27	7.57	0.07
116	SLU 83	12	-368	6863	15.02	7.7	0.07
116	SLU 84	12	-378	6892	15.39	7.67	0.07
116	SLE RA 1	7	-235	4427	9.55	4.86	0.04
116	SLE RA 2	7	-247	4459	9.96	4.83	0.04
116	SLE RA 3	8	-237	4506	9.66	4.96	0.04
116	SLE RA 4	8	-244	4525	9.91	4.94	0.04
116	SLE RA 5	7	-248	4513	10.04	4.9	0.04
116	SLE RA 6	8	-239	4560	9.74	5.03	0.05
116	SLE RA 7	8	-246	4579	9.99	5.01	0.04
116	SLE RA 8	8	-238	4535	9.71	5	0.05
116	SLE RA 9	8	-245	4554	9.96	4.98	0.04
116	SLE RA 10	8	-271	4872	10.96	5.35	0.05
116	SLE RA 11	8	-262	4919	10.66	5.48	0.05
116	SLE RA 12	8	-268	4938	10.91	5.46	0.05



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
116	SLE RA 13	8	-272	4926	11.04	5.41	0.05
116	SLE RA 14	8	-263	4973	10.75	5.54	0.05
116	SLE RA 15	8	-270	4992	10.99	5.53	0.05
116	SLE RA 16	8	-263	4948	10.72	5.51	0.05
116	SLE RA 17	8	-269	4967	10.96	5.49	0.05
116	SLE RA 18	9	-270	5017	10.98	5.6	0.05
116	SLE RA 19	8	-277	5036	11.23	5.58	0.05
116	SLE RA 20	9	-271	5071	11.06	5.66	0.05
116	SLE RA 21	9	-278	5090	11.31	5.65	0.05
116	SLE FR 1	7	-235	4427	9.55	4.86	0.04
116	SLE FR 2	7	-238	4433	9.63	4.86	0.04
116	SLE FR 3	7	-236	4448	9.58	4.89	0.04
116	SLE FR 4	8	-248	4610	10.06	5.08	0.05
116	SLE FR 5	8	-246	4625	10.01	5.11	0.05
116	SLE FR 6	8	-253	4722	10.27	5.23	0.05
116	SLE QP 1	7	-235	4427	9.55	4.86	0.04
116	SLE QP 2	8	-246	4604	9.98	5.08	0.05
116	SLD 1	20	80	4195	-3.41	15.87	0
116	SLD 2	20	80	4195	-3.41	15.87	0
116	SLD 3	23	-282	4069	11.62	18.34	-0.02
116	SLD 4	23	-282	4069	11.62	18.34	-0.02
116	SLD 5	7	400	4672	-16.83	4.56	0.06
116	SLD 6	7	400	4672	-16.83	4.56	0.06
116	SLD 7	17	-805	4253	33.27	12.81	-0.01
116	SLD 8	17	-805	4253	33.27	12.81	-0.01
116	SLD 9	-1	314	4955	-13.3	-2.65	0.1
116	SLD 10	-1	314	4955	-13.3	-2.65	0.1
116	SLD 11	8	-892	4536	36.79	5.6	0.03
116	SLD 12	8	-892	4536	36.79	5.6	0.03
116	SLD 13	-7	-210	5138	8.34	-8.18	0.11
116	SLD 14	-7	-210	5138	8.34	-8.18	0.11
116	SLD 15	-4	-571	5013	23.37	-5.7	0.09
116	SLD 16	-4	-571	5013	23.37	-5.7	0.09
116	SLV 1	37	513	3646	-21.23	31.54	-0.06
116	SLV 2	37	513	3646	-21.23	31.54	-0.06
116	SLV 3	45	-329	3351	13.74	37.57	-0.11
116	SLV 4	45	-329	3351	13.74	37.57	-0.11
116	SLV 5	6	1258	4765	-52.42	3.86	0.09
116	SLV 6	6	1258	4765	-52.42	3.86	0.09
116	SLV 7	30	-1546	3779	64.14	23.98	-0.08
116	SLV 8	30	-1546	3779	64.14	23.98	-0.08
116	SLV 9	-14	1055	5428	-44.18	-13.82	0.17
116	SLV 10	-14	1055	5428	-44.18	-13.82	0.17
116	SLV 11	10	-1749	4442	72.38	6.3	0.01
116	SLV 12	10	-1749	4442	72.38	6.3	0.01
116	SLV 13	-29	-163	5857	6.23	-27.41	0.21
116	SLV 14	-29	-163	5857	6.23	-27.41	0.21
116	SLV 15	-22	-1004	5561	41.19	-21.37	0.16
116	SLV 16	-22	-1004	5561	41.19	-21.37	0.16
117	SLU 1	0	-34	3463	12.74	-0.2	0
117	SLU 2	-1	225	3618	2.29	-1.2	0
117	SLU 3	0	-34	3558	13.12	-0.21	0
117	SLU 4	-1	121	3651	6.85	-0.81	0
117	SLU 5	-1	225	3678	2.55	-1.2	0
117	SLU 6	0	-35	3619	13.38	-0.21	0
117	SLU 7	-1	121	3712	7.11	-0.81	0
117	SLU 8	0	-35	3583	13.26	-0.21	0
117	SLU 9	-1	121	3677	6.99	-0.81	0
117	SLU 10	-1	217	4121	4.32	-1.23	0
117	SLU 11	0	-43	4061	15.15	-0.24	0
117	SLU 12	-1	113	4154	8.88	-0.84	0
117	SLU 13	-1	216	4181	4.58	-1.24	0
117	SLU 14	0	-43	4122	15.41	-0.25	0
117	SLU 15	-1	112	4215	9.14	-0.85	0
117	SLU 16	0	-43	4087	15.3	-0.25	0
117	SLU 17	-1	112	4180	9.03	-0.85	0
117	SLU 18	0	-46	4181	15.64	-0.25	0
117	SLU 19	-1	109	4275	9.37	-0.85	0
117	SLU 20	0	-47	4242	15.9	-0.26	0
117	SLU 21	-1	109	4335	9.63	-0.86	0
117	SLU 22	0	-39	3936	14.57	-0.23	0
117	SLU 23	-1	220	4091	4.12	-1.23	0
117	SLU 24	0	-39	4031	14.95	-0.24	0
117	SLU 25	-1	116	4124	8.68	-0.84	0
117	SLU 26	-1	219	4151	4.38	-1.23	0
117	SLU 27	0	-40	4091	15.21	-0.25	0
117	SLU 28	-1	116	4185	8.94	-0.84	0
117	SLU 29	0	-40	4056	15.09	-0.24	0
117	SLU 30	-1	115	4150	8.82	-0.84	0
117	SLU 31	-1	211	4594	6.15	-1.27	0
117	SLU 32	0	-48	4534	16.98	-0.28	0
117	SLU 33	-1	108	4627	10.71	-0.88	0
117	SLU 34	-1	211	4654	6.41	-1.27	0
117	SLU 35	0	-49	4595	17.24	-0.28	0
117	SLU 36	-1	107	4688	10.97	-0.88	0
117	SLU 37	0	-49	4560	17.13	-0.28	0
117	SLU 38	-1	107	4653	10.86	-0.88	0
117	SLU 39	0	-51	4654	17.47	-0.29	0
117	SLU 40	-1	104	4748	11.2	-0.88	0
117	SLU 41	0	-52	4715	17.74	-0.29	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
117	SLU 42	-1	104	4808	11.47	-0.89	0
117	SLU 43	0	-42	4339	15.94	-0.25	0
117	SLU 44	-1	217	4494	5.48	-1.24	0
117	SLU 45	0	-42	4435	16.31	-0.26	0
117	SLU 46	-1	113	4528	10.04	-0.85	0
117	SLU 47	-1	217	4555	5.75	-1.25	0
117	SLU 48	0	-43	4495	16.57	-0.26	0
117	SLU 49	-1	113	4588	10.3	-0.86	0
117	SLU 50	0	-43	4460	16.46	-0.26	0
117	SLU 51	-1	112	4553	10.19	-0.86	0
117	SLU 52	-1	209	4998	7.52	-1.28	0
117	SLU 53	0	-51	4938	18.34	-0.29	0
117	SLU 54	-1	105	5031	12.07	-0.89	0
117	SLU 55	-1	208	5058	7.78	-1.29	0
117	SLU 56	0	-51	4998	18.61	-0.3	0
117	SLU 57	-1	104	5091	12.34	-0.9	0
117	SLU 58	0	-52	4963	18.49	-0.3	0
117	SLU 59	-1	104	5056	12.22	-0.89	0
117	SLU 60	0	-54	5058	18.84	-0.3	0
117	SLU 61	-1	101	5151	12.57	-0.9	0
117	SLU 62	0	-55	5118	19.1	-0.31	0
117	SLU 63	-1	101	5212	12.83	-0.9	0
117	SLU 64	0	-48	4812	17.77	-0.28	0
117	SLU 65	-1	212	4967	7.32	-1.28	0
117	SLU 66	0	-48	4908	18.14	-0.29	0
117	SLU 67	-1	108	5001	11.87	-0.89	0
117	SLU 68	-1	211	5028	7.58	-1.28	0
117	SLU 69	0	-48	4968	18.41	-0.3	0
117	SLU 70	-1	107	5061	12.13	-0.89	0
117	SLU 71	0	-49	4933	18.29	-0.29	0
117	SLU 72	-1	107	5026	12.02	-0.89	0
117	SLU 73	-1	203	5471	9.35	-1.31	0
117	SLU 74	0	-56	5411	20.18	-0.33	0
117	SLU 75	-1	99	5504	13.91	-0.92	0
117	SLU 76	-1	203	5531	9.61	-1.32	0
117	SLU 77	0	-57	5471	20.44	-0.33	0
117	SLU 78	-1	99	5564	14.17	-0.93	0
117	SLU 79	0	-57	5436	20.32	-0.33	0
117	SLU 80	-1	98	5529	14.05	-0.93	0
117	SLU 81	0	-60	5531	20.67	-0.33	0
117	SLU 82	-1	96	5624	14.4	-0.93	0
117	SLU 83	0	-60	5591	20.93	-0.34	0
117	SLU 84	-1	95	5685	14.66	-0.94	0
117	SLE RA 1	0	-35	3598	13.26	-0.21	0
117	SLE RA 2	-1	137	3701	6.3	-0.87	0
117	SLE RA 3	0	-36	3661	13.52	-0.22	0
117	SLE RA 4	-1	68	3723	9.34	-0.61	0
117	SLE RA 5	-1	137	3742	6.47	-0.88	0
117	SLE RA 6	0	-36	3702	13.69	-0.22	0
117	SLE RA 7	-1	68	3764	9.51	-0.62	0
117	SLE RA 8	0	-36	3678	13.61	-0.22	0
117	SLE RA 9	-1	68	3740	9.43	-0.62	0
117	SLE RA 10	-1	132	4037	7.65	-0.9	0
117	SLE RA 11	0	-41	3997	14.87	-0.24	0
117	SLE RA 12	-1	62	4059	10.69	-0.64	0
117	SLE RA 13	-1	131	4077	7.83	-0.9	0
117	SLE RA 14	0	-42	4037	15.04	-0.24	0
117	SLE RA 15	-1	62	4099	10.86	-0.64	0
117	SLE RA 16	0	-42	4014	14.97	-0.24	0
117	SLE RA 17	-1	62	4076	10.79	-0.64	0
117	SLE RA 18	0	-44	4077	15.2	-0.24	0
117	SLE RA 19	-1	60	4139	11.02	-0.64	0
117	SLE RA 20	0	-44	4117	15.37	-0.25	0
117	SLE RA 21	-1	60	4179	11.19	-0.65	0
117	SLE FR 1	0	-35	3598	13.26	-0.21	0
117	SLE FR 2	0	-1	3618	11.87	-0.34	0
117	SLE FR 3	0	-36	3614	13.33	-0.21	0
117	SLE FR 4	0	-3	3762	12.45	-0.35	0
117	SLE FR 5	0	-38	3758	13.91	-0.22	0
117	SLE FR 6	0	-39	3837	14.23	-0.23	0
117	SLE QP 1	0	-35	3598	13.26	-0.21	0
117	SLE QP 2	0	-38	3741	13.84	-0.22	0
117	SLD 1	7	5	4065	12.06	5.92	0
117	SLD 2	7	5	4065	12.06	5.92	0
117	SLD 3	11	-389	3796	29.18	9.46	0
117	SLD 4	11	-389	3796	29.18	9.46	0
117	SLD 5	-4	572	4246	-12.64	-3.74	0
117	SLD 6	-4	572	4246	-12.64	-3.74	0
117	SLD 7	9	-741	3350	44.4	8.05	0
117	SLD 8	9	-741	3350	44.4	8.05	0
117	SLD 9	-9	665	4133	-16.71	-8.49	0
117	SLD 10	-9	665	4133	-16.71	-8.49	0
117	SLD 11	4	-648	3236	40.33	3.3	0
117	SLD 12	4	-648	3236	40.33	3.3	0
117	SLD 13	-11	314	3687	-1.49	-9.9	0
117	SLD 14	-11	314	3687	-1.49	-9.9	0
117	SLD 15	-7	-80	3418	15.63	-6.37	0
117	SLD 16	-7	-80	3418	15.63	-6.37	0
117	SLV 1	17	65	4502	9.54	14.53	-0.01
117	SLV 2	17	65	4502	9.54	14.53	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
117	SLV 3	26	-876	3866	50.35	23.22	-0.01
117	SLV 4	26	-876	3866	50.35	23.22	-0.01
117	SLV 5	-9	1421	4935	-49.33	-8.98	-0.01
117	SLV 6	-9	1421	4935	-49.33	-8.98	-0.01
117	SLV 7	22	-1717	2814	86.68	19.99	0
117	SLV 8	22	-1717	2814	86.68	19.99	0
117	SLV 9	-22	1642	4669	-58.99	-20.43	0
117	SLV 10	-22	1642	4669	-58.99	-20.43	0
117	SLV 11	9	-1497	2548	77.02	8.54	0.01
117	SLV 12	9	-1497	2548	77.02	8.54	0.01
117	SLV 13	-26	801	3617	-22.66	-23.66	0.01
117	SLV 14	-26	801	3617	-22.66	-23.66	0.01
117	SLV 15	-17	-141	2980	18.15	-14.97	0.01
117	SLV 16	-17	-141	2980	18.15	-14.97	0.01
118	SLU 1	1	472	5851	-15.76	1.03	0
118	SLU 2	8	560	6156	-18.91	8.26	0
118	SLU 3	1	488	6017	-16.27	1.05	0
118	SLU 4	5	541	6200	-18.16	5.4	0
118	SLU 5	8	569	6260	-19.17	8.28	0
118	SLU 6	1	496	6120	-16.53	1.07	0
118	SLU 7	5	549	6303	-18.43	5.42	0
118	SLU 8	1	489	6058	-16.28	1.07	0
118	SLU 9	5	542	6241	-18.18	5.41	0
118	SLU 10	8	623	6847	-21.04	8.43	0
118	SLU 11	1	550	6708	-18.4	1.23	0
118	SLU 12	6	603	6891	-20.3	5.57	0
118	SLU 13	8	632	6951	-21.31	8.45	0
118	SLU 14	1	559	6811	-18.67	1.25	0
118	SLU 15	6	612	6995	-20.56	5.59	0
118	SLU 16	1	552	6749	-18.42	1.24	0
118	SLU 17	6	605	6932	-20.31	5.58	0
118	SLU 18	1	562	6838	-18.81	1.27	0
118	SLU 19	6	615	7021	-20.7	5.61	0
118	SLU 20	1	570	6942	-19.07	1.29	0
118	SLU 21	6	623	7125	-20.96	5.63	0
118	SLU 22	1	534	6522	-17.87	1.18	0
118	SLU 23	8	623	6827	-21.02	8.42	0
118	SLU 24	1	550	6688	-18.38	1.21	0
118	SLU 25	6	603	6871	-20.28	5.55	0
118	SLU 26	8	631	6931	-21.29	8.44	0
118	SLU 27	1	559	6791	-18.65	1.23	0
118	SLU 28	6	612	6974	-20.54	5.57	0
118	SLU 29	1	551	6729	-18.4	1.22	0
118	SLU 30	6	604	6912	-20.29	5.56	0
118	SLU 31	9	686	7518	-23.16	8.59	0
118	SLU 32	1	613	7379	-20.52	1.38	0
118	SLU 33	6	666	7562	-22.41	5.72	0
118	SLU 34	9	694	7622	-23.42	8.61	0
118	SLU 35	1	621	7482	-20.78	1.4	0
118	SLU 36	6	674	7665	-22.67	5.74	0
118	SLU 37	1	614	7420	-20.53	1.4	0
118	SLU 38	6	667	7603	-22.42	5.74	0
118	SLU 39	1	624	7509	-20.92	1.43	0
118	SLU 40	6	677	7692	-22.81	5.77	0
118	SLU 41	2	633	7613	-21.18	1.45	0
118	SLU 42	6	686	7796	-23.08	5.79	0
118	SLU 43	1	592	7376	-19.76	1.28	0
118	SLU 44	8	681	7681	-22.91	8.51	0
118	SLU 45	1	608	7542	-20.27	1.31	0
118	SLU 46	6	661	7725	-22.16	5.65	0
118	SLU 47	9	689	7785	-23.18	8.53	0
118	SLU 48	1	616	7645	-20.54	1.33	0
118	SLU 49	6	669	7829	-22.43	5.67	0
118	SLU 50	1	609	7583	-20.29	1.32	0
118	SLU 51	6	662	7766	-22.18	5.66	0
118	SLU 52	9	743	8372	-25.05	8.69	0
118	SLU 53	1	670	8233	-22.41	1.48	0
118	SLU 54	6	724	8416	-24.3	5.82	0
118	SLU 55	9	752	8476	-25.31	8.71	0
118	SLU 56	2	679	8336	-22.67	1.5	0
118	SLU 57	6	732	8520	-24.56	5.84	0
118	SLU 58	1	672	8274	-22.42	1.49	0
118	SLU 59	6	725	8457	-24.31	5.83	0
118	SLU 60	2	682	8363	-22.81	1.53	0
118	SLU 61	6	735	8546	-24.7	5.87	0
118	SLU 62	2	690	8467	-23.07	1.55	0
118	SLU 63	6	743	8650	-24.96	5.89	0
118	SLU 64	1	655	8047	-21.87	1.44	0
118	SLU 65	9	743	8352	-25.03	8.67	0
118	SLU 66	1	670	8213	-22.39	1.47	0
118	SLU 67	6	723	8396	-24.28	5.81	0
118	SLU 68	9	752	8456	-25.29	8.69	0
118	SLU 69	1	679	8316	-22.65	1.49	0
118	SLU 70	6	732	8500	-24.54	5.83	0
118	SLU 71	1	671	8254	-22.4	1.48	0
118	SLU 72	6	725	8437	-24.29	5.82	0
118	SLU 73	9	806	9043	-27.16	8.84	0
118	SLU 74	2	733	8904	-24.52	1.64	0
118	SLU 75	6	786	9087	-26.41	5.98	0
118	SLU 76	9	814	9147	-27.42	8.86	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
118	SLU 77	2	741	9007	-24.78	1.66	0
118	SLU 78	6	795	9191	-26.68	6	0
118	SLU 79	2	734	8945	-24.53	1.65	0
118	SLU 80	6	787	9128	-26.43	5.99	0
118	SLU 81	2	744	9034	-24.92	1.68	0
118	SLU 82	6	797	9217	-26.81	6.02	0
118	SLU 83	2	753	9138	-25.19	1.7	0
118	SLU 84	6	806	9321	-27.08	6.04	0
118	SLE RA 1	1	490	6042	-16.36	1.07	0
118	SLE RA 2	6	549	6246	-18.46	5.89	0
118	SLE RA 3	1	500	6153	-16.7	1.09	0
118	SLE RA 4	4	536	6275	-17.96	3.98	0
118	SLE RA 5	6	554	6315	-18.64	5.91	0
118	SLE RA 6	1	506	6222	-16.88	1.1	0
118	SLE RA 7	4	541	6344	-18.14	4	0
118	SLE RA 8	1	501	6181	-16.71	1.1	0
118	SLE RA 9	4	536	6303	-17.97	3.99	0
118	SLE RA 10	6	591	6707	-19.89	6.01	0
118	SLE RA 11	1	542	6614	-18.13	1.21	0
118	SLE RA 12	4	577	6736	-19.39	4.1	0
118	SLE RA 13	6	596	6776	-20.06	6.02	0
118	SLE RA 14	1	548	6683	-18.3	1.22	0
118	SLE RA 15	4	583	6805	-19.56	4.11	0
118	SLE RA 16	1	543	6641	-18.14	1.21	0
118	SLE RA 17	4	578	6763	-19.4	4.11	0
118	SLE RA 18	1	550	6701	-18.39	1.24	0
118	SLE RA 19	4	585	6823	-19.65	4.13	0
118	SLE RA 20	1	555	6770	-18.57	1.25	0
118	SLE RA 21	4	591	6892	-19.83	4.14	0
118	SLE FR 1	1	490	6042	-16.36	1.07	0
118	SLE FR 2	2	502	6083	-16.78	2.04	0
118	SLE FR 3	1	492	6070	-16.43	1.08	0
118	SLE FR 4	2	519	6281	-17.39	2.09	0
118	SLE FR 5	1	510	6267	-17.04	1.13	0
118	SLE FR 6	1	520	6372	-17.38	1.15	0
118	SLE QP 1	1	490	6042	-16.36	1.07	0
118	SLE QP 2	1	508	6240	-16.97	1.12	0
118	SLD 1	30	533	4884	-18.3	26.4	-0.01
118	SLD 2	30	533	4884	-18.3	26.4	-0.01
118	SLD 3	18	135	4282	-1.42	15.58	-0.01
118	SLD 4	18	135	4282	-1.42	15.58	-0.01
118	SLD 5	28	1119	6745	-42.98	25.12	0
118	SLD 6	28	1119	6745	-42.98	25.12	0
118	SLD 7	-12	-208	4741	13.3	-10.95	-0.01
118	SLD 8	-12	-208	4741	13.3	-10.95	-0.01
118	SLD 9	14	1223	7739	-47.24	13.19	0.01
118	SLD 10	14	1223	7739	-47.24	13.19	0.01
118	SLD 11	-25	-103	5735	9.04	-22.88	0
118	SLD 12	-25	-103	5735	9.04	-22.88	0
118	SLD 13	-16	881	8197	-32.52	-13.34	0.01
118	SLD 14	-16	881	8197	-32.52	-13.34	0.01
118	SLD 15	-28	483	7596	-15.64	-24.16	0.01
118	SLD 16	-28	483	7596	-15.64	-24.16	0.01
118	SLV 1	70	568	3068	-20.16	62.13	-0.01
118	SLV 2	70	568	3068	-20.16	62.13	-0.01
118	SLV 3	40	-357	1656	19.08	34.57	-0.02
118	SLV 4	40	-357	1656	19.08	34.57	-0.02
118	SLV 5	68	1930	7431	-77.44	61.22	0.01
118	SLV 6	68	1930	7431	-77.44	61.22	0.01
118	SLV 7	-33	-1156	2722	53.35	-30.64	-0.02
118	SLV 8	-33	-1156	2722	53.35	-30.64	-0.02
118	SLV 9	35	2172	9758	-87.29	32.89	0.02
118	SLV 10	35	2172	9758	-87.29	32.89	0.02
118	SLV 11	-65	-915	5049	43.49	-58.98	-0.01
118	SLV 12	-65	-915	5049	43.49	-58.98	-0.01
118	SLV 13	-38	1373	10824	-53.02	-32.33	0.02
118	SLV 14	-38	1373	10824	-53.02	-32.33	0.02
118	SLV 15	-68	447	9412	-13.78	-59.89	0.01
118	SLV 16	-68	447	9412	-13.78	-59.89	0.01
119	SLU 1	4	-187	3863	7.89	2.77	0.01
119	SLU 2	4	-201	3890	8.46	2.84	0.01
119	SLU 3	4	-188	3970	7.96	2.86	0.01
119	SLU 4	4	-197	3986	8.3	2.91	0.01
119	SLU 5	4	-202	3960	8.52	2.91	0.01
119	SLU 6	4	-190	4040	8.03	2.93	0.01
119	SLU 7	4	-198	4056	8.37	2.97	0.01
119	SLU 8	4	-190	4005	8.02	2.89	0.01
119	SLU 9	4	-198	4020	8.36	2.94	0.01
119	SLU 10	3	-223	4458	9.48	2.9	0.01
119	SLU 11	4	-210	4538	8.99	2.92	0.01
119	SLU 12	4	-219	4554	9.33	2.96	0.01
119	SLU 13	4	-224	4529	9.55	2.96	0.01
119	SLU 14	4	-212	4608	9.06	2.98	0.01
119	SLU 15	4	-220	4624	9.4	3.02	0.01
119	SLU 16	4	-212	4573	9.04	2.95	0.01
119	SLU 17	4	-220	4589	9.38	2.99	0.01
119	SLU 18	3	-218	4675	9.36	2.85	0.01
119	SLU 19	3	-227	4691	9.7	2.89	0.01
119	SLU 20	3	-220	4746	9.42	2.91	0.01
119	SLU 21	4	-228	4761	9.76	2.95	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
119	SLU 22	4	-202	4338	8.62	3.05	0.01
119	SLU 23	4	-216	4364	9.19	3.13	0.01
119	SLU 24	4	-204	4444	8.7	3.15	0.01
119	SLU 25	4	-212	4460	9.04	3.19	0.01
119	SLU 26	4	-218	4435	9.25	3.19	0.01
119	SLU 27	4	-206	4515	8.76	3.21	0.01
119	SLU 28	4	-214	4531	9.1	3.25	0.01
119	SLU 29	4	-205	4479	8.75	3.18	0.01
119	SLU 30	4	-214	4495	9.09	3.22	0.01
119	SLU 31	4	-239	4932	10.22	3.18	0.01
119	SLU 32	4	-226	5012	9.72	3.2	0.01
119	SLU 33	4	-235	5028	10.07	3.24	0.01
119	SLU 34	4	-240	5003	10.28	3.24	0.01
119	SLU 35	4	-228	5083	9.79	3.26	0.01
119	SLU 36	4	-236	5099	10.13	3.31	0.01
119	SLU 37	4	-228	5047	9.78	3.23	0.01
119	SLU 38	4	-236	5063	10.12	3.28	0.01
119	SLU 39	4	-234	5149	10.09	3.13	0.01
119	SLU 40	4	-243	5165	10.43	3.17	0.01
119	SLU 41	4	-236	5220	10.15	3.19	0.01
119	SLU 42	4	-244	5236	10.49	3.24	0.01
119	SLU 43	4	-237	4859	10	3.5	0.01
119	SLU 44	5	-251	4886	10.57	3.58	0.01
119	SLU 45	5	-239	4966	10.08	3.6	0.01
119	SLU 46	5	-247	4982	10.42	3.64	0.01
119	SLU 47	5	-253	4957	10.63	3.64	0.01
119	SLU 48	5	-240	5037	10.14	3.66	0.01
119	SLU 49	5	-249	5052	10.48	3.71	0.01
119	SLU 50	5	-240	5001	10.13	3.63	0.01
119	SLU 51	5	-248	5017	10.47	3.67	0.01
119	SLU 52	4	-273	5454	11.6	3.63	0.01
119	SLU 53	5	-261	5534	11.11	3.65	0.01
119	SLU 54	5	-269	5550	11.45	3.7	0.01
119	SLU 55	5	-275	5525	11.66	3.69	0.01
119	SLU 56	5	-262	5605	11.17	3.71	0.01
119	SLU 57	5	-271	5621	11.51	3.76	0.01
119	SLU 58	5	-262	5569	11.16	3.68	0.01
119	SLU 59	5	-271	5585	11.5	3.73	0.01
119	SLU 60	4	-269	5671	11.47	3.58	0.01
119	SLU 61	4	-277	5687	11.81	3.62	0.01
119	SLU 62	4	-270	5742	11.54	3.64	0.01
119	SLU 63	4	-279	5758	11.88	3.69	0.01
119	SLU 64	5	-253	5334	10.73	3.79	0.01
119	SLU 65	5	-267	5360	11.3	3.86	0.01
119	SLU 66	5	-255	5440	10.81	3.88	0.01
119	SLU 67	5	-263	5456	11.15	3.92	0.01
119	SLU 68	5	-268	5431	11.37	3.92	0.01
119	SLU 69	5	-256	5511	10.88	3.94	0.01
119	SLU 70	5	-264	5527	11.22	3.99	0.01
119	SLU 71	5	-256	5475	10.86	3.91	0.01
119	SLU 72	5	-264	5491	11.2	3.96	0.01
119	SLU 73	5	-289	5929	12.33	3.91	0.01
119	SLU 74	5	-277	6009	11.84	3.93	0.01
119	SLU 75	5	-285	6024	12.18	3.98	0.01
119	SLU 76	5	-291	5999	12.4	3.98	0.01
119	SLU 77	5	-278	6079	11.9	4	0.01
119	SLU 78	5	-287	6095	12.24	4.04	0.01
119	SLU 79	5	-278	6044	11.89	3.96	0.01
119	SLU 80	5	-287	6059	12.23	4.01	0.01
119	SLU 81	5	-285	6146	12.2	3.86	0.01
119	SLU 82	5	-293	6162	12.54	3.91	0.01
119	SLU 83	5	-286	6216	12.27	3.92	0.01
119	SLU 84	5	-295	6232	12.61	3.97	0.01
119	SLE RA 1	4	-191	3999	8.1	2.85	0.01
119	SLE RA 2	4	-200	4016	8.48	2.9	0.01
119	SLE RA 3	4	-192	4070	8.15	2.91	0.01
119	SLE RA 4	4	-198	4080	8.37	2.94	0.01
119	SLE RA 5	4	-201	4064	8.52	2.94	0.01
119	SLE RA 6	4	-193	4117	8.19	2.95	0.01
119	SLE RA 7	4	-199	4127	8.42	2.98	0.01
119	SLE RA 8	4	-193	4093	8.18	2.93	0.01
119	SLE RA 9	4	-199	4104	8.41	2.96	0.01
119	SLE RA 10	4	-215	4395	9.16	2.94	0.01
119	SLE RA 11	4	-207	4448	8.83	2.95	0.01
119	SLE RA 12	4	-213	4459	9.06	2.98	0.01
119	SLE RA 13	4	-216	4442	9.2	2.98	0.01
119	SLE RA 14	4	-208	4496	8.88	2.99	0.01
119	SLE RA 15	4	-214	4506	9.1	3.02	0.01
119	SLE RA 16	4	-208	4472	8.87	2.97	0.01
119	SLE RA 17	4	-214	4482	9.09	3	0.01
119	SLE RA 18	4	-212	4540	9.08	2.9	0.01
119	SLE RA 19	4	-218	4550	9.3	2.93	0.01
119	SLE RA 20	4	-213	4587	9.12	2.94	0.01
119	SLE RA 21	4	-219	4598	9.35	2.97	0.01
119	SLE FR 1	4	-191	3999	8.1	2.85	0.01
119	SLE FR 2	4	-193	4002	8.17	2.86	0.01
119	SLE FR 3	4	-191	4018	8.11	2.87	0.01
119	SLE FR 4	4	-199	4165	8.47	2.88	0.01
119	SLE FR 5	4	-198	4180	8.41	2.88	0.01
119	SLE FR 6	4	-202	4269	8.59	2.88	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
119	SLE QP 1	4	-191	3999	8.1	2.85	0.01
119	SLE QP 2	4	-197	4161	8.39	2.87	0.01
119	SLD 1	22	-161	4470	6.65	16.81	0.07
119	SLD 2	22	-161	4470	6.65	16.81	0.07
119	SLD 3	26	-517	4375	23.1	20.06	0.05
119	SLD 4	26	-517	4375	23.1	20.06	0.05
119	SLD 5	3	354	4398	-17.09	2.1	0.04
119	SLD 6	3	354	4398	-17.09	2.1	0.04
119	SLD 7	17	-834	4081	37.76	12.97	0.01
119	SLD 8	17	-834	4081	37.76	12.97	0.01
119	SLD 9	-10	439	4241	-20.98	-7.24	0.01
119	SLD 10	-10	439	4241	-20.98	-7.24	0.01
119	SLD 11	5	-749	3924	33.87	3.63	-0.03
119	SLD 12	5	-749	3924	33.87	3.63	-0.03
119	SLD 13	-19	122	3947	-6.32	-14.33	-0.04
119	SLD 14	-19	122	3947	-6.32	-14.33	-0.04
119	SLD 15	-15	-234	3852	10.13	-11.08	-0.05
119	SLD 16	-15	-234	3852	10.13	-11.08	-0.05
119	SLV 1	48	-112	4888	4.31	36.93	0.15
119	SLV 2	48	-112	4888	4.31	36.93	0.15
119	SLV 3	58	-936	4664	42.37	44.88	0.12
119	SLV 4	58	-936	4664	42.37	44.88	0.12
119	SLV 5	1	1079	4720	-50.57	1.02	0.09
119	SLV 6	1	1079	4720	-50.57	1.02	0.09
119	SLV 7	36	-1670	3971	76.32	27.53	0
119	SLV 8	36	-1670	3971	76.32	27.53	0
119	SLV 9	-29	1275	4351	-59.54	-21.8	0.02
119	SLV 10	-29	1275	4351	-59.54	-21.8	0.02
119	SLV 11	6	-1474	3602	67.35	4.71	-0.07
119	SLV 12	6	-1474	3602	67.35	4.71	-0.07
119	SLV 13	-51	541	3659	-25.59	-39.15	-0.1
119	SLV 14	-51	541	3659	-25.59	-39.15	-0.1
119	SLV 15	-41	-283	3434	12.48	-31.2	-0.13
119	SLV 16	-41	-283	3434	12.48	-31.2	-0.13
120	SLU 1	4	-36	700	2.62	2.03	-0.1
120	SLU 2	4	-36	699	2.59	2.15	-0.1
120	SLU 3	4	-38	703	2.74	2.08	-0.1
120	SLU 4	4	-38	703	2.72	2.15	-0.1
120	SLU 5	4	-37	701	2.67	2.18	-0.1
120	SLU 6	4	-39	706	2.83	2.11	-0.1
120	SLU 7	4	-39	706	2.81	2.18	-0.1
120	SLU 8	4	-39	705	2.78	2.1	-0.1
120	SLU 9	4	-38	704	2.77	2.17	-0.1
120	SLU 10	5	-42	841	2.96	2.61	-0.13
120	SLU 11	5	-44	845	3.12	2.55	-0.13
120	SLU 12	5	-44	845	3.1	2.62	-0.13
120	SLU 13	5	-43	843	3.05	2.65	-0.13
120	SLU 14	5	-45	848	3.2	2.58	-0.13
120	SLU 15	5	-45	847	3.18	2.65	-0.13
120	SLU 16	5	-45	847	3.16	2.56	-0.13
120	SLU 17	5	-44	846	3.14	2.63	-0.13
120	SLU 18	5	-45	902	3.15	2.7	-0.14
120	SLU 19	5	-45	902	3.14	2.77	-0.14
120	SLU 20	5	-46	905	3.24	2.73	-0.14
120	SLU 21	5	-46	904	3.22	2.8	-0.14
120	SLU 22	4	-43	748	3.09	2.31	-0.11
120	SLU 23	4	-43	748	3.06	2.42	-0.12
120	SLU 24	4	-45	752	3.21	2.36	-0.11
120	SLU 25	4	-45	752	3.2	2.42	-0.12
120	SLU 26	5	-44	750	3.14	2.45	-0.12
120	SLU 27	4	-46	755	3.3	2.39	-0.11
120	SLU 28	5	-46	754	3.28	2.46	-0.12
120	SLU 29	4	-46	754	3.26	2.37	-0.11
120	SLU 30	5	-45	753	3.24	2.44	-0.12
120	SLU 31	6	-49	890	3.44	2.89	-0.14
120	SLU 32	5	-51	894	3.59	2.82	-0.14
120	SLU 33	6	-51	894	3.57	2.89	-0.14
120	SLU 34	6	-50	892	3.52	2.92	-0.14
120	SLU 35	6	-52	897	3.67	2.85	-0.14
120	SLU 36	6	-52	896	3.66	2.92	-0.14
120	SLU 37	5	-52	895	3.63	2.84	-0.14
120	SLU 38	6	-51	895	3.61	2.91	-0.14
120	SLU 39	6	-52	951	3.62	2.98	-0.15
120	SLU 40	6	-51	951	3.61	3.04	-0.15
120	SLU 41	6	-53	954	3.71	3.01	-0.15
120	SLU 42	6	-53	953	3.69	3.08	-0.15
120	SLU 43	5	-45	893	3.24	2.55	-0.12
120	SLU 44	5	-44	892	3.21	2.66	-0.13
120	SLU 45	5	-47	896	3.36	2.6	-0.12
120	SLU 46	5	-46	896	3.35	2.67	-0.13
120	SLU 47	5	-46	895	3.29	2.7	-0.13
120	SLU 48	5	-48	899	3.45	2.63	-0.12
120	SLU 49	5	-48	899	3.43	2.7	-0.13
120	SLU 50	5	-47	898	3.41	2.61	-0.12
120	SLU 51	5	-47	897	3.39	2.68	-0.13
120	SLU 52	6	-50	1034	3.59	3.13	-0.15
120	SLU 53	6	-53	1038	3.74	3.07	-0.15
120	SLU 54	6	-52	1038	3.72	3.13	-0.15
120	SLU 55	6	-52	1036	3.67	3.16	-0.15
120	SLU 56	6	-54	1041	3.82	3.1	-0.15



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
120	SLU 57	6	-54	1040	3.81	3.17	-0.15
120	SLU 58	6	-53	1040	3.78	3.08	-0.15
120	SLU 59	6	-53	1039	3.76	3.15	-0.15
120	SLU 60	6	-53	1095	3.78	3.22	-0.16
120	SLU 61	6	-53	1095	3.76	3.29	-0.16
120	SLU 62	6	-55	1098	3.86	3.25	-0.16
120	SLU 63	6	-54	1097	3.84	3.32	-0.16
120	SLU 64	5	-52	942	3.71	2.82	-0.13
120	SLU 65	5	-51	941	3.68	2.94	-0.14
120	SLU 66	5	-54	945	3.84	2.87	-0.14
120	SLU 67	5	-53	945	3.82	2.94	-0.14
120	SLU 68	5	-53	943	3.77	2.97	-0.14
120	SLU 69	5	-55	948	3.92	2.9	-0.14
120	SLU 70	5	-54	948	3.9	2.97	-0.14
120	SLU 71	5	-54	947	3.88	2.89	-0.14
120	SLU 72	5	-54	946	3.86	2.96	-0.14
120	SLU 73	6	-57	1083	4.06	3.4	-0.17
120	SLU 74	6	-60	1087	4.21	3.34	-0.16
120	SLU 75	6	-59	1087	4.2	3.41	-0.17
120	SLU 76	7	-58	1085	4.14	3.44	-0.17
120	SLU 77	6	-61	1090	4.3	3.37	-0.17
120	SLU 78	7	-60	1089	4.28	3.44	-0.17
120	SLU 79	6	-60	1088	4.25	3.36	-0.16
120	SLU 80	7	-60	1088	4.24	3.42	-0.17
120	SLU 81	7	-60	1144	4.25	3.49	-0.17
120	SLU 82	7	-60	1144	4.23	3.56	-0.18
120	SLU 83	7	-61	1147	4.33	3.52	-0.18
120	SLU 84	7	-61	1146	4.31	3.59	-0.18
120	SLE RA 1	4	-38	713	2.75	2.11	-0.1
120	SLE RA 2	4	-38	713	2.73	2.19	-0.1
120	SLE RA 3	4	-39	716	2.83	2.14	-0.1
120	SLE RA 4	4	-39	716	2.82	2.19	-0.1
120	SLE RA 5	4	-39	715	2.79	2.21	-0.1
120	SLE RA 6	4	-40	718	2.89	2.17	-0.1
120	SLE RA 7	4	-40	718	2.88	2.21	-0.1
120	SLE RA 8	4	-40	717	2.86	2.16	-0.1
120	SLE RA 9	4	-40	717	2.85	2.2	-0.1
120	SLE RA 10	5	-42	808	2.98	2.5	-0.12
120	SLE RA 11	5	-43	811	3.09	2.46	-0.12
120	SLE RA 12	5	-43	810	3.07	2.5	-0.12
120	SLE RA 13	5	-43	809	3.04	2.52	-0.12
120	SLE RA 14	5	-44	812	3.14	2.48	-0.12
120	SLE RA 15	5	-44	812	3.13	2.52	-0.12
120	SLE RA 16	5	-44	811	3.11	2.47	-0.12
120	SLE RA 17	5	-44	811	3.1	2.51	-0.12
120	SLE RA 18	5	-44	849	3.11	2.56	-0.13
120	SLE RA 19	5	-44	848	3.1	2.6	-0.13
120	SLE RA 20	5	-45	850	3.16	2.58	-0.13
120	SLE RA 21	5	-45	850	3.15	2.62	-0.13
120	SLE FR 1	4	-38	713	2.75	2.11	-0.1
120	SLE FR 2	4	-38	713	2.75	2.13	-0.1
120	SLE FR 3	4	-39	714	2.77	2.12	-0.1
120	SLE FR 4	4	-40	754	2.85	2.26	-0.11
120	SLE FR 5	4	-40	755	2.88	2.25	-0.11
120	SLE FR 6	4	-41	781	2.93	2.33	-0.11
120	SLE QP 1	4	-38	713	2.75	2.11	-0.1
120	SLE QP 2	4	-40	754	2.86	2.25	-0.11
120	SLD 1	24	98	710	-3.62	16.2	-0.65
120	SLD 2	24	98	710	-3.62	16.2	-0.65
120	SLD 3	29	-68	750	4.06	19.52	-0.79
120	SLD 4	29	-68	750	4.06	19.52	-0.79
120	SLD 5	3	253	681	-10.73	1.39	-0.07
120	SLD 6	3	253	681	-10.73	1.39	-0.07
120	SLD 7	19	-300	813	14.87	12.47	-0.51
120	SLD 8	19	-300	813	14.87	12.47	-0.51
120	SLD 9	-11	220	695	-9.15	-7.98	0.3
120	SLD 10	-11	220	695	-9.15	-7.98	0.3
120	SLD 11	6	-333	827	16.45	3.1	-0.14
120	SLD 12	6	-333	827	16.45	3.1	-0.14
120	SLD 13	-20	-12	758	1.66	-15.03	0.57
120	SLD 14	-20	-12	758	1.66	-15.03	0.57
120	SLD 15	-16	-178	798	9.34	-11.71	0.44
120	SLD 16	-16	-178	798	9.34	-11.71	0.44
120	SLV 1	53	282	651	-12.24	36.43	-1.44
120	SLV 2	53	282	651	-12.24	36.43	-1.44
120	SLV 3	64	-106	744	5.67	44.54	-1.77
120	SLV 4	64	-106	744	5.67	44.54	-1.77
120	SLV 5	1	644	583	-28.84	0.19	-0.02
120	SLV 6	1	644	583	-28.84	0.19	-0.02
120	SLV 7	40	-647	891	30.87	27.25	-1.09
120	SLV 8	40	-647	891	30.87	27.25	-1.09
120	SLV 9	-32	567	617	-25.15	-22.75	0.88
120	SLV 10	-32	567	617	-25.15	-22.75	0.88
120	SLV 11	8	-724	925	34.55	4.3	-0.2
120	SLV 12	8	-724	925	34.55	4.3	-0.2
120	SLV 13	-56	26	764	0.04	-40.05	1.55
120	SLV 14	-56	26	764	0.04	-40.05	1.55
120	SLV 15	-44	-362	857	17.95	-31.93	1.23
120	SLV 16	-44	-362	857	17.95	-31.93	1.23
121	SLU 1	-24	725	1766	-32.17	-15	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
121	SLU 2	-29	832	1718	-35.95	-20.31	0
121	SLU 3	-24	747	1799	-33.11	-15.5	0
121	SLU 4	-28	811	1771	-35.38	-18.68	0
121	SLU 5	-30	844	1739	-36.47	-20.63	0
121	SLU 6	-25	758	1820	-33.63	-15.82	0
121	SLU 7	-28	822	1791	-35.9	-19.01	0
121	SLU 8	-25	748	1807	-33.21	-15.65	0
121	SLU 9	-28	812	1779	-35.48	-18.83	0
121	SLU 10	-32	932	1867	-40.3	-22.29	0
121	SLU 11	-27	847	1948	-37.47	-17.48	0
121	SLU 12	-31	911	1919	-39.73	-20.67	0
121	SLU 13	-33	944	1888	-40.82	-22.62	0
121	SLU 14	-28	858	1969	-37.99	-17.81	0
121	SLU 15	-31	922	1940	-40.26	-20.99	0
121	SLU 16	-28	848	1956	-37.57	-17.63	0
121	SLU 17	-31	912	1927	-39.84	-20.82	0
121	SLU 18	-28	868	1979	-38.39	-17.84	0
121	SLU 19	-31	932	1950	-40.66	-21.02	0
121	SLU 20	-28	880	1999	-38.91	-18.16	0
121	SLU 21	-32	944	1971	-41.18	-21.34	0
121	SLU 22	-27	821	1908	-36.35	-16.95	0
121	SLU 23	-32	928	1860	-40.12	-22.26	0
121	SLU 24	-27	842	1941	-37.29	-17.45	0
121	SLU 25	-31	906	1912	-39.55	-20.63	0
121	SLU 26	-33	939	1881	-40.64	-22.58	0
121	SLU 27	-28	854	1962	-37.81	-17.77	0
121	SLU 28	-31	918	1933	-40.08	-20.96	0
121	SLU 29	-28	844	1949	-37.39	-17.6	0
121	SLU 30	-31	908	1921	-39.66	-20.78	0
121	SLU 31	-35	1028	2009	-44.48	-24.25	0
121	SLU 32	-30	942	2090	-41.64	-19.43	0
121	SLU 33	-34	1006	2061	-43.91	-22.62	0
121	SLU 34	-36	1039	2030	-45	-24.57	0
121	SLU 35	-31	954	2110	-42.17	-19.76	0
121	SLU 36	-34	1018	2082	-44.43	-22.94	0
121	SLU 37	-31	944	2098	-41.75	-19.58	0
121	SLU 38	-34	1008	2069	-44.01	-22.77	0
121	SLU 39	-31	964	2121	-42.57	-19.79	0
121	SLU 40	-34	1028	2092	-44.83	-22.97	0
121	SLU 41	-32	975	2141	-43.09	-20.11	0
121	SLU 42	-35	1039	2113	-45.36	-23.3	0
121	SLU 43	-30	910	2247	-40.39	-18.83	0
121	SLU 44	-35	1017	2200	-44.17	-24.14	0
121	SLU 45	-30	932	2280	-41.33	-19.33	0
121	SLU 46	-34	996	2252	-43.6	-22.51	0
121	SLU 47	-36	1029	2220	-44.46	-24.46	0
121	SLU 48	-31	943	2301	-41.85	-19.65	0
121	SLU 49	-34	1007	2272	-44.12	-22.84	0
121	SLU 50	-31	933	2289	-41.43	-19.48	0
121	SLU 51	-34	997	2260	-43.7	-22.66	0
121	SLU 52	-38	1117	2348	-48.52	-26.12	0
121	SLU 53	-33	1031	2429	-45.69	-21.31	0
121	SLU 54	-37	1095	2400	-47.95	-24.5	0
121	SLU 55	-39	1128	2369	-49.04	-26.45	0
121	SLU 56	-34	1043	2450	-46.21	-21.64	0
121	SLU 57	-37	1107	2421	-48.47	-24.82	0
121	SLU 58	-34	1033	2437	-45.79	-21.46	0
121	SLU 59	-37	1097	2409	-48.05	-24.65	0
121	SLU 60	-34	1053	2460	-46.61	-21.67	0
121	SLU 61	-37	1117	2431	-48.88	-24.85	0
121	SLU 62	-34	1065	2480	-47.13	-21.99	0
121	SLU 63	-38	1129	2452	-49.4	-25.18	0
121	SLU 64	-33	1006	2389	-44.57	-20.78	0
121	SLU 65	-38	1113	2342	-48.34	-26.09	0
121	SLU 66	-33	1027	2422	-45.51	-21.28	0
121	SLU 67	-37	1091	2394	-47.77	-24.46	0
121	SLU 68	-39	1124	2362	-48.86	-26.41	0
121	SLU 69	-34	1039	2443	-46.03	-21.6	0
121	SLU 70	-37	1103	2414	-48.3	-24.79	0
121	SLU 71	-34	1029	2431	-45.61	-21.43	0
121	SLU 72	-37	1093	2402	-47.88	-24.61	0
121	SLU 73	-41	1212	2490	-52.7	-28.08	0
121	SLU 74	-36	1127	2571	-49.86	-23.26	0
121	SLU 75	-40	1191	2542	-52.13	-26.45	0
121	SLU 76	-42	1224	2511	-53.22	-28.4	0
121	SLU 77	-37	1138	2592	-50.39	-23.59	0
121	SLU 78	-40	1202	2563	-52.65	-26.77	0
121	SLU 79	-37	1129	2579	-49.97	-23.41	0
121	SLU 80	-40	1193	2551	-52.23	-26.6	0
121	SLU 81	-37	1149	2602	-50.79	-23.62	0
121	SLU 82	-40	1213	2573	-53.05	-26.8	0
121	SLU 83	-38	1160	2622	-51.31	-23.94	0
121	SLU 84	-41	1224	2594	-53.58	-27.13	0
121	SLE RA 1	-24	753	1807	-33.36	-15.56	0
121	SLE RA 2	-28	824	1775	-35.88	-19.1	0
121	SLE RA 3	-25	767	1829	-33.99	-15.89	0
121	SLE RA 4	-27	810	1810	-35.5	-18.01	0
121	SLE RA 5	-29	832	1789	-36.23	-19.31	0
121	SLE RA 6	-25	775	1842	-34.34	-16.1	0
121	SLE RA 7	-28	817	1823	-35.85	-18.23	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
121	SLE RA 8	-25	768	1834	-34.06	-15.99	0
121	SLE RA 9	-27	811	1815	-35.57	-18.11	0
121	SLE RA 10	-30	890	1874	-38.78	-20.42	0
121	SLE RA 11	-27	833	1928	-36.9	-17.21	0
121	SLE RA 12	-29	876	1909	-38.41	-19.34	0
121	SLE RA 13	-31	898	1888	-39.13	-20.64	0
121	SLE RA 14	-27	841	1942	-37.24	-17.43	0
121	SLE RA 15	-30	884	1923	-38.75	-19.55	0
121	SLE RA 16	-27	835	1933	-36.96	-17.31	0
121	SLE RA 17	-29	877	1914	-38.47	-19.44	0
121	SLE RA 18	-27	848	1948	-37.51	-17.45	0
121	SLE RA 19	-30	891	1929	-39.02	-19.57	0
121	SLE RA 20	-28	856	1962	-37.86	-17.66	0
121	SLE RA 21	-30	898	1943	-39.37	-19.79	0
121	SLE FR 1	-24	753	1807	-33.36	-15.56	0
121	SLE FR 2	-25	767	1800	-33.87	-16.26	0
121	SLE FR 3	-25	756	1812	-33.5	-15.64	0
121	SLE FR 4	-26	796	1843	-35.11	-16.83	0
121	SLE FR 5	-25	784	1855	-34.75	-16.21	0
121	SLE FR 6	-26	800	1878	-35.44	-16.5	0
121	SLE QP 1	-24	753	1807	-33.36	-15.56	0
121	SLE QP 2	-25	781	1849	-34.61	-16.12	0
121	SLD 1	-44	1302	2445	-56.88	-31.36	0.01
121	SLD 2	-44	1302	2445	-56.88	-31.36	0.01
121	SLD 3	-37	855	2307	-38.17	-25.7	0
121	SLD 4	-37	855	2307	-38.17	-25.7	0
121	SLD 5	-41	1616	2237	-69.66	-29.27	0.01
121	SLD 6	-41	1616	2237	-69.66	-29.27	0.01
121	SLD 7	-19	125	1777	-7.3	-10.42	0
121	SLD 8	-19	125	1777	-7.3	-10.42	0
121	SLD 9	-32	1438	1921	-61.91	-21.82	0.01
121	SLD 10	-32	1438	1921	-61.91	-21.82	0.01
121	SLD 11	-10	-53	1461	0.45	-2.98	0
121	SLD 12	-10	-53	1461	0.45	-2.98	0
121	SLD 13	-13	708	1391	-31.05	-6.54	0
121	SLD 14	-13	708	1391	-31.05	-6.54	0
121	SLD 15	-7	260	1254	-12.34	-0.89	0
121	SLD 16	-7	260	1254	-12.34	-0.89	0
121	SLV 1	-69	1991	3257	-86.28	-52.67	0.01
121	SLV 2	-69	1991	3257	-86.28	-52.67	0.01
121	SLV 3	-53	955	2907	-43.02	-38.33	0
121	SLV 4	-53	955	2907	-43.02	-38.33	0
121	SLV 5	-63	2716	2802	-115.72	-48.84	0.02
121	SLV 6	-63	2716	2802	-115.72	-48.84	0.02
121	SLV 7	-9	-738	1636	28.48	-1.03	-0.01
121	SLV 8	-9	-738	1636	28.48	-1.03	-0.01
121	SLV 9	-42	2301	2062	-97.7	-31.21	0.02
121	SLV 10	-42	2301	2062	-97.7	-31.21	0.02
121	SLV 11	13	-1153	897	46.51	16.59	-0.01
121	SLV 12	13	-1153	897	46.51	16.59	-0.01
121	SLV 13	2	607	791	-26.19	6.08	0
121	SLV 14	2	607	791	-26.19	6.08	0
121	SLV 15	19	-429	442	17.07	20.42	-0.01
121	SLV 16	19	-429	442	17.07	20.42	-0.01
122	SLU 1	0	70	3277	-11.41	0.39	0
122	SLU 2	1	344	3373	-25.21	1.15	0
122	SLU 3	0	75	3370	-11.86	0.4	0
122	SLU 4	1	240	3428	-20.14	0.86	0
122	SLU 5	1	348	3433	-25.54	1.16	0
122	SLU 6	0	79	3430	-12.19	0.41	0
122	SLU 7	1	243	3487	-20.47	0.87	0
122	SLU 8	0	78	3397	-12.07	0.4	0
122	SLU 9	1	242	3455	-20.35	0.86	0
122	SLU 10	1	356	3838	-26.72	1.21	0
122	SLU 11	0	86	3834	-13.37	0.46	0
122	SLU 12	1	251	3892	-21.65	0.92	0
122	SLU 13	1	360	3898	-27.05	1.22	0
122	SLU 14	0	90	3894	-13.7	0.47	0
122	SLU 15	1	255	3952	-21.98	0.93	0
122	SLU 16	0	89	3861	-13.58	0.46	0
122	SLU 17	1	254	3919	-21.86	0.92	0
122	SLU 18	0	86	3940	-13.57	0.47	0
122	SLU 19	1	251	3998	-21.85	0.93	0
122	SLU 20	0	90	4000	-13.9	0.48	0
122	SLU 21	1	255	4058	-22.18	0.94	0
122	SLU 22	0	83	3713	-12.97	0.44	0
122	SLU 23	1	358	3810	-26.76	1.21	0
122	SLU 24	0	88	3806	-13.41	0.46	0
122	SLU 25	1	253	3864	-21.69	0.92	0
122	SLU 26	1	362	3870	-27.09	1.22	0
122	SLU 27	0	92	3866	-13.74	0.47	0
122	SLU 28	1	257	3924	-22.02	0.93	0
122	SLU 29	0	91	3833	-13.62	0.46	0
122	SLU 30	1	256	3891	-21.9	0.92	0
122	SLU 31	1	369	4274	-28.27	1.27	0
122	SLU 32	0	100	4270	-14.92	0.52	0
122	SLU 33	1	264	4328	-23.2	0.98	0
122	SLU 34	1	373	4334	-28.6	1.28	0
122	SLU 35	0	103	4330	-15.25	0.53	0
122	SLU 36	1	268	4388	-23.53	0.99	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
122	SLU 37	0	102	4297	-15.13	0.52	0
122	SLU 38	1	267	4355	-23.41	0.98	0
122	SLU 39	0	100	4376	-15.12	0.53	0
122	SLU 40	1	264	4434	-23.4	0.99	0
122	SLU 41	0	104	4436	-15.45	0.54	0
122	SLU 42	1	268	4494	-23.73	1	0
122	SLU 43	0	86	4110	-14.3	0.48	0
122	SLU 44	1	361	4207	-28.1	1.25	0
122	SLU 45	0	91	4203	-14.75	0.5	0
122	SLU 46	1	256	4261	-23.03	0.96	0
122	SLU 47	1	365	4267	-28.43	1.26	0
122	SLU 48	0	95	4263	-15.08	0.5	0
122	SLU 49	1	260	4321	-23.36	0.96	0
122	SLU 50	0	94	4230	-14.96	0.5	0
122	SLU 51	1	259	4288	-23.24	0.96	0
122	SLU 52	1	373	4671	-29.61	1.31	0
122	SLU 53	0	103	4667	-16.26	0.56	0
122	SLU 54	1	268	4725	-24.54	1.02	0
122	SLU 55	1	376	4731	-29.94	1.32	0
122	SLU 56	0	107	4727	-16.59	0.56	0
122	SLU 57	1	271	4785	-24.87	1.02	0
122	SLU 58	0	106	4694	-16.47	0.56	0
122	SLU 59	1	270	4752	-24.75	1.02	0
122	SLU 60	0	103	4773	-16.46	0.57	0
122	SLU 61	1	268	4831	-24.74	1.03	0
122	SLU 62	0	107	4833	-16.79	0.58	0
122	SLU 63	1	272	4891	-25.07	1.04	0
122	SLU 64	0	100	4546	-15.86	0.54	0
122	SLU 65	1	374	4643	-29.66	1.31	0
122	SLU 66	0	104	4639	-16.31	0.55	0
122	SLU 67	1	269	4697	-24.59	1.01	0
122	SLU 68	1	378	4703	-29.98	1.32	0
122	SLU 69	0	108	4699	-16.63	0.56	0
122	SLU 70	1	273	4757	-24.91	1.02	0
122	SLU 71	0	107	4666	-16.51	0.56	0
122	SLU 72	1	272	4724	-24.79	1.02	0
122	SLU 73	1	386	5107	-31.16	1.37	0
122	SLU 74	0	116	5104	-17.81	0.61	0
122	SLU 75	1	281	5162	-26.09	1.07	0
122	SLU 76	1	390	5167	-31.49	1.38	0
122	SLU 77	1	120	5164	-18.14	0.62	0
122	SLU 78	1	285	5222	-26.42	1.08	0
122	SLU 79	1	119	5131	-18.02	0.62	0
122	SLU 80	1	284	5189	-26.3	1.08	0
122	SLU 81	1	116	5210	-18.01	0.63	0
122	SLU 82	1	281	5268	-26.29	1.09	0
122	SLU 83	1	120	5270	-18.34	0.63	0
122	SLU 84	1	285	5328	-26.62	1.09	0
122	SLE RA 1	0	74	3401	-11.86	0.4	0
122	SLE RA 2	1	257	3466	-21.06	0.91	0
122	SLE RA 3	0	77	3463	-12.16	0.41	0
122	SLE RA 4	1	187	3502	-17.68	0.72	0
122	SLE RA 5	1	259	3506	-21.27	0.92	0
122	SLE RA 6	0	80	3503	-12.37	0.42	0
122	SLE RA 7	1	189	3542	-17.89	0.72	0
122	SLE RA 8	0	79	3481	-12.29	0.41	0
122	SLE RA 9	1	189	3520	-17.81	0.72	0
122	SLE RA 10	1	264	3775	-22.06	0.95	0
122	SLE RA 11	0	85	3773	-13.16	0.45	0
122	SLE RA 12	1	195	3811	-18.68	0.76	0
122	SLE RA 13	1	267	3815	-22.28	0.96	0
122	SLE RA 14	0	87	3813	-13.38	0.46	0
122	SLE RA 15	1	197	3851	-18.9	0.76	0
122	SLE RA 16	0	87	3791	-13.3	0.45	0
122	SLE RA 17	1	196	3829	-18.82	0.76	0
122	SLE RA 18	0	85	3844	-13.29	0.46	0
122	SLE RA 19	1	195	3882	-18.81	0.77	0
122	SLE RA 20	0	87	3883	-13.51	0.47	0
122	SLE RA 21	1	197	3922	-19.03	0.77	0
122	SLE FR 1	0	74	3401	-11.86	0.4	0
122	SLE FR 2	0	110	3414	-13.7	0.51	0
122	SLE FR 3	0	75	3417	-11.94	0.41	0
122	SLE FR 4	0	114	3547	-14.13	0.52	0
122	SLE FR 5	0	78	3550	-12.38	0.42	0
122	SLE FR 6	0	79	3622	-12.57	0.43	0
122	SLE QP 1	0	74	3401	-11.86	0.4	0
122	SLE QP 2	0	77	3534	-12.29	0.42	0
122	SLD 1	14	95	3559	-13.33	11.84	0
122	SLD 2	14	95	3559	-13.33	11.84	0
122	SLD 3	9	-327	3386	6.84	7.68	0
122	SLD 4	9	-327	3386	6.84	7.68	0
122	SLD 5	12	723	3803	-43.2	10.17	0
122	SLD 6	12	723	3803	-43.2	10.17	0
122	SLD 7	-4	-685	3228	24.05	-3.72	0
122	SLD 8	-4	-685	3228	24.05	-3.72	0
122	SLD 9	5	839	3840	-48.62	4.56	0
122	SLD 10	5	839	3840	-48.62	4.56	0
122	SLD 11	-11	-569	3265	18.62	-9.33	0
122	SLD 12	-11	-569	3265	18.62	-9.33	0
122	SLD 13	-9	481	3682	-31.41	-6.83	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
122	SLD 14	-9	481	3682	-31.41	-6.83	0
122	SLD 15	-13	59	3509	-11.24	-11	0
122	SLD 16	-13	59	3509	-11.24	-11	0
122	SLV 1	33	124	3593	-14.95	28.12	0
122	SLV 2	33	124	3593	-14.95	28.12	0
122	SLV 3	22	-896	3183	33.8	17.78	0
122	SLV 4	22	-896	3183	33.8	17.78	0
122	SLV 5	28	1638	4172	-87.02	24.4	0
122	SLV 6	28	1638	4172	-87.02	24.4	0
122	SLV 7	-10	-1761	2808	75.47	-10.05	0
122	SLV 8	-10	-1761	2808	75.47	-10.05	0
122	SLV 9	11	1916	4260	-100.04	10.89	0
122	SLV 10	11	1916	4260	-100.04	10.89	0
122	SLV 11	-27	-1484	2896	62.44	-23.56	0
122	SLV 12	-27	-1484	2896	62.44	-23.56	0
122	SLV 13	-21	1050	3885	-58.37	-16.94	0
122	SLV 14	-21	1050	3885	-58.37	-16.94	0
122	SLV 15	-33	30	3475	-9.63	-27.28	0
122	SLV 16	-33	30	3475	-9.63	-27.28	0
123	SLU 1	8	-308	4210	14.24	5.05	0.09
123	SLU 2	8	-326	4245	14.99	5.04	0.09
123	SLU 3	8	-313	4331	14.53	5.21	0.09
123	SLU 4	8	-324	4353	14.99	5.2	0.09
123	SLU 5	8	-330	4328	15.2	5.15	0.09
123	SLU 6	8	-317	4415	14.75	5.31	0.09
123	SLU 7	8	-328	4436	15.2	5.31	0.09
123	SLU 8	8	-315	4376	14.66	5.26	0.09
123	SLU 9	8	-326	4397	15.11	5.26	0.09
123	SLU 10	9	-369	4864	17.11	5.87	0.1
123	SLU 11	9	-356	4950	16.65	6.04	0.11
123	SLU 12	9	-367	4972	17.11	6.04	0.1
123	SLU 13	9	-373	4947	17.32	5.98	0.1
123	SLU 14	10	-360	5034	16.87	6.15	0.11
123	SLU 15	10	-371	5055	17.32	6.14	0.11
123	SLU 16	9	-359	4995	16.78	6.1	0.11
123	SLU 17	10	-370	5016	17.23	6.09	0.11
123	SLU 18	10	-370	5094	17.26	6.24	0.11
123	SLU 19	10	-381	5115	17.72	6.23	0.11
123	SLU 20	10	-374	5177	17.48	6.35	0.11
123	SLU 21	10	-385	5198	17.93	6.34	0.11
123	SLU 22	9	-340	4712	15.87	5.71	0.1
123	SLU 23	9	-359	4748	16.62	5.7	0.1
123	SLU 24	9	-346	4834	16.17	5.87	0.1
123	SLU 25	9	-357	4855	16.62	5.87	0.1
123	SLU 26	9	-363	4831	16.83	5.81	0.1
123	SLU 27	9	-350	4917	16.38	5.98	0.11
123	SLU 28	9	-361	4939	16.83	5.97	0.1
123	SLU 29	9	-348	4878	16.29	5.93	0.1
123	SLU 30	9	-359	4900	16.75	5.92	0.1
123	SLU 31	10	-402	5367	18.74	6.54	0.11
123	SLU 32	10	-389	5453	18.29	6.7	0.12
123	SLU 33	10	-400	5474	18.74	6.7	0.12
123	SLU 34	10	-406	5450	18.95	6.65	0.11
123	SLU 35	11	-393	5536	18.5	6.81	0.12
123	SLU 36	11	-404	5558	18.95	6.81	0.12
123	SLU 37	11	-392	5497	18.41	6.76	0.12
123	SLU 38	11	-403	5519	18.86	6.76	0.12
123	SLU 39	11	-403	5597	18.9	6.9	0.12
123	SLU 40	11	-414	5618	19.35	6.9	0.12
123	SLU 41	11	-407	5680	19.11	7.01	0.12
123	SLU 42	11	-417	5701	19.56	7.01	0.12
123	SLU 43	10	-389	5300	17.95	6.33	0.11
123	SLU 44	10	-407	5336	18.7	6.33	0.11
123	SLU 45	10	-394	5422	18.25	6.49	0.11
123	SLU 46	10	-405	5443	18.7	6.49	0.11
123	SLU 47	10	-411	5419	18.91	6.44	0.11
123	SLU 48	10	-398	5505	18.46	6.6	0.12
123	SLU 49	10	-409	5527	18.91	6.6	0.11
123	SLU 50	10	-396	5466	18.37	6.55	0.12
123	SLU 51	10	-407	5488	18.82	6.55	0.11
123	SLU 52	11	-450	5955	20.82	7.16	0.12
123	SLU 53	11	-437	6041	20.37	7.33	0.13
123	SLU 54	11	-448	6062	20.82	7.32	0.13
123	SLU 55	11	-454	6038	21.03	7.27	0.13
123	SLU 56	12	-441	6124	20.58	7.43	0.13
123	SLU 57	12	-452	6146	21.03	7.43	0.13
123	SLU 58	11	-440	6085	20.49	7.38	0.13
123	SLU 59	12	-451	6107	20.94	7.38	0.13
123	SLU 60	12	-451	6185	20.98	7.52	0.13
123	SLU 61	12	-462	6206	21.43	7.52	0.13
123	SLU 62	12	-455	6268	21.19	7.63	0.13
123	SLU 63	12	-466	6289	21.64	7.63	0.13
123	SLU 64	11	-421	5803	19.58	7	0.12
123	SLU 65	11	-440	5839	20.33	6.99	0.12
123	SLU 66	11	-427	5925	19.88	7.16	0.13
123	SLU 67	11	-438	5946	20.33	7.15	0.12
123	SLU 68	11	-444	5922	20.55	7.1	0.12
123	SLU 69	11	-431	6008	20.09	7.26	0.13
123	SLU 70	11	-442	6029	20.54	7.26	0.13
123	SLU 71	11	-429	5969	20	7.21	0.13



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
		x	y	z		x	y	z	
123	SLU 72	11	-440	5990		20.46	7.21	0.13	
123	SLU 73	12	-483	6458		22.45	7.82	0.13	
123	SLU 74	12	-470	6544		22	7.99	0.14	
123	SLU 75	12	-481	6565		22.45	7.99	0.14	
123	SLU 76	12	-487	6541		22.67	7.93	0.14	
123	SLU 77	13	-474	6627		22.21	8.1	0.14	
123	SLU 78	13	-485	6648		22.66	8.09	0.14	
123	SLU 79	13	-473	6588		22.12	8.05	0.14	
123	SLU 80	13	-484	6609		22.58	8.04	0.14	
123	SLU 81	13	-484	6687		22.61	8.19	0.14	
123	SLU 82	13	-495	6709		23.06	8.18	0.14	
123	SLU 83	13	-488	6770		22.82	8.3	0.15	
123	SLU 84	13	-498	6792		23.27	8.29	0.14	
123	SLE RA 1	8	-317	4353		14.7	5.24	0.09	
123	SLE RA 2	8	-329	4377		15.21	5.23	0.09	
123	SLE RA 3	8	-320	4434		14.9	5.34	0.09	
123	SLE RA 4	8	-328	4449		15.2	5.34	0.09	
123	SLE RA 5	8	-332	4432		15.35	5.3	0.09	
123	SLE RA 6	8	-323	4490		15.04	5.41	0.1	
123	SLE RA 7	8	-330	4504		15.34	5.41	0.09	
123	SLE RA 8	8	-322	4464		14.99	5.38	0.09	
123	SLE RA 9	8	-329	4478		15.29	5.38	0.09	
123	SLE RA 10	9	-358	4790		16.62	5.79	0.1	
123	SLE RA 11	9	-349	4847		16.31	5.9	0.1	
123	SLE RA 12	9	-357	4861		16.62	5.9	0.1	
123	SLE RA 13	9	-361	4845		16.76	5.86	0.1	
123	SLE RA 14	9	-352	4903		16.46	5.97	0.1	
123	SLE RA 15	9	-359	4917		16.76	5.97	0.1	
123	SLE RA 16	9	-351	4877		16.4	5.94	0.1	
123	SLE RA 17	9	-358	4891		16.7	5.93	0.1	
123	SLE RA 18	9	-358	4943		16.72	6.03	0.11	
123	SLE RA 19	9	-366	4957		17.02	6.03	0.1	
123	SLE RA 20	9	-361	4998		16.86	6.1	0.11	
123	SLE RA 21	10	-368	5012		17.16	6.1	0.11	
123	SLE FR 1	8	-317	4353		14.7	5.24	0.09	
123	SLE FR 2	8	-319	4358		14.8	5.23	0.09	
123	SLE FR 3	8	-318	4375		14.76	5.26	0.09	
123	SLE FR 4	9	-332	4535		15.41	5.47	0.1	
123	SLE FR 5	9	-330	4552		15.37	5.5	0.1	
123	SLE FR 6	9	-338	4648		15.71	5.63	0.1	
123	SLE QP 1	8	-317	4353		14.7	5.24	0.09	
123	SLE QP 2	9	-329	4530		15.31	5.47	0.1	
123	SLD 1	25	-9	3924		-0.4	18.12	0.01	
123	SLD 2	25	-9	3924		-0.4	18.12	0.01	
123	SLD 3	28	-369	4139		17.39	20.96	-0.03	
123	SLD 4	28	-369	4139		17.39	20.96	-0.03	
123	SLD 5	8	313	4023		-16.38	4.97	0.13	
123	SLD 6	8	313	4023		-16.38	4.97	0.13	
123	SLD 7	20	-888	4738		42.91	14.42	0	
123	SLD 8	20	-888	4738		42.91	14.42	0	
123	SLD 9	-3	229	4322		-12.29	-3.47	0.19	
123	SLD 10	-3	229	4322		-12.29	-3.47	0.19	
123	SLD 11	9	-972	5037		46.99	5.98	0.07	
123	SLD 12	9	-972	5037		46.99	5.98	0.07	
123	SLD 13	-11	-290	4922		13.23	-10.01	0.22	
123	SLD 14	-11	-290	4922		13.23	-10.01	0.22	
123	SLD 15	-8	-650	5136		31.01	-7.17	0.18	
123	SLD 16	-8	-650	5136		31.01	-7.17	0.18	
123	SLV 1	48	418	3111		-21.3	36.47	-0.11	
123	SLV 2	48	418	3111		-21.3	36.47	-0.11	
123	SLV 3	57	-420	3613		20.08	43.38	-0.2	
123	SLV 4	57	-420	3613		20.08	43.38	-0.2	
123	SLV 5	7	1166	3343		-58.43	4.28	0.17	
123	SLV 6	7	1166	3343		-58.43	4.28	0.17	
123	SLV 7	37	-1627	5017		79.49	27.33	-0.13	
123	SLV 8	37	-1627	5017		79.49	27.33	-0.13	
123	SLV 9	-20	969	4044		-48.88	-16.39	0.32	
123	SLV 10	-20	969	4044		-48.88	-16.39	0.32	
123	SLV 11	10	-1825	5718		89.05	6.67	0.02	
123	SLV 12	10	-1825	5718		89.05	6.67	0.02	
123	SLV 13	-40	-239	5448		10.54	-32.43	0.39	
123	SLV 14	-40	-239	5448		10.54	-32.43	0.39	
123	SLV 15	-31	-1077	5950		51.92	-25.52	0.3	
123	SLV 16	-31	-1077	5950		51.92	-25.52	0.3	
124	SLU 1	0	64	3520		-11.71	-0.33	0	
124	SLU 2	-1	334	3622		-25.53	-1.24	0	
124	SLU 3	0	67	3619		-12.11	-0.34	0	
124	SLU 4	-1	229	3681		-20.4	-0.89	0	
124	SLU 5	-1	335	3685		-25.78	-1.25	0	
124	SLU 6	0	69	3681		-12.36	-0.35	0	
124	SLU 7	-1	230	3743		-20.65	-0.89	0	
124	SLU 8	0	67	3644		-12.21	-0.34	0	
124	SLU 9	-1	229	3706		-20.5	-0.89	0	
124	SLU 10	-1	345	4152		-27.16	-1.29	0	
124	SLU 11	0	79	4148		-13.74	-0.39	0	
124	SLU 12	-1	240	4210		-22.03	-0.94	0	
124	SLU 13	-1	347	4214		-27.41	-1.3	0	
124	SLU 14	0	80	4210		-13.99	-0.4	0	
124	SLU 15	-1	242	4272		-22.28	-0.95	0	
124	SLU 16	0	79	4173		-13.84	-0.4	0	



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
124	SLU 17	-1	240	4235	-22.13	-0.94	0
124	SLU 18	0	81	4275	-14.03	-0.4	0
124	SLU 19	-1	242	4337	-22.33	-0.95	0
124	SLU 20	0	82	4338	-14.28	-0.41	0
124	SLU 21	-1	244	4400	-22.58	-0.96	0
124	SLU 22	0	76	4016	-13.34	-0.38	0
124	SLU 23	-1	346	4119	-27.16	-1.29	0
124	SLU 24	0	79	4116	-13.73	-0.39	0
124	SLU 25	-1	241	4177	-22.03	-0.93	0
124	SLU 26	-1	347	4182	-27.41	-1.29	0
124	SLU 27	0	81	4178	-13.98	-0.4	0
124	SLU 28	-1	242	4240	-22.28	-0.94	0
124	SLU 29	0	79	4141	-13.83	-0.39	0
124	SLU 30	-1	241	4203	-22.13	-0.94	0
124	SLU 31	-1	357	4648	-28.78	-1.34	0
124	SLU 32	0	91	4645	-15.36	-0.44	0
124	SLU 33	-1	252	4707	-23.66	-0.99	0
124	SLU 34	-1	359	4711	-29.03	-1.35	0
124	SLU 35	0	92	4707	-15.61	-0.45	0
124	SLU 36	-1	254	4769	-23.91	-1	0
124	SLU 37	0	91	4670	-15.46	-0.45	0
124	SLU 38	-1	253	4732	-23.76	-0.99	0
124	SLU 39	0	93	4772	-15.66	-0.45	0
124	SLU 40	-1	254	4834	-23.95	-1	0
124	SLU 41	0	94	4835	-15.91	-0.46	0
124	SLU 42	-1	256	4896	-24.2	-1.01	0
124	SLU 43	0	80	4405	-14.66	-0.41	0
124	SLU 44	-1	349	4508	-28.48	-1.32	0
124	SLU 45	0	82	4504	-15.06	-0.42	0
124	SLU 46	-1	244	4566	-23.35	-0.97	0
124	SLU 47	-1	350	4570	-28.73	-1.33	0
124	SLU 48	0	84	4567	-15.31	-0.43	0
124	SLU 49	-1	246	4628	-23.6	-0.97	0
124	SLU 50	0	83	4530	-15.16	-0.42	0
124	SLU 51	-1	244	4592	-23.45	-0.97	0
124	SLU 52	-1	360	5037	-30.11	-1.37	0
124	SLU 53	0	94	5033	-16.69	-0.47	0
124	SLU 54	-1	255	5095	-24.98	-1.02	0
124	SLU 55	-1	362	5099	-30.36	-1.38	0
124	SLU 56	0	95	5096	-16.94	-0.48	0
124	SLU 57	-1	257	5158	-25.23	-1.03	0
124	SLU 58	0	94	5059	-16.79	-0.48	0
124	SLU 59	-1	256	5121	-25.08	-1.02	0
124	SLU 60	0	96	5161	-16.99	-0.48	0
124	SLU 61	-1	257	5223	-25.28	-1.03	0
124	SLU 62	0	97	5223	-17.24	-0.49	0
124	SLU 63	-1	259	5285	-25.53	-1.04	0
124	SLU 64	0	92	4902	-16.29	-0.46	0
124	SLU 65	-1	361	5005	-30.11	-1.37	0
124	SLU 66	0	94	5001	-16.69	-0.47	0
124	SLU 67	-1	256	5063	-24.98	-1.02	0
124	SLU 68	-1	362	5067	-30.36	-1.38	0
124	SLU 69	0	96	5064	-16.94	-0.48	0
124	SLU 70	-1	258	5125	-25.23	-1.02	0
124	SLU 71	0	95	5027	-16.79	-0.47	0
124	SLU 72	-1	256	5088	-25.08	-1.02	0
124	SLU 73	-1	372	5534	-31.74	-1.42	0
124	SLU 74	0	106	5530	-18.32	-0.52	0
124	SLU 75	-1	267	5592	-26.61	-1.07	0
124	SLU 76	-1	374	5596	-31.99	-1.43	0
124	SLU 77	0	107	5593	-18.57	-0.53	0
124	SLU 78	-1	269	5654	-26.86	-1.08	0
124	SLU 79	0	106	5556	-18.42	-0.53	0
124	SLU 80	-1	268	5618	-26.71	-1.07	0
124	SLU 81	0	108	5658	-18.62	-0.53	0
124	SLU 82	-1	270	5720	-26.91	-1.08	0
124	SLU 83	0	109	5720	-18.87	-0.54	0
124	SLU 84	-1	271	5782	-27.16	-1.09	0
124	SLE RA 1	0	68	3662	-12.17	-0.34	0
124	SLE RA 2	-1	247	3730	-21.39	-0.95	0
124	SLE RA 3	0	70	3728	-12.44	-0.35	0
124	SLE RA 4	-1	177	3769	-17.97	-0.71	0
124	SLE RA 5	-1	248	3772	-21.55	-0.95	0
124	SLE RA 6	0	71	3769	-12.61	-0.35	0
124	SLE RA 7	-1	178	3810	-18.13	-0.72	0
124	SLE RA 8	0	70	3745	-12.51	-0.35	0
124	SLE RA 9	-1	178	3786	-18.03	-0.72	0
124	SLE RA 10	-1	255	4083	-22.47	-0.98	0
124	SLE RA 11	0	77	4080	-13.52	-0.38	0
124	SLE RA 12	-1	185	4122	-19.05	-0.75	0
124	SLE RA 13	-1	256	4124	-22.64	-0.99	0
124	SLE RA 14	0	78	4122	-13.69	-0.39	0
124	SLE RA 15	-1	186	4163	-19.22	-0.75	0
124	SLE RA 16	0	77	4097	-13.59	-0.39	0
124	SLE RA 17	-1	185	4139	-19.12	-0.75	0
124	SLE RA 18	0	79	4165	-13.72	-0.39	0
124	SLE RA 19	-1	186	4207	-19.25	-0.75	0
124	SLE RA 20	0	80	4207	-13.89	-0.4	0
124	SLE RA 21	-1	187	4248	-19.42	-0.76	0
124	SLE FR 1	0	68	3662	-12.17	-0.34	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
124	SLE FR 2	0	104	3675	-14.02	-0.46	0
124	SLE FR 3	0	68	3678	-12.24	-0.34	0
124	SLE FR 4	0	107	3826	-14.48	-0.48	0
124	SLE FR 5	0	71	3829	-12.7	-0.36	0
124	SLE FR 6	0	73	3913	-12.95	-0.37	0
124	SLE QP 1	0	68	3662	-12.17	-0.34	0
124	SLE QP 2	0	71	3813	-12.64	-0.36	0
124	SLD 1	9	115	4070	-29.89	6.96	0
124	SLD 2	9	115	4070	-29.89	6.96	0
124	SLD 3	13	-286	3856	-10.55	11	0
124	SLD 4	13	-286	3856	-10.55	11	0
124	SLD 5	-5	693	4214	-47.15	-4.29	0
124	SLD 6	-5	693	4214	-47.15	-4.29	0
124	SLD 7	11	-645	3501	17.33	9.18	0
124	SLD 8	11	-645	3501	17.33	9.18	0
124	SLD 9	-11	787	4124	-42.6	-9.89	0
124	SLD 10	-11	787	4124	-42.6	-9.89	0
124	SLD 11	4	-551	3411	21.88	3.57	0
124	SLD 12	4	-551	3411	21.88	3.57	0
124	SLD 13	-14	428	3769	-14.73	-11.71	0
124	SLD 14	-14	428	3769	-14.73	-11.71	0
124	SLD 15	-9	27	3555	4.61	-7.67	0
124	SLD 16	-9	27	3555	4.61	-7.67	0
124	SLV 1	21	179	4418	-53.88	17.25	-0.01
124	SLV 2	21	179	4418	-53.88	17.25	-0.01
124	SLV 3	32	-780	3911	-7.53	27.16	0
124	SLV 4	32	-780	3911	-7.53	27.16	0
124	SLV 5	-11	1559	4762	-95.29	-10.1	-0.01
124	SLV 6	-11	1559	4762	-95.29	-10.1	-0.01
124	SLV 7	26	-1640	3075	59.18	22.93	0
124	SLV 8	26	-1640	3075	59.18	22.93	0
124	SLV 9	-27	1782	4551	-84.45	-23.64	0
124	SLV 10	-27	1782	4551	-84.45	-23.64	0
124	SLV 11	10	-1416	2864	70.02	9.39	0
124	SLV 12	10	-1416	2864	70.02	9.39	0
124	SLV 13	-33	923	3714	-17.74	-27.87	0
124	SLV 14	-33	923	3714	-17.74	-27.87	0
124	SLV 15	-22	-37	3208	28.6	-17.96	0.01
124	SLV 16	-22	-37	3208	28.6	-17.96	0.01
125	SLU 1	2	439	5791	-22.19	1.42	0
125	SLU 2	8	515	6080	-26	8.24	0
125	SLU 3	2	454	5958	-22.92	1.45	0
125	SLU 4	5	500	6132	-25.21	5.55	0
125	SLU 5	8	523	6186	-26.41	8.27	0
125	SLU 6	2	462	6063	-23.33	1.48	0
125	SLU 7	5	508	6237	-25.62	5.58	0
125	SLU 8	2	455	6001	-23	1.47	0
125	SLU 9	5	501	6175	-25.28	5.56	0
125	SLU 10	8	580	6764	-29.17	8.45	0
125	SLU 11	2	518	6642	-26.09	1.66	0
125	SLU 12	6	564	6815	-28.38	5.75	0
125	SLU 13	8	588	6869	-29.57	8.47	0
125	SLU 14	2	526	6747	-26.49	1.69	0
125	SLU 15	6	572	6920	-28.78	5.78	0
125	SLU 16	2	520	6685	-26.16	1.67	0
125	SLU 17	6	565	6858	-28.45	5.77	0
125	SLU 18	2	531	6768	-26.71	1.71	0
125	SLU 19	6	577	6941	-29	5.8	0
125	SLU 20	2	539	6873	-27.11	1.73	0
125	SLU 21	6	585	7046	-29.4	5.83	0
125	SLU 22	2	502	6457	-25.28	1.61	0
125	SLU 23	8	578	6746	-29.09	8.43	0
125	SLU 24	2	517	6623	-26.02	1.65	0
125	SLU 25	6	563	6797	-28.31	5.74	0
125	SLU 26	8	586	6851	-29.5	8.46	0
125	SLU 27	2	525	6728	-26.42	1.67	0
125	SLU 28	6	571	6902	-28.71	5.77	0
125	SLU 29	2	518	6667	-26.09	1.66	0
125	SLU 30	6	564	6840	-28.38	5.75	0
125	SLU 31	8	642	7430	-32.26	8.64	0
125	SLU 32	2	581	7307	-29.18	1.85	0
125	SLU 33	6	627	7481	-31.47	5.95	0
125	SLU 34	8	651	7535	-32.66	8.66	0
125	SLU 35	2	589	7412	-29.59	1.88	0
125	SLU 36	6	635	7586	-31.88	5.97	0
125	SLU 37	2	582	7350	-29.25	1.86	0
125	SLU 38	6	628	7524	-31.54	5.96	0
125	SLU 39	2	594	7433	-29.8	1.9	0
125	SLU 40	6	639	7607	-32.09	6	0
125	SLU 41	2	602	7538	-30.21	1.93	0
125	SLU 42	6	648	7712	-32.49	6.02	0
125	SLU 43	2	549	7300	-27.78	1.78	0
125	SLU 44	8	625	7590	-31.6	8.6	0
125	SLU 45	2	564	7467	-28.52	1.81	0
125	SLU 46	6	610	7641	-30.81	5.91	0
125	SLU 47	8	633	7695	-32	8.63	0
125	SLU 48	2	572	7572	-28.92	1.84	0
125	SLU 49	6	618	7746	-31.21	5.93	0
125	SLU 50	2	565	7511	-28.59	1.83	0
125	SLU 51	6	611	7684	-30.88	5.92	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
125	SLU 52	8	690	8273	-34.76	8.81	0
125	SLU 53	2	628	8151	-31.69	2.02	0
125	SLU 54	6	674	8324	-33.97	6.11	0
125	SLU 55	8	698	8378	-35.17	8.83	0
125	SLU 56	2	637	8256	-32.09	2.04	0
125	SLU 57	6	682	8429	-34.38	6.14	0
125	SLU 58	2	630	8194	-31.76	2.03	0
125	SLU 59	6	675	8368	-34.05	6.13	0
125	SLU 60	2	641	8277	-32.3	2.07	0
125	SLU 61	6	687	8451	-34.59	6.16	0
125	SLU 62	2	649	8382	-32.71	2.09	0
125	SLU 63	6	695	8556	-35	6.19	0
125	SLU 64	2	612	7966	-30.87	1.97	0
125	SLU 65	8	688	8255	-34.69	8.79	0
125	SLU 66	2	627	8133	-31.61	2.01	0
125	SLU 67	6	673	8306	-33.9	6.1	0
125	SLU 68	8	696	8360	-35.09	8.82	0
125	SLU 69	2	635	8238	-32.02	2.03	0
125	SLU 70	6	681	8411	-34.31	6.13	0
125	SLU 71	2	628	8176	-31.68	2.02	0
125	SLU 72	6	674	8350	-33.97	6.11	0
125	SLU 73	9	753	8939	-37.86	9	0
125	SLU 74	3	691	8816	-34.78	2.21	0
125	SLU 75	6	737	8990	-37.07	6.31	0
125	SLU 76	9	761	9044	-38.26	9.02	0
125	SLU 77	3	699	8921	-35.18	2.24	0
125	SLU 78	6	745	9095	-37.47	6.33	0
125	SLU 79	3	693	8860	-34.85	2.22	0
125	SLU 80	6	738	9033	-37.14	6.32	0
125	SLU 81	3	704	8942	-35.4	2.26	0
125	SLU 82	6	750	9116	-37.69	6.36	0
125	SLU 83	3	712	9047	-35.8	2.29	0
125	SLU 84	6	758	9221	-38.09	6.38	0
125	SLE RA 1	2	457	5981	-23.07	1.47	0
125	SLE RA 2	6	508	6174	-25.61	6.02	0
125	SLE RA 3	2	467	6093	-23.56	1.5	0
125	SLE RA 4	4	497	6208	-25.09	4.23	0
125	SLE RA 5	6	513	6244	-25.88	6.04	0
125	SLE RA 6	2	472	6163	-23.83	1.51	0
125	SLE RA 7	4	503	6278	-25.36	4.24	0
125	SLE RA 8	2	468	6121	-23.61	1.51	0
125	SLE RA 9	4	498	6237	-25.14	4.24	0
125	SLE RA 10	6	551	6630	-27.72	6.16	0
125	SLE RA 11	2	510	6548	-25.67	1.63	0
125	SLE RA 12	4	540	6664	-27.2	4.36	0
125	SLE RA 13	6	556	6700	-27.99	6.18	0
125	SLE RA 14	2	515	6618	-25.94	1.65	0
125	SLE RA 15	4	546	6734	-27.47	4.38	0
125	SLE RA 16	2	511	6577	-25.72	1.64	0
125	SLE RA 17	4	541	6693	-27.25	4.37	0
125	SLE RA 18	2	518	6632	-26.08	1.67	0
125	SLE RA 19	4	549	6748	-27.61	4.4	0
125	SLE RA 20	2	524	6702	-26.35	1.68	0
125	SLE RA 21	4	554	6818	-27.88	4.41	0
125	SLE FR 1	2	457	5981	-23.07	1.47	0
125	SLE FR 2	3	467	6020	-23.58	2.38	0
125	SLE FR 3	2	459	6009	-23.18	1.48	0
125	SLE FR 4	3	485	6215	-24.48	2.44	0
125	SLE FR 5	2	477	6205	-24.08	1.54	0
125	SLE FR 6	2	487	6307	-24.58	1.57	0
125	SLE QP 1	2	457	5981	-23.07	1.47	0
125	SLE QP 2	2	475	6177	-23.97	1.53	0
125	SLD 1	33	505	4822	-24.75	28.73	0
125	SLD 2	33	505	4822	-24.75	28.73	0
125	SLD 3	22	99	4309	-7.39	17.64	0
125	SLD 4	22	99	4309	-7.39	17.64	0
125	SLD 5	28	1100	6548	-50.54	26.52	0
125	SLD 6	28	1100	6548	-50.54	26.52	0
125	SLD 7	-9	-253	4839	7.33	-10.47	0
125	SLD 8	-9	-253	4839	7.33	-10.47	0
125	SLD 9	13	1204	7515	-55.28	13.53	0.01
125	SLD 10	13	1204	7515	-55.28	13.53	0.01
125	SLD 11	-25	-149	5805	2.59	-23.46	0
125	SLD 12	-25	-149	5805	2.59	-23.46	0
125	SLD 13	-18	851	8045	-40.56	-14.58	0
125	SLD 14	-18	851	8045	-40.56	-14.58	0
125	SLD 15	-29	446	7532	-23.2	-25.67	0
125	SLD 16	-29	446	7532	-23.2	-25.67	0
125	SLV 1	77	546	3009	-25.82	67.03	0
125	SLV 2	77	546	3009	-25.82	67.03	0
125	SLV 3	48	-397	1802	14.52	38.86	-0.01
125	SLV 4	48	-397	1802	14.52	38.86	-0.01
125	SLV 5	68	1926	7057	-85.72	63.9	0.01
125	SLV 6	68	1926	7057	-85.72	63.9	0.01
125	SLV 7	-28	-1216	3034	48.77	-29.99	-0.01
125	SLV 8	-28	-1216	3034	48.77	-29.99	-0.01
125	SLV 9	31	2166	9319	-96.71	33.05	0.01
125	SLV 10	31	2166	9319	-96.71	33.05	0.01
125	SLV 11	-64	-976	5297	37.77	-60.84	-0.01
125	SLV 12	-64	-976	5297	37.77	-60.84	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
125	SLV 13	-45	1347	10552	-62.47	-35.8	0.01
125	SLV 14	-45	1347	10552	-62.47	-35.8	0.01
125	SLV 15	-73	405	9345	-22.12	-63.97	0
125	SLV 16	-73	405	9345	-22.12	-63.97	0
126	SLU 1	4	-267	3818	12.27	2.89	0.01
126	SLU 2	4	-282	3835	12.91	2.94	0.01
126	SLU 3	4	-272	3926	12.51	2.99	0.01
126	SLU 4	4	-281	3936	12.89	3.02	0.01
126	SLU 5	4	-286	3906	13.08	3	0.01
126	SLU 6	4	-276	3997	12.68	3.06	0.01
126	SLU 7	4	-285	4007	13.06	3.08	0.01
126	SLU 8	4	-275	3960	12.62	3.02	0.01
126	SLU 9	4	-284	3970	13	3.05	0.01
126	SLU 10	4	-315	4410	14.45	3.08	0.01
126	SLU 11	4	-305	4501	14.05	3.13	0.01
126	SLU 12	4	-314	4511	14.43	3.16	0.01
126	SLU 13	4	-319	4480	14.62	3.14	0.01
126	SLU 14	4	-309	4571	14.22	3.2	0.01
126	SLU 15	4	-317	4582	14.6	3.22	0.01
126	SLU 16	4	-308	4534	14.16	3.16	0.01
126	SLU 17	4	-316	4544	14.54	3.19	0.01
126	SLU 18	4	-314	4639	14.48	3.09	0.01
126	SLU 19	4	-323	4649	14.86	3.12	0.01
126	SLU 20	4	-318	4709	14.65	3.16	0.01
126	SLU 21	4	-327	4720	15.03	3.18	0.01
126	SLU 22	4	-292	4301	13.49	3.21	0.01
126	SLU 23	4	-307	4318	14.12	3.26	0.01
126	SLU 24	5	-297	4409	13.72	3.31	0.01
126	SLU 25	5	-306	4420	14.1	3.34	0.01
126	SLU 26	5	-310	4389	14.29	3.32	0.01
126	SLU 27	5	-300	4480	13.89	3.38	0.01
126	SLU 28	5	-309	4490	14.27	3.4	0.01
126	SLU 29	5	-299	4443	13.83	3.34	0.01
126	SLU 30	5	-308	4453	14.21	3.37	0.01
126	SLU 31	5	-340	4893	15.66	3.4	0.01
126	SLU 32	5	-330	4984	15.26	3.45	0.01
126	SLU 33	5	-338	4994	15.64	3.48	0.01
126	SLU 34	5	-343	4964	15.83	3.46	0.01
126	SLU 35	5	-333	5055	15.43	3.52	0.01
126	SLU 36	5	-342	5065	15.81	3.54	0.01
126	SLU 37	5	-332	5017	15.37	3.48	0.01
126	SLU 38	5	-341	5028	15.75	3.51	0.01
126	SLU 39	5	-339	5122	15.69	3.41	0.01
126	SLU 40	5	-348	5132	16.07	3.44	0.01
126	SLU 41	5	-343	5193	15.86	3.48	0.01
126	SLU 42	5	-351	5203	16.24	3.5	0.01
126	SLU 43	5	-339	4798	15.54	3.65	0.01
126	SLU 44	5	-354	4815	16.17	3.7	0.01
126	SLU 45	5	-344	4906	15.77	3.75	0.01
126	SLU 46	5	-353	4916	16.15	3.78	0.01
126	SLU 47	5	-358	4886	16.34	3.76	0.01
126	SLU 48	5	-348	4977	15.94	3.82	0.01
126	SLU 49	5	-356	4987	16.32	3.84	0.01
126	SLU 50	5	-347	4939	15.88	3.78	0.01
126	SLU 51	5	-355	4950	16.26	3.81	0.01
126	SLU 52	5	-387	5389	17.72	3.84	0.01
126	SLU 53	5	-377	5480	17.32	3.89	0.01
126	SLU 54	5	-386	5491	17.7	3.92	0.01
126	SLU 55	5	-390	5460	17.89	3.9	0.01
126	SLU 56	5	-380	5551	17.49	3.96	0.01
126	SLU 57	5	-389	5561	17.87	3.98	0.01
126	SLU 58	5	-379	5514	17.43	3.92	0.01
126	SLU 59	5	-388	5524	17.81	3.95	0.01
126	SLU 60	5	-386	5618	17.75	3.85	0.01
126	SLU 61	5	-395	5629	18.13	3.88	0.01
126	SLU 62	5	-390	5689	17.92	3.92	0.01
126	SLU 63	5	-399	5699	18.3	3.94	0.01
126	SLU 64	5	-364	5281	16.75	3.97	0.01
126	SLU 65	5	-379	5298	17.39	4.01	0.01
126	SLU 66	6	-369	5389	16.98	4.07	0.01
126	SLU 67	6	-377	5399	17.36	4.1	0.01
126	SLU 68	6	-382	5369	17.56	4.08	0.01
126	SLU 69	6	-372	5460	17.16	4.14	0.01
126	SLU 70	6	-381	5470	17.54	4.16	0.01
126	SLU 71	6	-371	5423	17.09	4.1	0.01
126	SLU 72	6	-380	5433	17.47	4.13	0.01
126	SLU 73	6	-411	5873	18.93	4.15	0.01
126	SLU 74	6	-401	5964	18.53	4.21	0.01
126	SLU 75	6	-410	5974	18.91	4.24	0.01
126	SLU 76	6	-415	5943	19.1	4.22	0.01
126	SLU 77	6	-405	6034	18.7	4.28	0.01
126	SLU 78	6	-414	6045	19.08	4.3	0.01
126	SLU 79	6	-404	5997	18.64	4.24	0.01
126	SLU 80	6	-413	6007	19.02	4.27	0.01
126	SLU 81	6	-411	6102	18.96	4.17	0.01
126	SLU 82	6	-420	6112	19.34	4.2	0.01
126	SLU 83	6	-414	6172	19.13	4.24	0.01
126	SLU 84	6	-423	6183	19.51	4.26	0.01
126	SLE RA 1	4	-275	3956	12.62	2.99	0.01
126	SLE RA 2	4	-284	3967	13.04	3.01	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
126	SLE RA 3	4	-278	4028	12.78	3.05	0.01
126	SLE RA 4	4	-284	4035	13.03	3.07	0.01
126	SLE RA 5	4	-287	4015	13.16	3.06	0.01
126	SLE RA 6	4	-280	4075	12.89	3.09	0.01
126	SLE RA 7	4	-286	4082	13.14	3.11	0.01
126	SLE RA 8	4	-279	4050	12.85	3.07	0.01
126	SLE RA 9	4	-285	4057	13.1	3.09	0.01
126	SLE RA 10	4	-306	4350	14.07	3.11	0.01
126	SLE RA 11	4	-300	4411	13.81	3.14	0.01
126	SLE RA 12	4	-305	4418	14.06	3.16	0.01
126	SLE RA 13	4	-309	4398	14.19	3.15	0.01
126	SLE RA 14	4	-302	4458	13.92	3.19	0.01
126	SLE RA 15	4	-308	4465	14.17	3.2	0.01
126	SLE RA 16	4	-301	4433	13.88	3.17	0.01
126	SLE RA 17	4	-307	4440	14.13	3.18	0.01
126	SLE RA 18	4	-306	4503	14.09	3.12	0.01
126	SLE RA 19	4	-312	4510	14.35	3.14	0.01
126	SLE RA 20	4	-308	4550	14.21	3.16	0.01
126	SLE RA 21	4	-314	4557	14.46	3.18	0.01
126	SLE FR 1	4	-275	3956	12.62	2.99	0.01
126	SLE FR 2	4	-276	3958	12.7	2.99	0.01
126	SLE FR 3	4	-275	3975	12.67	3	0.01
126	SLE FR 4	4	-286	4122	13.15	3.03	0.01
126	SLE FR 5	4	-285	4139	13.11	3.04	0.01
126	SLE FR 6	4	-290	4230	13.36	3.05	0.01
126	SLE QP 1	4	-275	3956	12.62	2.99	0.01
126	SLE QP 2	4	-284	4120	13.06	3.03	0.01
126	SLD 1	22	-249	4437	11.41	17.03	0.04
126	SLD 2	22	-249	4437	11.41	17.03	0.04
126	SLD 3	26	-603	4371	27.93	20.21	0.04
126	SLD 4	26	-603	4371	27.93	20.21	0.04
126	SLD 5	3	263	4315	-12.48	2.41	0.03
126	SLD 6	3	263	4315	-12.48	2.41	0.03
126	SLD 7	17	-917	4096	42.57	13	0
126	SLD 8	17	-917	4096	42.57	13	0
126	SLD 9	-8	349	4145	-16.45	-6.95	0.01
126	SLD 10	-8	349	4145	-16.45	-6.95	0.01
126	SLD 11	5	-831	3925	38.6	3.64	-0.02
126	SLD 12	5	-831	3925	38.6	3.64	-0.02
126	SLD 13	-18	36	3869	-1.8	-14.15	-0.03
126	SLD 14	-18	36	3869	-1.8	-14.15	-0.03
126	SLD 15	-14	-318	3804	14.71	-10.98	-0.03
126	SLD 16	-14	-318	3804	14.71	-10.98	-0.03
126	SLV 1	48	-203	4866	9.21	37.24	0.1
126	SLV 2	48	-203	4866	9.21	37.24	0.1
126	SLV 3	57	-1022	4710	47.42	44.99	0.08
126	SLV 4	57	-1022	4710	47.42	44.99	0.08
126	SLV 5	2	983	4581	-46.04	1.53	0.06
126	SLV 6	2	983	4581	-46.04	1.53	0.06
126	SLV 7	35	-1748	4060	81.32	27.38	0
126	SLV 8	35	-1748	4060	81.32	27.38	0
126	SLV 9	-27	1180	4180	-55.19	-21.32	0.01
126	SLV 10	-27	1180	4180	-55.19	-21.32	0.01
126	SLV 11	6	-1550	3660	72.16	4.52	-0.05
126	SLV 12	6	-1550	3660	72.16	4.52	-0.05
126	SLV 13	-49	454	3531	-21.29	-38.94	-0.07
126	SLV 14	-49	454	3531	-21.29	-38.94	-0.07
126	SLV 15	-39	-365	3374	16.91	-31.19	-0.09
126	SLV 16	-39	-365	3374	16.91	-31.19	-0.09
127	SLU 1	2	39	851	-0.14	1.62	-0.13
127	SLU 2	2	38	849	-0.14	1.71	-0.13
127	SLU 3	2	40	861	-0.15	1.65	-0.13
127	SLU 4	2	40	860	-0.15	1.71	-0.13
127	SLU 5	2	39	856	-0.15	1.73	-0.14
127	SLU 6	2	41	868	-0.16	1.67	-0.13
127	SLU 7	2	41	867	-0.15	1.73	-0.14
127	SLU 8	2	41	865	-0.15	1.66	-0.13
127	SLU 9	2	41	864	-0.15	1.72	-0.14
127	SLU 10	3	46	1011	-0.3	2.08	-0.17
127	SLU 11	3	49	1024	-0.31	2.02	-0.16
127	SLU 12	3	48	1023	-0.31	2.08	-0.17
127	SLU 13	3	48	1018	-0.3	2.1	-0.17
127	SLU 14	3	50	1031	-0.31	2.04	-0.17
127	SLU 15	3	49	1030	-0.31	2.1	-0.17
127	SLU 16	3	49	1028	-0.31	2.03	-0.16
127	SLU 17	3	49	1026	-0.31	2.09	-0.17
127	SLU 18	3	50	1083	-0.37	2.14	-0.17
127	SLU 19	3	50	1082	-0.37	2.2	-0.18
127	SLU 20	3	52	1090	-0.37	2.16	-0.18
127	SLU 21	3	51	1089	-0.37	2.22	-0.18
127	SLU 22	2	45	924	-0.2	1.83	-0.15
127	SLU 23	2	45	922	-0.2	1.93	-0.15
127	SLU 24	2	47	935	-0.21	1.87	-0.15
127	SLU 25	2	47	934	-0.21	1.92	-0.15
127	SLU 26	3	46	929	-0.21	1.95	-0.15
127	SLU 27	2	48	942	-0.21	1.89	-0.15
127	SLU 28	3	48	941	-0.21	1.95	-0.15
127	SLU 29	2	48	939	-0.21	1.88	-0.15
127	SLU 30	3	47	937	-0.21	1.93	-0.15
127	SLU 31	3	53	1085	-0.36	2.29	-0.19



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
127	SLU 32	3	55	1098	-0.36	2.23	-0.18
127	SLU 33	3	55	1097	-0.36	2.29	-0.19
127	SLU 34	3	54	1092	-0.36	2.32	-0.19
127	SLU 35	3	56	1105	-0.37	2.26	-0.18
127	SLU 36	3	56	1104	-0.37	2.31	-0.19
127	SLU 37	3	56	1101	-0.37	2.25	-0.18
127	SLU 38	3	56	1100	-0.37	2.3	-0.19
127	SLU 39	3	57	1157	-0.42	2.36	-0.19
127	SLU 40	3	57	1156	-0.42	2.41	-0.2
127	SLU 41	3	58	1164	-0.43	2.38	-0.2
127	SLU 42	3	58	1163	-0.43	2.44	-0.2
127	SLU 43	3	48	1081	-0.17	2.03	-0.16
127	SLU 44	3	47	1078	-0.16	2.12	-0.17
127	SLU 45	3	49	1091	-0.17	2.06	-0.16
127	SLU 46	3	49	1090	-0.17	2.12	-0.17
127	SLU 47	3	49	1085	-0.17	2.14	-0.17
127	SLU 48	3	51	1098	-0.18	2.08	-0.16
127	SLU 49	3	50	1097	-0.18	2.14	-0.17
127	SLU 50	3	50	1095	-0.18	2.07	-0.16
127	SLU 51	3	50	1093	-0.18	2.13	-0.17
127	SLU 52	3	56	1241	-0.32	2.49	-0.2
127	SLU 53	3	58	1254	-0.33	2.43	-0.2
127	SLU 54	3	58	1253	-0.33	2.49	-0.2
127	SLU 55	3	57	1248	-0.33	2.51	-0.2
127	SLU 56	3	59	1261	-0.33	2.45	-0.2
127	SLU 57	3	59	1260	-0.33	2.51	-0.2
127	SLU 58	3	58	1258	-0.33	2.44	-0.2
127	SLU 59	3	58	1256	-0.33	2.5	-0.2
127	SLU 60	3	60	1313	-0.39	2.55	-0.21
127	SLU 61	3	59	1312	-0.39	2.61	-0.21
127	SLU 62	3	61	1320	-0.39	2.58	-0.21
127	SLU 63	4	61	1319	-0.39	2.63	-0.21
127	SLU 64	3	55	1154	-0.22	2.24	-0.18
127	SLU 65	3	54	1152	-0.22	2.34	-0.18
127	SLU 66	3	56	1165	-0.23	2.28	-0.18
127	SLU 67	3	56	1164	-0.23	2.33	-0.18
127	SLU 68	3	55	1159	-0.23	2.36	-0.19
127	SLU 69	3	57	1172	-0.24	2.3	-0.18
127	SLU 70	3	57	1171	-0.24	2.36	-0.19
127	SLU 71	3	57	1168	-0.24	2.29	-0.18
127	SLU 72	3	57	1167	-0.23	2.34	-0.19
127	SLU 73	4	63	1315	-0.38	2.71	-0.22
127	SLU 74	4	65	1328	-0.39	2.65	-0.21
127	SLU 75	4	64	1326	-0.39	2.7	-0.22
127	SLU 76	4	64	1322	-0.38	2.73	-0.22
127	SLU 77	4	66	1335	-0.39	2.67	-0.22
127	SLU 78	4	65	1334	-0.39	2.72	-0.22
127	SLU 79	4	65	1331	-0.39	2.66	-0.21
127	SLU 80	4	65	1330	-0.39	2.71	-0.22
127	SLU 81	4	66	1387	-0.45	2.77	-0.23
127	SLU 82	4	66	1386	-0.45	2.83	-0.23
127	SLU 83	4	68	1394	-0.45	2.79	-0.23
127	SLU 84	4	67	1393	-0.45	2.85	-0.23
127	SLE RA 1	2	41	872	-0.16	1.68	-0.13
127	SLE RA 2	2	40	870	-0.16	1.74	-0.14
127	SLE RA 3	2	42	879	-0.16	1.7	-0.13
127	SLE RA 4	2	41	878	-0.16	1.74	-0.14
127	SLE RA 5	2	41	875	-0.16	1.76	-0.14
127	SLE RA 6	2	42	883	-0.17	1.72	-0.14
127	SLE RA 7	2	42	883	-0.17	1.75	-0.14
127	SLE RA 8	2	42	881	-0.17	1.71	-0.14
127	SLE RA 9	2	42	880	-0.17	1.75	-0.14
127	SLE RA 10	3	46	979	-0.26	1.99	-0.16
127	SLE RA 11	3	47	987	-0.27	1.95	-0.16
127	SLE RA 12	3	47	986	-0.27	1.98	-0.16
127	SLE RA 13	3	47	984	-0.27	2	-0.16
127	SLE RA 14	3	48	992	-0.27	1.96	-0.16
127	SLE RA 15	3	48	991	-0.27	2	-0.16
127	SLE RA 16	3	48	990	-0.27	1.95	-0.16
127	SLE RA 17	3	47	989	-0.27	1.99	-0.16
127	SLE RA 18	3	48	1027	-0.31	2.03	-0.16
127	SLE RA 19	3	48	1026	-0.31	2.07	-0.17
127	SLE RA 20	3	49	1032	-0.31	2.04	-0.17
127	SLE RA 21	3	49	1031	-0.31	2.08	-0.17
127	SLE FR 1	2	41	872	-0.16	1.68	-0.13
127	SLE FR 2	2	40	871	-0.16	1.69	-0.13
127	SLE FR 3	2	41	874	-0.16	1.68	-0.13
127	SLE FR 4	2	43	918	-0.2	1.8	-0.14
127	SLE FR 5	2	43	920	-0.21	1.79	-0.14
127	SLE FR 6	2	44	949	-0.23	1.85	-0.15
127	SLE QP 1	2	41	872	-0.16	1.68	-0.13
127	SLE QP 2	2	43	918	-0.2	1.78	-0.14
127	SLD 1	17	72	838	-1.63	15.06	-0.95
127	SLD 2	17	72	838	-1.63	15.06	-0.95
127	SLD 3	20	-87	874	6.2	18.15	-1.14
127	SLD 4	20	-87	874	6.2	18.15	-1.14
127	SLD 5	2	293	838	-12.51	1.08	-0.09
127	SLD 6	2	293	838	-12.51	1.08	-0.09
127	SLD 7	13	-237	961	13.6	11.38	-0.73
127	SLD 8	13	-237	961	13.6	11.38	-0.73



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
127	SLD 9	-8	323	876	-14.01	-7.81	0.45
127	SLD 10	-8	323	876	-14.01	-7.81	0.45
127	SLD 11	3	-207	998	12.11	2.49	-0.19
127	SLD 12	3	-207	998	12.11	2.49	-0.19
127	SLD 13	-15	173	962	-6.61	-14.58	0.86
127	SLD 14	-15	173	962	-6.61	-14.58	0.86
127	SLD 15	-12	14	999	1.22	-11.49	0.67
127	SLD 16	-12	14	999	1.22	-11.49	0.67
127	SLV 1	37	112	729	-3.55	34.32	-2.12
127	SLV 2	37	112	729	-3.55	34.32	-2.12
127	SLV 3	45	-259	816	14.72	41.86	-2.59
127	SLV 4	45	-259	816	14.72	41.86	-2.59
127	SLV 5	0	626	731	-28.93	0.1	-0.02
127	SLV 6	0	626	731	-28.93	0.1	-0.02
127	SLV 7	28	-610	1018	31.99	25.25	-1.59
127	SLV 8	28	-610	1018	31.99	25.25	-1.59
127	SLV 9	-23	696	818	-32.4	-21.68	1.31
127	SLV 10	-23	696	818	-32.4	-21.68	1.31
127	SLV 11	4	-540	1105	28.52	3.46	-0.26
127	SLV 12	4	-540	1105	28.52	3.46	-0.26
127	SLV 13	-41	345	1021	-15.13	-38.29	2.31
127	SLV 14	-41	345	1021	-15.13	-38.29	2.31
127	SLV 15	-32	-26	1107	3.15	-30.75	1.84
127	SLV 16	-32	-26	1107	3.15	-30.75	1.84
128	SLU 1	-24	682	1986	-24.99	-14.95	0
128	SLU 2	-28	788	1958	-29.83	-19.44	0
128	SLU 3	-24	702	2026	-25.74	-15.44	0
128	SLU 4	-27	766	2009	-28.64	-18.14	0
128	SLU 5	-28	799	1982	-30.22	-19.77	0
128	SLU 6	-25	713	2051	-26.12	-15.77	0
128	SLU 7	-28	777	2034	-29.02	-18.46	0
128	SLU 8	-25	704	2035	-25.77	-15.59	0
128	SLU 9	-27	767	2018	-28.67	-18.29	0
128	SLU 10	-31	890	2143	-33.64	-21.38	0
128	SLU 11	-27	805	2212	-29.54	-17.38	0
128	SLU 12	-30	868	2195	-32.44	-20.08	0
128	SLU 13	-32	901	2168	-34.02	-21.71	0
128	SLU 14	-28	816	2236	-29.93	-17.71	0
128	SLU 15	-31	879	2219	-32.83	-20.4	0
128	SLU 16	-28	806	2221	-29.57	-17.53	0
128	SLU 17	-30	870	2204	-32.47	-20.23	0
128	SLU 18	-28	828	2252	-30.43	-17.72	0
128	SLU 19	-31	892	2234	-33.33	-20.42	0
128	SLU 20	-29	839	2276	-30.82	-18.04	0
128	SLU 21	-31	903	2259	-33.72	-20.74	0
128	SLU 22	-27	779	2163	-28.58	-16.86	0
128	SLU 23	-31	885	2134	-33.42	-21.36	0
128	SLU 24	-27	799	2203	-29.32	-17.36	0
128	SLU 25	-30	863	2185	-32.22	-20.06	0
128	SLU 26	-32	895	2158	-33.8	-21.68	0
128	SLU 27	-28	810	2227	-29.71	-17.68	0
128	SLU 28	-31	874	2210	-32.61	-20.38	0
128	SLU 29	-28	801	2212	-29.35	-17.51	0
128	SLU 30	-30	864	2194	-32.25	-20.21	0
128	SLU 31	-34	987	2319	-37.22	-23.3	0
128	SLU 32	-31	902	2388	-33.13	-19.3	0
128	SLU 33	-33	965	2371	-36.03	-22	0
128	SLU 34	-35	998	2344	-37.61	-23.62	0
128	SLU 35	-31	913	2413	-33.51	-19.62	0
128	SLU 36	-34	976	2395	-36.41	-22.32	0
128	SLU 37	-31	903	2397	-33.15	-19.45	0
128	SLU 38	-33	967	2380	-36.06	-22.15	0
128	SLU 39	-31	925	2428	-34.01	-19.64	0
128	SLU 40	-34	989	2410	-36.92	-22.33	0
128	SLU 41	-32	936	2452	-34.4	-19.96	0
128	SLU 42	-34	999	2435	-37.3	-22.66	0
128	SLU 43	-30	853	2522	-31.26	-18.77	0
128	SLU 44	-34	959	2493	-36.1	-23.27	0
128	SLU 45	-30	874	2562	-32.01	-19.27	0
128	SLU 46	-33	937	2545	-34.91	-21.97	0
128	SLU 47	-35	970	2518	-36.49	-23.59	0
128	SLU 48	-31	885	2586	-32.39	-19.59	0
128	SLU 49	-34	948	2569	-35.29	-22.29	0
128	SLU 50	-31	875	2571	-32.03	-19.42	0
128	SLU 51	-33	939	2554	-34.94	-22.12	0
128	SLU 52	-37	1062	2679	-39.91	-25.21	0
128	SLU 53	-34	976	2747	-35.81	-21.21	0.01
128	SLU 54	-36	1040	2730	-38.71	-23.91	0
128	SLU 55	-38	1073	2703	-40.29	-25.53	0
128	SLU 56	-34	987	2772	-36.2	-21.53	0.01
128	SLU 57	-37	1051	2755	-39.1	-24.23	0
128	SLU 58	-34	978	2756	-35.84	-21.36	0.01
128	SLU 59	-36	1041	2739	-38.74	-24.06	0
128	SLU 60	-34	1000	2787	-36.7	-21.55	0.01
128	SLU 61	-37	1063	2770	-39.6	-24.24	0
128	SLU 62	-35	1011	2811	-37.09	-21.87	0.01
128	SLU 63	-37	1074	2794	-39.99	-24.57	0
128	SLU 64	-33	950	2698	-34.85	-20.69	0.01
128	SLU 65	-37	1056	2669	-39.69	-25.19	0
128	SLU 66	-34	971	2738	-35.59	-21.19	0.01



Nodo Ind.	Cont. N.br.	Reazione a traslazione				Reazione a rotazione			
		x	y	z		x	y	z	
128	SLU 67	-36	1034	2721		-38.49	-23.88	0	
128	SLU 68	-38	1067	2694		-40.07	-25.51	0	
128	SLU 69	-34	982	2763		-35.97	-21.51	0.01	
128	SLU 70	-37	1045	2745		-38.88	-24.21	0	
128	SLU 71	-34	972	2747		-35.62	-21.34	0.01	
128	SLU 72	-36	1036	2730		-38.52	-24.03	0	
128	SLU 73	-40	1158	2855		-43.49	-27.13	0	
128	SLU 74	-37	1073	2924		-39.39	-23.13	0.01	
128	SLU 75	-39	1137	2906		-42.3	-25.82	0	
128	SLU 76	-41	1169	2879		-43.88	-27.45	0	
128	SLU 77	-37	1084	2948		-39.78	-23.45	0.01	
128	SLU 78	-40	1147	2931		-42.68	-26.15	0	
128	SLU 79	-37	1074	2933		-39.42	-23.28	0.01	
128	SLU 80	-39	1138	2915		-42.33	-25.97	0	
128	SLU 81	-37	1096	2963		-40.28	-23.46	0.01	
128	SLU 82	-40	1160	2946		-43.19	-26.16	0	
128	SLU 83	-38	1107	2988		-40.67	-23.79	0.01	
128	SLU 84	-40	1171	2970		-43.57	-26.48	0	
128	SLE RA 1	-25	710	2037		-26.02	-15.49	0	
128	SLE RA 2	-27	780	2018		-29.24	-18.49	0	
128	SLE RA 3	-25	723	2064		-26.51	-15.82	0	
128	SLE RA 4	-27	766	2052		-28.45	-17.62	0	
128	SLE RA 5	-28	787	2034		-29.5	-18.71	0	
128	SLE RA 6	-25	731	2080		-26.77	-16.04	0	
128	SLE RA 7	-27	773	2068		-28.71	-17.84	0	
128	SLE RA 8	-25	724	2070		-26.53	-15.92	0	
128	SLE RA 9	-27	767	2058		-28.47	-17.72	0	
128	SLE RA 10	-29	848	2141		-31.78	-19.78	0	
128	SLE RA 11	-27	792	2187		-29.05	-17.12	0	
128	SLE RA 12	-29	834	2176		-30.98	-18.92	0	
128	SLE RA 13	-30	856	2158		-32.04	-20	0	
128	SLE RA 14	-27	799	2204		-29.31	-17.33	0	
128	SLE RA 15	-29	841	2192		-31.24	-19.13	0	
128	SLE RA 16	-27	793	2193		-29.07	-17.22	0	
128	SLE RA 17	-29	835	2182		-31	-19.02	0	
128	SLE RA 18	-27	807	2214		-29.64	-17.34	0	
128	SLE RA 19	-29	850	2202		-31.58	-19.14	0	
128	SLE RA 20	-28	814	2230		-29.9	-17.56	0	
128	SLE RA 21	-30	857	2218		-31.83	-19.36	0	
128	SLE FR 1	-25	710	2037		-26.02	-15.49	0	
128	SLE FR 2	-25	724	2033		-26.66	-16.09	0	
128	SLE FR 3	-25	713	2043		-26.12	-15.58	0	
128	SLE FR 4	-26	753	2086		-27.75	-16.65	0	
128	SLE FR 5	-26	742	2096		-27.21	-16.13	0	
128	SLE FR 6	-26	758	2125		-27.83	-16.42	0	
128	SLE QP 1	-25	710	2037		-26.02	-15.49	0	
128	SLE QP 2	-25	739	2090		-27.11	-16.05	0	
128	SLD 1	-42	1264	2747		-48.37	-30.32	0.01	
128	SLD 2	-42	1264	2747		-48.37	-30.32	0.01	
128	SLD 3	-37	813	2626		-29.29	-25.23	0.01	
128	SLD 4	-37	813	2626		-29.29	-25.23	0.01	
128	SLD 5	-39	1580	2470		-62.42	-28.04	0.01	
128	SLD 6	-39	1580	2470		-62.42	-28.04	0.01	
128	SLD 7	-21	77	2067		1.18	-11.09	0	
128	SLD 8	-21	77	2067		1.18	-11.09	0	
128	SLD 9	-30	1401	2112		-55.39	-21	0.01	
128	SLD 10	-30	1401	2112		-55.39	-21	0.01	
128	SLD 11	-12	-102	1709		8.21	-4.06	0	
128	SLD 12	-12	-102	1709		8.21	-4.06	0	
128	SLD 13	-14	665	1554		-24.92	-6.86	0	
128	SLD 14	-14	665	1554		-24.92	-6.86	0	
128	SLD 15	-9	214	1433		-5.84	-1.78	0	
128	SLD 16	-9	214	1433		-5.84	-1.78	0	
128	SLV 1	-65	1957	3639		-76.46	-50.27	0.02	
128	SLV 2	-65	1957	3639		-76.46	-50.27	0.02	
128	SLV 3	-52	912	3333		-32.22	-37.34	0.01	
128	SLV 4	-52	912	3333		-32.22	-37.34	0.01	
128	SLV 5	-58	2689	3020		-109.02	-45.91	0.02	
128	SLV 6	-58	2689	3020		-109.02	-45.91	0.02	
128	SLV 7	-13	-794	1998		38.47	-2.84	-0.01	
128	SLV 8	-13	-794	1998		38.47	-2.84	-0.01	
128	SLV 9	-38	2272	2182		-92.68	-29.26	0.02	
128	SLV 10	-38	2272	2182		-92.68	-29.26	0.02	
128	SLV 11	7	-1211	1160		54.81	13.82	-0.02	
128	SLV 12	7	-1211	1160		54.81	13.82	-0.02	
128	SLV 13	1	566	847		-21.99	5.25	0	
128	SLV 14	1	566	847		-21.99	5.25	0	
128	SLV 15	14	-479	540		22.25	18.17	-0.01	
128	SLV 16	14	-479	540		22.25	18.17	-0.01	
129	SLU 1	0	-141	3352		14.03	0.38	0	
129	SLU 2	1	106	3400		3.39	1	0	
129	SLU 3	0	-142	3450		14.36	0.4	0	
129	SLU 4	1	5	3479		7.77	0.77	0	
129	SLU 5	1	105	3463		3.57	1.01	0	
129	SLU 6	0	-143	3514		14.55	0.41	0	
129	SLU 7	1	5	3543		8.16	0.78	0	
129	SLU 8	0	-142	3479		14.41	0.4	0	
129	SLU 9	1	6	3507		8.02	0.77	0	
129	SLU 10	1	95	3893		5	1.06	0	
129	SLU 11	0	-153	3944		15.97	0.46	0	



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
129	SLU 12	1	-5	3973	9.58	0.83	0
129	SLU 13	1	94	3957	5.18	1.07	0
129	SLU 14	0	-154	4007	16.16	0.47	0
129	SLU 15	1	-6	4036	9.77	0.84	0
129	SLU 16	0	-153	3972	16.02	0.46	0
129	SLU 17	1	-5	4001	9.63	0.83	0
129	SLU 18	0	-156	4057	16.33	0.47	0
129	SLU 19	1	-8	4085	9.94	0.84	0
129	SLU 20	0	-157	4120	16.52	0.48	0
129	SLU 21	1	-9	4149	10.13	0.85	0
129	SLU 22	0	-151	3815	15.57	0.44	0
129	SLU 23	1	96	3863	4.92	1.06	0
129	SLU 24	0	-153	3913	15.89	0.46	0
129	SLU 25	1	-5	3942	9.51	0.83	0
129	SLU 26	1	95	3926	5.11	1.07	0
129	SLU 27	0	-153	3976	16.08	0.46	0
129	SLU 28	1	-5	4005	9.69	0.84	0
129	SLU 29	0	-152	3941	15.94	0.46	0
129	SLU 30	1	-4	3970	9.55	0.83	0
129	SLU 31	1	85	4356	6.53	1.12	0
129	SLU 32	0	-163	4406	17.5	0.52	0
129	SLU 33	1	-16	4435	11.11	0.89	0
129	SLU 34	1	84	4419	6.72	1.13	0
129	SLU 35	0	-164	4470	17.69	0.52	0
129	SLU 36	1	-16	4499	11.3	0.9	0
129	SLU 37	0	-163	4435	17.55	0.52	0
129	SLU 38	1	-15	4463	11.16	0.89	0
129	SLU 39	0	-166	4519	17.87	0.53	0
129	SLU 40	1	-18	4548	11.48	0.9	0
129	SLU 41	0	-167	4583	18.06	0.54	0
129	SLU 42	1	-19	4611	11.67	0.91	0
129	SLU 43	0	-179	4199	17.72	0.48	0
129	SLU 44	1	67	4247	7.07	1.1	0
129	SLU 45	0	-181	4297	18.05	0.49	0
129	SLU 46	1	-33	4326	11.66	0.87	0
129	SLU 47	1	67	4310	7.26	1.11	0
129	SLU 48	0	-182	4361	18.23	0.5	0
129	SLU 49	1	-34	4390	11.84	0.87	0
129	SLU 50	0	-180	4326	18.09	0.5	0
129	SLU 51	1	-33	4354	11.71	0.87	0
129	SLU 52	1	56	4740	8.68	1.16	0
129	SLU 53	0	-192	4791	19.65	0.55	0
129	SLU 54	1	-44	4820	13.27	0.93	0
129	SLU 55	1	56	4804	8.87	1.17	0
129	SLU 56	0	-192	4854	19.84	0.56	0
129	SLU 57	1	-45	4883	13.45	0.93	0
129	SLU 58	0	-191	4819	19.7	0.56	0
129	SLU 59	1	-43	4848	13.32	0.93	0
129	SLU 60	0	-195	4904	20.02	0.57	0
129	SLU 61	1	-47	4932	13.63	0.94	0
129	SLU 62	0	-195	4967	20.21	0.58	0
129	SLU 63	1	-47	4996	13.82	0.95	0
129	SLU 64	0	-190	4661	19.25	0.54	0
129	SLU 65	1	57	4709	8.6	1.16	0
129	SLU 66	0	-191	4760	19.58	0.55	0
129	SLU 67	1	-43	4789	13.19	0.92	0
129	SLU 68	1	56	4773	8.79	1.16	0
129	SLU 69	0	-192	4823	19.77	0.56	0
129	SLU 70	1	-44	4852	13.38	0.93	0
129	SLU 71	0	-191	4788	19.63	0.55	0
129	SLU 72	1	-43	4817	13.24	0.93	0
129	SLU 73	1	46	5203	10.21	1.22	0
129	SLU 74	0	-202	5253	21.19	0.61	0
129	SLU 75	1	-54	5282	14.8	0.98	0
129	SLU 76	1	46	5266	10.4	1.23	0
129	SLU 77	0	-203	5317	21.38	0.62	0
129	SLU 78	1	-55	5346	14.99	0.99	0
129	SLU 79	0	-202	5282	21.24	0.62	0
129	SLU 80	1	-54	5310	14.85	0.99	0
129	SLU 81	0	-205	5366	21.55	0.62	0
129	SLU 82	1	-57	5395	15.16	1	0
129	SLU 83	0	-206	5430	21.74	0.63	0
129	SLU 84	1	-58	5458	15.35	1	0
129	SLE RA 1	0	-144	3484	14.47	0.4	0
129	SLE RA 2	1	21	3516	7.37	0.81	0
129	SLE RA 3	0	-145	3550	14.69	0.41	0
129	SLE RA 4	0	-46	3569	10.43	0.66	0
129	SLE RA 5	1	20	3558	7.5	0.82	0
129	SLE RA 6	0	-145	3592	14.82	0.42	0
129	SLE RA 7	0	-47	3611	10.56	0.66	0
129	SLE RA 8	0	-144	3569	14.72	0.41	0
129	SLE RA 9	0	-46	3588	10.46	0.66	0
129	SLE RA 10	1	14	3845	8.45	0.85	0
129	SLE RA 11	0	-152	3879	15.76	0.45	0
129	SLE RA 12	0	-53	3898	11.5	0.7	0
129	SLE RA 13	1	13	3887	8.57	0.86	0
129	SLE RA 14	0	-152	3921	15.89	0.46	0
129	SLE RA 15	1	-54	3940	11.63	0.7	0
129	SLE RA 16	0	-152	3897	15.8	0.45	0
129	SLE RA 17	0	-53	3917	11.54	0.7	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
129	SLE RA 18	0	-154	3954	16.01	0.46	0
129	SLE RA 19	1	-55	3973	11.75	0.71	0
129	SLE RA 20	0	-154	3996	16.13	0.46	0
129	SLE RA 21	1	-56	4015	11.87	0.71	0
129	SLE FR 1	0	-144	3484	14.47	0.4	0
129	SLE FR 2	0	-111	3490	13.05	0.48	0
129	SLE FR 3	0	-144	3501	14.52	0.4	0
129	SLE FR 4	0	-114	3631	13.51	0.5	0
129	SLE FR 5	0	-147	3642	14.98	0.42	0
129	SLE FR 6	0	-149	3719	15.24	0.43	0
129	SLE QP 1	0	-144	3484	14.47	0.4	0
129	SLE QP 2	0	-147	3625	14.93	0.42	0
129	SLD 1	14	246	3709	-2.78	12.05	0.01
129	SLD 2	14	246	3709	-2.78	12.05	0.01
129	SLD 3	9	-155	3592	15.27	7.58	0
129	SLD 4	9	-155	3592	15.27	7.58	0
129	SLD 5	12	581	3828	-17.75	10.69	0
129	SLD 6	12	581	3828	-17.75	10.69	0
129	SLD 7	-5	-759	3438	42.4	-4.22	0
129	SLD 8	-5	-759	3438	42.4	-4.22	0
129	SLD 9	5	465	3812	-12.53	5.05	0
129	SLD 10	5	465	3812	-12.53	5.05	0
129	SLD 11	-12	-874	3422	47.61	-9.86	0
129	SLD 12	-12	-874	3422	47.61	-9.86	0
129	SLD 13	-9	-138	3658	14.6	-6.74	0
129	SLD 14	-9	-138	3658	14.6	-6.74	0
129	SLD 15	-14	-540	3541	32.64	-11.22	0
129	SLD 16	-14	-540	3541	32.64	-11.22	0
129	SLV 1	34	796	3825	-27.47	28.68	0.01
129	SLV 2	34	796	3825	-27.47	28.68	0.01
129	SLV 3	22	-172	3547	15.92	17.55	0.01
129	SLV 4	22	-172	3547	15.92	17.55	0.01
129	SLV 5	30	1604	4106	-63.6	25.79	0.01
129	SLV 6	30	1604	4106	-63.6	25.79	0.01
129	SLV 7	-13	-1622	3180	81.04	-11.33	0
129	SLV 8	-13	-1622	3180	81.04	-11.33	0
129	SLV 9	13	1328	4070	-51.17	12.17	0
129	SLV 10	13	1328	4070	-51.17	12.17	0
129	SLV 11	-29	-1897	3144	93.47	-24.95	-0.01
129	SLV 12	-29	-1897	3144	93.47	-24.95	-0.01
129	SLV 13	-21	-121	3703	13.95	-16.71	-0.01
129	SLV 14	-21	-121	3703	13.95	-16.71	-0.01
129	SLV 15	-34	-1089	3425	57.34	-27.84	-0.01
129	SLV 16	-34	-1089	3425	57.34	-27.84	-0.01
130	SLU 1	7	-380	4174	15.67	4.68	-0.13
130	SLU 2	7	-398	4196	16.37	4.7	-0.13
130	SLU 3	7	-388	4302	16.03	4.83	-0.13
130	SLU 4	7	-399	4315	16.45	4.84	-0.13
130	SLU 5	7	-403	4283	16.62	4.8	-0.13
130	SLU 6	7	-393	4388	16.27	4.92	-0.13
130	SLU 7	7	-404	4401	16.7	4.94	-0.13
130	SLU 8	7	-391	4347	16.17	4.88	-0.13
130	SLU 9	7	-402	4360	16.59	4.89	-0.13
130	SLU 10	8	-449	4827	18.61	5.48	-0.15
130	SLU 11	8	-439	4932	18.26	5.61	-0.15
130	SLU 12	8	-450	4945	18.68	5.62	-0.15
130	SLU 13	8	-455	4913	18.86	5.58	-0.15
130	SLU 14	8	-445	5018	18.51	5.71	-0.15
130	SLU 15	8	-455	5032	18.93	5.72	-0.15
130	SLU 16	8	-442	4978	18.4	5.66	-0.15
130	SLU 17	8	-453	4991	18.83	5.67	-0.15
130	SLU 18	8	-453	5075	18.86	5.8	-0.16
130	SLU 19	8	-464	5088	19.28	5.81	-0.16
130	SLU 20	8	-459	5161	19.11	5.9	-0.16
130	SLU 21	8	-469	5175	19.53	5.91	-0.16
130	SLU 22	8	-417	4692	17.37	5.3	-0.14
130	SLU 23	8	-435	4715	18.08	5.32	-0.14
130	SLU 24	8	-425	4820	17.73	5.44	-0.15
130	SLU 25	8	-436	4833	18.15	5.46	-0.15
130	SLU 26	8	-441	4801	18.33	5.42	-0.15
130	SLU 27	8	-431	4906	17.98	5.54	-0.15
130	SLU 28	8	-442	4919	18.4	5.56	-0.15
130	SLU 29	8	-429	4865	17.87	5.5	-0.15
130	SLU 30	8	-440	4878	18.29	5.51	-0.15
130	SLU 31	9	-486	5345	20.31	6.1	-0.16
130	SLU 32	9	-477	5450	19.96	6.23	-0.17
130	SLU 33	9	-487	5464	20.39	6.24	-0.17
130	SLU 34	9	-492	5431	20.56	6.2	-0.17
130	SLU 35	9	-482	5537	20.21	6.33	-0.17
130	SLU 36	9	-493	5550	20.63	6.34	-0.17
130	SLU 37	9	-480	5496	20.11	6.28	-0.17
130	SLU 38	9	-491	5509	20.53	6.29	-0.17
130	SLU 39	9	-490	5593	20.57	6.41	-0.17
130	SLU 40	9	-501	5607	20.99	6.43	-0.17
130	SLU 41	9	-496	5680	20.82	6.51	-0.18
130	SLU 42	9	-507	5693	21.24	6.53	-0.18
130	SLU 43	8	-481	5249	19.79	5.87	-0.16
130	SLU 44	8	-499	5271	20.49	5.89	-0.16
130	SLU 45	9	-489	5376	20.14	6.02	-0.16
130	SLU 46	9	-500	5389	20.56	6.03	-0.16



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
130	SLU 47	9	-504	5357	20.74	5.99	-0.16
130	SLU 48	9	-494	5463	20.39	6.12	-0.17
130	SLU 49	9	-505	5476	20.81	6.13	-0.17
130	SLU 50	9	-492	5422	20.29	6.07	-0.16
130	SLU 51	9	-503	5435	20.71	6.08	-0.16
130	SLU 52	10	-550	5901	22.72	6.67	-0.18
130	SLU 53	10	-540	6007	22.38	6.8	-0.18
130	SLU 54	10	-551	6020	22.8	6.81	-0.18
130	SLU 55	10	-556	5988	22.97	6.77	-0.18
130	SLU 56	10	-546	6093	22.63	6.9	-0.19
130	SLU 57	10	-556	6106	23.05	6.91	-0.19
130	SLU 58	10	-543	6052	22.52	6.85	-0.19
130	SLU 59	10	-554	6065	22.94	6.86	-0.19
130	SLU 60	10	-554	6150	22.98	6.99	-0.19
130	SLU 61	10	-565	6163	23.4	7	-0.19
130	SLU 62	10	-559	6236	23.23	7.09	-0.19
130	SLU 63	10	-570	6249	23.65	7.1	-0.19
130	SLU 64	9	-518	5767	21.49	6.49	-0.18
130	SLU 65	9	-536	5789	22.19	6.51	-0.18
130	SLU 66	9	-526	5894	21.85	6.64	-0.18
130	SLU 67	9	-537	5908	22.27	6.65	-0.18
130	SLU 68	9	-542	5876	22.44	6.61	-0.18
130	SLU 69	10	-532	5981	22.1	6.73	-0.18
130	SLU 70	10	-543	5994	22.52	6.75	-0.18
130	SLU 71	10	-530	5940	21.99	6.69	-0.18
130	SLU 72	10	-541	5953	22.41	6.7	-0.18
130	SLU 73	10	-587	6420	24.43	7.29	-0.2
130	SLU 74	11	-578	6525	24.08	7.42	-0.2
130	SLU 75	11	-588	6538	24.5	7.43	-0.2
130	SLU 76	11	-593	6506	24.68	7.39	-0.2
130	SLU 77	11	-583	6611	24.33	7.52	-0.2
130	SLU 78	11	-594	6624	24.75	7.53	-0.2
130	SLU 79	11	-581	6570	24.22	7.47	-0.2
130	SLU 80	11	-592	6584	24.65	7.48	-0.2
130	SLU 81	11	-591	6668	24.68	7.61	-0.21
130	SLU 82	11	-602	6681	25.1	7.62	-0.21
130	SLU 83	11	-597	6754	24.93	7.71	-0.21
130	SLU 84	11	-608	6767	25.35	7.72	-0.21
130	SLE RA 1	7	-390	4322	16.16	4.85	-0.13
130	SLE RA 2	7	-402	4337	16.62	4.87	-0.13
130	SLE RA 3	7	-396	4407	16.39	4.95	-0.13
130	SLE RA 4	7	-403	4416	16.67	4.96	-0.13
130	SLE RA 5	7	-406	4395	16.79	4.93	-0.13
130	SLE RA 6	7	-400	4465	16.56	5.02	-0.14
130	SLE RA 7	7	-407	4474	16.84	5.03	-0.14
130	SLE RA 8	7	-398	4437	16.49	4.99	-0.14
130	SLE RA 9	7	-405	4446	16.77	5	-0.13
130	SLE RA 10	8	-437	4757	18.11	5.39	-0.15
130	SLE RA 11	8	-430	4828	17.88	5.47	-0.15
130	SLE RA 12	8	-437	4836	18.16	5.48	-0.15
130	SLE RA 13	8	-440	4815	18.28	5.46	-0.15
130	SLE RA 14	8	-434	4885	18.05	5.54	-0.15
130	SLE RA 15	8	-441	4894	18.33	5.55	-0.15
130	SLE RA 16	8	-432	4858	17.98	5.51	-0.15
130	SLE RA 17	8	-439	4867	18.26	5.52	-0.15
130	SLE RA 18	8	-439	4923	18.29	5.6	-0.15
130	SLE RA 19	8	-446	4932	18.57	5.61	-0.15
130	SLE RA 20	8	-443	4980	18.45	5.67	-0.15
130	SLE RA 21	8	-450	4989	18.73	5.67	-0.15
130	SLE FR 1	7	-390	4322	16.16	4.85	-0.13
130	SLE FR 2	7	-393	4325	16.25	4.86	-0.13
130	SLE FR 3	7	-392	4345	16.22	4.88	-0.13
130	SLE FR 4	7	-407	4505	16.89	5.08	-0.14
130	SLE FR 5	7	-407	4526	16.86	5.1	-0.14
130	SLE FR 6	7	-415	4623	17.22	5.23	-0.14
130	SLE QP 1	7	-390	4322	16.16	4.85	-0.13
130	SLE QP 2	7	-405	4502	16.8	5.08	-0.14
130	SLD 1	23	-356	3808	2.05	17.94	-0.39
130	SLD 2	23	-356	3808	2.05	17.94	-0.39
130	SLD 3	27	-739	4113	18.86	20.84	-0.45
130	SLD 4	27	-739	4113	18.86	20.84	-0.45
130	SLD 5	6	191	3833	-13.12	4.54	-0.12
130	SLD 6	6	191	3833	-13.12	4.54	-0.12
130	SLD 7	19	-1086	4847	42.9	14.2	-0.33
130	SLD 8	19	-1086	4847	42.9	14.2	-0.33
130	SLD 9	-4	276	4158	-9.31	-4.05	0.05
130	SLD 10	-4	276	4158	-9.31	-4.05	0.05
130	SLD 11	8	-1001	5172	46.71	5.62	-0.16
130	SLD 12	8	-1001	5172	46.71	5.62	-0.16
130	SLD 13	-12	-72	4892	14.73	-10.68	0.18
130	SLD 14	-12	-72	4892	14.73	-10.68	0.18
130	SLD 15	-9	-455	5197	31.54	-7.78	0.11
130	SLD 16	-9	-455	5197	31.54	-7.78	0.11
130	SLV 1	46	-292	2877	-17.59	36.58	-0.75
130	SLV 2	46	-292	2877	-17.59	36.58	-0.75
130	SLV 3	55	-1183	3589	21.51	43.64	-0.9
130	SLV 4	55	-1183	3589	21.51	43.64	-0.9
130	SLV 5	5	980	2935	-52.82	3.82	-0.09
130	SLV 6	5	980	2935	-52.82	3.82	-0.09
130	SLV 7	35	-1990	5308	77.51	27.36	-0.6



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
130	SLV 8	35	-1990	5308	77.51	27.36	-0.6
130	SLV 9	-21	1179	3697	-43.92	-17.2	0.32
130	SLV 10	-21	1179	3697	-43.92	-17.2	0.32
130	SLV 11	9	-1790	6070	86.41	6.34	-0.19
130	SLV 12	9	-1790	6070	86.41	6.34	-0.19
130	SLV 13	-40	373	5416	12.08	-33.49	0.62
130	SLV 14	-40	373	5416	12.08	-33.49	0.62
130	SLV 15	-32	-518	6128	51.18	-26.42	0.47
130	SLV 16	-32	-518	6128	51.18	-26.42	0.47
131	SLU 1	0	-141	3621	14.74	-0.35	0
131	SLU 2	-1	93	3668	4.77	-1.09	0
131	SLU 3	0	-145	3725	15.19	-0.36	0
131	SLU 4	-1	-5	3753	9.21	-0.81	0
131	SLU 5	-1	90	3733	5.08	-1.1	0
131	SLU 6	0	-148	3790	15.49	-0.37	0
131	SLU 7	-1	-7	3818	9.51	-0.82	0
131	SLU 8	0	-147	3751	15.35	-0.36	0
131	SLU 9	-1	-7	3779	9.37	-0.81	0
131	SLU 10	-1	83	4235	6.55	-1.15	0
131	SLU 11	0	-155	4292	16.97	-0.41	0
131	SLU 12	-1	-15	4321	10.99	-0.86	0
131	SLU 13	-1	80	4300	6.86	-1.16	0
131	SLU 14	0	-158	4357	17.27	-0.42	0
131	SLU 15	-1	-18	4386	11.29	-0.87	0
131	SLU 16	0	-157	4318	17.13	-0.42	0
131	SLU 17	-1	-17	4346	11.15	-0.87	0
131	SLU 18	0	-156	4431	17.28	-0.42	0
131	SLU 19	-1	-15	4459	11.3	-0.87	0
131	SLU 20	0	-159	4496	17.59	-0.43	0
131	SLU 21	-1	-18	4524	11.61	-0.88	0
131	SLU 22	0	-152	4152	16.49	-0.4	0
131	SLU 23	-1	82	4199	6.52	-1.15	0
131	SLU 24	0	-156	4256	16.94	-0.41	0
131	SLU 25	-1	-16	4284	10.96	-0.86	0
131	SLU 26	-1	79	4264	6.83	-1.15	0
131	SLU 27	0	-159	4321	17.24	-0.42	0
131	SLU 28	-1	-18	4349	11.26	-0.87	0
131	SLU 29	0	-158	4282	17.1	-0.42	0
131	SLU 30	-1	-18	4310	11.12	-0.86	0
131	SLU 31	-1	72	4766	8.3	-1.2	0
131	SLU 32	0	-166	4824	18.72	-0.47	0
131	SLU 33	-1	-26	4852	12.74	-0.91	0
131	SLU 34	-1	69	4831	8.61	-1.21	0
131	SLU 35	0	-169	4889	19.02	-0.48	0
131	SLU 36	-1	-29	4917	13.04	-0.92	0
131	SLU 37	0	-168	4849	18.88	-0.47	0
131	SLU 38	-1	-28	4878	12.9	-0.92	0
131	SLU 39	0	-167	4962	19.03	-0.48	0
131	SLU 40	-1	-26	4991	13.05	-0.92	0
131	SLU 41	0	-170	5028	19.34	-0.48	0
131	SLU 42	-1	-29	5056	13.36	-0.93	0
131	SLU 43	0	-180	4525	18.56	-0.43	0
131	SLU 44	-1	54	4572	8.59	-1.18	0
131	SLU 45	0	-184	4629	19.01	-0.45	0
131	SLU 46	-1	-43	4657	13.03	-0.89	0
131	SLU 47	-1	51	4637	8.9	-1.19	0
131	SLU 48	0	-187	4694	19.31	-0.45	0
131	SLU 49	-1	-46	4722	13.33	-0.9	0
131	SLU 50	0	-186	4655	19.17	-0.45	0
131	SLU 51	-1	-45	4683	13.19	-0.9	0
131	SLU 52	-1	44	5139	10.37	-1.24	0
131	SLU 53	0	-194	5196	20.79	-0.5	0
131	SLU 54	-1	-53	5225	14.81	-0.95	0
131	SLU 55	-1	41	5204	10.68	-1.24	0
131	SLU 56	0	-197	5262	21.09	-0.51	0
131	SLU 57	-1	-56	5290	15.11	-0.96	0
131	SLU 58	0	-196	5222	20.95	-0.51	0
131	SLU 59	-1	-55	5250	14.97	-0.95	0
131	SLU 60	0	-194	5335	21.1	-0.51	0
131	SLU 61	-1	-54	5363	15.12	-0.96	0
131	SLU 62	0	-197	5400	21.41	-0.52	0
131	SLU 63	-1	-57	5429	15.43	-0.97	0
131	SLU 64	0	-191	5056	20.31	-0.48	0
131	SLU 65	-1	43	5103	10.34	-1.23	0
131	SLU 66	0	-195	5160	20.76	-0.5	0
131	SLU 67	-1	-54	5188	14.78	-0.95	0
131	SLU 68	-1	40	5168	10.65	-1.24	0
131	SLU 69	0	-198	5225	21.07	-0.51	0
131	SLU 70	-1	-57	5253	15.08	-0.96	0
131	SLU 71	0	-197	5186	20.92	-0.5	0
131	SLU 72	-1	-56	5214	14.94	-0.95	0
131	SLU 73	-1	33	5670	12.12	-1.29	0
131	SLU 74	0	-205	5728	22.54	-0.55	0
131	SLU 75	-1	-64	5756	16.56	-1	0
131	SLU 76	-1	30	5735	12.43	-1.3	0
131	SLU 77	0	-208	5793	22.84	-0.56	0
131	SLU 78	-1	-67	5821	16.86	-1.01	0
131	SLU 79	0	-207	5754	22.7	-0.56	0
131	SLU 80	-1	-66	5782	16.72	-1.01	0
131	SLU 81	0	-205	5867	22.85	-0.56	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
131	SLU 82	-1	-65	5895	16.87	-1.01	0
131	SLU 83	0	-208	5932	23.16	-0.57	0
131	SLU 84	-1	-68	5960	17.18	-1.02	0
131	SLE RA 1	0	-144	3772	15.24	-0.36	0
131	SLE RA 2	-1	12	3804	8.59	-0.86	0
131	SLE RA 3	0	-147	3842	15.54	-0.37	0
131	SLE RA 4	-1	-53	3861	11.55	-0.67	0
131	SLE RA 5	-1	10	3847	8.8	-0.87	0
131	SLE RA 6	0	-149	3885	15.74	-0.38	0
131	SLE RA 7	-1	-55	3904	11.75	-0.67	0
131	SLE RA 8	0	-148	3859	15.65	-0.37	0
131	SLE RA 9	-1	-55	3878	11.66	-0.67	0
131	SLE RA 10	-1	5	4182	9.78	-0.9	0
131	SLE RA 11	0	-154	4220	16.72	-0.41	0
131	SLE RA 12	-1	-60	4239	12.74	-0.71	0
131	SLE RA 13	-1	3	4225	9.98	-0.9	0
131	SLE RA 14	0	-156	4264	16.93	-0.41	0
131	SLE RA 15	-1	-62	4282	12.94	-0.71	0
131	SLE RA 16	0	-155	4237	16.83	-0.41	0
131	SLE RA 17	-1	-61	4256	12.85	-0.71	0
131	SLE RA 18	0	-154	4313	16.93	-0.41	0
131	SLE RA 19	-1	-60	4332	12.95	-0.71	0
131	SLE RA 20	0	-156	4356	17.14	-0.42	0
131	SLE RA 21	-1	-62	4375	13.15	-0.72	0
131	SLE FR 1	0	-144	3772	15.24	-0.36	0
131	SLE FR 2	0	-113	3779	13.91	-0.46	0
131	SLE FR 3	0	-145	3790	15.32	-0.36	0
131	SLE FR 4	0	-116	3941	14.42	-0.48	0
131	SLE FR 5	0	-148	3952	15.83	-0.38	0
131	SLE FR 6	0	-149	4043	16.09	-0.39	0
131	SLE QP 1	0	-144	3772	15.24	-0.36	0
131	SLE QP 2	0	-147	3935	15.75	-0.38	0
131	SLD 1	9	-105	4129	13.94	7.05	0
131	SLD 2	9	-105	4129	13.94	7.05	0
131	SLD 3	14	-483	3966	30.78	11.17	0
131	SLD 4	14	-483	3966	30.78	11.17	0
131	SLD 5	-5	438	4240	-10.33	-4.4	0
131	SLD 6	-5	438	4240	-10.33	-4.4	0
131	SLD 7	11	-821	3697	45.79	9.33	0
131	SLD 8	11	-821	3697	45.79	9.33	0
131	SLD 9	-12	526	4172	-14.3	-10.09	0
131	SLD 10	-12	526	4172	-14.3	-10.09	0
131	SLD 11	4	-733	3629	41.82	3.65	0
131	SLD 12	4	-733	3629	41.82	3.65	0
131	SLD 13	-14	188	3903	0.71	-11.92	-0.01
131	SLD 14	-14	188	3903	0.71	-11.92	-0.01
131	SLD 15	-9	-189	3740	17.55	-7.8	0
131	SLD 16	-9	-189	3740	17.55	-7.8	0
131	SLV 1	22	-46	4393	11.44	17.48	0.01
131	SLV 2	22	-46	4393	11.44	17.48	0.01
131	SLV 3	33	-946	4007	51.5	27.62	0.01
131	SLV 4	33	-946	4007	51.5	27.62	0.01
131	SLV 5	-11	1248	4658	-46.3	-10.41	0
131	SLV 6	-11	1248	4658	-46.3	-10.41	0
131	SLV 7	27	-1752	3371	87.23	23.41	0.01
131	SLV 8	27	-1752	3371	87.23	23.41	0.01
131	SLV 9	-28	1458	4498	-55.73	-24.16	-0.01
131	SLV 10	-28	1458	4498	-55.73	-24.16	-0.01
131	SLV 11	11	-1543	3211	77.8	9.66	0
131	SLV 12	11	-1543	3211	77.8	9.66	0
131	SLV 13	-34	652	3862	-20	-28.38	-0.01
131	SLV 14	-34	652	3862	-20	-28.38	-0.01
131	SLV 15	-22	-249	3476	20.05	-18.23	-0.01
131	SLV 16	-22	-249	3476	20.05	-18.23	-0.01
132	SLU 1	1	299	5763	-9.93	1.26	0
132	SLU 2	6	349	6026	-11.77	7.16	0
132	SLU 3	1	310	5931	-10.29	1.29	0
132	SLU 4	4	340	6090	-11.4	4.83	0
132	SLU 5	6	354	6134	-11.95	7.18	0
132	SLU 6	1	316	6038	-10.47	1.31	0
132	SLU 7	4	345	6197	-11.58	4.85	0
132	SLU 8	1	310	5977	-10.29	1.3	0
132	SLU 9	4	340	6135	-11.4	4.84	0
132	SLU 10	6	401	6711	-13.6	7.32	0
132	SLU 11	2	362	6616	-12.12	1.45	0
132	SLU 12	4	392	6775	-13.23	4.99	0
132	SLU 13	6	407	6819	-13.78	7.34	0
132	SLU 14	2	368	6723	-12.3	1.47	0
132	SLU 15	4	398	6882	-13.41	5.01	0
132	SLU 16	2	363	6662	-12.12	1.46	0
132	SLU 17	4	393	6820	-13.23	5	0
132	SLU 18	2	373	6741	-12.54	1.49	0
132	SLU 19	4	403	6899	-13.65	5.03	0
132	SLU 20	2	379	6848	-12.72	1.51	0
132	SLU 21	4	409	7006	-13.83	5.05	0
132	SLU 22	2	348	6430	-11.66	1.41	0
132	SLU 23	6	398	6694	-13.5	7.31	0
132	SLU 24	2	359	6599	-12.02	1.44	0
132	SLU 25	4	389	6757	-13.12	4.98	0
132	SLU 26	6	404	6801	-13.68	7.33	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
132	SLU 27	2	365	6706	-12.2	1.46	0
132	SLU 28	4	395	6864	-13.3	5	0
132	SLU 29	2	360	6644	-12.02	1.45	0
132	SLU 30	4	390	6803	-13.12	4.99	0
132	SLU 31	6	450	7379	-15.33	7.47	0
132	SLU 32	2	412	7284	-13.85	1.6	0
132	SLU 33	5	441	7442	-14.95	5.14	0
132	SLU 34	6	456	7486	-15.51	7.49	0
132	SLU 35	2	417	7391	-14.03	1.62	0
132	SLU 36	5	447	7549	-15.13	5.16	0
132	SLU 37	2	412	7329	-13.84	1.61	0
132	SLU 38	5	442	7488	-14.95	5.15	0
132	SLU 39	2	423	7408	-14.27	1.64	0
132	SLU 40	5	453	7567	-15.37	5.18	0
132	SLU 41	2	429	7516	-14.45	1.66	0
132	SLU 42	5	459	7674	-15.55	5.2	0
132	SLU 43	2	371	7263	-12.32	1.59	0
132	SLU 44	6	421	7526	-14.16	7.48	0
132	SLU 45	2	382	7431	-12.68	1.62	0
132	SLU 46	4	412	7590	-13.79	5.16	0
132	SLU 47	6	427	7634	-14.34	7.5	0
132	SLU 48	2	388	7538	-12.86	1.64	0
132	SLU 49	4	418	7697	-13.97	5.18	0
132	SLU 50	2	383	7477	-12.68	1.63	0
132	SLU 51	4	413	7635	-13.78	5.17	0
132	SLU 52	6	473	8211	-15.99	7.64	0
132	SLU 53	2	435	8116	-14.51	1.78	0
132	SLU 54	5	464	8274	-15.62	5.32	0
132	SLU 55	6	479	8318	-16.17	7.66	0
132	SLU 56	2	440	8223	-14.69	1.8	0
132	SLU 57	5	470	8382	-15.8	5.34	0
132	SLU 58	2	435	8162	-14.51	1.79	0
132	SLU 59	5	465	8320	-15.61	5.33	0
132	SLU 60	2	446	8241	-14.93	1.82	0
132	SLU 61	5	476	8399	-16.04	5.35	0
132	SLU 62	2	452	8348	-15.11	1.84	0
132	SLU 63	5	482	8506	-16.22	5.37	0
132	SLU 64	2	421	7930	-14.04	1.74	0
132	SLU 65	6	471	8194	-15.89	7.64	0
132	SLU 66	2	432	8099	-14.4	1.77	0
132	SLU 67	5	462	8257	-15.51	5.31	0
132	SLU 68	6	477	8301	-16.07	7.66	0
132	SLU 69	2	438	8206	-14.58	1.79	0
132	SLU 70	5	468	8364	-15.69	5.33	0
132	SLU 71	2	433	8144	-14.4	1.78	0
132	SLU 72	5	463	8303	-15.51	5.32	0
132	SLU 73	7	523	8879	-17.72	7.8	0
132	SLU 74	2	484	8784	-16.23	1.93	0
132	SLU 75	5	514	8942	-17.34	5.47	0
132	SLU 76	7	529	8986	-17.9	7.82	0
132	SLU 77	2	490	8891	-16.41	1.95	0
132	SLU 78	5	520	9049	-17.52	5.49	0
132	SLU 79	2	485	8829	-16.23	1.94	0
132	SLU 80	5	515	8988	-17.34	5.48	0
132	SLU 81	2	496	8908	-16.66	1.97	0
132	SLU 82	5	526	9067	-17.76	5.51	0
132	SLU 83	2	501	9016	-16.84	1.99	0
132	SLU 84	5	531	9174	-17.94	5.53	0
132	SLE RA 1	1	313	5953	-10.42	1.31	0
132	SLE RA 2	4	346	6129	-11.65	5.24	0
132	SLE RA 3	1	320	6066	-10.66	1.33	0
132	SLE RA 4	3	340	6171	-11.4	3.68	0
132	SLE RA 5	4	350	6201	-11.77	5.25	0
132	SLE RA 6	1	324	6137	-10.78	1.34	0
132	SLE RA 7	3	344	6243	-11.52	3.7	0
132	SLE RA 8	1	321	6096	-10.66	1.33	0
132	SLE RA 9	3	341	6202	-11.4	3.69	0
132	SLE RA 10	5	381	6586	-12.87	5.34	0
132	SLE RA 11	2	355	6522	-11.88	1.43	0
132	SLE RA 12	3	375	6628	-12.62	3.79	0
132	SLE RA 13	5	385	6657	-12.99	5.36	0
132	SLE RA 14	2	359	6594	-12	1.45	0
132	SLE RA 15	3	379	6699	-12.74	3.8	0
132	SLE RA 16	2	356	6553	-11.88	1.44	0
132	SLE RA 17	3	375	6658	-12.62	3.8	0
132	SLE RA 18	2	363	6606	-12.17	1.46	0
132	SLE RA 19	3	383	6711	-12.9	3.82	0
132	SLE RA 20	2	367	6677	-12.29	1.47	0
132	SLE RA 21	3	386	6783	-13.02	3.83	0
132	SLE FR 1	1	313	5953	-10.42	1.31	0
132	SLE FR 2	2	320	5988	-10.67	2.09	0
132	SLE FR 3	1	315	5982	-10.47	1.31	0
132	SLE FR 4	2	335	6184	-11.19	2.14	0
132	SLE FR 5	1	329	6178	-10.99	1.36	0
132	SLE FR 6	2	338	6279	-11.29	1.38	0
132	SLE QP 1	1	313	5953	-10.42	1.31	0
132	SLE QP 2	1	328	6149	-10.95	1.35	0
132	SLD 1	20	369	4772	-12.76	27.47	0.01
132	SLD 2	20	369	4772	-12.76	27.47	0.01
132	SLD 3	31	-42	4341	4.59	16.62	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
132	SLD 4	31	-42	4341	4.59	16.62	0
132	SLD 5	-9	963	6390	-37.8	25.64	0.01
132	SLD 6	-9	963	6390	-37.8	25.64	0.01
132	SLD 7	27	-406	4952	20.02	-10.52	0
132	SLD 8	27	-406	4952	20.02	-10.52	0
132	SLD 9	-24	1061	7346	-41.91	13.22	0
132	SLD 10	-24	1061	7346	-41.91	13.22	0
132	SLD 11	12	-307	5908	15.9	-22.94	0
132	SLD 12	12	-307	5908	15.9	-22.94	0
132	SLD 13	-28	698	7957	-26.48	-13.92	0
132	SLD 14	-28	698	7957	-26.48	-13.92	0
132	SLD 15	-17	287	7526	-9.14	-24.77	0
132	SLD 16	-17	287	7526	-9.14	-24.77	0
132	SLV 1	45	424	2930	-15.18	64.18	0.01
132	SLV 2	45	424	2930	-15.18	64.18	0.01
132	SLV 3	72	-528	1913	25.02	36.71	0.01
132	SLV 4	72	-528	1913	25.02	36.71	0.01
132	SLV 5	-27	1800	6725	-73.19	61.86	0.01
132	SLV 6	-27	1800	6725	-73.19	61.86	0.01
132	SLV 7	64	-1372	3336	60.82	-29.7	-0.01
132	SLV 8	64	-1372	3336	60.82	-29.7	-0.01
132	SLV 9	-61	2028	8962	-82.71	32.4	0.01
132	SLV 10	-61	2028	8962	-82.71	32.4	0.01
132	SLV 11	30	-1144	5572	51.3	-59.16	-0.01
132	SLV 12	30	-1144	5572	51.3	-59.16	-0.01
132	SLV 13	-69	1184	10385	-46.91	-34.01	-0.01
132	SLV 14	-69	1184	10385	-46.91	-34.01	-0.01
132	SLV 15	-42	232	9368	-6.71	-61.48	-0.01
132	SLV 16	-42	232	9368	-6.71	-61.48	-0.01
133	SLU 1	4	-345	3775	15.58	2.76	0
133	SLU 2	4	-360	3783	16.2	2.78	0
133	SLU 3	4	-353	3884	15.95	2.85	0
133	SLU 4	4	-362	3889	16.33	2.86	0
133	SLU 5	4	-366	3853	16.47	2.84	0
133	SLU 6	4	-359	3955	16.22	2.91	0
133	SLU 7	4	-368	3960	16.59	2.92	0
133	SLU 8	4	-357	3916	16.11	2.88	0
133	SLU 9	4	-366	3921	16.48	2.89	0
133	SLU 10	4	-404	4365	18.32	2.98	0
133	SLU 11	4	-397	4467	18.07	3.06	0
133	SLU 12	4	-406	4471	18.45	3.07	0
133	SLU 13	4	-410	4436	18.59	3.04	0
133	SLU 14	5	-403	4537	18.33	3.12	0
133	SLU 15	5	-412	4542	18.71	3.13	0
133	SLU 16	4	-401	4498	18.23	3.09	0
133	SLU 17	4	-410	4503	18.6	3.1	0
133	SLU 18	4	-408	4607	18.6	3.05	0
133	SLU 19	4	-417	4612	18.98	3.06	0
133	SLU 20	5	-414	4677	18.87	3.11	0
133	SLU 21	5	-423	4682	19.25	3.12	0
133	SLU 22	4	-379	4268	17.19	3.09	0
133	SLU 23	4	-394	4276	17.82	3.1	0
133	SLU 24	5	-387	4378	17.57	3.18	0
133	SLU 25	5	-396	4383	17.94	3.19	0
133	SLU 26	5	-399	4347	18.09	3.16	0
133	SLU 27	5	-392	4449	17.83	3.24	0
133	SLU 28	5	-401	4453	18.21	3.25	0
133	SLU 29	5	-390	4410	17.72	3.21	0
133	SLU 30	5	-399	4415	18.1	3.22	0
133	SLU 31	5	-438	4859	19.94	3.31	0
133	SLU 32	5	-431	4960	19.68	3.38	0
133	SLU 33	5	-440	4965	20.06	3.39	0
133	SLU 34	5	-444	4929	20.2	3.37	0
133	SLU 35	5	-437	5031	19.95	3.44	0
133	SLU 36	5	-446	5036	20.33	3.45	0
133	SLU 37	5	-434	4992	19.84	3.41	0
133	SLU 38	5	-443	4997	20.22	3.42	0
133	SLU 39	5	-442	5101	20.22	3.38	0
133	SLU 40	5	-451	5105	20.6	3.39	0
133	SLU 41	5	-448	5171	20.48	3.44	0
133	SLU 42	5	-456	5176	20.86	3.45	0
133	SLU 43	5	-437	4738	19.7	3.48	0
133	SLU 44	5	-452	4746	20.32	3.49	0
133	SLU 45	5	-445	4847	20.07	3.57	0
133	SLU 46	5	-454	4852	20.45	3.58	0
133	SLU 47	5	-458	4817	20.59	3.55	0
133	SLU 48	5	-451	4918	20.33	3.63	0
133	SLU 49	5	-460	4923	20.71	3.64	0
133	SLU 50	5	-449	4879	20.23	3.6	0
133	SLU 51	5	-458	4884	20.6	3.61	0
133	SLU 52	5	-496	5328	22.44	3.7	0
133	SLU 53	5	-489	5430	22.19	3.77	0
133	SLU 54	5	-498	5435	22.57	3.78	0
133	SLU 55	5	-502	5399	22.71	3.76	0
133	SLU 56	6	-495	5501	22.45	3.83	0
133	SLU 57	6	-504	5505	22.83	3.84	0
133	SLU 58	5	-493	5462	22.35	3.8	0
133	SLU 59	5	-502	5466	22.72	3.81	0
133	SLU 60	5	-500	5570	22.72	3.77	0
133	SLU 61	5	-509	5575	23.1	3.78	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
133	SLU 62	6	-506	5641	22.99	3.83	0
133	SLU 63	6	-515	5645	23.37	3.84	0
133	SLU 64	5	-471	5232	21.31	3.8	0
133	SLU 65	5	-486	5240	21.94	3.82	0
133	SLU 66	6	-479	5341	21.68	3.9	0
133	SLU 67	6	-488	5346	22.06	3.91	0
133	SLU 68	6	-491	5310	22.2	3.88	0
133	SLU 69	6	-484	5412	21.95	3.96	0
133	SLU 70	6	-493	5417	22.33	3.97	0
133	SLU 71	6	-482	5373	21.84	3.92	0
133	SLU 72	6	-491	5378	22.22	3.93	0
133	SLU 73	6	-530	5822	24.06	4.02	0
133	SLU 74	6	-523	5924	23.8	4.1	0
133	SLU 75	6	-532	5928	24.18	4.11	0
133	SLU 76	6	-536	5893	24.32	4.08	0
133	SLU 77	6	-529	5994	24.07	4.16	0
133	SLU 78	6	-538	5999	24.45	4.17	0
133	SLU 79	6	-526	5955	23.96	4.13	0
133	SLU 80	6	-535	5960	24.34	4.14	0
133	SLU 81	6	-534	6064	24.34	4.1	0
133	SLU 82	6	-543	6068	24.72	4.11	0
133	SLU 83	6	-540	6134	24.6	4.16	0
133	SLU 84	6	-548	6139	24.98	4.17	0
133	SLE RA 1	4	-355	3916	16.04	2.85	0
133	SLE RA 2	4	-365	3921	16.46	2.86	0
133	SLE RA 3	4	-360	3989	16.29	2.92	0
133	SLE RA 4	4	-366	3992	16.54	2.92	0
133	SLE RA 5	4	-369	3968	16.63	2.9	0
133	SLE RA 6	4	-364	4036	16.46	2.96	0
133	SLE RA 7	4	-370	4039	16.72	2.96	0
133	SLE RA 8	4	-362	4010	16.39	2.93	0
133	SLE RA 9	4	-368	4013	16.64	2.94	0
133	SLE RA 10	4	-394	4309	17.87	3	0
133	SLE RA 11	4	-389	4377	17.7	3.05	0
133	SLE RA 12	4	-395	4380	17.95	3.06	0
133	SLE RA 13	4	-398	4356	18.05	3.04	0
133	SLE RA 14	4	-393	4424	17.88	3.09	0
133	SLE RA 15	4	-399	4427	18.13	3.1	0
133	SLE RA 16	4	-392	4398	17.8	3.07	0
133	SLE RA 17	4	-398	4401	18.06	3.08	0
133	SLE RA 18	4	-397	4471	18.06	3.05	0
133	SLE RA 19	4	-403	4474	18.31	3.06	0
133	SLE RA 20	4	-401	4518	18.23	3.09	0
133	SLE RA 21	4	-407	4521	18.48	3.1	0
133	SLE FR 1	4	-355	3916	16.04	2.85	0
133	SLE FR 2	4	-357	3917	16.12	2.86	0
133	SLE FR 3	4	-356	3935	16.11	2.87	0
133	SLE FR 4	4	-369	4083	16.73	2.91	0
133	SLE FR 5	4	-369	4101	16.71	2.93	0
133	SLE FR 6	4	-376	4193	17.05	2.95	0
133	SLE QP 1	4	-355	3916	16.04	2.85	0
133	SLE QP 2	4	-367	4082	16.64	2.91	0
133	SLD 1	23	-46	4448	1.64	15.59	0.02
133	SLD 2	23	-46	4448	1.64	15.59	0.02
133	SLD 3	20	-397	4353	18.14	18.41	0.01
133	SLD 4	20	-397	4353	18.14	18.41	0.01
133	SLD 5	15	262	4335	-12.88	2.44	0.01
133	SLD 6	15	262	4335	-12.88	2.44	0.01
133	SLD 7	4	-909	4020	42.11	11.84	0
133	SLD 8	4	-909	4020	42.11	11.84	0
133	SLD 9	5	174	4144	-8.83	-6.01	0
133	SLD 10	5	174	4144	-8.83	-6.01	0
133	SLD 11	-7	-996	3829	46.17	3.38	-0.01
133	SLD 12	-7	-996	3829	46.17	3.38	-0.01
133	SLD 13	-11	-338	3811	15.15	-12.59	-0.01
133	SLD 14	-11	-338	3811	15.15	-12.59	-0.01
133	SLD 15	-15	-689	3717	31.65	-9.77	-0.01
133	SLD 16	-15	-689	3717	31.65	-9.77	-0.01
133	SLV 1	50	376	4941	-18.02	33.9	0.04
133	SLV 2	50	376	4941	-18.02	33.9	0.04
133	SLV 3	42	-436	4720	20.15	40.78	0.03
133	SLV 4	42	-436	4720	20.15	40.78	0.03
133	SLV 5	30	1087	4675	-51.65	1.78	0.02
133	SLV 6	30	1087	4675	-51.65	1.78	0.02
133	SLV 7	3	-1620	3939	75.59	24.7	0
133	SLV 8	3	-1620	3939	75.59	24.7	0
133	SLV 9	5	885	4226	-42.31	-18.88	0
133	SLV 10	5	885	4226	-42.31	-18.88	0
133	SLV 11	-22	-1822	3490	84.94	4.05	-0.02
133	SLV 12	-22	-1822	3490	84.94	4.05	-0.02
133	SLV 13	-33	-298	3444	13.14	-34.95	-0.03
133	SLV 14	-33	-298	3444	13.14	-34.95	-0.03
133	SLV 15	-41	-1110	3224	51.31	-28.08	-0.04
133	SLV 16	-41	-1110	3224	51.31	-28.08	-0.04
134	SLU 1	1	100	1096	-3.41	1.07	-0.05
134	SLU 2	1	99	1092	-3.37	1.14	-0.05
134	SLU 3	1	104	1118	-3.57	1.09	-0.05
134	SLU 4	1	104	1115	-3.55	1.13	-0.05
134	SLU 5	1	102	1106	-3.48	1.15	-0.05
134	SLU 6	1	107	1132	-3.68	1.1	-0.05



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
134	SLU 7	1	107	1130	-3.66	1.14	-0.05
134	SLU 8	1	106	1125	-3.63	1.1	-0.05
134	SLU 9	1	105	1122	-3.61	1.14	-0.05
134	SLU 10	2	120	1295	-4.11	1.38	-0.07
134	SLU 11	2	126	1321	-4.31	1.33	-0.06
134	SLU 12	2	125	1318	-4.29	1.37	-0.07
134	SLU 13	2	123	1309	-4.22	1.39	-0.07
134	SLU 14	2	129	1335	-4.42	1.34	-0.07
134	SLU 15	2	128	1333	-4.4	1.38	-0.07
134	SLU 16	2	127	1328	-4.37	1.33	-0.07
134	SLU 17	2	127	1325	-4.35	1.37	-0.07
134	SLU 18	2	130	1386	-4.47	1.41	-0.07
134	SLU 19	2	129	1383	-4.45	1.45	-0.07
134	SLU 20	2	133	1401	-4.58	1.42	-0.07
134	SLU 21	2	133	1398	-4.56	1.46	-0.07
134	SLU 22	1	119	1212	-4.07	1.21	-0.06
134	SLU 23	1	118	1208	-4.03	1.28	-0.06
134	SLU 24	1	123	1234	-4.23	1.23	-0.06
134	SLU 25	1	123	1231	-4.21	1.27	-0.06
134	SLU 26	1	121	1222	-4.14	1.29	-0.06
134	SLU 27	1	126	1248	-4.34	1.24	-0.06
134	SLU 28	1	126	1246	-4.32	1.28	-0.06
134	SLU 29	1	125	1241	-4.29	1.23	-0.06
134	SLU 30	1	124	1239	-4.27	1.27	-0.06
134	SLU 31	2	139	1411	-4.77	1.52	-0.07
134	SLU 32	2	145	1437	-4.97	1.46	-0.07
134	SLU 33	2	144	1434	-4.95	1.51	-0.07
134	SLU 34	2	142	1425	-4.88	1.53	-0.07
134	SLU 35	2	148	1451	-5.08	1.48	-0.07
134	SLU 36	2	147	1449	-5.06	1.52	-0.07
134	SLU 37	2	146	1444	-5.03	1.47	-0.07
134	SLU 38	2	146	1441	-5.01	1.51	-0.07
134	SLU 39	2	149	1502	-5.13	1.55	-0.08
134	SLU 40	2	148	1499	-5.1	1.59	-0.08
134	SLU 41	2	152	1517	-5.24	1.56	-0.08
134	SLU 42	2	152	1514	-5.21	1.6	-0.08
134	SLU 43	2	123	1385	-4.21	1.35	-0.06
134	SLU 44	2	122	1381	-4.17	1.42	-0.07
134	SLU 45	2	128	1407	-4.37	1.37	-0.06
134	SLU 46	2	127	1404	-4.35	1.41	-0.07
134	SLU 47	2	125	1395	-4.28	1.43	-0.07
134	SLU 48	2	131	1421	-4.48	1.38	-0.06
134	SLU 49	2	130	1419	-4.46	1.42	-0.07
134	SLU 50	2	129	1414	-4.43	1.37	-0.06
134	SLU 51	2	129	1412	-4.4	1.41	-0.07
134	SLU 52	2	143	1584	-4.91	1.65	-0.08
134	SLU 53	2	149	1610	-5.11	1.6	-0.08
134	SLU 54	2	148	1607	-5.09	1.64	-0.08
134	SLU 55	2	146	1598	-5.02	1.66	-0.08
134	SLU 56	2	152	1624	-5.22	1.61	-0.08
134	SLU 57	2	152	1622	-5.2	1.65	-0.08
134	SLU 58	2	151	1617	-5.17	1.61	-0.08
134	SLU 59	2	150	1614	-5.14	1.65	-0.08
134	SLU 60	2	153	1675	-5.26	1.68	-0.08
134	SLU 61	2	153	1672	-5.24	1.72	-0.08
134	SLU 62	2	157	1690	-5.37	1.69	-0.08
134	SLU 63	2	156	1687	-5.35	1.74	-0.08
134	SLU 64	2	142	1501	-4.86	1.48	-0.07
134	SLU 65	2	141	1497	-4.83	1.55	-0.07
134	SLU 66	2	147	1523	-5.03	1.5	-0.07
134	SLU 67	2	146	1520	-5.01	1.54	-0.07
134	SLU 68	2	144	1511	-4.94	1.57	-0.07
134	SLU 69	2	150	1537	-5.14	1.51	-0.07
134	SLU 70	2	149	1535	-5.12	1.56	-0.07
134	SLU 71	2	148	1530	-5.09	1.51	-0.07
134	SLU 72	2	148	1528	-5.06	1.55	-0.07
134	SLU 73	2	162	1700	-5.57	1.79	-0.09
134	SLU 74	2	168	1726	-5.77	1.74	-0.08
134	SLU 75	2	167	1723	-5.75	1.78	-0.09
134	SLU 76	2	165	1714	-5.68	1.8	-0.09
134	SLU 77	2	171	1740	-5.88	1.75	-0.09
134	SLU 78	2	171	1738	-5.86	1.79	-0.09
134	SLU 79	2	170	1733	-5.83	1.74	-0.08
134	SLU 80	2	169	1731	-5.8	1.78	-0.09
134	SLU 81	2	172	1791	-5.92	1.82	-0.09
134	SLU 82	2	172	1789	-5.9	1.86	-0.09
134	SLU 83	2	176	1806	-6.03	1.83	-0.09
134	SLU 84	2	175	1803	-6.01	1.87	-0.09
134	SLE RA 1	1	105	1129	-3.6	1.11	-0.05
134	SLE RA 2	1	104	1126	-3.57	1.16	-0.05
134	SLE RA 3	1	108	1144	-3.71	1.12	-0.05
134	SLE RA 4	1	108	1142	-3.69	1.15	-0.05
134	SLE RA 5	1	106	1136	-3.65	1.17	-0.05
134	SLE RA 6	1	110	1153	-3.78	1.13	-0.05
134	SLE RA 7	1	110	1152	-3.77	1.16	-0.05
134	SLE RA 8	1	109	1149	-3.74	1.13	-0.05
134	SLE RA 9	1	109	1147	-3.73	1.15	-0.05
134	SLE RA 10	2	119	1262	-4.07	1.31	-0.06
134	SLE RA 11	2	122	1279	-4.2	1.28	-0.06
134	SLE RA 12	2	122	1277	-4.19	1.31	-0.06



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
134	SLE RA 13	2	121	1271	-4.14	1.32	-0.06
134	SLE RA 14	2	124	1289	-4.27	1.29	-0.06
134	SLE RA 15	2	124	1287	-4.26	1.32	-0.06
134	SLE RA 16	2	123	1284	-4.24	1.28	-0.06
134	SLE RA 17	2	123	1282	-4.22	1.31	-0.06
134	SLE RA 18	2	125	1323	-4.3	1.34	-0.07
134	SLE RA 19	2	125	1321	-4.29	1.36	-0.07
134	SLE RA 20	2	127	1332	-4.38	1.34	-0.07
134	SLE RA 21	2	127	1330	-4.36	1.37	-0.07
134	SLE FR 1	1	105	1129	-3.6	1.11	-0.05
134	SLE FR 2	1	105	1129	-3.59	1.12	-0.05
134	SLE FR 3	1	106	1133	-3.63	1.11	-0.05
134	SLE FR 4	1	111	1187	-3.8	1.19	-0.06
134	SLE FR 5	1	112	1191	-3.84	1.18	-0.06
134	SLE FR 6	1	115	1226	-3.95	1.22	-0.06
134	SLE QP 1	1	105	1129	-3.6	1.11	-0.05
134	SLE QP 2	1	111	1187	-3.81	1.18	-0.06
134	SLD 1	16	138	1036	-4.62	13.03	-0.45
134	SLD 2	16	138	1036	-4.62	13.03	-0.45
134	SLD 3	19	-34	1078	0.83	15.71	-0.55
134	SLD 4	19	-34	1078	0.83	15.71	-0.55
134	SLD 5	1	381	1079	-12.33	0.66	-0.04
134	SLD 6	1	381	1079	-12.33	0.66	-0.04
134	SLD 7	12	-194	1218	5.86	9.61	-0.34
134	SLD 8	12	-194	1218	5.86	9.61	-0.34
134	SLD 9	-9	416	1157	-13.48	-7.25	0.23
134	SLD 10	-9	416	1157	-13.48	-7.25	0.23
134	SLD 11	2	-159	1296	4.71	1.7	-0.08
134	SLD 12	2	-159	1296	4.71	1.7	-0.08
134	SLD 13	-16	257	1297	-8.45	-13.36	0.44
134	SLD 14	-16	257	1297	-8.45	-13.36	0.44
134	SLD 15	-13	84	1338	-2.99	-10.67	0.34
134	SLD 16	-13	84	1338	-2.99	-10.67	0.34
134	SLV 1	37	175	834	-5.72	30.22	-1.03
134	SLV 2	37	175	834	-5.72	30.22	-1.03
134	SLV 3	44	-228	932	7.01	36.78	-1.26
134	SLV 4	44	-228	932	7.01	36.78	-1.26
134	SLV 5	0	741	933	-23.69	-0.06	-0.01
134	SLV 6	0	741	933	-23.69	-0.06	-0.01
134	SLV 7	26	-601	1259	18.75	21.8	-0.76
134	SLV 8	26	-601	1259	18.75	21.8	-0.76
134	SLV 9	-23	824	1115	-26.36	-19.45	0.65
134	SLV 10	-23	824	1115	-26.36	-19.45	0.65
134	SLV 11	3	-519	1442	16.08	2.41	-0.11
134	SLV 12	3	-519	1442	16.08	2.41	-0.11
134	SLV 13	-42	450	1443	-14.63	-34.42	1.15
134	SLV 14	-42	450	1443	-14.63	-34.42	1.15
134	SLV 15	-34	48	1541	-1.9	-27.86	0.92
134	SLV 16	-34	48	1541	-1.9	-27.86	0.92
135	SLU 1	-21	722	2266	-31	-13.08	0
135	SLU 2	-24	805	2255	-34.06	-16.58	0
135	SLU 3	-21	744	2315	-31.96	-13.52	0
135	SLU 4	-23	794	2308	-33.79	-15.62	0
135	SLU 5	-24	817	2284	-34.59	-16.87	0
135	SLU 6	-22	756	2345	-32.48	-13.8	0
135	SLU 7	-24	806	2338	-34.32	-15.9	0
135	SLU 8	-22	746	2325	-32.06	-13.65	0
135	SLU 9	-23	796	2319	-33.89	-15.75	0
135	SLU 10	-26	919	2491	-38.81	-18.24	0
135	SLU 11	-24	858	2552	-36.71	-15.17	0
135	SLU 12	-26	908	2545	-38.54	-17.27	0
135	SLU 13	-27	931	2521	-39.34	-18.52	0
135	SLU 14	-25	870	2581	-37.23	-15.45	0
135	SLU 15	-26	920	2575	-39.07	-17.55	0
135	SLU 16	-24	860	2562	-36.81	-15.3	0
135	SLU 17	-26	910	2555	-38.64	-17.4	0
135	SLU 18	-25	884	2604	-37.79	-15.44	0
135	SLU 19	-26	934	2597	-39.62	-17.55	0
135	SLU 20	-25	896	2633	-38.32	-15.73	0
135	SLU 21	-27	946	2627	-40.15	-17.83	0
135	SLU 22	-23	828	2489	-35.48	-14.73	0
135	SLU 23	-26	912	2478	-38.54	-18.23	0
135	SLU 24	-24	851	2539	-36.44	-15.16	0
135	SLU 25	-26	901	2532	-38.27	-17.26	0
135	SLU 26	-27	924	2508	-39.07	-18.51	0
135	SLU 27	-25	863	2568	-36.96	-15.44	0
135	SLU 28	-26	913	2562	-38.8	-17.54	0
135	SLU 29	-24	853	2549	-36.53	-15.29	0
135	SLU 30	-26	903	2542	-38.37	-17.39	0
135	SLU 31	-29	1026	2715	-43.29	-19.88	0
135	SLU 32	-27	965	2775	-41.19	-16.81	0
135	SLU 33	-29	1015	2768	-43.02	-18.91	0
135	SLU 34	-29	1038	2744	-43.82	-20.16	0
135	SLU 35	-27	977	2805	-41.71	-17.1	0
135	SLU 36	-29	1027	2798	-43.55	-19.2	0
135	SLU 37	-27	966	2785	-41.28	-16.95	0
135	SLU 38	-29	1017	2779	-43.12	-19.05	0
135	SLU 39	-27	991	2827	-42.27	-17.09	0
135	SLU 40	-29	1041	2820	-44.1	-19.19	0
135	SLU 41	-28	1003	2857	-42.79	-17.37	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
135	SLU 42	-29	1053	2850	-44.63	-19.47	0
135	SLU 43	-26	901	2869	-38.77	-16.44	0
135	SLU 44	-29	985	2858	-41.83	-19.94	0
135	SLU 45	-27	924	2918	-39.72	-16.88	0
135	SLU 46	-29	974	2911	-41.56	-18.98	0
135	SLU 47	-30	997	2887	-42.35	-20.23	0
135	SLU 48	-27	936	2948	-40.25	-17.16	0
135	SLU 49	-29	986	2941	-42.09	-19.26	0
135	SLU 50	-27	926	2928	-39.82	-17.01	0
135	SLU 51	-29	976	2922	-41.66	-19.11	0
135	SLU 52	-32	1099	3094	-46.58	-21.6	0
135	SLU 53	-29	1038	3155	-44.47	-18.53	0
135	SLU 54	-31	1088	3148	-46.31	-20.63	0
135	SLU 55	-32	1111	3124	-47.1	-21.88	0
135	SLU 56	-30	1050	3185	-45	-18.81	0
135	SLU 57	-32	1100	3178	-46.84	-20.92	0
135	SLU 58	-30	1039	3165	-44.57	-18.66	0
135	SLU 59	-31	1090	3158	-46.41	-20.77	0
135	SLU 60	-30	1064	3207	-45.55	-18.81	0
135	SLU 61	-32	1114	3200	-47.39	-20.91	0
135	SLU 62	-30	1076	3237	-46.08	-19.09	0
135	SLU 63	-32	1126	3230	-47.92	-21.19	0
135	SLU 64	-29	1008	3092	-43.25	-18.09	0
135	SLU 65	-32	1092	3081	-46.3	-21.59	0
135	SLU 66	-29	1030	3142	-44.2	-18.52	0
135	SLU 67	-31	1081	3135	-46.04	-20.62	0
135	SLU 68	-32	1104	3111	-46.83	-21.87	0
135	SLU 69	-30	1043	3171	-44.73	-18.8	0
135	SLU 70	-32	1093	3165	-46.56	-20.9	0
135	SLU 71	-30	1032	3152	-44.3	-18.65	0
135	SLU 72	-31	1083	3145	-46.13	-20.75	0
135	SLU 73	-34	1206	3318	-51.06	-23.24	0
135	SLU 74	-32	1144	3378	-48.95	-20.17	0
135	SLU 75	-34	1195	3372	-50.79	-22.28	0
135	SLU 76	-35	1218	3347	-51.58	-23.53	0
135	SLU 77	-33	1156	3408	-49.48	-20.46	0
135	SLU 78	-34	1207	3401	-51.31	-22.56	0
135	SLU 79	-32	1146	3388	-49.05	-20.31	0
135	SLU 80	-34	1196	3382	-50.89	-22.41	0
135	SLU 81	-33	1171	3430	-50.03	-20.45	0
135	SLU 82	-34	1221	3424	-51.87	-22.55	0
135	SLU 83	-33	1183	3460	-50.56	-20.73	0
135	SLU 84	-35	1233	3453	-52.39	-22.83	0
135	SLE RA 1	-22	752	2330	-32.28	-13.55	0
135	SLE RA 2	-24	808	2322	-34.32	-15.89	0
135	SLE RA 3	-22	767	2362	-32.92	-13.84	0
135	SLE RA 4	-23	800	2358	-34.14	-15.24	0
135	SLE RA 5	-24	816	2342	-34.67	-16.08	0
135	SLE RA 6	-22	775	2382	-33.27	-14.03	0
135	SLE RA 7	-23	808	2378	-34.49	-15.43	0
135	SLE RA 8	-22	768	2369	-32.98	-13.93	0
135	SLE RA 9	-23	802	2365	-34.21	-15.33	0
135	SLE RA 10	-25	884	2480	-37.49	-16.99	0
135	SLE RA 11	-24	843	2520	-36.09	-14.94	0
135	SLE RA 12	-25	876	2516	-37.31	-16.34	0
135	SLE RA 13	-26	892	2500	-37.84	-17.18	0
135	SLE RA 14	-24	851	2540	-36.44	-15.13	0
135	SLE RA 15	-25	884	2536	-37.66	-16.53	0
135	SLE RA 16	-24	844	2527	-36.15	-15.03	0
135	SLE RA 17	-25	878	2523	-37.37	-16.43	0
135	SLE RA 18	-24	861	2555	-36.81	-15.13	0
135	SLE RA 19	-25	894	2550	-38.03	-16.53	0
135	SLE RA 20	-24	869	2575	-37.16	-15.32	0
135	SLE RA 21	-26	902	2570	-38.38	-16.72	0
135	SLE FR 1	-22	752	2330	-32.28	-13.55	0
135	SLE FR 2	-22	763	2328	-32.69	-14.02	0
135	SLE FR 3	-22	755	2337	-32.42	-13.63	0
135	SLE FR 4	-23	796	2396	-34.05	-14.49	0
135	SLE FR 5	-22	788	2405	-33.78	-14.1	0
135	SLE FR 6	-23	806	2442	-34.54	-14.34	0
135	SLE QP 1	-22	752	2330	-32.28	-13.55	0
135	SLE QP 2	-22	785	2397	-33.64	-14.02	0
135	SLD 1	-36	1329	3143	-56.58	-26.17	0.02
135	SLD 2	-36	1329	3143	-56.58	-26.17	0.02
135	SLD 3	-31	882	3036	-37.84	-21.48	0.01
135	SLD 4	-31	882	3036	-37.84	-21.48	0.01
135	SLD 5	-35	1626	2784	-68.96	-24.78	0.01
135	SLD 6	-35	1626	2784	-68.96	-24.78	0.01
135	SLD 7	-17	136	2426	-6.46	-9.15	0
135	SLD 8	-17	136	2426	-6.46	-9.15	0
135	SLD 9	-28	1433	2368	-60.81	-18.9	0.01
135	SLD 10	-28	1433	2368	-60.81	-18.9	0.01
135	SLD 11	-10	-57	2011	1.68	-3.27	-0.01
135	SLD 12	-10	-57	2011	1.68	-3.27	-0.01
135	SLD 13	-14	687	1758	-29.44	-6.57	-0.01
135	SLD 14	-14	687	1758	-29.44	-6.57	-0.01
135	SLD 15	-9	240	1651	-10.69	-1.88	-0.01
135	SLD 16	-9	240	1651	-10.69	-1.88	-0.01
135	SLV 1	-55	2048	4152	-86.85	-43.18	0.03
135	SLV 2	-55	2048	4152	-86.85	-43.18	0.03



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
135	SLV 3	-42	1014	3881	-43.52	-31.22	0.02
135	SLV 4	-42	1014	3881	-43.52	-31.22	0.02
135	SLV 5	-53	2732	3334	-115.31	-40.91	0.03
135	SLV 6	-53	2732	3334	-115.31	-40.91	0.03
135	SLV 7	-7	-715	2432	29.1	-1.05	-0.01
135	SLV 8	-7	-715	2432	29.1	-1.05	-0.01
135	SLV 9	-37	2284	2363	-96.38	-27	0.01
135	SLV 10	-37	2284	2363	-96.38	-27	0.01
135	SLV 11	8	-1163	1460	48.03	12.86	-0.02
135	SLV 12	8	-1163	1460	48.03	12.86	-0.02
135	SLV 13	-3	555	913	-23.76	3.17	-0.02
135	SLV 14	-3	555	913	-23.76	3.17	-0.02
135	SLV 15	11	-479	642	19.57	15.13	-0.03
135	SLV 16	11	-479	642	19.57	15.13	-0.03
136	SLU 1	0	-75	3418	-2.07	0.37	0
136	SLU 2	0	179	3409	-14.8	0.81	0
136	SLU 3	0	-75	3522	-2.21	0.38	0
136	SLU 4	0	77	3517	-9.85	0.64	0
136	SLU 5	0	179	3475	-14.92	0.82	0
136	SLU 6	0	-74	3589	-2.33	0.39	0
136	SLU 7	0	78	3583	-9.97	0.65	0
136	SLU 8	0	-74	3551	-2.31	0.38	0
136	SLU 9	0	78	3545	-9.95	0.65	0
136	SLU 10	0	182	3936	-15.48	0.87	0
136	SLU 11	0	-72	4050	-2.89	0.44	0
136	SLU 12	0	80	4044	-10.53	0.7	0
136	SLU 13	0	182	4002	-15.6	0.87	0
136	SLU 14	0	-72	4116	-3.01	0.45	0
136	SLU 15	0	81	4110	-10.65	0.71	0
136	SLU 16	0	-71	4079	-2.99	0.44	0
136	SLU 17	0	81	4073	-10.63	0.71	0
136	SLU 18	0	-71	4172	-3.04	0.45	0
136	SLU 19	0	81	4166	-10.68	0.72	0
136	SLU 20	0	-70	4238	-3.16	0.46	0
136	SLU 21	0	82	4232	-10.8	0.72	0
136	SLU 22	0	-74	3910	-2.66	0.42	0
136	SLU 23	0	180	3901	-15.4	0.86	0
136	SLU 24	0	-74	4014	-2.81	0.44	0
136	SLU 25	0	78	4009	-10.44	0.7	0
136	SLU 26	0	180	3967	-15.52	0.87	0
136	SLU 27	0	-74	4081	-2.93	0.44	0
136	SLU 28	0	79	4075	-10.56	0.71	0
136	SLU 29	0	-73	4043	-2.91	0.44	0
136	SLU 30	0	79	4038	-10.54	0.7	0
136	SLU 31	0	182	4428	-16.08	0.92	0
136	SLU 32	0	-71	4542	-3.49	0.5	0
136	SLU 33	0	81	4536	-11.13	0.76	0
136	SLU 34	0	183	4494	-16.2	0.93	0
136	SLU 35	0	-71	4608	-3.61	0.5	0
136	SLU 36	0	81	4602	-11.25	0.77	0
136	SLU 37	0	-70	4571	-3.59	0.5	0
136	SLU 38	0	82	4565	-11.23	0.76	0
136	SLU 39	0	-70	4664	-3.64	0.51	0
136	SLU 40	0	82	4658	-11.28	0.77	0
136	SLU 41	0	-70	4730	-3.76	0.52	0
136	SLU 42	0	82	4724	-11.4	0.78	0
136	SLU 43	0	-97	4275	-2.48	0.46	0
136	SLU 44	0	156	4265	-15.22	0.9	0
136	SLU 45	0	-97	4379	-2.62	0.47	0
136	SLU 46	0	55	4373	-10.26	0.74	0
136	SLU 47	0	157	4332	-15.34	0.91	0
136	SLU 48	0	-97	4446	-2.74	0.48	0
136	SLU 49	0	55	4440	-10.38	0.74	0
136	SLU 50	0	-96	4408	-2.72	0.47	0
136	SLU 51	0	56	4402	-10.36	0.74	0
136	SLU 52	1	159	4793	-15.9	0.96	0
136	SLU 53	0	-95	4907	-3.31	0.53	0
136	SLU 54	0	57	4901	-10.94	0.8	0
136	SLU 55	1	159	4859	-16.02	0.97	0
136	SLU 56	0	-94	4973	-3.43	0.54	0
136	SLU 57	0	58	4967	-11.06	0.8	0
136	SLU 58	0	-94	4936	-3.41	0.53	0
136	SLU 59	0	58	4930	-11.04	0.8	0
136	SLU 60	0	-94	5029	-3.46	0.54	0
136	SLU 61	0	59	5023	-11.1	0.81	0
136	SLU 62	0	-93	5095	-3.58	0.55	0
136	SLU 63	0	59	5089	-11.22	0.81	0
136	SLU 64	0	-97	4767	-3.08	0.51	0
136	SLU 65	1	157	4757	-15.81	0.95	0
136	SLU 66	0	-97	4871	-3.22	0.53	0
136	SLU 67	0	55	4865	-10.86	0.79	0
136	SLU 68	1	158	4824	-15.93	0.96	0
136	SLU 69	0	-96	4938	-3.34	0.53	0
136	SLU 70	0	56	4932	-10.98	0.8	0
136	SLU 71	0	-96	4900	-3.32	0.53	0
136	SLU 72	0	56	4894	-10.96	0.79	0
136	SLU 73	1	160	5285	-16.49	1.01	0
136	SLU 74	0	-94	5399	-3.9	0.59	0
136	SLU 75	0	58	5393	-11.54	0.85	0
136	SLU 76	1	160	5351	-16.61	1.02	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
136	SLU 77	0	-94	5465	-4.02	0.59	0
136	SLU 78	0	59	5459	-11.66	0.86	0
136	SLU 79	0	-93	5428	-4	0.59	0
136	SLU 80	0	59	5422	-11.64	0.85	0
136	SLU 81	0	-93	5521	-4.05	0.6	0
136	SLU 82	0	59	5515	-11.69	0.86	0
136	SLU 83	0	-92	5587	-4.17	0.61	0
136	SLU 84	0	60	5581	-11.81	0.87	0
136	SLE RA 1	0	-74	3559	-2.24	0.38	0
136	SLE RA 2	0	95	3552	-10.73	0.68	0
136	SLE RA 3	0	-75	3628	-2.33	0.39	0
136	SLE RA 4	0	27	3624	-7.42	0.57	0
136	SLE RA 5	0	95	3597	-10.81	0.68	0
136	SLE RA 6	0	-74	3673	-2.41	0.4	0
136	SLE RA 7	0	27	3669	-7.5	0.57	0
136	SLE RA 8	0	-74	3648	-2.4	0.39	0
136	SLE RA 9	0	28	3644	-7.49	0.57	0
136	SLE RA 10	0	96	3904	-11.18	0.72	0
136	SLE RA 11	0	-73	3980	-2.79	0.43	0
136	SLE RA 12	0	29	3976	-7.88	0.61	0
136	SLE RA 13	0	97	3948	-11.26	0.72	0
136	SLE RA 14	0	-73	4024	-2.87	0.44	0
136	SLE RA 15	0	29	4020	-7.96	0.61	0
136	SLE RA 16	0	-72	3999	-2.85	0.43	0
136	SLE RA 17	0	29	3995	-7.95	0.61	0
136	SLE RA 18	0	-72	4061	-2.89	0.44	0
136	SLE RA 19	0	30	4057	-7.98	0.62	0
136	SLE RA 20	0	-72	4106	-2.97	0.44	0
136	SLE RA 21	0	30	4102	-8.06	0.62	0
136	SLE FR 1	0	-74	3559	-2.24	0.38	0
136	SLE FR 2	0	-41	3558	-3.94	0.44	0
136	SLE FR 3	0	-74	3577	-2.27	0.38	0
136	SLE FR 4	0	-40	3708	-4.13	0.46	0
136	SLE FR 5	0	-74	3727	-2.47	0.4	0
136	SLE FR 6	0	-73	3810	-2.56	0.41	0
136	SLE QP 1	0	-74	3559	-2.24	0.38	0
136	SLE QP 2	0	-74	3710	-2.43	0.4	0
136	SLD 1	12	324	3842	-2.99	10.7	0.01
136	SLD 2	12	324	3842	-2.99	10.7	0.01
136	SLD 3	7	-78	3776	16.34	6.3	0.01
136	SLD 4	7	-78	3776	16.34	6.3	0.01
136	SLD 5	12	655	3850	-31.91	10.16	0.01
136	SLD 6	12	655	3850	-31.91	10.16	0.01
136	SLD 7	-6	-685	3629	32.51	-4.5	0
136	SLD 8	-6	-685	3629	32.51	-4.5	0
136	SLD 9	6	537	3791	-37.38	5.3	0
136	SLD 10	6	537	3791	-37.38	5.3	0
136	SLD 11	-11	-803	3569	27.04	-9.36	-0.01
136	SLD 12	-11	-803	3569	27.04	-9.36	-0.01
136	SLD 13	-6	-69	3643	-21.21	-5.5	0
136	SLD 14	-6	-69	3643	-21.21	-5.5	0
136	SLD 15	-12	-471	3577	-1.88	-9.9	-0.01
136	SLD 16	-12	-471	3577	-1.88	-9.9	-0.01
136	SLV 1	29	878	4025	-3.95	25.5	0.02
136	SLV 2	29	878	4025	-3.95	25.5	0.02
136	SLV 3	16	-90	3862	42.66	14.46	0.01
136	SLV 4	16	-90	3862	42.66	14.46	0.01
136	SLV 5	29	1680	4051	-73.57	24.67	0.01
136	SLV 6	29	1680	4051	-73.57	24.67	0.01
136	SLV 7	-15	-1547	3508	81.78	-12.12	0
136	SLV 8	-15	-1547	3508	81.78	-12.12	0
136	SLV 9	15	1399	3911	-86.65	12.92	0
136	SLV 10	15	1399	3911	-86.65	12.92	0
136	SLV 11	-28	-1827	3368	68.71	-23.87	-0.01
136	SLV 12	-28	-1827	3368	68.71	-23.87	-0.01
136	SLV 13	-15	-58	3557	-47.53	-13.66	-0.01
136	SLV 14	-15	-58	3557	-47.53	-13.66	-0.01
136	SLV 15	-28	-1026	3395	-0.92	-24.7	-0.02
136	SLV 16	-28	-1026	3395	-0.92	-24.7	-0.02
137	SLU 1	5	-392	4178	16	3.65	0.08
137	SLU 2	5	-410	4189	16.66	3.69	0.08
137	SLU 3	5	-400	4311	16.39	3.76	0.08
137	SLU 4	5	-411	4318	16.78	3.79	0.08
137	SLU 5	5	-415	4278	16.92	3.76	0.08
137	SLU 6	5	-406	4401	16.65	3.84	0.08
137	SLU 7	5	-417	4408	17.04	3.86	0.08
137	SLU 8	5	-403	4358	16.53	3.8	0.08
137	SLU 9	5	-414	4364	16.92	3.83	0.08
137	SLU 10	6	-461	4838	18.86	4.31	0.09
137	SLU 11	6	-451	4961	18.59	4.39	0.09
137	SLU 12	6	-462	4967	18.98	4.41	0.09
137	SLU 13	6	-467	4928	19.13	4.39	0.09
137	SLU 14	6	-457	5051	18.86	4.47	0.09
137	SLU 15	6	-468	5057	19.25	4.49	0.09
137	SLU 16	6	-455	5008	18.74	4.43	0.09
137	SLU 17	6	-465	5014	19.13	4.45	0.09
137	SLU 18	6	-465	5106	19.16	4.55	0.09
137	SLU 19	6	-475	5112	19.55	4.57	0.09
137	SLU 20	6	-471	5196	19.42	4.62	0.09
137	SLU 21	6	-481	5202	19.81	4.64	0.1



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
137	SLU 22	5	-428	4719	17.63	4.14	0.09
137	SLU 23	5	-446	4729	18.28	4.17	0.09
137	SLU 24	6	-436	4852	18.01	4.25	0.09
137	SLU 25	6	-447	4858	18.4	4.27	0.09
137	SLU 26	6	-452	4819	18.54	4.25	0.09
137	SLU 27	6	-442	4942	18.27	4.33	0.09
137	SLU 28	6	-453	4948	18.66	4.35	0.09
137	SLU 29	6	-440	4899	18.15	4.29	0.09
137	SLU 30	6	-451	4905	18.55	4.31	0.09
137	SLU 31	6	-497	5379	20.48	4.8	0.1
137	SLU 32	6	-488	5502	20.21	4.88	0.1
137	SLU 33	6	-498	5508	20.61	4.9	0.1
137	SLU 34	6	-503	5469	20.75	4.88	0.1
137	SLU 35	6	-494	5592	20.48	4.95	0.1
137	SLU 36	7	-504	5598	20.87	4.98	0.1
137	SLU 37	6	-491	5549	20.36	4.92	0.1
137	SLU 38	6	-502	5555	20.75	4.94	0.1
137	SLU 39	7	-501	5647	20.78	5.03	0.1
137	SLU 40	7	-512	5653	21.17	5.05	0.1
137	SLU 41	7	-507	5737	21.04	5.11	0.1
137	SLU 42	7	-518	5743	21.43	5.13	0.11
137	SLU 43	6	-496	5246	20.25	4.58	0.09
137	SLU 44	6	-514	5257	20.9	4.62	0.1
137	SLU 45	6	-505	5380	20.63	4.69	0.1
137	SLU 46	6	-516	5386	21.02	4.72	0.1
137	SLU 47	6	-520	5347	21.17	4.69	0.1
137	SLU 48	6	-511	5470	20.9	4.77	0.1
137	SLU 49	6	-522	5476	21.29	4.79	0.1
137	SLU 50	6	-508	5426	20.78	4.73	0.1
137	SLU 51	6	-519	5432	21.17	4.76	0.1
137	SLU 52	7	-566	5906	23.11	5.24	0.11
137	SLU 53	7	-556	6029	22.84	5.32	0.11
137	SLU 54	7	-567	6035	23.23	5.34	0.11
137	SLU 55	7	-572	5996	23.37	5.32	0.11
137	SLU 56	7	-562	6119	23.1	5.4	0.11
137	SLU 57	7	-573	6125	23.49	5.42	0.11
137	SLU 58	7	-559	6076	22.98	5.36	0.11
137	SLU 59	7	-570	6082	23.38	5.38	0.11
137	SLU 60	7	-570	6174	23.4	5.47	0.11
137	SLU 61	7	-580	6181	23.79	5.5	0.11
137	SLU 62	7	-576	6264	23.67	5.55	0.11
137	SLU 63	7	-586	6271	24.06	5.57	0.11
137	SLU 64	7	-533	5787	21.87	5.07	0.1
137	SLU 65	7	-551	5797	22.52	5.1	0.11
137	SLU 66	7	-541	5920	22.25	5.18	0.11
137	SLU 67	7	-552	5926	22.64	5.2	0.11
137	SLU 68	7	-557	5887	22.79	5.18	0.11
137	SLU 69	7	-547	6010	22.52	5.26	0.11
137	SLU 70	7	-558	6016	22.91	5.28	0.11
137	SLU 71	7	-545	5967	22.4	5.22	0.11
137	SLU 72	7	-556	5973	22.79	5.24	0.11
137	SLU 73	7	-602	6447	24.73	5.73	0.12
137	SLU 74	8	-593	6570	24.46	5.81	0.12
137	SLU 75	8	-603	6576	24.85	5.83	0.12
137	SLU 76	8	-608	6537	24.99	5.8	0.12
137	SLU 77	8	-599	6660	24.72	5.88	0.12
137	SLU 78	8	-609	6666	25.12	5.9	0.12
137	SLU 79	8	-596	6617	24.61	5.85	0.12
137	SLU 80	8	-607	6623	25	5.87	0.12
137	SLU 81	8	-606	6715	25.02	5.96	0.12
137	SLU 82	8	-617	6721	25.41	5.98	0.12
137	SLU 83	8	-612	6805	25.29	6.04	0.12
137	SLU 84	8	-623	6811	25.68	6.06	0.12
137	SLE RA 1	5	-402	4333	16.47	3.79	0.08
137	SLE RA 2	5	-414	4340	16.9	3.81	0.08
137	SLE RA 3	5	-408	4422	16.72	3.87	0.08
137	SLE RA 4	5	-415	4426	16.98	3.88	0.08
137	SLE RA 5	5	-418	4400	17.08	3.87	0.08
137	SLE RA 6	5	-412	4482	16.9	3.92	0.08
137	SLE RA 7	5	-419	4486	17.16	3.93	0.08
137	SLE RA 8	5	-410	4453	16.82	3.89	0.08
137	SLE RA 9	5	-417	4457	17.08	3.91	0.08
137	SLE RA 10	6	-448	4773	18.37	4.23	0.09
137	SLE RA 11	6	-442	4855	18.19	4.28	0.09
137	SLE RA 12	6	-449	4859	18.45	4.3	0.09
137	SLE RA 13	6	-452	4833	18.55	4.28	0.09
137	SLE RA 14	6	-446	4915	18.37	4.33	0.09
137	SLE RA 15	6	-453	4919	18.63	4.35	0.09
137	SLE RA 16	6	-444	4886	18.29	4.31	0.09
137	SLE RA 17	6	-451	4890	18.55	4.32	0.09
137	SLE RA 18	6	-451	4951	18.57	4.39	0.09
137	SLE RA 19	6	-458	4956	18.83	4.4	0.09
137	SLE RA 20	6	-455	5011	18.75	4.44	0.09
137	SLE RA 21	6	-462	5016	19.01	4.45	0.09
137	SLE FR 1	5	-402	4333	16.47	3.79	0.08
137	SLE FR 2	5	-404	4334	16.55	3.8	0.08
137	SLE FR 3	5	-404	4357	16.54	3.81	0.08
137	SLE FR 4	5	-419	4520	17.18	3.97	0.08
137	SLE FR 5	5	-418	4542	17.17	3.99	0.08
137	SLE FR 6	5	-426	4642	17.52	4.09	0.08



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
137	SLE QP 1	5	-402	4333	16.47	3.79	0.08
137	SLE QP 2	5	-417	4518	17.1	3.97	0.08
137	SLD 1	18	-362	3743	14.87	15.28	0.24
137	SLD 2	18	-362	3743	14.87	15.28	0.24
137	SLD 3	22	-757	4105	31.07	17.95	0.28
137	SLD 4	22	-757	4105	31.07	17.95	0.28
137	SLD 5	4	199	3736	-8.15	3.33	0.07
137	SLD 6	4	199	3736	-8.15	3.33	0.07
137	SLD 7	15	-1118	4944	45.86	12.2	0.2
137	SLD 8	15	-1118	4944	45.86	12.2	0.2
137	SLD 9	-5	285	4093	-11.67	-4.26	-0.04
137	SLD 10	-5	285	4093	-11.67	-4.26	-0.04
137	SLD 11	6	-1032	5301	42.34	4.61	0.09
137	SLD 12	6	-1032	5301	42.34	4.61	0.09
137	SLD 13	-11	-76	4932	3.13	-10.01	-0.12
137	SLD 14	-11	-76	4932	3.13	-10.01	-0.12
137	SLD 15	-8	-472	5294	19.33	-7.35	-0.08
137	SLD 16	-8	-472	5294	19.33	-7.35	-0.08
137	SLV 1	37	-291	2702	12	31.65	0.47
137	SLV 2	37	-291	2702	12	31.65	0.47
137	SLV 3	45	-1210	3549	49.7	38.12	0.57
137	SLV 4	45	-1210	3549	49.7	38.12	0.57
137	SLV 5	3	1015	2688	-41.61	2.46	0.06
137	SLV 6	3	1015	2688	-41.61	2.46	0.06
137	SLV 7	29	-2049	5514	84.06	24.03	0.37
137	SLV 8	29	-2049	5514	84.06	24.03	0.37
137	SLV 9	-19	1216	3523	-49.86	-16.09	-0.2
137	SLV 10	-19	1216	3523	-49.86	-16.09	-0.2
137	SLV 11	8	-1848	6349	75.81	5.48	0.1
137	SLV 12	8	-1848	6349	75.81	5.48	0.1
137	SLV 13	-35	377	5487	-15.51	-30.18	-0.4
137	SLV 14	-35	377	5487	-15.51	-30.18	-0.4
137	SLV 15	-27	-542	6335	22.19	-23.71	-0.31
137	SLV 16	-27	-542	6335	22.19	-23.71	-0.31
138	SLU 1	0	-49	3729	-3.32	-0.3	0
138	SLU 2	0	191	3705	-15.63	-0.85	0
138	SLU 3	0	-50	3839	-3.44	-0.32	0
138	SLU 4	0	94	3824	-10.83	-0.64	0
138	SLU 5	0	190	3773	-15.7	-0.86	0
138	SLU 6	0	-51	3906	-3.51	-0.32	0
138	SLU 7	0	93	3892	-10.9	-0.65	0
138	SLU 8	0	-51	3865	-3.46	-0.32	0
138	SLU 9	0	93	3851	-10.84	-0.65	0
138	SLU 10	0	200	4320	-16.64	-0.9	0
138	SLU 11	0	-41	4453	-4.45	-0.37	0
138	SLU 12	0	103	4439	-11.84	-0.69	0
138	SLU 13	0	199	4388	-16.71	-0.91	0
138	SLU 14	0	-42	4521	-4.52	-0.37	0
138	SLU 15	0	102	4507	-11.91	-0.7	0
138	SLU 16	0	-42	4479	-4.47	-0.37	0
138	SLU 17	0	102	4465	-11.86	-0.7	0
138	SLU 18	0	-36	4607	-4.77	-0.37	0
138	SLU 19	0	108	4593	-12.15	-0.7	0
138	SLU 20	0	-37	4675	-4.84	-0.38	0
138	SLU 21	0	107	4661	-12.22	-0.71	0
138	SLU 22	0	-44	4301	-4.18	-0.35	0
138	SLU 23	0	196	4277	-16.48	-0.9	0
138	SLU 24	0	-45	4411	-4.3	-0.36	0
138	SLU 25	0	99	4396	-11.68	-0.69	0
138	SLU 26	0	195	4345	-16.55	-0.9	0
138	SLU 27	0	-46	4478	-4.37	-0.37	0
138	SLU 28	0	98	4464	-11.75	-0.7	0
138	SLU 29	0	-46	4437	-4.32	-0.37	0
138	SLU 30	0	98	4423	-11.7	-0.69	0
138	SLU 31	0	206	4892	-17.5	-0.95	0
138	SLU 32	0	-35	5025	-5.31	-0.41	0
138	SLU 33	0	109	5011	-12.69	-0.74	0
138	SLU 34	0	205	4960	-17.57	-0.95	0
138	SLU 35	0	-36	5093	-5.38	-0.42	0
138	SLU 36	0	108	5079	-12.76	-0.75	0
138	SLU 37	0	-36	5051	-5.33	-0.42	0
138	SLU 38	0	108	5037	-12.71	-0.74	0
138	SLU 39	0	-30	5179	-5.62	-0.42	0
138	SLU 40	0	114	5165	-13.01	-0.75	0
138	SLU 41	0	-31	5247	-5.69	-0.43	0
138	SLU 42	0	113	5233	-13.08	-0.76	0
138	SLU 43	0	-66	4652	-4.03	-0.38	0
138	SLU 44	0	174	4628	-16.33	-0.92	0
138	SLU 45	0	-67	4761	-4.15	-0.39	0
138	SLU 46	0	77	4747	-11.53	-0.72	0
138	SLU 47	0	173	4696	-16.4	-0.93	0
138	SLU 48	0	-68	4829	-4.21	-0.4	0
138	SLU 49	0	76	4815	-11.6	-0.73	0
138	SLU 50	0	-68	4787	-4.16	-0.4	0
138	SLU 51	0	76	4773	-11.55	-0.72	0
138	SLU 52	0	183	5243	-17.34	-0.97	0
138	SLU 53	0	-58	5376	-5.16	-0.44	0
138	SLU 54	0	86	5362	-12.54	-0.77	0
138	SLU 55	0	182	5310	-17.41	-0.98	0
138	SLU 56	0	-59	5444	-5.23	-0.45	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
138	SLU 57	0	85	5429	-12.61	-0.78	0
138	SLU 58	0	-59	5402	-5.18	-0.45	0
138	SLU 59	0	85	5388	-12.56	-0.77	0
138	SLU 60	0	-53	5530	-5.47	-0.45	0
138	SLU 61	0	91	5515	-12.85	-0.78	0
138	SLU 62	0	-54	5597	-5.54	-0.46	0
138	SLU 63	0	90	5583	-12.92	-0.79	0
138	SLU 64	0	-60	5224	-4.88	-0.42	0
138	SLU 65	0	179	5200	-17.19	-0.97	0
138	SLU 66	0	-61	5333	-5	-0.44	0
138	SLU 67	0	83	5319	-12.38	-0.76	0
138	SLU 68	0	179	5268	-17.26	-0.98	0
138	SLU 69	0	-62	5401	-5.07	-0.44	0
138	SLU 70	0	82	5387	-12.45	-0.77	0
138	SLU 71	0	-62	5359	-5.02	-0.44	0
138	SLU 72	0	82	5345	-12.4	-0.77	0
138	SLU 73	-1	189	5815	-18.2	-1.02	0
138	SLU 74	0	-52	5948	-6.01	-0.49	0
138	SLU 75	0	92	5934	-13.4	-0.81	0
138	SLU 76	-1	188	5882	-18.27	-1.03	0
138	SLU 77	0	-53	6016	-6.08	-0.49	0
138	SLU 78	0	91	6001	-13.47	-0.82	0
138	SLU 79	0	-53	5974	-6.03	-0.49	0
138	SLU 80	0	91	5960	-13.42	-0.82	0
138	SLU 81	0	-47	6102	-6.33	-0.49	0
138	SLU 82	0	97	6087	-13.71	-0.82	0
138	SLU 83	0	-48	6169	-6.4	-0.5	0
138	SLU 84	0	96	6155	-13.78	-0.83	0
138	SLE RA 1	0	-48	3893	-3.57	-0.31	0
138	SLE RA 2	0	112	3877	-11.77	-0.68	0
138	SLE RA 3	0	-48	3966	-3.65	-0.32	0
138	SLE RA 4	0	48	3956	-8.57	-0.54	0
138	SLE RA 5	0	112	3922	-11.82	-0.69	0
138	SLE RA 6	0	-49	4011	-3.69	-0.33	0
138	SLE RA 7	0	47	4001	-8.62	-0.55	0
138	SLE RA 8	0	-49	3983	-3.66	-0.33	0
138	SLE RA 9	0	47	3974	-8.58	-0.55	0
138	SLE RA 10	0	118	4286	-12.45	-0.71	0
138	SLE RA 11	0	-42	4375	-4.32	-0.36	0
138	SLE RA 12	0	54	4366	-9.24	-0.58	0
138	SLE RA 13	0	118	4332	-12.49	-0.72	0
138	SLE RA 14	0	-43	4420	-4.37	-0.36	0
138	SLE RA 15	0	53	4411	-9.29	-0.58	0
138	SLE RA 16	0	-43	4393	-4.33	-0.36	0
138	SLE RA 17	0	53	4383	-9.26	-0.58	0
138	SLE RA 18	0	-39	4478	-4.53	-0.36	0
138	SLE RA 19	0	57	4468	-9.45	-0.58	0
138	SLE RA 20	0	-39	4523	-4.58	-0.37	0
138	SLE RA 21	0	57	4514	-9.5	-0.59	0
138	SLE FR 1	0	-48	3893	-3.57	-0.31	0
138	SLE FR 2	0	-16	3889	-5.21	-0.39	0
138	SLE FR 3	0	-48	3911	-3.58	-0.32	0
138	SLE FR 4	0	-13	4065	-5.5	-0.4	0
138	SLE FR 5	0	-45	4086	-3.87	-0.33	0
138	SLE FR 6	0	-43	4185	-4.05	-0.34	0
138	SLE QP 1	0	-48	3893	-3.57	-0.31	0
138	SLE QP 2	0	-45	4068	-3.86	-0.33	0
138	SLD 1	7	-2	4205	-5.91	6.11	0
138	SLD 2	7	-2	4205	-5.91	6.11	0
138	SLD 3	12	-379	4089	12.38	9.94	0.01
138	SLD 4	12	-379	4089	12.38	9.94	0.01
138	SLD 5	-5	540	4284	-32.2	-4.21	0
138	SLD 6	-5	540	4284	-32.2	-4.21	0
138	SLD 7	10	-718	3899	28.75	8.56	0.01
138	SLD 8	10	-718	3899	28.75	8.56	0.01
138	SLD 9	-10	628	4237	-36.46	-9.22	-0.01
138	SLD 10	-10	628	4237	-36.46	-9.22	-0.01
138	SLD 11	4	-630	3852	24.49	3.55	0
138	SLD 12	4	-630	3852	24.49	3.55	0
138	SLD 13	-12	289	4047	-20.09	-10.59	-0.01
138	SLD 14	-12	289	4047	-20.09	-10.59	-0.01
138	SLD 15	-8	-88	3931	-1.81	-6.76	-0.01
138	SLD 16	-8	-88	3931	-1.81	-6.76	-0.01
138	SLV 1	17	58	4396	-8.8	15.12	0.01
138	SLV 2	17	58	4396	-8.8	15.12	0.01
138	SLV 3	28	-842	4118	34.9	24.64	0.02
138	SLV 4	28	-842	4118	34.9	24.64	0.02
138	SLV 5	-11	1351	4589	-71.61	-10.14	-0.01
138	SLV 6	-11	1351	4589	-71.61	-10.14	-0.01
138	SLV 7	25	-1649	3661	74.04	21.61	0.01
138	SLV 8	25	-1649	3661	74.04	21.61	0.01
138	SLV 9	-25	1559	4475	-81.75	-22.27	-0.02
138	SLV 10	-25	1559	4475	-81.75	-22.27	-0.02
138	SLV 11	11	-1441	3548	63.9	9.48	0.01
138	SLV 12	11	-1441	3548	63.9	9.48	0.01
138	SLV 13	-29	752	4018	-42.61	-25.3	-0.02
138	SLV 14	-29	752	4018	-42.61	-25.3	-0.02
138	SLV 15	-18	-148	3740	1.09	-15.77	-0.01
138	SLV 16	-18	-148	3740	1.09	-15.77	-0.01
139	SLU 1	1	298	5740	-14.62	0.71	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
139	SLU 2	3	343	5968	-17.01	5.34	0
139	SLU 3	1	309	5911	-15.15	0.72	0
139	SLU 4	2	336	6048	-16.58	3.5	0
139	SLU 5	3	349	6078	-17.29	5.35	0
139	SLU 6	1	316	6021	-15.43	0.73	0
139	SLU 7	2	342	6158	-16.86	3.5	0
139	SLU 8	1	310	5959	-15.19	0.72	0
139	SLU 9	2	337	6096	-16.62	3.5	0
139	SLU 10	3	400	6660	-19.6	5.4	0
139	SLU 11	1	367	6603	-17.74	0.78	0
139	SLU 12	2	393	6740	-19.17	3.56	0
139	SLU 13	3	406	6770	-19.89	5.4	0
139	SLU 14	1	373	6713	-18.02	0.78	0
139	SLU 15	2	399	6850	-19.46	3.56	0
139	SLU 16	1	368	6651	-17.79	0.78	0
139	SLU 17	2	394	6788	-19.22	3.56	0
139	SLU 18	1	380	6729	-18.33	0.79	0
139	SLU 19	2	407	6866	-19.76	3.57	0
139	SLU 20	1	386	6838	-18.61	0.8	0
139	SLU 21	2	413	6975	-20.04	3.58	0
139	SLU 22	1	352	6414	-17.07	0.77	0
139	SLU 23	3	396	6642	-19.45	5.4	0
139	SLU 24	1	363	6585	-17.59	0.78	0
139	SLU 25	2	390	6722	-19.02	3.56	0
139	SLU 26	3	402	6752	-19.74	5.4	0
139	SLU 27	1	369	6695	-17.87	0.78	0
139	SLU 28	2	396	6832	-19.31	3.56	0
139	SLU 29	1	364	6633	-17.64	0.78	0
139	SLU 30	2	391	6770	-19.07	3.56	0
139	SLU 31	4	453	7334	-22.05	5.46	0
139	SLU 32	1	420	7277	-20.18	0.84	0
139	SLU 33	2	447	7414	-21.62	3.61	0
139	SLU 34	4	460	7444	-22.33	5.46	0
139	SLU 35	1	426	7387	-20.47	0.84	0
139	SLU 36	2	453	7524	-21.9	3.62	0
139	SLU 37	1	421	7325	-20.23	0.84	0
139	SLU 38	2	448	7462	-21.66	3.62	0
139	SLU 39	1	433	7403	-20.77	0.85	0
139	SLU 40	2	460	7540	-22.2	3.63	0
139	SLU 41	1	439	7512	-21.06	0.86	0
139	SLU 42	2	466	7649	-22.49	3.63	0
139	SLU 43	1	369	7231	-18.17	0.9	0
139	SLU 44	4	414	7459	-20.56	5.53	0
139	SLU 45	1	380	7402	-18.7	0.91	0
139	SLU 46	2	407	7539	-20.13	3.69	0
139	SLU 47	4	420	7569	-20.84	5.54	0
139	SLU 48	1	387	7511	-18.98	0.92	0
139	SLU 49	2	413	7648	-20.41	3.7	0
139	SLU 50	1	382	7450	-18.74	0.92	0
139	SLU 51	2	408	7587	-20.17	3.69	0
139	SLU 52	4	471	8151	-23.15	5.59	0
139	SLU 53	1	438	8094	-21.29	0.97	0
139	SLU 54	2	464	8231	-22.72	3.75	0
139	SLU 55	4	477	8261	-23.44	5.6	0
139	SLU 56	1	444	8204	-21.57	0.98	0
139	SLU 57	3	471	8341	-23.01	3.76	0
139	SLU 58	1	439	8142	-21.33	0.97	0
139	SLU 59	3	465	8279	-22.77	3.75	0
139	SLU 60	1	451	8219	-21.88	0.99	0
139	SLU 61	3	478	8356	-23.31	3.76	0
139	SLU 62	1	457	8329	-22.16	0.99	0
139	SLU 63	3	484	8466	-23.59	3.77	0
139	SLU 64	1	423	7905	-20.62	0.96	0
139	SLU 65	4	467	8133	-23	5.59	0
139	SLU 66	1	434	8076	-21.14	0.97	0
139	SLU 67	2	461	8213	-22.57	3.75	0
139	SLU 68	4	473	8243	-23.29	5.6	0
139	SLU 69	1	440	8186	-21.42	0.98	0
139	SLU 70	3	467	8323	-22.86	3.75	0
139	SLU 71	1	435	8124	-21.18	0.97	0
139	SLU 72	2	462	8261	-22.62	3.75	0
139	SLU 73	4	524	8825	-25.6	5.65	0
139	SLU 74	1	491	8768	-23.73	1.03	0
139	SLU 75	3	518	8905	-25.16	3.81	0
139	SLU 76	4	531	8935	-25.88	5.65	0
139	SLU 77	1	497	8878	-24.02	1.03	0
139	SLU 78	3	524	9015	-25.45	3.81	0
139	SLU 79	1	492	8816	-23.78	1.03	0
139	SLU 80	3	519	8953	-25.21	3.81	0
139	SLU 81	1	504	8894	-24.32	1.04	0
139	SLU 82	3	531	9031	-25.75	3.82	0
139	SLU 83	1	510	9003	-24.61	1.05	0
139	SLU 84	3	537	9140	-26.04	3.83	0
139	SLE RA 1	1	313	5933	-15.32	0.73	0
139	SLE RA 2	2	343	6085	-16.91	3.81	0
139	SLE RA 3	1	321	6047	-15.67	0.73	0
139	SLE RA 4	2	339	6138	-16.62	2.58	0
139	SLE RA 5	2	347	6158	-17.1	3.82	0
139	SLE RA 6	1	325	6120	-15.86	0.74	0
139	SLE RA 7	2	343	6211	-16.81	2.59	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
139	SLE RA 8	1	322	6079	-15.7	0.73	0
139	SLE RA 9	2	339	6170	-16.66	2.59	0
139	SLE RA 10	3	381	6546	-18.64	3.85	0
139	SLE RA 11	1	359	6508	-17.4	0.77	0
139	SLE RA 12	2	377	6599	-18.35	2.62	0
139	SLE RA 13	3	385	6619	-18.83	3.86	0
139	SLE RA 14	1	363	6581	-17.59	0.78	0
139	SLE RA 15	2	381	6672	-18.54	2.63	0
139	SLE RA 16	1	360	6540	-17.43	0.77	0
139	SLE RA 17	2	378	6631	-18.38	2.63	0
139	SLE RA 18	1	368	6592	-17.79	0.78	0
139	SLE RA 19	2	386	6683	-18.75	2.63	0
139	SLE RA 20	1	372	6665	-17.98	0.79	0
139	SLE RA 21	2	390	6756	-18.94	2.64	0
139	SLE FR 1	1	313	5933	-15.32	0.73	0
139	SLE FR 2	1	319	5963	-15.64	1.34	0
139	SLE FR 3	1	315	5962	-15.4	0.73	0
139	SLE FR 4	1	336	6161	-16.38	1.36	0
139	SLE FR 5	1	331	6159	-16.14	0.74	0
139	SLE FR 6	1	341	6262	-16.56	0.75	0
139	SLE QP 1	1	313	5933	-15.32	0.73	0
139	SLE QP 2	1	330	6130	-16.06	0.74	0
139	SLD 1	14	368	4715	-17.46	12.83	0.01
139	SLD 2	14	368	4715	-17.46	12.83	0.01
139	SLD 3	24	-49	4364	0.2	22.95	0.01
139	SLD 4	24	-49	4364	0.2	22.95	0.01
139	SLD 5	-12	973	6237	-43.27	-10.99	0.01
139	SLD 6	-12	973	6237	-43.27	-10.99	0.01
139	SLD 7	24	-416	5069	15.61	22.76	0
139	SLD 8	24	-416	5069	15.61	22.76	0
139	SLD 9	-23	1075	7191	-47.73	-21.28	0
139	SLD 10	-23	1075	7191	-47.73	-21.28	0
139	SLD 11	13	-314	6024	11.15	12.47	-0.01
139	SLD 12	13	-314	6024	11.15	12.47	-0.01
139	SLD 13	-23	708	7896	-32.33	-21.47	-0.01
139	SLD 14	-23	708	7896	-32.33	-21.47	-0.01
139	SLD 15	-12	291	7546	-14.66	-11.34	-0.01
139	SLD 16	-12	291	7546	-14.66	-11.34	-0.01
139	SLV 1	30	419	2821	-19.32	28.57	0.03
139	SLV 2	30	419	2821	-19.32	28.57	0.03
139	SLV 3	57	-546	1994	21.63	54.19	0.02
139	SLV 4	57	-546	1994	21.63	54.19	0.02
139	SLV 5	-31	1821	6391	-79.14	-29.76	0.02
139	SLV 6	-31	1821	6391	-79.14	-29.76	0.02
139	SLV 7	59	-1398	3636	57.35	55.63	-0.01
139	SLV 8	59	-1398	3636	57.35	55.63	-0.01
139	SLV 9	-57	2057	8625	-89.48	-54.14	0.01
139	SLV 10	-57	2057	8625	-89.48	-54.14	0.01
139	SLV 11	33	-1162	5869	47.02	31.25	-0.02
139	SLV 12	33	-1162	5869	47.02	31.25	-0.02
139	SLV 13	-56	1206	10266	-53.76	-52.7	-0.02
139	SLV 14	-56	1206	10266	-53.76	-52.7	-0.02
139	SLV 15	-29	240	9439	-12.81	-27.08	-0.03
139	SLV 16	-29	240	9439	-12.81	-27.08	-0.03
140	SLU 1	3	-433	3738	20.11	2.28	0
140	SLU 2	3	-448	3737	20.77	2.28	0
140	SLU 3	3	-444	3848	20.66	2.35	0
140	SLU 4	3	-454	3848	21.06	2.35	0
140	SLU 5	3	-456	3807	21.15	2.32	0
140	SLU 6	3	-453	3919	21.05	2.4	0
140	SLU 7	3	-462	3918	21.44	2.4	0
140	SLU 8	3	-449	3878	20.88	2.37	0
140	SLU 9	3	-458	3877	21.27	2.37	0
140	SLU 10	3	-503	4330	23.4	2.49	0
140	SLU 11	3	-500	4442	23.29	2.57	0
140	SLU 12	3	-509	4441	23.69	2.56	0
140	SLU 13	3	-511	4400	23.78	2.54	0
140	SLU 14	4	-508	4512	23.67	2.61	0
140	SLU 15	4	-517	4511	24.07	2.61	0
140	SLU 16	4	-505	4472	23.5	2.59	0
140	SLU 17	3	-514	4471	23.9	2.58	0
140	SLU 18	4	-512	4586	23.86	2.58	0
140	SLU 19	3	-521	4585	24.26	2.58	0
140	SLU 20	4	-520	4656	24.25	2.63	0
140	SLU 21	4	-529	4655	24.64	2.63	0
140	SLU 22	3	-477	4245	22.25	2.56	0
140	SLU 23	3	-492	4243	22.92	2.56	0
140	SLU 24	4	-488	4355	22.81	2.64	0
140	SLU 25	4	-498	4354	23.21	2.64	0
140	SLU 26	3	-500	4314	23.3	2.61	0
140	SLU 27	4	-497	4425	23.19	2.69	0
140	SLU 28	4	-506	4425	23.59	2.69	0
140	SLU 29	4	-493	4385	23.03	2.66	0
140	SLU 30	4	-503	4384	23.42	2.66	0
140	SLU 31	4	-547	4837	25.55	2.77	0
140	SLU 32	4	-544	4949	25.44	2.85	0
140	SLU 33	4	-553	4948	25.83	2.85	0
140	SLU 34	4	-556	4907	25.93	2.82	0
140	SLU 35	4	-552	5019	25.82	2.9	0
140	SLU 36	4	-561	5018	26.22	2.9	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
140	SLU 37	4	-549	4979	25.65	2.87	0
140	SLU 38	4	-558	4978	26.05	2.87	0
140	SLU 39	4	-556	5093	26.01	2.87	0
140	SLU 40	4	-565	5092	26.41	2.87	0
140	SLU 41	4	-564	5163	26.39	2.92	0
140	SLU 42	4	-573	5162	26.79	2.91	0
140	SLU 43	4	-547	4686	25.4	2.86	0
140	SLU 44	4	-563	4684	26.06	2.86	0
140	SLU 45	4	-559	4796	25.95	2.94	0
140	SLU 46	4	-568	4795	26.35	2.94	0
140	SLU 47	4	-571	4754	26.45	2.91	0
140	SLU 48	4	-567	4866	26.34	2.99	0
140	SLU 49	4	-577	4866	26.74	2.98	0
140	SLU 50	4	-564	4826	26.17	2.96	0
140	SLU 51	4	-573	4825	26.57	2.96	0
140	SLU 52	4	-618	5278	28.69	3.07	0
140	SLU 53	4	-614	5390	28.58	3.15	0
140	SLU 54	4	-623	5389	28.98	3.15	0
140	SLU 55	4	-626	5348	29.08	3.12	0
140	SLU 56	4	-623	5460	28.97	3.2	0
140	SLU 57	4	-632	5459	29.37	3.2	0
140	SLU 58	4	-619	5419	28.8	3.17	0
140	SLU 59	4	-628	5419	29.2	3.17	0
140	SLU 60	4	-626	5534	29.16	3.17	0
140	SLU 61	4	-635	5533	29.55	3.17	0
140	SLU 62	4	-635	5604	29.54	3.22	0
140	SLU 63	4	-644	5603	29.94	3.21	0
140	SLU 64	4	-591	5192	27.55	3.15	0
140	SLU 65	4	-607	5191	28.21	3.15	0
140	SLU 66	4	-603	5303	28.1	3.23	0
140	SLU 67	4	-612	5302	28.5	3.22	0
140	SLU 68	4	-615	5261	28.6	3.19	0
140	SLU 69	4	-611	5373	28.49	3.27	0
140	SLU 70	4	-621	5372	28.89	3.27	0
140	SLU 71	4	-608	5333	28.32	3.25	0
140	SLU 72	4	-617	5332	28.72	3.24	0
140	SLU 73	4	-662	5785	30.84	3.36	0
140	SLU 74	5	-658	5896	30.73	3.44	0
140	SLU 75	5	-668	5896	31.13	3.44	0
140	SLU 76	5	-670	5855	31.23	3.41	0
140	SLU 77	5	-667	5967	31.12	3.49	0
140	SLU 78	5	-676	5966	31.51	3.48	0
140	SLU 79	5	-663	5926	30.95	3.46	0
140	SLU 80	5	-672	5925	31.35	3.46	0
140	SLU 81	5	-670	6040	31.3	3.45	0
140	SLU 82	5	-680	6040	31.7	3.45	0
140	SLU 83	5	-679	6110	31.69	3.5	0
140	SLU 84	5	-688	6110	32.09	3.5	0
140	SLE RA 1	3	-445	3883	20.72	2.36	0
140	SLE RA 2	3	-455	3882	21.16	2.36	0
140	SLE RA 3	3	-453	3956	21.09	2.41	0
140	SLE RA 4	3	-459	3956	21.35	2.41	0
140	SLE RA 5	3	-461	3929	21.42	2.39	0
140	SLE RA 6	3	-459	4003	21.35	2.44	0
140	SLE RA 7	3	-465	4003	21.61	2.44	0
140	SLE RA 8	3	-456	3976	21.23	2.42	0
140	SLE RA 9	3	-462	3976	21.5	2.42	0
140	SLE RA 10	3	-492	4278	22.91	2.5	0
140	SLE RA 11	3	-490	4352	22.84	2.55	0
140	SLE RA 12	3	-496	4352	23.11	2.55	0
140	SLE RA 13	3	-498	4324	23.17	2.53	0
140	SLE RA 14	3	-495	4399	23.1	2.58	0
140	SLE RA 15	3	-502	4398	23.36	2.58	0
140	SLE RA 16	3	-493	4372	22.99	2.57	0
140	SLE RA 17	3	-499	4371	23.25	2.56	0
140	SLE RA 18	3	-498	4448	23.22	2.56	0
140	SLE RA 19	3	-504	4448	23.49	2.56	0
140	SLE RA 20	4	-503	4495	23.48	2.59	0
140	SLE RA 21	3	-510	4494	23.74	2.59	0
140	SLE FR 1	3	-445	3883	20.72	2.36	0
140	SLE FR 2	3	-447	3883	20.81	2.36	0
140	SLE FR 3	3	-448	3901	20.82	2.37	0
140	SLE FR 4	3	-463	4052	21.56	2.42	0
140	SLE FR 5	3	-463	4071	21.57	2.43	0
140	SLE FR 6	3	-472	4165	21.97	2.46	0
140	SLE QP 1	3	-445	3883	20.72	2.36	0
140	SLE QP 2	3	-461	4052	21.47	2.42	0
140	SLD 1	17	-133	4348	6.03	14.9	0.01
140	SLD 2	17	-133	4348	6.03	14.9	0.01
140	SLD 3	14	-481	4502	22.64	12.64	0.01
140	SLD 4	14	-481	4502	22.64	12.64	0.01
140	SLD 5	11	165	3908	-8.34	9.59	0.01
140	SLD 6	11	165	3908	-8.34	9.59	0.01
140	SLD 7	3	-995	4420	47	2.06	0
140	SLD 8	3	-995	4420	47	2.06	0
140	SLD 9	4	73	3685	-4.06	2.78	0
140	SLD 10	4	73	3685	-4.06	2.78	0
140	SLD 11	-5	-1088	4197	51.28	-4.75	0
140	SLD 12	-5	-1088	4197	51.28	-4.75	0
140	SLD 13	-8	-441	3603	20.31	-7.8	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
140	SLD 14	-8	-441	3603	20.31	-7.8	0
140	SLD 15	-10	-789	3757	36.91	-10.06	-0.01
140	SLD 16	-10	-789	3757	36.91	-10.06	-0.01
140	SLV 1	36	298	4747	-14.23	32.9	0.02
140	SLV 2	36	298	4747	-14.23	32.9	0.02
140	SLV 3	30	-508	5105	24.18	27.39	0.01
140	SLV 4	30	-508	5105	24.18	27.39	0.01
140	SLV 5	22	988	3718	-47.5	19.92	0.01
140	SLV 6	22	988	3718	-47.5	19.92	0.01
140	SLV 7	2	-1697	4911	80.55	1.55	0
140	SLV 8	2	-1697	4911	80.55	1.55	0
140	SLV 9	4	775	3194	-37.6	3.29	0
140	SLV 10	4	775	3194	-37.6	3.29	0
140	SLV 11	-16	-1911	4386	90.44	-15.08	-0.01
140	SLV 12	-16	-1911	4386	90.44	-15.08	-0.01
140	SLV 13	-24	-414	2999	18.76	-22.55	-0.01
140	SLV 14	-24	-414	2999	18.76	-22.55	-0.01
140	SLV 15	-30	-1220	3357	57.17	-28.06	-0.01
140	SLV 16	-30	-1220	3357	57.17	-28.06	-0.01
141	SLU 1	0	195	1460	-6.34	0.52	0
141	SLU 2	0	193	1452	-6.27	0.57	0
141	SLU 3	0	205	1497	-6.65	0.53	0
141	SLU 4	0	203	1492	-6.61	0.55	0
141	SLU 5	0	199	1477	-6.48	0.57	0
141	SLU 6	0	211	1522	-6.85	0.53	0
141	SLU 7	0	210	1517	-6.81	0.55	0
141	SLU 8	0	208	1510	-6.75	0.53	0
141	SLU 9	0	207	1505	-6.71	0.55	0
141	SLU 10	0	230	1716	-7.46	0.68	0
141	SLU 11	0	242	1761	-7.83	0.64	0
141	SLU 12	0	241	1756	-7.79	0.67	0
141	SLU 13	0	237	1740	-7.66	0.68	0
141	SLU 14	0	248	1786	-8.04	0.64	0
141	SLU 15	0	247	1781	-8	0.67	0
141	SLU 16	0	245	1773	-7.94	0.64	0
141	SLU 17	0	244	1769	-7.9	0.66	0
141	SLU 18	0	248	1837	-8.04	0.69	0
141	SLU 19	0	247	1832	-7.99	0.71	-0.01
141	SLU 20	0	255	1861	-8.24	0.69	0
141	SLU 21	0	253	1857	-8.2	0.71	-0.01
141	SLU 22	0	232	1637	-7.53	0.59	0
141	SLU 23	0	230	1629	-7.46	0.63	0
141	SLU 24	0	241	1674	-7.84	0.59	0
141	SLU 25	0	240	1669	-7.8	0.61	0
141	SLU 26	0	236	1654	-7.67	0.63	0
141	SLU 27	0	248	1699	-8.04	0.59	0
141	SLU 28	0	246	1694	-8	0.62	0
141	SLU 29	0	245	1687	-7.94	0.59	0
141	SLU 30	0	243	1682	-7.9	0.61	0
141	SLU 31	0	267	1893	-8.65	0.74	-0.01
141	SLU 32	0	279	1938	-9.02	0.7	-0.01
141	SLU 33	0	277	1933	-8.98	0.73	-0.01
141	SLU 34	0	274	1918	-8.85	0.74	-0.01
141	SLU 35	0	285	1963	-9.23	0.7	-0.01
141	SLU 36	0	284	1958	-9.19	0.73	-0.01
141	SLU 37	0	282	1951	-9.13	0.7	-0.01
141	SLU 38	0	281	1946	-9.09	0.73	-0.01
141	SLU 39	0	285	2014	-9.23	0.75	-0.01
141	SLU 40	0	284	2009	-9.18	0.77	-0.01
141	SLU 41	0	292	2039	-9.43	0.75	-0.01
141	SLU 42	0	290	2034	-9.39	0.77	-0.01
141	SLU 43	0	241	1837	-7.84	0.66	0
141	SLU 44	0	239	1829	-7.77	0.7	0
141	SLU 45	0	250	1874	-8.14	0.66	0
141	SLU 46	0	249	1869	-8.1	0.69	0
141	SLU 47	0	245	1854	-7.97	0.7	0
141	SLU 48	0	257	1899	-8.34	0.66	0
141	SLU 49	0	255	1894	-8.3	0.69	0
141	SLU 50	0	254	1887	-8.24	0.66	0
141	SLU 51	0	252	1882	-8.2	0.69	0
141	SLU 52	0	276	2093	-8.95	0.82	-0.01
141	SLU 53	0	288	2138	-9.33	0.78	-0.01
141	SLU 54	0	286	2133	-9.29	0.8	-0.01
141	SLU 55	0	283	2118	-9.16	0.82	-0.01
141	SLU 56	0	294	2163	-9.53	0.78	-0.01
141	SLU 57	0	293	2158	-9.49	0.8	-0.01
141	SLU 58	0	291	2150	-9.43	0.77	-0.01
141	SLU 59	0	290	2146	-9.39	0.8	-0.01
141	SLU 60	0	294	2214	-9.53	0.82	-0.01
141	SLU 61	0	293	2209	-9.49	0.85	-0.01
141	SLU 62	0	301	2239	-9.73	0.82	-0.01
141	SLU 63	0	299	2234	-9.69	0.85	-0.01
141	SLU 64	0	278	2014	-9.03	0.72	0
141	SLU 65	0	276	2006	-8.96	0.77	-0.01
141	SLU 66	0	287	2051	-9.33	0.73	-0.01
141	SLU 67	0	286	2047	-9.29	0.75	-0.01
141	SLU 68	0	282	2031	-9.16	0.77	-0.01
141	SLU 69	0	294	2076	-9.54	0.73	-0.01
141	SLU 70	0	292	2071	-9.49	0.75	-0.01
141	SLU 71	0	291	2064	-9.44	0.72	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
141	SLU 72	0	289	2059	-9.39	0.75	-0.01
141	SLU 73	0	313	2270	-10.14	0.88	-0.01
141	SLU 74	0	325	2315	-10.52	0.84	-0.01
141	SLU 75	0	323	2310	-10.48	0.86	-0.01
141	SLU 76	0	319	2295	-10.35	0.88	-0.01
141	SLU 77	0	331	2340	-10.72	0.84	-0.01
141	SLU 78	0	330	2335	-10.68	0.86	-0.01
141	SLU 79	0	328	2328	-10.62	0.84	-0.01
141	SLU 80	0	327	2323	-10.58	0.86	-0.01
141	SLU 81	0	331	2391	-10.72	0.88	-0.01
141	SLU 82	0	330	2386	-10.68	0.91	-0.01
141	SLU 83	0	337	2416	-10.92	0.88	-0.01
141	SLU 84	0	336	2411	-10.88	0.91	-0.01
141	SLE RA 1	0	206	1510	-6.68	0.54	0
141	SLE RA 2	0	204	1505	-6.64	0.57	0
141	SLE RA 3	0	212	1535	-6.88	0.54	0
141	SLE RA 4	0	211	1532	-6.86	0.56	0
141	SLE RA 5	0	208	1522	-6.77	0.57	0
141	SLE RA 6	0	216	1552	-7.02	0.54	0
141	SLE RA 7	0	215	1549	-6.99	0.56	0
141	SLE RA 8	0	214	1544	-6.95	0.54	0
141	SLE RA 9	0	213	1540	-6.93	0.56	0
141	SLE RA 10	0	229	1681	-7.43	0.65	0
141	SLE RA 11	0	237	1711	-7.68	0.62	0
141	SLE RA 12	0	236	1708	-7.65	0.64	0
141	SLE RA 13	0	233	1698	-7.56	0.65	0
141	SLE RA 14	0	241	1728	-7.81	0.62	0
141	SLE RA 15	0	240	1724	-7.78	0.64	0
141	SLE RA 16	0	239	1719	-7.74	0.62	0
141	SLE RA 17	0	238	1716	-7.72	0.64	0
141	SLE RA 18	0	241	1762	-7.81	0.65	0
141	SLE RA 19	0	240	1758	-7.78	0.67	0
141	SLE RA 20	0	245	1778	-7.95	0.65	0
141	SLE RA 21	0	245	1775	-7.92	0.67	0
141	SLE FR 1	0	206	1510	-6.68	0.54	0
141	SLE FR 2	0	205	1509	-6.67	0.55	0
141	SLE FR 3	0	207	1517	-6.74	0.54	0
141	SLE FR 4	0	216	1585	-7.01	0.58	0
141	SLE FR 5	0	218	1592	-7.07	0.57	0
141	SLE FR 6	0	223	1636	-7.25	0.6	0
141	SLE QP 1	0	206	1510	-6.68	0.54	0
141	SLE QP 2	0	216	1586	-7.02	0.57	0
141	SLD 1	8	62	1328	-1.79	9.96	-0.08
141	SLD 2	8	62	1328	-1.79	9.96	-0.08
141	SLD 3	10	225	1389	-7.41	12.03	-0.09
141	SLD 4	10	225	1389	-7.41	12.03	-0.09
141	SLD 5	0	-77	1415	3.08	0.24	0
141	SLD 6	0	-77	1415	3.08	0.24	0
141	SLD 7	5	466	1620	-15.67	7.16	-0.05
141	SLD 8	5	466	1620	-15.67	7.16	-0.05
141	SLD 9	-5	-33	1552	1.63	-6.01	0.05
141	SLD 10	-5	-33	1552	1.63	-6.01	0.05
141	SLD 11	0	510	1756	-17.12	0.91	-0.01
141	SLD 12	0	510	1756	-17.12	0.91	-0.01
141	SLD 13	-10	208	1782	-6.63	-10.89	0.08
141	SLD 14	-10	208	1782	-6.63	-10.89	0.08
141	SLD 15	-8	371	1844	-12.25	-8.81	0.07
141	SLD 16	-8	371	1844	-12.25	-8.81	0.07
141	SLV 1	19	-145	982	5.19	23.57	-0.18
141	SLV 2	19	-145	982	5.19	23.57	-0.18
141	SLV 3	24	236	1125	-7.94	28.64	-0.22
141	SLV 4	24	236	1125	-7.94	28.64	-0.22
141	SLV 5	0	-469	1187	16.56	-0.22	0
141	SLV 6	0	-469	1187	16.56	-0.22	0
141	SLV 7	13	799	1665	-27.21	16.68	-0.13
141	SLV 8	13	799	1665	-27.21	16.68	-0.13
141	SLV 9	-13	-366	1506	13.17	-15.53	0.12
141	SLV 10	-13	-366	1506	13.17	-15.53	0.12
141	SLV 11	0	901	1985	-30.6	1.36	-0.01
141	SLV 12	0	901	1985	-30.6	1.36	-0.01
141	SLV 13	-23	197	2046	-6.1	-27.49	0.21
141	SLV 14	-23	197	2046	-6.1	-27.49	0.21
141	SLV 15	-19	577	2190	-19.23	-22.42	0.17
141	SLV 16	-19	577	2190	-19.23	-22.42	0.17
142	SLU 1	-14	638	2609	-22.95	-9.37	0
142	SLU 2	-16	715	2607	-26.43	-11.81	0
142	SLU 3	-15	658	2671	-23.66	-9.68	0
142	SLU 4	-15	704	2669	-25.75	-11.14	0
142	SLU 5	-16	725	2644	-26.79	-12.02	0
142	SLU 6	-15	669	2707	-24.02	-9.88	0
142	SLU 7	-16	715	2706	-26.11	-11.35	0
142	SLU 8	-15	659	2682	-23.67	-9.78	0
142	SLU 9	-16	705	2681	-25.76	-11.24	0
142	SLU 10	-17	824	2911	-30.43	-12.93	0
142	SLU 11	-16	768	2974	-27.66	-10.8	0
142	SLU 12	-17	813	2973	-29.75	-12.27	0
142	SLU 13	-18	834	2947	-30.79	-13.14	0
142	SLU 14	-17	778	3010	-28.02	-11.01	0
142	SLU 15	-17	824	3009	-30.11	-12.47	0
142	SLU 16	-16	769	2985	-27.67	-10.9	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
142	SLU 17	-17	814	2984	-29.76	-12.37	0
142	SLU 18	-17	794	3043	-28.66	-10.97	0
142	SLU 19	-17	840	3041	-30.75	-12.44	0
142	SLU 20	-17	805	3079	-29.02	-11.18	0
142	SLU 21	-18	851	3078	-31.11	-12.64	0
142	SLU 22	-16	739	2894	-26.64	-10.5	0
142	SLU 23	-17	816	2892	-30.13	-12.94	0
142	SLU 24	-16	760	2955	-27.35	-10.81	0
142	SLU 25	-17	805	2954	-29.44	-12.27	0
142	SLU 26	-18	826	2928	-30.49	-13.14	0
142	SLU 27	-17	770	2992	-27.71	-11.01	0
142	SLU 28	-17	816	2990	-29.8	-12.48	0
142	SLU 29	-16	761	2967	-27.36	-10.91	0
142	SLU 30	-17	806	2966	-29.45	-12.37	0
142	SLU 31	-19	925	3195	-34.12	-14.06	0
142	SLU 32	-18	869	3258	-31.35	-11.93	0
142	SLU 33	-19	915	3257	-33.44	-13.39	0
142	SLU 34	-19	936	3232	-34.48	-14.27	0
142	SLU 35	-18	879	3295	-31.71	-12.13	0
142	SLU 36	-19	925	3294	-33.8	-13.6	0
142	SLU 37	-18	870	3270	-31.36	-12.03	0
142	SLU 38	-19	916	3269	-33.45	-13.49	0
142	SLU 39	-18	896	3327	-32.35	-12.1	0
142	SLU 40	-19	941	3326	-34.44	-13.57	0
142	SLU 41	-19	906	3364	-32.71	-12.31	0
142	SLU 42	-19	952	3362	-34.8	-13.77	0
142	SLU 43	-18	795	3295	-28.57	-11.8	0
142	SLU 44	-19	871	3293	-32.05	-14.24	0
142	SLU 45	-18	815	3356	-29.28	-12.1	0
142	SLU 46	-19	861	3355	-31.37	-13.57	0
142	SLU 47	-20	882	3329	-32.41	-14.44	0
142	SLU 48	-18	825	3392	-29.64	-12.31	0
142	SLU 49	-19	871	3391	-31.73	-13.77	0
142	SLU 50	-18	816	3367	-29.29	-12.2	0
142	SLU 51	-19	862	3366	-31.38	-13.67	0
142	SLU 52	-21	981	3596	-36.05	-15.36	0
142	SLU 53	-20	924	3659	-33.27	-13.23	0
142	SLU 54	-21	970	3658	-35.37	-14.69	0
142	SLU 55	-21	991	3632	-36.41	-15.56	0
142	SLU 56	-20	935	3695	-33.64	-13.43	0
142	SLU 57	-21	981	3694	-35.73	-14.89	0
142	SLU 58	-20	925	3671	-33.29	-13.33	0
142	SLU 59	-21	971	3669	-35.38	-14.79	0
142	SLU 60	-20	951	3728	-34.28	-13.4	0
142	SLU 61	-21	997	3727	-36.37	-14.86	0
142	SLU 62	-20	962	3764	-34.64	-13.6	0
142	SLU 63	-21	1007	3763	-36.73	-15.07	0
142	SLU 64	-19	896	3579	-32.26	-12.92	0
142	SLU 65	-21	973	3577	-35.74	-15.36	0
142	SLU 66	-20	916	3640	-32.97	-13.23	0
142	SLU 67	-21	962	3639	-35.06	-14.7	0
142	SLU 68	-21	983	3614	-36.1	-15.57	0
142	SLU 69	-20	927	3677	-33.33	-13.44	0
142	SLU 70	-21	973	3676	-35.42	-14.9	0
142	SLU 71	-20	917	3652	-32.98	-13.33	0
142	SLU 72	-21	963	3651	-35.07	-14.8	0
142	SLU 73	-23	1082	3881	-39.74	-16.49	0
142	SLU 74	-22	1026	3944	-36.97	-14.36	0
142	SLU 75	-23	1071	3943	-39.06	-15.82	0
142	SLU 76	-23	1092	3917	-40.1	-16.69	0
142	SLU 77	-22	1036	3980	-37.33	-14.56	0
142	SLU 78	-23	1082	3979	-39.42	-16.02	0
142	SLU 79	-22	1027	3955	-36.98	-14.45	0
142	SLU 80	-23	1072	3954	-39.07	-15.92	0
142	SLU 81	-22	1052	4012	-37.97	-14.53	0
142	SLU 82	-23	1098	4011	-40.06	-15.99	0
142	SLU 83	-22	1063	4049	-38.33	-14.73	0
142	SLU 84	-23	1109	4048	-40.42	-16.2	0
142	SLE RA 1	-15	667	2691	-24	-9.69	0
142	SLE RA 2	-16	718	2689	-26.33	-11.32	0
142	SLE RA 3	-15	680	2731	-24.48	-9.9	0
142	SLE RA 4	-15	711	2731	-25.87	-10.88	0
142	SLE RA 5	-16	725	2714	-26.57	-11.46	0
142	SLE RA 6	-15	687	2756	-24.72	-10.04	0
142	SLE RA 7	-16	718	2755	-26.11	-11.01	0
142	SLE RA 8	-15	681	2739	-24.48	-9.97	0
142	SLE RA 9	-16	712	2738	-25.88	-10.94	0
142	SLE RA 10	-17	791	2892	-28.99	-12.07	0
142	SLE RA 11	-16	753	2934	-27.14	-10.65	0
142	SLE RA 12	-17	784	2933	-28.54	-11.62	0
142	SLE RA 13	-17	798	2916	-29.23	-12.2	0
142	SLE RA 14	-16	760	2958	-27.38	-10.78	0
142	SLE RA 15	-17	791	2957	-28.78	-11.76	0
142	SLE RA 16	-16	754	2941	-27.15	-10.71	0
142	SLE RA 17	-17	785	2941	-28.54	-11.69	0
142	SLE RA 18	-16	771	2980	-27.81	-10.76	0
142	SLE RA 19	-17	802	2979	-29.2	-11.74	0
142	SLE RA 20	-16	778	3004	-28.05	-10.9	0
142	SLE RA 21	-17	809	3003	-29.44	-11.87	0
142	SLE FR 1	-15	667	2691	-24	-9.69	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
142	SLE FR 2	-15	677	2690	-24.47	-10.02	0
142	SLE FR 3	-15	670	2700	-24.1	-9.75	0
142	SLE FR 4	-15	709	2777	-25.61	-10.34	0
142	SLE FR 5	-15	701	2787	-25.24	-10.07	0
142	SLE FR 6	-15	719	2835	-25.91	-10.23	0
142	SLE QP 1	-15	667	2691	-24	-9.69	0
142	SLE QP 2	-15	698	2777	-25.14	-10.01	0
142	SLD 1	-19	1237	3650	-46.79	-19.32	0.01
142	SLD 2	-19	1237	3650	-46.79	-19.32	0.01
142	SLD 3	-25	793	3552	-28.05	-14.85	0.02
142	SLD 4	-25	793	3552	-28.05	-14.85	0.02
142	SLD 5	-6	1534	3187	-60.07	-19.59	-0.01
142	SLD 6	-6	1534	3187	-60.07	-19.59	-0.01
142	SLD 7	-28	53	2861	2.41	-4.68	0.01
142	SLD 8	-28	53	2861	2.41	-4.68	0.01
142	SLD 9	-2	1344	2693	-52.7	-15.34	-0.01
142	SLD 10	-2	1344	2693	-52.7	-15.34	-0.01
142	SLD 11	-24	-137	2367	9.78	-0.44	0
142	SLD 12	-24	-137	2367	9.78	-0.44	0
142	SLD 13	-5	604	2003	-22.24	-5.18	-0.02
142	SLD 14	-5	604	2003	-22.24	-5.18	-0.02
142	SLD 15	-11	160	1905	-3.49	-0.71	-0.01
142	SLD 16	-11	160	1905	-3.49	-0.71	-0.01
142	SLV 1	-23	1947	4825	-75.29	-32.43	0.03
142	SLV 2	-23	1947	4825	-75.29	-32.43	0.03
142	SLV 3	-40	920	4579	-31.96	-21.01	0.04
142	SLV 4	-40	920	4579	-31.96	-21.01	0.04
142	SLV 5	8	2630	3764	-105.91	-34.05	-0.01
142	SLV 6	8	2630	3764	-105.91	-34.05	-0.01
142	SLV 7	-48	-792	2946	38.53	4	0.03
142	SLV 8	-48	-792	2946	38.53	4	0.03
142	SLV 9	18	2189	2609	-88.82	-24.03	-0.03
142	SLV 10	18	2189	2609	-88.82	-24.03	-0.03
142	SLV 11	-38	-1233	1791	55.62	14.02	0.01
142	SLV 12	-38	-1233	1791	55.62	14.02	0.01
142	SLV 13	10	476	975	-18.33	0.98	-0.04
142	SLV 14	10	476	975	-18.33	0.98	-0.04
142	SLV 15	-7	-550	730	25	12.4	-0.03
142	SLV 16	-7	-550	730	25	12.4	-0.03
143	SLU 1	0	-231	3550	16.54	0.36	0
143	SLU 2	0	5	3478	5.89	0.62	0
143	SLU 3	0	-236	3661	16.98	0.38	0
143	SLU 4	0	-95	3618	10.59	0.53	0
143	SLU 5	0	2	3549	6.16	0.63	0
143	SLU 6	0	-239	3732	17.25	0.38	0
143	SLU 7	0	-98	3689	10.86	0.54	0
143	SLU 8	0	-237	3691	17.07	0.38	0
143	SLU 9	0	-96	3648	10.69	0.53	0
143	SLU 10	0	-10	4054	7.55	0.68	0
143	SLU 11	0	-251	4237	18.64	0.44	0
143	SLU 12	0	-110	4194	12.25	0.59	0
143	SLU 13	0	-13	4125	7.82	0.69	0
143	SLU 14	0	-254	4308	18.9	0.45	0
143	SLU 15	0	-113	4265	12.52	0.6	0
143	SLU 16	0	-252	4267	18.73	0.44	0
143	SLU 17	0	-111	4224	12.34	0.6	0
143	SLU 18	0	-252	4373	18.91	0.45	0
143	SLU 19	0	-111	4330	12.52	0.61	0
143	SLU 20	0	-255	4444	19.17	0.46	0
143	SLU 21	0	-114	4401	12.79	0.61	0
143	SLU 22	0	-249	4084	18.26	0.42	0
143	SLU 23	0	-13	4012	7.61	0.68	0
143	SLU 24	0	-254	4195	18.7	0.43	0
143	SLU 25	0	-113	4152	12.31	0.59	0
143	SLU 26	0	-16	4083	7.88	0.69	0
143	SLU 27	0	-257	4266	18.97	0.44	0
143	SLU 28	0	-116	4223	12.58	0.6	0
143	SLU 29	0	-255	4225	18.79	0.44	0
143	SLU 30	0	-114	4182	12.41	0.59	0
143	SLU 31	0	-28	4588	9.27	0.74	0
143	SLU 32	0	-269	4771	20.36	0.5	0
143	SLU 33	0	-128	4728	13.97	0.65	0
143	SLU 34	0	-31	4659	9.54	0.75	0
143	SLU 35	0	-272	4842	20.62	0.5	0
143	SLU 36	0	-131	4799	14.24	0.66	0
143	SLU 37	0	-270	4801	20.45	0.5	0
143	SLU 38	0	-128	4758	14.06	0.65	0
143	SLU 39	0	-270	4907	20.63	0.51	0
143	SLU 40	0	-129	4864	14.24	0.66	0
143	SLU 41	0	-273	4978	20.89	0.52	0
143	SLU 42	0	-132	4935	14.51	0.67	0
143	SLU 43	0	-294	4431	20.91	0.45	0
143	SLU 44	0	-59	4360	10.27	0.71	0
143	SLU 45	0	-300	4543	21.35	0.47	0
143	SLU 46	0	-158	4500	14.96	0.62	0
143	SLU 47	0	-62	4431	10.53	0.72	0
143	SLU 48	0	-303	4614	21.62	0.47	0
143	SLU 49	0	-161	4571	15.23	0.63	0
143	SLU 50	0	-301	4573	21.45	0.47	0
143	SLU 51	0	-159	4530	15.06	0.62	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
143	SLU 52	0	-74	4936	11.92	0.77	0
143	SLU 53	0	-315	5119	23.01	0.53	0
143	SLU 54	0	-173	5076	16.62	0.68	0
143	SLU 55	0	-77	5007	12.19	0.78	0
143	SLU 56	0	-318	5190	23.28	0.54	0
143	SLU 57	0	-176	5147	16.89	0.69	0
143	SLU 58	0	-315	5149	23.1	0.53	0
143	SLU 59	0	-174	5106	16.72	0.68	0
143	SLU 60	0	-316	5254	23.28	0.54	0
143	SLU 61	0	-174	5211	16.89	0.7	0
143	SLU 62	0	-319	5325	23.55	0.55	0
143	SLU 63	0	-177	5282	17.16	0.7	0
143	SLU 64	0	-312	4965	22.63	0.51	0
143	SLU 65	0	-76	4894	11.99	0.77	0
143	SLU 66	0	-317	5077	23.07	0.52	0
143	SLU 67	0	-176	5034	16.68	0.68	0
143	SLU 68	0	-79	4965	12.25	0.78	0
143	SLU 69	0	-320	5148	23.34	0.53	0
143	SLU 70	0	-179	5105	16.95	0.69	0
143	SLU 71	0	-318	5107	23.17	0.52	0
143	SLU 72	0	-177	5064	16.78	0.68	0
143	SLU 73	0	-91	5470	13.64	0.83	0
143	SLU 74	0	-332	5653	24.73	0.59	0
143	SLU 75	0	-191	5610	18.34	0.74	0
143	SLU 76	0	-94	5541	13.91	0.84	0
143	SLU 77	0	-335	5724	25	0.59	0
143	SLU 78	0	-194	5681	18.61	0.75	0
143	SLU 79	0	-333	5683	24.82	0.59	0
143	SLU 80	0	-192	5640	18.44	0.74	0
143	SLU 81	0	-333	5789	25	0.6	0
143	SLU 82	0	-192	5746	18.61	0.75	0
143	SLU 83	0	-336	5859	25.27	0.61	0
143	SLU 84	0	-195	5816	18.88	0.76	0
143	SLE RA 1	0	-236	3702	17.03	0.38	0
143	SLE RA 2	0	-79	3654	9.93	0.55	0
143	SLE RA 3	0	-240	3776	17.32	0.39	0
143	SLE RA 4	0	-145	3748	13.07	0.49	0
143	SLE RA 5	0	-81	3702	10.11	0.56	0
143	SLE RA 6	0	-242	3824	17.5	0.39	0
143	SLE RA 7	0	-147	3795	13.24	0.5	0
143	SLE RA 8	0	-240	3797	17.39	0.39	0
143	SLE RA 9	0	-146	3768	13.13	0.49	0
143	SLE RA 10	0	-89	4039	11.04	0.59	0
143	SLE RA 11	0	-250	4161	18.43	0.43	0
143	SLE RA 12	0	-155	4132	14.17	0.53	0
143	SLE RA 13	0	-91	4086	11.22	0.6	0
143	SLE RA 14	0	-252	4208	18.61	0.43	0
143	SLE RA 15	0	-157	4179	14.35	0.54	0
143	SLE RA 16	0	-250	4181	18.49	0.43	0
143	SLE RA 17	0	-156	4152	14.23	0.53	0
143	SLE RA 18	0	-250	4251	18.61	0.44	0
143	SLE RA 19	0	-156	4222	14.35	0.54	0
143	SLE RA 20	0	-252	4298	18.79	0.44	0
143	SLE RA 21	0	-158	4269	14.53	0.55	0
143	SLE FR 1	0	-236	3702	17.03	0.38	0
143	SLE FR 2	0	-205	3693	15.61	0.41	0
143	SLE FR 3	0	-237	3721	17.1	0.38	0
143	SLE FR 4	0	-209	3857	16.09	0.43	0
143	SLE FR 5	0	-241	3886	17.58	0.4	0
143	SLE FR 6	0	-243	3977	17.82	0.41	0
143	SLE QP 1	0	-236	3702	17.03	0.38	0
143	SLE QP 2	0	-240	3867	17.5	0.4	0
143	SLD 1	8	150	4109	-0.33	8.24	0.01
143	SLD 2	8	150	4109	-0.33	8.24	0.01
143	SLD 3	3	-231	4027	17.21	4.21	0.01
143	SLD 4	3	-231	4027	17.21	4.21	0.01
143	SLD 5	11	455	4063	-14.46	8.86	0
143	SLD 6	11	455	4063	-14.46	8.86	0
143	SLD 7	-7	-816	3791	44.03	-4.57	0.01
143	SLD 8	-7	-816	3791	44.03	-4.57	0.01
143	SLD 9	8	335	3942	-9.02	5.36	-0.01
143	SLD 10	8	335	3942	-9.02	5.36	-0.01
143	SLD 11	-10	-936	3670	49.47	-8.06	0
143	SLD 12	-10	-936	3670	49.47	-8.06	0
143	SLD 13	-2	-250	3706	17.8	-3.41	-0.01
143	SLD 14	-2	-250	3706	17.8	-3.41	-0.01
143	SLD 15	-8	-631	3625	35.34	-7.44	-0.01
143	SLD 16	-8	-631	3625	35.34	-7.44	-0.01
143	SLV 1	20	693	4443	-25.1	19.6	0.02
143	SLV 2	20	693	4443	-25.1	19.6	0.02
143	SLV 3	6	-223	4236	17.03	9.39	0.02
143	SLV 4	6	-223	4236	17.03	9.39	0.02
143	SLV 5	27	1429	4354	-59.18	21.64	-0.01
143	SLV 6	27	1429	4354	-59.18	21.64	-0.01
143	SLV 7	-19	-1625	3664	81.27	-12.39	0.02
143	SLV 8	-19	-1625	3664	81.27	-12.39	0.02
143	SLV 9	19	1144	4070	-46.26	13.18	-0.02
143	SLV 10	19	1144	4070	-46.26	13.18	-0.02
143	SLV 11	-26	-1910	3380	94.19	-20.85	0.01
143	SLV 12	-26	-1910	3380	94.19	-20.85	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
143	SLV 13	-6	-258	3497	17.98	-8.6	-0.02
143	SLV 14	-6	-258	3497	17.98	-8.6	-0.02
143	SLV 15	-19	-1174	3290	60.11	-18.81	-0.02
143	SLV 16	-19	-1174	3290	60.11	-18.81	-0.02
144	SLU 1	3	-374	4295	21.12	2.46	0.13
144	SLU 2	3	-393	4292	21.91	2.49	0.14
144	SLU 3	3	-380	4439	21.64	2.53	0.14
144	SLU 4	3	-392	4437	22.11	2.55	0.14
144	SLU 5	3	-398	4388	22.27	2.54	0.14
144	SLU 6	3	-385	4536	21.99	2.58	0.14
144	SLU 7	3	-397	4534	22.47	2.6	0.14
144	SLU 8	3	-383	4489	21.83	2.56	0.14
144	SLU 9	3	-395	4487	22.3	2.58	0.14
144	SLU 10	3	-436	4983	24.76	2.93	0.16
144	SLU 11	3	-423	5130	24.49	2.97	0.16
144	SLU 12	4	-435	5128	24.96	2.99	0.16
144	SLU 13	4	-441	5080	25.12	2.98	0.16
144	SLU 14	4	-428	5227	24.84	3.02	0.16
144	SLU 15	4	-440	5225	25.32	3.04	0.16
144	SLU 16	4	-426	5180	24.68	2.99	0.16
144	SLU 17	4	-438	5178	25.15	3.01	0.16
144	SLU 18	4	-434	5283	25.19	3.08	0.17
144	SLU 19	4	-446	5281	25.67	3.1	0.17
144	SLU 20	4	-439	5380	25.55	3.13	0.17
144	SLU 21	4	-451	5377	26.02	3.15	0.17
144	SLU 22	3	-400	4881	23.16	2.79	0.15
144	SLU 23	3	-420	4877	23.95	2.82	0.15
144	SLU 24	3	-407	5024	23.68	2.86	0.16
144	SLU 25	3	-418	5022	24.15	2.88	0.16
144	SLU 26	3	-424	4974	24.3	2.87	0.16
144	SLU 27	3	-411	5121	24.03	2.91	0.16
144	SLU 28	3	-423	5119	24.5	2.93	0.16
144	SLU 29	3	-409	5074	23.86	2.89	0.16
144	SLU 30	3	-421	5072	24.34	2.91	0.16
144	SLU 31	4	-462	5568	26.8	3.26	0.18
144	SLU 32	4	-449	5716	26.53	3.29	0.18
144	SLU 33	4	-461	5714	27	3.32	0.18
144	SLU 34	4	-467	5665	27.15	3.31	0.18
144	SLU 35	4	-454	5813	26.88	3.34	0.18
144	SLU 36	4	-466	5810	27.35	3.37	0.18
144	SLU 37	4	-452	5766	26.72	3.32	0.18
144	SLU 38	4	-464	5764	27.19	3.34	0.18
144	SLU 39	4	-461	5868	27.23	3.41	0.18
144	SLU 40	4	-473	5866	27.7	3.43	0.18
144	SLU 41	4	-466	5965	27.58	3.46	0.19
144	SLU 42	4	-477	5963	28.06	3.48	0.19
144	SLU 43	4	-477	5383	26.76	3.08	0.17
144	SLU 44	4	-496	5379	27.55	3.12	0.17
144	SLU 45	4	-483	5527	27.28	3.16	0.17
144	SLU 46	4	-495	5524	27.75	3.18	0.17
144	SLU 47	4	-501	5476	27.9	3.17	0.17
144	SLU 48	4	-488	5623	27.63	3.21	0.18
144	SLU 49	4	-500	5621	28.1	3.23	0.18
144	SLU 50	4	-486	5577	27.47	3.18	0.17
144	SLU 51	4	-498	5574	27.94	3.21	0.17
144	SLU 52	4	-539	6071	30.4	3.55	0.19
144	SLU 53	4	-526	6218	30.13	3.59	0.19
144	SLU 54	4	-538	6216	30.6	3.61	0.2
144	SLU 55	4	-544	6168	30.75	3.6	0.19
144	SLU 56	4	-531	6315	30.48	3.64	0.2
144	SLU 57	4	-543	6313	30.96	3.66	0.2
144	SLU 58	4	-529	6268	30.32	3.62	0.2
144	SLU 59	4	-541	6266	30.79	3.64	0.2
144	SLU 60	4	-538	6371	30.83	3.7	0.2
144	SLU 61	4	-549	6368	31.31	3.72	0.2
144	SLU 62	4	-542	6467	31.19	3.75	0.2
144	SLU 63	4	-554	6465	31.66	3.77	0.2
144	SLU 64	4	-503	5968	28.8	3.41	0.19
144	SLU 65	4	-523	5965	29.59	3.45	0.19
144	SLU 66	4	-510	6112	29.31	3.48	0.19
144	SLU 67	4	-522	6110	29.79	3.51	0.19
144	SLU 68	4	-527	6062	29.94	3.5	0.19
144	SLU 69	4	-514	6209	29.67	3.54	0.19
144	SLU 70	4	-526	6207	30.14	3.56	0.19
144	SLU 71	4	-512	6162	29.5	3.51	0.19
144	SLU 72	4	-524	6160	29.98	3.53	0.19
144	SLU 73	5	-565	6656	32.44	3.88	0.21
144	SLU 74	5	-552	6804	32.16	3.92	0.21
144	SLU 75	5	-564	6801	32.64	3.94	0.21
144	SLU 76	5	-570	6753	32.79	3.93	0.21
144	SLU 77	5	-557	6900	32.52	3.97	0.22
144	SLU 78	5	-569	6898	32.99	3.99	0.22
144	SLU 79	5	-555	6853	32.35	3.94	0.21
144	SLU 80	5	-567	6851	32.83	3.97	0.22
144	SLU 81	5	-564	6956	32.87	4.03	0.22
144	SLU 82	5	-576	6954	33.34	4.05	0.22
144	SLU 83	5	-569	7053	33.22	4.08	0.22
144	SLU 84	5	-580	7051	33.7	4.1	0.22
144	SLE RA 1	3	-381	4462	21.7	2.55	0.14
144	SLE RA 2	3	-394	4460	22.23	2.58	0.14



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
144	SLE RA 3	3	-386	4558	22.05	2.6	0.14
144	SLE RA 4	3	-393	4557	22.36	2.62	0.14
144	SLE RA 5	3	-397	4525	22.47	2.61	0.14
144	SLE RA 6	3	-389	4623	22.28	2.63	0.14
144	SLE RA 7	3	-397	4621	22.6	2.65	0.14
144	SLE RA 8	3	-387	4592	22.17	2.62	0.14
144	SLE RA 9	3	-395	4590	22.49	2.63	0.14
144	SLE RA 10	3	-423	4921	24.13	2.86	0.15
144	SLE RA 11	3	-414	5019	23.95	2.89	0.16
144	SLE RA 12	3	-422	5018	24.26	2.9	0.16
144	SLE RA 13	3	-426	4986	24.37	2.9	0.16
144	SLE RA 14	3	-417	5084	24.18	2.92	0.16
144	SLE RA 15	3	-425	5082	24.5	2.94	0.16
144	SLE RA 16	3	-416	5052	24.07	2.91	0.16
144	SLE RA 17	3	-424	5051	24.39	2.92	0.16
144	SLE RA 18	3	-422	5121	24.42	2.96	0.16
144	SLE RA 19	4	-430	5119	24.73	2.98	0.16
144	SLE RA 20	4	-425	5185	24.65	3	0.16
144	SLE RA 21	4	-433	5184	24.97	3.01	0.16
144	SLE FR 1	3	-381	4462	21.7	2.55	0.14
144	SLE FR 2	3	-384	4462	21.81	2.56	0.14
144	SLE FR 3	3	-382	4488	21.8	2.56	0.14
144	SLE FR 4	3	-396	4659	22.62	2.68	0.15
144	SLE FR 5	3	-395	4686	22.61	2.69	0.15
144	SLE FR 6	3	-401	4792	23.06	2.76	0.15
144	SLE QP 1	3	-381	4462	21.7	2.55	0.14
144	SLE QP 2	3	-393	4660	22.52	2.68	0.15
144	SLD 1	13	-332	3770	19.6	11.17	0.5
144	SLD 2	13	-332	3770	19.6	11.17	0.5
144	SLD 3	16	-733	4175	39.54	13.38	0.58
144	SLD 4	16	-733	4175	39.54	13.38	0.58
144	SLD 5	1	234	3779	-8.6	1.88	0.13
144	SLD 6	1	234	3779	-8.6	1.88	0.13
144	SLD 7	11	-1104	5129	57.87	9.23	0.4
144	SLD 8	11	-1104	5129	57.87	9.23	0.4
144	SLD 9	-5	317	4191	-12.83	-3.88	-0.11
144	SLD 10	-5	317	4191	-12.83	-3.88	-0.11
144	SLD 11	5	-1020	5541	53.64	3.48	0.16
144	SLD 12	5	-1020	5541	53.64	3.48	0.16
144	SLD 13	-9	-54	5145	5.5	-8.03	-0.29
144	SLD 14	-9	-54	5145	5.5	-8.03	-0.29
144	SLD 15	-6	-455	5550	25.44	-5.82	-0.21
144	SLD 16	-6	-455	5550	25.44	-5.82	-0.21
144	SLV 1	26	-253	2577	15.86	23.42	1.02
144	SLV 2	26	-253	2577	15.86	23.42	1.02
144	SLV 3	33	-1186	3525	62.26	28.78	1.21
144	SLV 4	33	-1186	3525	62.26	28.78	1.21
144	SLV 5	-1	1064	2597	-49.85	0.77	0.11
144	SLV 6	-1	1064	2597	-49.85	0.77	0.11
144	SLV 7	23	-2047	5757	104.81	18.64	0.76
144	SLV 8	23	-2047	5757	104.81	18.64	0.76
144	SLV 9	-17	1260	3563	-59.77	-13.29	-0.47
144	SLV 10	-17	1260	3563	-59.77	-13.29	-0.47
144	SLV 11	7	-1851	6722	94.89	4.58	0.18
144	SLV 12	7	-1851	6722	94.89	4.58	0.18
144	SLV 13	-27	400	5795	-17.22	-23.43	-0.92
144	SLV 14	-27	400	5795	-17.22	-23.43	-0.92
144	SLV 15	-20	-533	6743	29.18	-18.07	-0.73
144	SLV 16	-20	-533	6743	29.18	-18.07	-0.73
145	SLU 1	0	-197	3926	15.71	-0.24	0
145	SLU 2	0	19	3824	5.96	-0.58	0
145	SLU 3	0	-203	4044	16.2	-0.25	0
145	SLU 4	0	-73	3982	10.35	-0.46	0
145	SLU 5	0	15	3896	6.29	-0.59	0
145	SLU 6	0	-207	4116	16.53	-0.26	0
145	SLU 7	0	-77	4055	10.68	-0.47	0
145	SLU 8	0	-205	4071	16.36	-0.25	0
145	SLU 9	0	-75	4009	10.51	-0.46	0
145	SLU 10	0	12	4506	7.48	-0.63	0
145	SLU 11	0	-210	4726	17.72	-0.29	0
145	SLU 12	0	-80	4664	11.87	-0.5	0
145	SLU 13	0	8	4578	7.81	-0.64	0
145	SLU 14	0	-214	4798	18.05	-0.3	0
145	SLU 15	0	-84	4737	12.2	-0.51	0
145	SLU 16	0	-212	4753	17.88	-0.3	0
145	SLU 17	0	-83	4691	12.03	-0.51	0
145	SLU 18	0	-207	4900	17.88	-0.3	0
145	SLU 19	0	-78	4839	12.03	-0.51	0
145	SLU 20	0	-211	4973	18.21	-0.31	0
145	SLU 21	0	-82	4911	12.36	-0.52	0
145	SLU 22	0	-209	4557	17.35	-0.28	0
145	SLU 23	0	7	4454	7.6	-0.62	0
145	SLU 24	0	-214	4674	17.84	-0.29	0
145	SLU 25	0	-85	4613	11.99	-0.5	0
145	SLU 26	0	3	4527	7.93	-0.63	0
145	SLU 27	0	-218	4747	18.17	-0.3	0
145	SLU 28	0	-89	4685	12.32	-0.51	0
145	SLU 29	0	-217	4701	18.01	-0.29	0
145	SLU 30	0	-87	4640	12.16	-0.5	0
145	SLU 31	0	0	5136	9.12	-0.67	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
145	SLU 32	0	-222	5356	19.36	-0.33	0
145	SLU 33	0	-92	5295	13.51	-0.54	0
145	SLU 34	0	-4	5209	9.45	-0.67	0
145	SLU 35	0	-226	5429	19.69	-0.34	0
145	SLU 36	0	-96	5367	13.84	-0.55	0
145	SLU 37	0	-224	5383	19.53	-0.34	0
145	SLU 38	0	-94	5322	13.68	-0.54	0
145	SLU 39	0	-219	5531	19.52	-0.34	0
145	SLU 40	0	-89	5470	13.67	-0.54	0
145	SLU 41	0	-223	5603	19.85	-0.35	0
145	SLU 42	0	-93	5542	14	-0.55	0
145	SLU 43	0	-252	4888	19.86	-0.3	0
145	SLU 44	0	-36	4785	10.11	-0.64	0
145	SLU 45	0	-258	5005	20.35	-0.31	0
145	SLU 46	0	-128	4944	14.5	-0.52	0
145	SLU 47	0	-40	4858	10.43	-0.65	0
145	SLU 48	0	-262	5077	20.68	-0.32	0
145	SLU 49	0	-132	5016	14.83	-0.53	0
145	SLU 50	0	-260	5032	20.51	-0.31	0
145	SLU 51	0	-130	4971	14.66	-0.52	0
145	SLU 52	0	-43	5467	11.63	-0.69	0
145	SLU 53	0	-265	5687	21.87	-0.35	0
145	SLU 54	0	-135	5626	16.02	-0.56	0
145	SLU 55	0	-47	5540	11.95	-0.69	0
145	SLU 56	0	-269	5760	22.2	-0.36	0
145	SLU 57	0	-139	5698	16.35	-0.57	0
145	SLU 58	0	-267	5714	22.03	-0.36	0
145	SLU 59	0	-138	5653	16.18	-0.56	0
145	SLU 60	0	-262	5862	22.03	-0.36	0
145	SLU 61	0	-132	5801	16.18	-0.56	0
145	SLU 62	0	-266	5934	22.35	-0.37	0
145	SLU 63	0	-137	5873	16.5	-0.57	0
145	SLU 64	0	-264	5518	21.5	-0.33	0
145	SLU 65	0	-48	5416	11.75	-0.68	0
145	SLU 66	0	-269	5636	21.99	-0.35	0
145	SLU 67	0	-140	5574	16.14	-0.55	0
145	SLU 68	0	-52	5488	12.08	-0.69	0
145	SLU 69	0	-273	5708	22.32	-0.35	0
145	SLU 70	0	-144	5647	16.47	-0.56	0
145	SLU 71	0	-272	5663	22.15	-0.35	0
145	SLU 72	0	-142	5601	16.31	-0.56	0
145	SLU 73	0	-55	6098	13.27	-0.72	0
145	SLU 74	0	-277	6318	23.51	-0.39	0
145	SLU 75	0	-147	6257	17.66	-0.6	0
145	SLU 76	0	-59	6170	13.6	-0.73	0
145	SLU 77	0	-281	6390	23.84	-0.4	0
145	SLU 78	0	-151	6329	17.99	-0.61	0
145	SLU 79	0	-279	6345	23.67	-0.39	0
145	SLU 80	0	-149	6284	17.83	-0.6	0
145	SLU 81	0	-274	6493	23.67	-0.39	0
145	SLU 82	0	-144	6431	17.82	-0.6	0
145	SLU 83	0	-278	6565	24	-0.4	0
145	SLU 84	0	-148	6504	18.15	-0.61	0
145	SLE RA 1	0	-200	4106	16.18	-0.25	0
145	SLE RA 2	0	-56	4038	9.68	-0.48	0
145	SLE RA 3	0	-204	4185	16.5	-0.26	0
145	SLE RA 4	0	-118	4144	12.61	-0.4	0
145	SLE RA 5	0	-59	4086	9.9	-0.49	0
145	SLE RA 6	0	-207	4233	16.72	-0.26	0
145	SLE RA 7	0	-120	4192	12.82	-0.4	0
145	SLE RA 8	0	-206	4203	16.61	-0.26	0
145	SLE RA 9	0	-119	4162	12.71	-0.4	0
145	SLE RA 10	0	-61	4493	10.69	-0.51	0
145	SLE RA 11	0	-209	4639	17.52	-0.28	0
145	SLE RA 12	0	-122	4598	13.62	-0.42	0
145	SLE RA 13	0	-64	4541	10.91	-0.51	0
145	SLE RA 14	0	-212	4688	17.74	-0.29	0
145	SLE RA 15	0	-125	4647	13.84	-0.43	0
145	SLE RA 16	0	-210	4657	17.63	-0.29	0
145	SLE RA 17	0	-124	4616	13.73	-0.43	0
145	SLE RA 18	0	-207	4756	17.62	-0.29	0
145	SLE RA 19	0	-121	4715	13.72	-0.43	0
145	SLE RA 20	0	-210	4804	17.84	-0.29	0
145	SLE RA 21	0	-123	4763	13.94	-0.43	0
145	SLE FR 1	0	-200	4106	16.18	-0.25	0
145	SLE FR 2	0	-171	4093	14.88	-0.29	0
145	SLE FR 3	0	-201	4125	16.26	-0.25	0
145	SLE FR 4	0	-173	4287	15.31	-0.31	0
145	SLE FR 5	0	-203	4320	16.7	-0.26	0
145	SLE FR 6	0	-204	4431	16.9	-0.27	0
145	SLE QP 1	0	-200	4106	16.18	-0.25	0
145	SLE QP 2	0	-202	4301	16.61	-0.26	0
145	SLD 1	4	-162	4427	14.87	4.38	0.01
145	SLD 2	4	-162	4427	14.87	4.38	0.01
145	SLD 3	8	-516	4314	31.1	7.71	0.01
145	SLD 4	8	-516	4314	31.1	7.71	0.01
145	SLD 5	-5	346	4510	-8.53	-3.92	0
145	SLD 6	-5	346	4510	-8.53	-3.92	0
145	SLD 7	9	-832	4134	45.57	7.18	0.01
145	SLD 8	9	-832	4134	45.57	7.18	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
145	SLD 9	-9	428	4468	-12.35	-7.7	-0.01
145	SLD 10	-9	428	4468	-12.35	-7.7	-0.01
145	SLD 11	5	-750	4092	41.75	3.4	0
145	SLD 12	5	-750	4092	41.75	3.4	0
145	SLD 13	-8	111	4288	2.12	-8.23	-0.01
145	SLD 14	-8	111	4288	2.12	-8.23	-0.01
145	SLD 15	-4	-242	4175	18.36	-4.9	-0.01
145	SLD 16	-4	-242	4175	18.36	-4.9	-0.01
145	SLV 1	9	-107	4617	12.49	10.81	0.02
145	SLV 2	9	-107	4617	12.49	10.81	0.02
145	SLV 3	20	-948	4336	51.06	19.21	0.02
145	SLV 4	20	-948	4336	51.06	19.21	0.02
145	SLV 5	-14	1102	4822	-43.13	-9.67	-0.01
145	SLV 6	-14	1102	4822	-43.13	-9.67	-0.01
145	SLV 7	22	-1702	3885	85.45	18.32	0.02
145	SLV 8	22	-1702	3885	85.45	18.32	0.02
145	SLV 9	-22	1297	4717	-52.23	-18.84	-0.02
145	SLV 10	-22	1297	4717	-52.23	-18.84	-0.02
145	SLV 11	13	-1506	3780	76.35	9.15	0.01
145	SLV 12	13	-1506	3780	76.35	9.15	0.01
145	SLV 13	-20	544	4267	-17.84	-19.73	-0.02
145	SLV 14	-20	544	4267	-17.84	-19.73	-0.02
145	SLV 15	-9	-297	3985	20.73	-11.33	-0.02
145	SLV 16	-9	-297	3985	20.73	-11.33	-0.02
146	SLU 1	0	230	5772	-7.9	-0.13	0
146	SLU 2	1	261	5961	-9.16	3.1	0
146	SLU 3	0	239	5948	-8.23	-0.15	0
146	SLU 4	0	258	6061	-8.98	1.79	0
146	SLU 5	1	266	6075	-9.34	3.09	0
146	SLU 6	-1	244	6061	-8.4	-0.16	0
146	SLU 7	0	263	6175	-9.16	1.77	0
146	SLU 8	-1	240	5999	-8.25	-0.16	0
146	SLU 9	0	259	6112	-9	1.78	0
146	SLU 10	1	314	6674	-11.09	3.01	0
146	SLU 11	-1	292	6660	-10.15	-0.24	0
146	SLU 12	0	311	6774	-10.91	1.7	0
146	SLU 13	1	319	6787	-11.26	2.99	0
146	SLU 14	-1	297	6774	-10.32	-0.25	0
146	SLU 15	0	316	6887	-11.08	1.68	0
146	SLU 16	-1	293	6711	-10.17	-0.25	0
146	SLU 17	0	312	6825	-10.93	1.69	0
146	SLU 18	-1	305	6790	-10.65	-0.26	0
146	SLU 19	0	324	6904	-11.41	1.68	0
146	SLU 20	-1	311	6903	-10.82	-0.27	0
146	SLU 21	0	329	7017	-11.58	1.66	0
146	SLU 22	-1	278	6465	-9.64	-0.21	0
146	SLU 23	1	309	6654	-10.9	3.02	0
146	SLU 24	-1	287	6640	-9.97	-0.23	0
146	SLU 25	0	306	6754	-10.72	1.71	0
146	SLU 26	1	314	6767	-11.08	3	0
146	SLU 27	-1	293	6754	-10.14	-0.24	0
146	SLU 28	0	311	6867	-10.89	1.69	0
146	SLU 29	-1	289	6691	-9.98	-0.24	0
146	SLU 30	0	307	6805	-10.74	1.7	0
146	SLU 31	0	362	7366	-12.83	2.93	0
146	SLU 32	-1	340	7353	-11.89	-0.32	0
146	SLU 33	0	359	7467	-12.65	1.61	0
146	SLU 34	0	367	7480	-13	2.91	0
146	SLU 35	-1	346	7466	-12.06	-0.33	0
146	SLU 36	0	364	7580	-12.82	1.6	0
146	SLU 37	-1	341	7404	-11.91	-0.33	0
146	SLU 38	0	360	7517	-12.66	1.61	0
146	SLU 39	-1	354	7482	-12.39	-0.34	0
146	SLU 40	0	372	7596	-13.15	1.59	0
146	SLU 41	-1	359	7596	-12.56	-0.35	0
146	SLU 42	0	378	7709	-13.32	1.58	0
146	SLU 43	-1	282	7266	-9.68	-0.14	0
146	SLU 44	1	313	7456	-10.94	3.09	0
146	SLU 45	-1	292	7442	-10	-0.16	0
146	SLU 46	0	310	7556	-10.76	1.78	0
146	SLU 47	1	318	7569	-11.11	3.07	0
146	SLU 48	-1	297	7555	-10.17	-0.17	0
146	SLU 49	0	315	7669	-10.93	1.76	0
146	SLU 50	-1	293	7493	-10.02	-0.17	0
146	SLU 51	0	311	7607	-10.78	1.77	0
146	SLU 52	0	366	8168	-12.86	3	0
146	SLU 53	-1	345	8155	-11.92	-0.25	0
146	SLU 54	0	363	8268	-12.68	1.69	0
146	SLU 55	0	371	8281	-13.03	2.98	0
146	SLU 56	-1	350	8268	-12.09	-0.26	0
146	SLU 57	0	368	8381	-12.85	1.67	0
146	SLU 58	-1	346	8205	-11.94	-0.26	0
146	SLU 59	0	364	8319	-12.7	1.68	0
146	SLU 60	-1	358	8284	-12.42	-0.27	0
146	SLU 61	0	376	8398	-13.18	1.67	0
146	SLU 62	-1	363	8397	-12.59	-0.28	0
146	SLU 63	0	382	8511	-13.35	1.65	0
146	SLU 64	-1	330	7959	-11.41	-0.22	0
146	SLU 65	0	361	8148	-12.68	3.01	0
146	SLU 66	-1	340	8135	-11.74	-0.24	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
146	SLU 67	0	359	8248	-12.5	1.7	0
146	SLU 68	0	367	8262	-12.85	2.99	0
146	SLU 69	-1	345	8248	-11.91	-0.25	0
146	SLU 70	0	364	8362	-12.67	1.68	0
146	SLU 71	-1	341	8186	-11.76	-0.25	0
146	SLU 72	0	360	8299	-12.52	1.69	0
146	SLU 73	0	414	8861	-14.6	2.91	0
146	SLU 74	-1	393	8847	-13.66	-0.33	0
146	SLU 75	0	411	8961	-14.42	1.6	0
146	SLU 76	0	420	8974	-14.77	2.9	0
146	SLU 77	-1	398	8960	-13.83	-0.35	0
146	SLU 78	0	417	9074	-14.59	1.59	0
146	SLU 79	-1	394	8898	-13.68	-0.34	0
146	SLU 80	0	413	9012	-14.44	1.6	0
146	SLU 81	-1	406	8977	-14.16	-0.35	0
146	SLU 82	0	425	9090	-14.92	1.58	0
146	SLU 83	-1	411	9090	-14.33	-0.37	0
146	SLU 84	0	430	9204	-15.09	1.57	0
146	SLE RA 1	0	244	5970	-8.4	-0.15	0
146	SLE RA 2	0	264	6096	-9.24	2	0
146	SLE RA 3	-1	250	6087	-8.61	-0.17	0
146	SLE RA 4	0	262	6163	-9.12	1.13	0
146	SLE RA 5	0	268	6172	-9.35	1.99	0
146	SLE RA 6	-1	253	6163	-8.73	-0.17	0
146	SLE RA 7	0	266	6238	-9.23	1.12	0
146	SLE RA 8	-1	251	6121	-8.63	-0.17	0
146	SLE RA 9	0	263	6197	-9.13	1.12	0
146	SLE RA 10	0	300	6571	-10.52	1.94	0
146	SLE RA 11	-1	285	6562	-9.9	-0.23	0
146	SLE RA 12	0	298	6638	-10.4	1.06	0
146	SLE RA 13	0	303	6647	-10.64	1.93	0
146	SLE RA 14	-1	289	6638	-10.01	-0.24	0
146	SLE RA 15	0	301	6713	-10.52	1.06	0
146	SLE RA 16	-1	286	6596	-9.91	-0.23	0
146	SLE RA 17	0	298	6672	-10.41	1.06	0
146	SLE RA 18	-1	294	6649	-10.23	-0.24	0
146	SLE RA 19	0	306	6724	-10.73	1.05	0
146	SLE RA 20	-1	297	6724	-10.34	-0.25	0
146	SLE RA 21	0	310	6800	-10.85	1.04	0
146	SLE FR 1	0	244	5970	-8.4	-0.15	0
146	SLE FR 2	0	248	5995	-8.57	0.28	0
146	SLE FR 3	-1	245	6000	-8.44	-0.16	0
146	SLE FR 4	0	263	6199	-9.12	0.25	0
146	SLE FR 5	-1	260	6204	-8.99	-0.18	0
146	SLE FR 6	-1	269	6309	-9.31	-0.2	0
146	SLE QP 1	0	244	5970	-8.4	-0.15	0
146	SLE QP 2	-1	259	6174	-8.95	-0.18	0
146	SLD 1	-16	298	4688	-10.74	7.23	0.02
146	SLD 2	-16	298	4688	-10.74	7.23	0.02
146	SLD 3	-5	-123	4414	6.99	16.14	0.01
146	SLD 4	-5	-123	4414	6.99	16.14	0.01
146	SLD 5	-21	909	6144	-36.38	-11.46	0.01
146	SLD 6	-21	909	6144	-36.38	-11.46	0.01
146	SLD 7	14	-494	5229	22.73	18.22	0
146	SLD 8	14	-494	5229	22.73	18.22	0
146	SLD 9	-15	1011	7118	-40.62	-18.57	0
146	SLD 10	-15	1011	7118	-40.62	-18.57	0
146	SLD 11	20	-391	6203	18.48	11.1	-0.01
146	SLD 12	20	-391	6203	18.48	11.1	-0.01
146	SLD 13	4	640	7933	-24.89	-16.49	-0.01
146	SLD 14	4	640	7933	-24.89	-16.49	-0.01
146	SLD 15	15	219	7659	-7.16	-7.59	-0.02
146	SLD 16	15	219	7659	-7.16	-7.59	-0.02
146	SLV 1	-37	350	2701	-13.1	16.63	0.04
146	SLV 2	-37	350	2701	-13.1	16.63	0.04
146	SLV 3	-10	-625	2052	27.95	39.17	0.03
146	SLV 4	-10	-625	2052	27.95	39.17	0.03
146	SLV 5	-53	1764	6116	-72.46	-29.33	0.03
146	SLV 6	-53	1764	6116	-72.46	-29.33	0.03
146	SLV 7	38	-1484	3953	64.39	45.82	-0.01
146	SLV 8	38	-1484	3953	64.39	45.82	-0.01
146	SLV 9	-39	2002	8394	-82.28	-46.17	0.01
146	SLV 10	-39	2002	8394	-82.28	-46.17	0.01
146	SLV 11	52	-1247	6231	54.56	28.97	-0.03
146	SLV 12	52	-1247	6231	54.56	28.97	-0.03
146	SLV 13	9	1142	10295	-45.85	-39.53	-0.03
146	SLV 14	9	1142	10295	-45.85	-39.53	-0.03
146	SLV 15	36	168	9646	-4.79	-16.99	-0.04
146	SLV 16	36	168	9646	-4.79	-16.99	-0.04
147	SLU 1	0	-530	3712	24.67	1.56	0.03
147	SLU 2	0	-545	3701	25.31	1.54	0.03
147	SLU 3	0	-545	3823	25.42	1.61	0.03
147	SLU 4	0	-554	3817	25.8	1.59	0.03
147	SLU 5	0	-556	3771	25.82	1.56	0.03
147	SLU 6	0	-556	3893	25.93	1.64	0.03
147	SLU 7	0	-566	3886	26.31	1.62	0.03
147	SLU 8	0	-552	3851	25.69	1.62	0.03
147	SLU 9	0	-561	3844	26.08	1.6	0.03
147	SLU 10	0	-615	4311	28.75	1.71	0.03
147	SLU 11	0	-616	4433	28.85	1.78	0.03



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
Ind.	N.br.	x	y	z		x	y	z	
147	SLU 12	0	-625	4426		29.24	1.77		0.03
147	SLU 13	0	-626	4380		29.26	1.74		0.03
147	SLU 14	0	-627	4502		29.36	1.81		0.03
147	SLU 15	0	-636	4496		29.75	1.8		0.03
147	SLU 16	0	-622	4460		29.13	1.79		0.03
147	SLU 17	0	-631	4454		29.52	1.78		0.03
147	SLU 18	0	-630	4583		29.58	1.81		0.03
147	SLU 19	0	-639	4576		29.96	1.79		0.03
147	SLU 20	0	-641	4652		30.09	1.84		0.03
147	SLU 21	0	-650	4646		30.48	1.82		0.03
147	SLU 22	0	-586	4236		27.45	1.77		0.03
147	SLU 23	0	-602	4225		28.1	1.75		0.03
147	SLU 24	0	-602	4347		28.2	1.82		0.03
147	SLU 25	0	-611	4340		28.59	1.81		0.03
147	SLU 26	0	-613	4294		28.61	1.78		0.03
147	SLU 27	0	-613	4416		28.71	1.85		0.03
147	SLU 28	0	-622	4410		29.1	1.84		0.03
147	SLU 29	0	-609	4374		28.48	1.83		0.03
147	SLU 30	0	-618	4368		28.86	1.82		0.03
147	SLU 31	0	-672	4834		31.53	1.92		0.03
147	SLU 32	0	-673	4956		31.64	1.99		0.03
147	SLU 33	0	-682	4950		32.02	1.98		0.03
147	SLU 34	0	-683	4903		32.05	1.95		0.03
147	SLU 35	0	-684	5025		32.15	2.02		0.04
147	SLU 36	0	-693	5019		32.54	2.01		0.04
147	SLU 37	0	-679	4983		31.92	2.01		0.03
147	SLU 38	0	-688	4977		32.3	1.99		0.03
147	SLU 39	0	-687	5106		32.36	2.02		0.04
147	SLU 40	0	-696	5100		32.75	2.01		0.04
147	SLU 41	0	-698	5175		32.88	2.05		0.04
147	SLU 42	0	-707	5169		33.26	2.04		0.04
147	SLU 43	0	-669	4647		31.11	1.95		0.03
147	SLU 44	0	-684	4636		31.76	1.93		0.03
147	SLU 45	0	-685	4758		31.86	2		0.03
147	SLU 46	0	-694	4751		32.25	1.99		0.03
147	SLU 47	0	-695	4705		32.27	1.96		0.03
147	SLU 48	0	-696	4827		32.37	2.03		0.03
147	SLU 49	0	-705	4821		32.76	2.02		0.03
147	SLU 50	0	-691	4785		32.14	2.01		0.03
147	SLU 51	0	-700	4779		32.52	2		0.03
147	SLU 52	0	-754	5245		35.19	2.1		0.04
147	SLU 53	0	-755	5367		35.3	2.17		0.04
147	SLU 54	0	-764	5361		35.68	2.16		0.04
147	SLU 55	0	-765	5314		35.71	2.13		0.04
147	SLU 56	0	-766	5436		35.81	2.2		0.04
147	SLU 57	0	-775	5430		36.2	2.19		0.04
147	SLU 58	0	-761	5394		35.58	2.18		0.04
147	SLU 59	0	-770	5388		35.96	2.17		0.04
147	SLU 60	0	-769	5517		36.02	2.2		0.04
147	SLU 61	0	-778	5511		36.41	2.19		0.04
147	SLU 62	0	-780	5586		36.54	2.23		0.04
147	SLU 63	0	-789	5580		36.92	2.22		0.04
147	SLU 64	0	-726	5170		33.9	2.17		0.04
147	SLU 65	0	-741	5159		34.54	2.14		0.04
147	SLU 66	0	-742	5281		34.65	2.21		0.04
147	SLU 67	0	-751	5275		35.03	2.2		0.04
147	SLU 68	0	-752	5228		35.05	2.17		0.04
147	SLU 69	0	-753	5350		35.16	2.24		0.04
147	SLU 70	0	-762	5344		35.54	2.23		0.04
147	SLU 71	0	-748	5308		34.92	2.22		0.04
147	SLU 72	0	-757	5302		35.31	2.21		0.04
147	SLU 73	0	-811	5768		37.98	2.32		0.04
147	SLU 74	0	-812	5890		38.08	2.39		0.04
147	SLU 75	0	-821	5884		38.47	2.38		0.04
147	SLU 76	0	-822	5838		38.49	2.35		0.04
147	SLU 77	0	-823	5960		38.6	2.42		0.04
147	SLU 78	0	-832	5953		38.98	2.4		0.04
147	SLU 79	0	-818	5918		38.36	2.4		0.04
147	SLU 80	0	-827	5911		38.75	2.39		0.04
147	SLU 81	0	-826	6040		38.81	2.41		0.04
147	SLU 82	0	-835	6034		39.2	2.4		0.04
147	SLU 83	0	-837	6110		39.32	2.44		0.04
147	SLU 84	0	-846	6103		39.71	2.43		0.04
147	SLE RA 1	0	-546	3862		25.46	1.62		0.03
147	SLE RA 2	0	-556	3855		25.89	1.6		0.03
147	SLE RA 3	0	-556	3936		25.96	1.65		0.03
147	SLE RA 4	0	-562	3932		26.22	1.64		0.03
147	SLE RA 5	0	-563	3901		26.23	1.62		0.03
147	SLE RA 6	0	-564	3982		26.3	1.67		0.03
147	SLE RA 7	0	-570	3978		26.56	1.66		0.03
147	SLE RA 8	0	-561	3954		26.15	1.66		0.03
147	SLE RA 9	0	-567	3950		26.4	1.65		0.03
147	SLE RA 10	0	-603	4261		28.18	1.72		0.03
147	SLE RA 11	0	-603	4342		28.25	1.77		0.03
147	SLE RA 12	0	-609	4338		28.51	1.76		0.03
147	SLE RA 13	0	-610	4307		28.53	1.74		0.03
147	SLE RA 14	0	-611	4388		28.6	1.79		0.03
147	SLE RA 15	0	-617	4384		28.85	1.78		0.03
147	SLE RA 16	0	-607	4360		28.44	1.77		0.03
147	SLE RA 17	0	-613	4356		28.7	1.77		0.03



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
Ind.	N.br.	x	y	z		x	y	z	
147	SLE RA 18	0	-613	4442		28.74	1.78		0.03
147	SLE RA 19	0	-619	4438		29	1.78		0.03
147	SLE RA 20	0	-620	4488		29.08	1.8		0.03
147	SLE RA 21	0	-626	4484		29.34	1.8		0.03
147	SLE FR 1	0	-546	3862		25.46	1.62		0.03
147	SLE FR 2	0	-548	3860		25.55	1.62		0.03
147	SLE FR 3	0	-549	3880		25.6	1.63		0.03
147	SLE FR 4	0	-568	4034		26.53	1.67		0.03
147	SLE FR 5	0	-569	4054		26.58	1.68		0.03
147	SLE FR 6	0	-579	4152		27.1	1.7		0.03
147	SLE QP 1	0	-546	3862		25.46	1.62		0.03
147	SLE QP 2	0	-566	4036		26.45	1.67		0.03
147	SLD 1	7	-226	4385		10.61	10.28		0.03
147	SLD 2	7	-226	4385		10.61	10.28		0.03
147	SLD 3	6	-571	4610		27.14	8.67		0.04
147	SLD 4	6	-571	4610		27.14	8.67		0.04
147	SLD 5	5	58	3799		-3.36	6.7		0.02
147	SLD 6	5	58	3799		-3.36	6.7		0.02
147	SLD 7	-1	-1089	4550		51.71	1.32		0.04
147	SLD 8	-1	-1089	4550		51.71	1.32		0.04
147	SLD 9	1	-43	3522		1.18	2.01		0.02
147	SLD 10	1	-43	3522		1.18	2.01		0.02
147	SLD 11	-4	-1190	4273		56.25	-3.36		0.03
147	SLD 12	-4	-1190	4273		56.25	-3.36		0.03
147	SLD 13	-5	-561	3462		25.76	-5.33		0.02
147	SLD 14	-5	-561	3462		25.76	-5.33		0.02
147	SLD 15	-7	-905	3687		42.28	-6.95		0.02
147	SLD 16	-7	-905	3687		42.28	-6.95		0.02
147	SLV 1	17	219	4855		-10.18	22.71		0.04
147	SLV 2	17	219	4855		-10.18	22.71		0.04
147	SLV 3	13	-577	5379		28.06	18.78		0.05
147	SLV 4	13	-577	5379		28.06	18.78		0.05
147	SLV 5	11	877	3486		-42.54	13.94		0.02
147	SLV 6	11	877	3486		-42.54	13.94		0.02
147	SLV 7	-2	-1777	5234		84.93	0.85		0.05
147	SLV 8	-2	-1777	5234		84.93	0.85		0.05
147	SLV 9	2	645	2837		-32.03	2.49		0.01
147	SLV 10	2	645	2837		-32.03	2.49		0.01
147	SLV 11	-11	-2009	4585		95.43	-10.6		0.04
147	SLV 12	-11	-2009	4585		95.43	-10.6		0.04
147	SLV 13	-13	-555	2692		24.83	-15.45		0
147	SLV 14	-13	-555	2692		24.83	-15.45		0
147	SLV 15	-17	-1351	3217		63.07	-19.38		0.01
147	SLV 16	-17	-1351	3217		63.07	-19.38		0.01
148	SLU 1	0	238	1870		-8.47	0.19		0
148	SLU 2	0	235	1858		-8.38	0.21		0
148	SLU 3	0	250	1925		-8.89	0.18		0
148	SLU 4	0	248	1918		-8.84	0.19		0
148	SLU 5	0	243	1895		-8.66	0.21		0
148	SLU 6	0	258	1962		-9.18	0.17		0
148	SLU 7	0	256	1955		-9.12	0.19		0
148	SLU 8	0	254	1944		-9.04	0.17		0
148	SLU 9	0	252	1937		-8.98	0.19		0
148	SLU 10	0	279	2192		-9.97	0.26		0
148	SLU 11	0	293	2259		-10.49	0.22		0
148	SLU 12	0	292	2252		-10.43	0.24		0
148	SLU 13	0	287	2229		-10.26	0.25		0
148	SLU 14	0	301	2296		-10.77	0.22		0
148	SLU 15	0	300	2288		-10.72	0.23		0
148	SLU 16	0	297	2277		-10.63	0.22		0
148	SLU 17	0	296	2270		-10.58	0.23		0
148	SLU 18	0	300	2346		-10.75	0.25		0
148	SLU 19	0	299	2339		-10.7	0.26		0
148	SLU 20	0	308	2383		-11.03	0.24		0
148	SLU 21	0	307	2376		-10.98	0.26		0
148	SLU 22	0	284	2117		-10.11	0.2		0
148	SLU 23	0	281	2106		-10.02	0.23		0
148	SLU 24	0	296	2173		-10.53	0.19		0
148	SLU 25	0	294	2165		-10.47	0.21		0
148	SLU 26	0	289	2142		-10.3	0.22		0
148	SLU 27	0	303	2209		-10.81	0.19		0
148	SLU 28	0	302	2202		-10.76	0.2		0
148	SLU 29	0	300	2191		-10.67	0.19		0
148	SLU 30	0	298	2184		-10.62	0.2		0
148	SLU 31	0	325	2439		-11.61	0.27		0
148	SLU 32	0	339	2506		-12.13	0.24		0
148	SLU 33	0	338	2499		-12.07	0.25		0
148	SLU 34	0	333	2476		-11.89	0.26		0
148	SLU 35	0	347	2543		-12.41	0.23		0
148	SLU 36	0	346	2536		-12.35	0.25		0
148	SLU 37	0	343	2525		-12.27	0.23		0
148	SLU 38	0	342	2518		-12.21	0.25		0
148	SLU 39	0	346	2594		-12.39	0.26		0
148	SLU 40	0	345	2587		-12.33	0.28		0
148	SLU 41	0	354	2631		-12.67	0.26		0
148	SLU 42	0	352	2624		-12.62	0.27		0
148	SLU 43	0	293	2346		-10.45	0.24		0
148	SLU 44	0	291	2334		-10.36	0.26		0
148	SLU 45	0	305	2401		-10.87	0.23		0
148	SLU 46	0	304	2394		-10.82	0.25		0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
148	SLU 47	0	299	2371	-10.64	0.26	0
148	SLU 48	0	313	2438	-11.16	0.22	0
148	SLU 49	0	312	2431	-11.1	0.24	0
148	SLU 50	0	309	2420	-11.02	0.22	0
148	SLU 51	0	308	2413	-10.96	0.24	0
148	SLU 52	0	335	2668	-11.95	0.31	0
148	SLU 53	0	349	2735	-12.47	0.27	0
148	SLU 54	0	347	2728	-12.41	0.29	0
148	SLU 55	0	342	2705	-12.24	0.3	0
148	SLU 56	0	357	2772	-12.75	0.27	0
148	SLU 57	0	355	2765	-12.7	0.28	0
148	SLU 58	0	353	2753	-12.61	0.27	0
148	SLU 59	0	351	2746	-12.56	0.28	0
148	SLU 60	0	356	2823	-12.73	0.3	0
148	SLU 61	0	354	2815	-12.68	0.31	0
148	SLU 62	0	364	2859	-13.02	0.29	0
148	SLU 63	0	362	2852	-12.96	0.31	0
148	SLU 64	0	339	2594	-12.09	0.25	0
148	SLU 65	0	337	2582	-12	0.28	0
148	SLU 66	0	351	2649	-12.51	0.24	0
148	SLU 67	0	350	2642	-12.46	0.26	0
148	SLU 68	0	345	2619	-12.28	0.27	0
148	SLU 69	0	359	2686	-12.79	0.24	0.01
148	SLU 70	0	357	2678	-12.74	0.25	0.01
148	SLU 71	0	355	2667	-12.66	0.24	0.01
148	SLU 72	0	354	2660	-12.6	0.25	0.01
148	SLU 73	0	380	2915	-13.59	0.32	0
148	SLU 74	0	395	2982	-14.11	0.29	0
148	SLU 75	0	393	2975	-14.05	0.3	0
148	SLU 76	0	388	2952	-13.87	0.32	0
148	SLU 77	0	403	3019	-14.39	0.28	0.01
148	SLU 78	0	401	3012	-14.33	0.3	0.01
148	SLU 79	0	399	3001	-14.25	0.28	0.01
148	SLU 80	0	397	2994	-14.19	0.3	0.01
148	SLU 81	0	402	3070	-14.37	0.31	0
148	SLU 82	0	400	3063	-14.31	0.33	0
148	SLU 83	0	410	3107	-14.65	0.31	0
148	SLU 84	0	408	3100	-14.6	0.32	0
148	SLE RA 1	0	251	1941	-8.94	0.19	0
148	SLE RA 2	0	249	1933	-8.88	0.21	0
148	SLE RA 3	0	259	1977	-9.22	0.19	0
148	SLE RA 4	0	258	1973	-9.18	0.2	0
148	SLE RA 5	0	254	1957	-9.07	0.2	0
148	SLE RA 6	0	264	2002	-9.41	0.18	0
148	SLE RA 7	0	263	1997	-9.37	0.19	0
148	SLE RA 8	0	261	1990	-9.32	0.18	0
148	SLE RA 9	0	260	1985	-9.28	0.19	0
148	SLE RA 10	0	278	2155	-9.94	0.24	0
148	SLE RA 11	0	288	2200	-10.29	0.21	0
148	SLE RA 12	0	287	2195	-10.25	0.23	0
148	SLE RA 13	0	284	2180	-10.13	0.23	0
148	SLE RA 14	0	293	2224	-10.47	0.21	0
148	SLE RA 15	0	292	2220	-10.44	0.22	0
148	SLE RA 16	0	291	2212	-10.38	0.21	0
148	SLE RA 17	0	290	2207	-10.34	0.22	0
148	SLE RA 18	0	293	2258	-10.46	0.23	0
148	SLE RA 19	0	291	2254	-10.42	0.24	0
148	SLE RA 20	0	298	2283	-10.65	0.23	0
148	SLE RA 21	0	297	2278	-10.61	0.24	0
148	SLE FR 1	0	251	1941	-8.94	0.19	0
148	SLE FR 2	0	251	1939	-8.93	0.19	0
148	SLE FR 3	0	253	1950	-9.02	0.19	0
148	SLE FR 4	0	263	2034	-9.38	0.21	0
148	SLE FR 5	0	266	2046	-9.47	0.2	0
148	SLE FR 6	0	272	2099	-9.7	0.21	0
148	SLE QP 1	0	251	1941	-8.94	0.19	0
148	SLE QP 2	0	263	2036	-9.4	0.2	0
148	SLD 1	8	101	1655	-2.92	7.2	-0.16
148	SLD 2	8	101	1655	-2.92	7.2	-0.16
148	SLD 3	6	261	1745	-9.63	8.73	-0.13
148	SLD 4	6	261	1745	-9.63	8.73	-0.13
148	SLD 5	4	-29	1785	2.73	-0.02	-0.09
148	SLD 6	4	-29	1785	2.73	-0.02	-0.09
148	SLD 7	0	506	2085	-19.65	5.08	0.01
148	SLD 8	0	506	2085	-19.65	5.08	0.01
148	SLD 9	0	21	1987	0.86	-4.67	0
148	SLD 10	0	21	1987	0.86	-4.67	0
148	SLD 11	-5	555	2287	-21.52	0.42	0.1
148	SLD 12	-5	555	2287	-21.52	0.42	0.1
148	SLD 13	-7	266	2327	-9.16	-8.32	0.14
148	SLD 14	-7	266	2327	-9.16	-8.32	0.14
148	SLD 15	-8	426	2417	-15.88	-6.79	0.17
148	SLD 16	-8	426	2417	-15.88	-6.79	0.17
148	SLV 1	19	-116	1143	5.73	17.33	-0.4
148	SLV 2	19	-116	1143	5.73	17.33	-0.4
148	SLV 3	15	258	1354	-9.94	21.06	-0.32
148	SLV 4	15	258	1354	-9.94	21.06	-0.32
148	SLV 5	11	-418	1448	18.92	-0.33	-0.22
148	SLV 6	11	-418	1448	18.92	-0.33	-0.22
148	SLV 7	-1	830	2151	-33.34	12.13	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
148	SLV 8	-1	830	2151	-33.34	12.13	0.01
148	SLV 9	0	-303	1921	14.54	-11.72	-0.01
148	SLV 10	0	-303	1921	14.54	-11.72	-0.01
148	SLV 11	-11	945	2624	-37.71	0.73	0.23
148	SLV 12	-11	945	2624	-37.71	0.73	0.23
148	SLV 13	-16	268	2718	-8.85	-20.66	0.33
148	SLV 14	-16	268	2718	-8.85	-20.66	0.33
148	SLV 15	-19	643	2929	-24.53	-16.92	0.4
148	SLV 16	-19	643	2929	-24.53	-16.92	0.4
149	SLU 1	-3	604	3007	-24.82	-4.16	0
149	SLU 2	-3	663	3008	-27.06	-5.61	0
149	SLU 3	-3	624	3082	-25.6	-4.29	0
149	SLU 4	-3	659	3083	-26.95	-5.16	0
149	SLU 5	-3	673	3052	-27.48	-5.7	0
149	SLU 6	-3	634	3126	-26.02	-4.39	0
149	SLU 7	-3	669	3127	-27.37	-5.25	0
149	SLU 8	-3	625	3095	-25.66	-4.35	0
149	SLU 9	-3	660	3096	-27	-5.21	0
149	SLU 10	-4	771	3394	-31.28	-5.98	0
149	SLU 11	-3	731	3468	-29.82	-4.67	0
149	SLU 12	-4	767	3468	-31.16	-5.54	0
149	SLU 13	-4	781	3438	-31.7	-6.08	0
149	SLU 14	-3	741	3512	-30.24	-4.77	0
149	SLU 15	-4	777	3512	-31.58	-5.63	0
149	SLU 16	-3	732	3481	-29.87	-4.72	0
149	SLU 17	-4	767	3481	-31.22	-5.59	0
149	SLU 18	-3	758	3558	-30.84	-4.7	0
149	SLU 19	-3	793	3559	-32.19	-5.57	0
149	SLU 20	-3	768	3602	-31.26	-4.79	0
149	SLU 21	-4	804	3603	-32.61	-5.66	0
149	SLU 22	-3	704	3366	-28.73	-4.57	0
149	SLU 23	-4	762	3367	-30.97	-6.01	0
149	SLU 24	-3	723	3441	-29.51	-4.7	0
149	SLU 25	-4	758	3442	-30.86	-5.57	0
149	SLU 26	-4	772	3411	-31.39	-6.11	0
149	SLU 27	-3	733	3485	-29.93	-4.8	0
149	SLU 28	-4	768	3486	-31.28	-5.66	0
149	SLU 29	-3	724	3454	-29.57	-4.76	0
149	SLU 30	-4	759	3455	-30.91	-5.62	0
149	SLU 31	-4	870	3753	-35.19	-6.39	0
149	SLU 32	-4	831	3827	-33.73	-5.08	0
149	SLU 33	-4	866	3828	-35.07	-5.95	0
149	SLU 34	-4	880	3797	-35.61	-6.49	0
149	SLU 35	-4	841	3871	-34.15	-5.17	0
149	SLU 36	-4	876	3872	-35.49	-6.04	0
149	SLU 37	-4	832	3840	-33.79	-5.13	0
149	SLU 38	-4	867	3841	-35.13	-6	0
149	SLU 39	-4	858	3917	-34.75	-5.11	0
149	SLU 40	-4	893	3918	-36.1	-5.98	0
149	SLU 41	-4	868	3961	-35.17	-5.2	0
149	SLU 42	-4	903	3962	-36.52	-6.07	0
149	SLU 43	-4	752	3786	-30.92	-5.27	0
149	SLU 44	-4	810	3787	-33.16	-6.71	0
149	SLU 45	-4	771	3861	-31.71	-5.4	0
149	SLU 46	-4	806	3862	-33.05	-6.27	0
149	SLU 47	-4	820	3831	-33.58	-6.81	0
149	SLU 48	-4	781	3905	-32.13	-5.49	0
149	SLU 49	-4	816	3906	-33.47	-6.36	0
149	SLU 50	-4	772	3874	-31.76	-5.45	0
149	SLU 51	-4	807	3875	-33.11	-6.32	0
149	SLU 52	-4	918	4173	-37.38	-7.09	0
149	SLU 53	-4	879	4247	-35.92	-5.78	0
149	SLU 54	-4	914	4247	-37.27	-6.65	0
149	SLU 55	-4	928	4217	-37.8	-7.18	0
149	SLU 56	-4	889	4291	-36.34	-5.87	0
149	SLU 57	-4	924	4291	-37.69	-6.74	0
149	SLU 58	-4	880	4259	-35.98	-5.83	0
149	SLU 59	-4	915	4260	-37.32	-6.7	0
149	SLU 60	-4	906	4337	-36.95	-5.81	0
149	SLU 61	-4	941	4337	-38.29	-6.68	0
149	SLU 62	-4	916	4381	-37.37	-5.9	0
149	SLU 63	-4	951	4381	-38.71	-6.77	0
149	SLU 64	-4	851	4145	-34.83	-5.68	0
149	SLU 65	-4	909	4146	-37.07	-7.12	0
149	SLU 66	-4	870	4220	-35.62	-5.81	0
149	SLU 67	-4	905	4221	-36.96	-6.68	0
149	SLU 68	-4	920	4190	-37.49	-7.22	0
149	SLU 69	-4	880	4264	-36.04	-5.9	0
149	SLU 70	-4	915	4265	-37.38	-6.77	0
149	SLU 71	-4	871	4233	-35.67	-5.86	0
149	SLU 72	-4	906	4234	-37.02	-6.73	0
149	SLU 73	-5	1017	4532	-41.29	-7.5	0
149	SLU 74	-4	978	4606	-39.83	-6.19	0
149	SLU 75	-5	1013	4607	-41.18	-7.06	0
149	SLU 76	-5	1027	4576	-41.71	-7.59	0
149	SLU 77	-4	988	4650	-40.25	-6.28	0
149	SLU 78	-5	1023	4651	-41.6	-7.15	0
149	SLU 79	-4	979	4619	-39.89	-6.24	0
149	SLU 80	-5	1014	4620	-41.24	-7.11	0
149	SLU 81	-4	1005	4696	-40.86	-6.22	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
149	SLU 82	-5	1040	4697	-42.2	-7.09	0
149	SLU 83	-4	1015	4740	-41.28	-6.31	0
149	SLU 84	-5	1050	4741	-42.62	-7.18	0
149	SLE RA 1	-3	633	3110	-25.93	-4.28	0
149	SLE RA 2	-3	672	3110	-27.43	-5.24	0
149	SLE RA 3	-3	646	3160	-26.46	-4.37	0
149	SLE RA 4	-3	669	3160	-27.35	-4.94	0
149	SLE RA 5	-3	678	3140	-27.71	-5.3	0
149	SLE RA 6	-3	652	3189	-26.74	-4.43	0
149	SLE RA 7	-3	676	3190	-27.63	-5.01	0
149	SLE RA 8	-3	646	3168	-26.49	-4.4	0
149	SLE RA 9	-3	670	3169	-27.39	-4.98	0
149	SLE RA 10	-3	744	3367	-30.24	-5.49	0
149	SLE RA 11	-3	717	3417	-29.27	-4.62	0
149	SLE RA 12	-3	741	3417	-30.17	-5.2	0
149	SLE RA 13	-3	750	3397	-30.52	-5.56	0
149	SLE RA 14	-3	724	3446	-29.55	-4.68	0
149	SLE RA 15	-3	748	3447	-30.45	-5.26	0
149	SLE RA 16	-3	718	3425	-29.31	-4.65	0
149	SLE RA 17	-3	741	3426	-30.2	-5.23	0
149	SLE RA 18	-3	735	3477	-29.95	-4.64	0
149	SLE RA 19	-3	759	3477	-30.85	-5.22	0
149	SLE RA 20	-3	742	3506	-30.23	-4.7	0
149	SLE RA 21	-3	766	3507	-31.13	-5.28	0
149	SLE FR 1	-3	633	3110	-25.93	-4.28	0
149	SLE FR 2	-3	640	3110	-26.23	-4.47	0
149	SLE FR 3	-3	635	3121	-26.05	-4.3	0
149	SLE FR 4	-3	671	3220	-27.44	-4.58	0
149	SLE FR 5	-3	666	3232	-27.25	-4.41	0
149	SLE FR 6	-3	684	3293	-27.94	-4.46	0
149	SLE QP 1	-3	633	3110	-25.93	-4.28	0
149	SLE QP 2	-3	663	3220	-27.14	-4.38	0
149	SLD 1	-4	1209	4263	-49.49	1.97	0.02
149	SLD 2	-4	1209	4263	-49.49	1.97	0.02
149	SLD 3	-11	771	4174	-31.01	-2.02	0.03
149	SLD 4	-11	771	4174	-31.01	-2.02	0.03
149	SLD 5	8	1493	3668	-61.88	3.57	0
149	SLD 6	8	1493	3668	-61.88	3.57	0
149	SLD 7	-17	30	3371	-0.27	-9.72	0.02
149	SLD 8	-17	30	3371	-0.27	-9.72	0.02
149	SLD 9	11	1297	3069	-54.01	0.95	-0.02
149	SLD 10	11	1297	3069	-54.01	0.95	-0.02
149	SLD 11	-15	-166	2772	7.6	-12.34	0
149	SLD 12	-15	-166	2772	7.6	-12.34	0
149	SLD 13	5	556	2266	-23.27	-6.75	-0.03
149	SLD 14	5	556	2266	-23.27	-6.75	-0.03
149	SLD 15	-3	118	2177	-4.78	-10.74	-0.02
149	SLD 16	-3	118	2177	-4.78	-10.74	-0.02
149	SLV 1	-3	1928	5662	-78.91	11.01	0.05
149	SLV 2	-3	1928	5662	-78.91	11.01	0.05
149	SLV 3	-23	915	5442	-36.25	0.82	0.06
149	SLV 4	-23	915	5442	-36.25	0.82	0.06
149	SLV 5	27	2579	4285	-107.36	15.68	-0.01
149	SLV 6	27	2579	4285	-107.36	15.68	-0.01
149	SLV 7	-39	-797	3554	34.82	-18.27	0.04
149	SLV 8	-39	-797	3554	34.82	-18.27	0.04
149	SLV 9	33	2124	2886	-89.1	9.5	-0.04
149	SLV 10	33	2124	2886	-89.1	9.5	-0.04
149	SLV 11	-33	-1252	2154	53.08	-24.45	0.01
149	SLV 12	-33	-1252	2154	53.08	-24.45	0.01
149	SLV 13	17	412	997	-18.03	-9.59	-0.06
149	SLV 14	17	412	997	-18.03	-9.59	-0.06
149	SLV 15	-3	-601	778	24.63	-19.77	-0.05
149	SLV 16	-3	-601	778	24.63	-19.77	-0.05
150	SLU 1	0	-257	3706	8.7	0.42	0
150	SLU 2	0	-15	3559	-3.52	0.53	0
150	SLU 3	0	-264	3826	8.93	0.44	0
150	SLU 4	0	-118	3738	1.6	0.5	0
150	SLU 5	0	-19	3635	-3.39	0.54	0
150	SLU 6	0	-268	3901	9.06	0.45	0
150	SLU 7	0	-122	3813	1.73	0.51	0
150	SLU 8	0	-265	3857	8.96	0.44	0
150	SLU 9	0	-120	3769	1.63	0.5	0
150	SLU 10	0	-34	4194	-2.81	0.61	0
150	SLU 11	1	-283	4461	9.64	0.52	0
150	SLU 12	0	-138	4373	2.31	0.58	0
150	SLU 13	0	-38	4270	-2.68	0.62	0
150	SLU 14	1	-287	4536	9.77	0.52	0
150	SLU 15	0	-142	4448	2.44	0.59	0
150	SLU 16	1	-285	4492	9.67	0.52	0
150	SLU 17	0	-139	4404	2.33	0.58	0
150	SLU 18	1	-285	4613	9.71	0.53	0
150	SLU 19	0	-139	4525	2.38	0.6	0
150	SLU 20	1	-289	4689	9.84	0.54	0
150	SLU 21	0	-143	4601	2.51	0.61	0
150	SLU 22	1	-280	4290	9.53	0.49	0
150	SLU 23	0	-38	4143	-2.69	0.6	0
150	SLU 24	1	-287	4409	9.76	0.51	0
150	SLU 25	0	-141	4321	2.43	0.57	0
150	SLU 26	0	-42	4218	-2.56	0.61	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
150	SLU 27	1	-291	4485	9.89	0.52	0
150	SLU 28	0	-145	4397	2.56	0.58	0
150	SLU 29	1	-288	4441	9.79	0.51	0
150	SLU 30	0	-143	4353	2.46	0.57	0
150	SLU 31	0	-57	4778	-1.98	0.68	0
150	SLU 32	1	-306	5044	10.47	0.59	0
150	SLU 33	1	-161	4956	3.14	0.65	0
150	SLU 34	0	-61	4853	-1.85	0.69	0
150	SLU 35	1	-310	5120	10.6	0.59	0
150	SLU 36	1	-165	5032	3.27	0.66	0
150	SLU 37	1	-307	5076	10.5	0.59	0
150	SLU 38	1	-162	4988	3.17	0.65	0
150	SLU 39	1	-308	5197	10.54	0.6	0
150	SLU 40	1	-162	5109	3.21	0.67	0
150	SLU 41	1	-312	5272	10.67	0.61	0
150	SLU 42	1	-166	5184	3.34	0.68	0
150	SLU 43	1	-326	4618	11.02	0.52	0
150	SLU 44	0	-84	4471	-1.2	0.63	0
150	SLU 45	1	-333	4737	11.26	0.54	0
150	SLU 46	0	-187	4649	3.93	0.61	0
150	SLU 47	0	-88	4546	-1.07	0.64	0
150	SLU 48	1	-337	4813	11.39	0.55	0
150	SLU 49	0	-191	4725	4.06	0.61	0
150	SLU 50	1	-334	4769	11.28	0.54	0
150	SLU 51	0	-189	4681	3.95	0.61	0
150	SLU 52	0	-103	5106	-0.49	0.71	0
150	SLU 53	1	-352	5372	11.96	0.62	0
150	SLU 54	1	-207	5284	4.63	0.68	0
150	SLU 55	0	-107	5181	-0.36	0.72	0
150	SLU 56	1	-356	5448	12.09	0.63	0
150	SLU 57	1	-211	5360	4.76	0.69	0
150	SLU 58	1	-354	5404	11.99	0.62	0
150	SLU 59	1	-208	5316	4.66	0.68	0
150	SLU 60	1	-354	5525	12.03	0.63	0
150	SLU 61	1	-209	5437	4.7	0.7	0
150	SLU 62	1	-358	5600	12.16	0.64	0
150	SLU 63	1	-213	5512	4.83	0.71	0
150	SLU 64	1	-349	5201	11.86	0.59	0
150	SLU 65	0	-107	5055	-0.36	0.7	0
150	SLU 66	1	-356	5321	12.09	0.61	0
150	SLU 67	1	-210	5233	4.76	0.68	0
150	SLU 68	0	-111	5130	-0.23	0.71	0
150	SLU 69	1	-360	5397	12.22	0.62	0
150	SLU 70	1	-214	5309	4.89	0.68	0
150	SLU 71	1	-357	5352	12.12	0.61	0
150	SLU 72	1	-212	5264	4.78	0.68	0
150	SLU 73	1	-126	5689	0.34	0.78	0
150	SLU 74	1	-375	5956	12.8	0.69	0
150	SLU 75	1	-230	5868	5.46	0.75	0
150	SLU 76	1	-130	5765	0.47	0.79	0
150	SLU 77	1	-379	6032	12.93	0.7	0
150	SLU 78	1	-234	5944	5.59	0.76	0
150	SLU 79	1	-377	5987	12.82	0.69	0
150	SLU 80	1	-231	5899	5.49	0.75	0
150	SLU 81	1	-377	6108	12.86	0.7	0
150	SLU 82	1	-232	6020	5.53	0.77	0
150	SLU 83	1	-381	6184	12.99	0.71	0
150	SLU 84	1	-236	6096	5.66	0.78	0
150	SLE RA 1	0	-264	3873	8.94	0.44	0
150	SLE RA 2	0	-102	3775	0.79	0.51	0
150	SLE RA 3	1	-268	3953	9.09	0.45	0
150	SLE RA 4	0	-171	3894	4.2	0.5	0
150	SLE RA 5	0	-105	3825	0.88	0.52	0
150	SLE RA 6	1	-271	4003	9.18	0.46	0
150	SLE RA 7	0	-174	3944	4.29	0.5	0
150	SLE RA 8	1	-269	3973	9.11	0.45	0
150	SLE RA 9	0	-172	3915	4.22	0.5	0
150	SLE RA 10	0	-115	4198	1.26	0.57	0
150	SLE RA 11	1	-281	4376	9.56	0.5	0
150	SLE RA 12	0	-184	4317	4.68	0.55	0
150	SLE RA 13	0	-118	4249	1.35	0.57	0
150	SLE RA 14	1	-284	4426	9.65	0.51	0
150	SLE RA 15	0	-187	4368	4.76	0.55	0
150	SLE RA 16	1	-282	4397	9.58	0.5	0
150	SLE RA 17	0	-185	4338	4.69	0.55	0
150	SLE RA 18	1	-282	4477	9.61	0.52	0
150	SLE RA 19	0	-185	4419	4.72	0.56	0
150	SLE RA 20	1	-285	4528	9.7	0.52	0
150	SLE RA 21	0	-188	4469	4.81	0.56	0
150	SLE FR 1	0	-264	3873	8.94	0.44	0
150	SLE FR 2	0	-231	3853	7.31	0.46	0
150	SLE FR 3	0	-265	3893	8.97	0.44	0
150	SLE FR 4	0	-237	4035	7.51	0.48	0
150	SLE FR 5	1	-270	4074	9.17	0.47	0
150	SLE FR 6	1	-273	4175	9.27	0.48	0
150	SLE QP 1	0	-264	3873	8.94	0.44	0
150	SLE QP 2	1	-269	4054	9.14	0.46	0
150	SLD 1	6	128	4314	-9.63	5.46	0.01
150	SLD 2	6	128	4314	-9.63	5.46	0.01
150	SLD 3	0	-247	4480	8.8	2.08	0.01



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
150	SLD 4	0	-247	4480	8.8	2.08	0.01
150	SLD 5	11	419	3880	-24.45	7.1	0
150	SLD 6	11	419	3880	-24.45	7.1	0
150	SLD 7	-9	-832	4434	37	-4.19	0.01
150	SLD 8	-9	-832	4434	37	-4.19	0.01
150	SLD 9	10	294	3674	-18.72	5.11	-0.01
150	SLD 10	10	294	3674	-18.72	5.11	-0.01
150	SLD 11	-10	-958	4228	42.73	-6.17	0.01
150	SLD 12	-10	-958	4228	42.73	-6.17	0.01
150	SLD 13	1	-291	3628	9.47	-1.15	-0.01
150	SLD 14	1	-291	3628	9.47	-1.15	-0.01
150	SLD 15	-5	-667	3794	27.91	-4.54	-0.01
150	SLD 16	-5	-667	3794	27.91	-4.54	-0.01
150	SLV 1	13	679	4655	-35.81	12.83	0.02
150	SLV 2	13	679	4655	-35.81	12.83	0.02
150	SLV 3	-2	-224	5066	8.62	4.18	0.03
150	SLV 4	-2	-224	5066	8.62	4.18	0.03
150	SLV 5	27	1386	3612	-71.73	17.3	-0.01
150	SLV 6	27	1386	3612	-71.73	17.3	-0.01
150	SLV 7	-23	-1626	4980	76.37	-11.55	0.03
150	SLV 8	-23	-1626	4980	76.37	-11.55	0.03
150	SLV 9	24	1087	3128	-58.09	12.47	-0.02
150	SLV 10	24	1087	3128	-58.09	12.47	-0.02
150	SLV 11	-26	-1924	4497	90.01	-16.37	0.01
150	SLV 12	-26	-1924	4497	90.01	-16.37	0.01
150	SLV 13	3	-314	3043	9.66	-3.25	-0.03
150	SLV 14	3	-314	3043	9.66	-3.25	-0.03
150	SLV 15	-12	-1218	3453	54.09	-11.9	-0.02
150	SLV 16	-12	-1218	3453	54.09	-11.9	-0.02
151	SLU 1	0	-423	4536	28.12	1.28	0.09
151	SLU 2	0	-442	4517	28.87	1.31	0.09
151	SLU 3	0	-432	4695	28.89	1.32	0.09
151	SLU 4	0	-443	4684	29.35	1.33	0.09
151	SLU 5	0	-448	4624	29.4	1.34	0.09
151	SLU 6	0	-438	4803	29.41	1.34	0.09
151	SLU 7	0	-449	4791	29.87	1.36	0.09
151	SLU 8	0	-435	4750	29.16	1.33	0.09
151	SLU 9	0	-446	4739	29.62	1.35	0.09
151	SLU 10	0	-491	5276	32.88	1.55	0.1
151	SLU 11	0	-481	5454	32.89	1.55	0.1
151	SLU 12	0	-492	5443	33.35	1.57	0.1
151	SLU 13	0	-497	5383	33.4	1.57	0.1
151	SLU 14	0	-487	5562	33.41	1.57	0.11
151	SLU 15	0	-498	5550	33.87	1.59	0.11
151	SLU 16	0	-484	5509	33.16	1.56	0.1
151	SLU 17	0	-496	5498	33.62	1.58	0.1
151	SLU 18	0	-493	5620	33.83	1.62	0.11
151	SLU 19	0	-505	5609	34.29	1.63	0.11
151	SLU 20	0	-499	5727	34.36	1.64	0.11
151	SLU 21	0	-511	5716	34.81	1.66	0.11
151	SLU 22	0	-453	5189	31.11	1.45	0.1
151	SLU 23	0	-472	5171	31.87	1.48	0.1
151	SLU 24	0	-462	5349	31.88	1.48	0.1
151	SLU 25	0	-474	5338	32.34	1.5	0.1
151	SLU 26	0	-478	5278	32.39	1.5	0.1
151	SLU 27	0	-468	5457	32.41	1.51	0.1
151	SLU 28	0	-479	5445	32.86	1.52	0.1
151	SLU 29	0	-465	5404	32.15	1.49	0.1
151	SLU 30	0	-477	5393	32.61	1.51	0.1
151	SLU 31	0	-522	5930	35.87	1.71	0.11
151	SLU 32	0	-511	6108	35.89	1.72	0.12
151	SLU 33	0	-523	6097	36.34	1.73	0.12
151	SLU 34	0	-528	6037	36.39	1.73	0.12
151	SLU 35	0	-517	6216	36.41	1.74	0.12
151	SLU 36	0	-529	6204	36.86	1.76	0.12
151	SLU 37	0	-514	6163	36.15	1.73	0.12
151	SLU 38	0	-526	6152	36.61	1.75	0.12
151	SLU 39	0	-524	6274	36.83	1.78	0.12
151	SLU 40	0	-535	6263	37.28	1.8	0.12
151	SLU 41	0	-530	6381	37.35	1.8	0.12
151	SLU 42	0	-541	6370	37.8	1.82	0.12
151	SLU 43	0	-540	5672	35.53	1.61	0.11
151	SLU 44	0	-559	5653	36.28	1.64	0.11
151	SLU 45	0	-548	5832	36.3	1.64	0.11
151	SLU 46	0	-560	5821	36.76	1.66	0.11
151	SLU 47	0	-565	5761	36.81	1.66	0.11
151	SLU 48	0	-554	5939	36.82	1.67	0.11
151	SLU 49	0	-566	5928	37.28	1.69	0.11
151	SLU 50	0	-551	5887	36.57	1.66	0.11
151	SLU 51	0	-563	5876	37.03	1.67	0.11
151	SLU 52	0	-608	6412	40.29	1.87	0.12
151	SLU 53	0	-598	6591	40.3	1.88	0.12
151	SLU 54	0	-609	6580	40.76	1.9	0.13
151	SLU 55	0	-614	6520	40.81	1.9	0.12
151	SLU 56	0	-604	6698	40.82	1.9	0.13
151	SLU 57	0	-615	6687	41.28	1.92	0.13
151	SLU 58	0	-601	6646	40.57	1.89	0.13
151	SLU 59	0	-612	6635	41.03	1.91	0.13
151	SLU 60	0	-610	6756	41.24	1.94	0.13
151	SLU 61	0	-621	6745	41.7	1.96	0.13



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
151	SLU 62	0	-616	6864	41.77	1.97	0.13
151	SLU 63	0	-627	6853	42.22	1.99	0.13
151	SLU 64	0	-570	6326	38.52	1.77	0.12
151	SLU 65	0	-589	6307	39.28	1.8	0.12
151	SLU 66	0	-579	6486	39.29	1.81	0.12
151	SLU 67	0	-590	6474	39.75	1.83	0.12
151	SLU 68	0	-595	6415	39.8	1.83	0.12
151	SLU 69	0	-585	6593	39.82	1.83	0.12
151	SLU 70	0	-596	6582	40.27	1.85	0.12
151	SLU 71	0	-582	6541	39.56	1.82	0.12
151	SLU 72	0	-593	6529	40.02	1.84	0.12
151	SLU 73	0	-638	7066	43.28	2.04	0.13
151	SLU 74	0	-628	7245	43.3	2.04	0.14
151	SLU 75	0	-639	7234	43.75	2.06	0.14
151	SLU 76	0	-644	7174	43.8	2.06	0.14
151	SLU 77	0	-634	7352	43.82	2.07	0.14
151	SLU 78	0	-645	7341	44.27	2.09	0.14
151	SLU 79	0	-631	7300	43.56	2.06	0.14
151	SLU 80	0	-642	7289	44.02	2.07	0.14
151	SLU 81	0	-640	7410	44.24	2.11	0.14
151	SLU 82	0	-652	7399	44.69	2.13	0.14
151	SLU 83	0	-646	7518	44.76	2.13	0.14
151	SLU 84	0	-658	7506	45.21	2.15	0.14
151	SLE RA 1	0	-432	4722	28.97	1.33	0.09
151	SLE RA 2	0	-444	4710	29.48	1.35	0.09
151	SLE RA 3	0	-438	4829	29.49	1.35	0.09
151	SLE RA 4	0	-445	4821	29.79	1.36	0.09
151	SLE RA 5	0	-448	4782	29.83	1.36	0.09
151	SLE RA 6	0	-442	4900	29.84	1.37	0.09
151	SLE RA 7	0	-449	4893	30.14	1.38	0.09
151	SLE RA 8	0	-440	4866	29.67	1.36	0.09
151	SLE RA 9	0	-447	4858	29.97	1.37	0.09
151	SLE RA 10	0	-477	5216	32.14	1.5	0.1
151	SLE RA 11	0	-470	5335	32.16	1.51	0.1
151	SLE RA 12	0	-478	5327	32.46	1.52	0.1
151	SLE RA 13	0	-481	5288	32.49	1.52	0.1
151	SLE RA 14	0	-474	5406	32.5	1.52	0.1
151	SLE RA 15	0	-482	5399	32.81	1.54	0.1
151	SLE RA 16	0	-472	5372	32.34	1.52	0.1
151	SLE RA 17	0	-480	5364	32.64	1.53	0.1
151	SLE RA 18	0	-479	5445	32.78	1.55	0.1
151	SLE RA 19	0	-486	5438	33.09	1.56	0.1
151	SLE RA 20	0	-483	5517	33.13	1.57	0.1
151	SLE RA 21	0	-490	5509	33.43	1.58	0.1
151	SLE FR 1	0	-432	4722	28.97	1.33	0.09
151	SLE FR 2	0	-434	4720	29.07	1.33	0.09
151	SLE FR 3	0	-433	4751	29.11	1.34	0.09
151	SLE FR 4	0	-448	4937	30.22	1.4	0.09
151	SLE FR 5	0	-447	4968	30.26	1.4	0.09
151	SLE FR 6	0	-455	5084	30.88	1.44	0.1
151	SLE QP 1	0	-432	4722	28.97	1.33	0.09
151	SLE QP 2	0	-446	4939	30.12	1.4	0.09
151	SLD 1	3	-382	3884	27.12	6.96	0.3
151	SLD 2	3	-382	3884	27.12	6.96	0.3
151	SLD 3	6	-796	4340	48.63	8.66	0.35
151	SLD 4	6	-796	4340	48.63	8.66	0.35
151	SLD 5	-3	200	3931	-3.39	0.48	0.08
151	SLD 6	-3	200	3931	-3.39	0.48	0.08
151	SLD 7	6	-1178	5451	68.28	6.16	0.24
151	SLD 8	6	-1178	5451	68.28	6.16	0.24
151	SLD 9	-6	286	4427	-8.05	-3.37	-0.06
151	SLD 10	-6	286	4427	-8.05	-3.37	-0.06
151	SLD 11	3	-1092	5948	63.63	2.31	0.11
151	SLD 12	3	-1092	5948	63.63	2.31	0.11
151	SLD 13	-6	-96	5539	11.61	-5.87	-0.16
151	SLD 14	-6	-96	5539	11.61	-5.87	-0.16
151	SLD 15	-4	-510	5995	33.11	-4.17	-0.11
151	SLD 16	-4	-510	5995	33.11	-4.17	-0.11
151	SLV 1	8	-301	2468	23.31	14.95	0.6
151	SLV 2	8	-301	2468	23.31	14.95	0.6
151	SLV 3	14	-1263	3537	73.35	19.09	0.72
151	SLV 4	14	-1263	3537	73.35	19.09	0.72
151	SLV 5	-7	1056	2577	-47.83	-0.81	0.06
151	SLV 6	-7	1056	2577	-47.83	-0.81	0.06
151	SLV 7	14	-2150	6139	118.99	12.98	0.46
151	SLV 8	14	-2150	6139	118.99	12.98	0.46
151	SLV 9	-14	1258	3739	-58.75	-10.19	-0.28
151	SLV 10	-14	1258	3739	-58.75	-10.19	-0.28
151	SLV 11	7	-1948	7301	108.06	3.61	0.12
151	SLV 12	7	-1948	7301	108.06	3.61	0.12
151	SLV 13	-14	371	6342	-13.12	-16.3	-0.53
151	SLV 14	-14	371	6342	-13.12	-16.3	-0.53
151	SLV 15	-8	-590	7410	36.93	-12.16	-0.41
151	SLV 16	-8	-590	7410	36.93	-12.16	-0.41
152	SLU 1	0	-215	4168	7.01	-0.18	0
152	SLU 2	0	5	3966	-4.44	-0.37	0
152	SLU 3	0	-222	4295	7.24	-0.19	0
152	SLU 4	0	-89	4174	0.36	-0.31	0
152	SLU 5	0	1	4044	-4.3	-0.38	0
152	SLU 6	0	-226	4373	7.38	-0.2	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
152	SLU 7	0	-94	4252	0.51	-0.31	0
152	SLU 8	0	-224	4323	7.3	-0.2	0
152	SLU 9	0	-91	4202	0.43	-0.31	0
152	SLU 10	0	-6	4729	-4.05	-0.41	0
152	SLU 11	0	-233	5058	7.62	-0.23	0
152	SLU 12	0	-101	4937	0.75	-0.34	0
152	SLU 13	0	-10	4807	-3.91	-0.41	0
152	SLU 14	0	-237	5136	7.77	-0.24	0
152	SLU 15	0	-105	5015	0.89	-0.35	0
152	SLU 16	0	-235	5087	7.69	-0.24	0
152	SLU 17	0	-103	4965	0.81	-0.35	0
152	SLU 18	0	-231	5258	7.57	-0.23	0
152	SLU 19	0	-99	5137	0.7	-0.35	0
152	SLU 20	0	-236	5336	7.71	-0.24	0
152	SLU 21	0	-103	5215	0.84	-0.36	0
152	SLU 22	0	-231	4869	7.58	-0.21	0
152	SLU 23	0	-11	4667	-3.88	-0.4	0
152	SLU 24	0	-238	4996	7.8	-0.23	0
152	SLU 25	0	-105	4875	0.93	-0.34	0
152	SLU 26	0	-15	4745	-3.74	-0.41	0
152	SLU 27	0	-242	5074	7.94	-0.23	0
152	SLU 28	0	-110	4952	1.07	-0.35	0
152	SLU 29	0	-240	5024	7.86	-0.23	0
152	SLU 30	0	-107	4903	0.99	-0.34	0
152	SLU 31	0	-22	5430	-3.49	-0.44	0
152	SLU 32	0	-249	5759	8.19	-0.26	0
152	SLU 33	0	-117	5638	1.31	-0.37	0
152	SLU 34	0	-26	5508	-3.35	-0.45	0
152	SLU 35	0	-253	5837	8.33	-0.27	0
152	SLU 36	0	-121	5716	1.46	-0.38	0
152	SLU 37	0	-251	5788	8.25	-0.27	0
152	SLU 38	0	-119	5666	1.38	-0.38	0
152	SLU 39	0	-247	5959	8.13	-0.27	0
152	SLU 40	0	-115	5838	1.26	-0.38	0
152	SLU 41	0	-252	6037	8.27	-0.27	0
152	SLU 42	0	-119	5916	1.4	-0.39	0
152	SLU 43	0	-274	5178	8.93	-0.22	0
152	SLU 44	0	-54	4976	-2.53	-0.41	0
152	SLU 45	0	-281	5305	9.15	-0.24	0
152	SLU 46	0	-148	5184	2.28	-0.35	0
152	SLU 47	0	-58	5054	-2.39	-0.42	0
152	SLU 48	0	-285	5383	9.29	-0.25	0
152	SLU 49	0	-153	5262	2.42	-0.36	0
152	SLU 50	0	-283	5333	9.21	-0.24	0
152	SLU 51	0	-150	5212	2.34	-0.35	0
152	SLU 52	0	-65	5739	-2.14	-0.45	0
152	SLU 53	0	-292	6068	9.54	-0.27	0
152	SLU 54	0	-160	5947	2.66	-0.39	0
152	SLU 55	0	-69	5817	-2	-0.46	0
152	SLU 56	0	-296	6146	9.68	-0.28	0
152	SLU 57	0	-164	6025	2.81	-0.39	0
152	SLU 58	0	-294	6097	9.6	-0.28	0
152	SLU 59	0	-162	5976	2.73	-0.39	0
152	SLU 60	0	-290	6268	9.48	-0.28	0
152	SLU 61	0	-158	6147	2.61	-0.39	0
152	SLU 62	0	-295	6346	9.62	-0.29	0
152	SLU 63	0	-162	6225	2.75	-0.4	0
152	SLU 64	0	-290	5879	9.49	-0.26	0
152	SLU 65	0	-70	5677	-1.97	-0.44	0
152	SLU 66	0	-297	6006	9.71	-0.27	0
152	SLU 67	0	-164	5885	2.84	-0.38	0
152	SLU 68	0	-74	5755	-1.82	-0.45	0
152	SLU 69	0	-301	6084	9.85	-0.28	0
152	SLU 70	0	-169	5963	2.98	-0.39	0
152	SLU 71	0	-299	6034	9.77	-0.27	0
152	SLU 72	0	-167	5913	2.9	-0.39	0
152	SLU 73	0	-81	6440	-1.58	-0.48	0
152	SLU 74	0	-308	6769	10.1	-0.31	0
152	SLU 75	0	-176	6648	3.23	-0.42	0
152	SLU 76	0	-85	6518	-1.44	-0.49	0
152	SLU 77	0	-312	6847	10.24	-0.31	0
152	SLU 78	0	-180	6726	3.37	-0.43	0
152	SLU 79	0	-310	6798	10.16	-0.31	0
152	SLU 80	0	-178	6676	3.29	-0.42	0
152	SLU 81	0	-306	6969	10.04	-0.31	0
152	SLU 82	0	-174	6848	3.17	-0.42	0
152	SLU 83	0	-311	7047	10.18	-0.32	0
152	SLU 84	0	-178	6926	3.31	-0.43	0
152	SLE RA 1	0	-220	4368	7.17	-0.19	0
152	SLE RA 2	0	-73	4234	-0.46	-0.31	0
152	SLE RA 3	0	-224	4453	7.32	-0.2	0
152	SLE RA 4	0	-136	4372	2.74	-0.27	0
152	SLE RA 5	0	-76	4285	-0.37	-0.32	0
152	SLE RA 6	0	-227	4505	7.42	-0.2	0
152	SLE RA 7	0	-139	4424	2.84	-0.28	0
152	SLE RA 8	0	-225	4472	7.36	-0.2	0
152	SLE RA 9	0	-137	4391	2.78	-0.28	0
152	SLE RA 10	0	-80	4742	-0.2	-0.34	0
152	SLE RA 11	0	-232	4962	7.58	-0.22	0
152	SLE RA 12	0	-143	4881	3	-0.3	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
152	SLE RA 13	0	-83	4794	-0.11	-0.35	0
152	SLE RA 14	0	-235	5014	7.68	-0.23	0
152	SLE RA 15	0	-146	4933	3.09	-0.3	0
152	SLE RA 16	0	-233	4981	7.62	-0.23	0
152	SLE RA 17	0	-145	4900	3.04	-0.3	0
152	SLE RA 18	0	-231	5095	7.54	-0.23	0
152	SLE RA 19	0	-142	5014	2.96	-0.3	0
152	SLE RA 20	0	-233	5147	7.64	-0.23	0
152	SLE RA 21	0	-145	5066	3.06	-0.31	0
152	SLE FR 1	0	-220	4368	7.17	-0.19	0
152	SLE FR 2	0	-190	4341	5.65	-0.22	0
152	SLE FR 3	0	-221	4389	7.21	-0.19	0
152	SLE FR 4	0	-194	4559	5.76	-0.23	0
152	SLE FR 5	0	-224	4607	7.32	-0.2	0
152	SLE FR 6	0	-225	4732	7.36	-0.21	0
152	SLE QP 1	0	-220	4368	7.17	-0.19	0
152	SLE QP 2	0	-223	4586	7.29	-0.2	0
152	SLD 1	1	-184	4391	5.38	2.42	0.01
152	SLD 2	1	-184	4391	5.38	2.42	0.01
152	SLD 3	5	-531	4571	22.59	5.18	0.01
152	SLD 4	5	-531	4571	22.59	5.18	0.01
152	SLD 5	-7	315	4255	-19.38	-3.59	0.01
152	SLD 6	-7	315	4255	-19.38	-3.59	0.01
152	SLD 7	9	-841	4855	37.97	5.59	0
152	SLD 8	9	-841	4855	37.97	5.59	0
152	SLD 9	-9	395	4318	-23.4	-5.99	0
152	SLD 10	-9	395	4318	-23.4	-5.99	0
152	SLD 11	7	-761	4918	33.95	3.18	-0.01
152	SLD 12	7	-761	4918	33.95	3.18	-0.01
152	SLD 13	-5	85	4601	-8.02	-5.58	-0.01
152	SLD 14	-5	85	4601	-8.02	-5.58	-0.01
152	SLD 15	-1	-262	4781	9.19	-2.83	-0.01
152	SLD 16	-1	-262	4781	9.19	-2.83	-0.01
152	SLV 1	1	-130	4099	2.74	6	0.02
152	SLV 2	1	-130	4099	2.74	6	0.02
152	SLV 3	13	-956	4546	43.83	13.02	0.01
152	SLV 4	13	-956	4546	43.83	13.02	0.01
152	SLV 5	-18	1058	3761	-56.39	-8.99	0.02
152	SLV 6	-18	1058	3761	-56.39	-8.99	0.02
152	SLV 7	23	-1696	5253	80.56	14.41	-0.01
152	SLV 8	23	-1696	5253	80.56	14.41	-0.01
152	SLV 9	-23	1250	3920	-65.99	-14.81	0.01
152	SLV 10	-23	1250	3920	-65.99	-14.81	0.01
152	SLV 11	18	-1504	5411	70.96	8.58	-0.02
152	SLV 12	18	-1504	5411	70.96	8.58	-0.02
152	SLV 13	-13	510	4627	-29.26	-13.42	-0.01
152	SLV 14	-13	510	4627	-29.26	-13.42	-0.01
152	SLV 15	-1	-316	5074	11.83	-6.4	-0.02
152	SLV 16	-1	-316	5074	11.83	-6.4	-0.02
153	SLU 1	-2	239	5852	-10.19	-1.37	-0.01
153	SLU 2	-2	270	5996	-11.93	0.54	-0.01
153	SLU 3	-2	249	6034	-10.59	-1.43	-0.02
153	SLU 4	-2	267	6121	-11.64	-0.28	-0.01
153	SLU 5	-2	275	6115	-12.16	0.5	-0.01
153	SLU 6	-2	255	6153	-10.82	-1.47	-0.02
153	SLU 7	-2	273	6240	-11.86	-0.33	-0.01
153	SLU 8	-2	250	6089	-10.65	-1.45	-0.02
153	SLU 9	-2	269	6176	-11.69	-0.3	-0.01
153	SLU 10	-3	326	6743	-14.15	0.22	-0.02
153	SLU 11	-3	306	6781	-12.81	-1.75	-0.02
153	SLU 12	-3	324	6868	-13.85	-0.6	-0.02
153	SLU 13	-3	332	6862	-14.38	0.18	-0.02
153	SLU 14	-3	311	6900	-13.04	-1.79	-0.02
153	SLU 15	-3	330	6987	-14.08	-0.65	-0.02
153	SLU 16	-3	307	6836	-12.86	-1.77	-0.02
153	SLU 17	-3	326	6923	-13.91	-0.62	-0.02
153	SLU 18	-3	320	6919	-13.36	-1.82	-0.02
153	SLU 19	-3	338	7006	-14.4	-0.68	-0.02
153	SLU 20	-3	326	7038	-13.59	-1.87	-0.02
153	SLU 21	-3	344	7124	-14.63	-0.72	-0.02
153	SLU 22	-2	290	6575	-12.22	-1.66	-0.02
153	SLU 23	-3	321	6720	-13.96	0.25	-0.02
153	SLU 24	-2	300	6758	-12.62	-1.72	-0.02
153	SLU 25	-3	319	6844	-13.66	-0.58	-0.02
153	SLU 26	-3	327	6838	-14.19	0.21	-0.02
153	SLU 27	-3	306	6876	-12.85	-1.76	-0.02
153	SLU 28	-3	325	6963	-13.89	-0.62	-0.02
153	SLU 29	-2	302	6812	-12.67	-1.74	-0.02
153	SLU 30	-3	320	6899	-13.72	-0.59	-0.02
153	SLU 31	-3	378	7467	-16.18	-0.07	-0.02
153	SLU 32	-3	357	7505	-14.84	-2.04	-0.02
153	SLU 33	-3	376	7591	-15.88	-0.9	-0.02
153	SLU 34	-3	384	7585	-16.4	-0.11	-0.02
153	SLU 35	-3	363	7623	-15.07	-2.08	-0.02
153	SLU 36	-3	382	7710	-16.11	-0.94	-0.02
153	SLU 37	-3	359	7559	-14.89	-2.06	-0.02
153	SLU 38	-3	377	7646	-15.93	-0.92	-0.02
153	SLU 39	-3	372	7642	-15.39	-2.12	-0.02
153	SLU 40	-3	390	7729	-16.43	-0.97	-0.02
153	SLU 41	-3	377	7761	-15.61	-2.16	-0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
153	SLU 42	-3	396	7847	-16.66	-1.01	-0.02
153	SLU 43	-2	292	7359	-12.56	-1.68	-0.02
153	SLU 44	-3	323	7504	-14.29	0.23	-0.02
153	SLU 45	-3	303	7542	-12.96	-1.74	-0.02
153	SLU 46	-3	321	7629	-14	-0.59	-0.02
153	SLU 47	-3	329	7623	-14.52	0.19	-0.02
153	SLU 48	-3	308	7661	-13.18	-1.78	-0.02
153	SLU 49	-3	327	7747	-14.23	-0.63	-0.02
153	SLU 50	-3	304	7597	-13.01	-1.76	-0.02
153	SLU 51	-3	323	7683	-14.05	-0.61	-0.02
153	SLU 52	-3	380	8251	-16.51	-0.09	-0.02
153	SLU 53	-3	359	8289	-15.17	-2.06	-0.02
153	SLU 54	-3	378	8376	-16.22	-0.91	-0.02
153	SLU 55	-3	386	8370	-16.74	-0.13	-0.02
153	SLU 56	-3	365	8408	-15.4	-2.1	-0.02
153	SLU 57	-3	384	8494	-16.44	-0.96	-0.02
153	SLU 58	-3	361	8344	-15.23	-2.08	-0.02
153	SLU 59	-3	380	8430	-16.27	-0.93	-0.02
153	SLU 60	-3	374	8427	-15.72	-2.13	-0.02
153	SLU 61	-3	392	8513	-16.77	-0.99	-0.02
153	SLU 62	-3	380	8545	-15.95	-2.18	-0.02
153	SLU 63	-3	398	8632	-16.99	-1.03	-0.02
153	SLU 64	-3	344	8083	-14.58	-1.97	-0.02
153	SLU 65	-3	375	8227	-16.32	-0.06	-0.02
153	SLU 66	-3	354	8265	-14.98	-2.03	-0.02
153	SLU 67	-3	373	8352	-16.03	-0.89	-0.02
153	SLU 68	-3	381	8346	-16.55	-0.1	-0.02
153	SLU 69	-3	360	8384	-15.21	-2.07	-0.02
153	SLU 70	-3	379	8471	-16.25	-0.93	-0.02
153	SLU 71	-3	356	8320	-15.04	-2.05	-0.02
153	SLU 72	-3	374	8407	-16.08	-0.9	-0.02
153	SLU 73	-3	432	8974	-18.54	-0.38	-0.02
153	SLU 74	-3	411	9012	-17.2	-2.35	-0.02
153	SLU 75	-3	430	9099	-18.25	-1.21	-0.02
153	SLU 76	-3	438	9093	-18.77	-0.42	-0.02
153	SLU 77	-3	417	9131	-17.43	-2.39	-0.02
153	SLU 78	-3	436	9218	-18.47	-1.25	-0.02
153	SLU 79	-3	413	9067	-17.25	-2.37	-0.02
153	SLU 80	-3	431	9154	-18.3	-1.23	-0.02
153	SLU 81	-3	425	9150	-17.75	-2.43	-0.02
153	SLU 82	-4	444	9236	-18.79	-1.28	-0.02
153	SLU 83	-3	431	9268	-17.98	-2.47	-0.03
153	SLU 84	-4	450	9355	-19.02	-1.32	-0.02
153	SLE RA 1	-2	253	6058	-10.77	-1.45	-0.02
153	SLE RA 2	-2	274	6155	-11.93	-0.18	-0.01
153	SLE RA 3	-2	260	6180	-11.04	-1.49	-0.02
153	SLE RA 4	-2	272	6238	-11.74	-0.73	-0.02
153	SLE RA 5	-2	278	6234	-12.08	-0.2	-0.01
153	SLE RA 6	-2	264	6259	-11.19	-1.52	-0.02
153	SLE RA 7	-2	276	6317	-11.89	-0.76	-0.02
153	SLE RA 8	-2	261	6217	-11.07	-1.5	-0.02
153	SLE RA 9	-2	274	6274	-11.77	-0.74	-0.02
153	SLE RA 10	-2	312	6653	-13.41	-0.39	-0.02
153	SLE RA 11	-2	298	6678	-12.52	-1.71	-0.02
153	SLE RA 12	-3	310	6736	-13.21	-0.94	-0.02
153	SLE RA 13	-3	316	6732	-13.56	-0.42	-0.02
153	SLE RA 14	-2	302	6757	-12.67	-1.73	-0.02
153	SLE RA 15	-3	314	6815	-13.36	-0.97	-0.02
153	SLE RA 16	-2	299	6715	-12.55	-1.72	-0.02
153	SLE RA 17	-3	311	6772	-13.25	-0.95	-0.02
153	SLE RA 18	-3	308	6770	-12.88	-1.76	-0.02
153	SLE RA 19	-3	320	6828	-13.58	-0.99	-0.02
153	SLE RA 20	-3	311	6849	-13.04	-1.78	-0.02
153	SLE RA 21	-3	324	6907	-13.73	-1.02	-0.02
153	SLE FR 1	-2	253	6058	-10.77	-1.45	-0.02
153	SLE FR 2	-2	257	6078	-11	-1.19	-0.02
153	SLE FR 3	-2	255	6090	-10.83	-1.46	-0.02
153	SLE FR 4	-2	274	6291	-11.64	-1.29	-0.02
153	SLE FR 5	-2	271	6303	-11.47	-1.55	-0.02
153	SLE FR 6	-2	280	6414	-11.83	-1.6	-0.02
153	SLE QP 1	-2	253	6058	-10.77	-1.45	-0.02
153	SLE QP 2	-2	270	6272	-11.41	-1.54	-0.02
153	SLD 1	-13	301	4683	-12.89	1.42	0.01
153	SLD 2	-13	301	4683	-12.89	1.42	0.01
153	SLD 3	-3	-124	4481	5.01	8.41	0
153	SLD 4	-3	-124	4481	5.01	8.41	0
153	SLD 5	-21	923	6101	-39	-11.25	0
153	SLD 6	-21	923	6101	-39	-11.25	0
153	SLD 7	13	-493	5428	20.67	12.04	-0.02
153	SLD 8	13	-493	5428	20.67	12.04	-0.02
153	SLD 9	-18	1032	7115	-43.48	-15.13	-0.01
153	SLD 10	-18	1032	7115	-43.48	-15.13	-0.01
153	SLD 11	17	-384	6442	16.19	8.17	-0.03
153	SLD 12	17	-384	6442	16.19	8.17	-0.03
153	SLD 13	-2	663	8063	-27.82	-11.49	-0.04
153	SLD 14	-2	663	8063	-27.82	-11.49	-0.04
153	SLD 15	9	238	7861	-9.92	-4.51	-0.04
153	SLD 16	9	238	7861	-9.92	-4.51	-0.04
153	SLV 1	-29	341	2556	-14.82	4.89	0.05
153	SLV 2	-29	341	2556	-14.82	4.89	0.05



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
153	SLV 3	-3	-642	2079	26.63	22.62	0.03
153	SLV 4	-3	-642	2079	26.63	22.62	0.03
153	SLV 5	-51	1783	5882	-75.3	-26.5	0.02
153	SLV 6	-51	1783	5882	-75.3	-26.5	0.02
153	SLV 7	38	-1496	4289	62.87	32.6	-0.02
153	SLV 8	38	-1496	4289	62.87	32.6	-0.02
153	SLV 9	-42	2035	8254	-85.68	-35.68	-0.01
153	SLV 10	-42	2035	8254	-85.68	-35.68	-0.01
153	SLV 11	46	-1244	6662	52.49	23.42	-0.06
153	SLV 12	46	-1244	6662	52.49	23.42	-0.06
153	SLV 13	-2	1181	10465	-49.44	-25.7	-0.06
153	SLV 14	-2	1181	10465	-49.44	-25.7	-0.06
153	SLV 15	25	198	9987	-7.99	-7.97	-0.08
153	SLV 16	25	198	9987	-7.99	-7.97	-0.08
154	SLU 1	5	-641	3722	30.89	2.01	-0.03
154	SLU 2	5	-656	3702	31.53	1.96	-0.03
154	SLU 3	5	-662	3834	31.88	2.07	-0.03
154	SLU 4	5	-671	3822	32.26	2.04	-0.03
154	SLU 5	5	-670	3770	32.19	1.99	-0.03
154	SLU 6	5	-676	3903	32.55	2.1	-0.03
154	SLU 7	5	-685	3890	32.93	2.07	-0.03
154	SLU 8	5	-670	3859	32.23	2.07	-0.03
154	SLU 9	5	-678	3847	32.61	2.04	-0.03
154	SLU 10	6	-743	4336	35.85	2.3	-0.03
154	SLU 11	6	-749	4468	36.2	2.4	-0.03
154	SLU 12	6	-758	4456	36.58	2.37	-0.03
154	SLU 13	6	-757	4404	36.52	2.33	-0.03
154	SLU 14	6	-763	4537	36.87	2.43	-0.04
154	SLU 15	6	-772	4524	37.25	2.41	-0.03
154	SLU 16	6	-757	4493	36.55	2.41	-0.03
154	SLU 17	6	-766	4480	36.93	2.38	-0.03
154	SLU 18	7	-766	4628	37.07	2.49	-0.04
154	SLU 19	6	-775	4615	37.45	2.46	-0.04
154	SLU 20	7	-780	4696	37.73	2.52	-0.04
154	SLU 21	7	-789	4684	38.11	2.49	-0.04
154	SLU 22	6	-714	4269	34.54	2.34	-0.03
154	SLU 23	6	-729	4249	35.17	2.29	-0.03
154	SLU 24	6	-735	4381	35.53	2.39	-0.03
154	SLU 25	6	-743	4369	35.91	2.36	-0.03
154	SLU 26	6	-743	4317	35.84	2.32	-0.03
154	SLU 27	6	-749	4450	36.2	2.42	-0.03
154	SLU 28	6	-758	4437	36.58	2.4	-0.03
154	SLU 29	6	-742	4406	35.87	2.4	-0.03
154	SLU 30	6	-751	4393	36.26	2.37	-0.03
154	SLU 31	7	-816	4882	39.49	2.62	-0.04
154	SLU 32	7	-822	5015	39.85	2.73	-0.04
154	SLU 33	7	-831	5003	40.23	2.7	-0.04
154	SLU 34	7	-830	4951	40.16	2.66	-0.04
154	SLU 35	7	-836	5083	40.52	2.76	-0.04
154	SLU 36	7	-845	5071	40.9	2.73	-0.04
154	SLU 37	7	-830	5040	40.2	2.74	-0.04
154	SLU 38	7	-838	5027	40.58	2.71	-0.04
154	SLU 39	8	-839	5175	40.71	2.82	-0.04
154	SLU 40	7	-848	5162	41.09	2.79	-0.04
154	SLU 41	8	-853	5243	41.38	2.85	-0.04
154	SLU 42	7	-862	5231	41.76	2.82	-0.04
154	SLU 43	6	-809	4652	38.91	2.5	-0.03
154	SLU 44	6	-823	4631	39.54	2.45	-0.03
154	SLU 45	6	-829	4764	39.9	2.56	-0.04
154	SLU 46	6	-838	4751	40.28	2.53	-0.04
154	SLU 47	6	-838	4699	40.21	2.48	-0.03
154	SLU 48	6	-844	4832	40.56	2.59	-0.04
154	SLU 49	6	-852	4820	40.95	2.56	-0.04
154	SLU 50	6	-837	4788	40.24	2.56	-0.04
154	SLU 51	6	-846	4776	40.62	2.53	-0.04
154	SLU 52	7	-911	5265	43.86	2.79	-0.04
154	SLU 53	7	-917	5397	44.22	2.89	-0.04
154	SLU 54	7	-925	5385	44.6	2.86	-0.04
154	SLU 55	7	-925	5333	44.53	2.82	-0.04
154	SLU 56	8	-931	5466	44.89	2.92	-0.04
154	SLU 57	7	-940	5453	45.27	2.9	-0.04
154	SLU 58	7	-924	5422	44.57	2.9	-0.04
154	SLU 59	7	-933	5410	44.95	2.87	-0.04
154	SLU 60	8	-934	5557	45.08	2.98	-0.04
154	SLU 61	8	-942	5545	45.46	2.95	-0.04
154	SLU 62	8	-948	5625	45.75	3.01	-0.04
154	SLU 63	8	-956	5613	46.13	2.98	-0.04
154	SLU 64	7	-882	5198	42.55	2.83	-0.04
154	SLU 65	7	-896	5178	43.19	2.78	-0.04
154	SLU 66	7	-902	5310	43.54	2.88	-0.04
154	SLU 67	7	-911	5298	43.92	2.85	-0.04
154	SLU 68	7	-910	5246	43.86	2.81	-0.04
154	SLU 69	7	-916	5379	44.21	2.91	-0.04
154	SLU 70	7	-925	5366	44.59	2.89	-0.04
154	SLU 71	7	-910	5335	43.89	2.89	-0.04
154	SLU 72	7	-919	5323	44.27	2.86	-0.04
154	SLU 73	8	-983	5812	47.51	3.12	-0.05
154	SLU 74	8	-990	5944	47.87	3.22	-0.05
154	SLU 75	8	-998	5932	48.25	3.19	-0.05
154	SLU 76	8	-998	5880	48.18	3.15	-0.05



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
154	SLU 77	8	-1004	6013	48.53	3.25	-0.05
154	SLU 78	8	-1012	6000	48.92	3.22	-0.05
154	SLU 79	8	-997	5969	48.21	3.23	-0.05
154	SLU 80	8	-1006	5957	48.59	3.2	-0.05
154	SLU 81	9	-1006	6104	48.73	3.31	-0.05
154	SLU 82	9	-1015	6091	49.11	3.28	-0.05
154	SLU 83	9	-1020	6172	49.4	3.34	-0.05
154	SLU 84	9	-1029	6160	49.78	3.31	-0.05
154	SLE RA 1	5	-662	3879	31.93	2.1	-0.03
154	SLE RA 2	5	-672	3865	32.36	2.07	-0.03
154	SLE RA 3	5	-676	3953	32.59	2.14	-0.03
154	SLE RA 4	5	-682	3945	32.85	2.12	-0.03
154	SLE RA 5	5	-681	3910	32.8	2.09	-0.03
154	SLE RA 6	5	-685	3999	33.04	2.16	-0.03
154	SLE RA 7	5	-691	3991	33.29	2.14	-0.03
154	SLE RA 8	5	-681	3970	32.82	2.14	-0.03
154	SLE RA 9	5	-687	3961	33.08	2.12	-0.03
154	SLE RA 10	6	-730	4287	35.24	2.29	-0.03
154	SLE RA 11	6	-734	4376	35.47	2.36	-0.03
154	SLE RA 12	6	-740	4368	35.73	2.35	-0.03
154	SLE RA 13	6	-739	4333	35.68	2.32	-0.03
154	SLE RA 14	6	-744	4421	35.92	2.39	-0.03
154	SLE RA 15	6	-749	4413	36.17	2.37	-0.03
154	SLE RA 16	6	-739	4392	35.71	2.37	-0.03
154	SLE RA 17	6	-745	4384	35.96	2.35	-0.03
154	SLE RA 18	6	-745	4482	36.05	2.42	-0.04
154	SLE RA 19	6	-751	4474	36.3	2.4	-0.03
154	SLE RA 20	6	-755	4528	36.49	2.44	-0.04
154	SLE RA 21	6	-761	4520	36.75	2.42	-0.04
154	SLE FR 1	5	-662	3879	31.93	2.1	-0.03
154	SLE FR 2	5	-664	3876	32.02	2.1	-0.03
154	SLE FR 3	5	-666	3897	32.11	2.11	-0.03
154	SLE FR 4	6	-689	4057	33.25	2.19	-0.03
154	SLE FR 5	6	-691	4078	33.35	2.21	-0.03
154	SLE FR 6	6	-704	4180	33.99	2.26	-0.03
154	SLE QP 1	5	-662	3879	31.93	2.1	-0.03
154	SLE QP 2	6	-687	4060	33.17	2.2	-0.03
154	SLD 1	10	-338	4507	16.52	7.04	-0.05
154	SLD 2	10	-338	4507	16.52	7.04	-0.05
154	SLD 3	8	-674	4825	33.29	6.03	-0.04
154	SLD 4	8	-674	4825	33.29	6.03	-0.04
154	SLD 5	10	-72	3712	2.74	5.19	-0.05
154	SLD 6	10	-72	3712	2.74	5.19	-0.05
154	SLD 7	4	-1193	4771	58.64	1.81	-0.03
154	SLD 8	4	-1193	4771	58.64	1.81	-0.03
154	SLD 9	8	-181	3348	7.7	2.59	-0.04
154	SLD 10	8	-181	3348	7.7	2.59	-0.04
154	SLD 11	2	-1302	4408	63.59	-0.79	-0.02
154	SLD 12	2	-1302	4408	63.59	-0.79	-0.02
154	SLD 13	3	-700	3295	33.05	-1.63	-0.02
154	SLD 14	3	-700	3295	33.05	-1.63	-0.02
154	SLD 15	1	-1037	3613	49.81	-2.65	-0.01
154	SLD 16	1	-1037	3613	49.81	-2.65	-0.01
154	SLV 1	15	122	5109	-5.38	14.01	-0.08
154	SLV 2	15	122	5109	-5.38	14.01	-0.08
154	SLV 3	11	-657	5847	33.44	11.54	-0.06
154	SLV 4	11	-657	5847	33.44	11.54	-0.06
154	SLV 5	15	737	3254	-37.28	9.49	-0.06
154	SLV 6	15	737	3254	-37.28	9.49	-0.06
154	SLV 7	1	-1859	5716	92.13	1.25	-0.02
154	SLV 8	1	-1859	5716	92.13	1.25	-0.02
154	SLV 9	10	485	2403	-25.8	3.14	-0.04
154	SLV 10	10	485	2403	-25.8	3.14	-0.04
154	SLV 11	-4	-2111	4865	103.61	-5.1	0
154	SLV 12	-4	-2111	4865	103.61	-5.1	0
154	SLV 13	0	-718	2272	32.89	-7.15	0
154	SLV 14	0	-718	2272	32.89	-7.15	0
154	SLV 15	-4	-1496	3011	71.72	-9.62	0.01
154	SLV 16	-4	-1496	3011	71.72	-9.62	0.01
155	SLU 1	0	288	2254	-6.33	-0.03	0.03
155	SLU 2	0	284	2239	-6.25	-0.02	0.03
155	SLU 3	0	301	2326	-6.66	-0.04	0.03
155	SLU 4	0	299	2317	-6.61	-0.03	0.03
155	SLU 5	0	294	2287	-6.47	-0.03	0.03
155	SLU 6	0	311	2375	-6.88	-0.05	0.03
155	SLU 7	0	309	2365	-6.83	-0.04	0.03
155	SLU 8	0	306	2351	-6.77	-0.05	0.03
155	SLU 9	0	304	2341	-6.72	-0.04	0.03
155	SLU 10	0	336	2639	-7.42	-0.02	0.03
155	SLU 11	0	353	2727	-7.82	-0.04	0.04
155	SLU 12	0	351	2718	-7.77	-0.03	0.04
155	SLU 13	0	346	2688	-7.63	-0.03	0.04
155	SLU 14	0	362	2775	-8.04	-0.05	0.04
155	SLU 15	0	361	2766	-7.99	-0.04	0.04
155	SLU 16	0	358	2752	-7.93	-0.05	0.04
155	SLU 17	0	356	2742	-7.88	-0.04	0.04
155	SLU 18	0	362	2827	-7.99	-0.03	0.04
155	SLU 19	0	360	2817	-7.94	-0.02	0.04
155	SLU 20	0	371	2875	-8.21	-0.04	0.04
155	SLU 21	0	369	2866	-8.16	-0.03	0.04



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
155	SLU 22	0	341	2569	-7.6	-0.04	0.03
155	SLU 23	0	338	2553	-7.52	-0.03	0.03
155	SLU 24	0	355	2641	-7.93	-0.05	0.03
155	SLU 25	0	353	2632	-7.88	-0.05	0.03
155	SLU 26	0	347	2601	-7.74	-0.04	0.03
155	SLU 27	0	364	2689	-8.14	-0.06	0.04
155	SLU 28	0	362	2680	-8.1	-0.06	0.04
155	SLU 29	0	360	2665	-8.03	-0.06	0.04
155	SLU 30	0	358	2656	-7.99	-0.05	0.04
155	SLU 31	0	390	2954	-8.68	-0.03	0.04
155	SLU 32	0	407	3042	-9.09	-0.06	0.04
155	SLU 33	0	405	3032	-9.04	-0.05	0.04
155	SLU 34	0	399	3002	-8.9	-0.04	0.04
155	SLU 35	0	416	3090	-9.31	-0.06	0.04
155	SLU 36	0	414	3081	-9.26	-0.06	0.04
155	SLU 37	0	411	3066	-9.2	-0.06	0.04
155	SLU 38	0	410	3057	-9.15	-0.05	0.04
155	SLU 39	0	415	3141	-9.26	-0.04	0.04
155	SLU 40	0	413	3132	-9.21	-0.04	0.04
155	SLU 41	-1	425	3190	-9.48	-0.05	0.04
155	SLU 42	-1	423	3180	-9.43	-0.04	0.04
155	SLU 43	0	355	2823	-7.8	-0.04	0.04
155	SLU 44	0	352	2807	-7.72	-0.02	0.04
155	SLU 45	0	369	2895	-8.12	-0.05	0.04
155	SLU 46	0	367	2885	-8.08	-0.04	0.04
155	SLU 47	0	362	2855	-7.94	-0.03	0.04
155	SLU 48	0	378	2943	-8.34	-0.06	0.04
155	SLU 49	0	377	2934	-8.29	-0.05	0.04
155	SLU 50	0	374	2919	-8.23	-0.06	0.04
155	SLU 51	0	372	2910	-8.18	-0.05	0.04
155	SLU 52	-1	404	3208	-8.88	-0.02	0.04
155	SLU 53	-1	421	3296	-9.28	-0.05	0.04
155	SLU 54	-1	419	3286	-9.24	-0.04	0.04
155	SLU 55	-1	413	3256	-9.1	-0.03	0.04
155	SLU 56	-1	430	3344	-9.5	-0.06	0.04
155	SLU 57	-1	428	3334	-9.46	-0.05	0.04
155	SLU 58	-1	426	3320	-9.39	-0.06	0.04
155	SLU 59	-1	424	3311	-9.35	-0.05	0.04
155	SLU 60	-1	430	3395	-9.46	-0.04	0.04
155	SLU 61	-1	428	3386	-9.41	-0.03	0.04
155	SLU 62	-1	439	3443	-9.67	-0.05	0.04
155	SLU 63	-1	437	3434	-9.63	-0.04	0.04
155	SLU 64	-1	409	3137	-9.07	-0.05	0.04
155	SLU 65	-1	406	3122	-8.99	-0.03	0.04
155	SLU 66	-1	423	3209	-9.39	-0.06	0.04
155	SLU 67	-1	421	3200	-9.35	-0.05	0.04
155	SLU 68	-1	415	3170	-9.21	-0.04	0.04
155	SLU 69	-1	432	3258	-9.61	-0.07	0.04
155	SLU 70	-1	430	3248	-9.56	-0.06	0.04
155	SLU 71	-1	427	3234	-9.5	-0.07	0.04
155	SLU 72	-1	426	3224	-9.45	-0.06	0.04
155	SLU 73	-1	458	3522	-10.15	-0.03	0.05
155	SLU 74	-1	475	3610	-10.55	-0.06	0.05
155	SLU 75	-1	473	3601	-10.51	-0.05	0.05
155	SLU 76	-1	467	3571	-10.37	-0.04	0.05
155	SLU 77	-1	484	3658	-10.77	-0.07	0.05
155	SLU 78	-1	482	3649	-10.72	-0.06	0.05
155	SLU 79	-1	479	3635	-10.66	-0.07	0.05
155	SLU 80	-1	477	3625	-10.61	-0.06	0.05
155	SLU 81	-1	483	3710	-10.72	-0.05	0.05
155	SLU 82	-1	481	3700	-10.68	-0.04	0.05
155	SLU 83	-1	492	3758	-10.94	-0.06	0.05
155	SLU 84	-1	491	3749	-10.89	-0.05	0.05
155	SLE RA 1	0	303	2344	-6.69	-0.03	0.03
155	SLE RA 2	0	301	2334	-6.64	-0.02	0.03
155	SLE RA 3	0	312	2392	-6.91	-0.04	0.03
155	SLE RA 4	0	311	2386	-6.88	-0.04	0.03
155	SLE RA 5	0	307	2366	-6.79	-0.03	0.03
155	SLE RA 6	0	318	2424	-7.06	-0.05	0.03
155	SLE RA 7	0	317	2418	-7.03	-0.04	0.03
155	SLE RA 8	0	315	2408	-6.98	-0.05	0.03
155	SLE RA 9	0	314	2402	-6.95	-0.04	0.03
155	SLE RA 10	0	335	2601	-7.42	-0.02	0.03
155	SLE RA 11	0	347	2659	-7.69	-0.04	0.03
155	SLE RA 12	0	345	2653	-7.66	-0.04	0.03
155	SLE RA 13	0	342	2633	-7.56	-0.03	0.03
155	SLE RA 14	0	353	2692	-7.83	-0.05	0.03
155	SLE RA 15	0	352	2685	-7.8	-0.04	0.04
155	SLE RA 16	0	350	2676	-7.76	-0.05	0.03
155	SLE RA 17	0	348	2669	-7.73	-0.04	0.03
155	SLE RA 18	0	352	2726	-7.8	-0.03	0.03
155	SLE RA 19	0	351	2720	-7.77	-0.03	0.04
155	SLE RA 20	0	358	2758	-7.95	-0.04	0.04
155	SLE RA 21	0	357	2752	-7.91	-0.04	0.04
155	SLE FR 1	0	303	2344	-6.69	-0.03	0.03
155	SLE FR 2	0	302	2342	-6.68	-0.03	0.03
155	SLE FR 3	0	305	2357	-6.75	-0.04	0.03
155	SLE FR 4	0	317	2457	-7.02	-0.03	0.03
155	SLE FR 5	0	320	2471	-7.08	-0.04	0.03
155	SLE FR 6	0	328	2535	-7.25	-0.03	0.03



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
155	SLE QP 1	0	303	2344	-6.69	-0.03	0.03
155	SLE QP 2	0	318	2459	-7.03	-0.03	0.03
155	SLD 1	3	151	1960	-1.87	5.52	-0.09
155	SLD 2	3	151	1960	-1.87	5.52	-0.09
155	SLD 3	2	305	2080	-7.5	4.53	-0.06
155	SLD 4	2	305	2080	-7.5	4.53	-0.06
155	SLD 5	2	35	2127	3.06	3.14	-0.05
155	SLD 6	2	35	2127	3.06	3.14	-0.05
155	SLD 7	-1	547	2527	-15.71	-0.17	0.05
155	SLD 8	-1	547	2527	-15.71	-0.17	0.05
155	SLD 9	0	89	2390	1.66	0.11	0.02
155	SLD 10	0	89	2390	1.66	0.11	0.02
155	SLD 11	-2	601	2790	-17.11	-3.21	0.11
155	SLD 12	-2	601	2790	-17.11	-3.21	0.11
155	SLD 13	-3	330	2837	-6.55	-4.6	0.13
155	SLD 14	-3	330	2837	-6.55	-4.6	0.13
155	SLD 15	-4	484	2957	-12.18	-5.59	0.16
155	SLD 16	-4	484	2957	-12.18	-5.59	0.16
155	SLV 1	8	-71	1292	5	13.56	-0.26
155	SLV 2	8	-71	1292	5	13.56	-0.26
155	SLV 3	6	288	1572	-8.14	11.12	-0.19
155	SLV 4	6	288	1572	-8.14	11.12	-0.19
155	SLV 5	5	-343	1683	16.51	7.74	-0.16
155	SLV 6	5	-343	1683	16.51	7.74	-0.16
155	SLV 7	-1	853	2618	-27.29	-0.38	0.07
155	SLV 8	-1	853	2618	-27.29	-0.38	0.07
155	SLV 9	0	-217	2300	13.24	0.31	-0.01
155	SLV 10	0	-217	2300	13.24	0.31	-0.01
155	SLV 11	-5	979	3234	-30.57	-7.81	0.22
155	SLV 12	-5	979	3234	-30.57	-7.81	0.22
155	SLV 13	-7	348	3345	-5.91	-11.19	0.25
155	SLV 14	-7	348	3345	-5.91	-11.19	0.25
155	SLV 15	-9	707	3626	-19.06	-13.63	0.32
155	SLV 16	-9	707	3626	-19.06	-13.63	0.32
156	SLU 1	15	475	3606	-14.55	1.59	-0.04
156	SLU 2	15	527	3596	-17.04	0.91	-0.04
156	SLU 3	15	490	3702	-15	1.64	-0.04
156	SLU 4	15	521	3696	-16.49	1.24	-0.04
156	SLU 5	15	535	3651	-17.24	0.93	-0.04
156	SLU 6	15	497	3757	-15.2	1.67	-0.04
156	SLU 7	16	529	3752	-16.69	1.26	-0.04
156	SLU 8	15	490	3716	-14.95	1.64	-0.04
156	SLU 9	15	521	3711	-16.45	1.23	-0.04
156	SLU 10	18	621	4112	-19.97	1.41	-0.05
156	SLU 11	18	583	4218	-17.93	2.15	-0.05
156	SLU 12	18	615	4213	-19.42	1.74	-0.05
156	SLU 13	18	628	4168	-20.17	1.44	-0.05
156	SLU 14	18	591	4274	-18.13	2.17	-0.05
156	SLU 15	18	622	4268	-19.62	1.77	-0.05
156	SLU 16	18	583	4233	-17.89	2.14	-0.05
156	SLU 17	18	615	4227	-19.38	1.73	-0.05
156	SLU 18	19	608	4343	-18.74	2.31	-0.05
156	SLU 19	19	640	4337	-20.23	1.9	-0.05
156	SLU 20	19	616	4399	-18.94	2.33	-0.05
156	SLU 21	19	647	4393	-20.43	1.92	-0.05
156	SLU 22	17	559	4082	-17.19	2.02	-0.05
156	SLU 23	17	612	4073	-19.68	1.34	-0.05
156	SLU 24	18	574	4179	-17.63	2.07	-0.05
156	SLU 25	18	606	4173	-19.13	1.67	-0.05
156	SLU 26	18	619	4128	-19.88	1.36	-0.05
156	SLU 27	18	582	4234	-17.84	2.1	-0.05
156	SLU 28	18	613	4228	-19.33	1.69	-0.05
156	SLU 29	18	574	4193	-17.59	2.06	-0.05
156	SLU 30	18	606	4187	-19.09	1.66	-0.05
156	SLU 31	20	706	4589	-22.61	1.84	-0.06
156	SLU 32	20	668	4695	-20.56	2.58	-0.06
156	SLU 33	20	700	4689	-22.06	2.17	-0.06
156	SLU 34	20	713	4644	-22.81	1.86	-0.06
156	SLU 35	21	676	4750	-20.77	2.6	-0.06
156	SLU 36	21	707	4745	-22.26	2.19	-0.06
156	SLU 37	21	668	4709	-20.52	2.57	-0.06
156	SLU 38	21	699	4704	-22.02	2.16	-0.06
156	SLU 39	21	693	4820	-21.37	2.73	-0.06
156	SLU 40	21	725	4814	-22.87	2.33	-0.06
156	SLU 41	21	701	4875	-21.58	2.76	-0.06
156	SLU 42	21	732	4870	-23.07	2.35	-0.06
156	SLU 43	18	588	4524	-18.01	1.92	-0.05
156	SLU 44	18	641	4514	-20.5	1.24	-0.05
156	SLU 45	19	603	4620	-18.46	1.97	-0.05
156	SLU 46	19	635	4614	-19.95	1.57	-0.05
156	SLU 47	19	648	4570	-20.7	1.26	-0.05
156	SLU 48	19	611	4676	-18.66	2	-0.05
156	SLU 49	19	642	4670	-20.15	1.59	-0.05
156	SLU 50	19	603	4635	-18.42	1.96	-0.05
156	SLU 51	19	634	4629	-19.91	1.56	-0.05
156	SLU 52	21	734	5030	-23.43	1.74	-0.06
156	SLU 53	21	697	5137	-21.39	2.48	-0.06
156	SLU 54	22	728	5131	-22.88	2.07	-0.06
156	SLU 55	21	742	5086	-23.63	1.77	-0.06
156	SLU 56	22	704	5192	-21.59	2.5	-0.06



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
		x	y	z		x	y	z	
156	SLU 57	22	736	5186		-23.08	2.09	-0.06	
156	SLU 58	22	697	5151		-21.35	2.47	-0.06	
156	SLU 59	22	728	5145		-22.84	2.06	-0.06	
156	SLU 60	22	722	5261		-22.2	2.64	-0.06	
156	SLU 61	22	753	5256		-23.69	2.23	-0.06	
156	SLU 62	22	729	5317		-22.4	2.66	-0.06	
156	SLU 63	22	761	5311		-23.89	2.25	-0.06	
156	SLU 64	21	673	5001		-20.65	2.34	-0.06	
156	SLU 65	21	725	4991		-23.14	1.67	-0.06	
156	SLU 66	21	688	5097		-21.09	2.4	-0.06	
156	SLU 67	21	719	5091		-22.59	2	-0.06	
156	SLU 68	21	733	5046		-23.34	1.69	-0.06	
156	SLU 69	22	695	5152		-21.3	2.43	-0.06	
156	SLU 70	22	727	5147		-22.79	2.02	-0.06	
156	SLU 71	21	688	5111		-21.05	2.39	-0.06	
156	SLU 72	21	719	5106		-22.55	1.99	-0.06	
156	SLU 73	24	819	5507		-26.07	2.17	-0.06	
156	SLU 74	24	781	5613		-24.02	2.91	-0.07	
156	SLU 75	24	813	5608		-25.52	2.5	-0.07	
156	SLU 76	24	826	5563		-26.27	2.19	-0.07	
156	SLU 77	24	789	5669		-24.23	2.93	-0.07	
156	SLU 78	24	820	5663		-25.72	2.52	-0.07	
156	SLU 79	24	781	5628		-23.98	2.9	-0.07	
156	SLU 80	24	813	5622		-25.48	2.49	-0.07	
156	SLU 81	25	807	5738		-24.83	3.06	-0.07	
156	SLU 82	25	838	5732		-26.33	2.66	-0.07	
156	SLU 83	25	814	5794		-25.04	3.09	-0.07	
156	SLU 84	25	846	5788		-26.53	2.68	-0.07	
156	SLE RA 1	15	499	3742		-15.3	1.71	-0.04	
156	SLE RA 2	15	534	3735		-16.96	1.26	-0.04	
156	SLE RA 3	16	509	3806		-15.6	1.75	-0.04	
156	SLE RA 4	16	530	3802		-16.6	1.48	-0.04	
156	SLE RA 5	16	539	3772		-17.1	1.27	-0.04	
156	SLE RA 6	16	514	3843		-15.74	1.76	-0.04	
156	SLE RA 7	16	535	3839		-16.73	1.49	-0.04	
156	SLE RA 8	16	509	3816		-15.57	1.74	-0.04	
156	SLE RA 9	16	530	3812		-16.57	1.47	-0.04	
156	SLE RA 10	17	596	4080		-18.92	1.59	-0.05	
156	SLE RA 11	18	571	4150		-17.55	2.08	-0.05	
156	SLE RA 12	18	592	4146		-18.55	1.81	-0.05	
156	SLE RA 13	17	601	4117		-19.05	1.61	-0.05	
156	SLE RA 14	18	576	4187		-17.69	2.1	-0.05	
156	SLE RA 15	18	597	4183		-18.69	1.83	-0.05	
156	SLE RA 16	18	571	4160		-17.53	2.08	-0.05	
156	SLE RA 17	18	592	4156		-18.52	1.81	-0.05	
156	SLE RA 18	18	588	4234		-18.09	2.19	-0.05	
156	SLE RA 19	18	609	4230		-19.09	1.92	-0.05	
156	SLE RA 20	18	593	4270		-18.23	2.2	-0.05	
156	SLE RA 21	18	614	4267		-19.23	1.93	-0.05	
156	SLE FR 1	15	499	3742		-15.3	1.71	-0.04	
156	SLE FR 2	15	506	3741		-15.64	1.62	-0.04	
156	SLE FR 3	15	501	3757		-15.36	1.72	-0.04	
156	SLE FR 4	16	533	3888		-16.47	1.76	-0.05	
156	SLE FR 5	16	528	3904		-16.19	1.86	-0.05	
156	SLE FR 6	17	543	3988		-16.7	1.95	-0.05	
156	SLE QP 1	15	499	3742		-15.3	1.71	-0.04	
156	SLE QP 2	16	526	3889		-16.14	1.85	-0.05	
156	SLD 1	25	1064	5257		-36.84	6.23	-0.06	
156	SLD 2	25	1064	5257		-36.84	6.23	-0.06	
156	SLD 3	19	630	5158		-18.48	3.67	-0.07	
156	SLD 4	19	630	5158		-18.48	3.67	-0.07	
156	SLD 5	28	1345	4449		-50.2	7.04	-0.04	
156	SLD 6	28	1345	4449		-50.2	7.04	-0.04	
156	SLD 7	8	-101	4121		11.01	-1.48	-0.07	
156	SLD 8	8	-101	4121		11.01	-1.48	-0.07	
156	SLD 9	25	1152	3658		-43.29	5.19	-0.02	
156	SLD 10	25	1152	3658		-43.29	5.19	-0.02	
156	SLD 11	4	-293	3330		17.92	-3.34	-0.06	
156	SLD 12	4	-293	3330		17.92	-3.34	-0.06	
156	SLD 13	14	421	2620		-13.8	0.03	-0.02	
156	SLD 14	14	421	2620		-13.8	0.03	-0.02	
156	SLD 15	8	-12	2522		4.56	-2.52	-0.03	
156	SLD 16	8	-12	2522		4.56	-2.52	-0.03	
156	SLV 1	37	1771	7083		-63.97	12.39	-0.08	
156	SLV 2	37	1771	7083		-63.97	12.39	-0.08	
156	SLV 3	22	770	6850		-21.61	5.86	-0.11	
156	SLV 4	22	770	6850		-21.61	5.86	-0.11	
156	SLV 5	46	2416	5201		-94.73	14.92	-0.02	
156	SLV 6	46	2416	5201		-94.73	14.92	-0.02	
156	SLV 7	-6	-918	4424		46.46	-6.85	-0.1	
156	SLV 8	-6	-918	4424		46.46	-6.85	-0.1	
156	SLV 9	38	1969	3355		-78.74	10.55	0.01	
156	SLV 10	38	1969	3355		-78.74	10.55	0.01	
156	SLV 11	-13	-1365	2578		62.45	-11.21	-0.07	
156	SLV 12	-13	-1365	2578		62.45	-11.21	-0.07	
156	SLV 13	11	281	928		-10.67	-2.15	0.01	
156	SLV 14	11	281	928		-10.67	-2.15	0.01	
156	SLV 15	-5	-719	695		31.69	-8.68	-0.01	
156	SLV 16	-5	-719	695		31.69	-8.68	-0.01	
157	SLU 1	2	-541	3940		30.81	0.6	-0.01	



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
157	SLU 2	1	-306	3693	19.46	0.63	-0.01
157	SLU 3	2	-557	4071	31.76	0.63	-0.01
157	SLU 4	2	-416	3923	24.95	0.64	-0.01
157	SLU 5	2	-316	3775	20.06	0.64	-0.01
157	SLU 6	2	-567	4153	32.36	0.64	-0.01
157	SLU 7	2	-426	4005	25.55	0.65	-0.01
157	SLU 8	2	-561	4104	32.01	0.63	-0.01
157	SLU 9	2	-420	3955	25.19	0.64	-0.01
157	SLU 10	2	-374	4402	23.64	0.74	-0.01
157	SLU 11	2	-625	4780	35.94	0.75	-0.01
157	SLU 12	2	-484	4632	29.13	0.76	-0.01
157	SLU 13	2	-384	4483	24.23	0.76	-0.01
157	SLU 14	2	-635	4862	36.54	0.76	-0.01
157	SLU 15	2	-494	4713	29.73	0.77	-0.01
157	SLU 16	2	-629	4813	36.18	0.75	-0.01
157	SLU 17	2	-488	4664	29.37	0.76	-0.01
157	SLU 18	2	-638	4953	36.78	0.77	-0.01
157	SLU 19	2	-497	4804	29.97	0.79	-0.01
157	SLU 20	2	-648	5035	37.38	0.79	-0.01
157	SLU 21	2	-507	4886	30.57	0.8	-0.01
157	SLU 22	2	-609	4587	34.91	0.71	-0.01
157	SLU 23	2	-374	4339	23.56	0.73	-0.01
157	SLU 24	2	-625	4718	35.87	0.73	-0.01
157	SLU 25	2	-485	4569	29.05	0.74	-0.01
157	SLU 26	2	-385	4421	24.16	0.74	-0.01
157	SLU 27	2	-636	4799	36.46	0.74	-0.01
157	SLU 28	2	-495	4651	29.65	0.76	-0.01
157	SLU 29	2	-630	4750	36.11	0.73	-0.01
157	SLU 30	2	-489	4602	29.3	0.74	-0.01
157	SLU 31	2	-442	5048	27.74	0.85	-0.01
157	SLU 32	2	-693	5426	40.04	0.85	-0.01
157	SLU 33	2	-552	5278	33.23	0.86	-0.01
157	SLU 34	2	-453	5130	28.34	0.86	-0.01
157	SLU 35	2	-704	5508	40.64	0.86	-0.01
157	SLU 36	2	-563	5360	33.83	0.87	-0.01
157	SLU 37	2	-698	5459	40.29	0.85	-0.01
157	SLU 38	2	-557	5311	33.48	0.86	-0.01
157	SLU 39	3	-706	5599	40.88	0.88	-0.01
157	SLU 40	2	-565	5451	34.07	0.89	-0.01
157	SLU 41	3	-716	5681	41.48	0.89	-0.01
157	SLU 42	2	-576	5533	34.67	0.9	-0.01
157	SLU 43	2	-680	4901	38.64	0.75	-0.01
157	SLU 44	2	-445	4653	27.29	0.77	-0.01
157	SLU 45	2	-696	5032	39.6	0.77	-0.01
157	SLU 46	2	-555	4883	32.79	0.79	-0.01
157	SLU 47	2	-455	4735	27.89	0.78	-0.01
157	SLU 48	2	-706	5114	40.2	0.79	-0.01
157	SLU 49	2	-565	4965	33.38	0.8	-0.01
157	SLU 50	2	-700	5064	39.84	0.77	-0.01
157	SLU 51	2	-559	4916	33.03	0.79	-0.01
157	SLU 52	2	-513	5362	31.47	0.89	-0.01
157	SLU 53	3	-764	5741	43.78	0.89	-0.01
157	SLU 54	2	-623	5592	36.97	0.9	-0.01
157	SLU 55	2	-523	5444	32.07	0.9	-0.01
157	SLU 56	3	-774	5822	44.38	0.9	-0.01
157	SLU 57	2	-633	5674	37.56	0.92	-0.01
157	SLU 58	3	-768	5773	44.02	0.89	-0.01
157	SLU 59	2	-627	5625	37.21	0.91	-0.01
157	SLU 60	3	-777	5913	44.61	0.92	-0.01
157	SLU 61	2	-636	5765	37.8	0.93	-0.01
157	SLU 62	3	-787	5995	45.21	0.93	-0.01
157	SLU 63	3	-646	5847	38.4	0.94	-0.01
157	SLU 64	2	-748	5547	42.75	0.85	-0.01
157	SLU 65	2	-513	5300	31.4	0.87	-0.01
157	SLU 66	3	-764	5678	43.7	0.88	-0.01
157	SLU 67	2	-623	5530	36.89	0.89	-0.01
157	SLU 68	2	-523	5382	31.99	0.89	-0.01
157	SLU 69	3	-774	5760	44.3	0.89	-0.01
157	SLU 70	2	-634	5611	37.49	0.9	-0.01
157	SLU 71	3	-768	5711	43.94	0.88	-0.01
157	SLU 72	2	-628	5562	37.13	0.89	-0.01
157	SLU 73	3	-581	6009	35.58	0.99	-0.01
157	SLU 74	3	-832	6387	47.88	0.99	-0.01
157	SLU 75	3	-691	6239	41.07	1.01	-0.01
157	SLU 76	3	-591	6090	36.17	1.01	-0.01
157	SLU 77	3	-842	6469	48.48	1.01	-0.01
157	SLU 78	3	-702	6320	41.67	1.02	-0.01
157	SLU 79	3	-836	6419	48.12	1	-0.01
157	SLU 80	3	-696	6271	41.31	1.01	-0.01
157	SLU 81	3	-845	6560	48.72	1.02	-0.01
157	SLU 82	3	-704	6411	41.91	1.03	-0.01
157	SLU 83	3	-855	6641	49.32	1.03	-0.01
157	SLU 84	3	-714	6493	42.51	1.05	-0.01
157	SLE RA 1	2	-560	4125	31.98	0.63	-0.01
157	SLE RA 2	2	-404	3960	24.41	0.65	-0.01
157	SLE RA 3	2	-571	4212	32.62	0.65	-0.01
157	SLE RA 4	2	-477	4113	28.08	0.66	-0.01
157	SLE RA 5	2	-411	4015	24.81	0.66	-0.01
157	SLE RA 6	2	-578	4267	33.02	0.66	-0.01
157	SLE RA 7	2	-484	4168	28.47	0.67	-0.01



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
157	SLE RA 8	2	-574	4234	32.78	0.65	-0.01
157	SLE RA 9	2	-480	4135	28.24	0.66	-0.01
157	SLE RA 10	2	-449	4433	27.2	0.73	-0.01
157	SLE RA 11	2	-616	4685	35.4	0.73	-0.01
157	SLE RA 12	2	-523	4586	30.86	0.74	-0.01
157	SLE RA 13	2	-456	4487	27.6	0.73	-0.01
157	SLE RA 14	2	-623	4739	35.8	0.74	-0.01
157	SLE RA 15	2	-529	4640	31.26	0.74	-0.01
157	SLE RA 16	2	-619	4707	35.56	0.73	-0.01
157	SLE RA 17	2	-525	4608	31.02	0.74	-0.01
157	SLE RA 18	2	-625	4800	35.96	0.75	-0.01
157	SLE RA 19	2	-531	4701	31.42	0.75	-0.01
157	SLE RA 20	2	-632	4855	36.36	0.75	-0.01
157	SLE RA 21	2	-538	4756	31.82	0.76	-0.01
157	SLE FR 1	2	-560	4125	31.98	0.63	-0.01
157	SLE FR 2	2	-529	4092	30.47	0.64	-0.01
157	SLE FR 3	2	-563	4147	32.14	0.64	-0.01
157	SLE FR 4	2	-548	4294	31.66	0.67	-0.01
157	SLE FR 5	2	-582	4349	33.33	0.67	-0.01
157	SLE FR 6	2	-593	4462	33.97	0.69	-0.01
157	SLE QP 1	2	-560	4125	31.98	0.63	-0.01
157	SLE QP 2	2	-580	4327	33.17	0.67	-0.01
157	SLD 1	8	-193	4724	15.05	3.23	-0.01
157	SLD 2	8	-193	4724	15.05	3.23	-0.01
157	SLD 3	2	-547	5031	32.35	1.06	-0.01
157	SLD 4	2	-547	5031	32.35	1.06	-0.01
157	SLD 5	12	72	3980	1.49	4.73	-0.02
157	SLD 6	12	72	3980	1.49	4.73	-0.02
157	SLD 7	-7	-1106	5005	59.17	-2.51	0
157	SLD 8	-7	-1106	5005	59.17	-2.51	0
157	SLD 9	11	-53	3650	7.18	3.85	-0.01
157	SLD 10	11	-53	3650	7.18	3.85	-0.01
157	SLD 11	-9	-1232	4675	64.86	-3.4	0
157	SLD 12	-9	-1232	4675	64.86	-3.4	0
157	SLD 13	2	-613	3624	34	0.27	0
157	SLD 14	2	-613	3624	34	0.27	0
157	SLD 15	-4	-966	3931	51.3	-1.9	0
157	SLD 16	-4	-966	3931	51.3	-1.9	0
157	SLV 1	16	342	5243	-10.11	7.06	-0.03
157	SLV 2	16	342	5243	-10.11	7.06	-0.03
157	SLV 3	1	-509	5993	31.45	1.48	-0.02
157	SLV 4	1	-509	5993	31.45	1.48	-0.02
157	SLV 5	29	986	3465	-42.84	11.04	-0.03
157	SLV 6	29	986	3465	-42.84	11.04	-0.03
157	SLV 7	-21	-1848	5964	95.69	-7.54	0.01
157	SLV 8	-21	-1848	5964	95.69	-7.54	0.01
157	SLV 9	25	689	2691	-29.34	8.88	-0.02
157	SLV 10	25	689	2691	-29.34	8.88	-0.02
157	SLV 11	-25	-2146	5190	109.19	-9.7	0.02
157	SLV 12	-25	-2146	5190	109.19	-9.7	0.02
157	SLV 13	2	-651	2662	34.9	-0.15	0
157	SLV 14	2	-651	2662	34.9	-0.15	0
157	SLV 15	-13	-1501	3412	76.46	-5.72	0.02
157	SLV 16	-13	-1501	3412	76.46	-5.72	0.02
158	SLU 1	-1	-339	4788	40.84	0.21	0.16
158	SLU 2	-1	-357	4757	41.39	0.23	0.16
158	SLU 3	-1	-345	4963	42.13	0.21	0.16
158	SLU 4	-1	-356	4944	42.46	0.23	0.16
158	SLU 5	-1	-361	4875	42.26	0.23	0.16
158	SLU 6	-2	-348	5080	43	0.21	0.17
158	SLU 7	-2	-359	5062	43.33	0.23	0.17
158	SLU 8	-1	-346	5023	42.57	0.21	0.17
158	SLU 9	-2	-357	5004	42.9	0.23	0.17
158	SLU 10	-2	-390	5583	47.74	0.28	0.19
158	SLU 11	-2	-378	5788	48.48	0.26	0.2
158	SLU 12	-2	-388	5770	48.81	0.27	0.2
158	SLU 13	-2	-394	5700	48.61	0.28	0.19
158	SLU 14	-2	-381	5906	49.34	0.26	0.2
158	SLU 15	-2	-392	5887	49.67	0.27	0.2
158	SLU 16	-2	-379	5848	48.92	0.26	0.2
158	SLU 17	-2	-390	5830	49.25	0.27	0.2
158	SLU 18	-2	-386	5967	49.91	0.28	0.2
158	SLU 19	-2	-397	5949	50.24	0.29	0.2
158	SLU 20	-2	-390	6085	50.78	0.28	0.21
158	SLU 21	-2	-401	6066	51.11	0.29	0.21
158	SLU 22	-2	-355	5508	45.93	0.23	0.18
158	SLU 23	-2	-373	5477	46.48	0.25	0.18
158	SLU 24	-2	-361	5683	47.22	0.23	0.19
158	SLU 25	-2	-372	5664	47.55	0.24	0.19
158	SLU 26	-2	-377	5595	47.34	0.25	0.19
158	SLU 27	-2	-364	5800	48.08	0.23	0.19
158	SLU 28	-2	-375	5782	48.41	0.24	0.19
158	SLU 29	-2	-362	5743	47.66	0.23	0.19
158	SLU 30	-2	-373	5725	47.99	0.24	0.19
158	SLU 31	-2	-406	6303	52.83	0.29	0.22
158	SLU 32	-2	-394	6508	53.57	0.27	0.22
158	SLU 33	-2	-404	6490	53.9	0.28	0.22
158	SLU 34	-2	-410	6420	53.69	0.29	0.22
158	SLU 35	-2	-397	6626	54.43	0.27	0.23
158	SLU 36	-2	-408	6607	54.76	0.28	0.23



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
158	SLU 37	-2	-395	6569	54.01	0.27	0.22
158	SLU 38	-2	-406	6550	54.34	0.28	0.22
158	SLU 39	-2	-402	6688	55	0.29	0.23
158	SLU 40	-2	-413	6669	55.33	0.3	0.23
158	SLU 41	-2	-406	6805	55.86	0.29	0.23
158	SLU 42	-2	-417	6787	56.19	0.3	0.23
158	SLU 43	-2	-435	5977	51.35	0.27	0.2
158	SLU 44	-2	-453	5946	51.9	0.29	0.2
158	SLU 45	-2	-441	6152	52.64	0.27	0.2
158	SLU 46	-2	-452	6133	52.97	0.29	0.2
158	SLU 47	-2	-457	6064	52.77	0.29	0.2
158	SLU 48	-2	-445	6269	53.51	0.27	0.21
158	SLU 49	-2	-455	6251	53.84	0.29	0.21
158	SLU 50	-2	-443	6212	53.08	0.27	0.2
158	SLU 51	-2	-453	6194	53.41	0.29	0.2
158	SLU 52	-2	-486	6772	58.25	0.34	0.23
158	SLU 53	-2	-474	6978	58.99	0.32	0.23
158	SLU 54	-2	-485	6959	59.32	0.33	0.23
158	SLU 55	-2	-490	6890	59.12	0.34	0.23
158	SLU 56	-2	-477	7095	59.85	0.32	0.24
158	SLU 57	-2	-488	7077	60.18	0.33	0.24
158	SLU 58	-2	-475	7038	59.43	0.32	0.24
158	SLU 59	-2	-486	7019	59.76	0.33	0.24
158	SLU 60	-2	-482	7157	60.42	0.34	0.24
158	SLU 61	-2	-493	7138	60.75	0.35	0.24
158	SLU 62	-2	-486	7274	61.29	0.34	0.25
158	SLU 63	-2	-497	7256	61.62	0.35	0.24
158	SLU 64	-2	-451	6697	56.44	0.29	0.22
158	SLU 65	-2	-469	6667	56.99	0.31	0.22
158	SLU 66	-2	-457	6872	57.73	0.29	0.23
158	SLU 67	-2	-468	6854	58.06	0.3	0.23
158	SLU 68	-2	-473	6784	57.85	0.31	0.23
158	SLU 69	-2	-461	6990	58.59	0.29	0.23
158	SLU 70	-2	-471	6971	58.92	0.3	0.23
158	SLU 71	-2	-459	6932	58.17	0.29	0.23
158	SLU 72	-2	-469	6914	58.5	0.3	0.23
158	SLU 73	-2	-502	7492	63.34	0.35	0.25
158	SLU 74	-2	-490	7698	64.08	0.33	0.26
158	SLU 75	-2	-501	7679	64.4	0.34	0.26
158	SLU 76	-2	-506	7610	64.2	0.35	0.26
158	SLU 77	-2	-493	7815	64.94	0.33	0.26
158	SLU 78	-2	-504	7797	65.27	0.34	0.26
158	SLU 79	-2	-491	7758	64.52	0.33	0.26
158	SLU 80	-2	-502	7740	64.85	0.34	0.26
158	SLU 81	-2	-498	7877	65.51	0.35	0.27
158	SLU 82	-2	-509	7858	65.84	0.36	0.27
158	SLU 83	-2	-502	7994	66.37	0.35	0.27
158	SLU 84	-2	-513	7976	66.7	0.36	0.27
158	SLE RA 1	-1	-344	4994	42.3	0.22	0.17
158	SLE RA 2	-1	-356	4973	42.66	0.23	0.17
158	SLE RA 3	-2	-347	5110	43.16	0.22	0.17
158	SLE RA 4	-2	-355	5098	43.38	0.23	0.17
158	SLE RA 5	-2	-358	5051	43.24	0.23	0.17
158	SLE RA 6	-2	-350	5188	43.73	0.22	0.17
158	SLE RA 7	-2	-357	5176	43.95	0.23	0.17
158	SLE RA 8	-2	-348	5150	43.45	0.22	0.17
158	SLE RA 9	-2	-356	5138	43.67	0.23	0.17
158	SLE RA 10	-2	-378	5524	46.9	0.26	0.19
158	SLE RA 11	-2	-369	5661	47.39	0.25	0.19
158	SLE RA 12	-2	-377	5648	47.61	0.26	0.19
158	SLE RA 13	-2	-380	5602	47.47	0.26	0.19
158	SLE RA 14	-2	-372	5739	47.96	0.25	0.19
158	SLE RA 15	-2	-379	5727	48.18	0.26	0.19
158	SLE RA 16	-2	-370	5701	47.68	0.25	0.19
158	SLE RA 17	-2	-378	5688	47.9	0.25	0.19
158	SLE RA 18	-2	-375	5780	48.34	0.26	0.2
158	SLE RA 19	-2	-382	5768	48.56	0.27	0.2
158	SLE RA 20	-2	-377	5858	48.92	0.26	0.2
158	SLE RA 21	-2	-385	5846	49.14	0.27	0.2
158	SLE FR 1	-1	-344	4994	42.3	0.22	0.17
158	SLE FR 2	-1	-346	4989	42.37	0.22	0.17
158	SLE FR 3	-1	-345	5025	42.53	0.22	0.17
158	SLE FR 4	-2	-355	5225	44.18	0.23	0.17
158	SLE FR 5	-2	-354	5261	44.34	0.23	0.18
158	SLE FR 6	-2	-359	5387	45.32	0.24	0.18
158	SLE QP 1	-1	-344	4994	42.3	0.22	0.17
158	SLE QP 2	-2	-353	5229	44.11	0.23	0.17
158	SLD 1	-5	-323	3989	24.13	2.86	-0.07
158	SLD 2	-5	-323	3989	24.13	2.86	-0.07
158	SLD 3	-2	-682	4501	45.73	3.94	-0.15
158	SLD 4	-2	-682	4501	45.73	3.94	-0.15
158	SLD 5	-6	200	4081	5.35	-0.61	0.21
158	SLD 6	-6	200	4081	5.35	-0.61	0.21
158	SLD 7	2	-996	5787	77.36	2.98	-0.04
158	SLD 8	2	-996	5787	77.36	2.98	-0.04
158	SLD 9	-5	290	4672	10.86	-2.52	0.38
158	SLD 10	-5	290	4672	10.86	-2.52	0.38
158	SLD 11	3	-906	6378	82.87	1.07	0.14
158	SLD 12	3	-906	6378	82.87	1.07	0.14
158	SLD 13	-1	-24	5958	42.49	-3.48	0.5



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
158	SLD 14	-1	-24	5958	42.49	-3.48	0.5
158	SLD 15	2	-383	6470	64.09	-2.4	0.42
158	SLD 16	2	-383	6470	64.09	-2.4	0.42
158	SLV 1	-9	-287	2325	-2.59	6.61	-0.42
158	SLV 2	-9	-287	2325	-2.59	6.61	-0.42
158	SLV 3	-3	-1122	3525	47.71	9.24	-0.6
158	SLV 4	-3	-1122	3525	47.71	9.24	-0.6
158	SLV 5	-13	932	2539	-46.2	-1.84	0.26
158	SLV 6	-13	932	2539	-46.2	-1.84	0.26
158	SLV 7	8	-1849	6537	121.49	6.92	-0.33
158	SLV 8	8	-1849	6537	121.49	6.92	-0.33
158	SLV 9	-11	1143	3922	-33.26	-6.46	0.68
158	SLV 10	-11	1143	3922	-33.26	-6.46	0.68
158	SLV 11	10	-1638	7920	134.42	2.3	0.09
158	SLV 12	10	-1638	7920	134.42	2.3	0.09
158	SLV 13	0	416	6934	40.51	-8.78	0.95
158	SLV 14	0	416	6934	40.51	-8.78	0.95
158	SLV 15	6	-419	8134	90.82	-6.15	0.77
158	SLV 16	6	-419	8134	90.82	-6.15	0.77
159	SLU 1	0	-532	4501	31.23	-0.15	0
159	SLU 2	0	-321	4162	20.78	-0.23	0
159	SLU 3	0	-549	4640	32.22	-0.16	0
159	SLU 4	0	-422	4437	25.96	-0.21	0
159	SLU 5	0	-332	4247	21.41	-0.24	0
159	SLU 6	0	-560	4725	32.85	-0.17	0
159	SLU 7	0	-433	4522	26.59	-0.22	0
159	SLU 8	0	-554	4671	32.48	-0.17	0
159	SLU 9	0	-427	4468	26.22	-0.22	0
159	SLU 10	0	-392	5023	25.28	-0.27	0
159	SLU 11	0	-620	5501	36.72	-0.2	0
159	SLU 12	0	-493	5298	30.46	-0.25	0
159	SLU 13	0	-402	5108	25.91	-0.28	0
159	SLU 14	0	-630	5586	37.35	-0.21	0
159	SLU 15	0	-504	5383	31.09	-0.26	0
159	SLU 16	0	-624	5531	36.98	-0.2	0
159	SLU 17	0	-497	5328	30.72	-0.25	0
159	SLU 18	0	-633	5730	37.66	-0.2	0
159	SLU 19	0	-506	5527	31.39	-0.25	0
159	SLU 20	0	-644	5815	38.28	-0.21	0
159	SLU 21	0	-517	5612	32.02	-0.26	0
159	SLU 22	0	-603	5287	35.63	-0.18	0
159	SLU 23	0	-392	4949	25.19	-0.26	0
159	SLU 24	0	-620	5427	36.63	-0.19	0
159	SLU 25	0	-493	5224	30.37	-0.24	0
159	SLU 26	0	-402	5034	25.82	-0.27	0
159	SLU 27	0	-630	5512	37.26	-0.2	0
159	SLU 28	0	-504	5309	30.99	-0.25	0
159	SLU 29	0	-624	5457	36.89	-0.2	0
159	SLU 30	0	-497	5254	30.63	-0.25	0
159	SLU 31	0	-462	5809	29.69	-0.3	0
159	SLU 32	0	-690	6287	41.13	-0.23	0
159	SLU 33	0	-564	6084	34.87	-0.28	0
159	SLU 34	0	-473	5894	30.32	-0.31	0
159	SLU 35	0	-701	6372	41.76	-0.24	0
159	SLU 36	0	-574	6169	35.49	-0.29	0
159	SLU 37	0	-695	6318	41.39	-0.23	0
159	SLU 38	0	-568	6115	35.13	-0.28	0
159	SLU 39	0	-704	6517	42.06	-0.23	0
159	SLU 40	0	-577	6314	35.8	-0.28	0
159	SLU 41	0	-715	6602	42.69	-0.24	0
159	SLU 42	0	-588	6399	36.43	-0.29	0
159	SLU 43	0	-668	5581	39.08	-0.18	0
159	SLU 44	0	-457	5243	28.64	-0.27	0
159	SLU 45	0	-685	5721	40.08	-0.2	0
159	SLU 46	0	-558	5518	33.81	-0.25	0
159	SLU 47	0	-467	5328	29.27	-0.28	0
159	SLU 48	0	-695	5806	40.71	-0.21	0
159	SLU 49	0	-568	5603	34.44	-0.26	0
159	SLU 50	0	-689	5751	40.34	-0.2	0
159	SLU 51	0	-562	5548	34.07	-0.25	0
159	SLU 52	0	-527	6103	33.14	-0.3	0
159	SLU 53	0	-755	6581	44.58	-0.23	0
159	SLU 54	0	-628	6378	38.31	-0.28	0
159	SLU 55	0	-538	6188	33.77	-0.31	0
159	SLU 56	0	-766	6666	45.21	-0.24	0
159	SLU 57	0	-639	6463	38.94	-0.29	0
159	SLU 58	0	-760	6612	44.84	-0.24	0
159	SLU 59	0	-633	6409	38.57	-0.29	0
159	SLU 60	0	-769	6811	45.51	-0.23	0
159	SLU 61	0	-642	6608	39.25	-0.28	0
159	SLU 62	0	-779	6896	46.14	-0.24	0
159	SLU 63	0	-653	6693	39.88	-0.29	0
159	SLU 64	0	-739	6368	43.49	-0.21	0
159	SLU 65	0	-527	6029	33.05	-0.3	0
159	SLU 66	0	-755	6507	44.49	-0.23	0
159	SLU 67	0	-628	6304	38.22	-0.28	0
159	SLU 68	0	-538	6114	33.68	-0.31	0
159	SLU 69	0	-766	6592	45.12	-0.24	0
159	SLU 70	0	-639	6389	38.85	-0.29	0
159	SLU 71	0	-760	6538	44.75	-0.23	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
159	SLU 72	0	-633	6335	38.48	-0.28	0
159	SLU 73	0	-598	6890	37.55	-0.33	0
159	SLU 74	0	-826	7368	48.99	-0.26	0
159	SLU 75	0	-699	7165	42.72	-0.31	0
159	SLU 76	0	-608	6975	38.18	-0.34	0
159	SLU 77	0	-837	7453	49.62	-0.27	0
159	SLU 78	0	-710	7250	43.35	-0.32	0
159	SLU 79	0	-830	7398	49.25	-0.27	0
159	SLU 80	0	-704	7195	42.98	-0.32	0
159	SLU 81	0	-839	7597	49.92	-0.26	0
159	SLU 82	0	-713	7394	43.66	-0.31	0
159	SLU 83	0	-850	7682	50.55	-0.27	0
159	SLU 84	0	-723	7479	44.28	-0.32	0
159	SLE RA 1	0	-553	4725	32.49	-0.16	0
159	SLE RA 2	0	-412	4500	25.52	-0.21	0
159	SLE RA 3	0	-564	4818	33.15	-0.17	0
159	SLE RA 4	0	-479	4683	28.97	-0.2	0
159	SLE RA 5	0	-419	4556	25.94	-0.22	0
159	SLE RA 6	0	-571	4875	33.57	-0.17	0
159	SLE RA 7	0	-486	4740	29.39	-0.21	0
159	SLE RA 8	0	-567	4839	33.32	-0.17	0
159	SLE RA 9	0	-482	4703	29.15	-0.2	0
159	SLE RA 10	0	-459	5073	28.52	-0.24	0
159	SLE RA 11	0	-611	5392	36.15	-0.19	0
159	SLE RA 12	0	-526	5257	31.97	-0.22	0
159	SLE RA 13	0	-466	5130	28.94	-0.24	0
159	SLE RA 14	0	-618	5449	36.57	-0.2	0
159	SLE RA 15	0	-533	5313	32.39	-0.23	0
159	SLE RA 16	0	-614	5412	36.32	-0.19	0
159	SLE RA 17	0	-529	5277	32.15	-0.23	0
159	SLE RA 18	0	-620	5545	36.77	-0.19	0
159	SLE RA 19	0	-535	5410	32.6	-0.23	0
159	SLE RA 20	0	-627	5602	37.19	-0.2	0
159	SLE RA 21	0	-542	5466	33.01	-0.23	0
159	SLE FR 1	0	-553	4725	32.49	-0.16	0
159	SLE FR 2	0	-524	4680	31.09	-0.17	0
159	SLE FR 3	0	-555	4748	32.65	-0.16	0
159	SLE FR 4	0	-545	4926	32.38	-0.18	0
159	SLE FR 5	0	-576	4994	33.94	-0.17	0
159	SLE FR 6	0	-586	5135	34.63	-0.17	0
159	SLE QP 1	0	-553	4725	32.49	-0.16	0
159	SLE QP 2	0	-573	4971	33.77	-0.17	0
159	SLD 1	0	-540	4632	32.24	0.97	-0.01
159	SLD 2	0	-540	4632	32.24	0.97	-0.01
159	SLD 3	5	-863	4956	48.17	2.81	-0.02
159	SLD 4	5	-863	4956	48.17	2.81	-0.02
159	SLD 5	-9	-74	4377	9.15	-2.63	0.02
159	SLD 6	-9	-74	4377	9.15	-2.63	0.02
159	SLD 7	10	-1149	5458	62.26	3.53	-0.03
159	SLD 8	10	-1149	5458	62.26	3.53	-0.03
159	SLD 9	-11	4	4484	5.29	-3.86	0.03
159	SLD 10	-11	4	4484	5.29	-3.86	0.03
159	SLD 11	9	-1072	5565	58.39	2.29	-0.02
159	SLD 12	9	-1072	5565	58.39	2.29	-0.02
159	SLD 13	-5	-283	4987	19.37	-3.15	0.02
159	SLD 14	-5	-283	4987	19.37	-3.15	0.02
159	SLD 15	0	-605	5311	35.3	-1.3	0.01
159	SLD 16	0	-605	5311	35.3	-1.3	0.01
159	SLV 1	-1	-496	4136	30.21	2.47	-0.02
159	SLV 2	-1	-496	4136	30.21	2.47	-0.02
159	SLV 3	14	-1265	4930	68.13	7.2	-0.06
159	SLV 4	14	-1265	4930	68.13	7.2	-0.06
159	SLV 5	-23	616	3516	-24.81	-6.54	0.05
159	SLV 6	-23	616	3516	-24.81	-6.54	0.05
159	SLV 7	27	-1946	6164	101.59	9.21	-0.07
159	SLV 8	27	-1946	6164	101.59	9.21	-0.07
159	SLV 9	-27	801	3779	-34.05	-9.55	0.07
159	SLV 10	-27	801	3779	-34.05	-9.55	0.07
159	SLV 11	23	-1762	6426	92.35	6.21	-0.05
159	SLV 12	23	-1762	6426	92.35	6.21	-0.05
159	SLV 13	-14	119	5012	-0.59	-7.54	0.06
159	SLV 14	-14	119	5012	-0.59	-7.54	0.06
159	SLV 15	1	-649	5806	37.34	-2.81	0.02
159	SLV 16	1	-649	5806	37.34	-2.81	0.02
160	SLU 1	-12	247	6165	-7.29	-3.7	0.04
160	SLU 2	-12	272	6259	-8.48	-2.82	0.04
160	SLU 3	-12	258	6364	-7.61	-3.84	0.05
160	SLU 4	-13	273	6420	-8.32	-3.32	0.04
160	SLU 5	-13	279	6389	-8.67	-2.91	0.04
160	SLU 6	-13	265	6494	-7.8	-3.94	0.05
160	SLU 7	-13	280	6550	-8.52	-3.41	0.04
160	SLU 8	-13	260	6425	-7.67	-3.89	0.05
160	SLU 9	-13	276	6481	-8.39	-3.36	0.04
160	SLU 10	-15	334	7094	-10.39	-3.59	0.05
160	SLU 11	-15	320	7199	-9.52	-4.61	0.05
160	SLU 12	-15	335	7255	-10.23	-4.09	0.05
160	SLU 13	-15	341	7223	-10.58	-3.68	0.05
160	SLU 14	-15	326	7329	-9.71	-4.71	0.05
160	SLU 15	-15	342	7385	-10.42	-4.18	0.05
160	SLU 16	-15	322	7260	-9.58	-4.66	0.05



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
160	SLU 17	-15	337	7316	-10.29	-4.13	0.05
160	SLU 18	-15	335	7358	-10.01	-4.8	0.06
160	SLU 19	-16	350	7414	-10.73	-4.27	0.05
160	SLU 20	-16	342	7488	-10.2	-4.89	0.06
160	SLU 21	-16	357	7544	-10.92	-4.36	0.05
160	SLU 22	-14	303	6967	-8.99	-4.4	0.05
160	SLU 23	-14	328	7061	-10.18	-3.52	0.05
160	SLU 24	-15	313	7166	-9.32	-4.55	0.05
160	SLU 25	-15	329	7222	-10.03	-4.02	0.05
160	SLU 26	-15	335	7190	-10.38	-3.61	0.05
160	SLU 27	-15	320	7296	-9.51	-4.64	0.05
160	SLU 28	-15	335	7352	-10.22	-4.11	0.05
160	SLU 29	-15	316	7227	-9.38	-4.59	0.05
160	SLU 30	-15	331	7283	-10.09	-4.06	0.05
160	SLU 31	-17	390	7896	-12.09	-4.29	0.06
160	SLU 32	-17	375	8001	-11.22	-5.32	0.06
160	SLU 33	-17	390	8057	-11.94	-4.79	0.06
160	SLU 34	-17	396	8025	-12.29	-4.38	0.06
160	SLU 35	-17	382	8131	-11.42	-5.41	0.06
160	SLU 36	-17	397	8187	-12.13	-4.88	0.06
160	SLU 37	-17	378	8062	-11.29	-5.36	0.06
160	SLU 38	-17	393	8118	-12	-4.83	0.06
160	SLU 39	-18	391	8160	-11.72	-5.5	0.06
160	SLU 40	-18	406	8216	-12.43	-4.97	0.06
160	SLU 41	-18	397	8290	-11.91	-5.59	0.06
160	SLU 42	-18	413	8346	-12.63	-5.07	0.06
160	SLU 43	-15	302	7740	-8.89	-4.56	0.05
160	SLU 44	-15	327	7833	-10.08	-3.68	0.05
160	SLU 45	-15	313	7939	-9.21	-4.71	0.06
160	SLU 46	-16	328	7995	-9.92	-4.18	0.05
160	SLU 47	-15	334	7963	-10.27	-3.78	0.05
160	SLU 48	-16	320	8069	-9.4	-4.81	0.06
160	SLU 49	-16	335	8125	-10.12	-4.28	0.05
160	SLU 50	-15	315	7999	-9.27	-4.75	0.06
160	SLU 51	-16	331	8056	-9.99	-4.22	0.05
160	SLU 52	-18	389	8668	-11.99	-4.45	0.06
160	SLU 53	-18	375	8774	-11.12	-5.48	0.06
160	SLU 54	-18	390	8830	-11.83	-4.95	0.06
160	SLU 55	-18	396	8798	-12.18	-4.55	0.06
160	SLU 56	-18	381	8903	-11.31	-5.58	0.07
160	SLU 57	-18	397	8960	-12.03	-5.05	0.06
160	SLU 58	-18	377	8834	-11.18	-5.52	0.06
160	SLU 59	-18	392	8890	-11.89	-5	0.06
160	SLU 60	-18	390	8933	-11.61	-5.66	0.07
160	SLU 61	-18	405	8989	-12.33	-5.14	0.06
160	SLU 62	-19	397	9062	-11.8	-5.76	0.07
160	SLU 63	-19	412	9118	-12.52	-5.23	0.07
160	SLU 64	-17	358	8542	-10.59	-5.27	0.06
160	SLU 65	-17	383	8635	-11.78	-4.39	0.06
160	SLU 66	-17	368	8741	-10.92	-5.41	0.06
160	SLU 67	-18	384	8797	-11.63	-4.89	0.06
160	SLU 68	-18	390	8765	-11.98	-4.48	0.06
160	SLU 69	-18	375	8871	-11.11	-5.51	0.06
160	SLU 70	-18	390	8927	-11.82	-4.98	0.06
160	SLU 71	-18	371	8801	-10.98	-5.46	0.06
160	SLU 72	-18	386	8858	-11.69	-4.93	0.06
160	SLU 73	-20	445	9470	-13.69	-5.16	0.07
160	SLU 74	-20	430	9576	-12.82	-6.18	0.07
160	SLU 75	-20	445	9632	-13.54	-5.66	0.07
160	SLU 76	-20	451	9600	-13.89	-5.25	0.07
160	SLU 77	-20	437	9705	-13.02	-6.28	0.07
160	SLU 78	-20	452	9762	-13.73	-5.75	0.07
160	SLU 79	-20	433	9636	-12.89	-6.23	0.07
160	SLU 80	-20	448	9692	-13.6	-5.7	0.07
160	SLU 81	-20	446	9735	-13.32	-6.37	0.07
160	SLU 82	-21	461	9791	-14.03	-5.84	0.07
160	SLU 83	-21	452	9864	-13.51	-6.46	0.08
160	SLU 84	-21	468	9920	-14.23	-5.93	0.07
160	SLE RA 1	-13	263	6394	-7.77	-3.9	0.05
160	SLE RA 2	-13	280	6457	-8.57	-3.31	0.04
160	SLE RA 3	-13	270	6527	-7.99	-4	0.05
160	SLE RA 4	-13	280	6564	-8.47	-3.64	0.05
160	SLE RA 5	-13	284	6543	-8.7	-3.37	0.04
160	SLE RA 6	-13	275	6614	-8.12	-4.06	0.05
160	SLE RA 7	-13	285	6651	-8.59	-3.71	0.05
160	SLE RA 8	-13	272	6567	-8.03	-4.02	0.05
160	SLE RA 9	-13	282	6605	-8.51	-3.67	0.05
160	SLE RA 10	-14	321	7013	-9.84	-3.82	0.05
160	SLE RA 11	-14	311	7084	-9.26	-4.51	0.05
160	SLE RA 12	-15	321	7121	-9.74	-4.16	0.05
160	SLE RA 13	-15	325	7100	-9.97	-3.89	0.05
160	SLE RA 14	-15	316	7170	-9.39	-4.57	0.05
160	SLE RA 15	-15	326	7208	-9.87	-4.22	0.05
160	SLE RA 16	-15	313	7124	-9.3	-4.54	0.05
160	SLE RA 17	-15	323	7161	-9.78	-4.18	0.05
160	SLE RA 18	-15	322	7190	-9.59	-4.63	0.05
160	SLE RA 19	-15	332	7227	-10.07	-4.28	0.05
160	SLE RA 20	-15	326	7276	-9.72	-4.69	0.05
160	SLE RA 21	-15	336	7313	-10.2	-4.34	0.05
160	SLE FR 1	-13	263	6394	-7.77	-3.9	0.05



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
160	SLE FR 2	-13	266	6407	-7.93	-3.78	0.05
160	SLE FR 3	-13	265	6429	-7.82	-3.92	0.05
160	SLE FR 4	-13	284	6645	-8.48	-4	0.05
160	SLE FR 5	-13	282	6668	-8.37	-4.14	0.05
160	SLE FR 6	-14	292	6792	-8.68	-4.26	0.05
160	SLE QP 1	-13	263	6394	-7.77	-3.9	0.05
160	SLE QP 2	-13	281	6633	-8.32	-4.12	0.05
160	SLD 1	-9	299	4822	-9.79	-2.8	0.02
160	SLD 2	-9	299	4822	-9.79	-2.8	0.02
160	SLD 3	-2	-129	4673	8.14	1.23	0.03
160	SLD 4	-2	-129	4673	8.14	1.23	0.03
160	SLD 5	-23	934	6315	-35.95	-9.82	0.03
160	SLD 6	-23	934	6315	-35.95	-9.82	0.03
160	SLD 7	1	-491	5819	23.81	3.59	0.06
160	SLD 8	1	-491	5819	23.81	3.59	0.06
160	SLD 9	-28	1052	7447	-40.44	-11.82	0.04
160	SLD 10	-28	1052	7447	-40.44	-11.82	0.04
160	SLD 11	-3	-373	6950	19.31	1.59	0.07
160	SLD 12	-3	-373	6950	19.31	1.59	0.07
160	SLD 13	-25	690	8592	-24.77	-9.46	0.07
160	SLD 14	-25	690	8592	-24.77	-9.46	0.07
160	SLD 15	-17	262	8444	-6.84	-5.44	0.08
160	SLD 16	-17	262	8444	-6.84	-5.44	0.08
160	SLV 1	-4	321	2400	-11.71	-1.37	-0.02
160	SLV 2	-4	321	2400	-11.71	-1.37	-0.02
160	SLV 3	15	-668	2048	29.78	8.85	0
160	SLV 4	15	-668	2048	29.78	8.85	0
160	SLV 5	-39	1793	5896	-72.26	-18.79	-0.01
160	SLV 6	-39	1793	5896	-72.26	-18.79	-0.01
160	SLV 7	24	-1505	4724	66.04	15.27	0.07
160	SLV 8	24	-1505	4724	66.04	15.27	0.07
160	SLV 9	-50	2066	8542	-82.67	-23.51	0.03
160	SLV 10	-50	2066	8542	-82.67	-23.51	0.03
160	SLV 11	12	-1232	7370	55.62	10.56	0.1
160	SLV 12	12	-1232	7370	55.62	10.56	0.1
160	SLV 13	-41	1229	11218	-46.42	-17.08	0.09
160	SLV 14	-41	1229	11218	-46.42	-17.08	0.09
160	SLV 15	-23	240	10866	-4.93	-6.86	0.12
160	SLV 16	-23	240	10866	-4.93	-6.86	0.12
161	SLU 1	-11	-852	3723	43.24	-2.83	1.08
161	SLU 2	-11	-864	3692	43.72	-2.74	1.03
161	SLU 3	-12	-880	3834	44.65	-2.9	1.1
161	SLU 4	-11	-888	3815	44.94	-2.85	1.07
161	SLU 5	-11	-883	3758	44.64	-2.78	1.03
161	SLU 6	-12	-899	3900	45.57	-2.93	1.11
161	SLU 7	-11	-906	3881	45.86	-2.88	1.08
161	SLU 8	-11	-890	3855	45.08	-2.9	1.09
161	SLU 9	-11	-897	3836	45.37	-2.85	1.06
161	SLU 10	-14	-990	4352	50.38	-3.34	1.28
161	SLU 11	-14	-1006	4493	51.31	-3.5	1.35
161	SLU 12	-14	-1013	4475	51.6	-3.45	1.32
161	SLU 13	-14	-1008	4417	51.3	-3.38	1.29
161	SLU 14	-15	-1025	4559	52.24	-3.53	1.36
161	SLU 15	-14	-1032	4540	52.52	-3.48	1.33
161	SLU 16	-14	-1015	4514	51.75	-3.5	1.34
161	SLU 17	-14	-1022	4495	52.03	-3.45	1.31
161	SLU 18	-16	-1031	4665	52.76	-3.69	1.44
161	SLU 19	-15	-1039	4647	53.04	-3.64	1.41
161	SLU 20	-16	-1050	4731	53.68	-3.72	1.44
161	SLU 21	-15	-1057	4712	53.97	-3.67	1.41
161	SLU 22	-14	-958	4294	48.88	-3.34	1.3
161	SLU 23	-13	-970	4263	49.36	-3.26	1.25
161	SLU 24	-14	-987	4404	50.29	-3.41	1.32
161	SLU 25	-14	-994	4386	50.58	-3.36	1.29
161	SLU 26	-13	-989	4328	50.28	-3.29	1.26
161	SLU 27	-14	-1005	4470	51.21	-3.45	1.33
161	SLU 28	-14	-1013	4452	51.5	-3.4	1.3
161	SLU 29	-14	-996	4425	50.72	-3.41	1.31
161	SLU 30	-14	-1003	4406	51.01	-3.36	1.28
161	SLU 31	-16	-1096	4922	56.02	-3.86	1.5
161	SLU 32	-17	-1112	5064	56.96	-4.02	1.57
161	SLU 33	-17	-1119	5045	57.24	-3.97	1.54
161	SLU 34	-16	-1115	4988	56.94	-3.89	1.51
161	SLU 35	-17	-1131	5130	57.88	-4.05	1.58
161	SLU 36	-17	-1138	5111	58.16	-4	1.55
161	SLU 37	-17	-1122	5085	57.39	-4.02	1.56
161	SLU 38	-16	-1129	5066	57.67	-3.96	1.54
161	SLU 39	-18	-1138	5236	58.4	-4.2	1.66
161	SLU 40	-18	-1145	5217	58.69	-4.15	1.63
161	SLU 41	-18	-1157	5301	59.32	-4.24	1.66
161	SLU 42	-18	-1164	5283	59.61	-4.19	1.63
161	SLU 43	-14	-1071	4644	54.28	-3.5	1.32
161	SLU 44	-13	-1083	4613	54.75	-3.41	1.27
161	SLU 45	-14	-1099	4755	55.69	-3.57	1.35
161	SLU 46	-14	-1107	4737	55.97	-3.52	1.32
161	SLU 47	-13	-1102	4679	55.67	-3.45	1.28
161	SLU 48	-14	-1118	4821	56.61	-3.6	1.35
161	SLU 49	-14	-1126	4802	56.89	-3.55	1.32
161	SLU 50	-14	-1109	4776	56.12	-3.57	1.34
161	SLU 51	-14	-1116	4757	56.41	-3.52	1.31



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
161	SLU 52	-16	-1209	5273	61.42	-4.01	1.53
161	SLU 53	-17	-1225	5415	62.35	-4.17	1.6
161	SLU 54	-17	-1232	5396	62.64	-4.12	1.57
161	SLU 55	-16	-1228	5339	62.34	-4.05	1.53
161	SLU 56	-17	-1244	5480	63.27	-4.21	1.61
161	SLU 57	-17	-1251	5462	63.56	-4.15	1.58
161	SLU 58	-17	-1234	5435	62.78	-4.17	1.59
161	SLU 59	-16	-1242	5417	63.07	-4.12	1.56
161	SLU 60	-18	-1251	5586	63.8	-4.36	1.68
161	SLU 61	-18	-1258	5568	64.08	-4.31	1.65
161	SLU 62	-18	-1269	5652	64.72	-4.39	1.69
161	SLU 63	-18	-1277	5634	65	-4.34	1.66
161	SLU 64	-17	-1178	5215	59.92	-4.01	1.54
161	SLU 65	-16	-1190	5184	60.39	-3.93	1.49
161	SLU 66	-17	-1206	5326	61.33	-4.09	1.57
161	SLU 67	-16	-1213	5307	61.61	-4.03	1.54
161	SLU 68	-16	-1208	5250	61.32	-3.96	1.5
161	SLU 69	-17	-1225	5391	62.25	-4.12	1.57
161	SLU 70	-16	-1232	5373	62.54	-4.07	1.54
161	SLU 71	-17	-1215	5346	61.76	-4.08	1.56
161	SLU 72	-16	-1222	5328	62.05	-4.03	1.53
161	SLU 73	-19	-1315	5843	67.06	-4.53	1.75
161	SLU 74	-20	-1331	5985	67.99	-4.69	1.82
161	SLU 75	-19	-1339	5967	68.28	-4.64	1.79
161	SLU 76	-19	-1334	5909	67.98	-4.57	1.75
161	SLU 77	-20	-1350	6051	68.91	-4.72	1.83
161	SLU 78	-19	-1357	6032	69.2	-4.67	1.8
161	SLU 79	-19	-1341	6006	68.43	-4.69	1.81
161	SLU 80	-19	-1348	5987	68.71	-4.63	1.78
161	SLU 81	-21	-1357	6157	69.44	-4.87	1.9
161	SLU 82	-20	-1364	6138	69.72	-4.82	1.87
161	SLU 83	-21	-1376	6223	70.36	-4.91	1.91
161	SLU 84	-20	-1383	6204	70.65	-4.86	1.88
161	SLE RA 1	-12	-882	3886	44.85	-2.97	1.14
161	SLE RA 2	-12	-890	3865	45.17	-2.92	1.11
161	SLE RA 3	-12	-901	3960	45.79	-3.02	1.15
161	SLE RA 4	-12	-906	3948	45.98	-2.99	1.13
161	SLE RA 5	-12	-903	3909	45.78	-2.94	1.11
161	SLE RA 6	-12	-914	4004	46.41	-3.05	1.16
161	SLE RA 7	-12	-919	3991	46.6	-3.01	1.14
161	SLE RA 8	-12	-908	3974	46.08	-3.02	1.15
161	SLE RA 9	-12	-912	3961	46.27	-2.99	1.13
161	SLE RA 10	-14	-974	4305	49.61	-3.32	1.27
161	SLE RA 11	-14	-985	4400	50.23	-3.42	1.32
161	SLE RA 12	-14	-990	4387	50.42	-3.39	1.3
161	SLE RA 13	-14	-987	4349	50.23	-3.34	1.28
161	SLE RA 14	-14	-998	4443	50.85	-3.45	1.33
161	SLE RA 15	-14	-1002	4431	51.04	-3.41	1.31
161	SLE RA 16	-14	-991	4413	50.52	-3.42	1.32
161	SLE RA 17	-14	-996	4401	50.71	-3.39	1.3
161	SLE RA 18	-15	-1002	4514	51.2	-3.55	1.38
161	SLE RA 19	-15	-1007	4502	51.39	-3.51	1.36
161	SLE RA 20	-15	-1015	4558	51.81	-3.57	1.38
161	SLE RA 21	-15	-1019	4546	52	-3.54	1.36
161	SLE FR 1	-12	-882	3886	44.85	-2.97	1.14
161	SLE FR 2	-12	-884	3882	44.92	-2.96	1.13
161	SLE FR 3	-12	-887	3904	45.1	-2.98	1.14
161	SLE FR 4	-13	-920	4070	46.82	-3.14	1.2
161	SLE FR 5	-13	-923	4092	47	-3.16	1.21
161	SLE FR 6	-14	-942	4200	48.03	-3.26	1.26
161	SLE QP 1	-12	-882	3886	44.85	-2.97	1.14
161	SLE QP 2	-13	-918	4074	46.76	-3.15	1.21
161	SLD 1	-32	-576	4699	30.87	-5.61	2.45
161	SLD 2	-32	-576	4699	30.87	-5.61	2.45
161	SLD 3	-24	-908	5134	47.76	-4.85	2.1
161	SLD 4	-24	-908	5134	47.76	-4.85	2.1
161	SLD 5	-31	-313	3602	16.37	-5.04	2.13
161	SLD 6	-31	-313	3602	16.37	-5.04	2.13
161	SLD 7	-4	-1418	5052	72.68	-2.5	0.93
161	SLD 8	-4	-1418	5052	72.68	-2.5	0.93
161	SLD 9	-22	-418	3097	20.83	-3.79	1.49
161	SLD 10	-22	-418	3097	20.83	-3.79	1.49
161	SLD 11	5	-1524	4547	77.14	-1.25	0.3
161	SLD 12	5	-1524	4547	77.14	-1.25	0.3
161	SLD 13	-2	-928	3015	45.75	-1.45	0.33
161	SLD 14	-2	-928	3015	45.75	-1.45	0.33
161	SLD 15	6	-1260	3450	62.64	-0.68	-0.03
161	SLD 16	6	-1260	3450	62.64	-0.68	-0.03
161	SLV 1	-57	-126	5537	9.9	-9.04	4.1
161	SLV 2	-57	-126	5537	9.9	-9.04	4.1
161	SLV 3	-39	-895	6546	49.04	-7.18	3.27
161	SLV 4	-39	-895	6546	49.04	-7.18	3.27
161	SLV 5	-54	485	2983	-23.67	-7.73	3.35
161	SLV 6	-54	485	2983	-23.67	-7.73	3.35
161	SLV 7	7	-2077	6346	106.81	-1.54	0.56
161	SLV 8	7	-2077	6346	106.81	-1.54	0.56
161	SLV 9	-33	240	1802	-13.3	-4.75	1.86
161	SLV 10	-33	240	1802	-13.3	-4.75	1.86
161	SLV 11	28	-2322	5166	117.18	1.43	-0.92
161	SLV 12	28	-2322	5166	117.18	1.43	-0.92



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
161	SLV 13	13	-942	1603	44.47	0.89	-0.85
161	SLV 14	13	-942	1603	44.47	0.89	-0.85
161	SLV 15	31	-1711	2612	83.61	2.75	-1.68
161	SLV 16	31	-1711	2612	83.61	2.75	-1.68
162	SLU 1	0	-27	2977	2.78	-0.14	-0.04
162	SLU 2	0	-27	2955	2.79	-0.14	-0.04
162	SLU 3	0	-24	3079	2.76	-0.15	-0.04
162	SLU 4	0	-25	3066	2.76	-0.15	-0.04
162	SLU 5	0	-26	3023	2.77	-0.15	-0.04
162	SLU 6	0	-23	3148	2.75	-0.17	-0.04
162	SLU 7	0	-23	3134	2.75	-0.16	-0.04
162	SLU 8	0	-23	3114	2.75	-0.16	-0.04
162	SLU 9	0	-24	3100	2.76	-0.16	-0.04
162	SLU 10	0	-33	3482	3.34	-0.16	-0.05
162	SLU 11	0	-30	3606	3.31	-0.17	-0.05
162	SLU 12	0	-30	3593	3.32	-0.17	-0.05
162	SLU 13	0	-31	3550	3.33	-0.17	-0.05
162	SLU 14	0	-28	3675	3.3	-0.19	-0.05
162	SLU 15	0	-28	3661	3.31	-0.18	-0.05
162	SLU 16	0	-29	3641	3.31	-0.18	-0.05
162	SLU 17	0	-29	3627	3.31	-0.18	-0.05
162	SLU 18	0	-34	3730	3.57	-0.17	-0.05
162	SLU 19	0	-35	3716	3.58	-0.17	-0.05
162	SLU 20	0	-33	3798	3.56	-0.18	-0.05
162	SLU 21	0	-33	3785	3.56	-0.18	-0.05
162	SLU 22	0	-20	3414	2.86	-0.17	-0.05
162	SLU 23	0	-21	3391	2.87	-0.16	-0.05
162	SLU 24	0	-18	3516	2.84	-0.18	-0.05
162	SLU 25	0	-18	3503	2.85	-0.18	-0.05
162	SLU 26	0	-19	3460	2.86	-0.17	-0.05
162	SLU 27	0	-16	3584	2.83	-0.19	-0.05
162	SLU 28	0	-16	3571	2.84	-0.19	-0.05
162	SLU 29	0	-17	3550	2.84	-0.19	-0.05
162	SLU 30	0	-17	3537	2.84	-0.19	-0.05
162	SLU 31	0	-26	3918	3.43	-0.18	-0.06
162	SLU 32	0	-23	4043	3.4	-0.2	-0.06
162	SLU 33	0	-24	4030	3.4	-0.2	-0.06
162	SLU 34	0	-25	3986	3.41	-0.19	-0.06
162	SLU 35	-1	-21	4111	3.39	-0.21	-0.06
162	SLU 36	-1	-22	4098	3.39	-0.21	-0.06
162	SLU 37	-1	-22	4077	3.39	-0.21	-0.06
162	SLU 38	-1	-23	4064	3.4	-0.21	-0.06
162	SLU 39	-1	-28	4166	3.66	-0.2	-0.06
162	SLU 40	-1	-28	4153	3.66	-0.19	-0.06
162	SLU 41	-1	-26	4235	3.64	-0.21	-0.06
162	SLU 42	-1	-27	4221	3.65	-0.21	-0.06
162	SLU 43	0	-37	3721	3.58	-0.17	-0.05
162	SLU 44	0	-38	3698	3.59	-0.17	-0.05
162	SLU 45	0	-34	3823	3.56	-0.19	-0.05
162	SLU 46	0	-35	3809	3.57	-0.19	-0.05
162	SLU 47	0	-36	3766	3.58	-0.18	-0.05
162	SLU 48	0	-33	3891	3.55	-0.2	-0.05
162	SLU 49	0	-33	3878	3.56	-0.2	-0.05
162	SLU 50	0	-34	3857	3.56	-0.2	-0.05
162	SLU 51	0	-34	3844	3.56	-0.2	-0.05
162	SLU 52	-1	-43	4225	4.15	-0.19	-0.06
162	SLU 53	-1	-40	4350	4.12	-0.21	-0.06
162	SLU 54	-1	-40	4336	4.12	-0.21	-0.06
162	SLU 55	-1	-41	4293	4.13	-0.2	-0.06
162	SLU 56	-1	-38	4418	4.11	-0.22	-0.06
162	SLU 57	-1	-39	4405	4.11	-0.22	-0.06
162	SLU 58	-1	-39	4384	4.11	-0.22	-0.06
162	SLU 59	-1	-40	4371	4.12	-0.22	-0.06
162	SLU 60	-1	-45	4473	4.38	-0.2	-0.06
162	SLU 61	-1	-45	4460	4.38	-0.2	-0.06
162	SLU 62	-1	-43	4542	4.36	-0.21	-0.06
162	SLU 63	-1	-44	4528	4.37	-0.21	-0.06
162	SLU 64	-1	-30	4157	3.67	-0.2	-0.06
162	SLU 65	-1	-31	4135	3.68	-0.2	-0.06
162	SLU 66	-1	-28	4260	3.65	-0.21	-0.06
162	SLU 67	-1	-28	4246	3.65	-0.21	-0.06
162	SLU 68	-1	-30	4203	3.66	-0.21	-0.06
162	SLU 69	-1	-26	4328	3.63	-0.23	-0.06
162	SLU 70	-1	-27	4314	3.64	-0.22	-0.06
162	SLU 71	-1	-27	4294	3.64	-0.22	-0.06
162	SLU 72	-1	-28	4280	3.65	-0.22	-0.06
162	SLU 73	-1	-37	4662	4.23	-0.22	-0.07
162	SLU 74	-1	-33	4786	4.2	-0.23	-0.07
162	SLU 75	-1	-34	4773	4.21	-0.23	-0.07
162	SLU 76	-1	-35	4730	4.22	-0.23	-0.07
162	SLU 77	-1	-32	4855	4.19	-0.25	-0.07
162	SLU 78	-1	-32	4841	4.2	-0.24	-0.07
162	SLU 79	-1	-33	4821	4.2	-0.24	-0.07
162	SLU 80	-1	-33	4807	4.2	-0.24	-0.07
162	SLU 81	-1	-38	4910	4.46	-0.23	-0.07
162	SLU 82	-1	-39	4896	4.47	-0.23	-0.07
162	SLU 83	-1	-37	4978	4.45	-0.24	-0.07
162	SLU 84	-1	-37	4965	4.45	-0.24	-0.07
162	SLE RA 1	0	-25	3102	2.8	-0.15	-0.04
162	SLE RA 2	0	-25	3087	2.81	-0.15	-0.04



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
162	SLE RA 3	0	-23	3170	2.79	-0.16	-0.04
162	SLE RA 4	0	-23	3161	2.79	-0.16	-0.04
162	SLE RA 5	0	-24	3132	2.8	-0.15	-0.04
162	SLE RA 6	0	-22	3216	2.78	-0.17	-0.04
162	SLE RA 7	0	-22	3207	2.78	-0.16	-0.05
162	SLE RA 8	0	-23	3193	2.78	-0.16	-0.04
162	SLE RA 9	0	-23	3184	2.79	-0.16	-0.04
162	SLE RA 10	0	-29	3438	3.18	-0.16	-0.05
162	SLE RA 11	0	-27	3521	3.16	-0.17	-0.05
162	SLE RA 12	0	-27	3512	3.16	-0.17	-0.05
162	SLE RA 13	0	-28	3484	3.17	-0.17	-0.05
162	SLE RA 14	0	-26	3567	3.15	-0.18	-0.05
162	SLE RA 15	0	-26	3558	3.15	-0.18	-0.05
162	SLE RA 16	0	-26	3544	3.16	-0.18	-0.05
162	SLE RA 17	0	-27	3535	3.16	-0.18	-0.05
162	SLE RA 18	0	-30	3604	3.33	-0.17	-0.05
162	SLE RA 19	0	-30	3595	3.34	-0.17	-0.05
162	SLE RA 20	0	-29	3649	3.32	-0.18	-0.05
162	SLE RA 21	0	-29	3640	3.33	-0.17	-0.05
162	SLE FR 1	0	-25	3102	2.8	-0.15	-0.04
162	SLE FR 2	0	-25	3099	2.8	-0.15	-0.04
162	SLE FR 3	0	-24	3120	2.8	-0.15	-0.04
162	SLE FR 4	0	-26	3249	2.96	-0.15	-0.04
162	SLE FR 5	0	-26	3271	2.96	-0.16	-0.04
162	SLE FR 6	0	-27	3353	3.07	-0.16	-0.05
162	SLE QP 1	0	-25	3102	2.8	-0.15	-0.04
162	SLE QP 2	0	-26	3252	2.96	-0.15	-0.04
162	SLD 1	1	78	2543	1.71	1.83	-0.35
162	SLD 2	1	78	2543	1.71	1.83	-0.35
162	SLD 3	1	-47	2756	8.47	1.48	-0.42
162	SLD 4	1	-47	2756	8.47	1.48	-0.42
162	SLD 5	1	194	2717	-7.66	0.97	-0.03
162	SLD 6	1	194	2717	-7.66	0.97	-0.03
162	SLD 7	-1	-221	3426	14.86	-0.19	-0.27
162	SLD 8	-1	-221	3426	14.86	-0.19	-0.27
162	SLD 9	0	169	3079	-8.94	-0.12	0.18
162	SLD 10	0	169	3079	-8.94	-0.12	0.18
162	SLD 11	-2	-247	3788	13.58	-1.27	-0.06
162	SLD 12	-2	-247	3788	13.58	-1.27	-0.06
162	SLD 13	-1	-6	3749	-2.55	-1.79	0.33
162	SLD 14	-1	-6	3749	-2.55	-1.79	0.33
162	SLD 15	-2	-131	3962	4.21	-2.14	0.26
162	SLD 16	-2	-131	3962	4.21	-2.14	0.26
162	SLV 1	3	217	1594	0.03	4.66	-0.79
162	SLV 2	3	217	1594	0.03	4.66	-0.79
162	SLV 3	2	-74	2089	15.79	3.81	-0.97
162	SLV 4	2	-74	2089	15.79	3.81	-0.97
162	SLV 5	3	488	2004	-21.82	2.57	0
162	SLV 6	3	488	2004	-21.82	2.57	0
162	SLV 7	-2	-482	3654	30.71	-0.25	-0.59
162	SLV 8	-2	-482	3654	30.71	-0.25	-0.59
162	SLV 9	1	429	2850	-24.79	-0.06	0.5
162	SLV 10	1	429	2850	-24.79	-0.06	0.5
162	SLV 11	-4	-541	4501	27.74	-2.88	-0.09
162	SLV 12	-4	-541	4501	27.74	-2.88	-0.09
162	SLV 13	-3	21	4416	-9.87	-4.12	0.88
162	SLV 14	-3	21	4416	-9.87	-4.12	0.88
162	SLV 15	-4	-269	4911	5.89	-4.97	0.7
162	SLV 16	-4	-269	4911	5.89	-4.97	0.7
163	SLU 1	1216	54	6778	-3.97	41.28	0
163	SLU 2	1189	108	6728	-6.05	40.08	0.01
163	SLU 3	1256	54	6971	-4.05	42.67	0
163	SLU 4	1239	87	6940	-5.3	41.95	0.01
163	SLU 5	1210	108	6836	-6.08	40.81	0.01
163	SLU 6	1277	54	7079	-4.07	43.4	0
163	SLU 7	1260	86	7049	-5.32	42.68	0.01
163	SLU 8	1259	53	6995	-4.02	42.74	0
163	SLU 9	1242	85	6965	-5.27	42.01	0.01
163	SLU 10	1436	114	7810	-6.53	49.22	0.01
163	SLU 11	1503	60	8053	-4.52	51.82	0
163	SLU 12	1487	92	8023	-5.77	51.1	0.01
163	SLU 13	1458	113	7919	-6.55	49.95	0.01
163	SLU 14	1525	59	8162	-4.55	52.55	0
163	SLU 15	1508	92	8132	-5.8	51.83	0.01
163	SLU 16	1506	59	8078	-4.49	51.88	0
163	SLU 17	1490	91	8048	-5.74	51.16	0.01
163	SLU 18	1570	62	8325	-4.65	54.34	0
163	SLU 19	1554	94	8294	-5.9	53.62	0.01
163	SLU 20	1591	61	8433	-4.67	55.07	0
163	SLU 21	1575	94	8403	-5.92	54.35	0.01
163	SLU 22	1438	59	7768	-4.42	49.4	0
163	SLU 23	1410	113	7718	-6.5	48.2	0.01
163	SLU 24	1477	59	7960	-4.49	50.79	0
163	SLU 25	1461	92	7930	-5.74	50.07	0.01
163	SLU 26	1432	113	7826	-6.52	48.92	0.01
163	SLU 27	1499	59	8069	-4.52	51.52	0
163	SLU 28	1482	91	8039	-5.76	50.8	0.01
163	SLU 29	1480	58	7985	-4.46	50.86	0
163	SLU 30	1464	91	7955	-5.71	50.13	0.01
163	SLU 31	1658	119	8800	-6.97	57.34	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
163	SLU 32	1725	65	9043	-4.97	59.94	0
163	SLU 33	1709	97	9013	-6.22	59.22	0.01
163	SLU 34	1679	118	8909	-6.99	58.07	0.01
163	SLU 35	1746	64	9152	-4.99	60.67	0
163	SLU 36	1730	97	9121	-6.24	59.95	0.01
163	SLU 37	1728	64	9068	-4.94	60	0
163	SLU 38	1712	96	9038	-6.18	59.28	0.01
163	SLU 39	1792	67	9315	-5.09	62.46	0
163	SLU 40	1775	99	9284	-6.34	61.74	0.01
163	SLU 41	1813	66	9423	-5.12	63.19	0
163	SLU 42	1797	99	9393	-6.37	62.47	0.01
163	SLU 43	1505	68	8472	-5.01	50.88	0
163	SLU 44	1477	122	8422	-7.09	49.68	0.01
163	SLU 45	1544	68	8665	-5.09	52.28	0
163	SLU 46	1528	101	8634	-6.34	51.55	0.01
163	SLU 47	1499	122	8530	-7.11	50.41	0.01
163	SLU 48	1566	68	8773	-5.11	53	0
163	SLU 49	1549	101	8743	-6.36	52.28	0.01
163	SLU 50	1547	67	8689	-5.06	52.34	0
163	SLU 51	1531	100	8659	-6.31	51.61	0.01
163	SLU 52	1725	128	9504	-7.57	58.82	0.01
163	SLU 53	1792	74	9747	-5.56	61.42	0
163	SLU 54	1776	107	9717	-6.81	60.7	0.01
163	SLU 55	1746	128	9613	-7.59	59.55	0.01
163	SLU 56	1813	74	9856	-5.59	62.15	0
163	SLU 57	1797	106	9826	-6.83	61.43	0.01
163	SLU 58	1795	73	9772	-5.53	61.48	0
163	SLU 59	1779	105	9742	-6.78	60.76	0.01
163	SLU 60	1859	76	10019	-5.69	63.95	0
163	SLU 61	1842	109	9988	-6.94	63.22	0.01
163	SLU 62	1880	76	10127	-5.71	64.67	0
163	SLU 63	1864	108	10097	-6.96	63.95	0.01
163	SLU 64	1727	73	9462	-5.46	59	0
163	SLU 65	1699	127	9412	-7.54	57.8	0.01
163	SLU 66	1766	74	9655	-5.53	60.39	0
163	SLU 67	1750	106	9624	-6.78	59.67	0.01
163	SLU 68	1720	127	9520	-7.56	58.53	0.01
163	SLU 69	1787	73	9763	-5.56	61.12	0
163	SLU 70	1771	106	9733	-6.8	60.4	0.01
163	SLU 71	1769	72	9679	-5.5	60.46	0
163	SLU 72	1753	105	9649	-6.75	59.73	0.01
163	SLU 73	1947	133	10494	-8.01	66.94	0.01
163	SLU 74	2014	79	10737	-6.01	69.54	0
163	SLU 75	1998	112	10707	-7.26	68.82	0.01
163	SLU 76	1968	133	10603	-8.03	67.67	0.01
163	SLU 77	2035	79	10846	-6.03	70.27	0
163	SLU 78	2019	111	10815	-7.28	69.55	0.01
163	SLU 79	2017	78	10762	-5.98	69.6	0
163	SLU 80	2000	111	10732	-7.22	68.88	0.01
163	SLU 81	2081	81	11009	-6.13	72.06	0
163	SLU 82	2064	114	10978	-7.38	71.34	0.01
163	SLU 83	2102	81	11117	-6.16	72.79	0
163	SLU 84	2086	113	11087	-7.4	72.07	0.01
163	SLE RA 1	1280	55	7061	-4.1	43.6	0
163	SLE RA 2	1261	91	7027	-5.49	42.8	0.01
163	SLE RA 3	1306	55	7189	-4.15	44.53	0
163	SLE RA 4	1295	77	7169	-4.98	44.05	0.01
163	SLE RA 5	1275	91	7100	-5.5	43.28	0.01
163	SLE RA 6	1320	55	7262	-4.17	45.02	0
163	SLE RA 7	1309	77	7242	-5	44.53	0.01
163	SLE RA 8	1308	55	7206	-4.13	44.57	0
163	SLE RA 9	1297	76	7186	-4.96	44.09	0.01
163	SLE RA 10	1426	95	7749	-5.8	48.9	0.01
163	SLE RA 11	1471	59	7911	-4.47	50.63	0
163	SLE RA 12	1460	81	7891	-5.3	50.15	0.01
163	SLE RA 13	1441	95	7822	-5.82	49.38	0.01
163	SLE RA 14	1485	59	7983	-4.48	51.11	0
163	SLE RA 15	1474	81	7963	-5.31	50.63	0.01
163	SLE RA 16	1473	58	7928	-4.45	50.67	0
163	SLE RA 17	1462	80	7907	-5.28	50.19	0.01
163	SLE RA 18	1516	60	8092	-4.55	52.31	0
163	SLE RA 19	1505	82	8072	-5.38	51.83	0.01
163	SLE RA 20	1530	60	8164	-4.57	52.8	0
163	SLE RA 21	1519	82	8144	-5.4	52.31	0.01
163	SLE FR 1	1280	55	7061	-4.1	43.6	0
163	SLE FR 2	1276	62	7054	-4.38	43.44	0
163	SLE FR 3	1285	55	7090	-4.11	43.79	0
163	SLE FR 4	1347	64	7364	-4.51	46.05	0
163	SLE FR 5	1356	57	7399	-4.24	46.41	0
163	SLE FR 6	1398	58	7576	-4.33	47.96	0
163	SLE QP 1	1280	55	7061	-4.1	43.6	0
163	SLE QP 2	1350	57	7370	-4.23	46.21	0
163	SLD 1	2051	83	10205	-22.37	74.37	0.01
163	SLD 2	2051	83	10205	-22.37	74.37	0.01
163	SLD 3	1980	-362	9987	-3.25	71.35	-0.08
163	SLD 4	1980	-362	9987	-3.25	71.35	-0.08
163	SLD 5	1667	738	8551	-38.67	59.25	0.15
163	SLD 6	1667	738	8551	-38.67	59.25	0.15
163	SLD 7	1433	-743	7825	25.06	49.17	-0.16
163	SLD 8	1433	-743	7825	25.06	49.17	-0.16



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
163	SLD 9	1268	856	6916	-33.53	43.26	0.17
163	SLD 10	1268	856	6916	-33.53	43.26	0.17
163	SLD 11	1034	-625	6190	30.2	33.18	-0.14
163	SLD 12	1034	-625	6190	30.2	33.18	-0.14
163	SLD 13	721	475	4754	-5.22	21.08	0.09
163	SLD 14	721	475	4754	-5.22	21.08	0.09
163	SLD 15	650	31	4536	13.9	18.05	0
163	SLD 16	650	31	4536	13.9	18.05	0
163	SLV 1	2984	117	13984	-46.03	111.86	0.02
163	SLV 2	2984	117	13984	-46.03	111.86	0.02
163	SLV 3	2819	-907	13477	-1.96	104.78	-0.2
163	SLV 4	2819	-907	13477	-1.96	104.78	-0.2
163	SLV 5	2090	1628	10123	-83.62	76.64	0.33
163	SLV 6	2090	1628	10123	-83.62	76.64	0.33
163	SLV 7	1541	-1785	8433	63.29	53.05	-0.38
163	SLV 8	1541	-1785	8433	63.29	53.05	-0.38
163	SLV 9	1160	1899	6307	-71.76	39.38	0.39
163	SLV 10	1160	1899	6307	-71.76	39.38	0.39
163	SLV 11	611	-1514	4617	75.15	15.78	-0.32
163	SLV 12	611	-1514	4617	75.15	15.78	-0.32
163	SLV 13	-118	1021	1264	-6.51	-12.35	0.2
163	SLV 14	-118	1021	1264	-6.51	-12.35	0.2
163	SLV 15	-283	-3	757	37.56	-19.43	-0.01
163	SLV 16	-283	-3	757	37.56	-19.43	-0.01
164	SLU 1	1628	0	4226	0.13	73	0
164	SLU 2	1578	-1	4201	0.47	70.82	0
164	SLU 3	1684	0	4343	0.13	75.52	0
164	SLU 4	1654	-1	4328	0.34	74.22	0
164	SLU 5	1608	-1	4269	0.47	72.17	0
164	SLU 6	1714	0	4410	0.14	76.87	0
164	SLU 7	1684	-1	4395	0.34	75.57	0
164	SLU 8	1688	0	4360	0.14	75.7	0
164	SLU 9	1657	-1	4345	0.34	74.39	0
164	SLU 10	1939	-1	4879	0.48	86.55	0
164	SLU 11	2045	0	5021	0.14	91.25	0
164	SLU 12	2015	-1	5006	0.35	89.94	0
164	SLU 13	1968	-1	4946	0.48	87.9	0
164	SLU 14	2075	0	5088	0.15	92.6	0
164	SLU 15	2045	-1	5073	0.35	91.29	0
164	SLU 16	2048	0	5038	0.15	91.43	0
164	SLU 17	2018	-1	5023	0.35	90.12	0
164	SLU 18	2144	0	5194	0.14	95.46	0
164	SLU 19	2114	-1	5180	0.35	94.16	0
164	SLU 20	2173	0	5261	0.15	96.81	0
164	SLU 21	2143	-1	5247	0.35	95.51	0
164	SLU 22	1949	0	4844	0.14	87.07	0
164	SLU 23	1899	-1	4820	0.48	84.89	0
164	SLU 24	2005	0	4961	0.14	89.59	0
164	SLU 25	1975	-1	4946	0.35	88.28	0
164	SLU 26	1929	-1	4887	0.48	86.24	0
164	SLU 27	2035	0	5028	0.15	90.94	0
164	SLU 28	2005	-1	5013	0.35	89.64	0
164	SLU 29	2009	0	4978	0.15	89.77	0
164	SLU 30	1979	-1	4964	0.35	88.46	0
164	SLU 31	2260	-1	5498	0.49	100.62	0
164	SLU 32	2366	0	5639	0.15	105.32	0
164	SLU 33	2336	-1	5624	0.36	104.01	0
164	SLU 34	2290	-1	5565	0.49	101.97	0
164	SLU 35	2396	0	5706	0.16	106.67	0
164	SLU 36	2366	-1	5691	0.36	105.36	0
164	SLU 37	2370	0	5656	0.16	105.5	0
164	SLU 38	2340	-1	5641	0.36	104.19	0
164	SLU 39	2465	0	5812	0.15	109.53	0
164	SLU 40	2435	-1	5798	0.36	108.23	0
164	SLU 41	2495	0	5879	0.16	110.88	0
164	SLU 42	2465	-1	5865	0.36	109.58	0
164	SLU 43	2006	0	5281	0.16	90.07	0
164	SLU 44	1956	-1	5257	0.5	87.89	0
164	SLU 45	2062	0	5398	0.17	92.6	0
164	SLU 46	2032	-1	5384	0.37	91.29	0
164	SLU 47	1986	-1	5324	0.5	89.24	0
164	SLU 48	2092	0	5465	0.17	93.95	0
164	SLU 49	2062	-1	5451	0.37	92.64	0
164	SLU 50	2066	0	5416	0.17	92.77	0
164	SLU 51	2036	-1	5401	0.37	91.47	0
164	SLU 52	2317	-1	5935	0.51	103.62	0
164	SLU 53	2423	0	6076	0.18	108.32	0
164	SLU 54	2393	-1	6062	0.38	107.02	0
164	SLU 55	2347	-1	6002	0.51	104.97	0
164	SLU 56	2453	0	6143	0.18	109.67	0
164	SLU 57	2423	-1	6129	0.38	108.37	0
164	SLU 58	2427	0	6093	0.18	108.5	0
164	SLU 59	2397	-1	6079	0.38	107.19	0
164	SLU 60	2522	0	6250	0.18	112.54	0
164	SLU 61	2492	-1	6235	0.38	111.23	0
164	SLU 62	2552	0	6317	0.18	113.89	0
164	SLU 63	2522	-1	6302	0.38	112.58	0
164	SLU 64	2328	0	5900	0.17	104.14	0
164	SLU 65	2277	-1	5875	0.51	101.96	0
164	SLU 66	2384	0	6017	0.18	106.67	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
164	SLU 67	2353	-1	6002	0.38	105.36	0
164	SLU 68	2307	-1	5943	0.52	103.31	0
164	SLU 69	2413	0	6084	0.18	108.02	0
164	SLU 70	2383	-1	6069	0.39	106.71	0
164	SLU 71	2387	0	6034	0.18	106.84	0
164	SLU 72	2357	-1	6019	0.39	105.54	0
164	SLU 73	2638	-1	6553	0.52	117.69	0
164	SLU 74	2745	0	6695	0.19	122.39	0
164	SLU 75	2714	-1	6680	0.39	121.09	0
164	SLU 76	2668	-1	6620	0.53	119.04	0
164	SLU 77	2774	0	6762	0.19	123.74	0
164	SLU 78	2744	-1	6747	0.4	122.44	0
164	SLU 79	2748	0	6712	0.19	122.57	0
164	SLU 80	2718	-1	6697	0.4	121.26	0
164	SLU 81	2843	0	6868	0.19	126.61	0
164	SLU 82	2813	-1	6854	0.39	125.3	0
164	SLU 83	2873	0	6935	0.19	127.96	0
164	SLU 84	2843	-1	6921	0.4	126.65	0
164	SLE RA 1	1720	0	4402	0.13	77.02	0
164	SLE RA 2	1686	-1	4386	0.36	75.56	0
164	SLE RA 3	1757	0	4480	0.13	78.7	0
164	SLE RA 4	1737	-1	4471	0.27	77.83	0
164	SLE RA 5	1706	-1	4431	0.36	76.46	0
164	SLE RA 6	1777	0	4525	0.14	79.6	0
164	SLE RA 7	1757	-1	4515	0.27	78.73	0
164	SLE RA 8	1759	0	4492	0.14	78.82	0
164	SLE RA 9	1739	-1	4482	0.27	77.95	0
164	SLE RA 10	1927	-1	4838	0.36	86.05	0
164	SLE RA 11	1998	0	4932	0.14	89.18	0
164	SLE RA 12	1978	-1	4923	0.28	88.31	0
164	SLE RA 13	1947	-1	4883	0.37	86.95	0
164	SLE RA 14	2018	0	4977	0.14	90.08	0
164	SLE RA 15	1998	-1	4967	0.28	89.21	0
164	SLE RA 16	2000	0	4944	0.14	89.3	0
164	SLE RA 17	1980	-1	4934	0.28	88.43	0
164	SLE RA 18	2064	0	5048	0.14	91.99	0
164	SLE RA 19	2044	-1	5038	0.28	91.12	0
164	SLE RA 20	2083	0	5093	0.14	92.89	0
164	SLE RA 21	2063	-1	5083	0.28	92.02	0
164	SLE FR 1	1720	0	4402	0.13	77.02	0
164	SLE FR 2	1713	0	4399	0.18	76.72	0
164	SLE FR 3	1728	0	4420	0.13	77.38	0
164	SLE FR 4	1816	0	4593	0.18	81.22	0
164	SLE FR 5	1831	0	4614	0.13	81.87	0
164	SLE FR 6	1892	0	4725	0.14	84.5	0
164	SLE QP 1	1720	0	4402	0.13	77.02	0
164	SLE QP 2	1823	0	4596	0.13	81.51	0
164	SLD 1	2894	-5	6000	-0.32	129.83	-0.01
164	SLD 2	2894	-5	6000	-0.32	129.83	-0.01
164	SLD 3	2777	0	5910	3	124.63	0
164	SLD 4	2777	0	5910	3	124.63	0
164	SLD 5	2321	-11	5154	-5.02	103.9	-0.03
164	SLD 6	2321	-11	5154	-5.02	103.9	-0.03
164	SLD 7	1932	9	4853	6.01	86.56	0.02
164	SLD 8	1932	9	4853	6.01	86.56	0.02
164	SLD 9	1714	-9	4339	-5.75	76.46	-0.02
164	SLD 10	1714	-9	4339	-5.75	76.46	-0.02
164	SLD 11	1325	10	4038	5.29	59.12	0.02
164	SLD 12	1325	10	4038	5.29	59.12	0.02
164	SLD 13	869	-1	3282	-2.73	38.39	0
164	SLD 14	869	-1	3282	-2.73	38.39	0
164	SLD 15	753	5	3192	0.58	33.18	0.01
164	SLD 16	753	5	3192	0.58	33.18	0.01
164	SLV 1	4321	-13	7877	-1.07	194.26	-0.03
164	SLV 2	4321	-13	7877	-1.07	194.26	-0.03
164	SLV 3	4047	2	7665	7.25	182.06	0.01
164	SLV 4	4047	2	7665	7.25	182.06	0.01
164	SLV 5	2988	-27	5902	-12.83	133.85	-0.06
164	SLV 6	2988	-27	5902	-12.83	133.85	-0.06
164	SLV 7	2075	23	5195	14.87	93.16	0.06
164	SLV 8	2075	23	5195	14.87	93.16	0.06
164	SLV 9	1571	-24	3997	-14.61	69.85	-0.06
164	SLV 10	1571	-24	3997	-14.61	69.85	-0.06
164	SLV 11	658	26	3290	13.1	29.17	0.06
164	SLV 12	658	26	3290	13.1	29.17	0.06
164	SLV 13	-401	-2	1527	-6.98	-19.04	-0.01
164	SLV 14	-401	-2	1527	-6.98	-19.04	-0.01
164	SLV 15	-675	13	1315	1.33	-31.25	0.03
164	SLV 16	-675	13	1315	1.33	-31.25	0.03
165	SLU 1	1304	-1	4422	0.27	51.29	0
165	SLU 2	1251	-2	4396	0.93	49.07	0
165	SLU 3	1351	-1	4541	0.28	53.17	0
165	SLU 4	1319	-1	4526	0.68	51.83	0
165	SLU 5	1275	-2	4466	0.94	50.01	0
165	SLU 6	1375	-1	4611	0.29	54.11	0
165	SLU 7	1343	-1	4596	0.68	52.78	0
165	SLU 8	1352	-1	4561	0.29	53.18	0
165	SLU 9	1320	-1	4546	0.68	51.84	0
165	SLU 10	1569	-2	5120	0.95	62.02	0
165	SLU 11	1668	-1	5265	0.3	66.12	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
165	SLU 12	1637	-1	5250	0.7	64.79	0
165	SLU 13	1593	-2	5190	0.96	62.96	0
165	SLU 14	1692	-1	5335	0.31	67.06	0
165	SLU 15	1661	-1	5320	0.7	65.73	0
165	SLU 16	1669	-1	5285	0.31	66.13	0
165	SLU 17	1638	-1	5270	0.7	64.8	0
165	SLU 18	1757	-1	5456	0.3	69.8	0
165	SLU 19	1726	-1	5441	0.7	68.46	0
165	SLU 20	1781	-1	5525	0.31	70.74	0
165	SLU 21	1750	-1	5510	0.7	69.4	0
165	SLU 22	1584	-1	5078	0.29	62.66	0
165	SLU 23	1531	-2	5053	0.95	60.44	0
165	SLU 24	1630	-1	5198	0.3	64.54	0
165	SLU 25	1599	-1	5183	0.7	63.21	0
165	SLU 26	1555	-2	5123	0.96	61.38	0
165	SLU 27	1655	-1	5268	0.31	65.48	0
165	SLU 28	1623	-1	5253	0.7	64.15	0
165	SLU 29	1632	-1	5217	0.31	64.55	0
165	SLU 30	1600	-1	5202	0.7	63.22	0
165	SLU 31	1848	-2	5777	0.97	73.39	0
165	SLU 32	1948	-1	5922	0.32	77.49	0
165	SLU 33	1916	-1	5907	0.72	76.16	0
165	SLU 34	1873	-2	5847	0.98	74.34	0
165	SLU 35	1972	-1	5991	0.33	78.44	0
165	SLU 36	1941	-1	5976	0.72	77.1	0
165	SLU 37	1949	-1	5941	0.33	77.5	0
165	SLU 38	1918	-1	5926	0.72	76.17	0
165	SLU 39	2037	-1	6112	0.32	81.17	0
165	SLU 40	2006	-1	6097	0.72	79.83	0
165	SLU 41	2061	-1	6182	0.33	82.11	0
165	SLU 42	2030	-1	6167	0.72	80.78	0
165	SLU 43	1599	-1	5523	0.35	62.78	0
165	SLU 44	1546	-2	5498	1.01	60.56	0
165	SLU 45	1646	-1	5643	0.36	64.66	0
165	SLU 46	1614	-1	5628	0.75	63.32	0
165	SLU 47	1570	-2	5567	1.01	61.5	0
165	SLU 48	1670	-1	5712	0.36	65.6	0
165	SLU 49	1638	-1	5697	0.76	64.26	0
165	SLU 50	1647	-1	5662	0.36	64.67	0
165	SLU 51	1616	-1	5647	0.76	63.33	0
165	SLU 52	1864	-2	6222	1.03	73.51	0
165	SLU 53	1963	-1	6367	0.38	77.61	0
165	SLU 54	1932	-1	6351	0.77	76.27	0
165	SLU 55	1888	-2	6291	1.03	74.45	0
165	SLU 56	1987	-1	6436	0.38	78.55	0
165	SLU 57	1956	-1	6421	0.78	77.22	0
165	SLU 58	1965	-1	6386	0.38	77.62	0
165	SLU 59	1933	-1	6371	0.78	76.29	0
165	SLU 60	2052	-1	6557	0.38	81.28	0
165	SLU 61	2021	-1	6542	0.77	79.95	0
165	SLU 62	2077	-1	6627	0.38	82.23	0
165	SLU 63	2045	-1	6612	0.78	80.89	0
165	SLU 64	1879	-1	6180	0.37	74.15	0
165	SLU 65	1826	-2	6155	1.03	71.93	0
165	SLU 66	1926	-1	6299	0.38	76.03	0
165	SLU 67	1894	-1	6284	0.77	74.69	0
165	SLU 68	1850	-2	6224	1.03	72.87	0
165	SLU 69	1950	-1	6369	0.38	76.97	0
165	SLU 70	1918	-1	6354	0.78	75.64	0
165	SLU 71	1927	-1	6319	0.38	76.04	0
165	SLU 72	1895	-1	6304	0.78	74.71	0
165	SLU 73	2144	-2	6878	1.05	84.88	0
165	SLU 74	2243	-1	7023	0.4	88.98	0
165	SLU 75	2212	-1	7008	0.79	87.65	0
165	SLU 76	2168	-2	6948	1.05	85.83	0
165	SLU 77	2267	-1	7093	0.4	89.93	0
165	SLU 78	2236	-1	7078	0.8	88.59	0
165	SLU 79	2244	-1	7043	0.4	88.99	0
165	SLU 80	2213	-1	7028	0.8	87.66	0
165	SLU 81	2332	-1	7214	0.4	92.66	0
165	SLU 82	2301	-1	7199	0.79	91.32	0
165	SLU 83	2356	-1	7283	0.4	93.6	0
165	SLU 84	2325	-1	7268	0.8	92.27	0
165	SLE RA 1	1384	-1	4609	0.28	54.54	0
165	SLE RA 2	1349	-1	4592	0.72	53.06	0
165	SLE RA 3	1415	-1	4689	0.28	55.79	0
165	SLE RA 4	1394	-1	4679	0.55	54.9	0
165	SLE RA 5	1365	-1	4639	0.72	53.69	0
165	SLE RA 6	1431	-1	4735	0.29	56.42	0
165	SLE RA 7	1410	-1	4725	0.55	55.53	0
165	SLE RA 8	1416	-1	4702	0.29	55.8	0
165	SLE RA 9	1395	-1	4692	0.55	54.91	0
165	SLE RA 10	1560	-1	5075	0.73	61.69	0
165	SLE RA 11	1627	-1	5172	0.3	64.43	0
165	SLE RA 12	1606	-1	5162	0.56	63.54	0
165	SLE RA 13	1576	-1	5121	0.74	62.32	0
165	SLE RA 14	1643	-1	5218	0.3	65.06	0
165	SLE RA 15	1622	-1	5208	0.57	64.17	0
165	SLE RA 16	1628	-1	5185	0.3	64.43	0
165	SLE RA 17	1606	-1	5175	0.56	63.54	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
165	SLE RA 18	1686	-1	5299	0.3	66.88	0
165	SLE RA 19	1665	-1	5289	0.56	65.99	0
165	SLE RA 20	1702	-1	5345	0.3	67.51	0
165	SLE RA 21	1681	-1	5335	0.57	66.62	0
165	SLE FR 1	1384	-1	4609	0.28	54.54	0
165	SLE FR 2	1377	-1	4606	0.37	54.24	0
165	SLE FR 3	1390	-1	4628	0.28	54.79	0
165	SLE FR 4	1467	-1	4813	0.37	57.94	0
165	SLE FR 5	1481	-1	4835	0.29	58.49	0
165	SLE FR 6	1535	-1	4954	0.29	60.71	0
165	SLE QP 1	1384	-1	4609	0.28	54.54	0
165	SLE QP 2	1474	-1	4816	0.29	58.24	0
165	SLD 1	2514	-5	5990	-1.26	103.33	0
165	SLD 2	2514	-5	5990	-1.26	103.33	0
165	SLD 3	2391	-1	5923	6.87	97.97	-0.01
165	SLD 4	2391	-1	5923	6.87	97.97	-0.01
165	SLD 5	1972	-9	5270	-12.51	79.89	0.02
165	SLD 6	1972	-9	5270	-12.51	79.89	0.02
165	SLD 7	1564	6	5047	14.6	62.04	-0.02
165	SLD 8	1564	6	5047	14.6	62.04	-0.02
165	SLD 9	1385	-7	4585	-14.03	54.44	0.02
165	SLD 10	1385	-7	4585	-14.03	54.44	0.02
165	SLD 11	977	7	4363	13.08	36.6	-0.02
165	SLD 12	977	7	4363	13.08	36.6	-0.02
165	SLD 13	557	0	3709	-6.3	18.51	0.01
165	SLD 14	557	0	3709	-6.3	18.51	0.01
165	SLD 15	435	4	3642	1.83	13.16	0
165	SLD 16	435	4	3642	1.83	13.16	0
165	SLV 1	3897	-12	7563	-3.75	163.27	0.01
165	SLV 2	3897	-12	7563	-3.75	163.27	0.01
165	SLV 3	3610	-1	7403	16.94	150.73	-0.03
165	SLV 4	3610	-1	7403	16.94	150.73	-0.03
165	SLV 5	2637	-21	5882	-32.32	108.77	0.05
165	SLV 6	2637	-21	5882	-32.32	108.77	0.05
165	SLV 7	1680	16	5351	36.67	66.97	-0.06
165	SLV 8	1680	16	5351	36.67	66.97	-0.06
165	SLV 9	1269	-17	4281	-36.1	49.51	0.06
165	SLV 10	1269	-17	4281	-36.1	49.51	0.06
165	SLV 11	312	19	3751	32.89	7.71	-0.05
165	SLV 12	312	19	3751	32.89	7.71	-0.05
165	SLV 13	-661	0	2229	-16.37	-34.25	0.03
165	SLV 14	-661	0	2229	-16.37	-34.25	0.03
165	SLV 15	-948	11	2069	4.32	-46.79	-0.01
165	SLV 16	-948	11	2069	4.32	-46.79	-0.01
166	SLU 1	1130	-1	4637	0.31	50.01	0
166	SLU 2	1078	-1	4605	1.12	47.81	0
166	SLU 3	1172	-1	4761	0.32	51.9	0
166	SLU 4	1141	-1	4742	0.8	50.58	0
166	SLU 5	1100	-1	4678	1.13	48.79	0
166	SLU 6	1194	-1	4833	0.32	52.88	0
166	SLU 7	1163	-1	4814	0.81	51.56	0
166	SLU 8	1174	-1	4782	0.32	51.97	0
166	SLU 9	1142	-1	4763	0.81	50.65	0
166	SLU 10	1359	-2	5388	1.13	59.82	0
166	SLU 11	1454	-1	5544	0.33	63.92	0
166	SLU 12	1422	-1	5525	0.82	62.59	0
166	SLU 13	1381	-2	5461	1.14	60.8	0
166	SLU 14	1476	-1	5616	0.34	64.9	0
166	SLU 15	1444	-1	5597	0.83	63.57	0
166	SLU 16	1455	-1	5565	0.34	63.99	0
166	SLU 17	1424	-1	5546	0.83	62.67	0
166	SLU 18	1532	-1	5755	0.33	67.18	0
166	SLU 19	1500	-1	5736	0.82	65.85	0
166	SLU 20	1554	-1	5828	0.34	68.16	0
166	SLU 21	1522	-1	5809	0.82	66.83	0
166	SLU 22	1378	-1	5342	0.33	60.67	0
166	SLU 23	1326	-2	5311	1.14	58.46	0
166	SLU 24	1421	-1	5466	0.33	62.56	0
166	SLU 25	1389	-1	5448	0.82	61.24	0
166	SLU 26	1348	-2	5384	1.14	59.45	0
166	SLU 27	1442	-1	5539	0.34	63.54	0
166	SLU 28	1411	-1	5520	0.83	62.22	0
166	SLU 29	1422	-1	5488	0.34	62.63	0
166	SLU 30	1390	-1	5469	0.83	61.31	0
166	SLU 31	1607	-2	6094	1.15	70.48	0
166	SLU 32	1702	-1	6249	0.35	74.58	0
166	SLU 33	1671	-1	6231	0.84	73.25	0
166	SLU 34	1629	-2	6167	1.16	71.46	0
166	SLU 35	1724	-1	6322	0.36	75.56	0
166	SLU 36	1692	-1	6303	0.84	74.23	0
166	SLU 37	1703	-1	6271	0.36	74.65	0
166	SLU 38	1672	-1	6252	0.84	73.33	0
166	SLU 39	1780	-1	6461	0.35	77.84	0
166	SLU 40	1749	-1	6442	0.83	76.51	0
166	SLU 41	1802	-1	6534	0.36	78.82	0
166	SLU 42	1770	-1	6515	0.84	77.49	0
166	SLU 43	1384	-1	5786	0.39	61.36	0
166	SLU 44	1332	-2	5754	1.21	59.15	0
166	SLU 45	1426	-1	5910	0.4	63.25	0
166	SLU 46	1395	-1	5891	0.89	61.93	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
166	SLU 47	1353	-2	5827	1.21	60.14	0
166	SLU 48	1448	-1	5982	0.41	64.23	0
166	SLU 49	1417	-1	5963	0.9	62.91	0
166	SLU 50	1428	-1	5931	0.41	63.32	0
166	SLU 51	1396	-1	5912	0.9	62	0
166	SLU 52	1613	-2	6537	1.22	71.17	0
166	SLU 53	1708	-1	6692	0.42	75.27	0
166	SLU 54	1676	-1	6674	0.91	73.94	0
166	SLU 55	1635	-2	6610	1.23	72.15	0
166	SLU 56	1730	-1	6765	0.43	76.25	0
166	SLU 57	1698	-1	6746	0.91	74.92	0
166	SLU 58	1709	-1	6714	0.42	75.34	0
166	SLU 59	1678	-1	6695	0.91	74.02	0
166	SLU 60	1786	-1	6904	0.42	78.53	0
166	SLU 61	1754	-1	6885	0.9	77.2	0
166	SLU 62	1808	-1	6977	0.42	79.51	0
166	SLU 63	1776	-1	6958	0.91	78.18	0
166	SLU 64	1632	-1	6491	0.41	72.02	0
166	SLU 65	1580	-2	6460	1.22	69.81	0
166	SLU 66	1675	-1	6615	0.42	73.91	0
166	SLU 67	1643	-1	6597	0.91	72.59	0
166	SLU 68	1602	-2	6533	1.23	70.79	0
166	SLU 69	1696	-1	6688	0.43	74.89	0
166	SLU 70	1665	-1	6669	0.92	73.57	0
166	SLU 71	1676	-1	6636	0.43	73.98	0
166	SLU 72	1644	-1	6618	0.91	72.66	0
166	SLU 73	1861	-2	7243	1.24	81.83	0
166	SLU 74	1956	-1	7398	0.44	85.93	0
166	SLU 75	1924	-1	7380	0.92	84.6	0
166	SLU 76	1883	-2	7316	1.25	82.81	0
166	SLU 77	1978	-1	7471	0.44	86.91	0
166	SLU 78	1946	-1	7452	0.93	85.58	0
166	SLU 79	1957	-1	7419	0.44	86	0
166	SLU 80	1926	-1	7401	0.93	84.67	0
166	SLU 81	2034	-1	7610	0.43	89.19	0
166	SLU 82	2003	-1	7591	0.92	87.86	0
166	SLU 83	2056	-1	7683	0.44	90.17	0
166	SLU 84	2024	-1	7664	0.93	88.84	0
166	SLE RA 1	1201	-1	4838	0.31	53.06	0
166	SLE RA 2	1166	-1	4817	0.85	51.59	0
166	SLE RA 3	1229	-1	4921	0.32	54.32	0
166	SLE RA 4	1208	-1	4908	0.64	53.43	0
166	SLE RA 5	1181	-1	4866	0.86	52.24	0
166	SLE RA 6	1244	-1	4969	0.32	54.97	0
166	SLE RA 7	1223	-1	4957	0.65	54.09	0
166	SLE RA 8	1230	-1	4935	0.32	54.37	0
166	SLE RA 9	1209	-1	4922	0.65	53.48	0
166	SLE RA 10	1354	-1	5339	0.86	59.6	0
166	SLE RA 11	1417	-1	5443	0.33	62.33	0
166	SLE RA 12	1396	-1	5430	0.65	61.45	0
166	SLE RA 13	1368	-1	5388	0.87	60.25	0
166	SLE RA 14	1431	-1	5491	0.33	62.98	0
166	SLE RA 15	1410	-1	5479	0.66	62.1	0
166	SLE RA 16	1418	-1	5457	0.33	62.38	0
166	SLE RA 17	1397	-1	5444	0.66	61.49	0
166	SLE RA 18	1469	-1	5584	0.33	64.5	0
166	SLE RA 19	1448	-1	5571	0.65	63.62	0
166	SLE RA 20	1483	-1	5632	0.33	65.16	0
166	SLE RA 21	1462	-1	5620	0.66	64.27	0
166	SLE FR 1	1201	-1	4838	0.31	53.06	0
166	SLE FR 2	1194	-1	4834	0.42	52.76	0
166	SLE FR 3	1207	-1	4858	0.32	53.32	0
166	SLE FR 4	1274	-1	5058	0.43	56.2	0
166	SLE FR 5	1287	-1	5081	0.32	56.75	0
166	SLE FR 6	1335	-1	5211	0.32	58.78	0
166	SLE QP 1	1201	-1	4838	0.31	53.06	0
166	SLE QP 2	1281	-1	5062	0.32	56.49	0
166	SLD 1	2295	-8	6088	-11.34	100.97	0
166	SLD 2	2295	-8	6088	-11.34	100.97	0
166	SLD 3	2171	0	6028	3.46	95.63	-0.02
166	SLD 4	2171	0	6028	3.46	95.63	-0.02
166	SLD 5	1773	-14	5462	-25.63	77.93	0.03
166	SLD 6	1773	-14	5462	-25.63	77.93	0.03
166	SLD 7	1360	11	5260	23.72	60.14	-0.04
166	SLD 8	1360	11	5260	23.72	60.14	-0.04
166	SLD 9	1202	-13	4864	-23.08	52.84	0.04
166	SLD 10	1202	-13	4864	-23.08	52.84	0.04
166	SLD 11	789	13	4662	26.27	35.05	-0.04
166	SLD 12	789	13	4662	26.27	35.05	-0.04
166	SLD 13	392	-1	4096	-2.83	17.35	0.02
166	SLD 14	392	-1	4096	-2.83	17.35	0.02
166	SLD 15	268	6	4036	11.98	12.02	0
166	SLD 16	268	6	4036	11.98	12.02	0
166	SLV 1	3643	-18	7465	-29.34	160.15	0.01
166	SLV 2	3643	-18	7465	-29.34	160.15	0.01
166	SLV 3	3352	2	7318	8.46	147.63	-0.04
166	SLV 4	3352	2	7318	8.46	147.63	-0.04
166	SLV 5	2431	-35	6006	-65.92	106.57	0.09
166	SLV 6	2431	-35	6006	-65.92	106.57	0.09
166	SLV 7	1461	29	5516	60.1	64.85	-0.1



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
166	SLV 8	1461	29	5516	60.1	64.85	-0.1
166	SLV 9	1101	-31	4608	-59.46	48.13	0.1
166	SLV 10	1101	-31	4608	-59.46	48.13	0.1
166	SLV 11	132	34	4118	66.55	6.41	-0.09
166	SLV 12	132	34	4118	66.55	6.41	-0.09
166	SLV 13	-790	-3	2806	-7.82	-34.65	0.04
166	SLV 14	-790	-3	2806	-7.82	-34.65	0.04
166	SLV 15	-1081	17	2659	29.98	-47.17	-0.01
166	SLV 16	-1081	17	2659	29.98	-47.17	-0.01
167	SLU 1	899	0	4797	0.28	36.13	0
167	SLU 2	847	-1	4759	1.14	33.93	0
167	SLU 3	935	0	4924	0.29	37.61	0
167	SLU 4	904	-1	4901	0.81	36.29	0
167	SLU 5	865	-1	4834	1.15	34.66	0
167	SLU 6	953	0	4999	0.29	38.34	0
167	SLU 7	922	-1	4976	0.81	37.02	0
167	SLU 8	935	0	4947	0.29	37.59	0
167	SLU 9	904	-1	4924	0.81	36.27	0
167	SLU 10	1087	-1	5590	1.15	43.87	0
167	SLU 11	1175	0	5754	0.29	47.55	0
167	SLU 12	1144	-1	5732	0.81	46.23	0
167	SLU 13	1105	-1	5665	1.16	44.6	0
167	SLU 14	1193	0	5829	0.3	48.28	0
167	SLU 15	1162	-1	5807	0.82	46.96	0
167	SLU 16	1175	0	5777	0.3	47.53	0
167	SLU 17	1144	-1	5755	0.82	46.21	0
167	SLU 18	1241	0	5983	0.29	50.33	0
167	SLU 19	1210	-1	5961	0.81	49.01	0
167	SLU 20	1259	0	6058	0.3	51.06	0
167	SLU 21	1228	-1	6036	0.81	49.74	0
167	SLU 22	1109	0	5542	0.29	44.83	0
167	SLU 23	1057	-1	5504	1.15	42.63	0
167	SLU 24	1145	0	5669	0.3	46.31	0
167	SLU 25	1114	-1	5646	0.82	44.99	0
167	SLU 26	1075	-1	5579	1.16	43.36	0
167	SLU 27	1163	0	5744	0.3	47.04	0
167	SLU 28	1132	-1	5721	0.82	45.72	0
167	SLU 29	1145	0	5692	0.3	46.28	0
167	SLU 30	1114	-1	5669	0.82	44.96	0
167	SLU 31	1297	-1	6335	1.16	52.57	0
167	SLU 32	1385	0	6499	0.3	56.25	0
167	SLU 33	1354	-1	6477	0.82	54.93	0
167	SLU 34	1315	-1	6410	1.17	53.3	0
167	SLU 35	1403	0	6574	0.31	56.98	0
167	SLU 36	1372	-1	6552	0.83	55.66	0
167	SLU 37	1385	0	6522	0.31	56.22	0
167	SLU 38	1354	-1	6500	0.83	54.9	0
167	SLU 39	1452	0	6728	0.3	59.03	0
167	SLU 40	1420	-1	6706	0.82	57.71	0
167	SLU 41	1470	0	6803	0.31	59.76	0
167	SLU 42	1439	-1	6781	0.82	58.44	0
167	SLU 43	1096	-1	5981	0.36	43.99	0
167	SLU 44	1044	-1	5943	1.23	41.79	0
167	SLU 45	1132	-1	6108	0.37	45.47	0
167	SLU 46	1101	-1	6085	0.89	44.15	0
167	SLU 47	1063	-1	6018	1.23	42.52	0
167	SLU 48	1151	-1	6182	0.38	46.2	0
167	SLU 49	1119	-1	6160	0.89	44.88	0
167	SLU 50	1133	-1	6130	0.37	45.44	0
167	SLU 51	1101	-1	6108	0.89	44.12	0
167	SLU 52	1284	-1	6773	1.23	51.73	0
167	SLU 53	1372	-1	6938	0.38	55.41	0
167	SLU 54	1341	-1	6916	0.89	54.09	0
167	SLU 55	1302	-1	6848	1.24	52.46	0
167	SLU 56	1390	-1	7013	0.38	56.14	0
167	SLU 57	1359	-1	6990	0.9	54.82	0
167	SLU 58	1372	-1	6961	0.38	55.38	0
167	SLU 59	1341	-1	6938	0.9	54.06	0
167	SLU 60	1439	-1	7167	0.37	58.19	0
167	SLU 61	1408	-1	7144	0.89	56.87	0
167	SLU 62	1457	-1	7242	0.38	58.92	0
167	SLU 63	1426	-1	7219	0.9	57.6	0
167	SLU 64	1307	-1	6726	0.37	52.69	0
167	SLU 65	1255	-1	6688	1.23	50.49	0
167	SLU 66	1343	-1	6853	0.38	54.17	0
167	SLU 67	1312	-1	6830	0.9	52.85	0
167	SLU 68	1273	-1	6763	1.24	51.21	0
167	SLU 69	1361	-1	6927	0.38	54.89	0
167	SLU 70	1330	-1	6905	0.9	53.57	0
167	SLU 71	1343	-1	6875	0.38	54.14	0
167	SLU 72	1312	-1	6853	0.9	52.82	0
167	SLU 73	1495	-1	7518	1.24	60.43	0
167	SLU 74	1582	-1	7683	0.39	64.11	0
167	SLU 75	1551	-1	7661	0.9	62.79	0
167	SLU 76	1513	-1	7593	1.25	61.15	0
167	SLU 77	1601	-1	7758	0.39	64.83	0
167	SLU 78	1569	-1	7735	0.91	63.51	0
167	SLU 79	1583	-1	7706	0.39	64.08	0
167	SLU 80	1552	-1	7683	0.91	62.76	0
167	SLU 81	1649	-1	7912	0.38	66.89	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
167	SLU 82	1618	-1	7889	0.9	65.57	0
167	SLU 83	1667	-1	7987	0.39	67.61	0
167	SLU 84	1636	-1	7964	0.91	66.29	0
167	SLE RA 1	959	0	5010	0.28	38.62	0
167	SLE RA 2	924	-1	4985	0.86	37.15	0
167	SLE RA 3	983	0	5094	0.29	39.6	0
167	SLE RA 4	962	-1	5079	0.63	38.72	0
167	SLE RA 5	936	-1	5035	0.86	37.64	0
167	SLE RA 6	995	0	5144	0.29	40.09	0
167	SLE RA 7	974	-1	5129	0.64	39.21	0
167	SLE RA 8	983	0	5110	0.29	39.59	0
167	SLE RA 9	962	-1	5095	0.64	38.71	0
167	SLE RA 10	1084	-1	5538	0.86	43.78	0
167	SLE RA 11	1143	0	5648	0.29	46.23	0
167	SLE RA 12	1122	-1	5633	0.64	45.35	0
167	SLE RA 13	1096	-1	5588	0.87	44.26	0
167	SLE RA 14	1155	0	5698	0.3	46.71	0
167	SLE RA 15	1134	-1	5683	0.64	45.83	0
167	SLE RA 16	1143	0	5663	0.3	46.21	0
167	SLE RA 17	1122	-1	5648	0.64	45.33	0
167	SLE RA 18	1187	0	5801	0.29	48.08	0
167	SLE RA 19	1166	-1	5786	0.64	47.2	0
167	SLE RA 20	1199	0	5851	0.29	48.57	0
167	SLE RA 21	1179	-1	5836	0.64	47.69	0
167	SLE FR 1	959	0	5010	0.28	38.62	0
167	SLE FR 2	952	-1	5005	0.4	38.33	0
167	SLE FR 3	964	0	5030	0.29	38.81	0
167	SLE FR 4	1020	-1	5242	0.4	41.16	0
167	SLE FR 5	1032	0	5267	0.29	41.65	0
167	SLE FR 6	1073	0	5405	0.29	43.35	0
167	SLE QP 1	959	0	5010	0.28	38.62	0
167	SLE QP 2	1027	0	5247	0.29	41.46	0
167	SLD 1	2021	3	6125	-16.67	84.86	0.01
167	SLD 2	2021	3	6125	-16.67	84.86	0.01
167	SLD 3	1894	-14	6066	5.12	79.36	-0.03
167	SLD 4	1894	-14	6066	5.12	79.36	-0.03
167	SLD 5	1517	26	5600	-37.85	62.83	0.06
167	SLD 6	1517	26	5600	-37.85	62.83	0.06
167	SLD 7	1096	-30	5403	34.79	44.47	-0.07
167	SLD 8	1096	-30	5403	34.79	44.47	-0.07
167	SLD 9	959	29	5091	-34.22	38.44	0.07
167	SLD 10	959	29	5091	-34.22	38.44	0.07
167	SLD 11	538	-27	4894	38.42	20.08	-0.06
167	SLD 12	538	-27	4894	38.42	20.08	-0.06
167	SLD 13	161	13	4428	-4.55	3.56	0.03
167	SLD 14	161	13	4428	-4.55	3.56	0.03
167	SLD 15	34	-4	4369	17.24	-1.95	-0.01
167	SLD 16	34	-4	4369	17.24	-1.95	-0.01
167	SLV 1	3340	8	7306	-42.97	142.49	0.02
167	SLV 2	3340	8	7306	-42.97	142.49	0.02
167	SLV 3	3043	-35	7160	12.76	129.59	-0.08
167	SLV 4	3043	-35	7160	12.76	129.59	-0.08
167	SLV 5	2171	67	6086	-97.22	91.33	0.15
167	SLV 6	2171	67	6086	-97.22	91.33	0.15
167	SLV 7	1183	-76	5599	88.56	48.33	-0.17
167	SLV 8	1183	-76	5599	88.56	48.33	-0.17
167	SLV 9	872	75	4895	-87.99	34.58	0.17
167	SLV 10	872	75	4895	-87.99	34.58	0.17
167	SLV 11	-116	-68	4408	97.79	-8.42	-0.15
167	SLV 12	-116	-68	4408	97.79	-8.42	-0.15
167	SLV 13	-989	34	3334	-12.19	-46.67	0.07
167	SLV 14	-989	34	3334	-12.19	-46.67	0.07
167	SLV 15	-1285	-9	3188	43.54	-59.57	-0.02
167	SLV 16	-1285	-9	3188	43.54	-59.57	-0.02
168	SLU 1	773	0	4888	0.22	34.58	0
168	SLU 2	721	-1	4844	1.07	32.36	0
168	SLU 3	807	0	5017	0.22	36.06	0
168	SLU 4	775	-1	4990	0.74	34.73	0
168	SLU 5	738	-1	4921	1.08	33.11	0
168	SLU 6	823	0	5093	0.23	36.81	0
168	SLU 7	792	-1	5067	0.74	35.48	0
168	SLU 8	807	0	5041	0.23	36.08	0
168	SLU 9	776	-1	5015	0.74	34.75	0
168	SLU 10	930	-1	5709	1.07	41.38	0
168	SLU 11	1015	0	5881	0.22	45.07	0
168	SLU 12	984	-1	5855	0.73	43.74	0
168	SLU 13	947	-1	5785	1.07	42.13	0
168	SLU 14	1032	0	5957	0.22	45.82	0
168	SLU 15	1001	-1	5931	0.74	44.49	0
168	SLU 16	1015	0	5905	0.22	45.09	0
168	SLU 17	984	-1	5879	0.74	43.76	0
168	SLU 18	1071	0	6123	0.21	47.46	0
168	SLU 19	1040	-1	6097	0.73	46.13	0
168	SLU 20	1088	0	6199	0.22	48.21	0
168	SLU 21	1057	-1	6173	0.73	46.88	0
168	SLU 22	957	0	5660	0.22	42.56	0
168	SLU 23	905	-1	5616	1.07	40.34	0
168	SLU 24	990	0	5789	0.22	44.04	0
168	SLU 25	959	-1	5762	0.74	42.71	0
168	SLU 26	922	-1	5693	1.08	41.09	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
168	SLU 27	1007	0	5865	0.23	44.78	0
168	SLU 28	976	-1	5839	0.74	43.46	0
168	SLU 29	990	0	5813	0.23	44.05	0
168	SLU 30	959	-1	5787	0.74	42.72	0
168	SLU 31	1114	-1	6481	1.07	49.35	0
168	SLU 32	1199	0	6653	0.22	53.05	0
168	SLU 33	1168	-1	6627	0.73	51.72	0
168	SLU 34	1130	-1	6557	1.07	50.1	0
168	SLU 35	1215	0	6729	0.22	53.8	0
168	SLU 36	1184	-1	6703	0.74	52.47	0
168	SLU 37	1199	0	6677	0.22	53.07	0
168	SLU 38	1168	-1	6651	0.74	51.74	0
168	SLU 39	1255	0	6895	0.21	55.43	0
168	SLU 40	1224	-1	6869	0.73	54.1	0
168	SLU 41	1272	0	6971	0.22	56.18	0
168	SLU 42	1240	-1	6945	0.73	54.85	0
168	SLU 43	942	0	6090	0.29	42.22	0
168	SLU 44	891	-1	6046	1.14	40	0
168	SLU 45	976	0	6219	0.29	43.7	0
168	SLU 46	945	-1	6192	0.8	42.37	0
168	SLU 47	907	-1	6122	1.14	40.75	0
168	SLU 48	992	0	6295	0.29	44.44	0
168	SLU 49	961	-1	6268	0.81	43.12	0
168	SLU 50	976	0	6243	0.29	43.71	0
168	SLU 51	945	-1	6216	0.81	42.38	0
168	SLU 52	1099	-1	6910	1.14	49.01	0
168	SLU 53	1184	0	7083	0.29	52.71	0
168	SLU 54	1153	-1	7056	0.8	51.38	0
168	SLU 55	1116	-1	6987	1.14	49.76	0
168	SLU 56	1201	0	7159	0.29	53.46	0
168	SLU 57	1170	-1	7133	0.8	52.13	0
168	SLU 58	1184	0	7107	0.29	52.73	0
168	SLU 59	1153	-1	7081	0.8	51.4	0
168	SLU 60	1240	0	7325	0.28	55.09	0
168	SLU 61	1209	-1	7298	0.79	53.76	0
168	SLU 62	1257	0	7401	0.28	55.84	0
168	SLU 63	1226	-1	7375	0.8	54.51	0
168	SLU 64	1126	0	6862	0.29	50.19	0
168	SLU 65	1074	-1	6818	1.14	47.98	0
168	SLU 66	1159	0	6991	0.29	51.67	0
168	SLU 67	1128	-1	6964	0.8	50.34	0
168	SLU 68	1091	-1	6894	1.14	48.73	0
168	SLU 69	1176	0	7067	0.29	52.42	0
168	SLU 70	1145	-1	7041	0.81	51.09	0
168	SLU 71	1159	0	7015	0.29	51.69	0
168	SLU 72	1128	-1	6988	0.81	50.36	0
168	SLU 73	1283	-1	7682	1.14	56.99	0
168	SLU 74	1368	0	7855	0.29	60.69	0
168	SLU 75	1337	-1	7829	0.8	59.36	0
168	SLU 76	1299	-1	7759	1.14	57.74	0
168	SLU 77	1384	0	7931	0.29	61.44	0
168	SLU 78	1353	-1	7905	0.8	60.11	0
168	SLU 79	1368	0	7879	0.29	60.71	0
168	SLU 80	1337	-1	7853	0.8	59.38	0
168	SLU 81	1424	0	8097	0.28	63.07	0
168	SLU 82	1393	-1	8071	0.79	61.74	0
168	SLU 83	1441	0	8173	0.28	63.82	0
168	SLU 84	1409	-1	8147	0.8	62.49	0
168	SLE RA 1	826	0	5109	0.22	36.86	0
168	SLE RA 2	791	-1	5080	0.79	35.38	0
168	SLE RA 3	848	0	5194	0.22	37.84	0
168	SLE RA 4	827	-1	5177	0.56	36.96	0
168	SLE RA 5	802	-1	5130	0.79	35.88	0
168	SLE RA 6	859	0	5245	0.22	38.34	0
168	SLE RA 7	838	-1	5228	0.57	37.46	0
168	SLE RA 8	848	0	5211	0.23	37.86	0
168	SLE RA 9	827	-1	5193	0.57	36.97	0
168	SLE RA 10	930	-1	5656	0.79	41.39	0
168	SLE RA 11	987	0	5771	0.22	43.85	0
168	SLE RA 12	966	-1	5753	0.56	42.97	0
168	SLE RA 13	941	-1	5707	0.79	41.89	0
168	SLE RA 14	998	0	5822	0.22	44.35	0
168	SLE RA 15	977	-1	5804	0.56	43.47	0
168	SLE RA 16	987	0	5787	0.22	43.87	0
168	SLE RA 17	966	-1	5769	0.56	42.98	0
168	SLE RA 18	1024	0	5932	0.22	45.44	0
168	SLE RA 19	1004	-1	5914	0.56	44.56	0
168	SLE RA 20	1036	0	5983	0.22	45.94	0
168	SLE RA 21	1015	-1	5965	0.56	45.06	0
168	SLE FR 1	826	0	5109	0.22	36.86	0
168	SLE FR 2	819	0	5103	0.33	36.56	0
168	SLE FR 3	830	0	5129	0.22	37.06	0
168	SLE FR 4	879	0	5350	0.33	39.14	0
168	SLE FR 5	890	0	5376	0.22	39.63	0
168	SLE FR 6	925	0	5520	0.22	41.15	0
168	SLE QP 1	826	0	5109	0.22	36.86	0
168	SLE QP 2	885	0	5356	0.22	39.43	0
168	SLD 1	1875	19	6080	-21.2	83.07	0.04
168	SLD 2	1875	19	6080	-21.2	83.07	0.04
168	SLD 3	1747	-6	6019	6.49	77.55	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
168	SLD 4	1747	-6	6019	6.49	77.55	-0.01
168	SLD 5	1376	43	5666	-48.2	60.9	0.1
168	SLD 6	1376	43	5666	-48.2	60.9	0.1
168	SLD 7	951	-39	5462	44.09	42.49	-0.09
168	SLD 8	951	-39	5462	44.09	42.49	-0.09
168	SLD 9	820	39	5249	-43.66	36.37	0.09
168	SLD 10	820	39	5249	-43.66	36.37	0.09
168	SLD 11	395	-44	5046	48.64	17.96	-0.1
168	SLD 12	395	-44	5046	48.64	17.96	-0.1
168	SLD 13	23	5	4693	-6.05	1.31	0.01
168	SLD 14	23	5	4693	-6.05	1.31	0.01
168	SLD 15	-104	-20	4632	21.64	-4.21	-0.04
168	SLD 16	-104	-20	4632	21.64	-4.21	-0.04
168	SLV 1	3189	49	7056	-54.51	141.04	0.11
168	SLV 2	3189	49	7056	-54.51	141.04	0.11
168	SLV 3	2890	-14	6904	16.37	128.09	-0.03
168	SLV 4	2890	-14	6904	16.37	128.09	-0.03
168	SLV 5	2030	111	6096	-123.69	89.55	0.25
168	SLV 6	2030	111	6096	-123.69	89.55	0.25
168	SLV 7	1033	-101	5590	112.55	46.4	-0.23
168	SLV 8	1033	-101	5590	112.55	46.4	-0.23
168	SLV 9	737	100	5122	-112.11	32.47	0.23
168	SLV 10	737	100	5122	-112.11	32.47	0.23
168	SLV 11	-259	-111	4615	124.12	-10.68	-0.25
168	SLV 12	-259	-111	4615	124.12	-10.68	-0.25
168	SLV 13	-1119	14	3808	-15.93	-49.23	0.03
168	SLV 14	-1119	14	3808	-15.93	-49.23	0.03
168	SLV 15	-1418	-50	3656	54.94	-62.17	-0.11
168	SLV 16	-1418	-50	3656	54.94	-62.17	-0.11
169	SLU 1	622	0	4953	0.15	25.67	0
169	SLU 2	569	-1	4902	0.95	23.41	0
169	SLU 3	652	0	5082	0.15	26.9	0
169	SLU 4	620	-1	5052	0.63	25.55	0
169	SLU 5	584	-1	4980	0.95	24.01	0
169	SLU 6	666	0	5160	0.15	27.5	0
169	SLU 7	634	-1	5130	0.63	26.15	0
169	SLU 8	651	0	5108	0.15	26.87	0
169	SLU 9	620	-1	5078	0.63	25.51	0
169	SLU 10	746	-1	5791	0.93	30.88	0
169	SLU 11	829	0	5971	0.13	34.37	0
169	SLU 12	797	-1	5941	0.61	33.02	0
169	SLU 13	761	-1	5868	0.93	31.48	0
169	SLU 14	843	0	6049	0.14	34.97	0
169	SLU 15	811	-1	6018	0.62	33.62	0
169	SLU 16	828	0	5997	0.14	34.34	0
169	SLU 17	797	-1	5966	0.62	32.98	0
169	SLU 18	875	0	6222	0.13	36.34	0
169	SLU 19	843	-1	6192	0.61	34.98	0
169	SLU 20	890	0	6300	0.13	36.94	0
169	SLU 21	858	-1	6270	0.61	35.58	0
169	SLU 22	778	0	5744	0.14	32.23	0
169	SLU 23	725	-1	5693	0.94	29.97	0
169	SLU 24	807	0	5874	0.14	33.47	0
169	SLU 25	776	-1	5843	0.62	32.11	0
169	SLU 26	740	-1	5771	0.94	30.57	0
169	SLU 27	822	0	5951	0.14	34.07	0
169	SLU 28	790	-1	5921	0.62	32.71	0
169	SLU 29	807	0	5900	0.14	33.43	0
169	SLU 30	775	-1	5869	0.62	32.08	0
169	SLU 31	902	-1	6582	0.92	37.44	0
169	SLU 32	984	0	6762	0.12	40.94	0
169	SLU 33	953	-1	6732	0.6	39.58	0
169	SLU 34	916	-1	6660	0.92	38.04	0
169	SLU 35	999	0	6840	0.13	41.54	0
169	SLU 36	967	-1	6810	0.61	40.18	0
169	SLU 37	984	0	6788	0.13	40.9	0
169	SLU 38	952	-1	6758	0.61	39.55	0
169	SLU 39	1031	0	7014	0.12	42.9	0
169	SLU 40	999	-1	6983	0.6	41.55	0
169	SLU 41	1045	0	7091	0.12	43.5	0
169	SLU 42	1014	-1	7061	0.6	42.15	0
169	SLU 43	756	0	6167	0.19	31.11	0
169	SLU 44	702	-1	6116	0.99	28.85	0
169	SLU 45	785	0	6297	0.19	32.35	0
169	SLU 46	753	-1	6266	0.67	31	0
169	SLU 47	717	-1	6194	1	29.46	0
169	SLU 48	800	0	6374	0.2	32.95	0
169	SLU 49	768	-1	6344	0.68	31.6	0
169	SLU 50	785	0	6323	0.2	32.32	0
169	SLU 51	753	-1	6292	0.68	30.96	0
169	SLU 52	879	-1	7005	0.98	36.33	0
169	SLU 53	962	0	7185	0.18	39.82	0
169	SLU 54	930	-1	7155	0.66	38.47	0
169	SLU 55	894	-1	7083	0.98	36.93	0
169	SLU 56	976	0	7263	0.18	40.42	0
169	SLU 57	945	-1	7233	0.66	39.07	0
169	SLU 58	962	0	7211	0.18	39.79	0
169	SLU 59	930	-1	7181	0.66	38.43	0
169	SLU 60	1008	0	7437	0.18	41.79	0
169	SLU 61	976	-1	7406	0.66	40.43	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
169	SLU 62	1023	0	7514	0.18	42.39	0
169	SLU 63	991	-1	7484	0.66	41.03	0
169	SLU 64	911	0	6959	0.18	37.68	0
169	SLU 65	858	-1	6908	0.98	35.42	0
169	SLU 66	941	0	7088	0.18	38.92	0
169	SLU 67	909	-1	7058	0.66	37.56	0
169	SLU 68	873	-1	6986	0.99	36.02	0
169	SLU 69	955	0	7166	0.19	39.52	0
169	SLU 70	923	-1	7135	0.67	38.16	0
169	SLU 71	940	0	7114	0.19	38.88	0
169	SLU 72	909	-1	7084	0.67	37.53	0
169	SLU 73	1035	-1	7797	0.97	42.89	0
169	SLU 74	1118	0	7977	0.17	46.39	0
169	SLU 75	1086	-1	7946	0.65	45.03	0
169	SLU 76	1050	-1	7874	0.97	43.49	0
169	SLU 77	1132	0	8055	0.17	46.99	0
169	SLU 78	1100	-1	8024	0.65	45.63	0
169	SLU 79	1117	0	8003	0.17	46.35	0
169	SLU 80	1086	-1	7972	0.65	45	0
169	SLU 81	1164	0	8228	0.17	48.35	0
169	SLU 82	1132	-1	8198	0.65	47	0
169	SLU 83	1179	0	8306	0.17	48.95	0
169	SLU 84	1147	-1	8275	0.65	47.6	0
169	SLE RA 1	667	0	5179	0.14	27.54	0
169	SLE RA 2	631	-1	5145	0.68	26.04	0
169	SLE RA 3	686	0	5265	0.14	28.37	0
169	SLE RA 4	665	0	5245	0.46	27.46	0
169	SLE RA 5	641	-1	5197	0.68	26.44	0
169	SLE RA 6	696	0	5317	0.15	28.77	0
169	SLE RA 7	675	0	5297	0.46	27.86	0
169	SLE RA 8	686	0	5282	0.15	28.34	0
169	SLE RA 9	665	0	5262	0.47	27.44	0
169	SLE RA 10	749	-1	5737	0.67	31.02	0
169	SLE RA 11	804	0	5858	0.14	33.35	0
169	SLE RA 12	783	0	5837	0.46	32.44	0
169	SLE RA 13	759	-1	5789	0.67	31.42	0
169	SLE RA 14	814	0	5909	0.14	33.75	0
169	SLE RA 15	793	0	5889	0.46	32.84	0
169	SLE RA 16	804	0	5875	0.14	33.32	0
169	SLE RA 17	783	0	5855	0.46	32.42	0
169	SLE RA 18	835	0	6025	0.13	34.66	0
169	SLE RA 19	814	0	6005	0.45	33.75	0
169	SLE RA 20	845	0	6077	0.13	35.06	0
169	SLE RA 21	824	0	6057	0.45	34.15	0
169	SLE FR 1	667	0	5179	0.14	27.54	0
169	SLE FR 2	660	0	5172	0.25	27.24	0
169	SLE FR 3	671	0	5200	0.14	27.7	0
169	SLE FR 4	710	0	5426	0.25	29.38	0
169	SLE FR 5	721	0	5453	0.14	29.84	0
169	SLE FR 6	751	0	5602	0.14	31.1	0
169	SLE QP 1	667	0	5179	0.14	27.54	0
169	SLE QP 2	717	0	5433	0.14	29.68	0
169	SLD 1	1713	23	6009	-24.17	73.54	0.06
169	SLD 2	1713	23	6009	-24.17	73.54	0.06
169	SLD 3	1583	-7	5944	7.34	67.89	-0.02
169	SLD 4	1583	-7	5944	7.34	67.89	-0.02
169	SLD 5	1212	52	5704	-54.94	51.4	0.13
169	SLD 6	1212	52	5704	-54.94	51.4	0.13
169	SLD 7	781	-48	5488	50.09	32.57	-0.12
169	SLD 8	781	-48	5488	50.09	32.57	-0.12
169	SLD 9	653	47	5378	-49.81	26.78	0.12
169	SLD 10	653	47	5378	-49.81	26.78	0.12
169	SLD 11	223	-53	5161	55.22	7.95	-0.13
169	SLD 12	223	-53	5161	55.22	7.95	-0.13
169	SLD 13	-149	6	4921	-7.06	-8.54	0.02
169	SLD 14	-149	6	4921	-7.06	-8.54	0.02
169	SLD 15	-278	-23	4856	24.45	-14.19	-0.06
169	SLD 16	-278	-23	4856	24.45	-14.19	-0.06
169	SLV 1	3033	59	6788	-62.02	131.73	0.15
169	SLV 2	3033	59	6788	-62.02	131.73	0.15
169	SLV 3	2731	-17	6625	18.65	118.5	-0.04
169	SLV 4	2731	-17	6625	18.65	118.5	-0.04
169	SLV 5	1871	134	6087	-140.86	80.37	0.33
169	SLV 6	1871	134	6087	-140.86	80.37	0.33
169	SLV 7	862	-122	5542	128.04	36.25	-0.3
169	SLV 8	862	-122	5542	128.04	36.25	-0.3
169	SLV 9	572	121	5323	-127.76	23.1	0.3
169	SLV 10	572	121	5323	-127.76	23.1	0.3
169	SLV 11	-437	-134	4778	141.14	-21.02	-0.33
169	SLV 12	-437	-134	4778	141.14	-21.02	-0.33
169	SLV 13	-1296	17	4241	-18.37	-59.14	0.04
169	SLV 14	-1296	17	4241	-18.37	-59.14	0.04
169	SLV 15	-1599	-60	4077	62.3	-72.38	-0.15
169	SLV 16	-1599	-60	4077	62.3	-72.38	-0.15
170	SLU 1	533	0	4988	0.08	24.08	0
170	SLU 2	478	-1	4928	0.79	21.69	0
170	SLU 3	561	0	5118	0.07	25.32	0
170	SLU 4	528	0	5082	0.5	23.89	0
170	SLU 5	491	-1	5007	0.79	22.31	0
170	SLU 6	575	0	5197	0.07	25.94	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
170	SLU 7	542	0	5161	0.5	24.51	0
170	SLU 8	561	0	5146	0.07	25.31	0
170	SLU 9	527	0	5110	0.5	23.88	0
170	SLU 10	632	-1	5834	0.77	28.45	0
170	SLU 11	715	0	6024	0.05	32.08	0
170	SLU 12	682	0	5988	0.48	30.65	0
170	SLU 13	645	-1	5913	0.77	29.07	0
170	SLU 14	729	0	6103	0.05	32.7	0
170	SLU 15	695	0	6067	0.48	31.27	0
170	SLU 16	715	0	6051	0.05	32.07	0
170	SLU 17	681	0	6016	0.48	30.64	0
170	SLU 18	753	0	6281	0.05	33.73	0
170	SLU 19	720	0	6246	0.47	32.3	0
170	SLU 20	767	0	6360	0.04	34.35	0
170	SLU 21	734	0	6325	0.47	32.92	0
170	SLU 22	669	0	5792	0.06	30.09	0
170	SLU 23	614	-1	5733	0.77	27.7	0
170	SLU 24	697	0	5923	0.05	31.34	0
170	SLU 25	664	0	5887	0.48	29.91	0
170	SLU 26	628	-1	5812	0.77	28.32	0
170	SLU 27	711	0	6002	0.05	31.95	0
170	SLU 28	678	0	5966	0.48	30.52	0
170	SLU 29	697	0	5950	0.05	31.32	0
170	SLU 30	664	0	5915	0.48	29.89	0
170	SLU 31	768	-1	6639	0.75	34.46	0
170	SLU 32	851	0	6828	0.03	38.09	0
170	SLU 33	818	0	6793	0.46	36.66	0
170	SLU 34	782	-1	6718	0.75	35.08	0
170	SLU 35	865	0	6907	0.03	38.71	0
170	SLU 36	832	0	6872	0.46	37.28	0
170	SLU 37	851	0	6856	0.03	38.08	0
170	SLU 38	818	0	6821	0.46	36.65	0
170	SLU 39	889	0	7086	0.03	39.74	0
170	SLU 40	856	0	7051	0.46	38.31	0
170	SLU 41	903	0	7165	0.03	40.36	0
170	SLU 42	870	0	7130	0.45	38.93	0
170	SLU 43	646	0	6208	0.1	29.24	0
170	SLU 44	591	-1	6149	0.82	26.86	0
170	SLU 45	674	0	6338	0.1	30.49	0
170	SLU 46	641	0	6303	0.53	29.06	0
170	SLU 47	605	-1	6228	0.81	27.47	0
170	SLU 48	688	0	6417	0.1	31.1	0
170	SLU 49	655	0	6382	0.53	29.67	0
170	SLU 50	674	0	6366	0.1	30.48	0
170	SLU 51	641	0	6331	0.53	29.05	0
170	SLU 52	745	-1	7054	0.8	33.61	0
170	SLU 53	828	0	7244	0.08	37.24	0
170	SLU 54	795	0	7208	0.51	35.81	0
170	SLU 55	759	-1	7134	0.79	34.23	0
170	SLU 56	842	0	7323	0.08	37.86	0
170	SLU 57	809	0	7288	0.51	36.43	0
170	SLU 58	828	0	7272	0.08	37.23	0
170	SLU 59	795	0	7236	0.51	35.8	0
170	SLU 60	866	0	7502	0.08	38.89	0
170	SLU 61	833	0	7466	0.5	37.46	0
170	SLU 62	880	0	7581	0.07	39.51	0
170	SLU 63	847	0	7545	0.5	38.08	0
170	SLU 64	783	0	7013	0.09	35.25	0
170	SLU 65	727	-1	6953	0.8	32.87	0
170	SLU 66	811	0	7143	0.08	36.5	0
170	SLU 67	777	0	7107	0.51	35.07	0
170	SLU 68	741	-1	7032	0.8	33.48	0
170	SLU 69	824	0	7222	0.08	37.12	0
170	SLU 70	791	0	7187	0.51	35.69	0
170	SLU 71	810	0	7171	0.08	36.49	0
170	SLU 72	777	0	7135	0.51	35.06	0
170	SLU 73	881	-1	7859	0.78	39.62	0
170	SLU 74	964	0	8049	0.06	43.26	0
170	SLU 75	931	0	8013	0.49	41.83	0
170	SLU 76	895	-1	7938	0.78	40.24	0
170	SLU 77	978	0	8128	0.06	43.87	0
170	SLU 78	945	0	8092	0.49	42.44	0
170	SLU 79	964	0	8076	0.06	43.24	0
170	SLU 80	931	0	8041	0.49	41.81	0
170	SLU 81	1003	0	8306	0.06	44.9	0
170	SLU 82	969	0	8271	0.48	43.47	0
170	SLU 83	1016	0	8386	0.06	45.52	0
170	SLU 84	983	0	8350	0.48	44.09	0
170	SLE RA 1	572	0	5217	0.07	25.79	0
170	SLE RA 2	535	0	5178	0.54	24.21	0
170	SLE RA 3	591	0	5304	0.07	26.63	0
170	SLE RA 4	568	0	5281	0.35	25.67	0
170	SLE RA 5	544	0	5231	0.54	24.62	0
170	SLE RA 6	600	0	5357	0.07	27.04	0
170	SLE RA 7	578	0	5333	0.35	26.08	0
170	SLE RA 8	590	0	5323	0.07	26.62	0
170	SLE RA 9	568	0	5299	0.35	25.67	0
170	SLE RA 10	638	0	5782	0.53	28.71	0
170	SLE RA 11	693	0	5908	0.05	31.13	0
170	SLE RA 12	671	0	5885	0.34	30.18	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
170	SLE RA 13	647	0	5835	0.53	29.12	0
170	SLE RA 14	702	0	5961	0.05	31.54	0
170	SLE RA 15	680	0	5937	0.34	30.59	0
170	SLE RA 16	693	0	5927	0.05	31.12	0
170	SLE RA 17	671	0	5903	0.34	30.17	0
170	SLE RA 18	719	0	6080	0.05	32.23	0
170	SLE RA 19	696	0	6056	0.34	31.28	0
170	SLE RA 20	728	0	6133	0.05	32.64	0
170	SLE RA 21	706	0	6109	0.33	31.69	0
170	SLE FR 1	572	0	5217	0.07	25.79	0
170	SLE FR 2	565	0	5210	0.17	25.48	0
170	SLE FR 3	576	0	5239	0.07	25.96	0
170	SLE FR 4	609	0	5468	0.16	27.41	0
170	SLE FR 5	620	0	5497	0.06	27.89	0
170	SLE FR 6	645	0	5649	0.06	29.01	0
170	SLE QP 1	572	0	5217	0.07	25.79	0
170	SLE QP 2	616	0	5476	0.06	27.73	0
170	SLD 1	1631	25	5922	-25.16	72.84	0.06
170	SLD 2	1631	25	5922	-25.16	72.84	0.06
170	SLD 3	1501	-7	5850	7.54	67.15	-0.02
170	SLD 4	1501	-7	5850	7.54	67.15	-0.02
170	SLD 5	1118	55	5720	-57.11	49.9	0.14
170	SLD 6	1118	55	5720	-57.11	49.9	0.14
170	SLD 7	685	-50	5479	51.91	30.91	-0.13
170	SLD 8	685	-50	5479	51.91	30.91	-0.13
170	SLD 9	548	50	5473	-51.78	24.54	0.13
170	SLD 10	548	50	5473	-51.78	24.54	0.13
170	SLD 11	115	-56	5233	57.24	5.55	-0.14
170	SLD 12	115	-56	5233	57.24	5.55	-0.14
170	SLD 13	-269	7	5102	-7.41	-11.7	0.02
170	SLD 14	-269	7	5102	-7.41	-11.7	0.02
170	SLD 15	-399	-25	5030	25.29	-17.39	-0.06
170	SLD 16	-399	-25	5030	25.29	-17.39	-0.06
170	SLV 1	2978	63	6527	-64.45	132.75	0.16
170	SLV 2	2978	63	6527	-64.45	132.75	0.16
170	SLV 3	2673	-18	6345	19.28	119.38	-0.05
170	SLV 4	2673	-18	6345	19.28	119.38	-0.05
170	SLV 5	1787	142	6068	-146.29	79.5	0.37
170	SLV 6	1787	142	6068	-146.29	79.5	0.37
170	SLV 7	771	-129	5460	132.83	34.95	-0.33
170	SLV 8	771	-129	5460	132.83	34.95	-0.33
170	SLV 9	461	128	5492	-132.7	20.5	0.33
170	SLV 10	461	128	5492	-132.7	20.5	0.33
170	SLV 11	-555	-142	4884	146.42	-24.05	-0.37
170	SLV 12	-555	-142	4884	146.42	-24.05	-0.37
170	SLV 13	-1441	18	4608	-19.15	-63.93	0.05
170	SLV 14	-1441	18	4608	-19.15	-63.93	0.05
170	SLV 15	-1746	-63	4425	64.58	-77.3	-0.16
170	SLV 16	-1746	-63	4425	64.58	-77.3	-0.16
171	SLU 1	425	0	5021	0.01	17.74	0
171	SLU 2	367	0	4951	0.61	15.27	0
171	SLU 3	451	0	5153	0	18.84	0
171	SLU 4	416	0	5111	0.36	17.35	0
171	SLU 5	380	0	5032	0.61	15.79	0
171	SLU 6	464	0	5233	0	19.36	0
171	SLU 7	429	0	5192	0.36	17.88	0
171	SLU 8	451	0	5182	0	18.79	0
171	SLU 9	416	0	5141	0.36	17.31	0
171	SLU 10	498	0	5871	0.59	20.82	0
171	SLU 11	581	0	6072	-0.02	24.39	0
171	SLU 12	547	0	6030	0.34	22.91	0
171	SLU 13	510	0	5951	0.58	21.35	0
171	SLU 14	594	0	6153	-0.02	24.91	0
171	SLU 15	559	0	6111	0.33	23.43	0
171	SLU 16	581	0	6102	-0.02	24.34	0
171	SLU 17	546	0	6060	0.34	22.86	0
171	SLU 18	611	0	6335	-0.02	25.67	0
171	SLU 19	577	0	6293	0.34	24.19	0
171	SLU 20	624	0	6415	-0.03	26.2	0
171	SLU 21	589	0	6374	0.33	24.72	0
171	SLU 22	541	0	5837	-0.01	22.68	0
171	SLU 23	483	0	5767	0.59	20.21	0
171	SLU 24	567	0	5969	-0.02	23.78	0
171	SLU 25	532	0	5927	0.34	22.3	0
171	SLU 26	496	0	5848	0.58	20.74	0
171	SLU 27	580	0	6050	-0.02	24.3	0
171	SLU 28	545	0	6008	0.34	22.82	0
171	SLU 29	567	0	5999	-0.02	23.73	0
171	SLU 30	532	0	5957	0.34	22.25	0
171	SLU 31	614	0	6687	0.56	25.77	0
171	SLU 32	697	0	6888	-0.04	29.33	0
171	SLU 33	663	0	6847	0.32	27.85	0
171	SLU 34	626	0	6768	0.56	26.29	0
171	SLU 35	710	0	6969	-0.05	29.86	0
171	SLU 36	675	0	6927	0.31	28.37	0
171	SLU 37	697	0	6918	-0.05	29.29	0
171	SLU 38	662	0	6876	0.31	27.8	0
171	SLU 39	728	0	7151	-0.05	30.62	0
171	SLU 40	693	0	7109	0.31	29.13	0
171	SLU 41	740	0	7232	-0.05	31.14	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
171	SLU 42	705	0	7190	0.31	29.66	0
171	SLU 43	513	0	6247	0.02	21.37	0
171	SLU 44	455	0	6177	0.62	18.9	0
171	SLU 45	539	0	6379	0.01	22.46	0
171	SLU 46	504	0	6337	0.37	20.98	0
171	SLU 47	468	0	6258	0.62	19.42	0
171	SLU 48	552	0	6460	0.01	22.99	0
171	SLU 49	517	0	6418	0.37	21.5	0
171	SLU 50	538	0	6409	0.01	22.42	0
171	SLU 51	504	0	6367	0.37	20.93	0
171	SLU 52	585	0	7097	0.6	24.45	0
171	SLU 53	669	0	7299	-0.01	28.02	0
171	SLU 54	634	0	7257	0.35	26.53	0
171	SLU 55	598	0	7178	0.59	24.97	0
171	SLU 56	682	0	7380	-0.01	28.54	0
171	SLU 57	647	0	7338	0.35	27.06	0
171	SLU 58	669	0	7329	-0.01	27.97	0
171	SLU 59	634	0	7287	0.35	26.49	0
171	SLU 60	699	0	7561	-0.01	29.3	0
171	SLU 61	664	0	7519	0.35	27.82	0
171	SLU 62	712	0	7642	-0.02	29.83	0
171	SLU 63	677	0	7600	0.34	28.34	0
171	SLU 64	629	0	7063	0	26.31	0
171	SLU 65	571	0	6993	0.6	23.84	0
171	SLU 66	655	0	7195	-0.01	27.41	0
171	SLU 67	620	0	7153	0.35	25.92	0
171	SLU 68	584	0	7074	0.59	24.36	0
171	SLU 69	668	0	7276	-0.01	27.93	0
171	SLU 70	633	0	7234	0.35	26.45	0
171	SLU 71	654	0	7225	-0.01	27.36	0
171	SLU 72	620	0	7183	0.35	25.88	0
171	SLU 73	701	0	7913	0.57	29.39	0
171	SLU 74	785	0	8115	-0.03	32.96	0
171	SLU 75	750	0	8073	0.33	31.48	0
171	SLU 76	714	0	7994	0.57	29.92	0
171	SLU 77	798	0	8196	-0.04	33.49	0
171	SLU 78	763	0	8154	0.32	32	0
171	SLU 79	785	0	8145	-0.04	32.92	0
171	SLU 80	750	0	8103	0.32	31.43	0
171	SLU 81	815	0	8377	-0.04	34.25	0
171	SLU 82	780	0	8335	0.32	32.76	0
171	SLU 83	828	0	8458	-0.04	34.77	0
171	SLU 84	793	0	8416	0.32	33.29	0
171	SLE RA 1	459	0	5254	0	19.15	0
171	SLE RA 2	420	0	5207	0.4	17.5	0
171	SLE RA 3	476	0	5342	0	19.88	0
171	SLE RA 4	452	0	5314	0.24	18.89	0
171	SLE RA 5	428	0	5261	0.4	17.85	0
171	SLE RA 6	484	0	5396	0	20.23	0
171	SLE RA 7	461	0	5368	0.24	19.24	0
171	SLE RA 8	475	0	5362	0	19.85	0
171	SLE RA 9	452	0	5334	0.24	18.86	0
171	SLE RA 10	507	0	5821	0.39	21.21	0
171	SLE RA 11	563	0	5955	-0.02	23.59	0
171	SLE RA 12	539	0	5927	0.22	22.6	0
171	SLE RA 13	515	0	5874	0.38	21.56	0
171	SLE RA 14	571	0	6009	-0.02	23.94	0
171	SLE RA 15	548	0	5981	0.22	22.95	0
171	SLE RA 16	562	0	5975	-0.02	23.56	0
171	SLE RA 17	539	0	5947	0.22	22.57	0
171	SLE RA 18	583	0	6130	-0.02	24.44	0
171	SLE RA 19	559	0	6102	0.22	23.45	0
171	SLE RA 20	591	0	6184	-0.02	24.79	0
171	SLE RA 21	568	0	6156	0.22	23.8	0
171	SLE FR 1	459	0	5254	0	19.15	0
171	SLE FR 2	451	0	5245	0.08	18.82	0
171	SLE FR 3	462	0	5276	0	19.29	0
171	SLE FR 4	488	0	5507	0.08	20.41	0
171	SLE FR 5	499	0	5538	-0.01	20.88	0
171	SLE FR 6	521	0	5692	-0.01	21.8	0
171	SLE QP 1	459	0	5254	0	19.15	0
171	SLE QP 2	496	0	5517	0	20.74	0
171	SLD 1	1529	23	5867	-24.08	66.72	0.06
171	SLD 2	1529	23	5867	-24.08	66.72	0.06
171	SLD 3	1400	-7	5784	7.07	60.97	-0.02
171	SLD 4	1400	-7	5784	7.07	60.97	-0.02
171	SLD 5	1003	53	5748	-54.47	43.25	0.13
171	SLD 6	1003	53	5748	-54.47	43.25	0.13
171	SLD 7	570	-48	5470	49.37	24.09	-0.12
171	SLD 8	570	-48	5470	49.37	24.09	-0.12
171	SLD 9	422	48	5563	-49.37	17.39	0.12
171	SLD 10	422	48	5563	-49.37	17.39	0.12
171	SLD 11	-11	-53	5285	54.46	-1.77	-0.14
171	SLD 12	-11	-53	5285	54.46	-1.77	-0.14
171	SLD 13	-408	7	5250	-7.08	-19.49	0.02
171	SLD 14	-408	7	5250	-7.08	-19.49	0.02
171	SLD 15	-538	-23	5166	24.07	-25.24	-0.06
171	SLD 16	-538	-23	5166	24.07	-25.24	-0.06
171	SLV 1	2902	60	6345	-61.56	127.77	0.15
171	SLV 2	2902	60	6345	-61.56	127.77	0.15



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
171	SLV 3	2597	-17	6133	18.17	114.27	-0.04
171	SLV 4	2597	-17	6133	18.17	114.27	-0.04
171	SLV 5	1681	135	6086	-139.4	73.33	0.34
171	SLV 6	1681	135	6086	-139.4	73.33	0.34
171	SLV 7	663	-122	5381	126.38	28.32	-0.31
171	SLV 8	663	-122	5381	126.38	28.32	-0.31
171	SLV 9	329	122	5653	-126.38	13.16	0.31
171	SLV 10	329	122	5653	-126.38	13.16	0.31
171	SLV 11	-689	-135	4947	139.39	-31.85	-0.35
171	SLV 12	-689	-135	4947	139.39	-31.85	-0.35
171	SLV 13	-1605	17	4901	-18.18	-72.79	0.04
171	SLV 14	-1605	17	4901	-18.18	-72.79	0.04
171	SLV 15	-1911	-60	4689	61.55	-86.29	-0.15
171	SLV 16	-1911	-60	4689	61.55	-86.29	-0.15
172	SLU 1	335	0	5052	-0.05	15.56	0
172	SLU 2	275	0	4969	0.42	12.94	0
172	SLU 3	359	0	5186	-0.06	16.65	0
172	SLU 4	323	0	5136	0.22	15.08	0
172	SLU 5	287	0	5052	0.41	13.47	0
172	SLU 6	371	0	5269	-0.07	17.18	0
172	SLU 7	335	0	5219	0.21	15.61	0
172	SLU 8	358	0	5219	-0.07	16.62	0
172	SLU 9	322	0	5169	0.22	15.05	0
172	SLU 10	383	0	5901	0.39	17.83	0
172	SLU 11	468	0	6118	-0.09	21.54	0
172	SLU 12	432	0	6068	0.2	19.97	0
172	SLU 13	395	0	5984	0.39	18.36	0
172	SLU 14	479	0	6201	-0.09	22.07	0
172	SLU 15	443	0	6152	0.19	20.5	0
172	SLU 16	467	0	6151	-0.09	21.51	0
172	SLU 17	431	0	6101	0.19	19.94	0
172	SLU 18	490	0	6384	-0.09	22.55	0
172	SLU 19	454	0	6334	0.19	20.98	0
172	SLU 20	502	0	6467	-0.1	23.07	0
172	SLU 21	466	0	6417	0.19	21.5	0
172	SLU 22	433	0	5879	-0.08	19.99	0
172	SLU 23	373	0	5796	0.39	17.37	0
172	SLU 24	457	0	6013	-0.09	21.08	0
172	SLU 25	421	0	5963	0.19	19.51	0
172	SLU 26	385	0	5879	0.38	17.9	0
172	SLU 27	469	0	6096	-0.1	21.61	0
172	SLU 28	433	0	6046	0.19	20.04	0
172	SLU 29	456	0	6046	-0.09	21.04	0
172	SLU 30	420	0	5996	0.19	19.47	0
172	SLU 31	481	0	6728	0.37	22.26	0
172	SLU 32	566	0	6945	-0.11	25.97	0
172	SLU 33	530	0	6896	0.17	24.4	0
172	SLU 34	493	0	6812	0.36	22.79	0
172	SLU 35	577	0	7029	-0.12	26.5	0
172	SLU 36	541	0	6979	0.16	24.93	0
172	SLU 37	565	0	6978	-0.12	25.93	0
172	SLU 38	529	0	6928	0.16	24.36	0
172	SLU 39	588	0	7211	-0.12	26.97	0
172	SLU 40	552	0	7161	0.17	25.4	0
172	SLU 41	600	0	7294	-0.12	27.5	0
172	SLU 42	564	0	7244	0.16	25.93	0
172	SLU 43	402	0	6285	-0.06	18.71	0
172	SLU 44	342	0	6201	0.41	16.09	0
172	SLU 45	426	0	6418	-0.07	19.8	0
172	SLU 46	390	0	6368	0.21	18.23	0
172	SLU 47	353	0	6284	0.4	16.62	0
172	SLU 48	438	0	6501	-0.07	20.33	0
172	SLU 49	402	0	6452	0.21	18.76	0
172	SLU 50	425	0	6451	-0.07	19.77	0
172	SLU 51	389	0	6401	0.21	18.2	0
172	SLU 52	450	0	7134	0.39	20.98	0
172	SLU 53	534	0	7351	-0.09	24.69	0
172	SLU 54	498	0	7301	0.19	23.12	0
172	SLU 55	462	0	7217	0.38	21.51	0
172	SLU 56	546	0	7434	-0.1	25.22	0
172	SLU 57	510	0	7384	0.18	23.65	0
172	SLU 58	534	0	7383	-0.1	24.66	0
172	SLU 59	498	0	7333	0.18	23.09	0
172	SLU 60	557	0	7616	-0.09	25.7	0
172	SLU 61	521	0	7566	0.19	24.13	0
172	SLU 62	569	0	7699	-0.1	26.23	0
172	SLU 63	532	0	7649	0.18	24.65	0
172	SLU 64	500	0	7112	-0.09	23.14	0
172	SLU 65	440	0	7028	0.38	20.52	0
172	SLU 66	524	0	7245	-0.09	24.23	0
172	SLU 67	488	0	7196	0.19	22.66	0
172	SLU 68	451	0	7112	0.38	21.05	0
172	SLU 69	536	0	7329	-0.1	24.76	0
172	SLU 70	500	0	7279	0.18	23.19	0
172	SLU 71	523	0	7278	-0.1	24.19	0
172	SLU 72	487	0	7228	0.18	22.62	0
172	SLU 73	548	0	7961	0.36	25.41	0
172	SLU 74	632	0	8178	-0.12	29.12	0
172	SLU 75	596	0	8128	0.16	27.55	0
172	SLU 76	560	0	8044	0.35	25.94	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
172	SLU 77	644	0	8261	-0.13	29.65	0
172	SLU 78	608	0	8211	0.16	28.08	0
172	SLU 79	632	0	8210	-0.12	29.08	0
172	SLU 80	596	0	8160	0.16	27.51	0
172	SLU 81	655	0	8443	-0.12	30.12	0
172	SLU 82	619	0	8393	0.16	28.55	0
172	SLU 83	667	0	8526	-0.13	30.65	0
172	SLU 84	631	0	8476	0.15	29.08	0
172	SLE RA 1	363	0	5289	-0.06	16.83	0
172	SLE RA 2	323	0	5233	0.25	15.08	0
172	SLE RA 3	379	0	5378	-0.07	17.55	0
172	SLE RA 4	355	0	5345	0.12	16.51	0
172	SLE RA 5	331	0	5289	0.25	15.43	0
172	SLE RA 6	387	0	5433	-0.07	17.91	0
172	SLE RA 7	363	0	5400	0.12	16.86	0
172	SLE RA 8	379	0	5399	-0.07	17.53	0
172	SLE RA 9	355	0	5366	0.12	16.48	0
172	SLE RA 10	395	0	5855	0.24	18.34	0
172	SLE RA 11	451	0	5999	-0.08	20.81	0
172	SLE RA 12	427	0	5966	0.11	19.77	0
172	SLE RA 13	403	0	5910	0.23	18.69	0
172	SLE RA 14	459	0	6055	-0.09	21.17	0
172	SLE RA 15	435	0	6021	0.1	20.12	0
172	SLE RA 16	451	0	6021	-0.09	20.79	0
172	SLE RA 17	427	0	5988	0.1	19.74	0
172	SLE RA 18	466	0	6176	-0.08	21.48	0
172	SLE RA 19	442	0	6143	0.1	20.43	0
172	SLE RA 20	474	0	6232	-0.09	21.83	0
172	SLE RA 21	450	0	6199	0.1	20.79	0
172	SLE FR 1	363	0	5289	-0.06	16.83	0
172	SLE FR 2	355	0	5278	0	16.48	0
172	SLE FR 3	366	0	5311	-0.06	16.97	0
172	SLE FR 4	386	0	5544	0	17.87	0
172	SLE FR 5	397	0	5577	-0.07	18.36	0
172	SLE FR 6	415	0	5733	-0.07	19.15	0
172	SLE QP 1	363	0	5289	-0.06	16.83	0
172	SLE QP 2	394	0	5555	-0.07	18.22	0
172	SLD 1	1434	20	5866	-21.08	65.36	0.05
172	SLD 2	1434	20	5866	-21.08	65.36	0.05
172	SLD 3	1307	-5	5765	5.98	59.66	-0.01
172	SLD 4	1307	-5	5765	5.98	59.66	-0.01
172	SLD 5	899	45	5801	-47.41	41.02	0.11
172	SLD 6	899	45	5801	-47.41	41.02	0.11
172	SLD 7	475	-41	5466	42.79	22	-0.1
172	SLD 8	475	-41	5466	42.79	22	-0.1
172	SLD 9	312	41	5644	-42.92	14.45	0.1
172	SLD 10	312	41	5644	-42.92	14.45	0.1
172	SLD 11	-111	-45	5309	47.27	-4.57	-0.11
172	SLD 12	-111	-45	5309	47.27	-4.57	-0.11
172	SLD 13	-520	5	5345	-6.12	-23.21	0.01
172	SLD 14	-520	5	5345	-6.12	-23.21	0.01
172	SLD 15	-647	-20	5244	20.94	-28.92	-0.05
172	SLD 16	-647	-20	5244	20.94	-28.92	-0.05
172	SLV 1	2817	52	6288	-53.76	128.01	0.12
172	SLV 2	2817	52	6288	-53.76	128.01	0.12
172	SLV 3	2518	-14	6033	15.45	114.58	-0.03
172	SLV 4	2518	-14	6033	15.45	114.58	-0.03
172	SLV 5	1575	116	6162	-121.15	71.53	0.27
172	SLV 6	1575	116	6162	-121.15	71.53	0.27
172	SLV 7	577	-104	5312	109.56	26.76	-0.24
172	SLV 8	577	-104	5312	109.56	26.76	-0.24
172	SLV 9	210	104	5798	-109.7	9.69	0.24
172	SLV 10	210	104	5798	-109.7	9.69	0.24
172	SLV 11	-787	-116	4948	121.02	-35.08	-0.27
172	SLV 12	-787	-116	4948	121.02	-35.08	-0.27
172	SLV 13	-1730	14	5077	-15.59	-78.13	0.03
172	SLV 14	-1730	14	5077	-15.59	-78.13	0.03
172	SLV 15	-2029	-52	4822	53.63	-91.56	-0.12
172	SLV 16	-2029	-52	4822	53.63	-91.56	-0.12
173	SLU 1	176	0	5071	-0.12	6.92	0
173	SLU 2	119	0	4975	0.21	4.45	0
173	SLU 3	196	0	5206	-0.13	7.76	0
173	SLU 4	161	0	5149	0.06	6.28	0
173	SLU 5	128	0	5060	0.2	4.83	0
173	SLU 6	205	0	5292	-0.14	8.13	0
173	SLU 7	170	0	5234	0.05	6.65	0
173	SLU 8	194	0	5241	-0.14	7.67	0
173	SLU 9	160	0	5184	0.06	6.19	0
173	SLU 10	193	0	5914	0.18	7.6	0
173	SLU 11	270	0	6146	-0.16	10.9	0
173	SLU 12	235	0	6088	0.04	9.42	0
173	SLU 13	202	0	6000	0.17	7.97	0
173	SLU 14	279	0	6231	-0.17	11.28	0
173	SLU 15	245	0	6173	0.03	9.8	0
173	SLU 16	268	0	6181	-0.16	10.81	0
173	SLU 17	234	0	6123	0.03	9.33	0
173	SLU 18	282	0	6413	-0.16	11.41	0
173	SLU 19	248	0	6355	0.04	9.93	0
173	SLU 20	291	0	6498	-0.17	11.78	0
173	SLU 21	257	0	6441	0.03	10.31	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
173	SLU 22	244	0	5905	-0.15	9.8	0
173	SLU 23	187	0	5809	0.18	7.34	0
173	SLU 24	264	0	6040	-0.16	10.64	0
173	SLU 25	229	0	5983	0.03	9.16	0
173	SLU 26	196	0	5894	0.17	7.71	0
173	SLU 27	273	0	6126	-0.17	11.01	0
173	SLU 28	239	0	6068	0.02	9.53	0
173	SLU 29	262	0	6076	-0.17	10.55	0
173	SLU 30	228	0	6018	0.03	9.07	0
173	SLU 31	261	0	6748	0.15	10.48	0
173	SLU 32	338	0	6980	-0.19	13.78	0
173	SLU 33	304	0	6922	0.01	12.3	0
173	SLU 34	270	0	6834	0.14	10.86	0
173	SLU 35	347	0	7065	-0.2	14.16	0
173	SLU 36	313	0	7008	0	12.68	0
173	SLU 37	337	0	7015	-0.19	13.69	0
173	SLU 38	302	0	6957	0	12.22	0
173	SLU 39	350	0	7247	-0.19	14.29	0
173	SLU 40	316	0	7189	0.01	12.81	0
173	SLU 41	359	0	7332	-0.2	14.67	0
173	SLU 42	325	0	7275	0	13.19	0
173	SLU 43	205	0	6306	-0.15	8	0
173	SLU 44	148	0	6210	0.18	5.54	0
173	SLU 45	225	0	6441	-0.16	8.84	0
173	SLU 46	191	0	6384	0.04	7.37	0
173	SLU 47	157	0	6295	0.17	5.92	0
173	SLU 48	234	0	6527	-0.17	9.22	0
173	SLU 49	200	0	6469	0.03	7.74	0
173	SLU 50	224	0	6477	-0.17	8.76	0
173	SLU 51	189	0	6419	0.03	7.28	0
173	SLU 52	222	0	7149	0.16	8.69	0
173	SLU 53	299	0	7381	-0.18	11.99	0
173	SLU 54	265	0	7323	0.01	10.51	0
173	SLU 55	231	0	7235	0.15	9.06	0
173	SLU 56	308	0	7466	-0.19	12.36	0
173	SLU 57	274	0	7409	0	10.89	0
173	SLU 58	298	0	7416	-0.19	11.9	0
173	SLU 59	263	0	7359	0.01	10.42	0
173	SLU 60	311	0	7648	-0.18	12.5	0
173	SLU 61	277	0	7590	0.01	11.02	0
173	SLU 62	320	0	7733	-0.19	12.87	0
173	SLU 63	286	0	7676	0	11.39	0
173	SLU 64	274	0	7140	-0.18	10.89	0
173	SLU 65	216	0	7044	0.15	8.42	0
173	SLU 66	293	0	7275	-0.19	11.72	0
173	SLU 67	259	0	7218	0.01	10.25	0
173	SLU 68	225	0	7129	0.14	8.8	0
173	SLU 69	302	0	7361	-0.2	12.1	0
173	SLU 70	268	0	7303	0	10.62	0
173	SLU 71	292	0	7311	-0.2	11.64	0
173	SLU 72	257	0	7253	0	10.16	0
173	SLU 73	291	0	7983	0.13	11.57	0
173	SLU 74	367	0	8215	-0.21	14.87	0
173	SLU 75	333	0	8157	-0.02	13.39	0
173	SLU 76	300	0	8069	0.12	11.94	0
173	SLU 77	377	0	8300	-0.22	15.24	0
173	SLU 78	342	0	8243	-0.03	13.77	0
173	SLU 79	366	0	8250	-0.22	14.78	0
173	SLU 80	332	0	8193	-0.02	13.3	0
173	SLU 81	380	0	8482	-0.21	15.38	0
173	SLU 82	345	0	8424	-0.02	13.9	0
173	SLU 83	389	0	8567	-0.22	15.75	0
173	SLU 84	354	0	8510	-0.03	14.28	0
173	SLE RA 1	195	0	5309	-0.13	7.74	0
173	SLE RA 2	157	0	5245	0.09	6.1	0
173	SLE RA 3	209	0	5399	-0.14	8.3	0
173	SLE RA 4	186	0	5361	-0.01	7.31	0
173	SLE RA 5	163	0	5302	0.08	6.35	0
173	SLE RA 6	215	0	5456	-0.14	8.55	0
173	SLE RA 7	192	0	5418	-0.01	7.56	0
173	SLE RA 8	208	0	5423	-0.14	8.24	0
173	SLE RA 9	185	0	5384	-0.01	7.26	0
173	SLE RA 10	207	0	5871	0.07	8.19	0
173	SLE RA 11	258	0	6026	-0.15	10.4	0
173	SLE RA 12	235	0	5987	-0.02	9.41	0
173	SLE RA 13	213	0	5928	0.07	8.45	0
173	SLE RA 14	264	0	6083	-0.16	10.65	0
173	SLE RA 15	241	0	6044	-0.03	9.66	0
173	SLE RA 16	257	0	6049	-0.16	10.34	0
173	SLE RA 17	234	0	6011	-0.03	9.35	0
173	SLE RA 18	266	0	6204	-0.15	10.73	0
173	SLE RA 19	243	0	6165	-0.02	9.75	0
173	SLE RA 20	272	0	6261	-0.16	10.99	0
173	SLE RA 21	249	0	6222	-0.03	10	0
173	SLE FR 1	195	0	5309	-0.13	7.74	0
173	SLE FR 2	188	0	5296	-0.09	7.41	0
173	SLE FR 3	198	0	5332	-0.13	7.84	0
173	SLE FR 4	209	0	5565	-0.09	8.31	0
173	SLE FR 5	219	0	5600	-0.14	8.74	0
173	SLE FR 6	231	0	5756	-0.14	9.24	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
173	SLE QP 1	195	0	5309	-0.13	7.74	0
173	SLE QP 2	217	0	5577	-0.14	8.64	0
173	SLD 1	1217	16	5325	-16.45	54.48	0.03
173	SLD 2	1217	16	5325	-16.45	54.48	0.03
173	SLD 3	1098	-4	5200	4.35	49.03	-0.01
173	SLD 4	1098	-4	5200	4.35	49.03	-0.01
173	SLD 5	697	35	5692	-36.58	30.66	0.07
173	SLD 6	697	35	5692	-36.58	30.66	0.07
173	SLD 7	301	-31	5274	32.76	12.49	-0.06
173	SLD 8	301	-31	5274	32.76	12.49	-0.06
173	SLD 9	133	31	5881	-33.03	4.79	0.06
173	SLD 10	133	31	5881	-33.03	4.79	0.06
173	SLD 11	-264	-35	5463	36.31	-13.38	-0.07
173	SLD 12	-264	-35	5463	36.31	-13.38	-0.07
173	SLD 13	-664	4	5955	-4.62	-31.75	0.01
173	SLD 14	-664	4	5955	-4.62	-31.75	0.01
173	SLD 15	-783	-16	5829	16.18	-37.2	-0.03
173	SLD 16	-783	-16	5829	16.18	-37.2	-0.03
173	SLV 1	2546	41	5007	-41.79	115.4	0.08
173	SLV 2	2546	41	5007	-41.79	115.4	0.08
173	SLV 3	2265	-10	4692	11.35	102.57	-0.02
173	SLV 4	2265	-10	4692	11.35	102.57	-0.02
173	SLV 5	1341	89	5885	-93.23	60.12	0.18
173	SLV 6	1341	89	5885	-93.23	60.12	0.18
173	SLV 7	406	-80	4834	83.91	17.37	-0.16
173	SLV 8	406	-80	4834	83.91	17.37	-0.16
173	SLV 9	27	80	6321	-84.18	-0.09	0.16
173	SLV 10	27	80	6321	-84.18	-0.09	0.16
173	SLV 11	-907	-89	5270	92.96	-42.84	-0.18
173	SLV 12	-907	-89	5270	92.96	-42.84	-0.18
173	SLV 13	-1832	10	6463	-11.63	-85.29	0.02
173	SLV 14	-1832	10	6463	-11.63	-85.29	0.02
173	SLV 15	-2113	-41	6147	41.52	-98.12	-0.08
173	SLV 16	-2113	-41	6147	41.52	-98.12	-0.08
174	SLU 1	-36	0	5035	-0.21	0.16	0
174	SLU 2	-85	0	4933	-0.05	-2.14	0
174	SLU 3	-24	0	5169	-0.23	0.82	0
174	SLU 4	-53	0	5108	-0.13	-0.56	0
174	SLU 5	-80	0	5019	-0.06	-1.87	0
174	SLU 6	-18	0	5256	-0.24	1.09	0
174	SLU 7	-48	0	5194	-0.14	-0.29	0
174	SLU 8	-26	0	5208	-0.24	0.7	0
174	SLU 9	-56	0	5146	-0.14	-0.68	0
174	SLU 10	-57	0	5865	-0.07	-0.5	0
174	SLU 11	4	0	6102	-0.25	2.46	0
174	SLU 12	-25	0	6040	-0.15	1.08	0
174	SLU 13	-52	0	5951	-0.08	-0.23	0
174	SLU 14	10	0	6188	-0.27	2.73	0
174	SLU 15	-20	0	6127	-0.17	1.35	0
174	SLU 16	2	0	6140	-0.26	2.34	0
174	SLU 17	-28	0	6079	-0.16	0.96	0
174	SLU 18	4	0	6367	-0.25	2.5	0
174	SLU 19	-26	0	6306	-0.15	1.12	0
174	SLU 20	9	0	6453	-0.26	2.77	0
174	SLU 21	-21	0	6392	-0.16	1.39	0
174	SLU 22	-9	0	5864	-0.25	1.75	0
174	SLU 23	-58	0	5761	-0.08	-0.55	0
174	SLU 24	4	0	5998	-0.26	2.42	0
174	SLU 25	-25	0	5937	-0.16	1.03	0
174	SLU 26	-53	0	5848	-0.09	-0.28	0
174	SLU 27	9	0	6084	-0.28	2.69	0
174	SLU 28	-20	0	6023	-0.18	1.3	0
174	SLU 29	2	0	6036	-0.27	2.3	0
174	SLU 30	-28	0	5975	-0.17	0.91	0
174	SLU 31	-30	0	6694	-0.11	1.09	0
174	SLU 32	32	0	6930	-0.29	4.06	0
174	SLU 33	3	0	6869	-0.19	2.67	0
174	SLU 34	-25	0	6780	-0.12	1.36	0
174	SLU 35	37	0	7017	-0.3	4.33	0
174	SLU 36	8	0	6955	-0.2	2.94	0
174	SLU 37	30	0	6969	-0.3	3.94	0
174	SLU 38	0	0	6907	-0.2	2.55	0
174	SLU 39	31	0	7196	-0.28	4.1	0
174	SLU 40	2	0	7134	-0.18	2.71	0
174	SLU 41	36	0	7282	-0.29	4.37	0
174	SLU 42	7	0	7221	-0.19	2.98	0
174	SLU 43	-57	0	6261	-0.27	-0.34	0
174	SLU 44	-106	0	6159	-0.1	-2.64	0
174	SLU 45	-44	0	6396	-0.28	0.33	0
174	SLU 46	-74	0	6334	-0.18	-1.06	0
174	SLU 47	-101	0	6245	-0.11	-2.37	0
174	SLU 48	-39	0	6482	-0.3	0.6	0
174	SLU 49	-68	0	6421	-0.2	-0.79	0
174	SLU 50	-47	0	6434	-0.29	0.2	0
174	SLU 51	-76	0	6373	-0.19	-1.18	0
174	SLU 52	-78	0	7091	-0.12	-1	0
174	SLU 53	-16	0	7328	-0.31	1.96	0
174	SLU 54	-45	0	7267	-0.21	0.58	0
174	SLU 55	-73	0	7178	-0.14	-0.73	0
174	SLU 56	-11	0	7414	-0.32	2.24	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
174	SLU 57	-40	0	7353	-0.22	0.85	0
174	SLU 58	-19	0	7367	-0.32	1.84	0
174	SLU 59	-48	0	7305	-0.22	0.46	0
174	SLU 60	-17	0	7593	-0.3	2.01	0
174	SLU 61	-46	0	7532	-0.2	0.62	0
174	SLU 62	-12	0	7680	-0.31	2.28	0
174	SLU 63	-41	0	7618	-0.21	0.89	0
174	SLU 64	-29	0	7090	-0.3	1.26	0
174	SLU 65	-78	0	6988	-0.14	-1.05	0
174	SLU 66	-16	0	7224	-0.32	1.92	0
174	SLU 67	-46	0	7163	-0.22	0.54	0
174	SLU 68	-73	0	7074	-0.15	-0.78	0
174	SLU 69	-11	0	7311	-0.33	2.19	0
174	SLU 70	-41	0	7249	-0.23	0.81	0
174	SLU 71	-19	0	7263	-0.33	1.8	0
174	SLU 72	-48	0	7201	-0.23	0.42	0
174	SLU 73	-50	0	7920	-0.16	0.59	0
174	SLU 74	12	0	8157	-0.34	3.56	0
174	SLU 75	-18	0	8095	-0.24	2.18	0
174	SLU 76	-45	0	8006	-0.17	0.86	0
174	SLU 77	17	0	8243	-0.35	3.83	0
174	SLU 78	-13	0	8182	-0.25	2.45	0
174	SLU 79	9	0	8195	-0.35	3.44	0
174	SLU 80	-20	0	8134	-0.25	2.06	0
174	SLU 81	11	0	8422	-0.33	3.6	0
174	SLU 82	-19	0	8361	-0.23	2.22	0
174	SLU 83	16	0	8508	-0.35	3.87	0
174	SLU 84	-13	0	8447	-0.25	2.49	0
174	SLE RA 1	-29	0	5272	-0.22	0.62	0
174	SLE RA 2	-61	0	5203	-0.11	-0.92	0
174	SLE RA 3	-20	0	5361	-0.23	1.06	0
174	SLE RA 4	-40	0	5320	-0.17	0.14	0
174	SLE RA 5	-58	0	5261	-0.12	-0.74	0
174	SLE RA 6	-17	0	5419	-0.24	1.24	0
174	SLE RA 7	-36	0	5378	-0.18	0.32	0
174	SLE RA 8	-22	0	5387	-0.24	0.98	0
174	SLE RA 9	-41	0	5346	-0.17	0.06	0
174	SLE RA 10	-43	0	5825	-0.13	0.17	0
174	SLE RA 11	-1	0	5983	-0.25	2.15	0
174	SLE RA 12	-21	0	5942	-0.18	1.23	0
174	SLE RA 13	-39	0	5883	-0.14	0.35	0
174	SLE RA 14	2	0	6040	-0.26	2.33	0
174	SLE RA 15	-17	0	6000	-0.19	1.41	0
174	SLE RA 16	-3	0	6009	-0.26	2.07	0
174	SLE RA 17	-23	0	5968	-0.19	1.15	0
174	SLE RA 18	-2	0	6160	-0.25	2.18	0
174	SLE RA 19	-21	0	6119	-0.18	1.26	0
174	SLE RA 20	2	0	6217	-0.25	2.36	0
174	SLE RA 21	-18	0	6176	-0.19	1.44	0
174	SLE FR 1	-29	0	5272	-0.22	0.62	0
174	SLE FR 2	-35	0	5258	-0.2	0.31	0
174	SLE FR 3	-27	0	5295	-0.23	0.69	0
174	SLE FR 4	-27	0	5524	-0.21	0.78	0
174	SLE FR 5	-19	0	5561	-0.23	1.16	0
174	SLE FR 6	-15	0	5716	-0.23	1.4	0
174	SLE QP 1	-29	0	5272	-0.22	0.62	0
174	SLE QP 2	-21	0	5538	-0.23	1.08	0
174	SLD 1	891	11	5054	-10.3	45.77	0.03
174	SLD 2	891	11	5054	-10.3	45.77	0.03
174	SLD 3	786	-2	4892	2.15	40.61	-0.01
174	SLD 4	786	-2	4892	2.15	40.61	-0.01
174	SLD 5	413	22	5640	-22.14	22.31	0.06
174	SLD 6	413	22	5640	-22.14	22.31	0.06
174	SLD 7	61	-19	5097	19.38	5.12	-0.06
174	SLD 8	61	-19	5097	19.38	5.12	-0.06
174	SLD 9	-103	19	5979	-19.84	-2.95	0.06
174	SLD 10	-103	19	5979	-19.84	-2.95	0.06
174	SLD 11	-454	-22	5437	21.68	-20.14	-0.06
174	SLD 12	-454	-22	5437	21.68	-20.14	-0.06
174	SLD 13	-827	2	6185	-2.61	-38.44	0.01
174	SLD 14	-827	2	6185	-2.61	-38.44	0.01
174	SLD 15	-933	-10	6022	9.84	-43.6	-0.03
174	SLD 16	-933	-10	6022	9.84	-43.6	-0.03
174	SLV 1	2104	27	4431	-25.83	105.15	0.07
174	SLV 2	2104	27	4431	-25.83	105.15	0.07
174	SLV 3	1855	-4	4030	5.86	93.03	-0.02
174	SLV 4	1855	-4	4030	5.86	93.03	-0.02
174	SLV 5	993	56	5815	-55.97	50.69	0.16
174	SLV 6	993	56	5815	-55.97	50.69	0.16
174	SLV 7	165	-49	4477	49.66	10.28	-0.15
174	SLV 8	165	-49	4477	49.66	10.28	-0.15
174	SLV 9	-207	49	6599	-50.12	-8.11	0.15
174	SLV 10	-207	49	6599	-50.12	-8.11	0.15
174	SLV 11	-1035	-55	5261	55.51	-48.52	-0.16
174	SLV 12	-1035	-55	5261	55.51	-48.52	-0.16
174	SLV 13	-1896	4	7046	-6.32	-90.86	0.02
174	SLV 14	-1896	4	7046	-6.32	-90.86	0.02
174	SLV 15	-2145	-27	6645	25.37	-102.98	-0.07
174	SLV 16	-2145	-27	6645	25.37	-102.98	-0.07
175	SLU 1	-372	0	5007	-0.34	-20.24	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
175	SLU 2	-400	1	4922	-0.39	-21.66	0
175	SLU 3	-372	1	5133	-0.36	-20.28	0
175	SLU 4	-389	1	5082	-0.39	-21.13	0
175	SLU 5	-402	1	5007	-0.41	-21.81	0
175	SLU 6	-374	1	5218	-0.38	-20.43	0
175	SLU 7	-391	1	5167	-0.41	-21.28	0
175	SLU 8	-376	1	5176	-0.37	-20.55	0
175	SLU 9	-393	1	5126	-0.4	-21.4	0
175	SLU 10	-445	1	5834	-0.41	-24.14	0
175	SLU 11	-417	1	6045	-0.38	-22.76	0
175	SLU 12	-434	1	5994	-0.41	-23.61	0
175	SLU 13	-447	1	5918	-0.43	-24.3	0
175	SLU 14	-419	1	6130	-0.4	-22.92	0
175	SLU 15	-436	1	6079	-0.43	-23.77	0
175	SLU 16	-421	1	6088	-0.39	-23.04	0
175	SLU 17	-438	1	6037	-0.42	-23.89	0
175	SLU 18	-436	1	6309	-0.37	-23.79	0
175	SLU 19	-453	1	6258	-0.4	-24.64	0
175	SLU 20	-438	1	6394	-0.39	-23.95	0
175	SLU 21	-455	1	6343	-0.42	-24.8	0
175	SLU 22	-410	1	5816	-0.38	-22.37	0
175	SLU 23	-438	1	5732	-0.43	-23.78	0
175	SLU 24	-410	1	5943	-0.4	-22.4	0
175	SLU 25	-427	1	5892	-0.43	-23.25	0
175	SLU 26	-440	1	5817	-0.44	-23.94	0
175	SLU 27	-412	1	6028	-0.42	-22.56	0
175	SLU 28	-429	1	5977	-0.45	-23.41	0
175	SLU 29	-414	1	5986	-0.41	-22.68	0
175	SLU 30	-431	1	5935	-0.44	-23.53	0
175	SLU 31	-483	1	6643	-0.45	-26.27	0
175	SLU 32	-455	1	6855	-0.42	-24.89	0
175	SLU 33	-472	1	6804	-0.45	-25.74	0
175	SLU 34	-485	1	6728	-0.46	-26.42	0
175	SLU 35	-457	1	6940	-0.44	-25.04	0
175	SLU 36	-474	1	6889	-0.46	-25.89	0
175	SLU 37	-459	1	6898	-0.43	-25.16	0
175	SLU 38	-476	1	6847	-0.46	-26.01	0
175	SLU 39	-474	1	7119	-0.41	-25.92	0
175	SLU 40	-491	1	7068	-0.44	-26.77	0
175	SLU 41	-476	1	7204	-0.42	-26.07	0
175	SLU 42	-493	1	7153	-0.45	-26.92	0
175	SLU 43	-470	1	6231	-0.43	-25.59	0
175	SLU 44	-498	1	6146	-0.48	-27	0
175	SLU 45	-470	1	6357	-0.45	-25.62	0
175	SLU 46	-487	1	6306	-0.48	-26.47	0
175	SLU 47	-501	1	6231	-0.5	-27.16	0
175	SLU 48	-473	1	6442	-0.47	-25.78	0
175	SLU 49	-490	1	6391	-0.5	-26.63	0
175	SLU 50	-475	1	6401	-0.46	-25.9	0
175	SLU 51	-492	1	6350	-0.49	-26.75	0
175	SLU 52	-543	1	7058	-0.5	-29.49	0
175	SLU 53	-515	1	7269	-0.47	-28.11	0
175	SLU 54	-532	1	7218	-0.5	-28.96	0
175	SLU 55	-545	1	7143	-0.52	-29.64	0
175	SLU 56	-518	1	7354	-0.49	-28.26	0
175	SLU 57	-534	1	7303	-0.52	-29.11	0
175	SLU 58	-520	1	7312	-0.48	-28.38	0
175	SLU 59	-537	1	7262	-0.51	-29.23	0
175	SLU 60	-534	1	7533	-0.46	-29.14	0
175	SLU 61	-551	1	7482	-0.49	-29.99	0
175	SLU 62	-537	1	7618	-0.48	-29.29	0
175	SLU 63	-553	1	7567	-0.51	-30.14	0
175	SLU 64	-508	1	7041	-0.47	-27.71	0
175	SLU 65	-536	1	6956	-0.52	-29.13	0
175	SLU 66	-508	1	7167	-0.49	-27.75	0
175	SLU 67	-525	1	7116	-0.52	-28.6	0
175	SLU 68	-539	1	7041	-0.53	-29.28	0
175	SLU 69	-511	1	7252	-0.51	-27.9	0
175	SLU 70	-527	1	7201	-0.53	-28.75	0
175	SLU 71	-513	1	7211	-0.5	-28.02	0
175	SLU 72	-530	1	7160	-0.53	-28.87	0
175	SLU 73	-581	1	7868	-0.54	-31.61	0
175	SLU 74	-553	1	8079	-0.51	-30.23	0
175	SLU 75	-570	1	8028	-0.54	-31.08	0
175	SLU 76	-583	1	7953	-0.55	-31.77	0
175	SLU 77	-556	1	8164	-0.53	-30.39	0
175	SLU 78	-572	1	8113	-0.55	-31.24	0
175	SLU 79	-558	1	8122	-0.52	-30.51	0
175	SLU 80	-575	1	8071	-0.55	-31.36	0
175	SLU 81	-572	1	8343	-0.5	-31.26	0
175	SLU 82	-589	1	8292	-0.53	-32.11	0
175	SLU 83	-575	1	8428	-0.51	-31.42	0
175	SLU 84	-591	1	8377	-0.54	-32.27	0
175	SLE RA 1	-382	1	5238	-0.35	-20.85	0
175	SLE RA 2	-401	1	5181	-0.38	-21.79	0
175	SLE RA 3	-383	1	5322	-0.37	-20.87	0
175	SLE RA 4	-394	1	5288	-0.39	-21.44	0
175	SLE RA 5	-403	1	5238	-0.4	-21.9	0
175	SLE RA 6	-384	1	5379	-0.38	-20.98	0
175	SLE RA 7	-395	1	5345	-0.4	-21.54	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
175	SLE RA 8	-386	1	5351	-0.37	-21.06	0
175	SLE RA 9	-397	1	5317	-0.39	-21.62	0
175	SLE RA 10	-431	1	5789	-0.4	-23.45	0
175	SLE RA 11	-413	1	5930	-0.38	-22.53	0
175	SLE RA 12	-424	1	5896	-0.4	-23.1	0
175	SLE RA 13	-433	1	5846	-0.41	-23.55	0
175	SLE RA 14	-414	1	5987	-0.39	-22.63	0
175	SLE RA 15	-425	1	5953	-0.41	-23.2	0
175	SLE RA 16	-416	1	5959	-0.39	-22.71	0
175	SLE RA 17	-427	1	5925	-0.41	-23.28	0
175	SLE RA 18	-425	1	6106	-0.37	-23.22	0
175	SLE RA 19	-436	1	6072	-0.39	-23.78	0
175	SLE RA 20	-427	1	6163	-0.38	-23.32	0
175	SLE RA 21	-438	1	6129	-0.4	-23.89	0
175	SLE FR 1	-382	1	5238	-0.35	-20.85	0
175	SLE FR 2	-386	1	5227	-0.36	-21.04	0
175	SLE FR 3	-383	1	5261	-0.36	-20.89	0
175	SLE FR 4	-399	1	5487	-0.36	-21.75	0
175	SLE FR 5	-396	1	5521	-0.36	-21.6	0
175	SLE FR 6	-404	1	5672	-0.36	-22.03	0
175	SLE QP 1	-382	1	5238	-0.35	-20.85	0
175	SLE QP 2	-395	1	5498	-0.36	-21.56	0
175	SLD 1	305	-1	4292	-3.62	13.6	0.02
175	SLD 2	305	-1	4292	-3.62	13.6	0.02
175	SLD 3	224	9	4050	-0.56	18.23	0
175	SLD 4	224	9	4050	-0.56	18.23	0
175	SLD 5	-63	-14	5504	-5.97	-18.03	0.03
175	SLD 6	-63	-14	5504	-5.97	-18.03	0.03
175	SLD 7	-331	17	4696	4.22	-2.61	-0.02
175	SLD 8	-331	17	4696	4.22	-2.61	-0.02
175	SLD 9	-459	-16	6301	-4.94	-40.51	0.03
175	SLD 10	-459	-16	6301	-4.94	-40.51	0.03
175	SLD 11	-727	15	5493	5.26	-25.09	-0.03
175	SLD 12	-727	15	5493	5.26	-25.09	-0.03
175	SLD 13	-1015	-8	6947	-0.16	-61.34	0
175	SLD 14	-1015	-8	6947	-0.16	-61.34	0
175	SLD 15	-1095	2	6705	2.9	-56.72	-0.02
175	SLD 16	-1095	2	6705	2.9	-56.72	-0.02
175	SLV 1	1234	-3	2707	-8.16	60.24	0.05
175	SLV 2	1234	-3	2707	-8.16	60.24	0.05
175	SLV 3	1046	21	2129	-0.98	71.01	0.01
175	SLV 4	1046	21	2129	-0.98	71.01	0.01
175	SLV 5	378	-36	5536	-13.58	-13.36	0.08
175	SLV 6	378	-36	5536	-13.58	-13.36	0.08
175	SLV 7	-248	42	3612	10.34	22.55	-0.06
175	SLV 8	-248	42	3612	10.34	22.55	-0.06
175	SLV 9	-543	-41	7385	-11.06	-65.67	0.07
175	SLV 10	-543	-41	7385	-11.06	-65.67	0.07
175	SLV 11	-1169	37	5460	12.87	-29.76	-0.08
175	SLV 12	-1169	37	5460	12.87	-29.76	-0.08
175	SLV 13	-1837	-20	8867	0.26	-114.13	0
175	SLV 14	-1837	-20	8867	0.26	-114.13	0
175	SLV 15	-2024	4	8290	7.44	-103.36	-0.04
175	SLV 16	-2024	4	8290	7.44	-103.36	-0.04
176	SLU 1	-692	1	2792	-0.22	-13.37	-0.04
176	SLU 2	-698	1	2769	-0.34	-14.02	-0.06
176	SLU 3	-704	1	2855	-0.23	-13.46	-0.04
176	SLU 4	-708	1	2841	-0.31	-13.85	-0.06
176	SLU 5	-708	1	2814	-0.35	-14.15	-0.07
176	SLU 6	-714	1	2900	-0.24	-13.59	-0.04
176	SLU 7	-718	1	2886	-0.31	-13.97	-0.06
176	SLU 8	-711	1	2882	-0.24	-13.62	-0.04
176	SLU 9	-715	1	2868	-0.31	-14.01	-0.06
176	SLU 10	-813	1	3261	-0.35	-15.92	-0.06
176	SLU 11	-820	1	3347	-0.24	-15.36	-0.04
176	SLU 12	-823	1	3333	-0.31	-15.75	-0.06
176	SLU 13	-823	1	3306	-0.36	-16.04	-0.07
176	SLU 14	-829	1	3392	-0.25	-15.49	-0.04
176	SLU 15	-833	1	3378	-0.32	-15.87	-0.06
176	SLU 16	-827	1	3374	-0.24	-15.52	-0.04
176	SLU 17	-830	1	3360	-0.32	-15.91	-0.06
176	SLU 18	-856	0	3495	-0.23	-16.08	-0.04
176	SLU 19	-860	1	3481	-0.3	-16.47	-0.05
176	SLU 20	-866	1	3540	-0.24	-16.21	-0.04
176	SLU 21	-870	1	3526	-0.31	-16.6	-0.06
176	SLU 22	-793	1	3228	-0.24	-15	-0.04
176	SLU 23	-799	1	3205	-0.36	-15.64	-0.07
176	SLU 24	-806	1	3291	-0.25	-15.08	-0.04
176	SLU 25	-809	1	3277	-0.32	-15.47	-0.06
176	SLU 26	-809	1	3250	-0.37	-15.77	-0.07
176	SLU 27	-815	1	3336	-0.26	-15.21	-0.04
176	SLU 28	-819	1	3322	-0.33	-15.6	-0.06
176	SLU 29	-813	1	3318	-0.26	-15.25	-0.04
176	SLU 30	-816	1	3304	-0.33	-15.64	-0.06
176	SLU 31	-914	1	3697	-0.37	-17.54	-0.07
176	SLU 32	-921	1	3783	-0.26	-16.98	-0.04
176	SLU 33	-924	1	3769	-0.33	-17.37	-0.06
176	SLU 34	-924	1	3742	-0.38	-17.67	-0.07
176	SLU 35	-931	1	3828	-0.27	-17.11	-0.04
176	SLU 36	-934	1	3814	-0.34	-17.5	-0.06



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
176	SLU 37	-928	1	3810	-0.26	-17.15	-0.04
176	SLU 38	-931	1	3796	-0.34	-17.54	-0.06
176	SLU 39	-958	1	3931	-0.25	-17.71	-0.04
176	SLU 40	-961	1	3917	-0.32	-18.1	-0.06
176	SLU 41	-967	1	3976	-0.26	-17.84	-0.04
176	SLU 42	-971	1	3962	-0.33	-18.22	-0.06
176	SLU 43	-865	1	3480	-0.28	-16.83	-0.05
176	SLU 44	-871	2	3457	-0.4	-17.47	-0.07
176	SLU 45	-877	1	3543	-0.29	-16.91	-0.05
176	SLU 46	-881	1	3529	-0.36	-17.3	-0.07
176	SLU 47	-880	2	3502	-0.41	-17.6	-0.08
176	SLU 48	-887	1	3588	-0.3	-17.04	-0.05
176	SLU 49	-891	1	3575	-0.37	-17.43	-0.07
176	SLU 50	-884	1	3570	-0.3	-17.08	-0.05
176	SLU 51	-888	1	3556	-0.37	-17.47	-0.07
176	SLU 52	-986	2	3949	-0.41	-19.37	-0.07
176	SLU 53	-992	1	4035	-0.3	-18.81	-0.05
176	SLU 54	-996	1	4022	-0.37	-19.2	-0.07
176	SLU 55	-996	2	3994	-0.42	-19.5	-0.08
176	SLU 56	-1002	1	4080	-0.31	-18.94	-0.05
176	SLU 57	-1006	1	4067	-0.38	-19.33	-0.07
176	SLU 58	-999	1	4062	-0.3	-18.98	-0.05
176	SLU 59	-1003	1	4049	-0.38	-19.37	-0.07
176	SLU 60	-1029	1	4183	-0.29	-19.54	-0.05
176	SLU 61	-1033	1	4169	-0.36	-19.93	-0.06
176	SLU 62	-1039	1	4228	-0.3	-19.67	-0.05
176	SLU 63	-1043	1	4214	-0.37	-20.05	-0.07
176	SLU 64	-966	1	3916	-0.3	-18.45	-0.05
176	SLU 65	-972	2	3893	-0.42	-19.1	-0.08
176	SLU 66	-978	1	3979	-0.31	-18.54	-0.05
176	SLU 67	-982	1	3965	-0.38	-18.93	-0.07
176	SLU 68	-982	2	3938	-0.43	-19.22	-0.08
176	SLU 69	-988	1	4024	-0.32	-18.67	-0.05
176	SLU 70	-992	1	4010	-0.39	-19.05	-0.07
176	SLU 71	-985	1	4006	-0.31	-18.7	-0.05
176	SLU 72	-989	1	3992	-0.39	-19.09	-0.07
176	SLU 73	-1087	2	4385	-0.43	-21	-0.08
176	SLU 74	-1094	1	4471	-0.32	-20.44	-0.05
176	SLU 75	-1097	1	4457	-0.39	-20.83	-0.07
176	SLU 76	-1097	2	4430	-0.44	-21.12	-0.08
176	SLU 77	-1103	1	4516	-0.32	-20.57	-0.05
176	SLU 78	-1107	1	4502	-0.4	-20.95	-0.07
176	SLU 79	-1101	1	4498	-0.32	-20.6	-0.05
176	SLU 80	-1104	1	4484	-0.4	-20.99	-0.07
176	SLU 81	-1130	1	4619	-0.31	-21.16	-0.05
176	SLU 82	-1134	1	4605	-0.38	-21.55	-0.07
176	SLU 83	-1140	1	4664	-0.32	-21.29	-0.05
176	SLU 84	-1144	1	4650	-0.39	-21.68	-0.07
176	SLE RA 1	-721	1	2917	-0.22	-13.84	-0.04
176	SLE RA 2	-725	1	2901	-0.31	-14.27	-0.06
176	SLE RA 3	-729	1	2959	-0.23	-13.89	-0.04
176	SLE RA 4	-731	1	2949	-0.28	-14.15	-0.05
176	SLE RA 5	-731	1	2931	-0.31	-14.35	-0.06
176	SLE RA 6	-736	1	2989	-0.24	-13.98	-0.04
176	SLE RA 7	-738	1	2979	-0.29	-14.24	-0.05
176	SLE RA 8	-734	1	2977	-0.24	-14	-0.04
176	SLE RA 9	-736	1	2967	-0.29	-14.26	-0.05
176	SLE RA 10	-802	1	3229	-0.31	-15.53	-0.06
176	SLE RA 11	-806	1	3287	-0.24	-15.16	-0.04
176	SLE RA 12	-808	1	3277	-0.29	-15.42	-0.05
176	SLE RA 13	-808	1	3259	-0.32	-15.62	-0.06
176	SLE RA 14	-812	1	3317	-0.24	-15.25	-0.04
176	SLE RA 15	-815	1	3307	-0.29	-15.5	-0.05
176	SLE RA 16	-811	1	3305	-0.24	-15.27	-0.04
176	SLE RA 17	-813	1	3295	-0.29	-15.53	-0.05
176	SLE RA 18	-830	1	3385	-0.23	-15.64	-0.04
176	SLE RA 19	-833	1	3376	-0.28	-15.9	-0.05
176	SLE RA 20	-837	1	3415	-0.24	-15.73	-0.04
176	SLE RA 21	-839	1	3406	-0.29	-15.99	-0.05
176	SLE FR 1	-721	1	2917	-0.22	-13.84	-0.04
176	SLE FR 2	-721	1	2913	-0.24	-13.92	-0.04
176	SLE FR 3	-723	1	2929	-0.23	-13.87	-0.04
176	SLE FR 4	-754	1	3054	-0.24	-14.46	-0.04
176	SLE FR 5	-756	1	3069	-0.23	-14.41	-0.04
176	SLE FR 6	-776	1	3151	-0.23	-14.74	-0.04
176	SLE QP 1	-721	1	2917	-0.22	-13.84	-0.04
176	SLE QP 2	-754	1	3057	-0.23	-14.38	-0.04
176	SLD 1	-268	-35	1805	4.24	4.17	0.93
176	SLD 2	-268	-35	1805	4.24	4.17	0.93
176	SLD 3	-200	11	1606	-1.46	6.6	-0.32
176	SLD 4	-200	11	1606	-1.46	6.6	-0.32
176	SLD 5	-711	-80	2984	9.76	-12.51	2.16
176	SLD 6	-711	-80	2984	9.76	-12.51	2.16
176	SLD 7	-485	73	2320	-9.25	-4.39	-2.03
176	SLD 8	-485	73	2320	-9.25	-4.39	-2.03
176	SLD 9	-1022	-72	3795	8.79	-24.36	1.95
176	SLD 10	-1022	-72	3795	8.79	-24.36	1.95
176	SLD 11	-797	81	3131	-10.21	-16.25	-2.23
176	SLD 12	-797	81	3131	-10.21	-16.25	-2.23
176	SLD 13	-1307	-10	4508	1.01	-35.36	0.25



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
176	SLD 14	-1307	-10	4508	1.01	-35.36	0.25
176	SLD 15	-1239	36	4309	-4.69	-32.92	-1.01
176	SLD 16	-1239	36	4309	-4.69	-32.92	-1.01
176	SLV 1	376	-90	149	11.11	28.76	2.43
176	SLV 2	376	-90	149	11.11	28.76	2.43
176	SLV 3	533	28	-316	-3.45	34.42	-0.77
176	SLV 4	533	28	-316	-3.45	34.42	-0.77
176	SLV 5	-653	-206	2890	25.26	-10.01	5.57
176	SLV 6	-653	-206	2890	25.26	-10.01	5.57
176	SLV 7	-129	187	1340	-23.27	8.84	-5.13
176	SLV 8	-129	187	1340	-23.27	8.84	-5.13
176	SLV 9	-1378	-186	4775	22.82	-37.6	5.05
176	SLV 10	-1378	-186	4775	22.82	-37.6	5.05
176	SLV 11	-854	207	3224	-25.71	-18.74	-5.65
176	SLV 12	-854	207	3224	-25.71	-18.74	-5.65
176	SLV 13	-2040	-27	6430	2.99	-63.18	0.7
176	SLV 14	-2040	-27	6430	2.99	-63.18	0.7
176	SLV 15	-1883	91	5965	-11.57	-57.52	-2.51
176	SLV 16	-1883	91	5965	-11.57	-57.52	-2.51
177	SLU 1	1197	-5	4144	1.7	31.69	-0.26
177	SLU 2	1119	-5	3841	1.3	30	-0.21
177	SLU 3	1240	-5	4290	1.76	32.85	-0.27
177	SLU 4	1193	-5	4107	1.52	31.83	-0.24
177	SLU 5	1144	-5	3927	1.33	30.65	-0.21
177	SLU 6	1265	-5	4376	1.79	33.5	-0.28
177	SLU 7	1218	-5	4193	1.55	32.48	-0.25
177	SLU 8	1247	-5	4317	1.77	32.99	-0.27
177	SLU 9	1200	-5	4135	1.53	31.98	-0.24
177	SLU 10	1352	-5	4638	1.57	36.26	-0.25
177	SLU 11	1473	-6	5087	2.03	39.11	-0.31
177	SLU 12	1426	-6	4905	1.79	38.09	-0.28
177	SLU 13	1377	-6	4724	1.6	36.91	-0.26
177	SLU 14	1498	-6	5173	2.07	39.76	-0.32
177	SLU 15	1451	-6	4991	1.82	38.74	-0.29
177	SLU 16	1480	-6	5115	2.04	39.26	-0.32
177	SLU 17	1433	-6	4932	1.8	38.24	-0.28
177	SLU 18	1530	-6	5284	2.09	40.64	-0.32
177	SLU 19	1484	-6	5102	1.85	39.63	-0.29
177	SLU 20	1555	-6	5370	2.12	41.29	-0.33
177	SLU 21	1508	-6	5188	1.88	40.28	-0.3
177	SLU 22	1403	-6	4857	1.96	37.15	-0.3
177	SLU 23	1325	-5	4553	1.56	35.46	-0.25
177	SLU 24	1446	-6	5002	2.02	38.31	-0.31
177	SLU 25	1399	-6	4820	1.78	37.29	-0.28
177	SLU 26	1350	-6	4639	1.59	36.11	-0.25
177	SLU 27	1471	-6	5088	2.05	38.96	-0.32
177	SLU 28	1424	-6	4906	1.81	37.94	-0.29
177	SLU 29	1453	-6	5030	2.03	38.45	-0.31
177	SLU 30	1406	-6	4847	1.79	37.44	-0.28
177	SLU 31	1559	-6	5351	1.83	41.72	-0.29
177	SLU 32	1679	-7	5800	2.29	44.57	-0.35
177	SLU 33	1632	-7	5617	2.05	43.55	-0.32
177	SLU 34	1583	-6	5437	1.86	42.37	-0.3
177	SLU 35	1704	-7	5886	2.32	45.22	-0.36
177	SLU 36	1657	-7	5704	2.08	44.2	-0.33
177	SLU 37	1686	-7	5827	2.3	44.72	-0.36
177	SLU 38	1639	-7	5645	2.06	43.7	-0.32
177	SLU 39	1736	-7	5997	2.35	46.1	-0.36
177	SLU 40	1690	-7	5814	2.1	45.09	-0.33
177	SLU 41	1761	-7	6083	2.38	46.75	-0.37
177	SLU 42	1715	-7	5900	2.14	45.74	-0.34
177	SLU 43	1486	-6	5143	2.12	39.33	-0.33
177	SLU 44	1408	-6	4840	1.72	37.63	-0.27
177	SLU 45	1528	-7	5289	2.18	40.48	-0.34
177	SLU 46	1481	-6	5106	1.94	39.47	-0.3
177	SLU 47	1433	-6	4926	1.76	38.28	-0.28
177	SLU 48	1553	-7	5375	2.22	41.13	-0.34
177	SLU 49	1506	-6	5192	1.97	40.12	-0.31
177	SLU 50	1535	-7	5316	2.19	40.63	-0.34
177	SLU 51	1489	-6	5134	1.95	39.61	-0.31
177	SLU 52	1641	-7	5637	1.99	43.9	-0.32
177	SLU 53	1761	-7	6086	2.45	46.75	-0.38
177	SLU 54	1715	-7	5904	2.21	45.73	-0.35
177	SLU 55	1666	-7	5723	2.03	44.55	-0.32
177	SLU 56	1786	-8	6172	2.49	47.4	-0.38
177	SLU 57	1740	-7	5990	2.24	46.38	-0.35
177	SLU 58	1768	-8	6114	2.46	46.89	-0.38
177	SLU 59	1722	-7	5931	2.22	45.88	-0.35
177	SLU 60	1819	-8	6283	2.51	48.28	-0.39
177	SLU 61	1772	-7	6101	2.27	47.26	-0.35
177	SLU 62	1844	-8	6369	2.54	48.93	-0.39
177	SLU 63	1797	-7	6187	2.3	47.91	-0.36
177	SLU 64	1692	-7	5856	2.38	44.79	-0.37
177	SLU 65	1614	-7	5552	1.98	43.09	-0.31
177	SLU 66	1734	-7	6001	2.44	45.94	-0.38
177	SLU 67	1688	-7	5819	2.2	44.93	-0.34
177	SLU 68	1639	-7	5638	2.01	43.74	-0.32
177	SLU 69	1759	-8	6087	2.47	46.59	-0.38
177	SLU 70	1712	-7	5905	2.23	45.57	-0.35
177	SLU 71	1741	-7	6029	2.45	46.09	-0.38



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
177	SLU 72	1695	-7	5846	2.21	45.07	-0.35
177	SLU 73	1847	-8	6350	2.25	49.36	-0.36
177	SLU 74	1967	-8	6799	2.71	52.21	-0.42
177	SLU 75	1921	-8	6616	2.47	51.19	-0.39
177	SLU 76	1872	-8	6436	2.28	50.01	-0.36
177	SLU 77	1992	-8	6885	2.75	52.86	-0.42
177	SLU 78	1946	-8	6703	2.5	51.84	-0.39
177	SLU 79	1975	-8	6826	2.72	52.35	-0.42
177	SLU 80	1928	-8	6644	2.48	51.34	-0.39
177	SLU 81	2025	-8	6996	2.77	53.74	-0.43
177	SLU 82	1978	-8	6813	2.53	52.72	-0.39
177	SLU 83	2050	-9	7082	2.8	54.39	-0.43
177	SLU 84	2003	-8	6899	2.56	53.37	-0.4
177	SLE RA 1	1256	-5	4348	1.77	33.25	-0.27
177	SLE RA 2	1204	-5	4145	1.51	32.12	-0.24
177	SLE RA 3	1284	-6	4445	1.81	34.02	-0.28
177	SLE RA 4	1253	-5	4323	1.65	33.34	-0.26
177	SLE RA 5	1221	-5	4203	1.53	32.56	-0.24
177	SLE RA 6	1301	-6	4502	1.84	34.46	-0.28
177	SLE RA 7	1270	-5	4381	1.68	33.78	-0.26
177	SLE RA 8	1289	-6	4463	1.82	34.12	-0.28
177	SLE RA 9	1258	-5	4341	1.66	33.44	-0.26
177	SLE RA 10	1360	-6	4677	1.69	36.3	-0.27
177	SLE RA 11	1440	-6	4977	1.99	38.2	-0.31
177	SLE RA 12	1409	-6	4855	1.83	37.52	-0.29
177	SLE RA 13	1376	-6	4735	1.71	36.73	-0.27
177	SLE RA 14	1456	-6	5034	2.02	38.63	-0.31
177	SLE RA 15	1425	-6	4912	1.86	37.95	-0.29
177	SLE RA 16	1445	-6	4995	2	38.3	-0.31
177	SLE RA 17	1413	-6	4873	1.84	37.62	-0.29
177	SLE RA 18	1478	-6	5108	2.03	39.22	-0.31
177	SLE RA 19	1447	-6	4986	1.87	38.54	-0.29
177	SLE RA 20	1495	-6	5165	2.06	39.65	-0.32
177	SLE RA 21	1464	-6	5044	1.89	38.98	-0.3
177	SLE FR 1	1256	-5	4348	1.77	33.25	-0.27
177	SLE FR 2	1246	-5	4308	1.72	33.03	-0.27
177	SLE FR 3	1263	-5	4371	1.78	33.43	-0.28
177	SLE FR 4	1312	-6	4535	1.8	34.82	-0.28
177	SLE FR 5	1329	-6	4599	1.86	35.22	-0.29
177	SLE FR 6	1367	-6	4728	1.9	36.24	-0.29
177	SLE QP 1	1256	-5	4348	1.77	33.25	-0.27
177	SLE QP 2	1323	-6	4576	1.85	35.04	-0.29
177	SLD 1	1840	-32	5948	5.83	54.7	-1.14
177	SLD 2	1840	-32	5948	5.83	54.7	-1.14
177	SLD 3	1999	-3	6447	1.49	59.65	-0.2
177	SLD 4	1999	-3	6447	1.49	59.65	-0.2
177	SLD 5	1236	-58	4230	9.63	33.43	-1.97
177	SLD 6	1236	-58	4230	9.63	33.43	-1.97
177	SLD 7	1767	40	5894	-4.84	49.94	1.17
177	SLD 8	1767	40	5894	-4.84	49.94	1.17
177	SLD 9	878	-51	3258	8.54	20.15	-1.74
177	SLD 10	878	-51	3258	8.54	20.15	-1.74
177	SLD 11	1409	46	4921	-5.92	36.66	1.4
177	SLD 12	1409	46	4921	-5.92	36.66	1.4
177	SLD 13	646	-9	2705	2.21	10.44	-0.37
177	SLD 14	646	-9	2705	2.21	10.44	-0.37
177	SLD 15	805	21	3204	-2.13	15.39	0.57
177	SLD 16	805	21	3204	-2.13	15.39	0.57
177	SLV 1	2526	-72	7764	12	80.77	-2.47
177	SLV 2	2526	-72	7764	12	80.77	-2.47
177	SLV 3	2901	2	8952	0.87	92.33	-0.05
177	SLV 4	2901	2	8952	0.87	92.33	-0.05
177	SLV 5	1114	-139	3731	21.76	31.22	-4.6
177	SLV 6	1114	-139	3731	21.76	31.22	-4.6
177	SLV 7	2366	110	7691	-15.31	69.77	3.45
177	SLV 8	2366	110	7691	-15.31	69.77	3.45
177	SLV 9	279	-122	1461	19.01	0.32	-4.02
177	SLV 10	279	-122	1461	19.01	0.32	-4.02
177	SLV 11	1531	128	5421	-18.06	38.87	4.03
177	SLV 12	1531	128	5421	-18.06	38.87	4.03
177	SLV 13	-256	-14	200	2.83	-22.24	-0.52
177	SLV 14	-256	-14	200	2.83	-22.24	-0.52
177	SLV 15	119	61	1388	-8.29	-10.68	1.89
177	SLV 16	119	61	1388	-8.29	-10.68	1.89
178	SLU 1	930	-689	9127	19.81	50.94	0.07
178	SLU 2	927	-529	8342	12.36	50.41	0.06
178	SLU 3	964	-711	9439	20.46	52.82	0.07
178	SLU 4	962	-616	8968	15.99	52.51	0.07
178	SLU 5	946	-543	8533	12.76	51.45	0.06
178	SLU 6	983	-725	9630	20.86	53.85	0.07
178	SLU 7	981	-630	9159	16.39	53.54	0.07
178	SLU 8	968	-717	9510	20.61	53	0.07
178	SLU 9	966	-621	9038	16.14	52.69	0.07
178	SLU 10	1116	-643	10054	15.46	60.84	0.08
178	SLU 11	1154	-825	11151	23.56	63.24	0.08
178	SLU 12	1152	-730	10680	19.09	62.93	0.08
178	SLU 13	1135	-657	10245	15.86	61.87	0.08
178	SLU 14	1173	-839	11342	23.96	64.28	0.08
178	SLU 15	1171	-744	10871	19.49	63.96	0.08
178	SLU 16	1158	-831	11222	23.72	63.43	0.08



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
178	SLU 17	1156	-735	10750	19.25	63.11	0.08
178	SLU 18	1201	-851	11573	24.25	65.83	0.08
178	SLU 19	1199	-756	11102	19.78	65.51	0.08
178	SLU 20	1220	-865	11764	24.65	66.86	0.09
178	SLU 21	1218	-770	11293	20.18	66.55	0.08
178	SLU 22	1092	-795	10673	22.77	59.86	0.08
178	SLU 23	1089	-636	9888	15.32	59.33	0.07
178	SLU 24	1126	-818	10986	23.42	61.74	0.08
178	SLU 25	1124	-722	10514	18.95	61.42	0.08
178	SLU 26	1108	-650	10079	15.72	60.37	0.07
178	SLU 27	1145	-832	11177	23.82	62.77	0.08
178	SLU 28	1143	-736	10706	19.35	62.46	0.08
178	SLU 29	1130	-823	11056	23.57	61.92	0.08
178	SLU 30	1128	-728	10585	19.1	61.61	0.08
178	SLU 31	1278	-750	11600	18.43	69.76	0.09
178	SLU 32	1315	-932	12698	26.53	72.16	0.09
178	SLU 33	1313	-836	12226	22.05	71.85	0.09
178	SLU 34	1297	-764	11792	18.83	70.79	0.09
178	SLU 35	1334	-946	12889	26.93	73.2	0.09
178	SLU 36	1332	-850	12418	22.45	72.88	0.09
178	SLU 37	1319	-937	12768	26.68	72.35	0.09
178	SLU 38	1317	-842	12297	22.21	72.03	0.09
178	SLU 39	1362	-958	13119	27.21	74.75	0.1
178	SLU 40	1360	-863	12648	22.74	74.43	0.09
178	SLU 41	1381	-972	13311	27.61	75.78	0.1
178	SLU 42	1379	-877	12839	23.14	75.47	0.1
178	SLU 43	1154	-859	11335	24.74	63.16	0.08
178	SLU 44	1151	-699	10549	17.29	62.64	0.08
178	SLU 45	1188	-881	11647	25.39	65.04	0.08
178	SLU 46	1186	-786	11176	20.91	64.73	0.08
178	SLU 47	1170	-714	10741	17.69	63.67	0.08
178	SLU 48	1207	-895	11838	25.79	66.08	0.09
178	SLU 49	1205	-800	11367	21.31	65.76	0.08
178	SLU 50	1192	-887	11717	25.54	65.23	0.08
178	SLU 51	1190	-791	11246	21.07	64.91	0.08
178	SLU 52	1340	-813	12262	20.39	73.06	0.09
178	SLU 53	1377	-995	13359	28.49	75.47	0.1
178	SLU 54	1375	-900	12888	24.02	75.15	0.1
178	SLU 55	1359	-827	12453	20.79	74.09	0.09
178	SLU 56	1396	-1009	13550	28.89	76.5	0.1
178	SLU 57	1394	-914	13079	24.42	76.19	0.1
178	SLU 58	1381	-1001	13429	28.64	75.65	0.1
178	SLU 59	1379	-905	12958	24.17	75.34	0.1
178	SLU 60	1424	-1021	13781	29.18	78.05	0.1
178	SLU 61	1422	-926	13309	24.7	77.74	0.1
178	SLU 62	1443	-1036	13972	29.58	79.08	0.1
178	SLU 63	1441	-940	13501	25.1	78.77	0.1
178	SLU 64	1316	-965	12881	27.7	72.08	0.09
178	SLU 65	1312	-806	12096	20.25	71.56	0.09
178	SLU 66	1350	-988	13193	28.35	73.96	0.1
178	SLU 67	1348	-892	12722	23.88	73.65	0.09
178	SLU 68	1331	-820	12287	20.65	72.59	0.09
178	SLU 69	1369	-1002	13385	28.75	75	0.1
178	SLU 70	1367	-906	12914	24.28	74.68	0.09
178	SLU 71	1354	-993	13264	28.5	74.15	0.1
178	SLU 72	1352	-898	12793	24.03	73.83	0.09
178	SLU 73	1502	-920	13808	23.35	81.98	0.1
178	SLU 74	1539	-1102	14905	31.45	84.38	0.11
178	SLU 75	1537	-1006	14434	26.98	84.07	0.11
178	SLU 76	1521	-934	13999	23.75	83.01	0.1
178	SLU 77	1558	-1116	15097	31.85	85.42	0.11
178	SLU 78	1556	-1020	14626	27.38	85.1	0.11
178	SLU 79	1543	-1107	14976	31.61	84.57	0.11
178	SLU 80	1541	-1012	14505	27.14	84.26	0.11
178	SLU 81	1586	-1128	15327	32.14	86.97	0.11
178	SLU 82	1584	-1033	14856	27.67	86.65	0.11
178	SLU 83	1605	-1142	15518	32.54	88	0.11
178	SLU 84	1603	-1047	15047	28.07	87.69	0.11
178	SLE RA 1	976	-719	9569	20.66	53.49	0.07
178	SLE RA 2	974	-613	9045	15.69	53.14	0.07
178	SLE RA 3	999	-734	9777	21.09	54.74	0.07
178	SLE RA 4	998	-670	9463	18.11	54.53	0.07
178	SLE RA 5	987	-622	9173	15.96	53.83	0.07
178	SLE RA 6	1012	-744	9904	21.36	55.43	0.07
178	SLE RA 7	1011	-680	9590	18.37	55.22	0.07
178	SLE RA 8	1002	-738	9824	21.19	54.86	0.07
178	SLE RA 9	1000	-674	9510	18.21	54.65	0.07
178	SLE RA 10	1100	-689	10187	17.76	60.08	0.08
178	SLE RA 11	1125	-810	10918	23.16	61.69	0.08
178	SLE RA 12	1124	-746	10604	20.18	61.48	0.08
178	SLE RA 13	1113	-698	10314	18.03	60.77	0.08
178	SLE RA 14	1138	-820	11046	23.43	62.38	0.08
178	SLE RA 15	1137	-756	10732	20.44	62.17	0.08
178	SLE RA 16	1128	-814	10965	23.26	61.81	0.08
178	SLE RA 17	1127	-750	10651	20.28	61.6	0.08
178	SLE RA 18	1157	-828	11199	23.62	63.41	0.08
178	SLE RA 19	1155	-764	10885	20.63	63.2	0.08
178	SLE RA 20	1169	-837	11327	23.88	64.1	0.08
178	SLE RA 21	1168	-773	11013	20.9	63.89	0.08
178	SLE FR 1	976	-719	9569	20.66	53.49	0.07



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
178	SLE FR 2	976	-698	9464	19.66	53.42	0.07
178	SLE FR 3	982	-723	9620	20.76	53.76	0.07
178	SLE FR 4	1030	-730	9953	20.55	56.39	0.07
178	SLE FR 5	1036	-755	10109	21.65	56.74	0.07
178	SLE FR 6	1067	-773	10384	22.14	58.45	0.08
178	SLE QP 1	976	-719	9569	20.66	53.49	0.07
178	SLE QP 2	1031	-752	10058	21.55	56.46	0.07
178	SLD 1	1717	-753	11557	21.76	97.08	0.13
178	SLD 2	1717	-753	11557	21.76	97.08	0.13
178	SLD 3	1848	-980	12636	32.12	104.71	0.15
178	SLD 4	1848	-980	12636	32.12	104.71	0.15
178	SLD 5	1037	-407	8870	5.9	57.07	0.05
178	SLD 6	1037	-407	8870	5.9	57.07	0.05
178	SLD 7	1475	-1165	12468	40.43	82.52	0.14
178	SLD 8	1475	-1165	12468	40.43	82.52	0.14
178	SLD 9	586	-338	7647	2.66	30.41	0.01
178	SLD 10	586	-338	7647	2.66	30.41	0.01
178	SLD 11	1024	-1096	11245	37.2	55.86	0.1
178	SLD 12	1024	-1096	11245	37.2	55.86	0.1
178	SLD 13	213	-523	7480	10.97	8.21	-0.01
178	SLD 14	213	-523	7480	10.97	8.21	-0.01
178	SLD 15	345	-751	8559	21.33	15.85	0.02
178	SLD 16	345	-751	8559	21.33	15.85	0.02
178	SLV 1	2626	-752	13530	22.02	150.95	0.19
178	SLV 2	2626	-752	13530	22.02	150.95	0.19
178	SLV 3	2930	-1301	16133	46.88	168.67	0.26
178	SLV 4	2930	-1301	16133	46.88	168.67	0.26
178	SLV 5	1047	81	7150	-16.01	57.93	0.01
178	SLV 6	1047	81	7150	-16.01	57.93	0.01
178	SLV 7	2063	-1749	15829	66.85	117.01	0.23
178	SLV 8	2063	-1749	15829	66.85	117.01	0.23
178	SLV 9	-1	246	4286	-23.76	-4.08	-0.08
178	SLV 10	-1	246	4286	-23.76	-4.08	-0.08
178	SLV 11	1014	-1584	12965	59.1	55	0.14
178	SLV 12	1014	-1584	12965	59.1	55	0.14
178	SLV 13	-869	-202	3982	-3.79	-55.75	-0.11
178	SLV 14	-869	-202	3982	-3.79	-55.75	-0.11
178	SLV 15	-565	-751	6586	21.07	-38.02	-0.05
178	SLV 16	-565	-751	6586	21.07	-38.02	-0.05
179	SLU 1	652	-6	6367	1.75	30.37	0.02
179	SLU 2	710	-4	5941	0.91	32.35	0.02
179	SLU 3	678	-7	6583	1.8	31.57	0.02
179	SLU 4	713	-6	6327	1.3	32.76	0.02
179	SLU 5	723	-5	6076	0.95	32.94	0.02
179	SLU 6	691	-7	6718	1.83	32.16	0.02
179	SLU 7	726	-6	6463	1.33	33.35	0.02
179	SLU 8	678	-7	6637	1.81	31.55	0.02
179	SLU 9	713	-6	6382	1.31	32.73	0.02
179	SLU 10	853	-6	7145	1.2	38.92	0.02
179	SLU 11	820	-8	7787	2.09	38.14	0.03
179	SLU 12	855	-7	7532	1.59	39.33	0.02
179	SLU 13	865	-6	7281	1.24	39.51	0.02
179	SLU 14	833	-8	7922	2.12	38.73	0.03
179	SLU 15	868	-7	7667	1.62	39.92	0.02
179	SLU 16	820	-8	7842	2.1	38.11	0.03
179	SLU 17	855	-7	7586	1.6	39.3	0.02
179	SLU 18	855	-8	8087	2.16	39.75	0.03
179	SLU 19	890	-7	7832	1.66	40.94	0.02
179	SLU 20	868	-8	8222	2.19	40.34	0.03
179	SLU 21	903	-7	7967	1.69	41.53	0.02
179	SLU 22	768	-7	7453	2.01	35.71	0.02
179	SLU 23	826	-6	7027	1.18	37.69	0.02
179	SLU 24	793	-8	7669	2.07	36.91	0.03
179	SLU 25	828	-7	7413	1.57	38.1	0.02
179	SLU 26	838	-6	7162	1.22	38.27	0.02
179	SLU 27	806	-8	7804	2.1	37.5	0.03
179	SLU 28	841	-7	7548	1.6	38.68	0.02
179	SLU 29	793	-8	7723	2.08	36.88	0.03
179	SLU 30	828	-7	7468	1.58	38.07	0.02
179	SLU 31	968	-7	8231	1.47	44.25	0.02
179	SLU 32	935	-9	8873	2.36	43.48	0.03
179	SLU 33	970	-8	8617	1.86	44.66	0.03
179	SLU 34	981	-7	8366	1.5	44.84	0.02
179	SLU 35	948	-9	9008	2.39	44.06	0.03
179	SLU 36	983	-8	8753	1.89	45.25	0.03
179	SLU 37	935	-9	8927	2.37	43.45	0.03
179	SLU 38	970	-8	8672	1.87	44.64	0.03
179	SLU 39	971	-9	9173	2.43	45.09	0.03
179	SLU 40	1005	-8	8917	1.93	46.28	0.03
179	SLU 41	983	-9	9308	2.46	45.67	0.03
179	SLU 42	1018	-8	9053	1.96	46.86	0.03
179	SLU 43	809	-8	7904	2.18	37.65	0.03
179	SLU 44	867	-6	7479	1.35	39.63	0.02
179	SLU 45	834	-8	8120	2.23	38.86	0.03
179	SLU 46	869	-7	7865	1.73	40.05	0.02
179	SLU 47	880	-6	7614	1.38	40.22	0.02
179	SLU 48	847	-8	8256	2.27	39.44	0.03
179	SLU 49	882	-7	8000	1.77	40.63	0.02
179	SLU 50	834	-8	8175	2.25	38.83	0.03
179	SLU 51	869	-7	7920	1.75	40.02	0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
179	SLU 52	1009	-7	8683	1.63	46.2	0.03
179	SLU 53	976	-9	9325	2.52	45.42	0.03
179	SLU 54	1011	-8	9069	2.02	46.61	0.03
179	SLU 55	1022	-7	8818	1.67	46.79	0.03
179	SLU 56	989	-10	9460	2.55	46.01	0.03
179	SLU 57	1024	-8	9205	2.06	47.2	0.03
179	SLU 58	976	-9	9379	2.53	45.4	0.03
179	SLU 59	1011	-8	9124	2.04	46.58	0.03
179	SLU 60	1012	-10	9625	2.59	47.04	0.03
179	SLU 61	1046	-8	9369	2.09	48.22	0.03
179	SLU 62	1025	-10	9760	2.62	47.62	0.03
179	SLU 63	1059	-9	9505	2.12	48.81	0.03
179	SLU 64	924	-9	8990	2.44	42.99	0.03
179	SLU 65	982	-7	8564	1.61	44.97	0.02
179	SLU 66	950	-9	9206	2.5	44.19	0.03
179	SLU 67	984	-8	8951	2	45.38	0.03
179	SLU 68	995	-7	8700	1.65	45.56	0.03
179	SLU 69	962	-9	9342	2.53	44.78	0.03
179	SLU 70	997	-8	9086	2.03	45.97	0.03
179	SLU 71	950	-9	9261	2.51	44.16	0.03
179	SLU 72	984	-8	9005	2.01	45.35	0.03
179	SLU 73	1124	-8	9769	1.9	51.54	0.03
179	SLU 74	1092	-10	10411	2.79	50.76	0.03
179	SLU 75	1126	-9	10155	2.29	51.95	0.03
179	SLU 76	1137	-8	9904	1.94	52.12	0.03
179	SLU 77	1104	-11	10546	2.82	51.35	0.03
179	SLU 78	1139	-9	10290	2.32	52.53	0.03
179	SLU 79	1092	-10	10465	2.8	50.73	0.03
179	SLU 80	1126	-9	10210	2.3	51.92	0.03
179	SLU 81	1127	-11	10711	2.86	52.37	0.04
179	SLU 82	1162	-9	10455	2.36	53.56	0.03
179	SLU 83	1140	-11	10846	2.89	52.96	0.04
179	SLU 84	1174	-10	10590	2.39	54.15	0.03
179	SLE RA 1	685	-7	6677	1.82	31.9	0.02
179	SLE RA 2	724	-5	6393	1.27	33.22	0.02
179	SLE RA 3	702	-7	6821	1.86	32.7	0.02
179	SLE RA 4	726	-6	6651	1.53	33.49	0.02
179	SLE RA 5	733	-6	6483	1.29	33.61	0.02
179	SLE RA 6	711	-7	6911	1.88	33.09	0.02
179	SLE RA 7	734	-6	6741	1.55	33.88	0.02
179	SLE RA 8	702	-7	6857	1.87	32.68	0.02
179	SLE RA 9	726	-6	6687	1.53	33.47	0.02
179	SLE RA 10	819	-6	7196	1.46	37.59	0.02
179	SLE RA 11	797	-8	7624	2.05	37.08	0.03
179	SLE RA 12	820	-7	7453	1.72	37.87	0.02
179	SLE RA 13	827	-6	7286	1.48	37.99	0.02
179	SLE RA 14	806	-8	7714	2.07	37.47	0.03
179	SLE RA 15	829	-7	7544	1.74	38.26	0.02
179	SLE RA 16	797	-8	7660	2.06	37.06	0.03
179	SLE RA 17	820	-7	7490	1.73	37.85	0.02
179	SLE RA 18	821	-8	7824	2.1	38.15	0.03
179	SLE RA 19	844	-7	7654	1.76	38.94	0.02
179	SLE RA 20	829	-8	7914	2.12	38.54	0.03
179	SLE RA 21	852	-7	7744	1.79	39.33	0.02
179	SLE FR 1	685	-7	6677	1.82	31.9	0.02
179	SLE FR 2	693	-7	6620	1.71	32.16	0.02
179	SLE FR 3	689	-7	6713	1.83	32.05	0.02
179	SLE FR 4	734	-7	6964	1.79	34.04	0.02
179	SLE FR 5	729	-7	7057	1.91	33.93	0.02
179	SLE FR 6	753	-7	7250	1.96	35.02	0.02
179	SLE QP 1	685	-7	6677	1.82	31.9	0.02
179	SLE QP 2	726	-7	7021	1.9	33.77	0.02
179	SLD 1	1781	5	7567	-5.52	78.36	0.02
179	SLD 2	1781	5	7567	-5.52	78.36	0.02
179	SLD 3	1625	-6	8114	3.22	86.02	0.05
179	SLD 4	1625	-6	8114	3.22	86.02	0.05
179	SLD 5	1279	13	6357	-13.58	35.54	-0.02
179	SLD 6	1279	13	6357	-13.58	35.54	-0.02
179	SLD 7	759	-23	8177	15.55	61.05	0.08
179	SLD 8	759	-23	8177	15.55	61.05	0.08
179	SLD 9	693	9	5865	-11.74	6.49	-0.03
179	SLD 10	693	9	5865	-11.74	6.49	-0.03
179	SLD 11	173	-27	7685	17.39	32	0.07
179	SLD 12	173	-27	7685	17.39	32	0.07
179	SLD 13	-173	-8	5928	0.59	-18.47	0
179	SLD 14	-173	-8	5928	0.59	-18.47	0
179	SLD 15	-329	-19	6474	9.33	-10.82	0.03
179	SLD 16	-329	-19	6474	9.33	-10.82	0.03
179	SLV 1	3181	23	8282	-17.06	137.34	0.01
179	SLV 2	3181	23	8282	-17.06	137.34	0.01
179	SLV 3	2813	-5	9610	5.34	155.26	0.09
179	SLV 4	2813	-5	9610	5.34	155.26	0.09
179	SLV 5	2020	44	5385	-37.75	37.67	-0.1
179	SLV 6	2020	44	5385	-37.75	37.67	-0.1
179	SLV 7	794	-48	9812	36.9	97.4	0.16
179	SLV 8	794	-48	9812	36.9	97.4	0.16
179	SLV 9	658	34	4230	-33.09	-29.85	-0.11
179	SLV 10	658	34	4230	-33.09	-29.85	-0.11
179	SLV 11	-568	-58	8657	41.56	29.88	0.15
179	SLV 12	-568	-58	8657	41.56	29.88	0.15



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
179	SLV 13	-1361	-10	4432	-1.53	-87.72	-0.04
179	SLV 14	-1361	-10	4432	-1.53	-87.72	-0.04
179	SLV 15	-1729	-37	5760	20.87	-69.8	0.04
179	SLV 16	-1729	-37	5760	20.87	-69.8	0.04
180	SLU 1	497	-1	6319	0.09	23.16	-0.01
180	SLU 2	551	0	5997	-0.48	25.14	-0.01
180	SLU 3	518	-1	6533	0.09	24.12	-0.01
180	SLU 4	550	0	6340	-0.25	25.32	-0.01
180	SLU 5	560	0	6133	-0.48	25.57	-0.01
180	SLU 6	527	-1	6669	0.09	24.56	-0.01
180	SLU 7	559	0	6475	-0.26	25.75	-0.01
180	SLU 8	515	-1	6591	0.09	24.02	-0.01
180	SLU 9	548	0	6398	-0.25	25.21	-0.01
180	SLU 10	661	0	7198	-0.45	30.23	-0.01
180	SLU 11	627	-1	7733	0.11	29.22	-0.01
180	SLU 12	660	0	7540	-0.23	30.41	-0.01
180	SLU 13	670	0	7333	-0.46	30.66	-0.01
180	SLU 14	637	-1	7869	0.11	29.65	-0.01
180	SLU 15	669	0	7676	-0.24	30.84	-0.01
180	SLU 16	625	-1	7791	0.11	29.11	-0.01
180	SLU 17	658	0	7598	-0.23	30.3	-0.01
180	SLU 18	653	-1	8034	0.13	30.43	-0.01
180	SLU 19	686	0	7841	-0.22	31.62	-0.01
180	SLU 20	663	-1	8170	0.12	30.86	-0.01
180	SLU 21	695	0	7977	-0.22	32.05	-0.01
180	SLU 22	582	-1	7398	0.1	27.15	-0.01
180	SLU 23	636	0	7076	-0.47	29.14	-0.01
180	SLU 24	603	-1	7612	0.1	28.12	-0.01
180	SLU 25	636	0	7419	-0.24	29.31	-0.01
180	SLU 26	646	0	7212	-0.47	29.57	-0.01
180	SLU 27	612	-1	7748	0.09	28.55	-0.01
180	SLU 28	645	0	7554	-0.25	29.75	-0.01
180	SLU 29	601	-1	7670	0.1	28.01	-0.01
180	SLU 30	633	0	7476	-0.24	29.21	-0.01
180	SLU 31	746	0	8277	-0.44	34.23	-0.01
180	SLU 32	713	-1	8812	0.12	33.21	-0.01
180	SLU 33	745	0	8619	-0.22	34.41	-0.01
180	SLU 34	755	0	8412	-0.45	34.66	-0.01
180	SLU 35	722	-1	8948	0.12	33.64	-0.01
180	SLU 36	755	0	8755	-0.23	34.84	-0.01
180	SLU 37	711	-1	8870	0.12	33.11	-0.01
180	SLU 38	743	0	8677	-0.22	34.3	-0.01
180	SLU 39	739	-1	9113	0.13	34.43	-0.01
180	SLU 40	771	0	8920	-0.21	35.62	-0.01
180	SLU 41	748	-1	9249	0.13	34.86	-0.01
180	SLU 42	781	0	9056	-0.21	36.05	-0.01
180	SLU 43	616	-1	7845	0.12	28.73	-0.01
180	SLU 44	670	0	7523	-0.45	30.72	-0.01
180	SLU 45	637	-1	8059	0.11	29.7	-0.01
180	SLU 46	670	0	7866	-0.23	30.89	-0.01
180	SLU 47	680	0	7659	-0.45	31.15	-0.01
180	SLU 48	647	-1	8194	0.11	30.13	-0.01
180	SLU 49	679	0	8001	-0.23	31.32	-0.01
180	SLU 50	635	-1	8116	0.11	29.59	-0.01
180	SLU 51	668	0	7923	-0.23	30.79	-0.01
180	SLU 52	780	0	8723	-0.43	35.81	-0.01
180	SLU 53	747	-1	9259	0.13	34.79	-0.01
180	SLU 54	779	0	9066	-0.21	35.98	-0.01
180	SLU 55	790	0	8859	-0.43	36.24	-0.01
180	SLU 56	756	-1	9395	0.13	35.22	-0.01
180	SLU 57	789	0	9202	-0.21	36.42	-0.01
180	SLU 58	745	-1	9317	0.14	34.68	-0.01
180	SLU 59	777	0	9124	-0.21	35.88	-0.01
180	SLU 60	773	-1	9560	0.15	36	-0.01
180	SLU 61	806	0	9367	-0.19	37.2	-0.01
180	SLU 62	783	-1	9696	0.15	36.44	-0.01
180	SLU 63	815	0	9502	-0.19	37.63	-0.01
180	SLU 64	702	-1	8924	0.13	32.73	-0.01
180	SLU 65	756	0	8602	-0.44	34.72	-0.01
180	SLU 66	723	-1	9138	0.12	33.7	-0.01
180	SLU 67	755	0	8944	-0.22	34.89	-0.01
180	SLU 68	765	0	8738	-0.44	35.15	-0.01
180	SLU 69	732	-1	9273	0.12	34.13	-0.01
180	SLU 70	765	0	9080	-0.22	35.32	-0.01
180	SLU 71	721	-1	9195	0.12	33.59	-0.01
180	SLU 72	753	0	9002	-0.22	34.78	-0.01
180	SLU 73	866	0	9802	-0.42	39.81	-0.01
180	SLU 74	833	-1	10338	0.14	38.79	-0.02
180	SLU 75	865	-1	10145	-0.2	39.98	-0.01
180	SLU 76	875	0	9938	-0.42	40.24	-0.01
180	SLU 77	842	-1	10474	0.14	39.22	-0.02
180	SLU 78	874	-1	10281	-0.2	40.41	-0.01
180	SLU 79	830	-1	10396	0.14	38.68	-0.02
180	SLU 80	863	-1	10203	-0.2	39.87	-0.01
180	SLU 81	859	-1	10639	0.16	40	-0.02
180	SLU 82	891	-1	10446	-0.18	41.19	-0.01
180	SLU 83	868	-1	10774	0.16	40.43	-0.02
180	SLU 84	901	-1	10581	-0.19	41.62	-0.01
180	SLE RA 1	521	-1	6627	0.1	24.3	-0.01
180	SLE RA 2	557	0	6413	-0.28	25.62	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
180	SLE RA 3	535	-1	6770	0.09	24.94	-0.01
180	SLE RA 4	557	0	6641	-0.13	25.74	-0.01
180	SLE RA 5	563	0	6503	-0.28	25.91	-0.01
180	SLE RA 6	541	-1	6860	0.09	25.23	-0.01
180	SLE RA 7	563	0	6732	-0.14	26.03	-0.01
180	SLE RA 8	534	-1	6808	0.09	24.87	-0.01
180	SLE RA 9	555	0	6680	-0.13	25.67	-0.01
180	SLE RA 10	630	0	7213	-0.27	29.02	-0.01
180	SLE RA 11	608	-1	7570	0.11	28.34	-0.01
180	SLE RA 12	630	0	7441	-0.12	29.13	-0.01
180	SLE RA 13	637	0	7304	-0.27	29.3	-0.01
180	SLE RA 14	614	-1	7661	0.11	28.62	-0.01
180	SLE RA 15	636	0	7532	-0.12	29.42	-0.01
180	SLE RA 16	607	-1	7609	0.11	28.27	-0.01
180	SLE RA 17	628	0	7480	-0.12	29.06	-0.01
180	SLE RA 18	626	-1	7771	0.12	29.15	-0.01
180	SLE RA 19	647	0	7642	-0.11	29.94	-0.01
180	SLE RA 20	632	-1	7861	0.12	29.43	-0.01
180	SLE RA 21	654	0	7732	-0.11	30.23	-0.01
180	SLE FR 1	521	-1	6627	0.1	24.3	-0.01
180	SLE FR 2	528	0	6584	0.02	24.56	-0.01
180	SLE FR 3	524	-1	6664	0.1	24.41	-0.01
180	SLE FR 4	560	-1	6927	0.03	26.02	-0.01
180	SLE FR 5	555	-1	7007	0.1	25.87	-0.01
180	SLE FR 6	573	-1	7199	0.11	26.72	-0.01
180	SLE QP 1	521	-1	6627	0.1	24.3	-0.01
180	SLE QP 2	552	-1	6970	0.1	25.75	-0.01
180	SLD 1	1524	14	7216	-13.32	71.58	-0.01
180	SLD 2	1524	14	7216	-13.32	71.58	-0.01
180	SLD 3	1697	-1	7628	2.98	79.58	-0.02
180	SLD 4	1697	-1	7628	2.98	79.58	-0.02
180	SLD 5	583	26	6420	-28.64	27.35	0.01
180	SLD 6	583	26	6420	-28.64	27.35	0.01
180	SLD 7	1157	-23	7792	25.69	54.05	-0.03
180	SLD 8	1157	-23	7792	25.69	54.05	-0.03
180	SLD 9	-52	22	6149	-25.48	-2.54	0.01
180	SLD 10	-52	22	6149	-25.48	-2.54	0.01
180	SLD 11	522	-27	7521	28.85	24.15	-0.03
180	SLD 12	522	-27	7521	28.85	24.15	-0.03
180	SLD 13	-592	0	6313	-2.78	-28.08	0
180	SLD 14	-592	0	6313	-2.78	-28.08	0
180	SLD 15	-419	-15	6724	13.52	-20.07	-0.01
180	SLD 16	-419	-15	6724	13.52	-20.07	-0.01
180	SLV 1	2809	36	7534	-34.27	132.2	-0.01
180	SLV 2	2809	36	7534	-34.27	132.2	-0.01
180	SLV 3	3213	-2	8540	7.54	150.92	-0.05
180	SLV 4	3213	-2	8540	7.54	150.92	-0.05
180	SLV 5	617	67	5614	-73.61	29.29	0.03
180	SLV 6	617	67	5614	-73.61	29.29	0.03
180	SLV 7	1963	-58	8966	65.74	91.69	-0.07
180	SLV 8	1963	-58	8966	65.74	91.69	-0.07
180	SLV 9	-858	57	4975	-65.53	-40.19	0.05
180	SLV 10	-858	57	4975	-65.53	-40.19	0.05
180	SLV 11	488	-69	8326	73.82	22.21	-0.06
180	SLV 12	488	-69	8326	73.82	22.21	-0.06
180	SLV 13	-2108	0	5401	-7.33	-99.41	0.02
180	SLV 14	-2108	0	5401	-7.33	-99.41	0.02
180	SLV 15	-1704	-37	6407	34.47	-80.69	-0.01
180	SLV 16	-1704	-37	6407	34.47	-80.69	-0.01
181	SLU 1	350	1	6374	-0.97	15.13	0
181	SLU 2	402	1	6111	-1.41	17.26	0
181	SLU 3	367	1	6590	-1.02	15.84	0
181	SLU 4	398	1	6432	-1.28	17.12	0
181	SLU 5	409	1	6250	-1.44	17.52	0
181	SLU 6	373	1	6729	-1.05	16.1	0
181	SLU 7	404	1	6571	-1.31	17.38	0
181	SLU 8	363	1	6651	-1.03	15.65	0
181	SLU 9	394	1	6494	-1.29	16.93	0
181	SLU 10	481	1	7324	-1.56	20.68	0
181	SLU 11	446	1	7803	-1.17	19.26	0
181	SLU 12	477	1	7645	-1.44	20.54	0
181	SLU 13	488	1	7462	-1.59	20.94	0
181	SLU 14	452	1	7941	-1.2	19.52	0
181	SLU 15	483	1	7784	-1.47	20.8	0
181	SLU 16	442	1	7864	-1.18	19.07	0
181	SLU 17	473	1	7706	-1.45	20.35	0
181	SLU 18	463	1	8107	-1.19	20.01	0
181	SLU 19	494	1	7949	-1.45	21.29	0
181	SLU 20	469	1	8245	-1.22	20.27	0
181	SLU 21	501	1	8087	-1.48	21.55	0
181	SLU 22	408	1	7461	-1.13	17.62	0
181	SLU 23	460	1	7198	-1.57	19.75	0
181	SLU 24	425	1	7677	-1.18	18.34	0
181	SLU 25	456	1	7519	-1.45	19.61	0
181	SLU 26	467	1	7337	-1.6	20.01	0
181	SLU 27	431	1	7816	-1.21	18.6	0
181	SLU 28	462	1	7658	-1.48	19.87	0
181	SLU 29	421	1	7738	-1.19	18.14	0
181	SLU 30	452	1	7581	-1.46	19.42	0
181	SLU 31	539	1	8411	-1.73	23.17	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
181	SLU 32	503	1	8890	-1.34	21.76	0
181	SLU 33	535	1	8732	-1.6	23.03	0
181	SLU 34	545	1	8549	-1.76	23.43	0
181	SLU 35	510	1	9028	-1.37	22.02	0
181	SLU 36	541	1	8871	-1.63	23.29	0
181	SLU 37	500	1	8951	-1.34	21.56	0
181	SLU 38	531	1	8793	-1.61	22.84	0
181	SLU 39	521	1	9194	-1.35	22.51	0
181	SLU 40	552	1	9036	-1.61	23.79	0
181	SLU 41	527	1	9332	-1.38	22.77	0
181	SLU 42	558	1	9174	-1.64	24.05	0
181	SLU 43	436	1	7914	-1.2	18.81	0
181	SLU 44	488	1	7651	-1.64	20.94	0
181	SLU 45	452	1	8130	-1.25	19.53	0
181	SLU 46	483	1	7972	-1.52	20.8	0
181	SLU 47	494	1	7789	-1.67	21.2	0
181	SLU 48	458	1	8268	-1.28	19.79	0
181	SLU 49	490	1	8110	-1.55	21.06	0
181	SLU 50	448	1	8191	-1.26	19.33	0
181	SLU 51	480	1	8033	-1.53	20.61	0
181	SLU 52	567	1	8863	-1.8	24.36	0
181	SLU 53	531	1	9342	-1.41	22.95	0
181	SLU 54	562	1	9185	-1.67	24.22	0
181	SLU 55	573	1	9002	-1.83	24.62	0
181	SLU 56	537	1	9481	-1.44	23.21	0
181	SLU 57	568	1	9323	-1.7	24.48	0
181	SLU 58	527	1	9404	-1.42	22.75	0
181	SLU 59	558	1	9246	-1.68	24.03	0
181	SLU 60	548	1	9646	-1.42	23.7	0
181	SLU 61	580	1	9488	-1.69	24.98	0
181	SLU 62	555	1	9785	-1.45	23.96	0
181	SLU 63	586	1	9627	-1.72	25.24	0
181	SLU 64	493	1	9001	-1.37	21.31	0
181	SLU 65	546	1	8738	-1.81	23.44	0
181	SLU 66	510	1	9217	-1.42	22.02	0
181	SLU 67	541	1	9059	-1.68	23.3	0
181	SLU 68	552	1	8876	-1.84	23.7	0
181	SLU 69	516	1	9355	-1.45	22.28	0
181	SLU 70	547	1	9197	-1.71	23.56	0
181	SLU 71	506	1	9278	-1.42	21.83	0
181	SLU 72	537	1	9120	-1.69	23.1	0
181	SLU 73	624	1	9950	-1.96	26.86	0
181	SLU 74	589	1	10429	-1.57	25.44	0
181	SLU 75	620	1	10272	-1.84	26.72	0
181	SLU 76	631	1	10089	-1.99	27.12	0
181	SLU 77	595	1	10568	-1.6	25.7	0
181	SLU 78	626	1	10410	-1.87	26.98	0
181	SLU 79	585	1	10491	-1.58	25.25	0
181	SLU 80	616	1	10333	-1.84	26.52	0
181	SLU 81	606	1	10733	-1.58	26.19	0
181	SLU 82	637	1	10575	-1.85	27.47	0
181	SLU 83	612	1	10872	-1.61	26.45	0
181	SLU 84	644	1	10714	-1.88	27.73	0
181	SLE RA 1	367	1	6685	-1.01	15.84	0
181	SLE RA 2	402	1	6509	-1.31	17.26	0
181	SLE RA 3	378	1	6829	-1.05	16.32	0
181	SLE RA 4	399	1	6724	-1.23	17.17	0
181	SLE RA 5	406	1	6602	-1.33	17.43	0
181	SLE RA 6	382	1	6921	-1.07	16.49	0
181	SLE RA 7	403	1	6816	-1.25	17.34	0
181	SLE RA 8	375	1	6870	-1.05	16.19	0
181	SLE RA 9	396	1	6764	-1.23	17.04	0
181	SLE RA 10	454	1	7318	-1.41	19.54	0
181	SLE RA 11	430	1	7637	-1.15	18.6	0
181	SLE RA 12	451	1	7532	-1.33	19.45	0
181	SLE RA 13	458	1	7410	-1.43	19.71	0
181	SLE RA 14	435	1	7730	-1.17	18.77	0
181	SLE RA 15	455	1	7624	-1.35	19.62	0
181	SLE RA 16	428	1	7678	-1.16	18.47	0
181	SLE RA 17	449	1	7573	-1.33	19.32	0
181	SLE RA 18	442	1	7840	-1.16	19.1	0
181	SLE RA 19	463	1	7735	-1.34	19.95	0
181	SLE RA 20	446	1	7932	-1.18	19.27	0
181	SLE RA 21	467	1	7827	-1.36	20.12	0
181	SLE FR 1	367	1	6685	-1.01	15.84	0
181	SLE FR 2	374	1	6650	-1.07	16.13	0
181	SLE FR 3	369	1	6722	-1.02	15.91	0
181	SLE FR 4	396	1	6996	-1.12	17.1	0
181	SLE FR 5	391	1	7068	-1.07	16.89	0
181	SLE FR 6	404	1	7262	-1.09	17.47	0
181	SLE QP 1	367	1	6685	-1.01	15.84	0
181	SLE QP 2	389	1	7031	-1.06	16.82	0
181	SLD 1	1400	21	7066	-20.16	63.98	-0.01
181	SLD 2	1400	21	7066	-20.16	63.98	-0.01
181	SLD 3	1582	-3	7421	3.59	72.34	-0.01
181	SLD 4	1582	-3	7421	3.59	72.34	-0.01
181	SLD 5	416	43	6503	-42.8	18.29	-0.01
181	SLD 6	416	43	6503	-42.8	18.29	-0.01
181	SLD 7	1023	-37	7687	36.34	46.15	0
181	SLD 8	1023	-37	7687	36.34	46.15	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
181	SLD 9	-245	38	6376	-38.46	-12.51	-0.01
181	SLD 10	-245	38	6376	-38.46	-12.51	-0.01
181	SLD 11	363	-42	7560	40.68	15.34	0.01
181	SLD 12	363	-42	7560	40.68	15.34	0.01
181	SLD 13	-803	5	6641	-5.7	-38.7	0
181	SLD 14	-803	5	6641	-5.7	-38.7	0
181	SLD 15	-621	-20	6997	18.04	-30.34	0.01
181	SLD 16	-621	-20	6997	18.04	-30.34	0.01
181	SLV 1	2735	52	7109	-49.99	126.37	-0.02
181	SLV 2	2735	52	7109	-49.99	126.37	-0.02
181	SLV 3	3161	-10	7977	10.91	145.89	-0.01
181	SLV 4	3161	-10	7977	10.91	145.89	-0.01
181	SLV 5	446	110	5739	-108.1	20.07	-0.03
181	SLV 6	446	110	5739	-108.1	20.07	-0.03
181	SLV 7	1868	-96	8631	94.9	85.16	0.01
181	SLV 8	1868	-96	8631	94.9	85.16	0.01
181	SLV 9	-1089	97	5432	-97.01	-51.52	-0.02
181	SLV 10	-1089	97	5432	-97.01	-51.52	-0.02
181	SLV 11	332	-109	8324	105.99	13.57	0.02
181	SLV 12	332	-109	8324	105.99	13.57	0.02
181	SLV 13	-2383	11	6086	-13.03	-112.26	0.01
181	SLV 14	-2383	11	6086	-13.03	-112.26	0.01
181	SLV 15	-1956	-51	6953	47.87	-92.73	0.02
181	SLV 16	-1956	-51	6953	47.87	-92.73	0.02
182	SLU 1	236	1	6461	-1.88	10.21	0
182	SLU 2	284	2	6240	-2.23	12.17	0
182	SLU 3	249	1	6681	-1.98	10.77	0
182	SLU 4	278	2	6549	-2.18	11.95	0
182	SLU 5	288	2	6383	-2.28	12.33	0
182	SLU 6	253	2	6824	-2.03	10.93	0
182	SLU 7	282	2	6691	-2.24	12.11	0
182	SLU 8	244	1	6746	-2	10.53	0
182	SLU 9	273	2	6614	-2.2	11.71	0
182	SLU 10	338	2	7470	-2.53	14.52	0
182	SLU 11	302	2	7911	-2.29	13.12	0
182	SLU 12	331	2	7779	-2.49	14.29	0
182	SLU 13	342	2	7613	-2.59	14.68	0
182	SLU 14	306	2	8054	-2.34	13.28	0
182	SLU 15	335	2	7921	-2.55	14.46	0
182	SLU 16	298	2	7976	-2.3	12.88	0
182	SLU 17	327	2	7843	-2.51	14.06	0
182	SLU 18	313	2	8218	-2.32	13.57	0
182	SLU 19	341	2	8085	-2.53	14.74	0
182	SLU 20	317	2	8360	-2.38	13.73	0
182	SLU 21	346	2	8228	-2.58	14.9	0
182	SLU 22	272	2	7561	-2.2	11.77	0
182	SLU 23	320	2	7340	-2.55	13.73	0
182	SLU 24	285	2	7781	-2.3	12.33	0
182	SLU 25	313	2	7649	-2.5	13.51	0
182	SLU 26	324	2	7483	-2.6	13.89	0
182	SLU 27	289	2	7924	-2.35	12.49	0
182	SLU 28	318	2	7791	-2.56	13.67	0
182	SLU 29	280	2	7846	-2.31	12.1	0
182	SLU 30	309	2	7714	-2.52	13.27	0
182	SLU 31	374	2	8570	-2.85	16.08	0
182	SLU 32	338	2	9011	-2.6	14.68	0
182	SLU 33	367	2	8879	-2.81	15.86	0
182	SLU 34	378	2	8713	-2.91	16.24	0
182	SLU 35	342	2	9154	-2.66	14.84	0
182	SLU 36	371	2	9021	-2.87	16.02	0
182	SLU 37	333	2	9076	-2.62	14.45	0
182	SLU 38	362	2	8943	-2.83	15.62	0
182	SLU 39	348	2	9318	-2.64	15.13	0
182	SLU 40	377	2	9185	-2.85	16.3	0
182	SLU 41	352	2	9460	-2.7	15.29	0
182	SLU 42	381	2	9328	-2.9	16.46	0
182	SLU 43	294	2	8023	-2.34	12.74	0
182	SLU 44	342	2	7802	-2.68	14.7	0
182	SLU 45	307	2	8243	-2.44	13.3	0
182	SLU 46	336	2	8110	-2.64	14.47	0
182	SLU 47	346	2	7944	-2.74	14.86	0
182	SLU 48	311	2	8385	-2.49	13.46	0
182	SLU 49	340	2	8253	-2.7	14.63	0
182	SLU 50	302	2	8308	-2.45	13.06	0
182	SLU 51	331	2	8175	-2.66	14.24	0
182	SLU 52	396	2	9031	-2.99	17.05	0
182	SLU 53	361	2	9472	-2.74	15.65	0
182	SLU 54	390	2	9340	-2.95	16.82	0
182	SLU 55	400	2	9174	-3.05	17.21	0
182	SLU 56	365	2	9615	-2.8	15.81	0
182	SLU 57	394	2	9482	-3	16.98	0
182	SLU 58	356	2	9537	-2.76	15.41	0
182	SLU 59	385	2	9405	-2.96	16.58	0
182	SLU 60	371	2	9779	-2.78	16.1	0
182	SLU 61	400	2	9647	-2.98	17.27	0
182	SLU 62	375	2	9922	-2.83	16.26	0
182	SLU 63	404	2	9789	-3.04	17.43	0
182	SLU 64	330	2	9123	-2.66	14.3	0
182	SLU 65	378	2	8902	-3	16.26	0
182	SLU 66	343	2	9343	-2.75	14.86	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
182	SLU 67	372	2	9210	-2.96	16.04	0
182	SLU 68	382	2	9044	-3.06	16.42	0
182	SLU 69	347	2	9485	-2.81	15.02	0
182	SLU 70	376	2	9353	-3.01	16.2	0
182	SLU 71	338	2	9408	-2.77	14.62	0
182	SLU 72	367	2	9275	-2.98	15.8	0
182	SLU 73	432	2	10131	-3.31	18.61	0
182	SLU 74	397	2	10572	-3.06	17.21	0
182	SLU 75	426	2	10440	-3.27	18.38	0
182	SLU 76	436	3	10274	-3.36	18.77	0
182	SLU 77	401	2	10715	-3.12	17.37	0
182	SLU 78	430	2	10582	-3.32	18.55	0
182	SLU 79	392	2	10637	-3.08	16.97	0
182	SLU 80	421	2	10505	-3.28	18.15	0
182	SLU 81	407	2	10879	-3.1	17.66	0
182	SLU 82	436	2	10747	-3.3	18.83	0
182	SLU 83	411	2	11022	-3.15	17.82	0
182	SLU 84	440	3	10889	-3.36	18.99	0
182	SLE RA 1	246	1	6776	-1.97	10.66	0
182	SLE RA 2	278	2	6628	-2.2	11.96	0
182	SLE RA 3	255	2	6922	-2.04	11.03	0
182	SLE RA 4	274	2	6834	-2.18	11.81	0
182	SLE RA 5	281	2	6723	-2.24	12.07	0
182	SLE RA 6	257	2	7017	-2.08	11.14	0
182	SLE RA 7	277	2	6929	-2.21	11.92	0
182	SLE RA 8	251	2	6966	-2.05	10.87	0
182	SLE RA 9	271	2	6877	-2.19	11.65	0
182	SLE RA 10	314	2	7448	-2.41	13.53	0
182	SLE RA 11	290	2	7742	-2.24	12.6	0
182	SLE RA 12	310	2	7654	-2.38	13.38	0
182	SLE RA 13	317	2	7543	-2.45	13.64	0
182	SLE RA 14	293	2	7837	-2.28	12.71	0
182	SLE RA 15	312	2	7749	-2.42	13.49	0
182	SLE RA 16	287	2	7785	-2.25	12.44	0
182	SLE RA 17	307	2	7697	-2.39	13.22	0
182	SLE RA 18	297	2	7947	-2.27	12.9	0
182	SLE RA 19	316	2	7858	-2.4	13.68	0
182	SLE RA 20	300	2	8042	-2.3	13	0
182	SLE RA 21	319	2	7953	-2.44	13.79	0
182	SLE FR 1	246	1	6776	-1.97	10.66	0
182	SLE FR 2	252	2	6746	-2.02	10.92	0
182	SLE FR 3	247	1	6814	-1.99	10.7	0
182	SLE FR 4	268	2	7097	-2.11	11.59	0
182	SLE FR 5	262	2	7165	-2.08	11.37	0
182	SLE FR 6	272	2	7361	-2.12	11.78	0
182	SLE QP 1	246	1	6776	-1.97	10.66	0
182	SLE QP 2	261	2	7127	-2.06	11.33	0
182	SLD 1	1274	28	6770	-25.7	58.16	-0.03
182	SLD 2	1274	28	6770	-25.7	58.16	-0.03
182	SLD 3	1460	-5	7100	3.96	66.54	0
182	SLD 4	1460	-5	7100	3.96	66.54	0
182	SLD 5	285	59	6520	-54.14	12.68	-0.05
182	SLD 6	285	59	6520	-54.14	12.68	-0.05
182	SLD 7	902	-50	7618	44.73	40.59	0.04
182	SLD 8	902	-50	7618	44.73	40.59	0.04
182	SLD 9	-379	53	6635	-48.86	-17.93	-0.05
182	SLD 10	-379	53	6635	-48.86	-17.93	-0.05
182	SLD 11	238	-56	7734	50.02	9.98	0.05
182	SLD 12	238	-56	7734	50.02	9.98	0.05
182	SLD 13	-937	8	7154	-8.09	-43.88	-0.01
182	SLD 14	-937	8	7154	-8.09	-43.88	-0.01
182	SLD 15	-752	-25	7483	21.57	-35.5	0.02
182	SLD 16	-752	-25	7483	21.57	-35.5	0.02
182	SLV 1	2614	69	6264	-62.58	120.13	-0.06
182	SLV 2	2614	69	6264	-62.58	120.13	-0.06
182	SLV 3	3046	-15	7067	13.51	139.66	0.01
182	SLV 4	3046	-15	7067	13.51	139.66	0.01
182	SLV 5	312	149	5651	-135.61	14.34	-0.14
182	SLV 6	312	149	5651	-135.61	14.34	-0.14
182	SLV 7	1753	-131	8326	118.01	79.46	0.12
182	SLV 8	1753	-131	8326	118.01	79.46	0.12
182	SLV 9	-1230	134	5928	-122.13	-56.8	-0.12
182	SLV 10	-1230	134	5928	-122.13	-56.8	-0.12
182	SLV 11	211	-146	8603	131.49	8.32	0.13
182	SLV 12	211	-146	8603	131.49	8.32	0.13
182	SLV 13	-2524	18	7187	-17.64	-117	-0.01
182	SLV 14	-2524	18	7187	-17.64	-117	-0.01
182	SLV 15	-2092	-66	7990	58.45	-97.47	0.06
182	SLV 16	-2092	-66	7990	58.45	-97.47	0.06
183	SLU 1	104	2	6583	-2.79	3.9	0
183	SLU 2	150	3	6393	-3.04	5.81	0
183	SLU 3	113	3	6809	-2.93	4.26	0
183	SLU 4	140	3	6695	-3.08	5.4	0
183	SLU 5	151	3	6541	-3.13	5.84	0
183	SLU 6	114	3	6957	-3.02	4.28	0
183	SLU 7	142	3	6843	-3.17	5.43	0
183	SLU 8	107	3	6879	-2.96	3.96	0
183	SLU 9	134	3	6764	-3.11	5.11	0
183	SLU 10	175	3	7645	-3.5	6.82	0
183	SLU 11	138	3	8061	-3.39	5.26	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
183	SLU 12	166	3	7947	-3.54	6.4	0
183	SLU 13	176	3	7793	-3.59	6.84	0
183	SLU 14	140	3	8209	-3.47	5.28	0
183	SLU 15	167	3	8095	-3.62	6.43	0
183	SLU 16	133	3	8131	-3.42	4.96	0
183	SLU 17	160	3	8017	-3.57	6.11	0
183	SLU 18	141	3	8372	-3.45	5.33	0
183	SLU 19	168	3	8257	-3.6	6.48	0
183	SLU 20	142	3	8519	-3.53	5.36	0
183	SLU 21	169	3	8405	-3.68	6.51	0
183	SLU 22	116	3	7702	-3.27	4.29	0
183	SLU 23	161	3	7511	-3.52	6.2	0
183	SLU 24	124	3	7928	-3.41	4.64	0
183	SLU 25	152	3	7814	-3.56	5.79	0
183	SLU 26	162	3	7659	-3.6	6.23	0
183	SLU 27	126	3	8076	-3.49	4.67	0
183	SLU 28	153	3	7962	-3.64	5.81	0
183	SLU 29	119	3	7997	-3.43	4.34	0
183	SLU 30	146	3	7883	-3.58	5.49	0
183	SLU 31	186	3	8764	-3.98	7.2	0
183	SLU 32	150	3	9180	-3.87	5.64	0
183	SLU 33	177	3	9066	-4.02	6.79	0
183	SLU 34	188	4	8911	-4.06	7.23	0
183	SLU 35	151	3	9328	-3.95	5.67	0
183	SLU 36	178	4	9214	-4.1	6.82	0
183	SLU 37	144	3	9249	-3.89	5.35	0
183	SLU 38	171	4	9135	-4.04	6.49	0
183	SLU 39	152	3	9490	-3.92	5.72	0
183	SLU 40	179	4	9376	-4.07	6.86	0
183	SLU 41	154	3	9638	-4.01	5.75	0
183	SLU 42	181	4	9524	-4.16	6.89	0
183	SLU 43	132	3	8174	-3.47	4.94	0
183	SLU 44	177	3	7984	-3.72	6.85	0
183	SLU 45	140	3	8401	-3.61	5.3	0
183	SLU 46	167	3	8287	-3.76	6.44	0
183	SLU 47	178	3	8132	-3.8	6.88	0
183	SLU 48	142	3	8548	-3.69	5.32	0
183	SLU 49	169	3	8434	-3.84	6.47	0
183	SLU 50	134	3	8470	-3.63	5	0
183	SLU 51	162	3	8356	-3.78	6.15	0
183	SLU 52	202	4	9236	-4.18	7.86	0
183	SLU 53	166	4	9653	-4.07	6.3	0
183	SLU 54	193	4	9539	-4.22	7.44	0
183	SLU 55	204	4	9384	-4.26	7.88	0
183	SLU 56	167	4	9800	-4.15	6.32	0
183	SLU 57	194	4	9686	-4.3	7.47	0
183	SLU 58	160	4	9722	-4.09	6	0
183	SLU 59	187	4	9608	-4.24	7.15	0
183	SLU 60	168	4	9963	-4.13	6.37	0
183	SLU 61	195	4	9849	-4.28	7.52	0
183	SLU 62	169	4	10111	-4.21	6.4	0
183	SLU 63	197	4	9997	-4.36	7.55	0
183	SLU 64	143	3	9293	-3.94	5.33	0
183	SLU 65	188	4	9103	-4.19	7.24	0
183	SLU 66	152	4	9519	-4.08	5.68	0
183	SLU 67	179	4	9405	-4.23	6.83	0
183	SLU 68	190	4	9251	-4.28	7.27	0
183	SLU 69	153	4	9667	-4.17	5.71	0
183	SLU 70	180	4	9553	-4.32	6.85	0
183	SLU 71	146	4	9589	-4.11	5.38	0
183	SLU 72	173	4	9474	-4.26	6.53	0
183	SLU 73	214	4	10355	-4.65	8.24	-0.01
183	SLU 74	177	4	10771	-4.54	6.68	-0.01
183	SLU 75	204	4	10657	-4.69	7.83	-0.01
183	SLU 76	215	4	10503	-4.74	8.27	-0.01
183	SLU 77	179	4	10919	-4.62	6.71	-0.01
183	SLU 78	206	4	10805	-4.77	7.85	-0.01
183	SLU 79	171	4	10841	-4.57	6.39	-0.01
183	SLU 80	199	4	10727	-4.72	7.53	-0.01
183	SLU 81	180	4	11082	-4.6	6.76	-0.01
183	SLU 82	207	4	10967	-4.75	7.9	-0.01
183	SLU 83	181	4	11229	-4.68	6.79	-0.01
183	SLU 84	208	4	11115	-4.83	7.93	-0.01
183	SLE RA 1	108	3	6903	-2.93	4.01	0
183	SLE RA 2	138	3	6776	-3.1	5.29	0
183	SLE RA 3	113	3	7053	-3.02	4.25	0
183	SLE RA 4	131	3	6977	-3.12	5.01	0
183	SLE RA 5	139	3	6874	-3.15	5.31	0
183	SLE RA 6	114	3	7152	-3.08	4.27	0
183	SLE RA 7	132	3	7076	-3.18	5.03	0
183	SLE RA 8	109	3	7100	-3.04	4.05	0
183	SLE RA 9	128	3	7024	-3.14	4.82	0
183	SLE RA 10	155	3	7610	-3.4	5.95	0
183	SLE RA 11	130	3	7888	-3.33	4.92	0
183	SLE RA 12	148	3	7812	-3.43	5.68	0
183	SLE RA 13	156	3	7709	-3.46	5.97	0
183	SLE RA 14	131	3	7987	-3.38	4.93	0
183	SLE RA 15	149	3	7911	-3.48	5.7	0
183	SLE RA 16	126	3	7934	-3.34	4.72	0
183	SLE RA 17	145	3	7858	-3.45	5.48	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
183	SLE RA 18	132	3	8095	-3.37	4.97	0
183	SLE RA 19	150	3	8019	-3.47	5.73	0
183	SLE RA 20	133	3	8193	-3.42	4.99	0
183	SLE RA 21	151	3	8117	-3.52	5.75	0
183	SLE FR 1	108	3	6903	-2.93	4.01	0
183	SLE FR 2	114	3	6877	-2.96	4.27	0
183	SLE FR 3	108	3	6942	-2.95	4.02	0
183	SLE FR 4	121	3	7235	-3.09	4.55	0
183	SLE FR 5	115	3	7300	-3.08	4.31	0
183	SLE FR 6	120	3	7499	-3.15	4.49	0
183	SLE QP 1	108	3	6903	-2.93	4.01	0
183	SLE QP 2	115	3	7260	-3.06	4.3	0
183	SLD 1	1101	32	6680	-29.12	50.52	-0.05
183	SLD 2	1101	32	6680	-29.12	50.52	-0.05
183	SLD 3	1282	-5	7001	3.64	58.78	0.01
183	SLD 4	1282	-5	7001	3.64	58.78	0.01
183	SLD 5	137	68	6600	-60.57	5.64	-0.1
183	SLD 6	137	68	6600	-60.57	5.64	-0.1
183	SLD 7	739	-56	7669	48.64	33.17	0.08
183	SLD 8	739	-56	7669	48.64	33.17	0.08
183	SLD 9	-509	62	6851	-54.77	-24.57	-0.09
183	SLD 10	-509	62	6851	-54.77	-24.57	-0.09
183	SLD 11	93	-63	7921	54.45	2.96	0.09
183	SLD 12	93	-63	7921	54.45	2.96	0.09
183	SLD 13	-1052	10	7520	-9.76	-50.18	-0.01
183	SLD 14	-1052	10	7520	-9.76	-50.18	-0.01
183	SLD 15	-871	-27	7840	23	-41.92	0.04
183	SLD 16	-871	-27	7840	23	-41.92	0.04
183	SLV 1	2405	79	5885	-69.69	111.69	-0.11
183	SLV 2	2405	79	5885	-69.69	111.69	-0.11
183	SLV 3	2827	-17	6664	14.34	130.95	0.02
183	SLV 4	2827	-17	6664	14.34	130.95	0.02
183	SLV 5	163	171	5666	-150.5	7.31	-0.24
183	SLV 6	163	171	5666	-150.5	7.31	-0.24
183	SLV 7	1568	-148	8263	129.61	71.5	0.21
183	SLV 8	1568	-148	8263	129.61	71.5	0.21
183	SLV 9	-1338	154	6258	-135.73	-62.9	-0.22
183	SLV 10	-1338	154	6258	-135.73	-62.9	-0.22
183	SLV 11	67	-165	8854	144.37	1.29	0.23
183	SLV 12	67	-165	8854	144.37	1.29	0.23
183	SLV 13	-2597	22	7857	-20.46	-122.35	-0.03
183	SLV 14	-2597	22	7857	-20.46	-122.35	-0.03
183	SLV 15	-2176	-73	8636	63.57	-103.09	0.1
183	SLV 16	-2176	-73	8636	63.57	-103.09	0.1
184	SLU 1	-73	3	6724	-3.66	-4.24	-0.01
184	SLU 2	-30	4	6556	-3.82	-2.42	-0.01
184	SLU 3	-70	4	6958	-3.84	-4.18	-0.01
184	SLU 4	-45	4	6857	-3.94	-3.08	-0.01
184	SLU 5	-33	4	6710	-3.93	-2.56	-0.01
184	SLU 6	-73	4	7112	-3.95	-4.33	-0.01
184	SLU 7	-47	4	7011	-4.05	-3.23	-0.01
184	SLU 8	-78	4	7033	-3.88	-4.54	-0.01
184	SLU 9	-52	4	6932	-3.97	-3.44	-0.01
184	SLU 10	-41	4	7834	-4.42	-3.08	-0.01
184	SLU 11	-81	4	8235	-4.45	-4.85	-0.01
184	SLU 12	-56	4	8135	-4.54	-3.75	-0.01
184	SLU 13	-44	4	7988	-4.53	-3.23	-0.01
184	SLU 14	-84	4	8390	-4.55	-4.99	-0.01
184	SLU 15	-58	4	8289	-4.65	-3.9	-0.01
184	SLU 16	-89	4	8310	-4.48	-5.21	-0.01
184	SLU 17	-63	4	8209	-4.58	-4.11	-0.01
184	SLU 18	-89	4	8549	-4.52	-5.2	-0.01
184	SLU 19	-63	4	8448	-4.62	-4.1	-0.01
184	SLU 20	-91	4	8703	-4.63	-5.34	-0.01
184	SLU 21	-65	4	8603	-4.73	-4.25	-0.01
184	SLU 22	-93	4	7866	-4.78	-5.29	-0.01
184	SLU 23	-50	4	7698	-4.44	-3.47	-0.01
184	SLU 24	-90	4	8099	-4.47	-5.23	-0.01
184	SLU 25	-65	4	7999	-4.56	-4.14	-0.01
184	SLU 26	-52	4	7852	-4.55	-3.62	-0.01
184	SLU 27	-93	4	8254	-4.57	-5.38	-0.01
184	SLU 28	-67	4	8153	-4.67	-4.28	-0.01
184	SLU 29	-98	4	8174	-4.5	-5.59	-0.01
184	SLU 30	-72	4	8074	-4.6	-4.5	-0.01
184	SLU 31	-61	5	8975	-5.05	-4.14	-0.01
184	SLU 32	-101	5	9377	-5.07	-5.9	-0.01
184	SLU 33	-76	5	9276	-5.17	-4.8	-0.01
184	SLU 34	-63	5	9130	-5.16	-4.29	-0.01
184	SLU 35	-104	5	9531	-5.18	-6.05	-0.01
184	SLU 36	-78	5	9431	-5.27	-4.95	-0.01
184	SLU 37	-109	5	9452	-5.1	-6.26	-0.01
184	SLU 38	-83	5	9351	-5.2	-5.16	-0.01
184	SLU 39	-109	5	9691	-5.15	-6.25	-0.01
184	SLU 40	-83	5	9590	-5.24	-5.15	-0.01
184	SLU 41	-111	5	9845	-5.25	-6.4	-0.01
184	SLU 42	-85	5	9744	-5.35	-5.3	-0.01
184	SLU 43	-88	4	8350	-4.54	-5.15	-0.01
184	SLU 44	-45	4	8182	-4.7	-3.33	-0.01
184	SLU 45	-86	4	8584	-4.73	-5.09	-0.01
184	SLU 46	-60	5	8483	-4.82	-3.99	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
184	SLU 47	-48	5	8336	-4.81	-3.48	-0.01
184	SLU 48	-88	5	8738	-4.83	-5.24	-0.01
184	SLU 49	-62	5	8637	-4.93	-4.14	-0.01
184	SLU 50	-93	5	8658	-4.76	-5.45	-0.01
184	SLU 51	-67	5	8558	-4.85	-4.35	-0.01
184	SLU 52	-56	5	9459	-5.31	-4	-0.01
184	SLU 53	-97	5	9861	-5.33	-5.76	-0.01
184	SLU 54	-71	5	9760	-5.43	-4.66	-0.01
184	SLU 55	-59	5	9614	-5.41	-4.14	-0.01
184	SLU 56	-99	5	10015	-5.44	-5.91	-0.01
184	SLU 57	-73	5	9915	-5.53	-4.81	-0.01
184	SLU 58	-104	5	9936	-5.36	-6.12	-0.01
184	SLU 59	-78	5	9835	-5.46	-5.02	-0.01
184	SLU 60	-104	5	10175	-5.41	-6.11	-0.01
184	SLU 61	-78	5	10074	-5.5	-5.01	-0.01
184	SLU 62	-106	5	10329	-5.51	-6.26	-0.01
184	SLU 63	-80	5	10228	-5.61	-5.16	-0.01
184	SLU 64	-108	5	9491	-5.17	-6.21	-0.01
184	SLU 65	-65	5	9324	-5.33	-4.38	-0.01
184	SLU 66	-105	5	9725	-5.35	-6.14	-0.01
184	SLU 67	-80	5	9625	-5.45	-5.05	-0.01
184	SLU 68	-67	5	9478	-5.43	-4.53	-0.01
184	SLU 69	-108	5	9880	-5.46	-6.29	-0.01
184	SLU 70	-82	5	9779	-5.55	-5.2	-0.01
184	SLU 71	-113	5	9800	-5.38	-6.5	-0.01
184	SLU 72	-87	5	9699	-5.48	-5.41	-0.01
184	SLU 73	-76	6	10601	-5.93	-5.05	-0.01
184	SLU 74	-116	6	11003	-5.95	-6.81	-0.01
184	SLU 75	-91	6	10902	-6.05	-5.72	-0.01
184	SLU 76	-79	6	10755	-6.04	-5.2	-0.01
184	SLU 77	-119	6	11157	-6.06	-6.96	-0.01
184	SLU 78	-93	6	11056	-6.16	-5.86	-0.01
184	SLU 79	-124	6	11077	-5.99	-7.17	-0.01
184	SLU 80	-98	6	10977	-6.08	-6.08	-0.01
184	SLU 81	-124	6	11316	-6.03	-7.16	-0.01
184	SLU 82	-98	6	11216	-6.13	-6.07	-0.01
184	SLU 83	-126	6	11471	-6.14	-7.31	-0.01
184	SLU 84	-100	6	11370	-6.23	-6.21	-0.01
184	SLE RA 1	-79	4	7050	-3.84	-4.54	-0.01
184	SLE RA 2	-50	4	6938	-3.94	-3.33	-0.01
184	SLE RA 3	-77	4	7206	-3.96	-4.5	-0.01
184	SLE RA 4	-60	4	7139	-4.02	-3.77	-0.01
184	SLE RA 5	-52	4	7041	-4.02	-3.42	-0.01
184	SLE RA 6	-79	4	7309	-4.03	-4.6	-0.01
184	SLE RA 7	-61	4	7242	-4.09	-3.87	-0.01
184	SLE RA 8	-82	4	7256	-3.98	-4.74	-0.01
184	SLE RA 9	-65	4	7189	-4.05	-4.01	-0.01
184	SLE RA 10	-57	4	7790	-4.35	-3.77	-0.01
184	SLE RA 11	-84	4	8058	-4.36	-4.95	-0.01
184	SLE RA 12	-67	4	7991	-4.43	-4.22	-0.01
184	SLE RA 13	-59	4	7893	-4.42	-3.87	-0.01
184	SLE RA 14	-86	4	8161	-4.43	-5.04	-0.01
184	SLE RA 15	-69	4	8093	-4.5	-4.31	-0.01
184	SLE RA 16	-89	4	8108	-4.38	-5.19	-0.01
184	SLE RA 17	-72	4	8040	-4.45	-4.46	-0.01
184	SLE RA 18	-89	4	8267	-4.41	-5.18	-0.01
184	SLE RA 19	-72	4	8200	-4.48	-4.45	-0.01
184	SLE RA 20	-91	4	8370	-4.48	-5.28	-0.01
184	SLE RA 21	-74	4	8303	-4.55	-4.55	-0.01
184	SLE FR 1	-79	4	7050	-3.84	-4.54	-0.01
184	SLE FR 2	-73	4	7028	-3.86	-4.3	-0.01
184	SLE FR 3	-79	4	7091	-3.87	-4.58	-0.01
184	SLE FR 4	-76	4	7393	-4.03	-4.49	-0.01
184	SLE FR 5	-82	4	7456	-4.04	-4.77	-0.01
184	SLE FR 6	-84	4	7658	-4.12	-4.86	-0.01
184	SLE QP 1	-79	4	7050	-3.84	-4.54	-0.01
184	SLE QP 2	-82	4	7415	-4.01	-4.73	-0.01
184	SLD 1	841	34	6480	-29.96	39.1	-0.05
184	SLD 2	841	34	6480	-29.96	39.1	-0.05
184	SLD 3	1008	-4	6800	2.54	46.75	0.01
184	SLD 4	1008	-4	6800	2.54	46.75	0.01
184	SLD 5	-57	69	6649	-61.09	-3.18	-0.11
184	SLD 6	-57	69	6649	-61.09	-3.18	-0.11
184	SLD 7	497	-55	7716	47.25	22.31	0.09
184	SLD 8	497	-55	7716	47.25	22.31	0.09
184	SLD 9	-661	63	7115	-55.27	-31.78	-0.1
184	SLD 10	-661	63	7115	-55.27	-31.78	-0.1
184	SLD 11	-106	-62	8181	53.08	-6.28	0.1
184	SLD 12	-106	-62	8181	53.08	-6.28	0.1
184	SLD 13	-1171	11	8031	-10.56	-56.22	-0.02
184	SLD 14	-1171	11	8031	-10.56	-56.22	-0.02
184	SLD 15	-1005	-26	8350	21.94	-48.57	0.04
184	SLD 16	-1005	-26	8350	21.94	-48.57	0.04
184	SLV 1	2063	80	5214	-70.2	97.13	-0.13
184	SLV 2	2063	80	5214	-70.2	97.13	-0.13
184	SLV 3	2451	-16	5989	13.12	114.96	0.03
184	SLV 4	2451	-16	5989	13.12	114.96	0.03
184	SLV 5	-27	172	5578	-150.23	-1.22	-0.28
184	SLV 6	-27	172	5578	-150.23	-1.22	-0.28
184	SLV 7	1267	-147	8164	127.5	58.22	0.24



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
184	SLV 8	1267	-147	8164	127.5	58.22	0.24
184	SLV 9	-1430	155	6667	-135.52	-67.68	-0.25
184	SLV 10	-1430	155	6667	-135.52	-67.68	-0.25
184	SLV 11	-136	-164	9252	142.22	-8.25	0.27
184	SLV 12	-136	-164	9252	142.22	-8.25	0.27
184	SLV 13	-2614	24	8841	-21.14	-124.43	-0.04
184	SLV 14	-2614	24	8841	-21.14	-124.43	-0.04
184	SLV 15	-2226	-72	9617	62.18	-106.59	0.12
184	SLV 16	-2226	-72	9617	62.18	-106.59	0.12
185	SLU 1	-350	5	6854	-4.43	-16.32	-0.01
185	SLU 2	-308	5	6701	-4.5	-14.45	-0.01
185	SLU 3	-357	5	7095	-4.65	-16.7	-0.01
185	SLU 4	-332	5	7003	-4.69	-15.58	-0.01
185	SLU 5	-316	5	6862	-4.63	-14.88	-0.01
185	SLU 6	-366	5	7256	-4.79	-17.13	-0.01
185	SLU 7	-341	5	7165	-4.83	-16.01	-0.01
185	SLU 8	-367	5	7177	-4.7	-17.18	-0.01
185	SLU 9	-342	5	7085	-4.74	-16.06	-0.01
185	SLU 10	-374	5	8002	-5.23	-17.53	-0.01
185	SLU 11	-423	6	8396	-5.39	-19.78	-0.01
185	SLU 12	-398	6	8304	-5.43	-18.66	-0.01
185	SLU 13	-382	5	8163	-5.36	-17.96	-0.01
185	SLU 14	-432	6	8557	-5.52	-20.21	-0.01
185	SLU 15	-407	6	8465	-5.56	-19.09	-0.01
185	SLU 16	-433	6	8478	-5.43	-20.26	-0.01
185	SLU 17	-408	6	8386	-5.47	-19.14	-0.01
185	SLU 18	-444	6	8712	-5.48	-20.72	-0.01
185	SLU 19	-419	6	8621	-5.52	-19.6	-0.01
185	SLU 20	-452	6	8874	-5.61	-21.15	-0.01
185	SLU 21	-427	6	8782	-5.65	-20.03	-0.01
185	SLU 22	-417	5	8019	-5.19	-19.49	-0.01
185	SLU 23	-375	5	7866	-5.26	-17.62	-0.01
185	SLU 24	-425	6	8260	-5.41	-19.87	-0.01
185	SLU 25	-400	6	8168	-5.45	-18.75	-0.01
185	SLU 26	-384	5	8027	-5.39	-18.05	-0.01
185	SLU 27	-433	6	8421	-5.55	-20.3	-0.01
185	SLU 28	-408	6	8329	-5.59	-19.18	-0.01
185	SLU 29	-434	6	8341	-5.46	-20.35	-0.01
185	SLU 30	-409	6	8250	-5.5	-19.23	-0.01
185	SLU 31	-441	6	9167	-5.99	-20.7	-0.01
185	SLU 32	-491	6	9561	-6.15	-22.95	-0.01
185	SLU 33	-466	6	9469	-6.19	-21.83	-0.01
185	SLU 34	-450	6	9328	-6.12	-21.13	-0.01
185	SLU 35	-499	6	9722	-6.28	-23.38	-0.01
185	SLU 36	-474	6	9630	-6.32	-22.26	-0.01
185	SLU 37	-500	6	9642	-6.19	-23.43	-0.01
185	SLU 38	-475	6	9550	-6.23	-22.31	-0.01
185	SLU 39	-511	6	9877	-6.24	-23.89	-0.01
185	SLU 40	-486	6	9785	-6.28	-22.77	-0.01
185	SLU 41	-520	7	10039	-6.37	-24.32	-0.01
185	SLU 42	-495	7	9947	-6.41	-23.2	-0.01
185	SLU 43	-431	6	8511	-5.5	-20.13	-0.01
185	SLU 44	-389	6	8358	-5.57	-18.26	-0.01
185	SLU 45	-439	6	8752	-5.72	-20.51	-0.01
185	SLU 46	-414	6	8660	-5.76	-19.39	-0.01
185	SLU 47	-398	6	8519	-5.7	-18.69	-0.01
185	SLU 48	-448	6	8913	-5.86	-20.94	-0.01
185	SLU 49	-423	6	8821	-5.9	-19.82	-0.01
185	SLU 50	-449	6	8834	-5.77	-20.99	-0.01
185	SLU 51	-423	6	8742	-5.81	-19.87	-0.01
185	SLU 52	-455	6	9659	-6.3	-21.35	-0.01
185	SLU 53	-505	7	10053	-6.46	-23.59	-0.01
185	SLU 54	-480	7	9961	-6.5	-22.47	-0.01
185	SLU 55	-464	7	9820	-6.43	-21.77	-0.01
185	SLU 56	-514	7	10214	-6.59	-24.02	-0.01
185	SLU 57	-489	7	10122	-6.63	-22.9	-0.01
185	SLU 58	-515	7	10134	-6.5	-24.07	-0.01
185	SLU 59	-489	7	10043	-6.54	-22.95	-0.01
185	SLU 60	-526	7	10369	-6.55	-24.54	-0.01
185	SLU 61	-500	7	10277	-6.59	-23.41	-0.01
185	SLU 62	-534	7	10531	-6.68	-24.96	-0.01
185	SLU 63	-509	7	10439	-6.72	-23.84	-0.01
185	SLU 64	-499	6	9676	-6.26	-23.3	-0.01
185	SLU 65	-457	6	9523	-6.33	-21.43	-0.01
185	SLU 66	-506	7	9917	-6.48	-23.68	-0.01
185	SLU 67	-481	7	9825	-6.52	-22.56	-0.01
185	SLU 68	-465	7	9684	-6.46	-21.86	-0.01
185	SLU 69	-515	7	10078	-6.61	-24.11	-0.01
185	SLU 70	-490	7	9986	-6.66	-22.99	-0.01
185	SLU 71	-516	7	9998	-6.52	-24.16	-0.01
185	SLU 72	-491	7	9906	-6.56	-23.04	-0.01
185	SLU 73	-523	7	10823	-7.06	-24.51	-0.01
185	SLU 74	-572	7	11218	-7.21	-26.76	-0.01
185	SLU 75	-547	7	11126	-7.26	-25.64	-0.01
185	SLU 76	-531	7	10985	-7.19	-24.94	-0.01
185	SLU 77	-581	8	11379	-7.35	-27.19	-0.01
185	SLU 78	-556	8	11287	-7.39	-26.07	-0.01
185	SLU 79	-582	7	11299	-7.26	-27.24	-0.01
185	SLU 80	-557	7	11207	-7.3	-26.12	-0.01
185	SLU 81	-593	8	11534	-7.31	-27.7	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
185	SLU 82	-568	8	11442	-7.35	-26.58	-0.01
185	SLU 83	-602	8	11695	-7.44	-28.13	-0.01
185	SLU 84	-576	8	11604	-7.48	-27.01	-0.01
185	SLE RA 1	-369	5	7187	-4.65	-17.23	-0.01
185	SLE RA 2	-341	5	7085	-4.69	-15.98	-0.01
185	SLE RA 3	-374	5	7348	-4.8	-17.48	-0.01
185	SLE RA 4	-357	5	7286	-4.82	-16.73	-0.01
185	SLE RA 5	-347	5	7192	-4.78	-16.27	-0.01
185	SLE RA 6	-380	5	7455	-4.89	-17.77	-0.01
185	SLE RA 7	-363	5	7394	-4.91	-17.02	-0.01
185	SLE RA 8	-380	5	7402	-4.83	-17.8	-0.01
185	SLE RA 9	-364	5	7341	-4.85	-17.05	-0.01
185	SLE RA 10	-385	5	7952	-5.18	-18.04	-0.01
185	SLE RA 11	-418	5	8215	-5.29	-19.53	-0.01
185	SLE RA 12	-401	5	8154	-5.31	-18.79	-0.01
185	SLE RA 13	-391	5	8060	-5.27	-18.32	-0.01
185	SLE RA 14	-424	6	8322	-5.37	-19.82	-0.01
185	SLE RA 15	-407	6	8261	-5.4	-19.07	-0.01
185	SLE RA 16	-424	5	8269	-5.31	-19.86	-0.01
185	SLE RA 17	-408	5	8208	-5.34	-19.11	-0.01
185	SLE RA 18	-432	5	8426	-5.35	-20.16	-0.01
185	SLE RA 19	-415	5	8365	-5.37	-19.41	-0.01
185	SLE RA 20	-437	6	8533	-5.43	-20.45	-0.01
185	SLE RA 21	-421	6	8472	-5.46	-19.7	-0.01
185	SLE FR 1	-369	5	7187	-4.65	-17.23	-0.01
185	SLE FR 2	-363	5	7166	-4.66	-16.98	-0.01
185	SLE FR 3	-371	5	7230	-4.68	-17.34	-0.01
185	SLE FR 4	-382	5	7538	-4.87	-17.86	-0.01
185	SLE FR 5	-390	5	7602	-4.89	-18.22	-0.01
185	SLE FR 6	-400	5	7806	-5	-18.7	-0.01
185	SLE QP 1	-369	5	7187	-4.65	-17.23	-0.01
185	SLE QP 2	-388	5	7559	-4.86	-18.11	-0.01
185	SLD 1	458	32	6410	-28.18	24.67	-0.04
185	SLD 2	458	32	6410	-28.18	24.67	-0.04
185	SLD 3	602	-2	6089	0.66	31.76	0
185	SLD 4	602	-2	6089	0.66	31.76	0
185	SLD 5	-352	64	7702	-55.59	-16.03	-0.07
185	SLD 6	-352	64	7702	-55.59	-16.03	-0.07
185	SLD 7	127	-48	6630	40.54	7.61	0.05
185	SLD 8	127	-48	6630	40.54	7.61	0.05
185	SLD 9	-903	58	8487	-50.25	-43.83	-0.06
185	SLD 10	-903	58	8487	-50.25	-43.83	-0.06
185	SLD 11	-423	-54	7415	45.88	-20.18	0.06
185	SLD 12	-423	-54	7415	45.88	-20.18	0.06
185	SLD 13	-1377	12	9028	-10.38	-67.98	-0.01
185	SLD 14	-1377	12	9028	-10.38	-67.98	-0.01
185	SLD 15	-1233	-22	8707	18.46	-60.89	0.02
185	SLD 16	-1233	-22	8707	18.46	-60.89	0.02
185	SLV 1	1576	74	4891	-64.06	81.32	-0.08
185	SLV 2	1576	74	4891	-64.06	81.32	-0.08
185	SLV 3	1913	-12	4111	9.76	97.87	0.01
185	SLV 4	1913	-12	4111	9.76	97.87	0.01
185	SLV 5	-308	157	7942	-134.57	-13.39	-0.17
185	SLV 6	-308	157	7942	-134.57	-13.39	-0.17
185	SLV 7	812	-131	5341	111.48	41.79	0.14
185	SLV 8	812	-131	5341	111.48	41.79	0.14
185	SLV 9	-1587	141	9776	-121.19	-78.01	-0.15
185	SLV 10	-1587	141	9776	-121.19	-78.01	-0.15
185	SLV 11	-467	-147	7175	124.85	-22.83	0.15
185	SLV 12	-467	-147	7175	124.85	-22.83	0.15
185	SLV 13	-2688	22	11006	-19.47	-134.09	-0.02
185	SLV 14	-2688	22	11006	-19.47	-134.09	-0.02
185	SLV 15	-2352	-64	10226	54.34	-117.54	0.07
185	SLV 16	-2352	-64	10226	54.34	-117.54	0.07
186	SLU 1	-706	7	7191	-4.96	-38.31	0.01
186	SLU 2	-666	6	7033	-4.92	-36.31	0.01
186	SLU 3	-727	7	7445	-5.21	-39.51	0.01
186	SLU 4	-704	7	7350	-5.19	-38.31	0.01
186	SLU 5	-683	7	7207	-5.07	-37.26	0.01
186	SLU 6	-744	7	7620	-5.36	-40.47	0.01
186	SLU 7	-721	7	7525	-5.34	-39.27	0.01
186	SLU 8	-740	7	7540	-5.26	-40.22	0.01
186	SLU 9	-716	7	7445	-5.24	-39.02	0.01
186	SLU 10	-801	7	8398	-5.74	-43.64	0.01
186	SLU 11	-862	8	8811	-6.03	-46.85	0.02
186	SLU 12	-839	8	8716	-6.01	-45.65	0.02
186	SLU 13	-818	8	8572	-5.89	-44.6	0.02
186	SLU 14	-879	8	8985	-6.18	-47.8	0.02
186	SLU 15	-856	8	8890	-6.16	-46.6	0.02
186	SLU 16	-875	8	8905	-6.08	-47.56	0.02
186	SLU 17	-851	8	8810	-6.05	-46.36	0.02
186	SLU 18	-898	8	9142	-6.13	-48.79	0.02
186	SLU 19	-875	8	9047	-6.11	-47.59	0.02
186	SLU 20	-915	8	9316	-6.28	-49.74	0.02
186	SLU 21	-892	8	9221	-6.26	-48.54	0.02
186	SLU 22	-832	8	8421	-5.82	-45.21	0.02
186	SLU 23	-793	7	8262	-5.77	-43.21	0.02
186	SLU 24	-854	8	8675	-6.07	-46.41	0.02
186	SLU 25	-830	8	8580	-6.04	-45.21	0.02
186	SLU 26	-810	8	8436	-5.92	-44.16	0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
186	SLU 27	-871	8	8849	-6.22	-47.37	0.02
186	SLU 28	-847	8	8754	-6.19	-46.17	0.02
186	SLU 29	-866	8	8769	-6.11	-47.12	0.02
186	SLU 30	-843	8	8674	-6.09	-45.92	0.02
186	SLU 31	-928	9	9627	-6.59	-50.54	0.02
186	SLU 32	-989	9	10040	-6.88	-53.75	0.02
186	SLU 33	-965	9	9945	-6.86	-52.55	0.02
186	SLU 34	-945	9	9802	-6.74	-51.5	0.02
186	SLU 35	-1006	9	10214	-7.03	-54.7	0.02
186	SLU 36	-982	9	10119	-7.01	-53.5	0.02
186	SLU 37	-1001	9	10135	-6.93	-54.46	0.02
186	SLU 38	-978	9	10040	-6.91	-53.26	0.02
186	SLU 39	-1025	9	10371	-6.98	-55.69	0.02
186	SLU 40	-1001	9	10276	-6.96	-54.49	0.02
186	SLU 41	-1042	9	10545	-7.13	-56.64	0.02
186	SLU 42	-1019	9	10450	-7.11	-55.44	0.02
186	SLU 43	-874	8	8927	-6.16	-47.43	0.02
186	SLU 44	-835	8	8768	-6.12	-45.43	0.02
186	SLU 45	-895	8	9181	-6.41	-48.64	0.02
186	SLU 46	-872	8	9086	-6.39	-47.44	0.02
186	SLU 47	-852	8	8943	-6.27	-46.39	0.02
186	SLU 48	-913	9	9356	-6.56	-49.59	0.02
186	SLU 49	-889	9	9260	-6.53	-48.39	0.02
186	SLU 50	-908	8	9276	-6.46	-49.35	0.02
186	SLU 51	-884	8	9181	-6.43	-48.15	0.02
186	SLU 52	-969	9	10134	-6.94	-52.77	0.02
186	SLU 53	-1030	9	10547	-7.23	-55.97	0.02
186	SLU 54	-1007	9	10451	-7.2	-54.77	0.02
186	SLU 55	-987	9	10308	-7.08	-53.73	0.02
186	SLU 56	-1047	10	10721	-7.38	-56.93	0.02
186	SLU 57	-1024	10	10626	-7.35	-55.73	0.02
186	SLU 58	-1043	10	10641	-7.28	-56.68	0.02
186	SLU 59	-1019	9	10546	-7.25	-55.48	0.02
186	SLU 60	-1067	10	10878	-7.33	-57.91	0.02
186	SLU 61	-1043	10	10782	-7.3	-56.71	0.02
186	SLU 62	-1084	10	11052	-7.48	-58.87	0.02
186	SLU 63	-1060	10	10957	-7.45	-57.67	0.02
186	SLU 64	-1000	9	10156	-7.01	-54.33	0.02
186	SLU 65	-961	9	9998	-6.97	-52.33	0.02
186	SLU 66	-1022	10	10411	-7.26	-55.54	0.02
186	SLU 67	-999	9	10315	-7.24	-54.34	0.02
186	SLU 68	-978	9	10172	-7.12	-53.29	0.02
186	SLU 69	-1039	10	10585	-7.41	-56.49	0.02
186	SLU 70	-1016	10	10490	-7.39	-55.29	0.02
186	SLU 71	-1035	10	10505	-7.31	-56.25	0.02
186	SLU 72	-1011	10	10410	-7.29	-55.05	0.02
186	SLU 73	-1096	10	11363	-7.79	-59.67	0.02
186	SLU 74	-1157	11	11776	-8.08	-62.87	0.02
186	SLU 75	-1134	11	11681	-8.06	-61.67	0.02
186	SLU 76	-1113	10	11538	-7.94	-60.63	0.02
186	SLU 77	-1174	11	11950	-8.23	-63.83	0.02
186	SLU 78	-1151	11	11855	-8.2	-62.63	0.02
186	SLU 79	-1170	11	11871	-8.13	-63.58	0.02
186	SLU 80	-1146	11	11775	-8.1	-62.38	0.02
186	SLU 81	-1193	11	12107	-8.18	-64.81	0.02
186	SLU 82	-1170	11	12012	-8.16	-63.61	0.02
186	SLU 83	-1210	11	12281	-8.33	-65.77	0.02
186	SLU 84	-1187	11	12186	-8.3	-64.57	0.02
186	SLE RA 1	-742	7	7542	-5.21	-40.28	0.01
186	SLE RA 2	-716	7	7437	-5.18	-38.94	0.01
186	SLE RA 3	-756	7	7712	-5.37	-41.08	0.01
186	SLE RA 4	-741	7	7648	-5.36	-40.28	0.01
186	SLE RA 5	-727	7	7553	-5.28	-39.58	0.01
186	SLE RA 6	-768	7	7828	-5.47	-41.72	0.01
186	SLE RA 7	-752	7	7765	-5.46	-40.92	0.01
186	SLE RA 8	-764	7	7775	-5.41	-41.55	0.01
186	SLE RA 9	-749	7	7711	-5.39	-40.75	0.01
186	SLE RA 10	-806	7	8347	-5.72	-43.84	0.01
186	SLE RA 11	-846	8	8622	-5.92	-45.97	0.02
186	SLE RA 12	-830	8	8559	-5.9	-45.17	0.02
186	SLE RA 13	-817	8	8463	-5.82	-44.47	0.02
186	SLE RA 14	-858	8	8738	-6.02	-46.61	0.02
186	SLE RA 15	-842	8	8675	-6	-45.81	0.02
186	SLE RA 16	-854	8	8685	-5.95	-46.45	0.02
186	SLE RA 17	-839	8	8622	-5.93	-45.65	0.02
186	SLE RA 18	-870	8	8843	-5.99	-47.27	0.02
186	SLE RA 19	-855	8	8779	-5.97	-46.47	0.02
186	SLE RA 20	-882	8	8959	-6.09	-47.9	0.02
186	SLE RA 21	-866	8	8896	-6.07	-47.1	0.02
186	SLE FR 1	-742	7	7542	-5.21	-40.28	0.01
186	SLE FR 2	-737	7	7521	-5.2	-40.01	0.01
186	SLE FR 3	-746	7	7589	-5.25	-40.53	0.01
186	SLE FR 4	-775	7	7911	-5.44	-42.11	0.01
186	SLE FR 5	-785	7	7979	-5.48	-42.63	0.01
186	SLE FR 6	-806	7	8193	-5.6	-43.77	0.01
186	SLE QP 1	-742	7	7542	-5.21	-40.28	0.01
186	SLE QP 2	-780	7	7933	-5.44	-42.37	0.01
186	SLD 1	-81	28	5731	-23.17	-1.37	0.05
186	SLD 2	-81	28	5731	-23.17	-1.37	0.05
186	SLD 3	24	4	5379	-2.17	4.58	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
186	SLD 4	24	4	5379	-2.17	4.58	0.01
186	SLD 5	-730	50	7806	-42.6	-39.1	0.08
186	SLD 6	-730	50	7806	-42.6	-39.1	0.08
186	SLD 7	-380	-30	6633	27.39	-19.27	-0.04
186	SLD 8	-380	-30	6633	27.39	-19.27	-0.04
186	SLD 9	-1181	45	9232	-38.27	-65.48	0.07
186	SLD 10	-1181	45	9232	-38.27	-65.48	0.07
186	SLD 11	-831	-36	8059	31.72	-45.65	-0.05
186	SLD 12	-831	-36	8059	31.72	-45.65	-0.05
186	SLD 13	-1584	10	10486	-8.71	-89.33	0.02
186	SLD 14	-1584	10	10486	-8.71	-89.33	0.02
186	SLD 15	-1479	-14	10134	12.28	-83.38	-0.02
186	SLD 16	-1479	-14	10134	12.28	-83.38	-0.02
186	SLV 1	844	59	2813	-49.9	52.95	0.09
186	SLV 2	844	59	2813	-49.9	52.95	0.09
186	SLV 3	1091	-2	1959	3.51	66.92	0
186	SLV 4	1091	-2	1959	3.51	66.92	0
186	SLV 5	-668	115	7691	-99.79	-34.95	0.17
186	SLV 6	-668	115	7691	-99.79	-34.95	0.17
186	SLV 7	156	-88	4846	78.25	11.59	-0.13
186	SLV 8	156	-88	4846	78.25	11.59	-0.13
186	SLV 9	-1716	102	11019	-89.13	-96.34	0.15
186	SLV 10	-1716	102	11019	-89.13	-96.34	0.15
186	SLV 11	-893	-101	8174	88.9	-49.8	-0.15
186	SLV 12	-893	-101	8174	88.9	-49.8	-0.15
186	SLV 13	-2651	16	13906	-14.39	-151.66	0.03
186	SLV 14	-2651	16	13906	-14.39	-151.66	0.03
186	SLV 15	-2404	-45	13052	39.02	-137.7	-0.06
186	SLV 16	-2404	-45	13052	39.02	-137.7	-0.06
187	SLU 1	-1122	2	4262	-2.46	-27.22	-0.41
187	SLU 2	-1086	1	4158	-2.39	-26.11	-0.39
187	SLU 3	-1160	2	4412	-2.58	-28.12	-0.43
187	SLU 4	-1139	1	4349	-2.54	-27.46	-0.42
187	SLU 5	-1114	1	4263	-2.46	-26.79	-0.4
187	SLU 6	-1188	2	4517	-2.65	-28.8	-0.44
187	SLU 7	-1167	2	4455	-2.61	-28.14	-0.43
187	SLU 8	-1177	2	4473	-2.6	-28.59	-0.43
187	SLU 9	-1156	1	4410	-2.56	-27.92	-0.42
187	SLU 10	-1301	1	4969	-2.79	-31.34	-0.46
187	SLU 11	-1375	2	5223	-2.98	-33.35	-0.49
187	SLU 12	-1354	2	5160	-2.94	-32.68	-0.48
187	SLU 13	-1329	2	5074	-2.86	-32.02	-0.47
187	SLU 14	-1403	2	5329	-3.06	-34.03	-0.51
187	SLU 15	-1382	2	5266	-3.02	-33.37	-0.5
187	SLU 16	-1392	2	5284	-3.01	-33.81	-0.5
187	SLU 17	-1371	2	5222	-2.97	-33.15	-0.49
187	SLU 18	-1429	2	5421	-3.03	-34.69	-0.5
187	SLU 19	-1407	2	5358	-2.99	-34.02	-0.49
187	SLU 20	-1456	2	5527	-3.11	-35.37	-0.51
187	SLU 21	-1435	2	5464	-3.06	-34.7	-0.51
187	SLU 22	-1318	2	4998	-2.88	-32.07	-0.48
187	SLU 23	-1283	1	4893	-2.81	-30.96	-0.46
187	SLU 24	-1357	2	5148	-3	-32.97	-0.5
187	SLU 25	-1335	2	5085	-2.96	-32.31	-0.49
187	SLU 26	-1311	2	4999	-2.88	-31.65	-0.47
187	SLU 27	-1384	2	5253	-3.08	-33.65	-0.51
187	SLU 28	-1363	2	5190	-3.04	-32.99	-0.5
187	SLU 29	-1374	2	5209	-3.03	-33.44	-0.5
187	SLU 30	-1353	2	5146	-2.99	-32.77	-0.49
187	SLU 31	-1498	2	5705	-3.21	-36.19	-0.53
187	SLU 32	-1571	2	5959	-3.41	-38.2	-0.56
187	SLU 33	-1550	2	5896	-3.36	-37.53	-0.55
187	SLU 34	-1525	2	5810	-3.29	-36.87	-0.54
187	SLU 35	-1599	2	6064	-3.48	-38.88	-0.58
187	SLU 36	-1578	2	6002	-3.44	-38.22	-0.57
187	SLU 37	-1588	2	6020	-3.43	-38.66	-0.57
187	SLU 38	-1567	2	5957	-3.39	-38	-0.56
187	SLU 39	-1625	2	6157	-3.45	-39.54	-0.57
187	SLU 40	-1604	2	6094	-3.41	-38.87	-0.56
187	SLU 41	-1653	2	6262	-3.53	-40.22	-0.58
187	SLU 42	-1631	2	6200	-3.49	-39.56	-0.58
187	SLU 43	-1391	2	5289	-3.05	-33.72	-0.5
187	SLU 44	-1356	2	5184	-2.98	-32.61	-0.49
187	SLU 45	-1430	2	5438	-3.17	-34.62	-0.52
187	SLU 46	-1408	2	5376	-3.13	-33.96	-0.52
187	SLU 47	-1383	2	5290	-3.05	-33.3	-0.5
187	SLU 48	-1457	2	5544	-3.25	-35.31	-0.54
187	SLU 49	-1436	2	5481	-3.2	-34.64	-0.53
187	SLU 50	-1447	2	5500	-3.2	-35.09	-0.53
187	SLU 51	-1425	2	5437	-3.15	-34.42	-0.52
187	SLU 52	-1570	2	5995	-3.38	-37.84	-0.56
187	SLU 53	-1644	2	6250	-3.58	-39.85	-0.59
187	SLU 54	-1623	2	6187	-3.53	-39.19	-0.58
187	SLU 55	-1598	2	6101	-3.46	-38.52	-0.57
187	SLU 56	-1672	2	6355	-3.65	-40.53	-0.6
187	SLU 57	-1651	2	6292	-3.61	-39.87	-0.6
187	SLU 58	-1661	2	6311	-3.6	-40.31	-0.6
187	SLU 59	-1640	2	6248	-3.56	-39.65	-0.59
187	SLU 60	-1698	2	6448	-3.62	-41.19	-0.6
187	SLU 61	-1677	2	6385	-3.58	-40.52	-0.59



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
187	SLU 62	-1726	2	6553	-3.7	-41.87	-0.61
187	SLU 63	-1704	2	6490	-3.66	-41.21	-0.6
187	SLU 64	-1587	2	6024	-3.47	-38.57	-0.57
187	SLU 65	-1552	2	5920	-3.4	-37.46	-0.56
187	SLU 66	-1626	2	6174	-3.59	-39.47	-0.59
187	SLU 67	-1605	2	6111	-3.55	-38.81	-0.59
187	SLU 68	-1580	2	6025	-3.47	-38.15	-0.57
187	SLU 69	-1654	2	6280	-3.67	-40.16	-0.61
187	SLU 70	-1632	2	6217	-3.63	-39.49	-0.6
187	SLU 71	-1643	2	6235	-3.62	-39.94	-0.6
187	SLU 72	-1622	2	6173	-3.58	-39.27	-0.59
187	SLU 73	-1767	2	6731	-3.8	-42.69	-0.63
187	SLU 74	-1841	3	6985	-4	-44.7	-0.66
187	SLU 75	-1819	2	6923	-3.96	-44.04	-0.65
187	SLU 76	-1795	2	6836	-3.88	-43.38	-0.64
187	SLU 77	-1868	3	7091	-4.07	-45.38	-0.67
187	SLU 78	-1847	2	7028	-4.03	-44.72	-0.67
187	SLU 79	-1858	3	7047	-4.02	-45.17	-0.67
187	SLU 80	-1836	2	6984	-3.98	-44.5	-0.66
187	SLU 81	-1894	3	7183	-4.05	-46.04	-0.67
187	SLU 82	-1873	2	7121	-4	-45.37	-0.66
187	SLU 83	-1922	3	7289	-4.12	-46.72	-0.68
187	SLU 84	-1901	2	7226	-4.08	-46.06	-0.67
187	SLE RA 1	-1178	2	4472	-2.58	-28.6	-0.43
187	SLE RA 2	-1154	1	4403	-2.53	-27.87	-0.42
187	SLE RA 3	-1204	2	4572	-2.66	-29.21	-0.44
187	SLE RA 4	-1189	2	4530	-2.63	-28.76	-0.43
187	SLE RA 5	-1173	1	4473	-2.58	-28.32	-0.42
187	SLE RA 6	-1222	2	4643	-2.71	-29.66	-0.45
187	SLE RA 7	-1208	2	4601	-2.68	-29.22	-0.44
187	SLE RA 8	-1215	2	4613	-2.68	-29.52	-0.44
187	SLE RA 9	-1201	2	4571	-2.65	-29.07	-0.44
187	SLE RA 10	-1298	2	4944	-2.8	-31.35	-0.46
187	SLE RA 11	-1347	2	5113	-2.93	-32.69	-0.48
187	SLE RA 12	-1333	2	5071	-2.9	-32.25	-0.48
187	SLE RA 13	-1316	2	5014	-2.85	-31.81	-0.47
187	SLE RA 14	-1365	2	5183	-2.98	-33.15	-0.49
187	SLE RA 15	-1351	2	5142	-2.95	-32.7	-0.49
187	SLE RA 16	-1358	2	5154	-2.94	-33	-0.49
187	SLE RA 17	-1344	2	5112	-2.92	-32.56	-0.48
187	SLE RA 18	-1382	2	5245	-2.96	-33.58	-0.49
187	SLE RA 19	-1368	2	5203	-2.93	-33.14	-0.48
187	SLE RA 20	-1401	2	5315	-3.01	-34.04	-0.5
187	SLE RA 21	-1387	2	5273	-2.98	-33.6	-0.49
187	SLE FR 1	-1178	2	4472	-2.58	-28.6	-0.43
187	SLE FR 2	-1173	2	4458	-2.57	-28.46	-0.42
187	SLE FR 3	-1185	2	4501	-2.6	-28.79	-0.43
187	SLE FR 4	-1235	2	4690	-2.68	-29.95	-0.44
187	SLE FR 5	-1247	2	4732	-2.71	-30.28	-0.45
187	SLE FR 6	-1280	2	4859	-2.77	-31.09	-0.46
187	SLE QP 1	-1178	2	4472	-2.58	-28.6	-0.43
187	SLE QP 2	-1239	2	4704	-2.69	-30.1	-0.45
187	SLD 1	-584	-25	2771	-8.63	-7.13	-1.33
187	SLD 2	-584	-25	2771	-8.63	-7.13	-1.33
187	SLD 3	-499	8	2521	-2.4	-3.97	-0.46
187	SLD 4	-499	8	2521	-2.4	-3.97	-0.46
187	SLD 5	-1172	-57	4504	-13.91	-28	-2.03
187	SLD 6	-1172	-57	4504	-13.91	-28	-2.03
187	SLD 7	-888	55	3670	6.84	-17.47	0.87
187	SLD 8	-888	55	3670	6.84	-17.47	0.87
187	SLD 9	-1590	-51	5739	-12.22	-42.73	-1.76
187	SLD 10	-1590	-51	5739	-12.22	-42.73	-1.76
187	SLD 11	-1307	61	4904	8.53	-32.2	1.14
187	SLD 12	-1307	61	4904	8.53	-32.2	1.14
187	SLD 13	-1979	-5	6887	-2.98	-56.23	-0.43
187	SLD 14	-1979	-5	6887	-2.98	-56.23	-0.43
187	SLD 15	-1894	29	6637	3.25	-53.07	0.44
187	SLD 16	-1894	29	6637	3.25	-53.07	0.44
187	SLV 1	284	-68	208	-17.17	23.33	-2.58
187	SLV 2	284	-68	208	-17.17	23.33	-2.58
187	SLV 3	486	18	-393	-1.75	30.77	-0.47
187	SLV 4	486	18	-393	-1.75	30.77	-0.47
187	SLV 5	-1089	-149	4267	-30.42	-25.36	-4.29
187	SLV 6	-1089	-149	4267	-30.42	-25.36	-4.29
187	SLV 7	-415	137	2263	20.98	-0.55	2.75
187	SLV 8	-415	137	2263	20.98	-0.55	2.75
187	SLV 9	-2064	-133	7145	-26.36	-59.65	-3.64
187	SLV 10	-2064	-133	7145	-26.36	-59.65	-3.64
187	SLV 11	-1389	152	5141	25.04	-34.84	3.4
187	SLV 12	-1389	152	5141	25.04	-34.84	3.4
187	SLV 13	-2965	-14	9801	-3.63	-90.96	-0.42
187	SLV 14	-2965	-14	9801	-3.63	-90.96	-0.42
187	SLV 15	-2762	71	9200	11.79	-83.52	1.69
187	SLV 16	-2762	71	9200	11.79	-83.52	1.69
188	SLU 1	588	-7	4029	2.11	6.18	-0.22
188	SLU 2	588	-7	4004	2.14	6.33	-0.23
188	SLU 3	610	-7	4180	2.17	6.39	-0.23
188	SLU 4	610	-7	4165	2.19	6.47	-0.23
188	SLU 5	601	-7	4101	2.18	6.42	-0.23
188	SLU 6	623	-7	4278	2.21	6.48	-0.23



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
188	SLU 7	623	-7	4262	2.23	6.57	-0.23
188	SLU 8	615	-7	4224	2.19	6.37	-0.23
188	SLU 9	615	-7	4208	2.21	6.45	-0.23
188	SLU 10	685	-8	4708	2.51	7.1	-0.27
188	SLU 11	707	-8	4885	2.53	7.16	-0.27
188	SLU 12	707	-8	4870	2.55	7.25	-0.27
188	SLU 13	699	-8	4806	2.55	7.19	-0.27
188	SLU 14	720	-8	4982	2.58	7.25	-0.27
188	SLU 15	720	-8	4967	2.6	7.34	-0.28
188	SLU 16	712	-8	4928	2.56	7.14	-0.27
188	SLU 17	712	-8	4913	2.58	7.23	-0.27
188	SLU 18	727	-8	5036	2.63	7.29	-0.28
188	SLU 19	727	-8	5020	2.65	7.37	-0.28
188	SLU 20	740	-8	5133	2.68	7.38	-0.29
188	SLU 21	740	-9	5118	2.69	7.46	-0.29
188	SLU 22	670	-7	4640	2.38	6.7	-0.25
188	SLU 23	670	-8	4615	2.42	6.84	-0.26
188	SLU 24	691	-8	4791	2.44	6.91	-0.26
188	SLU 25	691	-8	4776	2.46	6.99	-0.26
188	SLU 26	683	-8	4712	2.46	6.94	-0.26
188	SLU 27	705	-8	4888	2.49	7	-0.26
188	SLU 28	705	-8	4873	2.51	7.08	-0.26
188	SLU 29	696	-8	4834	2.47	6.89	-0.26
188	SLU 30	696	-8	4819	2.49	6.97	-0.26
188	SLU 31	767	-9	5319	2.78	7.62	-0.3
188	SLU 32	789	-9	5496	2.81	7.68	-0.3
188	SLU 33	788	-9	5481	2.83	7.76	-0.3
188	SLU 34	780	-9	5416	2.83	7.71	-0.3
188	SLU 35	802	-9	5593	2.85	7.77	-0.3
188	SLU 36	802	-9	5578	2.87	7.86	-0.31
188	SLU 37	793	-9	5539	2.84	7.66	-0.3
188	SLU 38	793	-9	5524	2.86	7.75	-0.3
188	SLU 39	809	-9	5646	2.91	7.81	-0.31
188	SLU 40	809	-9	5631	2.93	7.89	-0.31
188	SLU 41	822	-9	5744	2.95	7.9	-0.32
188	SLU 42	822	-9	5729	2.97	7.98	-0.32
188	SLU 43	737	-8	5028	2.64	7.86	-0.28
188	SLU 44	737	-8	5003	2.68	8	-0.28
188	SLU 45	758	-8	5180	2.7	8.07	-0.28
188	SLU 46	758	-8	5164	2.72	8.15	-0.29
188	SLU 47	750	-8	5100	2.72	8.1	-0.29
188	SLU 48	772	-9	5277	2.75	8.16	-0.29
188	SLU 49	772	-9	5262	2.77	8.24	-0.29
188	SLU 50	763	-8	5223	2.73	8.05	-0.29
188	SLU 51	763	-9	5208	2.75	8.13	-0.29
188	SLU 52	834	-10	5708	3.04	8.78	-0.32
188	SLU 53	856	-10	5884	3.07	8.84	-0.33
188	SLU 54	856	-10	5869	3.09	8.92	-0.33
188	SLU 55	847	-10	5805	3.09	8.87	-0.33
188	SLU 56	869	-10	5982	3.11	8.93	-0.33
188	SLU 57	869	-10	5966	3.13	9.01	-0.33
188	SLU 58	861	-10	5928	3.1	8.82	-0.33
188	SLU 59	861	-10	5912	3.12	8.9	-0.33
188	SLU 60	876	-10	6035	3.17	8.97	-0.34
188	SLU 61	876	-10	6020	3.19	9.05	-0.34
188	SLU 62	889	-10	6132	3.21	9.06	-0.34
188	SLU 63	889	-10	6117	3.23	9.14	-0.34
188	SLU 64	818	-9	5639	2.92	8.38	-0.31
188	SLU 65	818	-9	5614	2.95	8.52	-0.31
188	SLU 66	840	-9	5791	2.98	8.58	-0.31
188	SLU 67	840	-9	5775	3	8.67	-0.32
188	SLU 68	831	-9	5711	3	8.61	-0.32
188	SLU 69	853	-9	5888	3.02	8.68	-0.32
188	SLU 70	853	-9	5873	3.04	8.76	-0.32
188	SLU 71	845	-9	5834	3.01	8.57	-0.32
188	SLU 72	845	-9	5819	3.03	8.65	-0.32
188	SLU 73	915	-10	6318	3.32	9.29	-0.35
188	SLU 74	937	-11	6495	3.35	9.36	-0.36
188	SLU 75	937	-11	6480	3.37	9.44	-0.36
188	SLU 76	929	-11	6416	3.36	9.39	-0.36
188	SLU 77	950	-11	6592	3.39	9.45	-0.36
188	SLU 78	950	-11	6577	3.41	9.53	-0.36
188	SLU 79	942	-11	6538	3.38	9.34	-0.36
188	SLU 80	942	-11	6523	3.39	9.42	-0.36
188	SLU 81	957	-11	6646	3.45	9.48	-0.37
188	SLU 82	957	-11	6631	3.47	9.57	-0.37
188	SLU 83	970	-11	6743	3.49	9.58	-0.37
188	SLU 84	970	-11	6728	3.51	9.66	-0.37
188	SLE RA 1	612	-7	4204	2.19	6.33	-0.23
188	SLE RA 2	611	-7	4187	2.21	6.43	-0.23
188	SLE RA 3	626	-7	4304	2.23	6.47	-0.23
188	SLE RA 4	626	-7	4294	2.24	6.52	-0.24
188	SLE RA 5	620	-7	4252	2.24	6.49	-0.24
188	SLE RA 6	635	-7	4369	2.25	6.53	-0.24
188	SLE RA 7	635	-7	4359	2.27	6.59	-0.24
188	SLE RA 8	629	-7	4333	2.24	6.46	-0.24
188	SLE RA 9	629	-7	4323	2.26	6.51	-0.24
188	SLE RA 10	676	-8	4656	2.45	6.94	-0.26
188	SLE RA 11	691	-8	4774	2.47	6.98	-0.26
188	SLE RA 12	691	-8	4764	2.48	7.04	-0.26



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
188	SLE RA 13	685	-8	4721	2.48	7	-0.26
188	SLE RA 14	700	-8	4839	2.5	7.05	-0.26
188	SLE RA 15	700	-8	4829	2.51	7.1	-0.27
188	SLE RA 16	694	-8	4803	2.49	6.97	-0.26
188	SLE RA 17	694	-8	4793	2.5	7.03	-0.27
188	SLE RA 18	704	-8	4875	2.54	7.07	-0.27
188	SLE RA 19	704	-8	4865	2.55	7.12	-0.27
188	SLE RA 20	713	-8	4939	2.57	7.13	-0.27
188	SLE RA 21	713	-8	4929	2.58	7.19	-0.27
188	SLE FR 1	612	-7	4204	2.19	6.33	-0.23
188	SLE FR 2	612	-7	4200	2.19	6.35	-0.23
188	SLE FR 3	615	-7	4230	2.2	6.36	-0.23
188	SLE FR 4	639	-7	4402	2.3	6.57	-0.24
188	SLE FR 5	643	-7	4431	2.3	6.58	-0.24
188	SLE FR 6	658	-7	4539	2.36	6.7	-0.25
188	SLE QP 1	612	-7	4204	2.19	6.33	-0.23
188	SLE QP 2	639	-7	4405	2.29	6.55	-0.24
188	SLD 1	800	-29	4706	5.45	15.16	-0.81
188	SLD 2	800	-29	4706	5.45	15.16	-0.81
188	SLD 3	942	-43	5300	7.98	18.84	-1.21
188	SLD 4	942	-43	5300	7.98	18.84	-1.21
188	SLD 5	472	7	3595	-0.58	3.55	0.19
188	SLD 6	472	7	3595	-0.58	3.55	0.19
188	SLD 7	946	-39	5574	7.82	15.82	-1.13
188	SLD 8	946	-39	5574	7.82	15.82	-1.13
188	SLD 9	333	25	3236	-3.24	-2.71	0.65
188	SLD 10	333	25	3236	-3.24	-2.71	0.65
188	SLD 11	807	-22	5215	5.17	9.55	-0.67
188	SLD 12	807	-22	5215	5.17	9.55	-0.67
188	SLD 13	337	29	3510	-3.39	-5.73	0.72
188	SLD 14	337	29	3510	-3.39	-5.73	0.72
188	SLD 15	479	15	4104	-0.87	-2.05	0.33
188	SLD 16	479	15	4104	-0.87	-2.05	0.33
188	SLV 1	1010	-60	5093	10	26.54	-1.63
188	SLV 2	1010	-60	5093	10	26.54	-1.63
188	SLV 3	1340	-95	6476	16.1	35.07	-2.59
188	SLV 4	1340	-95	6476	16.1	35.07	-2.59
188	SLV 5	249	29	2514	-4.64	-0.38	0.8
188	SLV 6	249	29	2514	-4.64	-0.38	0.8
188	SLV 7	1351	-85	7124	15.68	28.04	-2.41
188	SLV 8	1351	-85	7124	15.68	28.04	-2.41
188	SLV 9	-72	71	1686	-11.1	-14.93	1.92
188	SLV 10	-72	71	1686	-11.1	-14.93	1.92
188	SLV 11	1029	-43	6296	9.22	13.49	-1.29
188	SLV 12	1029	-43	6296	9.22	13.49	-1.29
188	SLV 13	-61	80	2334	-11.52	-21.96	2.11
188	SLV 14	-61	80	2334	-11.52	-21.96	2.11
188	SLV 15	269	46	3716	-5.42	-13.43	1.14
188	SLV 16	269	46	3716	-5.42	-13.43	1.14
189	SLU 1	62	-1334	9428	28.43	-5.7	-0.23
189	SLU 2	64	-1332	9355	28.7	-5.48	-0.23
189	SLU 3	64	-1382	9784	29.36	-5.95	-0.24
189	SLU 4	65	-1381	9740	29.52	-5.82	-0.24
189	SLU 5	65	-1365	9593	29.32	-5.71	-0.24
189	SLU 6	66	-1415	10022	29.98	-6.18	-0.25
189	SLU 7	67	-1413	9978	30.14	-6.05	-0.25
189	SLU 8	65	-1399	9905	29.67	-6.16	-0.25
189	SLU 9	66	-1398	9861	29.84	-6.03	-0.24
189	SLU 10	71	-1561	11031	33.23	-6.8	-0.27
189	SLU 11	72	-1611	11460	33.88	-7.28	-0.28
189	SLU 12	73	-1610	11416	34.05	-7.14	-0.28
189	SLU 13	73	-1594	11270	33.85	-7.03	-0.28
189	SLU 14	74	-1644	11698	34.51	-7.51	-0.29
189	SLU 15	74	-1643	11655	34.67	-7.37	-0.29
189	SLU 16	73	-1628	11581	34.2	-7.49	-0.29
189	SLU 17	74	-1627	11537	34.36	-7.35	-0.29
189	SLU 18	73	-1662	11823	34.9	-7.59	-0.29
189	SLU 19	74	-1660	11779	35.06	-7.46	-0.29
189	SLU 20	75	-1694	12061	35.52	-7.82	-0.3
189	SLU 21	76	-1693	12017	35.68	-7.69	-0.3
189	SLU 22	68	-1531	10901	32.11	-7.05	-0.27
189	SLU 23	70	-1529	10829	32.38	-6.82	-0.27
189	SLU 24	70	-1579	11257	33.04	-7.3	-0.28
189	SLU 25	71	-1578	11213	33.2	-7.16	-0.28
189	SLU 26	71	-1561	11067	33	-7.05	-0.28
189	SLU 27	72	-1611	11495	33.66	-7.53	-0.29
189	SLU 28	73	-1610	11452	33.82	-7.39	-0.28
189	SLU 29	71	-1595	11378	33.35	-7.51	-0.28
189	SLU 30	72	-1594	11334	33.51	-7.37	-0.28
189	SLU 31	77	-1758	12505	36.9	-8.15	-0.31
189	SLU 32	78	-1808	12933	37.56	-8.62	-0.32
189	SLU 33	79	-1807	12890	37.72	-8.49	-0.32
189	SLU 34	79	-1790	12743	37.52	-8.38	-0.32
189	SLU 35	80	-1840	13172	38.18	-8.85	-0.33
189	SLU 36	80	-1839	13128	38.34	-8.72	-0.33
189	SLU 37	79	-1825	13054	37.88	-8.83	-0.33
189	SLU 38	80	-1823	13011	38.04	-8.7	-0.32
189	SLU 39	79	-1858	13296	38.57	-8.94	-0.33
189	SLU 40	80	-1857	13253	38.73	-8.8	-0.33
189	SLU 41	81	-1890	13535	39.19	-9.17	-0.34



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
189	SLU 42	82	-1889	13491	39.36	-9.03	-0.34
189	SLU 43	79	-1667	11751	35.7	-6.95	-0.29
189	SLU 44	80	-1665	11678	35.97	-6.73	-0.29
189	SLU 45	81	-1715	12107	36.63	-7.2	-0.3
189	SLU 46	82	-1714	12063	36.79	-7.07	-0.3
189	SLU 47	82	-1697	11917	36.59	-6.96	-0.29
189	SLU 48	82	-1747	12345	37.25	-7.43	-0.31
189	SLU 49	83	-1746	12301	37.41	-7.3	-0.3
189	SLU 50	82	-1732	12228	36.94	-7.41	-0.3
189	SLU 51	83	-1731	12184	37.11	-7.28	-0.3
189	SLU 52	88	-1894	13355	40.5	-8.05	-0.33
189	SLU 53	89	-1944	13783	41.15	-8.53	-0.34
189	SLU 54	89	-1943	13739	41.32	-8.4	-0.34
189	SLU 55	89	-1927	13593	41.12	-8.28	-0.34
189	SLU 56	90	-1977	14022	41.78	-8.76	-0.35
189	SLU 57	91	-1976	13978	41.94	-8.62	-0.35
189	SLU 58	90	-1961	13904	41.47	-8.74	-0.35
189	SLU 59	90	-1960	13860	41.63	-8.6	-0.34
189	SLU 60	90	-1994	14146	42.17	-8.84	-0.35
189	SLU 61	91	-1993	14102	42.33	-8.71	-0.35
189	SLU 62	91	-2027	14384	42.79	-9.07	-0.36
189	SLU 63	92	-2026	14341	42.95	-8.94	-0.36
189	SLU 64	85	-1863	13225	39.38	-8.3	-0.33
189	SLU 65	86	-1862	13152	39.65	-8.07	-0.33
189	SLU 66	87	-1912	13580	40.31	-8.55	-0.34
189	SLU 67	88	-1911	13537	40.47	-8.41	-0.34
189	SLU 68	88	-1894	13390	40.27	-8.3	-0.33
189	SLU 69	88	-1944	13819	40.93	-8.78	-0.34
189	SLU 70	89	-1943	13775	41.09	-8.64	-0.34
189	SLU 71	88	-1928	13701	40.62	-8.76	-0.34
189	SLU 72	89	-1927	13658	40.78	-8.62	-0.34
189	SLU 73	94	-2091	14828	44.17	-9.4	-0.37
189	SLU 74	95	-2141	15257	44.83	-9.87	-0.38
189	SLU 75	95	-2140	15213	44.99	-9.74	-0.38
189	SLU 76	95	-2123	15066	44.79	-9.63	-0.38
189	SLU 77	96	-2173	15495	45.45	-10.1	-0.39
189	SLU 78	97	-2172	15451	45.61	-9.97	-0.38
189	SLU 79	96	-2157	15378	45.15	-10.08	-0.38
189	SLU 80	96	-2156	15334	45.31	-9.95	-0.38
189	SLU 81	96	-2191	15619	45.84	-10.19	-0.39
189	SLU 82	97	-2190	15576	46	-10.06	-0.39
189	SLU 83	97	-2223	15858	46.46	-10.42	-0.39
189	SLU 84	98	-2222	15814	46.63	-10.28	-0.39
189	SLE RA 1	64	-1390	9849	29.48	-6.09	-0.24
189	SLE RA 2	65	-1389	9800	29.66	-5.94	-0.24
189	SLE RA 3	65	-1422	10086	30.1	-6.25	-0.25
189	SLE RA 4	66	-1422	10057	30.21	-6.17	-0.25
189	SLE RA 5	66	-1411	9959	30.08	-6.09	-0.25
189	SLE RA 6	66	-1444	10245	30.52	-6.41	-0.25
189	SLE RA 7	67	-1443	10216	30.62	-6.32	-0.25
189	SLE RA 8	66	-1433	10167	30.31	-6.39	-0.25
189	SLE RA 9	67	-1433	10138	30.42	-6.3	-0.25
189	SLE RA 10	70	-1542	10918	32.68	-6.82	-0.27
189	SLE RA 11	70	-1575	11204	33.12	-7.14	-0.28
189	SLE RA 12	71	-1574	11174	33.23	-7.05	-0.28
189	SLE RA 13	71	-1563	11077	33.09	-6.97	-0.28
189	SLE RA 14	71	-1597	11363	33.53	-7.29	-0.28
189	SLE RA 15	72	-1596	11333	33.64	-7.2	-0.28
189	SLE RA 16	71	-1586	11284	33.33	-7.28	-0.28
189	SLE RA 17	72	-1585	11255	33.44	-7.19	-0.28
189	SLE RA 18	71	-1609	11445	33.79	-7.35	-0.28
189	SLE RA 19	72	-1608	11416	33.9	-7.26	-0.28
189	SLE RA 20	72	-1630	11604	34.21	-7.5	-0.29
189	SLE RA 21	73	-1629	11575	34.31	-7.41	-0.29
189	SLE FR 1	64	-1390	9849	29.48	-6.09	-0.24
189	SLE FR 2	64	-1390	9839	29.52	-6.06	-0.24
189	SLE FR 3	64	-1399	9912	29.65	-6.15	-0.25
189	SLE FR 4	66	-1455	10318	30.81	-6.44	-0.26
189	SLE FR 5	66	-1464	10391	30.94	-6.53	-0.26
189	SLE FR 6	68	-1499	10647	31.64	-6.72	-0.26
189	SLE QP 1	64	-1390	9849	29.48	-6.09	-0.24
189	SLE QP 2	66	-1456	10328	30.78	-6.47	-0.26
189	SLD 1	-9	-991	7679	18.22	8.21	-0.18
189	SLD 2	-9	-991	7679	18.22	8.21	-0.18
189	SLD 3	36	-1337	8963	31.22	11.21	-0.21
189	SLD 4	36	-1337	8963	31.22	11.21	-0.21
189	SLD 5	-25	-792	7586	7.31	-6.6	-0.19
189	SLD 6	-25	-792	7586	7.31	-6.6	-0.19
189	SLD 7	125	-1944	11866	50.61	3.37	-0.28
189	SLD 8	125	-1944	11866	50.61	3.37	-0.28
189	SLD 9	7	-967	8790	10.94	-16.31	-0.23
189	SLD 10	7	-967	8790	10.94	-16.31	-0.23
189	SLD 11	157	-2119	13070	54.25	-6.33	-0.32
189	SLD 12	157	-2119	13070	54.25	-6.33	-0.32
189	SLD 13	96	-1574	11693	30.34	-24.14	-0.3
189	SLD 14	96	-1574	11693	30.34	-24.14	-0.3
189	SLD 15	141	-1920	12977	43.33	-21.14	-0.33
189	SLD 16	141	-1920	12977	43.33	-21.14	-0.33
189	SLV 1	-109	-370	4127	1.36	27.69	-0.08
189	SLV 2	-109	-370	4127	1.36	27.69	-0.08



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
189	SLV 3	-4	-1176	7131	31.65	34.63	-0.14
189	SLV 4	-4	-1176	7131	31.65	34.63	-0.14
189	SLV 5	-145	93	3911	-24	-6.75	-0.11
189	SLV 6	-145	93	3911	-24	-6.75	-0.11
189	SLV 7	204	-2595	13926	76.99	16.39	-0.32
189	SLV 8	204	-2595	13926	76.99	16.39	-0.32
189	SLV 9	-72	-317	6730	-15.43	-29.32	-0.2
189	SLV 10	-72	-317	6730	-15.43	-29.32	-0.2
189	SLV 11	277	-3004	16745	85.55	-6.18	-0.4
189	SLV 12	277	-3004	16745	85.55	-6.18	-0.4
189	SLV 13	136	-1736	13525	29.9	-47.56	-0.37
189	SLV 14	136	-1736	13525	29.9	-47.56	-0.37
189	SLV 15	241	-2542	16529	60.19	-40.62	-0.43
189	SLV 16	241	-2542	16529	60.19	-40.62	-0.43
190	SLU 1	-854	-1	2269	0.89	-7.33	0.27
190	SLU 2	-846	-1	2247	0.9	-7.25	0.27
190	SLU 3	-887	-1	2355	0.93	-7.6	0.28
190	SLU 4	-882	-1	2342	0.93	-7.55	0.28
190	SLU 5	-868	-1	2306	0.92	-7.44	0.28
190	SLU 6	-909	-1	2415	0.95	-7.79	0.29
190	SLU 7	-904	-1	2402	0.95	-7.74	0.29
190	SLU 8	-899	-1	2388	0.94	-7.71	0.28
190	SLU 9	-894	-1	2375	0.94	-7.66	0.28
190	SLU 10	-1001	-1	2657	1.03	-8.61	0.31
190	SLU 11	-1042	-1	2766	1.06	-8.97	0.32
190	SLU 12	-1037	-1	2753	1.06	-8.92	0.32
190	SLU 13	-1023	-1	2717	1.05	-8.8	0.32
190	SLU 14	-1064	-1	2825	1.08	-9.16	0.33
190	SLU 15	-1059	-1	2812	1.08	-9.11	0.33
190	SLU 16	-1054	-1	2798	1.07	-9.08	0.32
190	SLU 17	-1049	-1	2785	1.07	-9.03	0.32
190	SLU 18	-1076	-1	2856	1.08	-9.28	0.33
190	SLU 19	-1071	-1	2842	1.09	-9.23	0.33
190	SLU 20	-1098	-1	2915	1.1	-9.47	0.33
190	SLU 21	-1093	-1	2902	1.11	-9.42	0.33
190	SLU 22	-992	-1	2635	1.01	-8.55	0.31
190	SLU 23	-984	-1	2612	1.01	-8.47	0.31
190	SLU 24	-1025	-1	2721	1.04	-8.82	0.32
190	SLU 25	-1020	-1	2708	1.04	-8.77	0.32
190	SLU 26	-1006	-1	2672	1.03	-8.66	0.31
190	SLU 27	-1047	-1	2780	1.06	-9.01	0.32
190	SLU 28	-1042	-1	2767	1.06	-8.96	0.32
190	SLU 29	-1037	-1	2753	1.05	-8.93	0.32
190	SLU 30	-1032	-1	2740	1.05	-8.88	0.32
190	SLU 31	-1139	-1	3023	1.15	-9.83	0.35
190	SLU 32	-1180	-1	3131	1.17	-10.19	0.35
190	SLU 33	-1175	-1	3118	1.18	-10.14	0.36
190	SLU 34	-1161	-1	3082	1.17	-10.02	0.35
190	SLU 35	-1202	-1	3191	1.19	-10.38	0.36
190	SLU 36	-1197	-1	3177	1.2	-10.33	0.36
190	SLU 37	-1192	-1	3164	1.18	-10.3	0.36
190	SLU 38	-1187	-1	3151	1.19	-10.25	0.36
190	SLU 39	-1214	-1	3221	1.2	-10.5	0.36
190	SLU 40	-1209	-1	3208	1.2	-10.45	0.36
190	SLU 41	-1236	-1	3280	1.22	-10.69	0.37
190	SLU 42	-1231	-1	3267	1.22	-10.64	0.37
190	SLU 43	-1063	-1	2825	1.12	-9.11	0.34
190	SLU 44	-1055	-1	2802	1.13	-9.03	0.34
190	SLU 45	-1096	-1	2911	1.16	-9.38	0.35
190	SLU 46	-1091	-1	2898	1.16	-9.33	0.35
190	SLU 47	-1077	-1	2862	1.15	-9.22	0.35
190	SLU 48	-1118	-1	2970	1.18	-9.57	0.36
190	SLU 49	-1113	-1	2957	1.18	-9.52	0.36
190	SLU 50	-1108	-1	2943	1.16	-9.5	0.35
190	SLU 51	-1103	-1	2930	1.17	-9.45	0.35
190	SLU 52	-1210	-1	3213	1.26	-10.39	0.38
190	SLU 53	-1251	-1	3321	1.29	-10.75	0.39
190	SLU 54	-1246	-1	3308	1.29	-10.7	0.39
190	SLU 55	-1232	-1	3272	1.28	-10.58	0.39
190	SLU 56	-1273	-1	3381	1.31	-10.94	0.4
190	SLU 57	-1268	-1	3368	1.31	-10.89	0.4
190	SLU 58	-1263	-1	3354	1.3	-10.86	0.39
190	SLU 59	-1258	-1	3341	1.3	-10.81	0.39
190	SLU 60	-1285	-1	3411	1.31	-11.06	0.4
190	SLU 61	-1280	-1	3398	1.32	-11.01	0.4
190	SLU 62	-1307	-1	3470	1.33	-11.25	0.4
190	SLU 63	-1302	-1	3457	1.34	-11.2	0.4
190	SLU 64	-1201	-1	3190	1.24	-10.33	0.37
190	SLU 65	-1193	-1	3168	1.24	-10.25	0.38
190	SLU 66	-1234	-1	3276	1.27	-10.6	0.38
190	SLU 67	-1229	-1	3263	1.27	-10.55	0.39
190	SLU 68	-1215	-1	3227	1.26	-10.44	0.38
190	SLU 69	-1256	-1	3336	1.29	-10.79	0.39
190	SLU 70	-1251	-1	3322	1.29	-10.74	0.39
190	SLU 71	-1246	-1	3309	1.28	-10.72	0.39
190	SLU 72	-1241	-1	3295	1.28	-10.67	0.39
190	SLU 73	-1348	-1	3578	1.38	-11.61	0.42
190	SLU 74	-1389	-1	3687	1.4	-11.97	0.42
190	SLU 75	-1384	-1	3674	1.41	-11.92	0.42
190	SLU 76	-1370	-1	3638	1.4	-11.8	0.42



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
190	SLU 77	-1411	-1	3746	1.42	-12.16	0.43
190	SLU 78	-1406	-1	3733	1.43	-12.11	0.43
190	SLU 79	-1401	-1	3719	1.41	-12.08	0.43
190	SLU 80	-1396	-1	3706	1.42	-12.03	0.43
190	SLU 81	-1423	-1	3776	1.43	-12.28	0.43
190	SLU 82	-1418	-1	3763	1.43	-12.23	0.43
190	SLU 83	-1445	-1	3836	1.45	-12.47	0.44
190	SLU 84	-1440	-1	3823	1.45	-12.42	0.44
190	SLE RA 1	-894	-1	2374	0.93	-7.68	0.28
190	SLE RA 2	-888	-1	2359	0.93	-7.63	0.28
190	SLE RA 3	-915	-1	2431	0.95	-7.86	0.29
190	SLE RA 4	-912	-1	2422	0.95	-7.83	0.29
190	SLE RA 5	-903	-1	2398	0.94	-7.75	0.29
190	SLE RA 6	-930	-1	2471	0.96	-7.99	0.29
190	SLE RA 7	-927	-1	2462	0.96	-7.95	0.29
190	SLE RA 8	-923	-1	2453	0.95	-7.94	0.29
190	SLE RA 9	-920	-1	2444	0.96	-7.9	0.29
190	SLE RA 10	-992	-1	2632	1.02	-8.53	0.31
190	SLE RA 11	-1019	-1	2705	1.04	-8.77	0.31
190	SLE RA 12	-1015	-1	2696	1.04	-8.74	0.31
190	SLE RA 13	-1006	-1	2672	1.03	-8.66	0.31
190	SLE RA 14	-1034	-1	2744	1.05	-8.9	0.32
190	SLE RA 15	-1030	-1	2735	1.05	-8.86	0.32
190	SLE RA 16	-1027	-1	2726	1.04	-8.84	0.32
190	SLE RA 17	-1024	-1	2718	1.05	-8.81	0.32
190	SLE RA 18	-1041	-1	2765	1.05	-8.98	0.32
190	SLE RA 19	-1038	-1	2756	1.06	-8.95	0.32
190	SLE RA 20	-1056	-1	2804	1.07	-9.11	0.32
190	SLE RA 21	-1053	-1	2795	1.07	-9.07	0.32
190	SLE FR 1	-894	-1	2374	0.93	-7.68	0.28
190	SLE FR 2	-893	-1	2371	0.93	-7.67	0.28
190	SLE FR 3	-900	-1	2389	0.93	-7.73	0.28
190	SLE FR 4	-937	-1	2488	0.97	-8.06	0.29
190	SLE FR 5	-944	-1	2507	0.97	-8.12	0.29
190	SLE FR 6	-968	-1	2569	0.99	-8.33	0.3
190	SLE QP 1	-894	-1	2374	0.93	-7.68	0.28
190	SLE QP 2	-938	-1	2491	0.97	-8.07	0.29
190	SLD 1	-587	16	1539	-0.5	-3.84	-0.24
190	SLD 2	-587	16	1539	-0.5	-3.84	-0.24
190	SLD 3	-683	25	1790	-0.02	-4.66	-0.07
190	SLD 4	-683	25	1790	-0.02	-4.66	-0.07
190	SLD 5	-687	-10	1825	-0.2	-5.56	-0.13
190	SLD 6	-687	-10	1825	-0.2	-5.56	-0.13
190	SLD 7	-1007	21	2661	1.39	-8.29	0.44
190	SLD 8	-1007	21	2661	1.39	-8.29	0.44
190	SLD 9	-869	-23	2321	0.54	-7.85	0.14
190	SLD 10	-869	-23	2321	0.54	-7.85	0.14
190	SLD 11	-1189	8	3157	2.13	-10.58	0.71
190	SLD 12	-1189	8	3157	2.13	-10.58	0.71
190	SLD 13	-1193	-27	3192	1.95	-11.48	0.66
190	SLD 14	-1193	-27	3192	1.95	-11.48	0.66
190	SLD 15	-1288	-18	3442	2.43	-12.3	0.83
190	SLD 16	-1288	-18	3442	2.43	-12.3	0.83
190	SLV 1	-118	40	265	-2.61	1.8	-1.02
190	SLV 2	-118	40	265	-2.61	1.8	-1.02
190	SLV 3	-344	63	856	-1.44	-0.14	-0.59
190	SLV 4	-344	63	856	-1.44	-0.14	-0.59
190	SLV 5	-349	-23	927	-1.88	-2.16	-0.74
190	SLV 6	-349	-23	927	-1.88	-2.16	-0.74
190	SLV 7	-1103	53	2896	2.02	-8.64	0.67
190	SLV 8	-1103	53	2896	2.02	-8.64	0.67
190	SLV 9	-773	-55	2085	-0.09	-7.5	-0.09
190	SLV 10	-773	-55	2085	-0.09	-7.5	-0.09
190	SLV 11	-1527	22	4055	3.81	-13.98	1.33
190	SLV 12	-1527	22	4055	3.81	-13.98	1.33
190	SLV 13	-1532	-65	4126	3.37	-16	1.18
190	SLV 14	-1532	-65	4126	3.37	-16	1.18
190	SLV 15	-1758	-42	4717	4.54	-17.94	1.6
190	SLV 16	-1758	-42	4717	4.54	-17.94	1.6
191	SLU 1	469	-345	4535	9.03	-257.9	-51.41
191	SLU 2	465	-343	4500	8.99	-255.97	-51.08
191	SLU 3	485	-355	4692	9.27	-266.85	-52.94
191	SLU 4	482	-354	4670	9.25	-265.7	-52.75
191	SLU 5	475	-350	4603	9.15	-261.98	-52.11
191	SLU 6	495	-362	4795	9.44	-272.86	-53.97
191	SLU 7	493	-361	4773	9.41	-271.71	-53.78
191	SLU 8	490	-359	4741	9.36	-269.92	-53.46
191	SLU 9	487	-357	4720	9.33	-268.76	-53.27
191	SLU 10	549	-404	5305	10.62	-301.44	-60.26
191	SLU 11	569	-417	5496	10.91	-312.32	-62.12
191	SLU 12	567	-415	5475	10.88	-311.17	-61.93
191	SLU 13	560	-411	5407	10.78	-307.45	-61.29
191	SLU 14	580	-424	5599	11.07	-318.34	-63.15
191	SLU 15	577	-422	5578	11.04	-317.18	-62.96
191	SLU 16	574	-420	5546	10.99	-315.39	-62.64
191	SLU 17	572	-419	5525	10.96	-314.23	-62.45
191	SLU 18	589	-433	5685	11.37	-322.85	-64.52
191	SLU 19	587	-432	5664	11.34	-321.7	-64.33
191	SLU 20	600	-440	5788	11.53	-328.87	-65.55
191	SLU 21	597	-438	5766	11.5	-327.71	-65.35



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
191	SLU 22	540	-391	5212	10.16	-295.67	-58.28
191	SLU 23	536	-389	5177	10.11	-293.74	-57.95
191	SLU 24	556	-401	5369	10.4	-304.62	-59.81
191	SLU 25	554	-400	5347	10.37	-303.47	-59.62
191	SLU 26	547	-396	5280	10.27	-299.75	-58.98
191	SLU 27	567	-408	5471	10.56	-310.64	-60.84
191	SLU 28	564	-407	5450	10.53	-309.48	-60.65
191	SLU 29	561	-405	5418	10.48	-307.69	-60.33
191	SLU 30	559	-403	5397	10.45	-306.53	-60.14
191	SLU 31	621	-450	5981	11.75	-339.21	-67.13
191	SLU 32	641	-463	6173	12.04	-350.1	-68.99
191	SLU 33	638	-461	6152	12.01	-348.94	-68.8
191	SLU 34	631	-457	6084	11.91	-345.22	-68.16
191	SLU 35	651	-470	6276	12.2	-356.11	-70.02
191	SLU 36	649	-468	6255	12.17	-354.95	-69.83
191	SLU 37	645	-466	6223	12.12	-353.16	-69.51
191	SLU 38	643	-465	6201	12.09	-352	-69.32
191	SLU 39	661	-479	6362	12.5	-360.63	-71.39
191	SLU 40	658	-478	6340	12.47	-359.47	-71.2
191	SLU 41	671	-486	6465	12.66	-366.64	-72.42
191	SLU 42	669	-484	6443	12.63	-365.48	-72.22
191	SLU 43	585	-433	5664	11.36	-322.31	-64.47
191	SLU 44	581	-430	5629	11.31	-320.39	-64.15
191	SLU 45	601	-443	5820	11.6	-331.27	-66.01
191	SLU 46	599	-442	5799	11.57	-330.12	-65.82
191	SLU 47	592	-437	5731	11.47	-326.4	-65.18
191	SLU 48	611	-450	5923	11.76	-337.28	-67.04
191	SLU 49	609	-448	5902	11.73	-336.13	-66.84
191	SLU 50	606	-446	5870	11.68	-334.34	-66.53
191	SLU 51	603	-445	5849	11.65	-333.18	-66.33
191	SLU 52	666	-492	6433	12.94	-365.86	-73.33
191	SLU 53	685	-504	6625	13.23	-376.74	-75.19
191	SLU 54	683	-503	6604	13.21	-375.59	-75
191	SLU 55	676	-499	6536	13.11	-371.87	-74.36
191	SLU 56	696	-511	6728	13.4	-382.75	-76.22
191	SLU 57	693	-510	6706	13.37	-381.6	-76.02
191	SLU 58	690	-508	6674	13.32	-379.81	-75.71
191	SLU 59	688	-507	6653	13.29	-378.65	-75.51
191	SLU 60	706	-520	6813	13.69	-387.27	-77.59
191	SLU 61	703	-519	6792	13.67	-386.12	-77.39
191	SLU 62	716	-527	6916	13.86	-393.28	-78.62
191	SLU 63	714	-526	6895	13.83	-392.13	-78.42
191	SLU 64	656	-479	6341	12.48	-360.09	-71.34
191	SLU 65	653	-476	6305	12.43	-358.16	-71.02
191	SLU 66	672	-489	6497	12.72	-369.04	-72.88
191	SLU 67	670	-488	6476	12.7	-367.89	-72.69
191	SLU 68	663	-483	6408	12.6	-364.17	-72.05
191	SLU 69	683	-496	6600	12.89	-375.05	-73.91
191	SLU 70	680	-494	6579	12.86	-373.9	-73.71
191	SLU 71	677	-492	6547	12.81	-372.11	-73.4
191	SLU 72	675	-491	6525	12.78	-370.95	-73.2
191	SLU 73	737	-538	7110	14.07	-403.63	-80.2
191	SLU 74	757	-550	7302	14.36	-414.51	-82.06
191	SLU 75	754	-549	7280	14.33	-413.36	-81.87
191	SLU 76	747	-545	7213	14.23	-409.64	-81.23
191	SLU 77	767	-557	7405	14.52	-420.53	-83.09
191	SLU 78	765	-556	7383	14.49	-419.37	-82.89
191	SLU 79	761	-554	7351	14.44	-417.58	-82.58
191	SLU 80	759	-553	7330	14.41	-416.42	-82.38
191	SLU 81	777	-567	7490	14.82	-425.04	-84.46
191	SLU 82	775	-565	7469	14.79	-423.89	-84.26
191	SLU 83	787	-573	7593	14.98	-431.06	-85.49
191	SLU 84	785	-572	7572	14.95	-429.9	-85.29
191	SLE RA 1	489	-358	4729	9.35	-268.69	-53.37
191	SLE RA 2	487	-357	4705	9.32	-267.4	-53.15
191	SLE RA 3	500	-365	4833	9.52	-274.66	-54.39
191	SLE RA 4	498	-364	4819	9.5	-273.89	-54.26
191	SLE RA 5	494	-361	4774	9.43	-271.41	-53.84
191	SLE RA 6	507	-369	4902	9.62	-278.67	-55.08
191	SLE RA 7	505	-369	4887	9.6	-277.9	-54.95
191	SLE RA 8	503	-367	4866	9.57	-276.7	-54.74
191	SLE RA 9	501	-366	4852	9.55	-275.93	-54.61
191	SLE RA 10	543	-398	5242	10.41	-297.72	-59.27
191	SLE RA 11	556	-406	5369	10.61	-304.97	-60.52
191	SLE RA 12	555	-405	5355	10.59	-304.2	-60.38
191	SLE RA 13	550	-402	5310	10.52	-301.72	-59.96
191	SLE RA 14	563	-410	5438	10.71	-308.98	-61.2
191	SLE RA 15	561	-410	5424	10.69	-308.21	-61.07
191	SLE RA 16	559	-408	5402	10.66	-307.02	-60.86
191	SLE RA 17	558	-407	5388	10.64	-306.25	-60.73
191	SLE RA 18	570	-417	5495	10.91	-311.99	-62.11
191	SLE RA 19	568	-416	5481	10.89	-311.22	-61.98
191	SLE RA 20	576	-421	5564	11.02	-316	-62.8
191	SLE RA 21	575	-420	5549	11	-315.23	-62.67
191	SLE FR 1	489	-358	4729	9.35	-268.69	-53.37
191	SLE FR 2	489	-358	4724	9.35	-268.43	-53.33
191	SLE FR 3	492	-360	4756	9.4	-270.29	-53.64
191	SLE FR 4	513	-375	4954	9.82	-281.42	-55.95
191	SLE FR 5	516	-377	4986	9.87	-283.28	-56.27
191	SLE FR 6	529	-387	5112	10.13	-290.34	-57.74



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
191	SLE QP 1	489	-358	4729	9.35	-268.69	-53.37
191	SLE QP 2	513	-376	4959	9.82	-281.68	-55.99
191	SLD 1	431	-258	4035	5.4	-209.74	-38.64
191	SLD 2	431	-258	4035	5.4	-209.74	-38.64
191	SLD 3	470	-346	4416	9.73	-234.18	-51.91
191	SLD 4	470	-346	4416	9.73	-234.18	-51.91
191	SLD 5	429	-206	4104	1.93	-223.03	-30.66
191	SLD 6	429	-206	4104	1.93	-223.03	-30.66
191	SLD 7	559	-501	5374	16.36	-304.49	-74.89
191	SLD 8	559	-501	5374	16.36	-304.49	-74.89
191	SLD 9	467	-250	4543	3.28	-258.87	-37.09
191	SLD 10	467	-250	4543	3.28	-258.87	-37.09
191	SLD 11	597	-546	5814	17.72	-340.33	-81.33
191	SLD 12	597	-546	5814	17.72	-340.33	-81.33
191	SLD 13	557	-405	5501	9.92	-329.18	-60.08
191	SLD 14	557	-405	5501	9.92	-329.18	-60.08
191	SLD 15	596	-494	5882	14.25	-353.62	-73.35
191	SLD 16	596	-494	5882	14.25	-353.62	-73.35
191	SLV 1	321	-99	2803	-0.52	-113.44	-15.47
191	SLV 2	321	-99	2803	-0.52	-113.44	-15.47
191	SLV 3	411	-306	3687	9.57	-170.35	-46.39
191	SLV 4	411	-306	3687	9.57	-170.35	-46.39
191	SLV 5	319	20	2970	-8.58	-144.9	3.06
191	SLV 6	319	20	2970	-8.58	-144.9	3.06
191	SLV 7	620	-668	5919	25.05	-334.59	-100.01
191	SLV 8	620	-668	5919	25.05	-334.59	-100.01
191	SLV 9	407	-84	3998	-5.4	-228.77	-11.97
191	SLV 10	407	-84	3998	-5.4	-228.77	-11.97
191	SLV 11	708	-772	6947	28.23	-418.46	-115.05
191	SLV 12	708	-772	6947	28.23	-418.46	-115.05
191	SLV 13	615	-446	6230	10.08	-393.01	-65.6
191	SLV 14	615	-446	6230	10.08	-393.01	-65.6
191	SLV 15	706	-652	7115	20.17	-449.92	-96.52
191	SLV 16	706	-652	7115	20.17	-449.92	-96.52
193	SLU 1	-546	-1	3258	0.46	-7.56	0.08
193	SLU 2	-541	-1	3232	0.46	-7.52	0.08
193	SLU 3	-567	-2	3383	0.47	-7.97	0.09
193	SLU 4	-564	-1	3367	0.47	-7.94	0.09
193	SLU 5	-556	-1	3318	0.46	-7.83	0.08
193	SLU 6	-582	-2	3469	0.48	-8.29	0.09
193	SLU 7	-579	-2	3453	0.48	-8.26	0.09
193	SLU 8	-575	-2	3429	0.48	-8.2	0.09
193	SLU 9	-572	-2	3414	0.47	-8.17	0.09
193	SLU 10	-637	-2	3805	0.54	-8.77	0.1
193	SLU 11	-663	-2	3956	0.56	-9.22	0.1
193	SLU 12	-660	-2	3940	0.56	-9.19	0.1
193	SLU 13	-652	-2	3891	0.55	-9.09	0.1
193	SLU 14	-678	-2	4041	0.57	-9.54	0.11
193	SLU 15	-675	-2	4026	0.57	-9.51	0.1
193	SLU 16	-671	-2	4002	0.56	-9.45	0.1
193	SLU 17	-668	-2	3987	0.56	-9.42	0.1
193	SLU 18	-683	-2	4076	0.59	-9.35	0.11
193	SLU 19	-680	-2	4061	0.58	-9.33	0.11
193	SLU 20	-698	-2	4162	0.59	-9.67	0.11
193	SLU 21	-695	-2	4146	0.59	-9.64	0.11
193	SLU 22	-629	-2	3757	0.52	-8.72	0.1
193	SLU 23	-625	-2	3731	0.51	-8.67	0.09
193	SLU 24	-650	-2	3882	0.53	-9.13	0.1
193	SLU 25	-648	-2	3866	0.53	-9.1	0.1
193	SLU 26	-639	-2	3817	0.52	-8.99	0.1
193	SLU 27	-665	-2	3967	0.54	-9.44	0.1
193	SLU 28	-662	-2	3952	0.54	-9.41	0.1
193	SLU 29	-658	-2	3928	0.54	-9.35	0.1
193	SLU 30	-656	-2	3912	0.53	-9.32	0.1
193	SLU 31	-721	-2	4304	0.6	-9.93	0.11
193	SLU 32	-746	-2	4454	0.62	-10.38	0.12
193	SLU 33	-744	-2	4439	0.62	-10.35	0.11
193	SLU 34	-736	-2	4389	0.61	-10.24	0.11
193	SLU 35	-761	-2	4540	0.63	-10.69	0.12
193	SLU 36	-759	-2	4525	0.62	-10.67	0.12
193	SLU 37	-755	-2	4501	0.62	-10.61	0.12
193	SLU 38	-752	-2	4485	0.62	-10.58	0.11
193	SLU 39	-766	-2	4575	0.64	-10.51	0.12
193	SLU 40	-764	-2	4559	0.64	-10.48	0.12
193	SLU 41	-781	-2	4661	0.65	-10.83	0.12
193	SLU 42	-779	-2	4645	0.65	-10.8	0.12
193	SLU 43	-681	-2	4064	0.58	-9.44	0.11
193	SLU 44	-676	-2	4039	0.57	-9.39	0.11
193	SLU 45	-702	-2	4189	0.59	-9.84	0.11
193	SLU 46	-699	-2	4174	0.59	-9.81	0.11
193	SLU 47	-691	-2	4124	0.58	-9.7	0.11
193	SLU 48	-717	-2	4275	0.6	-10.16	0.11
193	SLU 49	-714	-2	4259	0.6	-10.13	0.11
193	SLU 50	-710	-2	4236	0.6	-10.07	0.11
193	SLU 51	-707	-2	4220	0.59	-10.04	0.11
193	SLU 52	-772	-2	4611	0.66	-10.64	0.12
193	SLU 53	-798	-2	4762	0.68	-11.09	0.13
193	SLU 54	-795	-2	4747	0.68	-11.07	0.12
193	SLU 55	-787	-2	4697	0.67	-10.96	0.12
193	SLU 56	-813	-2	4848	0.69	-11.41	0.13



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
193	SLU 57	-810	-2	4832	0.68	-11.38	0.13
193	SLU 58	-806	-2	4808	0.68	-11.32	0.13
193	SLU 59	-804	-2	4793	0.68	-11.29	0.13
193	SLU 60	-818	-2	4883	0.7	-11.23	0.13
193	SLU 61	-815	-2	4867	0.7	-11.2	0.13
193	SLU 62	-833	-2	4968	0.71	-11.54	0.13
193	SLU 63	-830	-2	4953	0.71	-11.51	0.13
193	SLU 64	-764	-2	4563	0.64	-10.59	0.12
193	SLU 65	-760	-2	4537	0.63	-10.54	0.12
193	SLU 66	-785	-2	4688	0.65	-11	0.12
193	SLU 67	-783	-2	4673	0.65	-10.97	0.12
193	SLU 68	-775	-2	4623	0.64	-10.86	0.12
193	SLU 69	-800	-2	4774	0.66	-11.31	0.12
193	SLU 70	-798	-2	4758	0.65	-11.29	0.12
193	SLU 71	-793	-2	4734	0.65	-11.22	0.12
193	SLU 72	-791	-2	4719	0.65	-11.2	0.12
193	SLU 73	-856	-2	5110	0.72	-11.8	0.13
193	SLU 74	-882	-2	5261	0.74	-12.25	0.14
193	SLU 75	-879	-2	5245	0.73	-12.22	0.14
193	SLU 76	-871	-2	5196	0.73	-12.11	0.13
193	SLU 77	-896	-2	5346	0.75	-12.57	0.14
193	SLU 78	-894	-2	5331	0.74	-12.54	0.14
193	SLU 79	-890	-2	5307	0.74	-12.48	0.14
193	SLU 80	-887	-2	5292	0.74	-12.45	0.14
193	SLU 81	-901	-2	5381	0.76	-12.38	0.14
193	SLU 82	-899	-2	5366	0.76	-12.35	0.14
193	SLU 83	-916	-3	5467	0.77	-12.7	0.14
193	SLU 84	-914	-2	5451	0.77	-12.67	0.14
193	SLE RA 1	-569	-2	3400	0.48	-7.89	0.09
193	SLE RA 2	-567	-2	3383	0.47	-7.86	0.09
193	SLE RA 3	-584	-2	3484	0.49	-8.16	0.09
193	SLE RA 4	-582	-2	3473	0.48	-8.15	0.09
193	SLE RA 5	-576	-2	3440	0.48	-8.07	0.09
193	SLE RA 6	-593	-2	3541	0.49	-8.37	0.09
193	SLE RA 7	-592	-2	3530	0.49	-8.36	0.09
193	SLE RA 8	-589	-2	3515	0.49	-8.32	0.09
193	SLE RA 9	-587	-2	3504	0.49	-8.3	0.09
193	SLE RA 10	-631	-2	3765	0.53	-8.7	0.1
193	SLE RA 11	-648	-2	3866	0.54	-9	0.1
193	SLE RA 12	-646	-2	3855	0.54	-8.98	0.1
193	SLE RA 13	-640	-2	3822	0.54	-8.91	0.1
193	SLE RA 14	-657	-2	3923	0.55	-9.21	0.1
193	SLE RA 15	-656	-2	3912	0.55	-9.19	0.1
193	SLE RA 16	-653	-2	3896	0.55	-9.15	0.1
193	SLE RA 17	-651	-2	3886	0.54	-9.13	0.1
193	SLE RA 18	-661	-2	3946	0.56	-9.09	0.1
193	SLE RA 19	-659	-2	3936	0.56	-9.07	0.1
193	SLE RA 20	-671	-2	4003	0.57	-9.3	0.1
193	SLE RA 21	-669	-2	3993	0.56	-9.28	0.1
193	SLE FR 1	-569	-2	3400	0.48	-7.89	0.09
193	SLE FR 2	-569	-2	3397	0.48	-7.89	0.09
193	SLE FR 3	-573	-2	3423	0.48	-7.98	0.09
193	SLE FR 4	-596	-2	3561	0.5	-8.25	0.09
193	SLE FR 5	-601	-2	3587	0.5	-8.34	0.09
193	SLE FR 6	-615	-2	3673	0.52	-8.49	0.1
193	SLE QP 1	-569	-2	3400	0.48	-7.89	0.09
193	SLE QP 2	-597	-2	3564	0.5	-8.25	0.09
193	SLD 1	-365	27	2299	-1.57	3.13	-0.6
193	SLD 2	-365	27	2299	-1.57	3.13	-0.6
193	SLD 3	-399	21	2493	-1.05	4.22	-0.45
193	SLD 4	-399	21	2493	-1.05	4.22	-0.45
193	SLD 5	-476	16	2891	-0.91	-6.49	-0.34
193	SLD 6	-476	16	2891	-0.91	-6.49	-0.34
193	SLD 7	-589	-4	3536	0.83	-2.86	0.16
193	SLD 8	-589	-4	3536	0.83	-2.86	0.16
193	SLD 9	-604	0	3592	0.18	-13.64	0.03
193	SLD 10	-604	0	3592	0.18	-13.64	0.03
193	SLD 11	-718	-19	4237	1.92	-10.02	0.53
193	SLD 12	-718	-19	4237	1.92	-10.02	0.53
193	SLD 13	-795	-24	4636	2.06	-20.72	0.63
193	SLD 14	-795	-24	4636	2.06	-20.72	0.63
193	SLD 15	-829	-30	4829	2.58	-19.64	0.78
193	SLD 16	-829	-30	4829	2.58	-19.64	0.78
193	SLV 1	-55	68	603	-4.58	18.29	-1.6
193	SLV 2	-55	68	603	-4.58	18.29	-1.6
193	SLV 3	-135	54	1058	-3.31	20.86	-1.23
193	SLV 4	-135	54	1058	-3.31	20.86	-1.23
193	SLV 5	-313	41	1986	-2.95	-4.19	-0.98
193	SLV 6	-313	41	1986	-2.95	-4.19	-0.98
193	SLV 7	-580	-6	3503	1.29	4.38	0.25
193	SLV 8	-580	-6	3503	1.29	4.38	0.25
193	SLV 9	-614	3	3626	-0.28	-20.88	-0.07
193	SLV 10	-614	3	3626	-0.28	-20.88	-0.07
193	SLV 11	-881	-44	5142	3.95	-12.32	1.16
193	SLV 12	-881	-44	5142	3.95	-12.32	1.16
193	SLV 13	-1059	-57	6070	4.31	-37.36	1.42
193	SLV 14	-1059	-57	6070	4.31	-37.36	1.42
193	SLV 15	-1139	-71	6525	5.58	-34.79	1.79
193	SLV 16	-1139	-71	6525	5.58	-34.79	1.79
194	SLU 1	902	-13	2420	1.92	14.15	-0.53



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
194	SLU 2	884	-13	2377	1.91	13.75	-0.53
194	SLU 3	925	-13	2483	1.98	14.45	-0.55
194	SLU 4	914	-13	2458	1.97	14.21	-0.55
194	SLU 5	896	-13	2411	1.95	13.89	-0.54
194	SLU 6	937	-13	2517	2.01	14.59	-0.56
194	SLU 7	926	-13	2491	2.01	14.35	-0.56
194	SLU 8	926	-13	2487	1.99	14.42	-0.55
194	SLU 9	915	-13	2462	1.99	14.19	-0.55
194	SLU 10	1060	-15	2840	2.23	16.61	-0.62
194	SLU 11	1101	-15	2946	2.29	17.32	-0.63
194	SLU 12	1090	-15	2921	2.29	17.08	-0.63
194	SLU 13	1072	-15	2874	2.26	16.75	-0.63
194	SLU 14	1113	-16	2980	2.33	17.45	-0.64
194	SLU 15	1102	-16	2954	2.33	17.22	-0.64
194	SLU 16	1102	-15	2950	2.3	17.29	-0.64
194	SLU 17	1091	-15	2925	2.3	17.05	-0.64
194	SLU 18	1153	-16	3081	2.36	18.24	-0.66
194	SLU 19	1143	-16	3056	2.36	18	-0.65
194	SLU 20	1165	-16	3115	2.4	18.38	-0.67
194	SLU 21	1154	-16	3090	2.4	18.14	-0.66
194	SLU 22	1055	-15	2823	2.19	16.65	-0.61
194	SLU 23	1037	-15	2780	2.19	16.25	-0.61
194	SLU 24	1078	-15	2886	2.25	16.96	-0.62
194	SLU 25	1067	-15	2861	2.25	16.72	-0.62
194	SLU 26	1049	-15	2814	2.23	16.39	-0.62
194	SLU 27	1090	-15	2920	2.29	17.09	-0.63
194	SLU 28	1079	-15	2894	2.29	16.86	-0.63
194	SLU 29	1079	-15	2890	2.27	16.93	-0.63
194	SLU 30	1068	-15	2864	2.27	16.69	-0.63
194	SLU 31	1213	-17	3243	2.5	19.12	-0.69
194	SLU 32	1254	-17	3349	2.57	19.82	-0.71
194	SLU 33	1243	-17	3324	2.56	19.58	-0.71
194	SLU 34	1225	-17	3277	2.54	19.26	-0.7
194	SLU 35	1266	-18	3383	2.6	19.96	-0.72
194	SLU 36	1255	-17	3357	2.6	19.72	-0.72
194	SLU 37	1255	-17	3353	2.58	19.79	-0.72
194	SLU 38	1244	-17	3328	2.58	19.55	-0.71
194	SLU 39	1306	-18	3484	2.64	20.74	-0.73
194	SLU 40	1296	-18	3459	2.64	20.5	-0.73
194	SLU 41	1318	-18	3518	2.68	20.88	-0.74
194	SLU 42	1307	-18	3493	2.68	20.64	-0.74
194	SLU 43	1121	-16	3007	2.4	17.53	-0.66
194	SLU 44	1103	-16	2965	2.39	17.13	-0.66
194	SLU 45	1143	-16	3071	2.46	17.84	-0.68
194	SLU 46	1133	-16	3045	2.45	17.6	-0.68
194	SLU 47	1114	-16	2999	2.43	17.27	-0.67
194	SLU 48	1155	-17	3104	2.49	17.98	-0.69
194	SLU 49	1145	-17	3079	2.49	17.74	-0.69
194	SLU 50	1144	-16	3075	2.47	17.81	-0.68
194	SLU 51	1134	-16	3049	2.47	17.57	-0.68
194	SLU 52	1278	-18	3428	2.71	20	-0.75
194	SLU 53	1319	-19	3534	2.77	20.7	-0.77
194	SLU 54	1308	-18	3509	2.77	20.46	-0.77
194	SLU 55	1290	-18	3462	2.74	20.14	-0.76
194	SLU 56	1331	-19	3568	2.81	20.84	-0.78
194	SLU 57	1320	-19	3542	2.81	20.6	-0.78
194	SLU 58	1320	-19	3538	2.78	20.67	-0.77
194	SLU 59	1309	-19	3512	2.78	20.43	-0.77
194	SLU 60	1372	-19	3669	2.84	21.62	-0.79
194	SLU 61	1361	-19	3644	2.84	21.39	-0.79
194	SLU 62	1383	-19	3703	2.88	21.76	-0.8
194	SLU 63	1373	-19	3677	2.88	21.52	-0.8
194	SLU 64	1274	-18	3410	2.67	20.03	-0.74
194	SLU 65	1256	-18	3368	2.67	19.64	-0.74
194	SLU 66	1297	-18	3474	2.73	20.34	-0.76
194	SLU 67	1286	-18	3448	2.73	20.1	-0.76
194	SLU 68	1267	-18	3402	2.71	19.78	-0.75
194	SLU 69	1308	-19	3507	2.77	20.48	-0.77
194	SLU 70	1298	-19	3482	2.77	20.24	-0.77
194	SLU 71	1297	-18	3478	2.75	20.31	-0.76
194	SLU 72	1287	-18	3452	2.75	20.07	-0.76
194	SLU 73	1431	-20	3831	2.98	22.5	-0.83
194	SLU 74	1472	-20	3937	3.05	23.21	-0.84
194	SLU 75	1461	-20	3911	3.04	22.97	-0.84
194	SLU 76	1443	-20	3865	3.02	22.64	-0.84
194	SLU 77	1484	-21	3971	3.08	23.34	-0.85
194	SLU 78	1473	-21	3945	3.08	23.11	-0.85
194	SLU 79	1473	-21	3941	3.06	23.18	-0.85
194	SLU 80	1462	-20	3915	3.06	22.94	-0.85
194	SLU 81	1525	-21	4072	3.12	24.13	-0.87
194	SLU 82	1514	-21	4047	3.12	23.89	-0.86
194	SLU 83	1536	-21	4106	3.16	24.27	-0.88
194	SLU 84	1526	-21	4080	3.16	24.03	-0.87
194	SLE RA 1	946	-13	2535	1.99	14.86	-0.55
194	SLE RA 2	934	-13	2507	1.99	14.6	-0.55
194	SLE RA 3	961	-14	2577	2.03	15.07	-0.56
194	SLE RA 4	954	-14	2560	2.03	14.91	-0.56
194	SLE RA 5	942	-13	2529	2.02	14.69	-0.56
194	SLE RA 6	969	-14	2599	2.06	15.16	-0.57
194	SLE RA 7	962	-14	2583	2.06	15	-0.57



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
194	SLE RA 8	962	-14	2580	2.04	15.05	-0.57
194	SLE RA 9	955	-14	2563	2.04	14.89	-0.57
194	SLE RA 10	1051	-15	2815	2.2	16.51	-0.61
194	SLE RA 11	1078	-15	2886	2.24	16.97	-0.62
194	SLE RA 12	1071	-15	2869	2.24	16.82	-0.62
194	SLE RA 13	1059	-15	2838	2.23	16.6	-0.62
194	SLE RA 14	1086	-15	2908	2.27	17.07	-0.63
194	SLE RA 15	1079	-15	2891	2.27	16.91	-0.63
194	SLE RA 16	1079	-15	2888	2.25	16.96	-0.62
194	SLE RA 17	1072	-15	2871	2.25	16.8	-0.62
194	SLE RA 18	1113	-15	2976	2.29	17.59	-0.64
194	SLE RA 19	1106	-15	2959	2.29	17.43	-0.64
194	SLE RA 20	1121	-16	2998	2.32	17.68	-0.64
194	SLE RA 21	1114	-16	2981	2.32	17.52	-0.64
194	SLE FR 1	946	-13	2535	1.99	14.86	-0.55
194	SLE FR 2	944	-13	2529	1.99	14.81	-0.55
194	SLE FR 3	949	-13	2544	2	14.9	-0.55
194	SLE FR 4	994	-14	2661	2.08	15.63	-0.58
194	SLE FR 5	999	-14	2676	2.09	15.72	-0.58
194	SLE FR 6	1030	-14	2755	2.14	16.23	-0.59
194	SLE QP 1	946	-13	2535	1.99	14.86	-0.55
194	SLE QP 2	996	-14	2667	2.08	15.68	-0.58
194	SLD 1	1451	-21	3759	2.62	25.94	-0.75
194	SLD 2	1451	-21	3759	2.62	25.94	-0.75
194	SLD 3	1570	-27	4088	3.2	27.79	-0.92
194	SLD 4	1570	-27	4088	3.2	27.79	-0.92
194	SLD 5	952	-7	2495	1.36	15.96	-0.37
194	SLD 6	952	-7	2495	1.36	15.96	-0.37
194	SLD 7	1349	-27	3593	3.3	22.11	-0.94
194	SLD 8	1349	-27	3593	3.3	22.11	-0.94
194	SLD 9	644	-1	1741	0.87	9.24	-0.22
194	SLD 10	644	-1	1741	0.87	9.24	-0.22
194	SLD 11	1040	-21	2839	2.81	15.4	-0.78
194	SLD 12	1040	-21	2839	2.81	15.4	-0.78
194	SLD 13	423	-1	1246	0.97	3.57	-0.24
194	SLD 14	423	-1	1246	0.97	3.57	-0.24
194	SLD 15	541	-7	1576	1.55	5.42	-0.41
194	SLD 16	541	-7	1576	1.55	5.42	-0.41
194	SLV 1	2059	-31	5219	3.41	39.64	-1
194	SLV 2	2059	-31	5219	3.41	39.64	-1
194	SLV 3	2334	-46	5982	4.82	43.91	-1.42
194	SLV 4	2334	-46	5982	4.82	43.91	-1.42
194	SLV 5	898	3	2276	0.34	16.4	-0.07
194	SLV 6	898	3	2276	0.34	16.4	-0.07
194	SLV 7	1815	-46	4818	5.04	30.62	-1.46
194	SLV 8	1815	-46	4818	5.04	30.62	-1.46
194	SLV 9	178	18	516	-0.88	0.74	0.31
194	SLV 10	178	18	516	-0.88	0.74	0.31
194	SLV 11	1095	-31	3058	3.82	14.96	-1.08
194	SLV 12	1095	-31	3058	3.82	14.96	-1.08
194	SLV 13	-342	18	-648	-0.66	-12.55	0.26
194	SLV 14	-342	18	-648	-0.66	-12.55	0.26
194	SLV 15	-67	3	115	0.75	-8.28	-0.15
194	SLV 16	-67	3	115	0.75	-8.28	-0.15
195	SLU 1	490	-852	7588	28.44	49	5.69
195	SLU 2	462	-853	7494	28.63	47.32	5.69
195	SLU 3	495	-879	7806	29.37	49.93	5.87
195	SLU 4	478	-880	7749	29.48	48.93	5.87
195	SLU 5	462	-870	7618	29.22	47.69	5.8
195	SLU 6	496	-896	7930	29.96	50.3	5.98
195	SLU 7	479	-896	7873	30.07	49.3	5.98
195	SLU 8	490	-886	7836	29.63	49.74	5.91
195	SLU 9	473	-886	7780	29.74	48.73	5.91
195	SLU 10	578	-994	8897	33.14	57.61	6.64
195	SLU 11	612	-1020	9209	33.87	60.23	6.81
195	SLU 12	595	-1021	9152	33.98	59.22	6.81
195	SLU 13	579	-1011	9021	33.73	57.98	6.75
195	SLU 14	612	-1037	9333	34.46	60.6	6.92
195	SLU 15	595	-1037	9277	34.57	59.59	6.92
195	SLU 16	607	-1027	9239	34.13	60.03	6.85
195	SLU 17	590	-1027	9183	34.24	59.03	6.86
195	SLU 18	657	-1053	9593	34.88	63.71	7.03
195	SLU 19	640	-1054	9536	34.99	62.7	7.04
195	SLU 20	657	-1070	9717	35.47	64.08	7.15
195	SLU 21	640	-1071	9660	35.58	63.07	7.15
195	SLU 22	593	-973	8807	32.32	58	6.5
195	SLU 23	564	-975	8713	32.51	56.32	6.51
195	SLU 24	598	-1000	9025	33.24	58.93	6.68
195	SLU 25	581	-1001	8968	33.36	57.93	6.68
195	SLU 26	565	-991	8837	33.1	56.69	6.62
195	SLU 27	599	-1017	9149	33.84	59.3	6.79
195	SLU 28	582	-1018	9093	33.95	58.3	6.79
195	SLU 29	593	-1007	9056	33.5	58.74	6.72
195	SLU 30	576	-1008	8999	33.62	57.73	6.73
195	SLU 31	681	-1115	10116	37.01	66.61	7.45
195	SLU 32	715	-1141	10428	37.75	69.23	7.62
195	SLU 33	698	-1142	10372	37.86	68.22	7.63
195	SLU 34	681	-1132	10240	37.6	66.99	7.56
195	SLU 35	715	-1158	10552	38.34	69.6	7.73
195	SLU 36	698	-1159	10496	38.45	68.59	7.74



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
195	SLU 37	710	-1148	10459	38.01	69.04	7.67
195	SLU 38	693	-1149	10402	38.12	68.03	7.67
195	SLU 39	759	-1175	10812	38.76	72.71	7.85
195	SLU 40	742	-1175	10755	38.87	71.7	7.85
195	SLU 41	760	-1191	10936	39.35	73.08	7.96
195	SLU 42	743	-1192	10879	39.46	72.07	7.96
195	SLU 43	601	-1066	9446	35.65	60.61	7.12
195	SLU 44	573	-1067	9352	35.83	58.93	7.12
195	SLU 45	607	-1093	9664	36.57	61.55	7.29
195	SLU 46	590	-1094	9608	36.68	60.54	7.3
195	SLU 47	574	-1084	9476	36.42	59.3	7.23
195	SLU 48	607	-1110	9788	37.16	61.92	7.4
195	SLU 49	590	-1110	9732	37.27	60.91	7.41
195	SLU 50	602	-1100	9695	36.83	61.35	7.34
195	SLU 51	585	-1100	9638	36.94	60.34	7.34
195	SLU 52	690	-1208	10755	40.34	69.23	8.06
195	SLU 53	724	-1234	11067	41.07	71.84	8.24
195	SLU 54	707	-1234	11011	41.19	70.84	8.24
195	SLU 55	690	-1225	10879	40.93	69.6	8.18
195	SLU 56	724	-1251	11191	41.66	72.21	8.35
195	SLU 57	707	-1251	11135	41.78	71.21	8.35
195	SLU 58	719	-1240	11098	41.33	71.65	8.28
195	SLU 59	702	-1241	11041	41.44	70.64	8.28
195	SLU 60	768	-1267	11451	42.08	75.32	8.46
195	SLU 61	751	-1268	11394	42.19	74.31	8.47
195	SLU 62	768	-1284	11575	42.67	75.69	8.57
195	SLU 63	752	-1285	11519	42.78	74.68	8.58
195	SLU 64	704	-1187	10665	39.53	69.61	7.93
195	SLU 65	676	-1188	10571	39.71	67.93	7.93
195	SLU 66	710	-1214	10883	40.45	70.55	8.11
195	SLU 67	693	-1215	10827	40.56	69.54	8.11
195	SLU 68	676	-1205	10696	40.3	68.3	8.04
195	SLU 69	710	-1231	11007	41.04	70.92	8.22
195	SLU 70	693	-1232	10951	41.15	69.91	8.22
195	SLU 71	705	-1221	10914	40.71	70.35	8.15
195	SLU 72	688	-1222	10857	40.82	69.34	8.15
195	SLU 73	793	-1329	11975	44.22	78.23	8.88
195	SLU 74	827	-1355	12287	44.95	80.84	9.05
195	SLU 75	810	-1356	12230	45.06	79.84	9.05
195	SLU 76	793	-1346	12099	44.81	78.6	8.99
195	SLU 77	827	-1372	12411	45.54	81.21	9.16
195	SLU 78	810	-1373	12354	45.65	80.21	9.16
195	SLU 79	822	-1362	12317	45.21	80.65	9.09
195	SLU 80	805	-1363	12261	45.32	79.64	9.1
195	SLU 81	871	-1389	12670	45.96	84.32	9.28
195	SLU 82	854	-1389	12614	46.07	83.31	9.28
195	SLU 83	871	-1405	12794	46.55	84.69	9.39
195	SLU 84	854	-1406	12738	46.66	83.68	9.39
195	SLE RA 1	519	-887	7936	29.55	51.57	5.92
195	SLE RA 2	500	-887	7873	29.68	50.45	5.92
195	SLE RA 3	523	-905	8081	30.17	52.19	6.04
195	SLE RA 4	512	-905	8044	30.24	51.52	6.04
195	SLE RA 5	501	-899	7956	30.07	50.69	6
195	SLE RA 6	523	-916	8164	30.56	52.44	6.11
195	SLE RA 7	512	-916	8127	30.64	51.77	6.11
195	SLE RA 8	520	-909	8102	30.34	52.06	6.07
195	SLE RA 9	508	-910	8064	30.41	51.39	6.07
195	SLE RA 10	578	-981	8809	32.68	57.31	6.55
195	SLE RA 11	601	-998	9017	33.17	59.06	6.67
195	SLE RA 12	589	-999	8979	33.24	58.39	6.67
195	SLE RA 13	578	-993	8892	33.07	57.56	6.63
195	SLE RA 14	601	-1010	9100	33.56	59.3	6.74
195	SLE RA 15	590	-1010	9062	33.64	58.63	6.74
195	SLE RA 16	597	-1003	9037	33.34	58.93	6.7
195	SLE RA 17	586	-1004	9000	33.42	58.25	6.7
195	SLE RA 18	630	-1021	9273	33.84	61.37	6.82
195	SLE RA 19	619	-1021	9235	33.92	60.7	6.82
195	SLE RA 20	631	-1032	9355	34.24	61.62	6.89
195	SLE RA 21	619	-1033	9318	34.31	60.95	6.89
195	SLE FR 1	519	-887	7936	29.55	51.57	5.92
195	SLE FR 2	515	-887	7924	29.58	51.34	5.92
195	SLE FR 3	519	-891	7969	29.71	51.67	5.95
195	SLE FR 4	549	-927	8325	30.86	54.29	6.19
195	SLE FR 5	553	-931	8370	31	54.61	6.22
195	SLE FR 6	575	-954	8604	31.7	56.47	6.37
195	SLE QP 1	519	-887	7936	29.55	51.57	5.92
195	SLE QP 2	553	-927	8337	30.84	54.51	6.19
195	SLD 1	1258	-931	10299	30.25	102.84	6.28
195	SLD 2	1258	-931	10299	30.25	102.84	6.28
195	SLD 3	1181	-1153	11374	39.8	97.61	7.76
195	SLD 4	1181	-1153	11374	39.8	97.61	7.76
195	SLD 5	882	-591	7296	16.18	76.95	3.97
195	SLD 6	882	-591	7296	16.18	76.95	3.97
195	SLD 7	623	-1332	10878	48.01	59.5	8.9
195	SLD 8	623	-1332	10878	48.01	59.5	8.9
195	SLD 9	482	-522	5796	13.67	49.52	3.48
195	SLD 10	482	-522	5796	13.67	49.52	3.48
195	SLD 11	223	-1263	9379	45.5	32.07	8.4
195	SLD 12	223	-1263	9379	45.5	32.07	8.4
195	SLD 13	-76	-701	5301	21.88	11.41	4.62



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
195	SLD 14	-76	-701	5301	21.88	11.41	4.62
195	SLD 15	-153	-923	6376	31.43	6.18	6.1
195	SLD 16	-153	-923	6376	31.43	6.18	6.1
195	SLV 1	2197	-941	12936	29.65	167.13	6.45
195	SLV 2	2197	-941	12936	29.65	167.13	6.45
195	SLV 3	2014	-1456	15427	51.76	155	9.87
195	SLV 4	2014	-1456	15427	51.76	155	9.87
195	SLV 5	1322	-150	5939	-3.05	106.7	1.07
195	SLV 6	1322	-150	5939	-3.05	106.7	1.07
195	SLV 7	714	-1867	14242	70.65	66.25	12.49
195	SLV 8	714	-1867	14242	70.65	66.25	12.49
195	SLV 9	391	13	2432	-8.97	42.77	-0.11
195	SLV 10	391	13	2432	-8.97	42.77	-0.11
195	SLV 11	-217	-1704	10736	64.73	2.32	11.31
195	SLV 12	-217	-1704	10736	64.73	2.32	11.31
195	SLV 13	-909	-397	1248	9.92	-45.98	2.51
195	SLV 14	-909	-397	1248	9.92	-45.98	2.51
195	SLV 15	-1092	-912	3739	32.03	-58.11	5.93
195	SLV 16	-1092	-912	3739	32.03	-58.11	5.93
196	SLU 1	530	-3	6257	1.96	27.66	0.03
196	SLU 2	485	-3	6168	2.01	25.62	0.03
196	SLU 3	530	-3	6443	2.03	27.71	0.03
196	SLU 4	503	-4	6389	2.06	26.49	0.03
196	SLU 5	480	-4	6276	2.06	25.38	0.03
196	SLU 6	524	-3	6551	2.07	27.48	0.03
196	SLU 7	498	-4	6498	2.1	26.25	0.03
196	SLU 8	519	-3	6474	2.05	27.2	0.03
196	SLU 9	492	-4	6420	2.08	25.97	0.03
196	SLU 10	625	-4	7346	2.34	32.57	0.03
196	SLU 11	670	-4	7620	2.36	34.67	0.03
196	SLU 12	643	-4	7567	2.39	33.44	0.03
196	SLU 13	620	-4	7454	2.38	32.34	0.03
196	SLU 14	665	-4	7729	2.4	34.43	0.03
196	SLU 15	638	-4	7675	2.43	33.21	0.03
196	SLU 16	659	-4	7651	2.38	34.15	0.03
196	SLU 17	632	-4	7598	2.41	32.92	0.03
196	SLU 18	730	-4	7939	2.43	37.59	0.03
196	SLU 19	703	-4	7886	2.46	36.37	0.03
196	SLU 20	725	-4	8048	2.48	37.36	0.03
196	SLU 21	698	-4	7994	2.51	36.14	0.03
196	SLU 22	654	-4	7283	2.22	33.8	0.03
196	SLU 23	609	-4	7195	2.27	31.75	0.03
196	SLU 24	654	-4	7469	2.29	33.85	0.03
196	SLU 25	627	-4	7416	2.32	32.62	0.03
196	SLU 26	604	-4	7303	2.32	31.52	0.03
196	SLU 27	649	-4	7578	2.33	33.62	0.03
196	SLU 28	622	-4	7525	2.36	32.39	0.03
196	SLU 29	643	-4	7500	2.31	33.33	0.03
196	SLU 30	617	-4	7447	2.34	32.11	0.03
196	SLU 31	750	-4	8372	2.6	38.71	0.04
196	SLU 32	794	-4	8647	2.62	40.8	0.03
196	SLU 33	767	-4	8594	2.65	39.58	0.04
196	SLU 34	744	-4	8481	2.64	38.48	0.04
196	SLU 35	789	-4	8755	2.66	40.57	0.04
196	SLU 36	762	-4	8702	2.69	39.35	0.04
196	SLU 37	783	-4	8678	2.64	40.29	0.04
196	SLU 38	757	-4	8625	2.67	39.06	0.04
196	SLU 39	854	-4	8966	2.69	43.73	0.04
196	SLU 40	827	-4	8913	2.72	42.51	0.04
196	SLU 41	849	-4	9074	2.74	43.5	0.04
196	SLU 42	822	-5	9021	2.77	42.27	0.04
196	SLU 43	646	-4	7782	2.46	33.85	0.04
196	SLU 44	602	-4	7693	2.51	31.81	0.04
196	SLU 45	646	-4	7968	2.53	33.91	0.04
196	SLU 46	620	-4	7914	2.56	32.68	0.04
196	SLU 47	596	-4	7801	2.56	31.58	0.04
196	SLU 48	641	-4	8076	2.57	33.67	0.04
196	SLU 49	614	-4	8023	2.6	32.45	0.04
196	SLU 50	636	-4	7999	2.55	33.39	0.04
196	SLU 51	609	-4	7945	2.58	32.16	0.04
196	SLU 52	742	-5	8871	2.84	38.76	0.04
196	SLU 53	786	-5	9145	2.86	40.86	0.04
196	SLU 54	760	-5	9092	2.89	39.63	0.04
196	SLU 55	737	-5	8979	2.88	38.53	0.04
196	SLU 56	781	-5	9254	2.9	40.63	0.04
196	SLU 57	754	-5	9201	2.93	39.4	0.04
196	SLU 58	776	-5	9176	2.88	40.34	0.04
196	SLU 59	749	-5	9123	2.91	39.12	0.04
196	SLU 60	847	-5	9464	2.93	43.79	0.04
196	SLU 61	820	-5	9411	2.96	42.56	0.04
196	SLU 62	841	-5	9573	2.98	43.56	0.04
196	SLU 63	814	-5	9519	3.01	42.33	0.04
196	SLU 64	771	-4	8808	2.72	39.99	0.04
196	SLU 65	726	-5	8720	2.77	37.95	0.04
196	SLU 66	770	-5	8994	2.79	40.04	0.04
196	SLU 67	744	-5	8941	2.82	38.82	0.04
196	SLU 68	721	-5	8828	2.82	37.72	0.04
196	SLU 69	765	-5	9103	2.83	39.81	0.04
196	SLU 70	738	-5	9050	2.86	38.59	0.04
196	SLU 71	760	-5	9025	2.81	39.53	0.04



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
196	SLU 72	733	-5	8972	2.84	38.3	0.04
196	SLU 73	866	-5	9897	3.1	44.9	0.04
196	SLU 74	910	-5	10172	3.12	47	0.04
196	SLU 75	884	-5	10119	3.15	45.77	0.04
196	SLU 76	861	-5	10006	3.14	44.67	0.04
196	SLU 77	905	-5	10280	3.16	46.77	0.04
196	SLU 78	878	-5	10227	3.19	45.54	0.04
196	SLU 79	900	-5	10203	3.14	46.48	0.04
196	SLU 80	873	-5	10150	3.17	45.26	0.04
196	SLU 81	971	-5	10491	3.19	49.93	0.04
196	SLU 82	944	-5	10438	3.22	48.7	0.04
196	SLU 83	965	-5	10599	3.24	49.69	0.04
196	SLU 84	938	-5	10546	3.27	48.47	0.04
196	SLE RA 1	565	-3	6550	2.04	29.41	0.03
196	SLE RA 2	536	-3	6491	2.07	28.05	0.03
196	SLE RA 3	565	-3	6674	2.08	29.45	0.03
196	SLE RA 4	548	-4	6639	2.1	28.63	0.03
196	SLE RA 5	532	-4	6563	2.1	27.9	0.03
196	SLE RA 6	562	-4	6746	2.11	29.29	0.03
196	SLE RA 7	544	-4	6711	2.13	28.48	0.03
196	SLE RA 8	558	-3	6695	2.1	29.1	0.03
196	SLE RA 9	540	-4	6659	2.11	28.29	0.03
196	SLE RA 10	629	-4	7276	2.29	32.69	0.03
196	SLE RA 11	659	-4	7459	2.3	34.08	0.03
196	SLE RA 12	641	-4	7424	2.32	33.27	0.03
196	SLE RA 13	625	-4	7348	2.32	32.53	0.03
196	SLE RA 14	655	-4	7531	2.33	33.93	0.03
196	SLE RA 15	637	-4	7496	2.35	33.11	0.03
196	SLE RA 16	652	-4	7480	2.31	33.74	0.03
196	SLE RA 17	634	-4	7444	2.33	32.92	0.03
196	SLE RA 18	699	-4	7672	2.35	36.04	0.03
196	SLE RA 19	681	-4	7636	2.37	35.22	0.03
196	SLE RA 20	695	-4	7744	2.38	35.88	0.03
196	SLE RA 21	677	-4	7708	2.4	35.06	0.03
196	SLE FR 1	565	-3	6550	2.04	29.41	0.03
196	SLE FR 2	559	-3	6538	2.04	29.14	0.03
196	SLE FR 3	564	-3	6579	2.05	29.35	0.03
196	SLE FR 4	600	-4	6875	2.14	31.13	0.03
196	SLE FR 5	604	-4	6915	2.14	31.34	0.03
196	SLE FR 6	632	-4	7111	2.19	32.72	0.03
196	SLE QP 1	565	-3	6550	2.04	29.41	0.03
196	SLE QP 2	605	-4	6887	2.13	31.4	0.03
196	SLD 1	1795	12	7958	-2.16	91.19	-0.08
196	SLD 2	1795	12	7958	-2.16	91.19	-0.08
196	SLD 3	1652	3	8636	0.82	84.84	-0.02
196	SLD 4	1652	3	8636	0.82	84.84	-0.02
196	SLD 5	1179	14	6179	-3.67	58.97	-0.1
196	SLD 6	1179	14	6179	-3.67	58.97	-0.1
196	SLD 7	702	-15	8440	6.25	37.81	0.11
196	SLD 8	702	-15	8440	6.25	37.81	0.11
196	SLD 9	509	8	5333	-1.99	24.99	-0.05
196	SLD 10	509	8	5333	-1.99	24.99	-0.05
196	SLD 11	32	-22	7594	7.93	3.84	0.16
196	SLD 12	32	-22	7594	7.93	3.84	0.16
196	SLD 13	-441	-10	5137	3.44	-22.04	0.08
196	SLD 14	-441	-10	5137	3.44	-22.04	0.08
196	SLD 15	-584	-19	5815	6.42	-28.39	0.14
196	SLD 16	-584	-19	5815	6.42	-28.39	0.14
196	SLV 1	3376	34	9398	-8.3	170.68	-0.25
196	SLV 2	3376	34	9398	-8.3	170.68	-0.25
196	SLV 3	3041	12	10973	-1.14	155.84	-0.1
196	SLV 4	3041	12	10973	-1.14	155.84	-0.1
196	SLV 5	1945	41	5250	-11.85	95.68	-0.28
196	SLV 6	1945	41	5250	-11.85	95.68	-0.28
196	SLV 7	828	-32	10503	12	46.23	0.22
196	SLV 8	828	-32	10503	12	46.23	0.22
196	SLV 9	383	25	3271	-7.74	16.57	-0.16
196	SLV 10	383	25	3271	-7.74	16.57	-0.16
196	SLV 11	-734	-48	8523	16.11	-32.88	0.34
196	SLV 12	-734	-48	8523	16.11	-32.88	0.34
196	SLV 13	-1830	-19	2800	5.4	-93.04	0.16
196	SLV 14	-1830	-19	2800	5.4	-93.04	0.16
196	SLV 15	-2165	-41	4375	12.56	-107.88	0.3
196	SLV 16	-2165	-41	4375	12.56	-107.88	0.3
197	SLU 1	285	1	6151	0.29	12.15	-0.01
197	SLU 2	240	1	6051	0.34	10.14	-0.01
197	SLU 3	275	1	6338	0.3	11.64	-0.01
197	SLU 4	248	1	6278	0.33	10.43	-0.01
197	SLU 5	228	1	6162	0.34	9.55	-0.01
197	SLU 6	263	1	6449	0.3	11.05	-0.01
197	SLU 7	236	1	6389	0.33	9.84	-0.01
197	SLU 8	262	1	6373	0.3	10.97	-0.01
197	SLU 9	234	1	6313	0.33	9.76	-0.01
197	SLU 10	333	1	7228	0.4	14.18	-0.01
197	SLU 11	369	1	7515	0.36	15.68	-0.01
197	SLU 12	342	1	7455	0.39	14.47	-0.01
197	SLU 13	322	1	7339	0.41	13.59	-0.01
197	SLU 14	357	1	7625	0.37	15.09	-0.01
197	SLU 15	330	1	7565	0.4	13.88	-0.01
197	SLU 16	355	1	7550	0.37	15.01	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
197	SLU 17	328	1	7490	0.4	13.81	-0.01
197	SLU 18	419	1	7832	0.38	17.92	-0.01
197	SLU 19	392	1	7772	0.41	16.72	-0.01
197	SLU 20	407	1	7943	0.39	17.34	-0.01
197	SLU 21	380	1	7883	0.42	16.13	-0.01
197	SLU 22	369	1	7180	0.31	15.75	-0.01
197	SLU 23	324	1	7080	0.36	13.74	-0.01
197	SLU 24	359	1	7367	0.32	15.24	-0.01
197	SLU 25	332	1	7307	0.35	14.03	-0.01
197	SLU 26	312	1	7191	0.37	13.15	-0.01
197	SLU 27	347	1	7478	0.33	14.65	-0.01
197	SLU 28	320	1	7417	0.36	13.44	-0.01
197	SLU 29	345	1	7402	0.33	14.57	-0.01
197	SLU 30	318	1	7342	0.36	13.36	-0.01
197	SLU 31	417	1	8257	0.43	17.78	-0.01
197	SLU 32	452	1	8543	0.39	19.28	-0.01
197	SLU 33	425	1	8483	0.42	18.07	-0.01
197	SLU 34	405	1	8368	0.44	17.19	-0.01
197	SLU 35	441	1	8654	0.4	18.69	-0.01
197	SLU 36	413	1	8594	0.43	17.48	-0.01
197	SLU 37	439	1	8578	0.4	18.61	-0.01
197	SLU 38	412	1	8518	0.43	17.41	-0.01
197	SLU 39	502	1	8861	0.41	21.52	-0.01
197	SLU 40	475	1	8801	0.44	20.32	-0.01
197	SLU 41	491	1	8972	0.42	20.94	-0.01
197	SLU 42	463	1	8912	0.45	19.73	-0.01
197	SLU 43	342	1	7644	0.36	14.56	-0.01
197	SLU 44	297	1	7544	0.41	12.55	-0.01
197	SLU 45	332	1	7831	0.37	14.05	-0.01
197	SLU 46	305	1	7771	0.4	12.84	-0.01
197	SLU 47	285	1	7655	0.42	11.96	-0.01
197	SLU 48	320	1	7941	0.38	13.46	-0.01
197	SLU 49	293	1	7881	0.41	12.25	-0.01
197	SLU 50	318	1	7866	0.38	13.38	-0.01
197	SLU 51	291	1	7806	0.41	12.17	-0.01
197	SLU 52	390	1	8721	0.48	16.59	-0.01
197	SLU 53	426	1	9007	0.44	18.09	-0.01
197	SLU 54	399	1	8947	0.47	16.88	-0.01
197	SLU 55	379	1	8831	0.49	16	-0.01
197	SLU 56	414	1	9118	0.45	17.5	-0.01
197	SLU 57	387	1	9058	0.48	16.29	-0.01
197	SLU 58	412	1	9042	0.45	17.42	-0.01
197	SLU 59	385	1	8982	0.48	16.22	-0.01
197	SLU 60	476	1	9325	0.46	20.33	-0.01
197	SLU 61	449	1	9265	0.49	19.13	-0.01
197	SLU 62	464	1	9436	0.47	19.75	-0.01
197	SLU 63	437	1	9376	0.5	18.54	-0.01
197	SLU 64	426	1	8673	0.39	18.16	-0.01
197	SLU 65	380	1	8573	0.44	16.15	-0.01
197	SLU 66	416	1	8859	0.4	17.65	-0.01
197	SLU 67	389	1	8799	0.43	16.44	-0.01
197	SLU 68	369	1	8684	0.45	15.56	-0.01
197	SLU 69	404	1	8970	0.41	17.06	-0.01
197	SLU 70	377	1	8910	0.44	15.85	-0.01
197	SLU 71	402	1	8894	0.41	16.98	-0.01
197	SLU 72	375	1	8834	0.44	15.77	-0.01
197	SLU 73	474	1	9749	0.5	20.19	-0.01
197	SLU 74	509	1	10036	0.47	21.69	-0.01
197	SLU 75	482	1	9976	0.49	20.48	-0.01
197	SLU 76	462	1	9860	0.51	19.6	-0.01
197	SLU 77	497	1	10147	0.47	21.1	-0.01
197	SLU 78	470	1	10087	0.5	19.89	-0.01
197	SLU 79	496	1	10071	0.47	21.02	-0.01
197	SLU 80	468	1	10011	0.5	19.82	-0.01
197	SLU 81	559	1	10354	0.48	23.93	-0.01
197	SLU 82	532	1	10294	0.51	22.73	-0.01
197	SLU 83	547	1	10464	0.49	23.35	-0.01
197	SLU 84	520	1	10404	0.52	22.14	-0.01
197	SLE RA 1	309	1	6445	0.29	13.18	-0.01
197	SLE RA 2	279	1	6379	0.33	11.84	-0.01
197	SLE RA 3	302	1	6570	0.3	12.84	-0.01
197	SLE RA 4	284	1	6530	0.32	12.03	-0.01
197	SLE RA 5	271	1	6452	0.33	11.44	-0.01
197	SLE RA 6	295	1	6644	0.31	12.44	-0.01
197	SLE RA 7	276	1	6604	0.33	11.64	-0.01
197	SLE RA 8	293	1	6593	0.31	12.39	-0.01
197	SLE RA 9	275	1	6553	0.33	11.59	-0.01
197	SLE RA 10	341	1	7163	0.37	14.53	-0.01
197	SLE RA 11	365	1	7354	0.34	15.53	-0.01
197	SLE RA 12	347	1	7314	0.36	14.73	-0.01
197	SLE RA 13	333	1	7237	0.38	14.14	-0.01
197	SLE RA 14	357	1	7428	0.35	15.14	-0.01
197	SLE RA 15	339	1	7388	0.37	14.33	-0.01
197	SLE RA 16	356	1	7377	0.35	15.09	-0.01
197	SLE RA 17	338	1	7337	0.37	14.28	-0.01
197	SLE RA 18	398	1	7566	0.36	17.03	-0.01
197	SLE RA 19	380	1	7526	0.38	16.22	-0.01
197	SLE RA 20	390	1	7640	0.36	16.64	-0.01
197	SLE RA 21	372	1	7600	0.38	15.83	-0.01
197	SLE FR 1	309	1	6445	0.29	13.18	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
197	SLE FR 2	303	1	6432	0.3	12.91	-0.01
197	SLE FR 3	306	1	6475	0.3	13.02	-0.01
197	SLE FR 4	330	1	6768	0.32	14.06	-0.01
197	SLE FR 5	333	1	6811	0.32	14.18	-0.01
197	SLE FR 6	354	1	7006	0.33	15.1	-0.01
197	SLE QP 1	309	1	6445	0.29	13.18	-0.01
197	SLE QP 2	336	1	6781	0.31	14.33	-0.01
197	SLD 1	1631	16	7378	-4.72	76.92	-0.15
197	SLD 2	1631	16	7378	-4.72	76.92	-0.15
197	SLD 3	1471	4	7885	-1.04	69.52	-0.05
197	SLD 4	1471	4	7885	-1.04	69.52	-0.05
197	SLD 5	967	25	6192	-6.78	44.33	-0.2
197	SLD 6	967	25	6192	-6.78	44.33	-0.2
197	SLD 7	434	-17	7881	5.49	19.67	0.13
197	SLD 8	434	-17	7881	5.49	19.67	0.13
197	SLD 9	238	19	5682	-4.86	9	-0.14
197	SLD 10	238	19	5682	-4.86	9	-0.14
197	SLD 11	-296	-23	7371	7.4	-15.67	0.18
197	SLD 12	-296	-23	7371	7.4	-15.67	0.18
197	SLD 13	-799	-2	5678	1.66	-40.86	0.03
197	SLD 14	-799	-2	5678	1.66	-40.86	0.03
197	SLD 15	-959	-14	6185	5.34	-48.26	0.13
197	SLD 16	-959	-14	6185	5.34	-48.26	0.13
197	SLV 1	3353	39	8180	-11.93	160.13	-0.36
197	SLV 2	3353	39	8180	-11.93	160.13	-0.36
197	SLV 3	2978	8	9361	-3.09	142.81	-0.11
197	SLV 4	2978	8	9361	-3.09	142.81	-0.11
197	SLV 5	1809	60	5411	-16.77	84.34	-0.48
197	SLV 6	1809	60	5411	-16.77	84.34	-0.48
197	SLV 7	560	-44	9346	12.7	26.61	0.33
197	SLV 8	560	-44	9346	12.7	26.61	0.33
197	SLV 9	111	46	4217	-12.08	2.05	-0.35
197	SLV 10	111	46	4217	-12.08	2.05	-0.35
197	SLV 11	-1138	-58	8152	17.4	-55.67	0.46
197	SLV 12	-1138	-58	8152	17.4	-55.67	0.46
197	SLV 13	-2306	-6	4202	3.72	-114.15	0.1
197	SLV 14	-2306	-6	4202	3.72	-114.15	0.1
197	SLV 15	-2681	-37	5383	12.56	-131.46	0.34
197	SLV 16	-2681	-37	5383	12.56	-131.46	0.34
198	SLU 1	119	1	6206	-0.29	5.44	-0.01
198	SLU 2	73	1	6090	-0.26	3.39	-0.01
198	SLU 3	103	1	6396	-0.3	4.68	-0.01
198	SLU 4	75	1	6326	-0.28	3.45	-0.01
198	SLU 5	57	1	6204	-0.26	2.65	-0.01
198	SLU 6	87	1	6509	-0.31	3.94	-0.01
198	SLU 7	59	1	6440	-0.29	2.71	-0.01
198	SLU 8	87	1	6433	-0.3	3.96	-0.01
198	SLU 9	60	1	6364	-0.28	2.73	-0.01
198	SLU 10	132	1	7296	-0.29	6.03	-0.01
198	SLU 11	162	1	7602	-0.33	7.33	-0.02
198	SLU 12	135	1	7532	-0.31	6.1	-0.02
198	SLU 13	117	1	7410	-0.29	5.29	-0.01
198	SLU 14	146	2	7715	-0.34	6.59	-0.02
198	SLU 15	119	1	7646	-0.32	5.35	-0.02
198	SLU 16	147	1	7639	-0.33	6.6	-0.02
198	SLU 17	119	1	7570	-0.31	5.37	-0.02
198	SLU 18	204	2	7929	-0.33	9.22	-0.02
198	SLU 19	176	1	7859	-0.31	7.99	-0.02
198	SLU 20	188	2	8042	-0.34	8.48	-0.02
198	SLU 21	160	1	7973	-0.32	7.24	-0.02
198	SLU 22	173	1	7263	-0.34	7.83	-0.02
198	SLU 23	127	1	7147	-0.31	5.77	-0.01
198	SLU 24	156	2	7453	-0.35	7.07	-0.02
198	SLU 25	129	1	7383	-0.33	5.84	-0.02
198	SLU 26	111	1	7261	-0.31	5.03	-0.01
198	SLU 27	141	2	7567	-0.36	6.33	-0.02
198	SLU 28	113	1	7497	-0.34	5.1	-0.02
198	SLU 29	141	2	7491	-0.35	6.34	-0.02
198	SLU 30	114	1	7421	-0.33	5.11	-0.02
198	SLU 31	186	1	8353	-0.34	8.42	-0.02
198	SLU 32	216	2	8659	-0.38	9.71	-0.02
198	SLU 33	189	2	8589	-0.36	8.48	-0.02
198	SLU 34	170	2	8467	-0.34	7.68	-0.02
198	SLU 35	200	2	8772	-0.39	8.97	-0.02
198	SLU 36	173	2	8703	-0.37	7.74	-0.02
198	SLU 37	201	2	8696	-0.38	8.99	-0.02
198	SLU 38	173	2	8627	-0.36	7.75	-0.02
198	SLU 39	258	2	8986	-0.39	11.6	-0.02
198	SLU 40	230	2	8916	-0.37	10.37	-0.02
198	SLU 41	242	2	9100	-0.39	10.86	-0.02
198	SLU 42	214	2	9030	-0.37	9.63	-0.02
198	SLU 43	136	2	7705	-0.36	6.26	-0.02
198	SLU 44	90	1	7589	-0.33	4.2	-0.02
198	SLU 45	120	2	7895	-0.37	5.5	-0.02
198	SLU 46	92	2	7825	-0.35	4.27	-0.02
198	SLU 47	74	1	7703	-0.33	3.46	-0.02
198	SLU 48	104	2	8009	-0.37	4.76	-0.02
198	SLU 49	76	2	7939	-0.35	3.53	-0.02
198	SLU 50	104	2	7933	-0.37	4.77	-0.02
198	SLU 51	77	2	7863	-0.35	3.54	-0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
198	SLU 52	149	2	8795	-0.36	6.85	-0.02
198	SLU 53	179	2	9101	-0.4	8.14	-0.02
198	SLU 54	152	2	9031	-0.38	6.91	-0.02
198	SLU 55	134	2	8909	-0.36	6.11	-0.02
198	SLU 56	163	2	9215	-0.41	7.4	-0.02
198	SLU 57	136	2	9145	-0.39	6.17	-0.02
198	SLU 58	164	2	9139	-0.4	7.42	-0.02
198	SLU 59	136	2	9069	-0.38	6.18	-0.02
198	SLU 60	221	2	9428	-0.4	10.03	-0.02
198	SLU 61	193	2	9358	-0.38	8.8	-0.02
198	SLU 62	205	2	9542	-0.41	9.29	-0.02
198	SLU 63	178	2	9472	-0.39	8.06	-0.02
198	SLU 64	190	2	8762	-0.41	8.64	-0.02
198	SLU 65	144	2	8646	-0.38	6.59	-0.02
198	SLU 66	174	2	8952	-0.42	7.88	-0.02
198	SLU 67	146	2	8883	-0.4	6.65	-0.02
198	SLU 68	128	2	8760	-0.38	5.85	-0.02
198	SLU 69	158	2	9066	-0.43	7.14	-0.02
198	SLU 70	130	2	8996	-0.41	5.91	-0.02
198	SLU 71	158	2	8990	-0.42	7.16	-0.02
198	SLU 72	131	2	8920	-0.4	5.93	-0.02
198	SLU 73	203	2	9852	-0.41	9.23	-0.02
198	SLU 74	233	2	10158	-0.45	10.53	-0.02
198	SLU 75	206	2	10088	-0.43	9.3	-0.02
198	SLU 76	188	2	9966	-0.41	8.49	-0.02
198	SLU 77	217	2	10272	-0.46	9.79	-0.02
198	SLU 78	190	2	10202	-0.44	8.55	-0.02
198	SLU 79	218	2	10196	-0.45	9.8	-0.02
198	SLU 80	190	2	10126	-0.43	8.57	-0.02
198	SLU 81	275	2	10485	-0.46	12.42	-0.02
198	SLU 82	247	2	10416	-0.44	11.19	-0.02
198	SLU 83	259	2	10599	-0.46	11.68	-0.02
198	SLU 84	231	2	10529	-0.44	10.44	-0.02
198	SLE RA 1	134	1	6508	-0.31	6.12	-0.01
198	SLE RA 2	103	1	6431	-0.28	4.76	-0.01
198	SLE RA 3	123	1	6634	-0.31	5.62	-0.01
198	SLE RA 4	105	1	6588	-0.3	4.8	-0.01
198	SLE RA 5	93	1	6507	-0.29	4.26	-0.01
198	SLE RA 6	113	1	6710	-0.32	5.12	-0.01
198	SLE RA 7	94	1	6664	-0.3	4.3	-0.01
198	SLE RA 8	113	1	6660	-0.31	5.13	-0.01
198	SLE RA 9	95	1	6613	-0.3	4.31	-0.01
198	SLE RA 10	143	1	7235	-0.3	6.52	-0.01
198	SLE RA 11	163	1	7438	-0.33	7.38	-0.02
198	SLE RA 12	145	1	7392	-0.32	6.56	-0.02
198	SLE RA 13	133	1	7310	-0.31	6.02	-0.01
198	SLE RA 14	153	1	7514	-0.34	6.89	-0.02
198	SLE RA 15	134	1	7468	-0.32	6.06	-0.02
198	SLE RA 16	153	1	7464	-0.33	6.9	-0.02
198	SLE RA 17	134	1	7417	-0.32	6.07	-0.02
198	SLE RA 18	191	1	7656	-0.33	8.64	-0.02
198	SLE RA 19	172	1	7610	-0.32	7.82	-0.02
198	SLE RA 20	180	2	7732	-0.34	8.15	-0.02
198	SLE RA 21	162	1	7686	-0.32	7.33	-0.02
198	SLE FR 1	134	1	6508	-0.31	6.12	-0.01
198	SLE FR 2	128	1	6493	-0.3	5.85	-0.01
198	SLE FR 3	130	1	6538	-0.31	5.93	-0.01
198	SLE FR 4	145	1	6837	-0.31	6.6	-0.01
198	SLE FR 5	147	1	6883	-0.32	6.68	-0.01
198	SLE FR 6	162	1	7082	-0.32	7.38	-0.02
198	SLE QP 1	134	1	6508	-0.31	6.12	-0.01
198	SLE QP 2	151	1	6853	-0.31	6.88	-0.01
198	SLD 1	1504	13	7170	-4.05	71.47	-0.14
198	SLD 2	1504	13	7170	-4.05	71.47	-0.14
198	SLD 3	1337	1	7577	-1.15	63.83	-0.02
198	SLD 4	1337	1	7577	-1.15	63.83	-0.02
198	SLD 5	809	24	6330	-5.84	37.84	-0.23
198	SLD 6	809	24	6330	-5.84	37.84	-0.23
198	SLD 7	255	-18	7687	3.84	12.38	0.17
198	SLD 8	255	-18	7687	3.84	12.38	0.17
198	SLD 9	48	20	6018	-4.47	1.38	-0.2
198	SLD 10	48	20	6018	-4.47	1.38	-0.2
198	SLD 11	-507	-21	7375	5.21	-24.09	0.2
198	SLD 12	-507	-21	7375	5.21	-24.09	0.2
198	SLD 13	-1035	2	6128	0.52	-50.07	-0.01
198	SLD 14	-1035	2	6128	0.52	-50.07	-0.01
198	SLD 15	-1201	-10	6535	3.42	-57.71	0.11
198	SLD 16	-1201	-10	6535	3.42	-57.71	0.11
198	SLV 1	3301	30	7596	-9.19	157.33	-0.32
198	SLV 2	3301	30	7596	-9.19	157.33	-0.32
198	SLV 3	2912	0	8548	-2.47	139.47	-0.02
198	SLV 4	2912	0	8548	-2.47	139.47	-0.02
198	SLV 5	1687	57	5632	-13.17	79.1	-0.56
198	SLV 6	1687	57	5632	-13.17	79.1	-0.56
198	SLV 7	389	-46	8805	9.23	19.57	0.43
198	SLV 8	389	-46	8805	9.23	19.57	0.43
198	SLV 9	-87	48	4900	-9.86	-5.81	-0.46
198	SLV 10	-87	48	4900	-9.86	-5.81	-0.46
198	SLV 11	-1385	-54	8073	12.54	-65.35	0.53
198	SLV 12	-1385	-54	8073	12.54	-65.35	0.53



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
198	SLV 13	-2610	3	5157	1.84	-125.72	-0.01
198	SLV 14	-2610	3	5157	1.84	-125.72	-0.01
198	SLV 15	-2999	-28	6109	8.56	-143.58	0.29
198	SLV 16	-2999	-28	6109	8.56	-143.58	0.29
199	SLU 1	-29	1	6300	-0.45	-2.63	-0.01
199	SLU 2	-74	1	6166	-0.45	-4.61	-0.01
199	SLU 3	-50	1	6494	-0.46	-3.64	-0.01
199	SLU 4	-77	1	6413	-0.46	-4.84	-0.01
199	SLU 5	-93	1	6283	-0.45	-5.51	-0.01
199	SLU 6	-68	1	6611	-0.47	-4.54	-0.01
199	SLU 7	-96	1	6530	-0.47	-5.74	-0.01
199	SLU 8	-66	1	6534	-0.46	-4.43	-0.01
199	SLU 9	-94	1	6453	-0.46	-5.62	-0.01
199	SLU 10	-47	1	7408	-0.51	-3.69	-0.01
199	SLU 11	-22	1	7736	-0.53	-2.72	-0.02
199	SLU 12	-49	1	7656	-0.53	-3.91	-0.01
199	SLU 13	-65	1	7525	-0.52	-4.59	-0.01
199	SLU 14	-40	1	7853	-0.53	-3.62	-0.02
199	SLU 15	-68	1	7773	-0.53	-4.81	-0.02
199	SLU 16	-38	1	7776	-0.52	-3.5	-0.02
199	SLU 17	-66	1	7696	-0.53	-4.69	-0.01
199	SLU 18	11	1	8075	-0.54	-1.3	-0.02
199	SLU 19	-17	1	7995	-0.54	-2.5	-0.02
199	SLU 20	-8	1	8192	-0.54	-2.2	-0.02
199	SLU 21	-35	1	8111	-0.54	-3.4	-0.02
199	SLU 22	-3	1	7392	-0.52	-1.75	-0.02
199	SLU 23	-48	1	7257	-0.52	-3.73	-0.01
199	SLU 24	-23	1	7585	-0.54	-2.76	-0.02
199	SLU 25	-51	1	7505	-0.54	-3.95	-0.02
199	SLU 26	-67	1	7374	-0.53	-4.63	-0.01
199	SLU 27	-42	1	7702	-0.54	-3.66	-0.02
199	SLU 28	-70	1	7622	-0.54	-4.85	-0.02
199	SLU 29	-40	1	7625	-0.53	-3.55	-0.02
199	SLU 30	-67	1	7545	-0.53	-4.74	-0.02
199	SLU 31	-21	1	8500	-0.58	-2.81	-0.02
199	SLU 32	4	1	8828	-0.6	-1.84	-0.02
199	SLU 33	-23	1	8747	-0.6	-3.03	-0.02
199	SLU 34	-39	1	8617	-0.59	-3.71	-0.02
199	SLU 35	-14	2	8945	-0.61	-2.74	-0.02
199	SLU 36	-42	1	8864	-0.61	-3.93	-0.02
199	SLU 37	-12	1	8868	-0.6	-2.62	-0.02
199	SLU 38	-40	1	8787	-0.6	-3.81	-0.02
199	SLU 39	37	2	9167	-0.61	-0.42	-0.02
199	SLU 40	10	1	9086	-0.61	-1.61	-0.02
199	SLU 41	18	2	9283	-0.62	-1.32	-0.02
199	SLU 42	-9	1	9203	-0.62	-2.51	-0.02
199	SLU 43	-46	1	7816	-0.55	-3.72	-0.02
199	SLU 44	-92	1	7682	-0.56	-5.7	-0.02
199	SLU 45	-67	1	8010	-0.57	-4.73	-0.02
199	SLU 46	-95	1	7929	-0.57	-5.93	-0.02
199	SLU 47	-111	1	7799	-0.56	-6.6	-0.02
199	SLU 48	-86	1	8127	-0.58	-5.63	-0.02
199	SLU 49	-113	1	8046	-0.58	-6.83	-0.02
199	SLU 50	-84	1	8050	-0.57	-5.52	-0.02
199	SLU 51	-111	1	7969	-0.57	-6.71	-0.02
199	SLU 52	-64	1	8924	-0.62	-4.78	-0.02
199	SLU 53	-39	2	9252	-0.63	-3.81	-0.02
199	SLU 54	-67	2	9172	-0.64	-5	-0.02
199	SLU 55	-83	1	9041	-0.63	-5.68	-0.02
199	SLU 56	-58	2	9369	-0.64	-4.71	-0.02
199	SLU 57	-86	2	9288	-0.64	-5.9	-0.02
199	SLU 58	-56	2	9292	-0.63	-4.59	-0.02
199	SLU 59	-83	2	9212	-0.63	-5.78	-0.02
199	SLU 60	-7	2	9591	-0.65	-2.39	-0.02
199	SLU 61	-34	2	9510	-0.65	-3.59	-0.02
199	SLU 62	-25	2	9708	-0.65	-3.29	-0.02
199	SLU 63	-53	2	9627	-0.65	-4.49	-0.02
199	SLU 64	-20	2	8908	-0.63	-2.84	-0.02
199	SLU 65	-66	1	8773	-0.63	-4.82	-0.02
199	SLU 66	-41	2	9101	-0.64	-3.85	-0.02
199	SLU 67	-68	2	9021	-0.65	-5.04	-0.02
199	SLU 68	-85	1	8890	-0.64	-5.72	-0.02
199	SLU 69	-60	2	9218	-0.65	-4.75	-0.02
199	SLU 70	-87	2	9138	-0.65	-5.94	-0.02
199	SLU 71	-57	2	9141	-0.64	-4.64	-0.02
199	SLU 72	-85	2	9061	-0.64	-5.83	-0.02
199	SLU 73	-38	2	10016	-0.69	-3.9	-0.02
199	SLU 74	-13	2	10344	-0.71	-2.93	-0.02
199	SLU 75	-41	2	10263	-0.71	-4.12	-0.02
199	SLU 76	-57	2	10133	-0.7	-4.8	-0.02
199	SLU 77	-32	2	10461	-0.72	-3.83	-0.02
199	SLU 78	-59	2	10380	-0.72	-5.02	-0.02
199	SLU 79	-30	2	10384	-0.71	-3.71	-0.02
199	SLU 80	-57	2	10303	-0.71	-4.9	-0.02
199	SLU 81	20	2	10682	-0.72	-1.51	-0.02
199	SLU 82	-8	2	10602	-0.72	-2.7	-0.02
199	SLU 83	1	2	10799	-0.73	-2.41	-0.02
199	SLU 84	-27	2	10719	-0.73	-3.61	-0.02
199	SLE RA 1	-21	1	6612	-0.47	-2.38	-0.01
199	SLE RA 2	-52	1	6523	-0.47	-3.7	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
199	SLE RA 3	-35	1	6741	-0.48	-3.05	-0.01
199	SLE RA 4	-53	1	6687	-0.48	-3.85	-0.01
199	SLE RA 5	-64	1	6600	-0.47	-4.3	-0.01
199	SLE RA 6	-48	1	6819	-0.48	-3.65	-0.01
199	SLE RA 7	-66	1	6765	-0.48	-4.45	-0.01
199	SLE RA 8	-46	1	6768	-0.48	-3.58	-0.01
199	SLE RA 9	-64	1	6714	-0.48	-4.37	-0.01
199	SLE RA 10	-33	1	7351	-0.51	-3.08	-0.01
199	SLE RA 11	-17	1	7569	-0.52	-2.44	-0.02
199	SLE RA 12	-35	1	7516	-0.52	-3.23	-0.02
199	SLE RA 13	-46	1	7429	-0.51	-3.68	-0.01
199	SLE RA 14	-29	1	7647	-0.53	-3.04	-0.02
199	SLE RA 15	-47	1	7594	-0.53	-3.83	-0.02
199	SLE RA 16	-28	1	7596	-0.52	-2.96	-0.02
199	SLE RA 17	-46	1	7542	-0.52	-3.75	-0.02
199	SLE RA 18	5	1	7795	-0.53	-1.49	-0.02
199	SLE RA 19	-13	1	7742	-0.53	-2.29	-0.02
199	SLE RA 20	-7	1	7873	-0.53	-2.09	-0.02
199	SLE RA 21	-26	1	7820	-0.53	-2.89	-0.02
199	SLE FR 1	-21	1	6612	-0.47	-2.38	-0.01
199	SLE FR 2	-27	1	6594	-0.47	-2.64	-0.01
199	SLE FR 3	-26	1	6643	-0.47	-2.62	-0.01
199	SLE FR 4	-19	1	6949	-0.49	-2.38	-0.01
199	SLE FR 5	-18	1	6998	-0.49	-2.35	-0.01
199	SLE FR 6	-8	1	7204	-0.5	-1.93	-0.01
199	SLE QP 1	-21	1	6612	-0.47	-2.38	-0.01
199	SLE QP 2	-13	1	6967	-0.49	-2.11	-0.01
199	SLD 1	1356	7	7082	-1.04	62.7	-0.09
199	SLD 2	1356	7	7082	-1.04	62.7	-0.09
199	SLD 3	1187	0	7423	4.15	54.93	-0.01
199	SLD 4	1187	0	7423	4.15	54.93	-0.01
199	SLD 5	652	14	6483	-8.52	29.11	-0.16
199	SLD 6	652	14	6483	-8.52	29.11	-0.16
199	SLD 7	92	-10	7622	8.77	3.23	0.11
199	SLD 8	92	-10	7622	8.77	3.23	0.11
199	SLD 9	-119	12	6312	-9.74	-7.45	-0.14
199	SLD 10	-119	12	6312	-9.74	-7.45	-0.14
199	SLD 11	-679	-11	7451	7.55	-33.33	0.13
199	SLD 12	-679	-11	7451	7.55	-33.33	0.13
199	SLD 13	-1214	2	6511	-5.12	-59.16	-0.02
199	SLD 14	-1214	2	6511	-5.12	-59.16	-0.02
199	SLD 15	-1382	-5	6853	0.07	-66.92	0.07
199	SLD 16	-1382	-5	6853	0.07	-66.92	0.07
199	SLV 1	3175	16	7236	-2.02	148.87	-0.21
199	SLV 2	3175	16	7236	-2.02	148.87	-0.21
199	SLV 3	2782	-1	8038	10.91	130.71	-0.01
199	SLV 4	2782	-1	8038	10.91	130.71	-0.01
199	SLV 5	1540	31	5831	-20.54	70.72	-0.38
199	SLV 6	1540	31	5831	-20.54	70.72	-0.38
199	SLV 7	229	-25	8504	22.53	10.2	0.29
199	SLV 8	229	-25	8504	22.53	10.2	0.29
199	SLV 9	-255	27	5430	-23.5	-14.42	-0.32
199	SLV 10	-255	27	5430	-23.5	-14.42	-0.32
199	SLV 11	-1566	-29	8103	19.57	-74.94	0.35
199	SLV 12	-1566	-29	8103	19.57	-74.94	0.35
199	SLV 13	-2809	3	5897	-11.88	-134.93	-0.02
199	SLV 14	-2809	3	5897	-11.88	-134.93	-0.02
199	SLV 15	-3202	-14	6698	1.05	-153.09	0.18
199	SLV 16	-3202	-14	6698	1.05	-153.09	0.18
200	SLU 1	-159	1	6427	-0.42	-7.76	-0.01
200	SLU 2	-204	1	6273	-0.47	-9.75	-0.01
200	SLU 3	-183	1	6626	-0.43	-8.92	-0.01
200	SLU 4	-210	1	6534	-0.47	-10.11	-0.01
200	SLU 5	-224	1	6394	-0.48	-10.73	-0.01
200	SLU 6	-204	1	6747	-0.44	-9.9	-0.01
200	SLU 7	-231	1	6655	-0.47	-11.09	-0.01
200	SLU 8	-200	1	6669	-0.43	-9.71	-0.01
200	SLU 9	-227	1	6576	-0.46	-10.91	-0.01
200	SLU 10	-206	1	7557	-0.54	-10.01	-0.01
200	SLU 11	-185	1	7911	-0.5	-9.18	-0.01
200	SLU 12	-212	1	7818	-0.53	-10.37	-0.01
200	SLU 13	-226	1	7678	-0.54	-10.99	-0.01
200	SLU 14	-206	1	8032	-0.5	-10.16	-0.01
200	SLU 15	-233	1	7939	-0.54	-11.35	-0.01
200	SLU 16	-202	1	7953	-0.49	-9.98	-0.01
200	SLU 17	-229	1	7861	-0.53	-11.17	-0.01
200	SLU 18	-162	1	8262	-0.51	-8.13	-0.01
200	SLU 19	-189	1	8170	-0.54	-9.32	-0.01
200	SLU 20	-182	1	8383	-0.51	-9.11	-0.01
200	SLU 21	-209	1	8291	-0.55	-10.3	-0.01
200	SLU 22	-159	1	7558	-0.48	-7.9	-0.01
200	SLU 23	-203	1	7404	-0.54	-9.9	-0.01
200	SLU 24	-183	1	7757	-0.5	-9.07	-0.01
200	SLU 25	-210	1	7665	-0.53	-10.26	-0.01
200	SLU 26	-224	1	7525	-0.55	-10.88	-0.01
200	SLU 27	-204	1	7878	-0.51	-10.05	-0.01
200	SLU 28	-231	1	7786	-0.54	-11.24	-0.01
200	SLU 29	-200	1	7800	-0.5	-9.86	-0.01
200	SLU 30	-227	1	7707	-0.53	-11.06	-0.01
200	SLU 31	-205	1	8688	-0.6	-10.16	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
200	SLU 32	-185	1	9042	-0.56	-9.33	-0.01
200	SLU 33	-212	1	8949	-0.6	-10.52	-0.01
200	SLU 34	-226	1	8809	-0.61	-11.14	-0.01
200	SLU 35	-206	1	9163	-0.57	-10.31	-0.01
200	SLU 36	-232	1	9070	-0.6	-11.5	-0.01
200	SLU 37	-202	1	9084	-0.56	-10.12	-0.01
200	SLU 38	-229	1	8992	-0.6	-11.32	-0.01
200	SLU 39	-162	1	9393	-0.57	-8.28	-0.01
200	SLU 40	-188	1	9301	-0.61	-9.47	-0.01
200	SLU 41	-182	1	9514	-0.58	-9.26	-0.01
200	SLU 42	-209	1	9422	-0.62	-10.45	-0.01
200	SLU 43	-207	1	7967	-0.52	-10.03	-0.01
200	SLU 44	-251	1	7813	-0.57	-12.03	-0.01
200	SLU 45	-231	1	8167	-0.53	-11.19	-0.01
200	SLU 46	-258	1	8074	-0.57	-12.39	-0.01
200	SLU 47	-272	1	7934	-0.58	-13.01	-0.01
200	SLU 48	-252	1	8288	-0.54	-12.17	-0.01
200	SLU 49	-279	1	8195	-0.57	-13.37	-0.01
200	SLU 50	-248	1	8209	-0.53	-11.99	-0.01
200	SLU 51	-275	1	8117	-0.57	-13.19	-0.01
200	SLU 52	-253	1	9098	-0.64	-12.29	-0.01
200	SLU 53	-233	1	9451	-0.6	-11.45	-0.01
200	SLU 54	-260	1	9359	-0.63	-12.65	-0.01
200	SLU 55	-274	1	9219	-0.65	-13.27	-0.01
200	SLU 56	-254	1	9572	-0.61	-12.43	-0.01
200	SLU 57	-280	1	9480	-0.64	-13.63	-0.01
200	SLU 58	-250	1	9494	-0.6	-12.25	-0.01
200	SLU 59	-277	1	9401	-0.63	-13.45	-0.01
200	SLU 60	-210	1	9803	-0.61	-10.4	-0.01
200	SLU 61	-236	1	9710	-0.64	-11.6	-0.01
200	SLU 62	-230	1	9923	-0.62	-11.38	-0.01
200	SLU 63	-257	1	9831	-0.65	-12.58	-0.01
200	SLU 64	-207	1	9098	-0.58	-10.18	-0.01
200	SLU 65	-251	1	8944	-0.64	-12.17	-0.01
200	SLU 66	-231	1	9298	-0.6	-11.34	-0.01
200	SLU 67	-258	1	9205	-0.63	-12.54	-0.01
200	SLU 68	-272	1	9065	-0.65	-13.15	-0.01
200	SLU 69	-252	1	9419	-0.61	-12.32	-0.01
200	SLU 70	-278	1	9326	-0.64	-13.52	-0.01
200	SLU 71	-248	1	9340	-0.6	-12.14	-0.01
200	SLU 72	-275	1	9248	-0.63	-13.34	-0.01
200	SLU 73	-253	1	10229	-0.7	-12.43	-0.01
200	SLU 74	-233	1	10582	-0.66	-11.6	-0.02
200	SLU 75	-260	1	10490	-0.7	-12.8	-0.01
200	SLU 76	-274	1	10350	-0.71	-13.41	-0.01
200	SLU 77	-253	1	10703	-0.67	-12.58	-0.02
200	SLU 78	-280	1	10611	-0.71	-13.78	-0.02
200	SLU 79	-250	1	10625	-0.66	-12.4	-0.02
200	SLU 80	-276	1	10532	-0.7	-13.6	-0.01
200	SLU 81	-209	1	10934	-0.68	-10.55	-0.02
200	SLU 82	-236	1	10841	-0.71	-11.75	-0.02
200	SLU 83	-230	1	11054	-0.68	-11.53	-0.02
200	SLU 84	-257	1	10962	-0.72	-12.73	-0.02
200	SLE RA 1	-159	1	6750	-0.43	-7.8	-0.01
200	SLE RA 2	-189	1	6647	-0.47	-9.13	-0.01
200	SLE RA 3	-175	1	6883	-0.45	-8.57	-0.01
200	SLE RA 4	-193	1	6821	-0.47	-9.37	-0.01
200	SLE RA 5	-202	1	6728	-0.48	-9.78	-0.01
200	SLE RA 6	-189	1	6964	-0.45	-9.23	-0.01
200	SLE RA 7	-207	1	6902	-0.47	-10.02	-0.01
200	SLE RA 8	-186	1	6911	-0.44	-9.1	-0.01
200	SLE RA 9	-204	1	6850	-0.47	-9.9	-0.01
200	SLE RA 10	-190	1	7504	-0.52	-9.3	-0.01
200	SLE RA 11	-176	1	7739	-0.49	-8.75	-0.01
200	SLE RA 12	-194	1	7678	-0.51	-9.54	-0.01
200	SLE RA 13	-204	1	7584	-0.52	-9.95	-0.01
200	SLE RA 14	-190	1	7820	-0.49	-9.4	-0.01
200	SLE RA 15	-208	1	7758	-0.52	-10.2	-0.01
200	SLE RA 16	-188	1	7768	-0.49	-9.28	-0.01
200	SLE RA 17	-206	1	7706	-0.51	-10.08	-0.01
200	SLE RA 18	-161	1	7974	-0.5	-8.05	-0.01
200	SLE RA 19	-179	1	7912	-0.52	-8.84	-0.01
200	SLE RA 20	-175	1	8054	-0.5	-8.7	-0.01
200	SLE RA 21	-192	1	7993	-0.52	-9.5	-0.01
200	SLE FR 1	-159	1	6750	-0.43	-7.8	-0.01
200	SLE FR 2	-165	1	6730	-0.44	-8.06	-0.01
200	SLE FR 3	-164	1	6782	-0.44	-8.06	-0.01
200	SLE FR 4	-165	1	7097	-0.46	-8.14	-0.01
200	SLE FR 5	-165	1	7149	-0.46	-8.13	-0.01
200	SLE FR 6	-160	1	7362	-0.47	-7.92	-0.01
200	SLE QP 1	-159	1	6750	-0.43	-7.8	-0.01
200	SLE QP 2	-160	1	7117	-0.45	-7.87	-0.01
200	SLD 1	1180	1	7114	-2.61	56.22	-0.01
200	SLD 2	1180	1	7114	-2.61	56.22	-0.01
200	SLD 3	1015	-5	7414	8.9	48.5	0.04
200	SLD 4	1015	-5	7414	8.9	48.5	0.04
200	SLD 5	492	11	6662	-18.57	23.06	-0.1
200	SLD 6	492	11	6662	-18.57	23.06	-0.1
200	SLD 7	-57	-10	7661	19.82	-2.67	0.09
200	SLD 8	-57	-10	7661	19.82	-2.67	0.09



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
200	SLD 9	-262	12	6574	-20.72	-13.08	-0.11
200	SLD 10	-262	12	6574	-20.72	-13.08	-0.11
200	SLD 11	-811	-9	7573	17.66	-38.8	0.08
200	SLD 12	-811	-9	7573	17.66	-38.8	0.08
200	SLD 13	-1334	7	6820	-9.81	-64.25	-0.06
200	SLD 14	-1334	7	6820	-9.81	-64.25	-0.06
200	SLD 15	-1499	0	7120	1.71	-71.96	-0.01
200	SLD 16	-1499	0	7120	1.71	-71.96	-0.01
200	SLV 1	2961	2	7111	-5.99	141.43	-0.02
200	SLV 2	2961	2	7111	-5.99	141.43	-0.02
200	SLV 3	2575	-13	7818	23.13	123.39	0.12
200	SLV 4	2575	-13	7818	23.13	123.39	0.12
200	SLV 5	1361	25	6043	-46.27	64.28	-0.22
200	SLV 6	1361	25	6043	-46.27	64.28	-0.22
200	SLV 7	76	-27	8400	50.78	4.15	0.24
200	SLV 8	76	-27	8400	50.78	4.15	0.24
200	SLV 9	-395	29	5835	-51.69	-19.89	-0.26
200	SLV 10	-395	29	5835	-51.69	-19.89	-0.26
200	SLV 11	-1680	-23	8191	45.37	-80.02	0.2
200	SLV 12	-1680	-23	8191	45.37	-80.02	0.2
200	SLV 13	-2894	15	6416	-24.03	-139.14	-0.14
200	SLV 14	-2894	15	6416	-24.03	-139.14	-0.14
200	SLV 15	-3280	-1	7123	5.08	-157.17	0
200	SLV 16	-3280	-1	7123	5.08	-157.17	0
201	SLU 1	-332	1	6585	-0.3	-17.25	-0.01
201	SLU 2	-370	1	6412	-0.44	-18.85	-0.01
201	SLU 3	-360	1	6793	-0.32	-18.64	-0.01
201	SLU 4	-383	1	6689	-0.4	-19.6	-0.01
201	SLU 5	-393	1	6539	-0.44	-19.95	-0.01
201	SLU 6	-383	1	6920	-0.32	-19.74	-0.01
201	SLU 7	-406	1	6816	-0.4	-20.7	-0.01
201	SLU 8	-377	1	6839	-0.31	-19.45	-0.01
201	SLU 9	-400	1	6735	-0.39	-20.41	-0.01
201	SLU 10	-411	1	7743	-0.48	-21.24	-0.01
201	SLU 11	-401	1	8124	-0.36	-21.04	-0.01
201	SLU 12	-424	1	8021	-0.44	-22	-0.01
201	SLU 13	-434	1	7871	-0.49	-22.34	-0.01
201	SLU 14	-424	1	8252	-0.37	-22.14	-0.01
201	SLU 15	-447	1	8148	-0.45	-23.1	-0.01
201	SLU 16	-418	1	8171	-0.36	-21.85	-0.01
201	SLU 17	-441	1	8067	-0.44	-22.8	-0.01
201	SLU 18	-391	1	8488	-0.37	-20.67	-0.01
201	SLU 19	-414	1	8384	-0.45	-21.63	-0.01
201	SLU 20	-413	1	8615	-0.38	-21.77	-0.01
201	SLU 21	-436	1	8511	-0.46	-22.73	-0.01
201	SLU 22	-366	1	7759	-0.35	-19.29	-0.01
201	SLU 23	-405	1	7586	-0.48	-20.88	-0.01
201	SLU 24	-395	1	7967	-0.36	-20.68	-0.01
201	SLU 25	-418	1	7863	-0.44	-21.64	-0.01
201	SLU 26	-427	1	7713	-0.49	-21.98	-0.01
201	SLU 27	-417	1	8094	-0.37	-21.78	-0.01
201	SLU 28	-440	1	7990	-0.45	-22.74	-0.01
201	SLU 29	-411	1	8014	-0.36	-21.49	-0.01
201	SLU 30	-434	1	7910	-0.44	-22.44	-0.01
201	SLU 31	-446	1	8918	-0.53	-23.28	-0.01
201	SLU 32	-436	1	9299	-0.41	-23.07	-0.01
201	SLU 33	-459	1	9195	-0.49	-24.03	-0.01
201	SLU 34	-469	1	9045	-0.54	-24.38	-0.01
201	SLU 35	-458	1	9426	-0.41	-24.17	-0.01
201	SLU 36	-481	1	9322	-0.49	-25.13	-0.01
201	SLU 37	-453	1	9345	-0.41	-23.88	-0.01
201	SLU 38	-476	1	9242	-0.49	-24.84	-0.01
201	SLU 39	-425	1	9662	-0.42	-22.7	-0.01
201	SLU 40	-448	1	9558	-0.5	-23.66	-0.01
201	SLU 41	-448	1	9789	-0.42	-23.8	-0.01
201	SLU 42	-471	1	9685	-0.5	-24.76	-0.01
201	SLU 43	-420	1	8157	-0.38	-21.73	-0.01
201	SLU 44	-458	1	7984	-0.51	-23.33	-0.01
201	SLU 45	-448	1	8365	-0.39	-23.12	-0.01
201	SLU 46	-471	1	8261	-0.47	-24.08	-0.01
201	SLU 47	-480	1	8111	-0.52	-24.43	-0.01
201	SLU 48	-470	1	8492	-0.4	-24.22	-0.01
201	SLU 49	-493	1	8388	-0.48	-25.18	-0.01
201	SLU 50	-465	1	8411	-0.39	-23.93	-0.01
201	SLU 51	-488	1	8307	-0.47	-24.89	-0.01
201	SLU 52	-499	1	9316	-0.56	-25.72	-0.01
201	SLU 53	-489	1	9697	-0.44	-25.52	-0.01
201	SLU 54	-512	1	9593	-0.52	-26.47	-0.01
201	SLU 55	-522	1	9443	-0.57	-26.82	-0.01
201	SLU 56	-512	1	9824	-0.44	-26.62	-0.01
201	SLU 57	-535	1	9720	-0.52	-27.57	-0.01
201	SLU 58	-506	1	9743	-0.44	-26.32	-0.01
201	SLU 59	-529	1	9639	-0.52	-27.28	-0.01
201	SLU 60	-479	1	10060	-0.45	-25.15	-0.01
201	SLU 61	-502	1	9956	-0.53	-26.11	-0.01
201	SLU 62	-501	1	10187	-0.45	-26.25	-0.01
201	SLU 63	-524	1	10083	-0.53	-27.21	-0.01
201	SLU 64	-454	1	9332	-0.42	-23.77	-0.01
201	SLU 65	-492	1	9159	-0.56	-25.36	-0.01
201	SLU 66	-482	1	9540	-0.44	-25.16	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
201	SLU 67	-505	1	9436	-0.52	-26.11	-0.01
201	SLU 68	-515	1	9286	-0.56	-26.46	-0.01
201	SLU 69	-505	1	9667	-0.44	-26.26	-0.01
201	SLU 70	-528	1	9563	-0.52	-27.21	-0.01
201	SLU 71	-499	1	9586	-0.44	-25.97	-0.01
201	SLU 72	-522	1	9482	-0.52	-26.92	-0.01
201	SLU 73	-534	1	10491	-0.61	-27.76	-0.01
201	SLU 74	-524	1	10872	-0.48	-27.55	-0.01
201	SLU 75	-547	1	10768	-0.56	-28.51	-0.01
201	SLU 76	-556	1	10618	-0.61	-28.86	-0.01
201	SLU 77	-546	1	10999	-0.49	-28.65	-0.01
201	SLU 78	-569	1	10895	-0.57	-29.61	-0.01
201	SLU 79	-540	1	10918	-0.48	-28.36	-0.01
201	SLU 80	-563	1	10814	-0.56	-29.32	-0.01
201	SLU 81	-513	1	11235	-0.49	-27.18	-0.01
201	SLU 82	-536	1	11131	-0.57	-28.14	-0.01
201	SLU 83	-536	1	11362	-0.5	-28.28	-0.01
201	SLU 84	-559	1	11258	-0.58	-29.24	-0.01
201	SLE RA 1	-342	1	6920	-0.32	-17.83	-0.01
201	SLE RA 2	-367	1	6805	-0.41	-18.9	-0.01
201	SLE RA 3	-360	1	7059	-0.32	-18.76	-0.01
201	SLE RA 4	-376	1	6990	-0.38	-19.4	-0.01
201	SLE RA 5	-382	1	6890	-0.41	-19.63	-0.01
201	SLE RA 6	-376	1	7144	-0.33	-19.49	-0.01
201	SLE RA 7	-391	1	7074	-0.38	-20.13	-0.01
201	SLE RA 8	-372	1	7090	-0.32	-19.3	-0.01
201	SLE RA 9	-387	1	7020	-0.38	-19.94	-0.01
201	SLE RA 10	-395	1	7693	-0.44	-20.49	-0.01
201	SLE RA 11	-388	1	7947	-0.36	-20.36	-0.01
201	SLE RA 12	-403	1	7878	-0.41	-21	-0.01
201	SLE RA 13	-410	1	7778	-0.44	-21.23	-0.01
201	SLE RA 14	-403	1	8032	-0.36	-21.09	-0.01
201	SLE RA 15	-418	1	7962	-0.41	-21.73	-0.01
201	SLE RA 16	-399	1	7978	-0.36	-20.9	-0.01
201	SLE RA 17	-415	1	7908	-0.41	-21.53	-0.01
201	SLE RA 18	-381	1	8189	-0.36	-20.11	-0.01
201	SLE RA 19	-396	1	8120	-0.42	-20.75	-0.01
201	SLE RA 20	-396	1	8274	-0.37	-20.85	-0.01
201	SLE RA 21	-411	1	8204	-0.42	-21.49	-0.01
201	SLE FR 1	-342	1	6920	-0.32	-17.83	-0.01
201	SLE FR 2	-347	1	6897	-0.33	-18.05	-0.01
201	SLE FR 3	-348	1	6954	-0.32	-18.13	-0.01
201	SLE FR 4	-359	1	7278	-0.35	-18.73	-0.01
201	SLE FR 5	-359	1	7335	-0.33	-18.81	-0.01
201	SLE FR 6	-361	1	7555	-0.34	-18.97	-0.01
201	SLE QP 1	-342	1	6920	-0.32	-17.83	-0.01
201	SLE QP 2	-353	1	7301	-0.33	-18.52	-0.01
201	SLD 1	897	4	6796	-3.99	41.12	-0.03
201	SLD 2	897	4	6796	-3.99	41.12	-0.03
201	SLD 3	742	-13	7074	14.54	33.86	0.11
201	SLD 4	742	-13	7074	14.54	33.86	0.11
201	SLD 5	257	26	6727	-29.54	10.38	-0.22
201	SLD 6	257	26	6727	-29.54	10.38	-0.22
201	SLD 7	-260	-28	7656	32.24	-13.81	0.24
201	SLD 8	-260	-28	7656	32.24	-13.81	0.24
201	SLD 9	-447	29	6946	-32.91	-23.22	-0.25
201	SLD 10	-447	29	6946	-32.91	-23.22	-0.25
201	SLD 11	-964	-25	7875	28.88	-47.42	0.21
201	SLD 12	-964	-25	7875	28.88	-47.42	0.21
201	SLD 13	-1449	14	7527	-15.2	-70.9	-0.12
201	SLD 14	-1449	14	7527	-15.2	-70.9	-0.12
201	SLD 15	-1604	-2	7806	3.33	-78.15	0.02
201	SLD 16	-1604	-2	7806	3.33	-78.15	0.02
201	SLV 1	2559	8	6116	-9.59	120.41	-0.07
201	SLV 2	2559	8	6116	-9.59	120.41	-0.07
201	SLV 3	2196	-33	6777	37.32	103.45	0.28
201	SLV 4	2196	-33	6777	37.32	103.45	0.28
201	SLV 5	1071	65	5943	-74.26	48.88	-0.55
201	SLV 6	1071	65	5943	-74.26	48.88	-0.55
201	SLV 7	-139	-71	8147	82.11	-7.65	0.61
201	SLV 8	-139	-71	8147	82.11	-7.65	0.61
201	SLV 9	-568	72	6455	-82.78	-29.39	-0.62
201	SLV 10	-568	72	6455	-82.78	-29.39	-0.62
201	SLV 11	-1778	-64	8659	73.6	-85.92	0.54
201	SLV 12	-1778	-64	8659	73.6	-85.92	0.54
201	SLV 13	-2903	34	7825	-37.98	-140.49	-0.29
201	SLV 14	-2903	34	7825	-37.98	-140.49	-0.29
201	SLV 15	-3266	-7	8486	8.93	-157.45	0.06
201	SLV 16	-3266	-7	8486	8.93	-157.45	0.06
202	SLU 1	-563	0	6772	-0.15	-26.18	0
202	SLU 2	-591	0	6585	-0.38	-27.51	0
202	SLU 3	-597	0	6993	-0.16	-27.8	0
202	SLU 4	-614	0	6880	-0.29	-28.6	0
202	SLU 5	-616	0	6721	-0.38	-28.73	0
202	SLU 6	-622	0	7129	-0.16	-29.03	0
202	SLU 7	-639	0	7017	-0.3	-29.83	0
202	SLU 8	-614	0	7045	-0.15	-28.63	0
202	SLU 9	-630	0	6933	-0.29	-29.43	0
202	SLU 10	-685	0	7968	-0.4	-31.94	0
202	SLU 11	-691	0	8376	-0.17	-32.23	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
202	SLU 12	-707	0	8264	-0.31	-33.03	0
202	SLU 13	-710	0	8105	-0.4	-33.16	0
202	SLU 14	-716	0	8513	-0.18	-33.45	0
202	SLU 15	-733	0	8400	-0.32	-34.25	0
202	SLU 16	-708	0	8429	-0.17	-33.05	0
202	SLU 17	-724	0	8316	-0.31	-33.85	0
202	SLU 18	-698	0	8748	-0.18	-32.5	0
202	SLU 19	-714	0	8636	-0.32	-33.3	0
202	SLU 20	-723	0	8885	-0.18	-33.73	0
202	SLU 21	-739	0	8773	-0.32	-34.53	0
202	SLU 22	-644	0	7994	-0.17	-30	0
202	SLU 23	-672	0	7807	-0.4	-31.33	0
202	SLU 24	-678	0	8215	-0.17	-31.62	0
202	SLU 25	-694	0	8102	-0.31	-32.42	0
202	SLU 26	-697	0	7943	-0.4	-32.55	0
202	SLU 27	-703	0	8351	-0.17	-32.85	0
202	SLU 28	-720	0	8239	-0.31	-33.65	0
202	SLU 29	-695	0	8267	-0.17	-32.45	0
202	SLU 30	-711	0	8155	-0.31	-33.25	0
202	SLU 31	-766	1	9190	-0.42	-35.76	0
202	SLU 32	-772	0	9598	-0.19	-36.05	0
202	SLU 33	-788	0	9486	-0.33	-36.85	0
202	SLU 34	-791	1	9327	-0.42	-36.98	0
202	SLU 35	-797	0	9735	-0.19	-37.27	0
202	SLU 36	-814	0	9622	-0.33	-38.07	0
202	SLU 37	-789	0	9650	-0.19	-36.87	0
202	SLU 38	-805	0	9538	-0.33	-37.67	0
202	SLU 39	-779	0	9970	-0.19	-36.32	0
202	SLU 40	-795	0	9858	-0.33	-37.12	0
202	SLU 41	-804	0	10107	-0.19	-37.55	0
202	SLU 42	-820	0	9995	-0.33	-38.35	0
202	SLU 43	-705	0	8385	-0.19	-32.72	0
202	SLU 44	-732	0	8198	-0.42	-34.05	0
202	SLU 45	-738	0	8605	-0.2	-34.34	0
202	SLU 46	-755	0	8493	-0.33	-35.14	0
202	SLU 47	-757	0	8334	-0.42	-35.28	0
202	SLU 48	-763	0	8742	-0.2	-35.57	0
202	SLU 49	-780	0	8630	-0.34	-36.37	0
202	SLU 50	-755	0	8658	-0.19	-35.17	0
202	SLU 51	-772	0	8545	-0.33	-35.97	0
202	SLU 52	-826	1	9581	-0.44	-38.48	0
202	SLU 53	-832	0	9989	-0.21	-38.77	0
202	SLU 54	-849	0	9876	-0.35	-39.57	0
202	SLU 55	-851	1	9717	-0.44	-39.71	0
202	SLU 56	-857	0	10125	-0.22	-40	0
202	SLU 57	-874	1	10013	-0.36	-40.8	0
202	SLU 58	-849	0	10041	-0.21	-39.6	0
202	SLU 59	-865	0	9929	-0.35	-40.4	0
202	SLU 60	-839	0	10361	-0.22	-39.05	0
202	SLU 61	-855	1	10249	-0.36	-39.85	0
202	SLU 62	-864	0	10498	-0.22	-40.27	0
202	SLU 63	-881	1	10385	-0.36	-41.07	0
202	SLU 64	-786	0	9607	-0.2	-36.54	0
202	SLU 65	-813	1	9419	-0.44	-37.87	0
202	SLU 66	-819	0	9827	-0.21	-38.17	0
202	SLU 67	-836	0	9715	-0.35	-38.97	0
202	SLU 68	-838	1	9556	-0.44	-39.1	0
202	SLU 69	-844	0	9964	-0.21	-39.39	0
202	SLU 70	-861	0	9851	-0.35	-40.19	0
202	SLU 71	-836	0	9880	-0.21	-38.99	0
202	SLU 72	-853	0	9767	-0.35	-39.79	0
202	SLU 73	-907	1	10803	-0.46	-42.3	0
202	SLU 74	-913	0	11211	-0.23	-42.59	0
202	SLU 75	-930	1	11098	-0.37	-43.39	0
202	SLU 76	-932	1	10939	-0.46	-43.53	0
202	SLU 77	-938	0	11347	-0.23	-43.82	0
202	SLU 78	-955	1	11235	-0.37	-44.62	0
202	SLU 79	-930	0	11263	-0.23	-43.42	0
202	SLU 80	-946	1	11151	-0.37	-44.22	0
202	SLU 81	-920	0	11583	-0.23	-42.87	0
202	SLU 82	-936	1	11471	-0.37	-43.67	0
202	SLU 83	-945	0	11720	-0.23	-44.09	0
202	SLU 84	-961	1	11607	-0.37	-44.89	0
202	SLE RA 1	-587	0	7121	-0.15	-27.27	0
202	SLE RA 2	-605	0	6996	-0.31	-28.16	0
202	SLE RA 3	-609	0	7268	-0.16	-28.35	0
202	SLE RA 4	-620	0	7193	-0.25	-28.88	0
202	SLE RA 5	-622	0	7087	-0.31	-28.97	0
202	SLE RA 6	-626	0	7359	-0.16	-29.17	0
202	SLE RA 7	-637	0	7284	-0.25	-29.7	0
202	SLE RA 8	-620	0	7303	-0.16	-28.9	0
202	SLE RA 9	-631	0	7228	-0.25	-29.43	0
202	SLE RA 10	-668	0	7919	-0.32	-31.11	0
202	SLE RA 11	-672	0	8191	-0.17	-31.3	0
202	SLE RA 12	-683	0	8116	-0.26	-31.84	0
202	SLE RA 13	-684	0	8010	-0.32	-31.93	0
202	SLE RA 14	-688	0	8282	-0.17	-32.12	0
202	SLE RA 15	-699	0	8207	-0.26	-32.65	0
202	SLE RA 16	-683	0	8226	-0.17	-31.85	0
202	SLE RA 17	-694	0	8151	-0.26	-32.39	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
202	SLE RA 18	-676	0	8439	-0.17	-31.49	0
202	SLE RA 19	-687	0	8364	-0.26	-32.02	0
202	SLE RA 20	-693	0	8530	-0.17	-32.3	0
202	SLE RA 21	-704	0	8455	-0.27	-32.83	0
202	SLE FR 1	-587	0	7121	-0.15	-27.27	0
202	SLE FR 2	-590	0	7096	-0.19	-27.45	0
202	SLE FR 3	-593	0	7158	-0.15	-27.6	0
202	SLE FR 4	-617	0	7492	-0.19	-28.71	0
202	SLE FR 5	-620	0	7553	-0.16	-28.86	0
202	SLE FR 6	-631	0	7780	-0.16	-29.38	0
202	SLE QP 1	-587	0	7121	-0.15	-27.27	0
202	SLE QP 2	-613	0	7517	-0.16	-28.53	0
202	SLD 1	511	5	6512	-5.05	28.54	-0.04
202	SLD 2	511	5	6512	-5.05	28.54	-0.04
202	SLD 3	369	-20	6796	19.45	21.5	0.14
202	SLD 4	369	-20	6796	19.45	21.5	0.14
202	SLD 5	-60	40	6785	-38.79	-0.72	-0.27
202	SLD 6	-60	40	6785	-38.79	-0.72	-0.27
202	SLD 7	-535	-44	7731	42.89	-24.21	0.3
202	SLD 8	-535	-44	7731	42.89	-24.21	0.3
202	SLD 9	-692	44	7302	-43.21	-32.85	-0.3
202	SLD 10	-692	44	7302	-43.21	-32.85	-0.3
202	SLD 11	-1167	-39	8248	38.47	-56.35	0.27
202	SLD 12	-1167	-39	8248	38.47	-56.35	0.27
202	SLD 13	-1596	20	8237	-19.77	-78.57	-0.14
202	SLD 14	-1596	20	8237	-19.77	-78.57	-0.14
202	SLD 15	-1738	-5	8521	4.73	-85.61	0.03
202	SLD 16	-1738	-5	8521	4.73	-85.61	0.03
202	SLV 1	2006	13	5169	-12.47	104.44	-0.09
202	SLV 2	2006	13	5169	-12.47	104.44	-0.09
202	SLV 3	1674	-50	5844	49.56	87.98	0.34
202	SLV 4	1674	-50	5844	49.56	87.98	0.34
202	SLV 5	677	100	5788	-97.92	36.33	-0.68
202	SLV 6	677	100	5788	-97.92	36.33	-0.68
202	SLV 7	-432	-111	8039	108.83	-18.55	0.76
202	SLV 8	-432	-111	8039	108.83	-18.55	0.76
202	SLV 9	-795	111	6994	-109.15	-38.52	-0.76
202	SLV 10	-795	111	6994	-109.15	-38.52	-0.76
202	SLV 11	-1904	-99	9245	97.6	-93.39	0.68
202	SLV 12	-1904	-99	9245	97.6	-93.39	0.68
202	SLV 13	-2901	51	9189	-49.88	-145.04	-0.35
202	SLV 14	-2901	51	9189	-49.88	-145.04	-0.35
202	SLV 15	-3233	-12	9864	12.15	-161.51	0.08
202	SLV 16	-3233	-12	9864	12.15	-161.51	0.08
203	SLU 1	-876	0	7284	0.05	-48.86	0
203	SLU 2	-881	0	7096	-0.3	-49.01	0
203	SLU 3	-915	0	7538	0.05	-51.1	0
203	SLU 4	-919	0	7424	-0.16	-51.2	0
203	SLU 5	-909	0	7256	-0.3	-50.59	0
203	SLU 6	-943	0	7698	0.05	-52.68	0
203	SLU 7	-947	0	7585	-0.16	-52.77	0
203	SLU 8	-931	0	7605	0.05	-52.01	0
203	SLU 9	-935	0	7492	-0.16	-52.1	0
203	SLU 10	-1047	0	8591	-0.28	-58.38	0
203	SLU 11	-1081	0	9033	0.07	-60.47	0
203	SLU 12	-1084	0	8920	-0.14	-60.57	0
203	SLU 13	-1074	0	8752	-0.27	-59.96	0
203	SLU 14	-1108	0	9193	0.07	-62.05	0
203	SLU 15	-1112	0	9080	-0.13	-62.14	0
203	SLU 16	-1096	0	9101	0.07	-61.38	0
203	SLU 17	-1100	0	8988	-0.13	-61.47	0
203	SLU 18	-1112	0	9421	0.08	-62.25	0
203	SLU 19	-1115	0	9308	-0.13	-62.34	0
203	SLU 20	-1140	0	9581	0.08	-63.82	0
203	SLU 21	-1143	0	9468	-0.13	-63.91	0
203	SLU 22	-1020	0	8606	0.07	-57.08	0
203	SLU 23	-1026	0	8417	-0.27	-57.23	0
203	SLU 24	-1060	0	8859	0.07	-59.32	0
203	SLU 25	-1063	0	8746	-0.13	-59.42	0
203	SLU 26	-1054	0	8578	-0.27	-58.81	0
203	SLU 27	-1088	0	9020	0.08	-60.9	0
203	SLU 28	-1091	0	8906	-0.13	-60.99	0
203	SLU 29	-1076	0	8927	0.08	-60.23	0
203	SLU 30	-1079	0	8814	-0.13	-60.32	0
203	SLU 31	-1191	0	9913	-0.25	-66.6	0
203	SLU 32	-1225	0	10355	0.1	-68.69	0
203	SLU 33	-1229	0	10241	-0.11	-68.79	0
203	SLU 34	-1219	0	10073	-0.25	-68.18	0
203	SLU 35	-1253	0	10515	0.1	-70.27	0
203	SLU 36	-1257	0	10402	-0.11	-70.36	0
203	SLU 37	-1241	0	10423	0.1	-69.6	0
203	SLU 38	-1245	0	10309	-0.11	-69.69	0
203	SLU 39	-1256	0	10742	0.1	-70.47	0
203	SLU 40	-1260	0	10629	-0.1	-70.56	0
203	SLU 41	-1284	0	10903	0.1	-72.04	0
203	SLU 42	-1288	0	10790	-0.1	-72.13	0
203	SLU 43	-1089	0	9017	0.05	-60.7	0
203	SLU 44	-1094	0	8828	-0.29	-60.85	0
203	SLU 45	-1128	0	9270	0.05	-62.94	0
203	SLU 46	-1132	0	9156	-0.15	-63.04	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
203	SLU 47	-1122	0	8988	-0.29	-62.43	0
203	SLU 48	-1156	0	9430	0.06	-64.52	0
203	SLU 49	-1160	0	9317	-0.15	-64.61	0
203	SLU 50	-1144	0	9338	0.06	-63.85	0
203	SLU 51	-1148	0	9224	-0.15	-63.94	0
203	SLU 52	-1260	0	10323	-0.27	-70.22	0
203	SLU 53	-1294	0	10765	0.08	-72.31	0
203	SLU 54	-1297	0	10652	-0.13	-72.41	0
203	SLU 55	-1288	0	10484	-0.27	-71.8	0
203	SLU 56	-1321	0	10926	0.08	-73.89	0
203	SLU 57	-1325	0	10812	-0.13	-73.98	0
203	SLU 58	-1310	0	10833	0.08	-73.22	0
203	SLU 59	-1313	0	10720	-0.13	-73.31	0
203	SLU 60	-1325	0	11153	0.08	-74.08	0
203	SLU 61	-1328	0	11040	-0.12	-74.18	0
203	SLU 62	-1353	0	11313	0.08	-75.66	0
203	SLU 63	-1356	0	11200	-0.12	-75.75	0
203	SLU 64	-1233	0	10338	0.08	-68.92	0
203	SLU 65	-1239	0	10150	-0.27	-69.07	0
203	SLU 66	-1273	0	10591	0.08	-71.16	0
203	SLU 67	-1276	0	10478	-0.13	-71.26	0
203	SLU 68	-1267	0	10310	-0.27	-70.65	0
203	SLU 69	-1301	0	10752	0.08	-72.74	0
203	SLU 70	-1304	0	10639	-0.13	-72.83	0
203	SLU 71	-1289	0	10659	0.08	-72.07	0
203	SLU 72	-1292	0	10546	-0.13	-72.16	0
203	SLU 73	-1404	0	11645	-0.25	-78.44	0
203	SLU 74	-1438	0	12087	0.1	-80.53	0
203	SLU 75	-1442	0	11974	-0.11	-80.63	0
203	SLU 76	-1432	0	11806	-0.24	-80.02	0
203	SLU 77	-1466	0	12247	0.1	-82.11	0
203	SLU 78	-1470	0	12134	-0.1	-82.2	0
203	SLU 79	-1454	0	12155	0.1	-81.44	0
203	SLU 80	-1458	0	12041	-0.1	-81.53	0
203	SLU 81	-1469	0	12475	0.11	-82.31	0
203	SLU 82	-1473	0	12361	-0.1	-82.4	0
203	SLU 83	-1497	0	12635	0.11	-83.88	0
203	SLU 84	-1501	0	12522	-0.1	-83.97	0
203	SLE RA 1	-917	0	7662	0.05	-51.21	0
203	SLE RA 2	-921	0	7536	-0.18	-51.31	0
203	SLE RA 3	-943	0	7831	0.05	-52.7	0
203	SLE RA 4	-946	0	7755	-0.08	-52.77	0
203	SLE RA 5	-939	0	7643	-0.17	-52.36	0
203	SLE RA 6	-962	0	7938	0.06	-53.75	0
203	SLE RA 7	-964	0	7862	-0.08	-53.82	0
203	SLE RA 8	-954	0	7876	0.06	-53.31	0
203	SLE RA 9	-956	0	7801	-0.08	-53.37	0
203	SLE RA 10	-1031	0	8533	-0.16	-57.56	0
203	SLE RA 11	-1054	0	8828	0.07	-58.95	0
203	SLE RA 12	-1056	0	8752	-0.07	-59.01	0
203	SLE RA 13	-1049	0	8640	-0.16	-58.61	0
203	SLE RA 14	-1072	0	8935	0.07	-60	0
203	SLE RA 15	-1074	0	8859	-0.07	-60.06	0
203	SLE RA 16	-1064	0	8873	0.07	-59.55	0
203	SLE RA 17	-1066	0	8798	-0.07	-59.61	0
203	SLE RA 18	-1074	0	9086	0.07	-60.13	0
203	SLE RA 19	-1077	0	9011	-0.06	-60.19	0
203	SLE RA 20	-1093	0	9193	0.08	-61.18	0
203	SLE RA 21	-1095	0	9118	-0.06	-61.24	0
203	SLE FR 1	-917	0	7662	0.05	-51.21	0
203	SLE FR 2	-918	0	7637	0.01	-51.23	0
203	SLE FR 3	-924	0	7705	0.05	-51.63	0
203	SLE FR 4	-965	0	8064	0.01	-53.91	0
203	SLE FR 5	-972	0	8132	0.06	-54.31	0
203	SLE FR 6	-996	0	8374	0.06	-55.67	0
203	SLE QP 1	-917	0	7662	0.05	-51.21	0
203	SLE QP 2	-964	0	8089	0.06	-53.89	0
203	SLD 1	-78	7	5932	-5.46	-2.66	0
203	SLD 2	-78	7	5932	-5.46	-2.66	0
203	SLD 3	-194	-29	6297	22.42	-9.19	-0.01
203	SLD 4	-194	-29	6297	22.42	-9.19	-0.01
203	SLD 5	-521	56	6887	-43.89	-28.62	0.02
203	SLD 6	-521	56	6887	-43.89	-28.62	0.02
203	SLD 7	-910	-63	8107	49.06	-50.38	-0.03
203	SLD 8	-910	-63	8107	49.06	-50.38	-0.03
203	SLD 9	-1018	63	8072	-48.94	-57.39	0.02
203	SLD 10	-1018	63	8072	-48.94	-57.39	0.02
203	SLD 11	-1407	-57	9292	44.01	-79.16	-0.02
203	SLD 12	-1407	-57	9292	44.01	-79.16	-0.02
203	SLD 13	-1734	29	9881	-22.3	-98.58	0.01
203	SLD 14	-1734	29	9881	-22.3	-98.58	0.01
203	SLD 15	-1851	-7	10247	5.58	-105.11	0
203	SLD 16	-1851	-7	10247	5.58	-105.11	0
203	SLV 1	1101	18	3055	-13.8	65.45	0
203	SLV 2	1101	18	3055	-13.8	65.45	0
203	SLV 3	828	-73	3920	56.8	50.2	-0.03
203	SLV 4	828	-73	3920	56.8	50.2	-0.03
203	SLV 5	69	143	5267	-111.17	5.05	0.05
203	SLV 6	69	143	5267	-111.17	5.05	0.05
203	SLV 7	-840	-160	8150	124.15	-45.79	-0.06



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
203	SLV 8	-840	-160	8150	124.15	-45.79	-0.06
203	SLV 9	-1088	159	8028	-124.04	-61.98	0.06
203	SLV 10	-1088	159	8028	-124.04	-61.98	0.06
203	SLV 11	-1998	-143	10911	111.29	-112.82	-0.05
203	SLV 12	-1998	-143	10911	111.29	-112.82	-0.05
203	SLV 13	-2757	73	12258	-56.68	-157.98	0.03
203	SLV 14	-2757	73	12258	-56.68	-157.98	0.03
203	SLV 15	-3030	-18	13123	13.92	-173.23	0
203	SLV 16	-3030	-18	13123	13.92	-173.23	0
204	SLU 1	-1206	-1	4461	0.11	-31.86	0.02
204	SLU 2	-1190	0	4364	-0.1	-31.79	-0.01
204	SLU 3	-1254	-1	4626	0.11	-33.25	0.02
204	SLU 4	-1244	0	4568	-0.01	-33.21	0
204	SLU 5	-1222	0	4472	-0.1	-32.74	-0.01
204	SLU 6	-1286	-1	4734	0.11	-34.2	0.02
204	SLU 7	-1276	0	4676	-0.01	-34.16	0
204	SLU 8	-1270	-1	4676	0.11	-33.77	0.02
204	SLU 9	-1260	0	4618	-0.01	-33.72	0
204	SLU 10	-1433	0	5277	-0.07	-38.09	-0.01
204	SLU 11	-1497	-1	5540	0.14	-39.55	0.03
204	SLU 12	-1487	-1	5482	0.02	-39.5	0.01
204	SLU 13	-1465	0	5385	-0.07	-39.04	-0.01
204	SLU 14	-1529	-1	5647	0.14	-40.5	0.03
204	SLU 15	-1519	-1	5589	0.02	-40.46	0.01
204	SLU 16	-1513	-1	5589	0.14	-40.06	0.03
204	SLU 17	-1503	-1	5531	0.02	-40.02	0.01
204	SLU 18	-1554	-1	5765	0.15	-40.86	0.03
204	SLU 19	-1544	-1	5707	0.03	-40.82	0.01
204	SLU 20	-1586	-1	5873	0.15	-41.81	0.03
204	SLU 21	-1576	-1	5815	0.03	-41.77	0.01
204	SLU 22	-1421	-1	5267	0.14	-37.39	0.03
204	SLU 23	-1404	0	5171	-0.07	-37.32	-0.01
204	SLU 24	-1468	-1	5433	0.14	-38.78	0.03
204	SLU 25	-1459	-1	5375	0.02	-38.74	0.01
204	SLU 26	-1436	0	5278	-0.07	-38.27	-0.01
204	SLU 27	-1500	-1	5541	0.14	-39.73	0.03
204	SLU 28	-1490	-1	5483	0.02	-39.69	0.01
204	SLU 29	-1484	-1	5483	0.14	-39.3	0.03
204	SLU 30	-1474	-1	5425	0.02	-39.25	0.01
204	SLU 31	-1647	-1	6084	-0.04	-43.62	0
204	SLU 32	-1711	-1	6346	0.17	-45.08	0.03
204	SLU 33	-1702	-1	6288	0.05	-45.04	0.01
204	SLU 34	-1679	-1	6191	-0.04	-44.57	0
204	SLU 35	-1743	-1	6454	0.17	-46.03	0.03
204	SLU 36	-1733	-1	6396	0.05	-45.99	0.01
204	SLU 37	-1727	-1	6396	0.17	-45.6	0.03
204	SLU 38	-1717	-1	6338	0.05	-45.55	0.01
204	SLU 39	-1768	-1	6572	0.18	-46.39	0.04
204	SLU 40	-1758	-1	6514	0.05	-46.35	0.01
204	SLU 41	-1800	-1	6679	0.18	-47.34	0.04
204	SLU 42	-1790	-1	6621	0.06	-47.3	0.02
204	SLU 43	-1495	-1	5522	0.13	-39.52	0.03
204	SLU 44	-1479	0	5426	-0.08	-39.45	-0.01
204	SLU 45	-1543	-1	5688	0.13	-40.91	0.03
204	SLU 46	-1533	-1	5630	0.01	-40.87	0.01
204	SLU 47	-1510	0	5533	-0.07	-40.4	-0.01
204	SLU 48	-1575	-1	5796	0.14	-41.86	0.03
204	SLU 49	-1565	-1	5738	0.01	-41.82	0.01
204	SLU 50	-1559	-1	5738	0.13	-41.43	0.03
204	SLU 51	-1549	-1	5680	0.01	-41.38	0.01
204	SLU 52	-1722	-1	6339	-0.05	-45.75	0
204	SLU 53	-1786	-1	6601	0.16	-47.21	0.03
204	SLU 54	-1776	-1	6543	0.04	-47.17	0.01
204	SLU 55	-1753	-1	6447	-0.04	-46.7	0
204	SLU 56	-1818	-1	6709	0.17	-48.16	0.03
204	SLU 57	-1808	-1	6651	0.04	-48.12	0.01
204	SLU 58	-1802	-1	6651	0.16	-47.73	0.03
204	SLU 59	-1792	-1	6593	0.04	-47.68	0.01
204	SLU 60	-1842	-1	6827	0.17	-48.52	0.03
204	SLU 61	-1832	-1	6769	0.05	-48.48	0.01
204	SLU 62	-1874	-1	6935	0.17	-49.47	0.04
204	SLU 63	-1864	-1	6877	0.05	-49.43	0.01
204	SLU 64	-1709	-1	6329	0.16	-45.05	0.03
204	SLU 65	-1693	-1	6232	-0.05	-44.98	0
204	SLU 66	-1757	-1	6495	0.16	-46.44	0.03
204	SLU 67	-1747	-1	6437	0.04	-46.4	0.01
204	SLU 68	-1725	-1	6340	-0.04	-45.93	0
204	SLU 69	-1789	-1	6602	0.16	-47.39	0.03
204	SLU 70	-1779	-1	6544	0.04	-47.35	0.01
204	SLU 71	-1773	-1	6544	0.16	-46.96	0.03
204	SLU 72	-1763	-1	6486	0.04	-46.92	0.01
204	SLU 73	-1936	-1	7145	-0.02	-51.28	0
204	SLU 74	-2000	-1	7408	0.19	-52.74	0.04
204	SLU 75	-1990	-1	7350	0.07	-52.7	0.02
204	SLU 76	-1968	-1	7253	-0.01	-52.23	0
204	SLU 77	-2032	-1	7516	0.19	-53.69	0.04
204	SLU 78	-2022	-1	7458	0.07	-53.65	0.02
204	SLU 79	-2016	-1	7458	0.19	-53.26	0.04
204	SLU 80	-2006	-1	7400	0.07	-53.21	0.02
204	SLU 81	-2056	-1	7633	0.2	-54.05	0.04



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
204	SLU 82	-2046	-1	7575	0.08	-54.01	0.02
204	SLU 83	-2088	-1	7741	0.2	-55	0.04
204	SLU 84	-2078	-1	7683	0.08	-54.96	0.02
204	SLE RA 1	-1268	-1	4691	0.11	-33.44	0.02
204	SLE RA 2	-1257	0	4627	-0.02	-33.39	0
204	SLE RA 3	-1300	-1	4802	0.12	-34.37	0.02
204	SLE RA 4	-1293	-1	4763	0.04	-34.34	0.01
204	SLE RA 5	-1278	0	4699	-0.02	-34.03	0
204	SLE RA 6	-1321	-1	4873	0.12	-35	0.02
204	SLE RA 7	-1314	-1	4835	0.04	-34.97	0.01
204	SLE RA 8	-1310	-1	4835	0.12	-34.71	0.02
204	SLE RA 9	-1304	-1	4796	0.04	-34.68	0.01
204	SLE RA 10	-1419	-1	5235	0	-37.59	0
204	SLE RA 11	-1462	-1	5410	0.14	-38.57	0.03
204	SLE RA 12	-1455	-1	5372	0.06	-38.54	0.01
204	SLE RA 13	-1440	-1	5307	0	-38.23	0
204	SLE RA 14	-1483	-1	5482	0.14	-39.2	0.03
204	SLE RA 15	-1476	-1	5444	0.06	-39.17	0.01
204	SLE RA 16	-1472	-1	5444	0.14	-38.91	0.03
204	SLE RA 17	-1466	-1	5405	0.06	-38.88	0.01
204	SLE RA 18	-1499	-1	5561	0.14	-39.44	0.03
204	SLE RA 19	-1493	-1	5522	0.06	-39.41	0.01
204	SLE RA 20	-1520	-1	5633	0.14	-40.07	0.03
204	SLE RA 21	-1514	-1	5594	0.06	-40.05	0.02
204	SLE FR 1	-1268	-1	4691	0.11	-33.44	0.02
204	SLE FR 2	-1265	-1	4678	0.09	-33.43	0.02
204	SLE FR 3	-1276	-1	4720	0.12	-33.7	0.02
204	SLE FR 4	-1335	-1	4939	0.1	-35.23	0.02
204	SLE FR 5	-1346	-1	4981	0.12	-35.49	0.03
204	SLE FR 6	-1383	-1	5126	0.13	-36.44	0.03
204	SLE QP 1	-1268	-1	4691	0.11	-33.44	0.02
204	SLE QP 2	-1337	-1	4952	0.12	-35.24	0.03
204	SLD 1	-591	-6	2908	-2.51	-6.93	-0.39
204	SLD 2	-591	-6	2908	-2.51	-6.93	-0.39
204	SLD 3	-692	0	3197	11.04	-10.58	1.78
204	SLD 4	-692	0	3197	11.04	-10.58	1.78
204	SLD 5	-960	-11	3901	-21.22	-21.22	-3.39
204	SLD 6	-960	-11	3901	-21.22	-21.22	-3.39
204	SLD 7	-1297	9	4864	23.95	-33.37	3.84
204	SLD 8	-1297	9	4864	23.95	-33.37	3.84
204	SLD 9	-1377	-10	5041	-23.71	-37.12	-3.79
204	SLD 10	-1377	-10	5041	-23.71	-37.12	-3.79
204	SLD 11	-1714	10	6003	21.47	-49.26	3.44
204	SLD 12	-1714	10	6003	21.47	-49.26	3.44
204	SLD 13	-1982	-1	6707	-10.79	-59.91	-1.73
204	SLD 14	-1982	-1	6707	-10.79	-59.91	-1.73
204	SLD 15	-2083	5	6996	2.76	-63.55	0.44
204	SLD 16	-2083	5	6996	2.76	-63.55	0.44
204	SLV 1	402	-15	187	-6.49	30.71	-1.02
204	SLV 2	402	-15	187	-6.49	30.71	-1.02
204	SLV 3	165	0	865	27.84	22.2	4.47
204	SLV 4	165	0	865	27.84	22.2	4.47
204	SLV 5	-457	-28	2494	-53.92	-2.55	-8.62
204	SLV 6	-457	-28	2494	-53.92	-2.55	-8.62
204	SLV 7	-1245	23	4755	60.5	-30.91	9.69
204	SLV 8	-1245	23	4755	60.5	-30.91	9.69
204	SLV 9	-1429	-24	5150	-60.25	-39.57	-9.64
204	SLV 10	-1429	-24	5150	-60.25	-39.57	-9.64
204	SLV 11	-2217	27	7410	54.17	-67.93	8.67
204	SLV 12	-2217	27	7410	54.17	-67.93	8.67
204	SLV 13	-2840	-2	9039	-27.59	-92.69	-4.42
204	SLV 14	-2840	-2	9039	-27.59	-92.69	-4.42
204	SLV 15	-3076	14	9717	6.73	-101.19	1.07
204	SLV 16	-3076	14	9717	6.73	-101.19	1.07
205	SLU 1	687	-4	2515	1.25	5.8	-0.28
205	SLU 2	604	-2	2237	0.79	4.71	-0.18
205	SLU 3	705	-4	2584	1.29	5.88	-0.29
205	SLU 4	656	-3	2417	1.02	5.23	-0.23
205	SLU 5	615	-2	2277	0.82	4.74	-0.18
205	SLU 6	716	-4	2624	1.31	5.91	-0.3
205	SLU 7	666	-3	2457	1.04	5.26	-0.24
205	SLU 8	708	-4	2596	1.3	5.86	-0.3
205	SLU 9	659	-3	2428	1.03	5.21	-0.23
205	SLU 10	737	-3	2726	1.01	5.73	-0.23
205	SLU 11	838	-5	3073	1.51	6.89	-0.34
205	SLU 12	789	-4	2906	1.24	6.24	-0.28
205	SLU 13	747	-3	2766	1.04	5.76	-0.23
205	SLU 14	849	-5	3113	1.53	6.92	-0.35
205	SLU 15	799	-4	2946	1.26	6.27	-0.29
205	SLU 16	841	-5	3085	1.52	6.87	-0.35
205	SLU 17	791	-4	2917	1.24	6.22	-0.28
205	SLU 18	877	-5	3214	1.56	7.24	-0.36
205	SLU 19	827	-4	3047	1.29	6.59	-0.29
205	SLU 20	887	-5	3254	1.59	7.27	-0.36
205	SLU 21	838	-4	3087	1.31	6.62	-0.3
205	SLU 22	809	-5	2962	1.46	6.75	-0.33
205	SLU 23	726	-3	2684	1	5.67	-0.22
205	SLU 24	827	-5	3031	1.5	6.83	-0.34
205	SLU 25	777	-3	2864	1.22	6.18	-0.28
205	SLU 26	736	-3	2724	1.03	5.7	-0.23



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
205	SLU 27	838	-5	3072	1.52	6.86	-0.35
205	SLU 28	788	-4	2904	1.25	6.21	-0.28
205	SLU 29	830	-5	3043	1.51	6.81	-0.34
205	SLU 30	780	-4	2875	1.23	6.16	-0.28
205	SLU 31	858	-3	3173	1.22	6.68	-0.27
205	SLU 32	960	-5	3521	1.72	7.84	-0.39
205	SLU 33	910	-4	3353	1.44	7.19	-0.33
205	SLU 34	869	-3	3213	1.25	6.71	-0.28
205	SLU 35	971	-5	3561	1.74	7.87	-0.4
205	SLU 36	921	-4	3393	1.47	7.22	-0.33
205	SLU 37	963	-5	3532	1.73	7.82	-0.39
205	SLU 38	913	-4	3365	1.45	7.17	-0.33
205	SLU 39	998	-6	3661	1.77	8.2	-0.4
205	SLU 40	949	-4	3494	1.5	7.55	-0.34
205	SLU 41	1009	-6	3701	1.79	8.23	-0.41
205	SLU 42	959	-4	3534	1.52	7.58	-0.34
205	SLU 43	851	-5	3117	1.55	7.21	-0.35
205	SLU 44	768	-3	2838	1.1	6.13	-0.25
205	SLU 45	870	-5	3186	1.59	7.29	-0.36
205	SLU 46	820	-4	3018	1.32	6.64	-0.3
205	SLU 47	779	-3	2878	1.12	6.16	-0.25
205	SLU 48	881	-5	3226	1.62	7.32	-0.37
205	SLU 49	831	-4	3058	1.34	6.67	-0.3
205	SLU 50	873	-5	3197	1.6	7.27	-0.36
205	SLU 51	823	-4	3030	1.33	6.62	-0.3
205	SLU 52	901	-4	3327	1.32	7.14	-0.3
205	SLU 53	1003	-6	3675	1.81	8.3	-0.41
205	SLU 54	953	-4	3507	1.54	7.65	-0.35
205	SLU 55	912	-4	3367	1.34	7.17	-0.3
205	SLU 56	1013	-6	3715	1.84	8.33	-0.42
205	SLU 57	964	-5	3548	1.56	7.68	-0.35
205	SLU 58	1006	-6	3686	1.82	8.28	-0.42
205	SLU 59	956	-4	3519	1.55	7.63	-0.35
205	SLU 60	1041	-6	3815	1.87	8.66	-0.42
205	SLU 61	991	-5	3648	1.59	8.01	-0.36
205	SLU 62	1052	-6	3855	1.89	8.69	-0.43
205	SLU 63	1002	-5	3688	1.62	8.04	-0.37
205	SLU 64	973	-5	3564	1.76	8.16	-0.4
205	SLU 65	890	-4	3285	1.3	7.08	-0.29
205	SLU 66	992	-6	3633	1.8	8.24	-0.41
205	SLU 67	942	-4	3465	1.53	7.59	-0.35
205	SLU 68	901	-4	3325	1.33	7.11	-0.3
205	SLU 69	1002	-6	3673	1.82	8.27	-0.42
205	SLU 70	953	-5	3506	1.55	7.62	-0.35
205	SLU 71	995	-6	3644	1.81	8.22	-0.41
205	SLU 72	945	-4	3477	1.54	7.57	-0.35
205	SLU 73	1023	-4	3774	1.52	8.09	-0.34
205	SLU 74	1124	-6	4122	2.02	9.25	-0.46
205	SLU 75	1075	-5	3955	1.75	8.6	-0.4
205	SLU 76	1034	-4	3814	1.55	8.12	-0.35
205	SLU 77	1135	-6	4162	2.04	9.28	-0.47
205	SLU 78	1085	-5	3995	1.77	8.63	-0.4
205	SLU 79	1127	-6	4133	2.03	9.24	-0.46
205	SLU 80	1078	-5	3966	1.76	8.59	-0.4
205	SLU 81	1163	-6	4263	2.07	9.61	-0.47
205	SLU 82	1113	-5	4095	1.8	8.96	-0.41
205	SLU 83	1173	-7	4303	2.1	9.64	-0.48
205	SLU 84	1124	-5	4135	1.82	8.99	-0.41
205	SLE RA 1	722	-4	2643	1.31	6.07	-0.3
205	SLE RA 2	666	-3	2457	1	5.35	-0.23
205	SLE RA 3	734	-4	2689	1.33	6.12	-0.3
205	SLE RA 4	701	-3	2578	1.15	5.69	-0.26
205	SLE RA 5	673	-3	2484	1.02	5.37	-0.23
205	SLE RA 6	741	-4	2716	1.35	6.14	-0.31
205	SLE RA 7	708	-3	2604	1.17	5.71	-0.27
205	SLE RA 8	736	-4	2697	1.34	6.11	-0.31
205	SLE RA 9	703	-3	2585	1.16	5.68	-0.26
205	SLE RA 10	755	-3	2783	1.15	6.02	-0.26
205	SLE RA 11	823	-5	3015	1.48	6.8	-0.34
205	SLE RA 12	789	-4	2904	1.3	6.36	-0.29
205	SLE RA 13	762	-3	2810	1.17	6.04	-0.26
205	SLE RA 14	830	-5	3042	1.5	6.82	-0.34
205	SLE RA 15	797	-4	2930	1.32	6.38	-0.3
205	SLE RA 16	825	-5	3023	1.49	6.79	-0.34
205	SLE RA 17	791	-4	2911	1.31	6.35	-0.3
205	SLE RA 18	848	-5	3109	1.52	7.03	-0.35
205	SLE RA 19	815	-4	2997	1.33	6.6	-0.3
205	SLE RA 20	855	-5	3136	1.53	7.05	-0.35
205	SLE RA 21	822	-4	3024	1.35	6.62	-0.31
205	SLE FR 1	722	-4	2643	1.31	6.07	-0.3
205	SLE FR 2	711	-4	2606	1.25	5.93	-0.28
205	SLE FR 3	724	-4	2654	1.31	6.08	-0.3
205	SLE FR 4	748	-4	2746	1.31	6.21	-0.3
205	SLE FR 5	762	-4	2794	1.38	6.37	-0.31
205	SLE FR 6	785	-4	2876	1.41	6.55	-0.32
205	SLE QP 1	722	-4	2643	1.31	6.07	-0.3
205	SLE QP 2	760	-4	2783	1.37	6.36	-0.31
205	SLD 1	888	-11	3208	1.88	11.72	-0.47
205	SLD 2	888	-11	3208	1.88	11.72	-0.47
205	SLD 3	979	-35	3505	4.25	13.28	-1.18



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
205	SLD 4	979	-35	3505	4.25	13.28	-1.18
205	SLD 5	660	31	2459	-2.08	5.61	0.72
205	SLD 6	660	31	2459	-2.08	5.61	0.72
205	SLD 7	963	-50	3451	5.84	10.8	-1.65
205	SLD 8	963	-50	3451	5.84	10.8	-1.65
205	SLD 9	556	42	2115	-3.1	1.92	1.02
205	SLD 10	556	42	2115	-3.1	1.92	1.02
205	SLD 11	859	-39	3107	4.82	7.11	-1.34
205	SLD 12	859	-39	3107	4.82	7.11	-1.34
205	SLD 13	540	27	2060	-1.51	-0.56	0.55
205	SLD 14	540	27	2060	-1.51	-0.56	0.55
205	SLD 15	631	3	2358	0.86	0.99	-0.16
205	SLD 16	631	3	2358	0.86	0.99	-0.16
205	SLV 1	1055	-20	3758	2.54	18.79	-0.67
205	SLV 2	1055	-20	3758	2.54	18.79	-0.67
205	SLV 3	1275	-82	4478	8.62	22.48	-2.48
205	SLV 4	1275	-82	4478	8.62	22.48	-2.48
205	SLV 5	515	85	1983	-7.5	4.48	2.33
205	SLV 6	515	85	1983	-7.5	4.48	2.33
205	SLV 7	1247	-122	4384	12.76	16.8	-3.71
205	SLV 8	1247	-122	4384	12.76	16.8	-3.71
205	SLV 9	272	114	1182	-10.02	-4.08	3.09
205	SLV 10	272	114	1182	-10.02	-4.08	3.09
205	SLV 11	1004	-94	3583	10.24	8.24	-2.96
205	SLV 12	1004	-94	3583	10.24	8.24	-2.96
205	SLV 13	244	74	1087	-5.88	-9.76	1.86
205	SLV 14	244	74	1087	-5.88	-9.76	1.86
205	SLV 15	464	12	1808	0.2	-6.07	0.04
205	SLV 16	464	12	1808	0.2	-6.07	0.04
206	SLU 1	11	-746	7832	19.98	-3.87	-0.01
206	SLU 2	13	-587	6996	13.01	-3.77	-0.01
206	SLU 3	12	-769	8079	20.62	-4.18	-0.01
206	SLU 4	14	-674	7577	16.43	-4.12	-0.01
206	SLU 5	14	-601	7146	13.4	-3.99	-0.01
206	SLU 6	13	-784	8229	21.01	-4.4	-0.01
206	SLU 7	14	-688	7728	16.82	-4.34	-0.01
206	SLU 8	13	-775	8132	20.76	-4.31	-0.01
206	SLU 9	14	-679	7631	16.58	-4.25	-0.01
206	SLU 10	16	-719	8536	16.37	-4.77	-0.02
206	SLU 11	15	-902	9618	23.98	-5.18	-0.02
206	SLU 12	16	-806	9117	19.8	-5.12	-0.02
206	SLU 13	17	-734	8686	16.76	-4.99	-0.02
206	SLU 14	16	-916	9769	24.37	-5.4	-0.02
206	SLU 15	17	-821	9267	20.19	-5.34	-0.02
206	SLU 16	16	-907	9672	24.13	-5.31	-0.02
206	SLU 17	17	-812	9170	19.94	-5.25	-0.02
206	SLU 18	15	-935	10031	24.78	-5.3	-0.02
206	SLU 19	16	-840	9530	20.6	-5.24	-0.02
206	SLU 20	16	-950	10181	25.18	-5.52	-0.02
206	SLU 21	17	-854	9680	20.99	-5.46	-0.02
206	SLU 22	14	-869	9235	23.17	-4.73	-0.01
206	SLU 23	16	-710	8400	16.2	-4.63	-0.02
206	SLU 24	15	-893	9483	23.81	-5.04	-0.02
206	SLU 25	16	-798	8981	19.63	-4.98	-0.02
206	SLU 26	17	-725	8550	16.59	-4.85	-0.02
206	SLU 27	16	-907	9633	24.2	-5.26	-0.02
206	SLU 28	17	-812	9131	20.02	-5.2	-0.02
206	SLU 29	15	-898	9536	23.95	-5.17	-0.02
206	SLU 30	17	-803	9034	19.77	-5.11	-0.02
206	SLU 31	19	-843	9940	19.56	-5.63	-0.02
206	SLU 32	18	-1025	11022	27.17	-6.04	-0.02
206	SLU 33	19	-930	10521	22.99	-5.98	-0.02
206	SLU 34	19	-857	10090	19.96	-5.85	-0.02
206	SLU 35	18	-1040	11172	27.57	-6.26	-0.02
206	SLU 36	20	-944	10671	23.38	-6.21	-0.02
206	SLU 37	18	-1031	11076	27.32	-6.17	-0.02
206	SLU 38	19	-935	10574	23.14	-6.11	-0.02
206	SLU 39	18	-1059	11435	27.98	-6.16	-0.02
206	SLU 40	19	-963	10934	23.79	-6.1	-0.02
206	SLU 41	19	-1073	11585	28.37	-6.38	-0.02
206	SLU 42	20	-978	11084	24.19	-6.32	-0.02
206	SLU 43	14	-927	9700	24.87	-4.73	-0.01
206	SLU 44	16	-768	8864	17.9	-4.63	-0.02
206	SLU 45	15	-951	9947	25.51	-5.04	-0.02
206	SLU 46	16	-855	9446	21.33	-4.98	-0.02
206	SLU 47	17	-783	9014	18.3	-4.85	-0.02
206	SLU 48	16	-965	10097	25.91	-5.26	-0.02
206	SLU 49	17	-870	9596	21.72	-5.2	-0.02
206	SLU 50	15	-956	10000	25.66	-5.17	-0.02
206	SLU 51	17	-861	9499	21.48	-5.11	-0.02
206	SLU 52	19	-901	10404	21.27	-5.63	-0.02
206	SLU 53	18	-1083	11487	28.88	-6.04	-0.02
206	SLU 54	19	-988	10985	24.7	-5.99	-0.02
206	SLU 55	19	-915	10554	21.66	-5.85	-0.02
206	SLU 56	18	-1098	11637	29.27	-6.27	-0.02
206	SLU 57	20	-1002	11135	25.09	-6.21	-0.02
206	SLU 58	18	-1089	11540	29.02	-6.17	-0.02
206	SLU 59	19	-993	11038	24.84	-6.11	-0.02
206	SLU 60	18	-1116	11899	29.68	-6.16	-0.02
206	SLU 61	19	-1021	11398	25.5	-6.1	-0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
206	SLU 62	19	-1131	12049	30.07	-6.38	-0.02
206	SLU 63	20	-1035	11548	25.89	-6.32	-0.02
206	SLU 64	16	-1051	11104	28.07	-5.59	-0.02
206	SLU 65	19	-892	10268	21.1	-5.49	-0.02
206	SLU 66	17	-1074	11351	28.71	-5.91	-0.02
206	SLU 67	19	-979	10849	24.52	-5.85	-0.02
206	SLU 68	19	-906	10418	21.49	-5.71	-0.02
206	SLU 69	18	-1089	11501	29.1	-6.13	-0.02
206	SLU 70	19	-993	11000	24.92	-6.07	-0.02
206	SLU 71	18	-1080	11404	28.85	-6.03	-0.02
206	SLU 72	19	-984	10903	24.67	-5.97	-0.02
206	SLU 73	21	-1024	11808	24.46	-6.49	-0.02
206	SLU 74	20	-1207	12890	32.07	-6.91	-0.02
206	SLU 75	21	-1111	12389	27.89	-6.85	-0.02
206	SLU 76	22	-1039	11958	24.85	-6.72	-0.02
206	SLU 77	21	-1221	13041	32.46	-7.13	-0.02
206	SLU 78	22	-1126	12539	28.28	-7.07	-0.02
206	SLU 79	21	-1212	12944	32.22	-7.03	-0.02
206	SLU 80	22	-1117	12442	28.03	-6.98	-0.02
206	SLU 81	20	-1240	13303	32.87	-7.02	-0.02
206	SLU 82	22	-1145	12802	28.69	-6.96	-0.02
206	SLU 83	21	-1254	13453	33.27	-7.24	-0.02
206	SLU 84	22	-1159	12952	29.08	-7.18	-0.02
206	SLE RA 1	12	-781	8233	20.89	-4.11	-0.01
206	SLE RA 2	13	-675	7676	16.24	-4.05	-0.01
206	SLE RA 3	13	-797	8397	21.31	-4.32	-0.01
206	SLE RA 4	14	-733	8063	18.53	-4.28	-0.01
206	SLE RA 5	14	-685	7776	16.5	-4.19	-0.01
206	SLE RA 6	13	-807	8497	21.58	-4.47	-0.01
206	SLE RA 7	14	-743	8163	18.79	-4.43	-0.01
206	SLE RA 8	13	-800	8433	21.41	-4.41	-0.01
206	SLE RA 9	14	-737	8099	18.62	-4.37	-0.01
206	SLE RA 10	15	-763	8702	18.48	-4.71	-0.02
206	SLE RA 11	15	-885	9424	23.56	-4.99	-0.02
206	SLE RA 12	15	-822	9090	20.77	-4.95	-0.02
206	SLE RA 13	16	-773	8802	18.75	-4.86	-0.02
206	SLE RA 14	15	-895	9524	23.82	-5.14	-0.02
206	SLE RA 15	16	-831	9190	21.03	-5.1	-0.02
206	SLE RA 16	15	-889	9459	23.66	-5.07	-0.02
206	SLE RA 17	16	-825	9125	20.87	-5.03	-0.02
206	SLE RA 18	15	-907	9699	24.09	-5.07	-0.02
206	SLE RA 19	16	-844	9365	21.31	-5.03	-0.02
206	SLE RA 20	15	-917	9799	24.36	-5.21	-0.02
206	SLE RA 21	16	-853	9465	21.57	-5.17	-0.02
206	SLE FR 1	12	-781	8233	20.89	-4.11	-0.01
206	SLE FR 2	12	-760	8121	19.96	-4.1	-0.01
206	SLE FR 3	12	-785	8273	20.99	-4.17	-0.01
206	SLE FR 4	13	-798	8561	20.92	-4.38	-0.01
206	SLE FR 5	13	-823	8713	21.95	-4.46	-0.01
206	SLE FR 6	13	-844	8966	22.49	-4.59	-0.01
206	SLE QP 1	12	-781	8233	20.89	-4.11	-0.01
206	SLE QP 2	13	-819	8673	21.85	-4.4	-0.01
206	SLD 1	-24	-623	7772	13.01	8.11	0.05
206	SLD 2	-24	-623	7772	13.01	8.11	0.05
206	SLD 3	-33	-835	8651	22.69	6.33	0.03
206	SLD 4	-33	-835	8651	22.69	6.33	0.03
206	SLD 5	15	-439	7071	4.53	2.04	0.04
206	SLD 6	15	-439	7071	4.53	2.04	0.04
206	SLD 7	-15	-1144	9998	36.77	-3.87	-0.04
206	SLD 8	-15	-1144	9998	36.77	-3.87	-0.04
206	SLD 9	40	-493	7347	6.93	-4.92	0.01
206	SLD 10	40	-493	7347	6.93	-4.92	0.01
206	SLD 11	10	-1199	10275	39.17	-10.84	-0.07
206	SLD 12	10	-1199	10275	39.17	-10.84	-0.07
206	SLD 13	59	-803	8694	21.01	-15.13	-0.05
206	SLD 14	59	-803	8694	21.01	-15.13	-0.05
206	SLD 15	50	-1015	9573	30.69	-16.9	-0.08
206	SLD 16	50	-1015	9573	30.69	-16.9	-0.08
206	SLV 1	-73	-348	6483	0.68	24.7	0.14
206	SLV 2	-73	-348	6483	0.68	24.7	0.14
206	SLV 3	-95	-855	8615	23.81	20.54	0.08
206	SLV 4	-95	-855	8615	23.81	20.54	0.08
206	SLV 5	20	91	4783	-19.58	10.64	0.12
206	SLV 6	20	91	4783	-19.58	10.64	0.12
206	SLV 7	-53	-1598	11888	57.51	-3.22	-0.08
206	SLV 8	-53	-1598	11888	57.51	-3.22	-0.08
206	SLV 9	79	-40	5457	-13.81	-5.57	0.05
206	SLV 10	79	-40	5457	-13.81	-5.57	0.05
206	SLV 11	5	-1729	12562	63.28	-19.44	-0.15
206	SLV 12	5	-1729	12562	63.28	-19.44	-0.15
206	SLV 13	121	-783	8730	19.89	-29.34	-0.11
206	SLV 14	121	-783	8730	19.89	-29.34	-0.11
206	SLV 15	99	-1290	10862	43.02	-33.5	-0.17
206	SLV 16	99	-1290	10862	43.02	-33.5	-0.17
207	SLU 1	-785	-4	3064	1.34	-8.24	0.28
207	SLU 2	-701	-5	2767	1.08	-7.16	0.24
207	SLU 3	-813	-4	3173	1.38	-8.62	0.29
207	SLU 4	-763	-5	2995	1.23	-7.97	0.27
207	SLU 5	-718	-5	2835	1.11	-7.41	0.25
207	SLU 6	-831	-4	3241	1.41	-8.87	0.3



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
207	SLU 7	-780	-5	3063	1.25	-8.23	0.27
207	SLU 8	-820	-4	3200	1.39	-8.74	0.3
207	SLU 9	-770	-5	3022	1.24	-8.09	0.27
207	SLU 10	-859	-5	3387	1.31	-8.84	0.29
207	SLU 11	-972	-5	3793	1.61	-10.3	0.34
207	SLU 12	-921	-5	3615	1.46	-9.66	0.31
207	SLU 13	-877	-5	3455	1.34	-9.09	0.29
207	SLU 14	-989	-5	3861	1.64	-10.56	0.35
207	SLU 15	-939	-5	3683	1.48	-9.91	0.32
207	SLU 16	-979	-5	3820	1.62	-10.42	0.34
207	SLU 17	-928	-5	3642	1.47	-9.78	0.32
207	SLU 18	-1011	-5	3950	1.67	-10.64	0.35
207	SLU 19	-961	-5	3772	1.51	-9.99	0.33
207	SLU 20	-1029	-5	4018	1.7	-10.89	0.36
207	SLU 21	-979	-5	3840	1.54	-10.24	0.33
207	SLU 22	-929	-5	3627	1.56	-9.76	0.33
207	SLU 23	-845	-5	3330	1.3	-8.68	0.29
207	SLU 24	-957	-5	3735	1.6	-10.15	0.34
207	SLU 25	-907	-5	3557	1.44	-9.5	0.31
207	SLU 26	-862	-5	3398	1.32	-8.93	0.29
207	SLU 27	-975	-5	3803	1.63	-10.4	0.34
207	SLU 28	-924	-5	3625	1.47	-9.75	0.32
207	SLU 29	-964	-5	3762	1.61	-10.27	0.34
207	SLU 30	-914	-5	3584	1.45	-9.62	0.31
207	SLU 31	-1003	-6	3950	1.53	-10.36	0.33
207	SLU 32	-1116	-6	4355	1.83	-11.83	0.39
207	SLU 33	-1065	-6	4177	1.67	-11.18	0.36
207	SLU 34	-1021	-6	4018	1.55	-10.61	0.34
207	SLU 35	-1133	-6	4423	1.86	-12.08	0.39
207	SLU 36	-1083	-6	4245	1.7	-11.43	0.37
207	SLU 37	-1123	-6	4382	1.84	-11.95	0.39
207	SLU 38	-1072	-6	4204	1.68	-11.3	0.36
207	SLU 39	-1155	-6	4513	1.89	-12.16	0.4
207	SLU 40	-1105	-6	4334	1.73	-11.51	0.37
207	SLU 41	-1173	-6	4580	1.91	-12.42	0.4
207	SLU 42	-1123	-6	4402	1.75	-11.77	0.38
207	SLU 43	-971	-5	3791	1.67	-10.18	0.35
207	SLU 44	-887	-6	3494	1.41	-9.1	0.31
207	SLU 45	-999	-5	3900	1.71	-10.57	0.36
207	SLU 46	-949	-6	3721	1.56	-9.92	0.34
207	SLU 47	-905	-6	3562	1.44	-9.36	0.32
207	SLU 48	-1017	-5	3967	1.74	-10.82	0.37
207	SLU 49	-966	-6	3789	1.58	-10.18	0.34
207	SLU 50	-1006	-5	3927	1.72	-10.69	0.36
207	SLU 51	-956	-6	3748	1.57	-10.04	0.34
207	SLU 52	-1045	-6	4114	1.64	-10.79	0.36
207	SLU 53	-1158	-6	4520	1.94	-12.25	0.41
207	SLU 54	-1107	-6	4341	1.79	-11.6	0.38
207	SLU 55	-1063	-6	4182	1.66	-11.04	0.36
207	SLU 56	-1175	-6	4587	1.97	-12.5	0.42
207	SLU 57	-1125	-6	4409	1.81	-11.86	0.39
207	SLU 58	-1165	-6	4547	1.95	-12.37	0.41
207	SLU 59	-1114	-6	4368	1.8	-11.72	0.39
207	SLU 60	-1197	-6	4677	2	-12.59	0.42
207	SLU 61	-1147	-6	4499	1.84	-11.94	0.4
207	SLU 62	-1215	-6	4744	2.03	-12.84	0.43
207	SLU 63	-1165	-7	4566	1.87	-12.19	0.4
207	SLU 64	-1115	-6	4353	1.89	-11.71	0.4
207	SLU 65	-1031	-6	4056	1.62	-10.63	0.36
207	SLU 66	-1143	-6	4462	1.93	-12.09	0.41
207	SLU 67	-1093	-6	4284	1.77	-11.45	0.38
207	SLU 68	-1049	-6	4124	1.65	-10.88	0.36
207	SLU 69	-1161	-6	4530	1.96	-12.35	0.41
207	SLU 70	-1110	-6	4351	1.8	-11.7	0.39
207	SLU 71	-1150	-6	4489	1.94	-12.21	0.41
207	SLU 72	-1100	-6	4311	1.78	-11.57	0.38
207	SLU 73	-1189	-7	4676	1.85	-12.31	0.4
207	SLU 74	-1302	-7	5082	2.16	-13.78	0.46
207	SLU 75	-1251	-7	4904	2	-13.13	0.43
207	SLU 76	-1207	-7	4744	1.88	-12.56	0.41
207	SLU 77	-1319	-7	5150	2.18	-14.03	0.46
207	SLU 78	-1269	-7	4971	2.03	-13.38	0.44
207	SLU 79	-1309	-7	5109	2.17	-13.9	0.46
207	SLU 80	-1258	-7	4931	2.01	-13.25	0.43
207	SLU 81	-1341	-7	5239	2.22	-14.11	0.47
207	SLU 82	-1291	-7	5061	2.06	-13.46	0.44
207	SLU 83	-1359	-7	5307	2.24	-14.36	0.47
207	SLU 84	-1309	-7	5129	2.08	-13.72	0.45
207	SLE RA 1	-826	-4	3225	1.4	-8.67	0.3
207	SLE RA 2	-770	-5	3027	1.23	-7.95	0.27
207	SLE RA 3	-845	-5	3297	1.43	-8.93	0.3
207	SLE RA 4	-811	-5	3179	1.33	-8.5	0.29
207	SLE RA 5	-782	-5	3072	1.25	-8.12	0.27
207	SLE RA 6	-857	-5	3343	1.45	-9.1	0.31
207	SLE RA 7	-823	-5	3224	1.34	-8.67	0.29
207	SLE RA 8	-849	-5	3316	1.44	-9.01	0.3
207	SLE RA 9	-816	-5	3197	1.33	-8.58	0.29
207	SLE RA 10	-876	-5	3440	1.38	-9.07	0.3
207	SLE RA 11	-950	-5	3711	1.59	-10.05	0.34
207	SLE RA 12	-917	-5	3592	1.48	-9.62	0.32



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
207	SLE RA 13	-887	-5	3486	1.4	-9.24	0.3
207	SLE RA 14	-962	-5	3756	1.6	-10.22	0.34
207	SLE RA 15	-929	-5	3637	1.5	-9.79	0.32
207	SLE RA 16	-955	-5	3729	1.59	-10.13	0.34
207	SLE RA 17	-922	-5	3610	1.49	-9.7	0.32
207	SLE RA 18	-977	-5	3816	1.62	-10.27	0.34
207	SLE RA 19	-943	-5	3697	1.52	-9.84	0.33
207	SLE RA 20	-989	-5	3861	1.64	-10.44	0.35
207	SLE RA 21	-955	-5	3742	1.54	-10.01	0.33
207	SLE FR 1	-826	-4	3225	1.4	-8.67	0.3
207	SLE FR 2	-815	-4	3186	1.37	-8.53	0.29
207	SLE FR 3	-831	-4	3243	1.41	-8.74	0.3
207	SLE FR 4	-860	-5	3363	1.44	-9.01	0.3
207	SLE FR 5	-876	-5	3420	1.48	-9.22	0.31
207	SLE FR 6	-901	-5	3520	1.51	-9.47	0.32
207	SLE QP 1	-826	-4	3225	1.4	-8.67	0.3
207	SLE QP 2	-871	-5	3402	1.47	-9.15	0.31
207	SLD 1	-598	3	2458	-1.58	-0.84	0.08
207	SLD 2	-598	3	2458	-1.58	-0.84	0.08
207	SLD 3	-694	27	2781	0.63	-2.58	-0.55
207	SLD 4	-694	27	2781	0.63	-2.58	-0.55
207	SLD 5	-643	-38	2628	-2.8	-4.02	1.2
207	SLD 6	-643	-38	2628	-2.8	-4.02	1.2
207	SLD 7	-965	41	3706	4.58	-9.82	-0.91
207	SLD 8	-965	41	3706	4.58	-9.82	-0.91
207	SLD 9	-778	-50	3098	-1.64	-8.49	1.53
207	SLD 10	-778	-50	3098	-1.64	-8.49	1.53
207	SLD 11	-1100	29	4176	5.74	-14.28	-0.58
207	SLD 12	-1100	29	4176	5.74	-14.28	-0.58
207	SLD 13	-1048	-36	4023	2.31	-15.72	1.17
207	SLD 14	-1048	-36	4023	2.31	-15.72	1.17
207	SLD 15	-1145	-12	4347	4.52	-17.46	0.54
207	SLD 16	-1145	-12	4347	4.52	-17.46	0.54
207	SLV 1	-228	13	1181	-6.15	10.24	-0.23
207	SLV 2	-228	13	1181	-6.15	10.24	-0.23
207	SLV 3	-462	74	1965	-0.52	6.08	-1.84
207	SLV 4	-462	74	1965	-0.52	6.08	-1.84
207	SLV 5	-324	-91	1547	-9.36	2.97	2.59
207	SLV 6	-324	-91	1547	-9.36	2.97	2.59
207	SLV 7	-1103	111	4160	9.41	-10.89	-2.78
207	SLV 8	-1103	111	4160	9.41	-10.89	-2.78
207	SLV 9	-639	-120	2644	-6.47	-7.42	3.4
207	SLV 10	-639	-120	2644	-6.47	-7.42	3.4
207	SLV 11	-1418	82	5258	12.3	-21.27	-1.97
207	SLV 12	-1418	82	5258	12.3	-21.27	-1.97
207	SLV 13	-1280	-83	4839	3.46	-24.39	2.47
207	SLV 14	-1280	-83	4839	3.46	-24.39	2.47
207	SLV 15	-1514	-23	5623	9.09	-28.55	0.85
207	SLV 16	-1514	-23	5623	9.09	-28.55	0.85
208	SLU 1	635	1	2671	-0.34	10.48	0.06
208	SLU 2	648	2	2662	-0.56	11.46	0.11
208	SLU 3	638	1	2705	-0.36	10.21	0.06
208	SLU 4	646	2	2699	-0.49	10.79	0.09
208	SLU 5	649	2	2680	-0.58	11.25	0.11
208	SLU 6	638	1	2722	-0.37	10	0.06
208	SLU 7	646	2	2717	-0.51	10.59	0.09
208	SLU 8	636	1	2706	-0.37	10.06	0.06
208	SLU 9	644	2	2701	-0.5	10.65	0.09
208	SLU 10	745	2	3122	-0.59	12.43	0.11
208	SLU 11	734	1	3165	-0.39	11.17	0.07
208	SLU 12	742	2	3159	-0.52	11.76	0.09
208	SLU 13	745	2	3140	-0.6	12.22	0.11
208	SLU 14	734	1	3182	-0.4	10.96	0.07
208	SLU 15	742	2	3177	-0.53	11.55	0.1
208	SLU 16	732	1	3166	-0.39	11.03	0.07
208	SLU 17	740	2	3161	-0.53	11.61	0.1
208	SLU 18	773	1	3328	-0.38	11.86	0.06
208	SLU 19	781	2	3323	-0.51	12.45	0.09
208	SLU 20	773	1	3346	-0.39	11.65	0.07
208	SLU 21	781	2	3340	-0.53	12.24	0.09
208	SLU 22	718	1	3074	-0.38	11.22	0.06
208	SLU 23	732	2	3065	-0.61	12.2	0.11
208	SLU 24	721	1	3107	-0.4	10.94	0.07
208	SLU 25	729	2	3102	-0.54	11.53	0.1
208	SLU 26	732	2	3082	-0.62	11.99	0.11
208	SLU 27	721	1	3125	-0.41	10.73	0.07
208	SLU 28	729	2	3119	-0.55	11.32	0.1
208	SLU 29	719	1	3109	-0.41	10.8	0.07
208	SLU 30	727	2	3103	-0.54	11.39	0.1
208	SLU 31	828	2	3525	-0.63	13.16	0.12
208	SLU 32	817	1	3567	-0.43	11.91	0.07
208	SLU 33	825	2	3562	-0.56	12.5	0.1
208	SLU 34	828	2	3542	-0.65	12.96	0.12
208	SLU 35	817	1	3585	-0.44	11.7	0.07
208	SLU 36	826	2	3579	-0.58	12.29	0.1
208	SLU 37	815	1	3569	-0.44	11.76	0.07
208	SLU 38	823	2	3563	-0.57	12.35	0.1
208	SLU 39	856	1	3731	-0.42	12.6	0.07
208	SLU 40	864	2	3725	-0.56	13.18	0.1
208	SLU 41	856	1	3748	-0.43	12.39	0.07



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
208	SLU 42	864	2	3743	-0.57	12.98	0.1
208	SLU 43	797	1	3335	-0.43	13.37	0.07
208	SLU 44	810	3	3326	-0.65	14.36	0.12
208	SLU 45	800	1	3368	-0.45	13.1	0.08
208	SLU 46	808	2	3363	-0.58	13.69	0.1
208	SLU 47	811	3	3343	-0.66	14.15	0.12
208	SLU 48	800	1	3386	-0.46	12.89	0.08
208	SLU 49	808	2	3380	-0.59	13.48	0.11
208	SLU 50	798	1	3370	-0.45	12.95	0.08
208	SLU 51	806	2	3364	-0.59	13.54	0.11
208	SLU 52	907	3	3786	-0.68	15.32	0.12
208	SLU 53	896	1	3828	-0.47	14.06	0.08
208	SLU 54	904	2	3823	-0.61	14.65	0.11
208	SLU 55	907	3	3803	-0.69	15.11	0.13
208	SLU 56	896	1	3846	-0.49	13.85	0.08
208	SLU 57	904	2	3840	-0.62	14.44	0.11
208	SLU 58	894	1	3830	-0.48	13.92	0.08
208	SLU 59	902	2	3824	-0.61	14.51	0.11
208	SLU 60	935	1	3992	-0.47	14.75	0.08
208	SLU 61	943	2	3986	-0.6	15.34	0.11
208	SLU 62	935	1	4009	-0.48	14.54	0.08
208	SLU 63	943	2	4004	-0.61	15.13	0.11
208	SLU 64	880	1	3737	-0.47	14.11	0.08
208	SLU 65	894	3	3728	-0.69	15.09	0.13
208	SLU 66	883	1	3771	-0.49	13.84	0.08
208	SLU 67	891	2	3765	-0.62	14.42	0.11
208	SLU 68	894	3	3746	-0.71	14.88	0.13
208	SLU 69	883	1	3788	-0.5	13.63	0.09
208	SLU 70	891	2	3783	-0.64	14.22	0.11
208	SLU 71	881	1	3772	-0.5	13.69	0.08
208	SLU 72	889	2	3767	-0.63	14.28	0.11
208	SLU 73	990	3	4188	-0.72	16.06	0.13
208	SLU 74	979	1	4231	-0.52	14.8	0.09
208	SLU 75	987	2	4225	-0.65	15.39	0.12
208	SLU 76	990	3	4206	-0.73	15.85	0.13
208	SLU 77	980	1	4248	-0.53	14.59	0.09
208	SLU 78	988	2	4243	-0.66	15.18	0.12
208	SLU 79	977	1	4232	-0.52	14.66	0.09
208	SLU 80	986	2	4227	-0.66	15.24	0.12
208	SLU 81	1018	1	4394	-0.51	15.49	0.09
208	SLU 82	1026	2	4389	-0.64	16.08	0.11
208	SLU 83	1018	1	4412	-0.52	15.28	0.09
208	SLU 84	1026	2	4406	-0.66	15.87	0.12
208	SLE RA 1	659	1	2786	-0.35	10.69	0.06
208	SLE RA 2	668	2	2780	-0.5	11.35	0.09
208	SLE RA 3	660	1	2809	-0.36	10.51	0.06
208	SLE RA 4	666	1	2805	-0.45	10.9	0.08
208	SLE RA 5	668	2	2792	-0.51	11.21	0.09
208	SLE RA 6	661	1	2820	-0.37	10.37	0.06
208	SLE RA 7	666	1	2817	-0.46	10.76	0.08
208	SLE RA 8	659	1	2810	-0.37	10.41	0.06
208	SLE RA 9	665	1	2806	-0.46	10.81	0.08
208	SLE RA 10	732	2	3087	-0.52	11.99	0.09
208	SLE RA 11	725	1	3115	-0.38	11.15	0.06
208	SLE RA 12	730	1	3112	-0.47	11.54	0.08
208	SLE RA 13	732	2	3099	-0.53	11.85	0.1
208	SLE RA 14	725	1	3127	-0.39	11.01	0.07
208	SLE RA 15	730	1	3123	-0.48	11.4	0.09
208	SLE RA 16	724	1	3116	-0.39	11.06	0.07
208	SLE RA 17	729	1	3113	-0.48	11.45	0.08
208	SLE RA 18	751	1	3224	-0.38	11.61	0.06
208	SLE RA 19	756	1	3221	-0.47	12	0.08
208	SLE RA 20	751	1	3236	-0.39	11.47	0.07
208	SLE RA 21	756	1	3232	-0.48	11.86	0.08
208	SLE FR 1	659	1	2786	-0.35	10.69	0.06
208	SLE FR 2	661	1	2785	-0.38	10.82	0.07
208	SLE FR 3	659	1	2791	-0.35	10.64	0.06
208	SLE FR 4	688	1	2917	-0.39	11.1	0.07
208	SLE FR 5	686	1	2922	-0.36	10.91	0.06
208	SLE FR 6	705	1	3005	-0.36	11.15	0.06
208	SLE QP 1	659	1	2786	-0.35	10.69	0.06
208	SLE QP 2	686	1	2918	-0.36	10.97	0.06
208	SLD 1	1302	-12	4623	3.57	33.44	-0.8
208	SLD 2	1302	-12	4623	3.57	33.44	-0.8
208	SLD 3	1228	34	4414	-1.69	30.7	0.39
208	SLD 4	1228	34	4414	-1.69	30.7	0.39
208	SLD 5	983	-73	3745	8.81	21.86	-1.99
208	SLD 6	983	-73	3745	8.81	21.86	-1.99
208	SLD 7	737	81	3051	-8.75	12.74	1.96
208	SLD 8	737	81	3051	-8.75	12.74	1.96
208	SLD 9	636	-79	2785	8.03	9.2	-1.84
208	SLD 10	636	-79	2785	8.03	9.2	-1.84
208	SLD 11	390	74	2090	-9.53	0.08	2.12
208	SLD 12	390	74	2090	-9.53	0.08	2.12
208	SLD 13	144	-32	1421	0.98	-8.77	-0.27
208	SLD 14	144	-32	1421	0.98	-8.77	-0.27
208	SLD 15	71	14	1213	-4.29	-11.5	0.92
208	SLD 16	71	14	1213	-4.29	-11.5	0.92
208	SLV 1	2119	-32	6886	9.62	63.26	-2.12
208	SLV 2	2119	-32	6886	9.62	63.26	-2.12



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
208	SLV 3	1947	86	6399	-3.82	56.88	0.91
208	SLV 4	1947	86	6399	-3.82	56.88	0.91
208	SLV 5	1376	-188	4846	23.03	36.33	-5.2
208	SLV 6	1376	-188	4846	23.03	36.33	-5.2
208	SLV 7	805	205	3225	-21.79	15.07	4.92
208	SLV 8	805	205	3225	-21.79	15.07	4.92
208	SLV 9	568	-204	2611	21.07	6.87	-4.79
208	SLV 10	568	-204	2611	21.07	6.87	-4.79
208	SLV 11	-3	190	990	-23.75	-14.4	5.32
208	SLV 12	-3	190	990	-23.75	-14.4	5.32
208	SLV 13	-575	-84	-564	3.11	-34.95	-0.79
208	SLV 14	-575	-84	-564	3.11	-34.95	-0.79
208	SLV 15	-746	34	-1050	-10.34	-41.33	2.25
208	SLV 16	-746	34	-1050	-10.34	-41.33	2.25
209	SLU 1	296	1	4959	-0.56	15.86	0
209	SLU 2	335	1	4888	-0.63	17.8	-0.01
209	SLU 3	286	1	5051	-0.59	15.31	0
209	SLU 4	309	1	5009	-0.63	16.48	0
209	SLU 5	328	1	4942	-0.65	17.4	-0.01
209	SLU 6	278	1	5105	-0.61	14.91	0
209	SLU 7	302	1	5063	-0.65	16.08	-0.01
209	SLU 8	281	1	5066	-0.6	15.05	0
209	SLU 9	305	1	5023	-0.64	16.22	-0.01
209	SLU 10	348	1	5792	-0.68	18.58	-0.01
209	SLU 11	299	1	5955	-0.64	16.08	0
209	SLU 12	322	1	5913	-0.69	17.25	-0.01
209	SLU 13	341	1	5846	-0.7	18.17	-0.01
209	SLU 14	291	1	6009	-0.67	15.68	-0.01
209	SLU 15	315	1	5966	-0.71	16.85	-0.01
209	SLU 16	294	1	5970	-0.66	15.83	0
209	SLU 17	318	1	5927	-0.7	16.99	-0.01
209	SLU 18	314	1	6250	-0.64	16.96	0
209	SLU 19	338	1	6208	-0.68	18.13	-0.01
209	SLU 20	307	1	6304	-0.66	16.56	-0.01
209	SLU 21	331	1	6261	-0.7	17.73	-0.01
209	SLU 22	305	1	5756	-0.64	16.43	0
209	SLU 23	344	1	5686	-0.71	18.37	-0.01
209	SLU 24	295	1	5849	-0.67	15.88	-0.01
209	SLU 25	318	1	5807	-0.71	17.05	-0.01
209	SLU 26	337	1	5739	-0.73	17.97	-0.01
209	SLU 27	287	1	5902	-0.69	15.48	-0.01
209	SLU 28	311	1	5860	-0.73	16.64	-0.01
209	SLU 29	290	1	5863	-0.68	15.62	-0.01
209	SLU 30	314	1	5821	-0.72	16.79	-0.01
209	SLU 31	357	2	6590	-0.76	19.15	-0.01
209	SLU 32	308	1	6753	-0.72	16.65	-0.01
209	SLU 33	331	1	6710	-0.77	17.82	-0.01
209	SLU 34	350	2	6643	-0.78	18.74	-0.01
209	SLU 35	300	1	6806	-0.75	16.25	-0.01
209	SLU 36	324	1	6764	-0.79	17.42	-0.01
209	SLU 37	303	1	6767	-0.74	16.4	-0.01
209	SLU 38	327	1	6725	-0.78	17.56	-0.01
209	SLU 39	323	1	7048	-0.71	17.53	-0.01
209	SLU 40	347	1	7005	-0.76	18.7	-0.01
209	SLU 41	316	1	7101	-0.74	17.13	-0.01
209	SLU 42	340	1	7059	-0.78	18.3	-0.01
209	SLU 43	381	1	6173	-0.7	20.42	-0.01
209	SLU 44	421	2	6103	-0.77	22.36	-0.01
209	SLU 45	371	1	6266	-0.73	19.87	-0.01
209	SLU 46	395	1	6223	-0.77	21.04	-0.01
209	SLU 47	414	2	6156	-0.79	21.96	-0.01
209	SLU 48	364	1	6319	-0.75	19.47	-0.01
209	SLU 49	388	1	6277	-0.79	20.64	-0.01
209	SLU 50	367	1	6280	-0.74	19.61	-0.01
209	SLU 51	390	1	6238	-0.78	20.78	-0.01
209	SLU 52	434	2	7006	-0.82	23.14	-0.01
209	SLU 53	384	1	7170	-0.78	20.65	-0.01
209	SLU 54	408	1	7127	-0.83	21.81	-0.01
209	SLU 55	426	2	7060	-0.84	22.74	-0.01
209	SLU 56	377	1	7223	-0.81	20.24	-0.01
209	SLU 57	401	2	7181	-0.85	21.41	-0.01
209	SLU 58	380	1	7184	-0.8	20.39	-0.01
209	SLU 59	403	2	7142	-0.84	21.56	-0.01
209	SLU 60	400	1	7464	-0.78	21.52	-0.01
209	SLU 61	423	1	7422	-0.82	22.69	-0.01
209	SLU 62	392	1	7518	-0.8	21.12	-0.01
209	SLU 63	416	2	7475	-0.84	22.29	-0.01
209	SLU 64	390	1	6971	-0.78	20.99	-0.01
209	SLU 65	430	2	6900	-0.85	22.93	-0.01
209	SLU 66	380	1	7063	-0.81	20.44	-0.01
209	SLU 67	404	2	7021	-0.85	21.61	-0.01
209	SLU 68	423	2	6954	-0.87	22.53	-0.01
209	SLU 69	373	1	7117	-0.83	20.04	-0.01
209	SLU 70	397	2	7074	-0.87	21.21	-0.01
209	SLU 71	376	1	7078	-0.82	20.18	-0.01
209	SLU 72	400	2	7035	-0.86	21.35	-0.01
209	SLU 73	443	2	7804	-0.9	23.71	-0.01
209	SLU 74	393	1	7967	-0.86	21.21	-0.01
209	SLU 75	417	2	7925	-0.91	22.38	-0.01
209	SLU 76	435	2	7857	-0.92	23.31	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
209	SLU 77	386	1	8021	-0.89	20.81	-0.01
209	SLU 78	410	2	7978	-0.93	21.98	-0.01
209	SLU 79	389	1	7981	-0.88	20.96	-0.01
209	SLU 80	412	2	7939	-0.92	22.12	-0.01
209	SLU 81	409	1	8262	-0.85	22.09	-0.01
209	SLU 82	432	2	8220	-0.9	23.26	-0.01
209	SLU 83	401	1	8315	-0.88	21.69	-0.01
209	SLU 84	425	2	8273	-0.92	22.86	-0.01
209	SLE RA 1	298	1	5187	-0.58	16.02	0
209	SLE RA 2	325	1	5140	-0.63	17.32	0
209	SLE RA 3	292	1	5248	-0.6	15.65	0
209	SLE RA 4	307	1	5220	-0.63	16.43	0
209	SLE RA 5	320	1	5175	-0.64	17.05	-0.01
209	SLE RA 6	287	1	5284	-0.62	15.39	0
209	SLE RA 7	303	1	5256	-0.64	16.16	0
209	SLE RA 8	289	1	5258	-0.61	15.48	0
209	SLE RA 9	304	1	5230	-0.64	16.26	0
209	SLE RA 10	333	1	5742	-0.66	17.83	-0.01
209	SLE RA 11	300	1	5851	-0.64	16.17	0
209	SLE RA 12	316	1	5823	-0.67	16.95	-0.01
209	SLE RA 13	328	1	5778	-0.68	17.56	-0.01
209	SLE RA 14	295	1	5887	-0.65	15.9	0
209	SLE RA 15	311	1	5858	-0.68	16.68	-0.01
209	SLE RA 16	297	1	5861	-0.65	16	0
209	SLE RA 17	313	1	5832	-0.67	16.78	-0.01
209	SLE RA 18	310	1	6048	-0.63	16.76	0
209	SLE RA 19	326	1	6019	-0.66	17.53	-0.01
209	SLE RA 20	306	1	6083	-0.65	16.49	0
209	SLE RA 21	321	1	6055	-0.67	17.27	-0.01
209	SLE FR 1	298	1	5187	-0.58	16.02	0
209	SLE FR 2	303	1	5177	-0.59	16.28	0
209	SLE FR 3	296	1	5201	-0.59	15.91	0
209	SLE FR 4	307	1	5436	-0.61	16.5	0
209	SLE FR 5	300	1	5459	-0.6	16.13	0
209	SLE FR 6	304	1	5617	-0.61	16.39	0
209	SLE QP 1	298	1	5187	-0.58	16.02	0
209	SLE QP 2	302	1	5445	-0.6	16.24	0
209	SLD 1	1025	-7	7271	0.13	57.6	0.02
209	SLD 2	1025	-7	7271	0.13	57.6	0.02
209	SLD 3	936	1	7026	3.23	52.54	0
209	SLD 4	936	1	7026	3.23	52.54	0
209	SLD 5	655	-13	6364	-5.07	36.32	0.03
209	SLD 6	655	-13	6364	-5.07	36.32	0.03
209	SLD 7	356	13	5548	5.25	19.46	-0.03
209	SLD 8	356	13	5548	5.25	19.46	-0.03
209	SLD 9	248	-11	5342	-6.44	13.02	0.03
209	SLD 10	248	-11	5342	-6.44	13.02	0.03
209	SLD 11	-51	15	4526	3.88	-3.84	-0.04
209	SLD 12	-51	15	4526	3.88	-3.84	-0.04
209	SLD 13	-332	1	3864	-4.42	-20.06	-0.01
209	SLD 14	-332	1	3864	-4.42	-20.06	-0.01
209	SLD 15	-422	8	3619	-1.33	-25.12	-0.03
209	SLD 16	-422	8	3619	-1.33	-25.12	-0.03
209	SLV 1	1987	-18	9697	1.41	112.54	0.06
209	SLV 2	1987	-18	9697	1.41	112.54	0.06
209	SLV 3	1777	2	9119	8.74	100.71	0.01
209	SLV 4	1777	2	9119	8.74	100.71	0.01
209	SLV 5	1126	-35	7598	-11.11	63.07	0.09
209	SLV 6	1126	-35	7598	-11.11	63.07	0.09
209	SLV 7	426	31	5670	13.32	23.64	-0.08
209	SLV 8	426	31	5670	13.32	23.64	-0.08
209	SLV 9	178	-30	5220	-14.51	8.84	0.07
209	SLV 10	178	-30	5220	-14.51	8.84	0.07
209	SLV 11	-522	37	3292	9.92	-30.59	-0.1
209	SLV 12	-522	37	3292	9.92	-30.59	-0.1
209	SLV 13	-1173	0	1771	-9.93	-68.23	-0.02
209	SLV 14	-1173	0	1771	-9.93	-68.23	-0.02
209	SLV 15	-1383	20	1193	-2.6	-80.06	-0.07
209	SLV 16	-1383	20	1193	-2.6	-80.06	-0.07
210	SLU 1	-82	0	5127	-0.38	-6.12	0
210	SLU 2	-17	0	5037	-0.05	-3.09	0
210	SLU 3	-107	0	5243	-0.41	-7.43	0
210	SLU 4	-68	0	5189	-0.21	-5.61	0
210	SLU 5	-34	0	5107	-0.07	-3.97	0
210	SLU 6	-124	0	5313	-0.42	-8.31	0
210	SLU 7	-85	0	5259	-0.22	-6.49	0
210	SLU 8	-116	0	5266	-0.42	-7.88	0
210	SLU 9	-77	0	5213	-0.22	-6.06	0
210	SLU 10	-92	0	5991	-0.1	-6.99	0
210	SLU 11	-183	0	6196	-0.46	-11.34	0
210	SLU 12	-144	0	6143	-0.26	-9.52	0
210	SLU 13	-109	0	6061	-0.12	-7.87	0
210	SLU 14	-200	0	6266	-0.47	-12.22	0
210	SLU 15	-161	0	6213	-0.27	-10.39	0
210	SLU 16	-191	0	6220	-0.46	-11.79	0
210	SLU 17	-153	0	6166	-0.27	-9.96	0
210	SLU 18	-189	0	6489	-0.45	-11.7	0
210	SLU 19	-151	0	6435	-0.25	-9.88	0
210	SLU 20	-207	0	6559	-0.47	-12.58	0
210	SLU 21	-168	0	6505	-0.27	-10.76	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
210	SLU 22	-152	0	5973	-0.45	-9.79	0
210	SLU 23	-88	0	5884	-0.12	-6.76	0
210	SLU 24	-178	0	6089	-0.47	-11.1	0
210	SLU 25	-139	0	6036	-0.27	-9.28	0
210	SLU 26	-105	0	5954	-0.13	-7.64	0
210	SLU 27	-195	1	6159	-0.49	-11.98	0
210	SLU 28	-156	0	6105	-0.29	-10.16	0
210	SLU 29	-187	0	6113	-0.48	-11.55	0
210	SLU 30	-148	0	6059	-0.28	-9.73	0
210	SLU 31	-163	0	6837	-0.16	-10.66	0
210	SLU 32	-253	1	7043	-0.52	-15.01	0
210	SLU 33	-214	0	6989	-0.32	-13.19	0
210	SLU 34	-180	0	6907	-0.18	-11.54	0
210	SLU 35	-270	1	7112	-0.54	-15.89	0
210	SLU 36	-232	1	7059	-0.34	-14.07	0
210	SLU 37	-262	1	7066	-0.53	-15.46	0
210	SLU 38	-223	1	7013	-0.33	-13.64	0
210	SLU 39	-260	1	7335	-0.52	-15.37	0
210	SLU 40	-221	0	7282	-0.32	-13.55	0
210	SLU 41	-277	1	7405	-0.53	-16.25	0
210	SLU 42	-238	1	7351	-0.33	-14.43	0
210	SLU 43	-82	0	6375	-0.48	-6.7	0
210	SLU 44	-17	0	6285	-0.15	-3.67	0
210	SLU 45	-107	1	6491	-0.5	-8.01	0
210	SLU 46	-68	0	6437	-0.3	-6.19	0
210	SLU 47	-34	0	6355	-0.16	-4.55	0
210	SLU 48	-124	1	6560	-0.52	-8.89	0
210	SLU 49	-86	0	6507	-0.32	-7.07	0
210	SLU 50	-116	1	6514	-0.51	-8.46	0
210	SLU 51	-77	0	6461	-0.31	-6.64	0
210	SLU 52	-93	0	7239	-0.19	-7.57	0
210	SLU 53	-183	1	7444	-0.55	-11.91	0
210	SLU 54	-144	1	7391	-0.35	-10.09	0
210	SLU 55	-110	0	7309	-0.21	-8.45	0
210	SLU 56	-200	1	7514	-0.57	-12.79	0
210	SLU 57	-161	1	7460	-0.37	-10.97	0
210	SLU 58	-192	1	7468	-0.56	-12.36	0
210	SLU 59	-153	1	7414	-0.36	-10.54	0
210	SLU 60	-190	1	7737	-0.55	-12.28	0
210	SLU 61	-151	1	7683	-0.35	-10.46	0
210	SLU 62	-207	1	7807	-0.56	-13.16	0
210	SLU 63	-168	1	7753	-0.36	-11.34	0
210	SLU 64	-153	1	7221	-0.54	-10.37	0
210	SLU 65	-88	0	7132	-0.21	-7.34	0
210	SLU 66	-178	1	7337	-0.57	-11.68	0
210	SLU 67	-139	1	7283	-0.37	-9.86	0
210	SLU 68	-105	1	7201	-0.23	-8.22	0
210	SLU 69	-195	1	7407	-0.58	-12.56	0
210	SLU 70	-156	1	7353	-0.38	-10.74	0
210	SLU 71	-187	1	7360	-0.57	-12.13	0
210	SLU 72	-148	1	7307	-0.37	-10.31	0
210	SLU 73	-163	1	8085	-0.26	-11.24	0
210	SLU 74	-254	1	8291	-0.61	-15.59	0
210	SLU 75	-215	1	8237	-0.41	-13.76	0
210	SLU 76	-180	1	8155	-0.27	-12.12	0
210	SLU 77	-271	1	8360	-0.63	-16.47	0
210	SLU 78	-232	1	8307	-0.43	-14.64	0
210	SLU 79	-262	1	8314	-0.62	-16.04	0
210	SLU 80	-223	1	8260	-0.42	-14.21	0
210	SLU 81	-260	1	8583	-0.61	-15.95	0
210	SLU 82	-222	1	8530	-0.41	-14.13	0
210	SLU 83	-278	1	8653	-0.63	-16.83	0
210	SLU 84	-239	1	8599	-0.43	-15.01	0
210	SLE RA 1	-102	0	5368	-0.4	-7.17	0
210	SLE RA 2	-59	0	5309	-0.18	-5.15	0
210	SLE RA 3	-119	0	5446	-0.42	-8.05	0
210	SLE RA 4	-93	0	5410	-0.29	-6.83	0
210	SLE RA 5	-70	0	5356	-0.19	-5.74	0
210	SLE RA 6	-130	0	5492	-0.43	-8.63	0
210	SLE RA 7	-104	0	5457	-0.3	-7.42	0
210	SLE RA 8	-125	0	5462	-0.42	-8.35	0
210	SLE RA 9	-99	0	5426	-0.29	-7.13	0
210	SLE RA 10	-109	0	5945	-0.21	-7.75	0
210	SLE RA 11	-169	0	6082	-0.45	-10.65	0
210	SLE RA 12	-143	0	6046	-0.32	-9.43	0
210	SLE RA 13	-120	0	5991	-0.22	-8.34	0
210	SLE RA 14	-181	0	6128	-0.46	-11.23	0
210	SLE RA 15	-155	0	6092	-0.33	-10.02	0
210	SLE RA 16	-175	0	6097	-0.46	-10.95	0
210	SLE RA 17	-149	0	6062	-0.32	-9.73	0
210	SLE RA 18	-174	0	6277	-0.45	-10.89	0
210	SLE RA 19	-148	0	6241	-0.32	-9.68	0
210	SLE RA 20	-185	0	6323	-0.46	-11.48	0
210	SLE RA 21	-159	0	6287	-0.33	-10.26	0
210	SLE FR 1	-102	0	5368	-0.4	-7.17	0
210	SLE FR 2	-93	0	5357	-0.36	-6.77	0
210	SLE FR 3	-106	0	5387	-0.41	-7.41	0
210	SLE FR 4	-115	0	5629	-0.37	-7.88	0
210	SLE FR 5	-128	0	5660	-0.42	-8.52	0
210	SLE FR 6	-138	0	5823	-0.43	-9.03	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
210	SLE QP 1	-102	0	5368	-0.4	-7.17	0
210	SLE QP 2	-123	0	5641	-0.42	-8.29	0
210	SLD 1	680	2	6539	-3.08	31.56	-0.01
210	SLD 2	680	2	6539	-3.08	31.56	-0.01
210	SLD 3	799	-11	6383	10.29	37.41	0.05
210	SLD 4	799	-11	6383	10.29	37.41	0.05
210	SLD 5	-63	21	6148	-21.5	-5.2	-0.09
210	SLD 6	-63	21	6148	-21.5	-5.2	-0.09
210	SLD 7	334	-23	5626	23.08	14.29	0.1
210	SLD 8	334	-23	5626	23.08	14.29	0.1
210	SLD 9	-581	24	5656	-23.92	-30.86	-0.1
210	SLD 10	-581	24	5656	-23.92	-30.86	-0.1
210	SLD 11	-184	-20	5134	20.67	-11.38	0.09
210	SLD 12	-184	-20	5134	20.67	-11.38	0.09
210	SLD 13	-1046	12	4899	-11.13	-53.98	-0.05
210	SLD 14	-1046	12	4899	-11.13	-53.98	-0.05
210	SLD 15	-927	-1	4743	2.25	-48.14	0.01
210	SLD 16	-927	-1	4743	2.25	-48.14	0.01
210	SLV 1	1745	5	7739	-7.27	84.39	-0.03
210	SLV 2	1745	5	7739	-7.27	84.39	-0.03
210	SLV 3	2026	-29	7358	26.86	98.14	0.12
210	SLV 4	2026	-29	7358	26.86	98.14	0.12
210	SLV 5	12	52	6848	-54.23	-1.33	-0.23
210	SLV 6	12	52	6848	-54.23	-1.33	-0.23
210	SLV 7	946	-59	5578	59.53	44.48	0.26
210	SLV 8	946	-59	5578	59.53	44.48	0.26
210	SLV 9	-1193	60	5704	-60.36	-61.06	-0.26
210	SLV 10	-1193	60	5704	-60.36	-61.06	-0.26
210	SLV 11	-259	-51	4434	53.4	-15.25	0.23
210	SLV 12	-259	-51	4434	53.4	-15.25	0.23
210	SLV 13	-2272	30	3924	-27.69	-114.71	-0.12
210	SLV 14	-2272	30	3924	-27.69	-114.71	-0.12
210	SLV 15	-1992	-4	3543	6.43	-100.97	0.03
210	SLV 16	-1992	-4	3543	6.43	-100.97	0.03
211	SLU 1	-313	0	5229	-0.25	-13.52	0
211	SLU 2	-240	0	5152	0.4	-10.41	0
211	SLU 3	-347	0	5354	-0.26	-14.99	0
211	SLU 4	-303	0	5308	0.12	-13.13	0
211	SLU 5	-262	0	5228	0.39	-11.39	0
211	SLU 6	-368	0	5431	-0.27	-15.97	0
211	SLU 7	-325	0	5384	0.11	-14.11	0
211	SLU 8	-357	0	5382	-0.27	-15.47	0
211	SLU 9	-313	0	5335	0.12	-13.61	0
211	SLU 10	-369	0	6117	0.36	-15.98	0
211	SLU 11	-475	0	6319	-0.3	-20.57	0
211	SLU 12	-431	0	6273	0.08	-18.7	0
211	SLU 13	-391	0	6193	0.35	-16.96	0
211	SLU 14	-497	0	6396	-0.31	-21.55	0
211	SLU 15	-453	0	6349	0.07	-19.68	0
211	SLU 16	-486	0	6346	-0.31	-21.05	0
211	SLU 17	-442	0	6300	0.08	-19.18	0
211	SLU 18	-497	0	6607	-0.3	-21.48	0
211	SLU 19	-453	0	6561	0.08	-19.62	0
211	SLU 20	-519	0	6684	-0.32	-22.46	0
211	SLU 21	-475	0	6637	0.07	-20.59	0
211	SLU 22	-431	0	6088	-0.3	-18.61	0
211	SLU 23	-358	0	6011	0.35	-15.5	0
211	SLU 24	-464	0	6213	-0.31	-20.09	0
211	SLU 25	-420	0	6167	0.07	-18.22	0
211	SLU 26	-380	0	6087	0.34	-16.48	0
211	SLU 27	-486	0	6289	-0.32	-21.06	0
211	SLU 28	-442	0	6243	0.06	-19.2	0
211	SLU 29	-474	0	6240	-0.32	-20.57	0
211	SLU 30	-431	0	6194	0.07	-18.7	0
211	SLU 31	-486	0	6976	0.31	-21.08	0
211	SLU 32	-592	0	7178	-0.35	-25.66	0
211	SLU 33	-548	0	7132	0.03	-23.8	0
211	SLU 34	-508	0	7052	0.3	-22.05	0
211	SLU 35	-614	0	7254	-0.36	-26.64	0
211	SLU 36	-570	0	7208	0.02	-24.77	0
211	SLU 37	-603	0	7205	-0.36	-26.14	0
211	SLU 38	-559	0	7159	0.03	-24.28	0
211	SLU 39	-614	0	7466	-0.35	-26.58	0
211	SLU 40	-570	0	7420	0.03	-24.71	0
211	SLU 41	-636	0	7542	-0.37	-27.55	0
211	SLU 42	-592	0	7496	0.02	-25.69	0
211	SLU 43	-367	0	6503	-0.3	-15.83	0
211	SLU 44	-294	0	6426	0.34	-12.72	0
211	SLU 45	-400	0	6629	-0.32	-17.3	0
211	SLU 46	-357	0	6582	0.07	-15.44	0
211	SLU 47	-316	0	6503	0.33	-13.69	0
211	SLU 48	-422	0	6705	-0.33	-18.28	0
211	SLU 49	-379	0	6659	0.06	-16.41	0
211	SLU 50	-411	0	6656	-0.33	-17.78	0
211	SLU 51	-367	0	6610	0.06	-15.92	0
211	SLU 52	-423	0	7391	0.3	-18.29	0
211	SLU 53	-529	0	7594	-0.36	-22.88	0
211	SLU 54	-485	0	7547	0.03	-21.01	0
211	SLU 55	-445	0	7467	0.29	-19.27	0
211	SLU 56	-551	0	7670	-0.37	-23.85	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
211	SLU 57	-507	0	7624	0.02	-21.99	0
211	SLU 58	-539	0	7621	-0.37	-23.36	0
211	SLU 59	-496	0	7575	0.02	-21.49	0
211	SLU 60	-551	0	7882	-0.36	-23.79	0
211	SLU 61	-507	0	7835	0.03	-21.93	0
211	SLU 62	-572	0	7958	-0.37	-24.77	0
211	SLU 63	-529	0	7912	0.01	-22.9	0
211	SLU 64	-484	0	7362	-0.35	-20.92	0
211	SLU 65	-412	0	7285	0.29	-17.81	0
211	SLU 66	-518	0	7487	-0.37	-22.4	0
211	SLU 67	-474	0	7441	0.02	-20.53	0
211	SLU 68	-433	0	7361	0.28	-18.79	0
211	SLU 69	-539	0	7564	-0.38	-23.37	0
211	SLU 70	-496	0	7517	0.01	-21.51	0
211	SLU 71	-528	0	7515	-0.38	-22.87	0
211	SLU 72	-484	0	7468	0.01	-21.01	0
211	SLU 73	-540	0	8250	0.25	-23.39	0
211	SLU 74	-646	0	8452	-0.41	-27.97	0
211	SLU 75	-602	0	8406	-0.02	-26.11	0
211	SLU 76	-562	0	8326	0.24	-24.36	0
211	SLU 77	-668	0	8529	-0.42	-28.95	0
211	SLU 78	-624	0	8482	-0.03	-27.08	0
211	SLU 79	-657	0	8479	-0.42	-28.45	0
211	SLU 80	-613	0	8433	-0.03	-26.58	0
211	SLU 81	-668	0	8740	-0.41	-28.88	0
211	SLU 82	-624	0	8694	-0.02	-27.02	0
211	SLU 83	-690	0	8817	-0.42	-29.86	0
211	SLU 84	-646	0	8770	-0.04	-28	0
211	SLE RA 1	-347	0	5474	-0.26	-14.97	0
211	SLE RA 2	-298	0	5423	0.17	-12.9	0
211	SLE RA 3	-369	0	5558	-0.27	-15.96	0
211	SLE RA 4	-340	0	5527	-0.01	-14.71	0
211	SLE RA 5	-313	0	5474	0.16	-13.55	0
211	SLE RA 6	-384	0	5609	-0.28	-16.61	0
211	SLE RA 7	-354	0	5578	-0.02	-15.36	0
211	SLE RA 8	-376	0	5576	-0.28	-16.28	0
211	SLE RA 9	-347	0	5545	-0.02	-15.03	0
211	SLE RA 10	-384	0	6066	0.14	-16.62	0
211	SLE RA 11	-455	0	6201	-0.3	-19.67	0
211	SLE RA 12	-425	0	6170	-0.04	-18.43	0
211	SLE RA 13	-398	0	6117	0.13	-17.27	0
211	SLE RA 14	-469	0	6252	-0.31	-20.33	0
211	SLE RA 15	-440	0	6221	-0.05	-19.08	0
211	SLE RA 16	-462	0	6219	-0.3	-19.99	0
211	SLE RA 17	-432	0	6189	-0.05	-18.75	0
211	SLE RA 18	-469	0	6393	-0.3	-20.28	0
211	SLE RA 19	-440	0	6362	-0.04	-19.04	0
211	SLE RA 20	-484	0	6444	-0.31	-20.93	0
211	SLE RA 21	-455	0	6413	-0.05	-19.69	0
211	SLE FR 1	-347	0	5474	-0.26	-14.97	0
211	SLE FR 2	-337	0	5464	-0.18	-14.56	0
211	SLE FR 3	-353	0	5495	-0.26	-15.23	0
211	SLE FR 4	-374	0	5740	-0.19	-16.15	0
211	SLE FR 5	-389	0	5770	-0.28	-16.83	0
211	SLE FR 6	-408	0	5934	-0.28	-17.63	0
211	SLE QP 1	-347	0	5474	-0.26	-14.97	0
211	SLE QP 2	-384	0	5750	-0.27	-16.57	0
211	SLD 1	490	5	6244	-5.63	23.83	-0.02
211	SLD 2	490	5	6244	-5.63	23.83	-0.02
211	SLD 3	622	-16	6128	16.08	29.83	0.07
211	SLD 4	622	-16	6128	16.08	29.83	0.07
211	SLD 5	-322	33	6073	-34.8	-13.56	-0.14
211	SLD 6	-322	33	6073	-34.8	-13.56	-0.14
211	SLD 7	119	-36	5688	37.55	6.46	0.16
211	SLD 8	119	-36	5688	37.55	6.46	0.16
211	SLD 9	-886	36	5812	-38.1	-39.6	-0.16
211	SLD 10	-886	36	5812	-38.1	-39.6	-0.16
211	SLD 11	-445	-32	5427	34.25	-19.57	0.14
211	SLD 12	-445	-32	5427	34.25	-19.57	0.14
211	SLD 13	-1390	17	5372	-16.62	-62.96	-0.07
211	SLD 14	-1390	17	5372	-16.62	-62.96	-0.07
211	SLD 15	-1257	-4	5256	5.08	-56.96	0.02
211	SLD 16	-1257	-4	5256	5.08	-56.96	0.02
211	SLV 1	1648	11	6907	-14.03	77.36	-0.05
211	SLV 2	1648	11	6907	-14.03	77.36	-0.05
211	SLV 3	1960	-41	6620	41.51	91.51	0.18
211	SLV 4	1960	-41	6620	41.51	91.51	0.18
211	SLV 5	-247	84	6532	-88.65	-9.84	-0.36
211	SLV 6	-247	84	6532	-88.65	-9.84	-0.36
211	SLV 7	792	-92	5576	96.51	37.31	0.4
211	SLV 8	792	-92	5576	96.51	37.31	0.4
211	SLV 9	-1559	93	5924	-97.05	-70.44	-0.4
211	SLV 10	-1559	93	5924	-97.05	-70.44	-0.4
211	SLV 11	-520	-83	4968	88.1	-23.29	0.36
211	SLV 12	-520	-83	4968	88.1	-23.29	0.36
211	SLV 13	-2727	42	4880	-42.06	-124.64	-0.18
211	SLV 14	-2727	42	4880	-42.06	-124.64	-0.18
211	SLV 15	-2415	-11	4593	13.49	-110.49	0.05
211	SLV 16	-2415	-11	4593	13.49	-110.49	0.05
212	SLU 1	-482	0	5258	-0.14	-22.09	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
212	SLU 2	-406	0	5200	0.79	-18.8	0
212	SLU 3	-520	0	5387	-0.15	-23.84	0
212	SLU 4	-475	0	5352	0.4	-21.87	0
212	SLU 5	-431	0	5279	0.78	-19.95	0
212	SLU 6	-545	0	5466	-0.16	-24.99	0
212	SLU 7	-500	0	5432	0.4	-23.01	0
212	SLU 8	-532	0	5416	-0.16	-24.38	0
212	SLU 9	-486	0	5382	0.4	-22.41	0
212	SLU 10	-572	0	6154	0.75	-26.21	0
212	SLU 11	-686	0	6342	-0.18	-31.25	0
212	SLU 12	-640	0	6307	0.37	-29.28	0
212	SLU 13	-597	0	6234	0.75	-27.35	0
212	SLU 14	-711	0	6421	-0.19	-32.4	0
212	SLU 15	-665	0	6386	0.36	-30.42	0
212	SLU 16	-698	0	6371	-0.19	-31.79	0
212	SLU 17	-652	0	6336	0.37	-29.82	0
212	SLU 18	-719	0	6621	-0.19	-32.68	0
212	SLU 19	-673	0	6587	0.37	-30.7	0
212	SLU 20	-744	0	6700	-0.19	-33.82	0
212	SLU 21	-698	0	6666	0.36	-31.85	0
212	SLU 22	-632	0	6109	-0.18	-28.83	0
212	SLU 23	-556	0	6052	0.75	-25.54	0
212	SLU 24	-670	0	6239	-0.19	-30.58	0
212	SLU 25	-625	0	6204	0.37	-28.6	0
212	SLU 26	-581	0	6131	0.74	-26.68	0
212	SLU 27	-695	0	6318	-0.2	-31.72	0
212	SLU 28	-650	0	6283	0.36	-29.75	0
212	SLU 29	-682	0	6268	-0.19	-31.12	0
212	SLU 30	-637	0	6233	0.36	-29.14	0
212	SLU 31	-722	0	7006	0.72	-32.95	0
212	SLU 32	-836	0	7193	-0.22	-37.99	0
212	SLU 33	-791	0	7159	0.33	-36.01	0
212	SLU 34	-747	0	7085	0.71	-34.09	0
212	SLU 35	-861	0	7273	-0.23	-39.13	0
212	SLU 36	-816	0	7238	0.33	-37.16	0
212	SLU 37	-848	0	7222	-0.23	-38.53	0
212	SLU 38	-802	0	7188	0.33	-36.55	0
212	SLU 39	-869	0	7473	-0.22	-39.41	0
212	SLU 40	-823	0	7438	0.33	-37.44	0
212	SLU 41	-894	0	7552	-0.23	-40.56	0
212	SLU 42	-849	0	7518	0.32	-38.58	0
212	SLU 43	-575	0	6543	-0.17	-26.41	0
212	SLU 44	-499	0	6485	0.76	-23.12	0
212	SLU 45	-613	0	6672	-0.18	-28.16	0
212	SLU 46	-568	0	6638	0.37	-26.19	0
212	SLU 47	-524	0	6564	0.75	-24.26	0
212	SLU 48	-638	0	6752	-0.19	-29.31	0
212	SLU 49	-593	0	6717	0.37	-27.33	0
212	SLU 50	-625	0	6701	-0.19	-28.7	0
212	SLU 51	-579	0	6667	0.37	-26.73	0
212	SLU 52	-665	0	7440	0.72	-30.53	0
212	SLU 53	-779	0	7627	-0.21	-35.57	0
212	SLU 54	-733	0	7592	0.34	-33.59	0
212	SLU 55	-690	0	7519	0.72	-31.67	0
212	SLU 56	-804	0	7706	-0.22	-36.71	0
212	SLU 57	-758	0	7671	0.33	-34.74	0
212	SLU 58	-790	0	7656	-0.22	-36.11	0
212	SLU 59	-745	0	7621	0.34	-34.13	0
212	SLU 60	-811	0	7906	-0.22	-37	0
212	SLU 61	-766	0	7872	0.34	-35.02	0
212	SLU 62	-837	0	7986	-0.22	-38.14	0
212	SLU 63	-791	0	7951	0.33	-36.16	0
212	SLU 64	-725	0	7395	-0.21	-33.15	0
212	SLU 65	-649	0	7337	0.72	-29.86	0
212	SLU 66	-763	0	7524	-0.22	-34.9	0
212	SLU 67	-718	0	7489	0.34	-32.92	0
212	SLU 68	-674	0	7416	0.71	-31	0
212	SLU 69	-788	0	7603	-0.23	-36.04	0
212	SLU 70	-743	0	7569	0.33	-34.07	0
212	SLU 71	-775	0	7553	-0.22	-35.44	0
212	SLU 72	-730	0	7519	0.33	-33.46	0
212	SLU 73	-815	0	8291	0.69	-37.26	0
212	SLU 74	-929	0	8478	-0.25	-42.3	0
212	SLU 75	-884	0	8444	0.3	-40.33	0
212	SLU 76	-840	0	8371	0.68	-38.41	0
212	SLU 77	-954	0	8558	-0.26	-43.45	0
212	SLU 78	-909	0	8523	0.3	-41.47	0
212	SLU 79	-941	0	8508	-0.26	-42.84	0
212	SLU 80	-895	0	8473	0.3	-40.87	0
212	SLU 81	-962	0	8758	-0.25	-43.73	0
212	SLU 82	-916	0	8724	0.3	-41.76	0
212	SLU 83	-987	0	8837	-0.26	-44.87	0
212	SLU 84	-941	0	8803	0.29	-42.9	0
212	SLE RA 1	-525	0	5501	-0.15	-24.02	0
212	SLE RA 2	-474	0	5462	0.47	-21.82	0
212	SLE RA 3	-550	0	5587	-0.16	-25.18	0
212	SLE RA 4	-520	0	5564	0.21	-23.87	0
212	SLE RA 5	-491	0	5515	0.46	-22.59	0
212	SLE RA 6	-567	0	5640	-0.17	-25.95	0
212	SLE RA 7	-537	0	5617	0.21	-24.63	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
212	SLE RA 8	-558	0	5607	-0.16	-25.54	0
212	SLE RA 9	-528	0	5584	0.21	-24.23	0
212	SLE RA 10	-585	0	6099	0.44	-26.76	0
212	SLE RA 11	-661	0	6224	-0.18	-30.12	0
212	SLE RA 12	-630	0	6200	0.19	-28.81	0
212	SLE RA 13	-601	0	6152	0.44	-27.52	0
212	SLE RA 14	-677	0	6276	-0.19	-30.89	0
212	SLE RA 15	-647	0	6253	0.18	-29.57	0
212	SLE RA 16	-668	0	6243	-0.18	-30.48	0
212	SLE RA 17	-638	0	6220	0.19	-29.17	0
212	SLE RA 18	-682	0	6410	-0.18	-31.07	0
212	SLE RA 19	-652	0	6387	0.19	-29.76	0
212	SLE RA 20	-699	0	6463	-0.19	-31.84	0
212	SLE RA 21	-669	0	6440	0.18	-30.52	0
212	SLE FR 1	-525	0	5501	-0.15	-24.02	0
212	SLE FR 2	-514	0	5493	-0.03	-23.58	0
212	SLE FR 3	-531	0	5522	-0.16	-24.32	0
212	SLE FR 4	-562	0	5766	-0.04	-25.7	0
212	SLE FR 5	-579	0	5795	-0.16	-26.44	0
212	SLE FR 6	-603	0	5955	-0.17	-27.55	0
212	SLE QP 1	-525	0	5501	-0.15	-24.02	0
212	SLE QP 2	-572	0	5774	-0.16	-26.13	0
212	SLD 1	344	7	6037	-7.58	15.77	-0.03
212	SLD 2	344	7	6037	-7.58	15.77	-0.03
212	SLD 3	486	-20	5948	20.33	22.16	0.1
212	SLD 4	486	-20	5948	20.33	22.16	0.1
212	SLD 5	-511	42	5987	-44.71	-23.25	-0.21
212	SLD 6	-511	42	5987	-44.71	-23.25	-0.21
212	SLD 7	-40	-46	5692	48.31	-1.96	0.23
212	SLD 8	-40	-46	5692	48.31	-1.96	0.23
212	SLD 9	-1104	46	5856	-48.63	-50.31	-0.23
212	SLD 10	-1104	46	5856	-48.63	-50.31	-0.23
212	SLD 11	-632	-42	5560	44.39	-29.02	0.21
212	SLD 12	-632	-42	5560	44.39	-29.02	0.21
212	SLD 13	-1630	20	5599	-20.65	-74.43	-0.1
212	SLD 14	-1630	20	5599	-20.65	-74.43	-0.1
212	SLD 15	-1488	-7	5510	7.25	-68.04	0.03
212	SLD 16	-1488	-7	5510	7.25	-68.04	0.03
212	SLV 1	1558	17	6394	-19.21	71.28	-0.08
212	SLV 2	1558	17	6394	-19.21	71.28	-0.08
212	SLV 3	1891	-51	6172	52.27	86.32	0.26
212	SLV 4	1891	-51	6172	52.27	86.32	0.26
212	SLV 5	-438	109	6297	-114.29	-19.72	-0.55
212	SLV 6	-438	109	6297	-114.29	-19.72	-0.55
212	SLV 7	672	-118	5556	123.98	30.41	0.6
212	SLV 8	672	-118	5556	123.98	30.41	0.6
212	SLV 9	-1816	119	5991	-124.31	-82.68	-0.6
212	SLV 10	-1816	119	5991	-124.31	-82.68	-0.6
212	SLV 11	-705	-108	5251	113.97	-32.55	0.54
212	SLV 12	-705	-108	5251	113.97	-32.55	0.54
212	SLV 13	-3035	51	5375	-52.6	-138.59	-0.26
212	SLV 14	-3035	51	5375	-52.6	-138.59	-0.26
212	SLV 15	-2702	-17	5153	18.88	-123.55	0.08
212	SLV 16	-2702	-17	5153	18.88	-123.55	0.08
213	SLU 1	-578	0	5262	-0.06	-25.18	0
213	SLU 2	-506	-1	5224	1.13	-22.14	0
213	SLU 3	-618	0	5394	-0.07	-26.94	0
213	SLU 4	-575	0	5371	0.65	-25.12	0
213	SLU 5	-532	-1	5305	1.13	-23.28	0
213	SLU 6	-644	0	5475	-0.07	-28.09	0
213	SLU 7	-601	0	5452	0.65	-26.26	0
213	SLU 8	-630	0	5424	-0.07	-27.47	0
213	SLU 9	-587	0	5401	0.65	-25.64	0
213	SLU 10	-694	-1	6160	1.11	-30.24	0
213	SLU 11	-806	0	6330	-0.09	-35.04	0
213	SLU 12	-762	0	6307	0.63	-33.22	0
213	SLU 13	-720	-1	6241	1.11	-31.38	0
213	SLU 14	-832	0	6411	-0.09	-36.19	0
213	SLU 15	-788	0	6388	0.62	-34.36	0
213	SLU 16	-817	0	6360	-0.09	-35.57	0
213	SLU 17	-774	0	6337	0.63	-33.74	0
213	SLU 18	-846	0	6599	-0.09	-36.75	0
213	SLU 19	-803	0	6576	0.63	-34.93	0
213	SLU 20	-872	0	6680	-0.1	-37.9	0
213	SLU 21	-829	0	6658	0.62	-36.07	0
213	SLU 22	-747	0	6100	-0.08	-32.48	0
213	SLU 23	-675	-1	6062	1.11	-29.43	0
213	SLU 24	-787	0	6232	-0.09	-34.24	0
213	SLU 25	-744	0	6209	0.62	-32.41	0
213	SLU 26	-701	-1	6143	1.1	-30.57	0
213	SLU 27	-813	0	6313	-0.1	-35.38	0
213	SLU 28	-770	0	6290	0.62	-33.55	0
213	SLU 29	-799	0	6262	-0.09	-34.76	0
213	SLU 30	-755	0	6239	0.62	-32.93	0
213	SLU 31	-862	-1	6998	1.09	-37.53	0
213	SLU 32	-974	0	7168	-0.11	-42.34	0
213	SLU 33	-931	0	7145	0.6	-40.51	0
213	SLU 34	-888	-1	7079	1.08	-38.67	0
213	SLU 35	-1000	0	7249	-0.12	-43.48	0
213	SLU 36	-957	0	7226	0.6	-41.65	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
213	SLU 37	-986	0	7198	-0.12	-42.86	0
213	SLU 38	-943	0	7175	0.6	-41.03	0
213	SLU 39	-1015	0	7437	-0.12	-44.05	0
213	SLU 40	-971	0	7414	0.6	-42.22	0
213	SLU 41	-1041	0	7518	-0.12	-45.19	0
213	SLU 42	-997	0	7495	0.59	-43.36	0
213	SLU 43	-694	0	6553	-0.07	-30.24	0
213	SLU 44	-622	-1	6515	1.13	-27.19	0
213	SLU 45	-734	0	6685	-0.07	-32	0
213	SLU 46	-690	0	6662	0.64	-30.17	0
213	SLU 47	-648	-1	6596	1.12	-28.33	0
213	SLU 48	-760	0	6766	-0.08	-33.14	0
213	SLU 49	-716	0	6743	0.64	-31.31	0
213	SLU 50	-745	0	6715	-0.08	-32.52	0
213	SLU 51	-702	0	6693	0.64	-30.69	0
213	SLU 52	-809	-1	7451	1.1	-35.29	0
213	SLU 53	-921	0	7621	-0.1	-40.1	0
213	SLU 54	-878	0	7598	0.62	-38.27	0
213	SLU 55	-835	-1	7532	1.1	-36.43	0
213	SLU 56	-947	0	7702	-0.1	-41.24	0
213	SLU 57	-904	0	7679	0.61	-39.41	0
213	SLU 58	-933	0	7652	-0.1	-40.62	0
213	SLU 59	-890	0	7629	0.62	-38.79	0
213	SLU 60	-961	0	7890	-0.1	-41.81	0
213	SLU 61	-918	0	7868	0.62	-39.98	0
213	SLU 62	-987	0	7972	-0.1	-42.95	0
213	SLU 63	-944	0	7949	0.61	-41.12	0
213	SLU 64	-862	0	7391	-0.09	-37.53	0
213	SLU 65	-790	-1	7353	1.1	-34.49	0
213	SLU 66	-902	0	7523	-0.1	-39.29	0
213	SLU 67	-859	0	7500	0.62	-37.47	0
213	SLU 68	-816	-1	7434	1.1	-35.63	0
213	SLU 69	-928	0	7604	-0.11	-40.44	0
213	SLU 70	-885	0	7581	0.61	-38.61	0
213	SLU 71	-914	0	7553	-0.1	-39.82	0
213	SLU 72	-871	0	7531	0.61	-37.99	0
213	SLU 73	-978	-1	8289	1.08	-42.59	0
213	SLU 74	-1090	0	8459	-0.12	-47.39	0
213	SLU 75	-1047	0	8436	0.59	-45.57	0
213	SLU 76	-1004	-1	8370	1.07	-43.73	0
213	SLU 77	-1116	0	8540	-0.13	-48.54	0
213	SLU 78	-1073	0	8517	0.59	-46.71	0
213	SLU 79	-1102	0	8490	-0.13	-47.92	0
213	SLU 80	-1058	0	8467	0.59	-46.09	0
213	SLU 81	-1130	0	8728	-0.13	-49.1	0
213	SLU 82	-1087	0	8706	0.59	-47.28	0
213	SLU 83	-1156	0	8810	-0.13	-50.24	0
213	SLU 84	-1113	0	8787	0.59	-48.42	0
213	SLE RA 1	-626	0	5501	-0.07	-27.27	0
213	SLE RA 2	-578	0	5476	0.73	-25.24	0
213	SLE RA 3	-653	0	5589	-0.07	-28.44	0
213	SLE RA 4	-624	0	5574	0.41	-27.22	0
213	SLE RA 5	-596	0	5530	0.73	-26	0
213	SLE RA 6	-670	0	5643	-0.07	-29.2	0
213	SLE RA 7	-641	0	5628	0.4	-27.98	0
213	SLE RA 8	-661	0	5609	-0.07	-28.79	0
213	SLE RA 9	-632	0	5594	0.4	-27.57	0
213	SLE RA 10	-703	0	6100	0.71	-30.64	0
213	SLE RA 11	-778	0	6213	-0.09	-33.84	0
213	SLE RA 12	-749	0	6198	0.39	-32.62	0
213	SLE RA 13	-721	0	6154	0.71	-31.4	0
213	SLE RA 14	-795	0	6267	-0.09	-34.6	0
213	SLE RA 15	-766	0	6252	0.39	-33.38	0
213	SLE RA 16	-786	0	6234	-0.09	-34.19	0
213	SLE RA 17	-757	0	6218	0.39	-32.97	0
213	SLE RA 18	-805	0	6393	-0.09	-34.98	0
213	SLE RA 19	-776	0	6378	0.39	-33.76	0
213	SLE RA 20	-822	0	6447	-0.09	-35.74	0
213	SLE RA 21	-793	0	6432	0.39	-34.52	0
213	SLE FR 1	-626	0	5501	-0.07	-27.27	0
213	SLE FR 2	-617	0	5496	0.09	-26.86	0
213	SLE FR 3	-633	0	5523	-0.07	-27.57	0
213	SLE FR 4	-670	0	5764	0.09	-29.18	0
213	SLE FR 5	-687	0	5790	-0.07	-29.89	0
213	SLE FR 6	-716	0	5947	-0.08	-31.12	0
213	SLE QP 1	-626	0	5501	-0.07	-27.27	0
213	SLE QP 2	-680	0	5769	-0.07	-29.58	0
213	SLD 1	237	8	5943	-8.91	11.43	-0.04
213	SLD 2	237	8	5943	-8.91	11.43	-0.04
213	SLD 3	381	-23	5873	23.07	17.77	0.12
213	SLD 4	381	-23	5873	23.07	17.77	0.12
213	SLD 5	-623	49	5927	-51.22	-26.9	-0.26
213	SLD 6	-623	49	5927	-51.22	-26.9	-0.26
213	SLD 7	-144	-54	5694	55.37	-5.76	0.29
213	SLD 8	-144	-54	5694	55.37	-5.76	0.29
213	SLD 9	-1216	54	5843	-55.51	-53.41	-0.29
213	SLD 10	-1216	54	5843	-55.51	-53.41	-0.29
213	SLD 11	-737	-49	5611	51.08	-32.27	0.26
213	SLD 12	-737	-49	5611	51.08	-32.27	0.26
213	SLD 13	-1740	23	5664	-23.22	-76.93	-0.12



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
213	SLD 14	-1740	23	5664	-23.22	-76.93	-0.12
213	SLD 15	-1597	-8	5594	8.76	-70.59	0.04
213	SLD 16	-1597	-8	5594	8.76	-70.59	0.04
213	SLV 1	1450	21	6183	-22.75	65.72	-0.11
213	SLV 2	1450	21	6183	-22.75	65.72	-0.11
213	SLV 3	1789	-58	6007	59.18	80.63	0.31
213	SLV 4	1789	-58	6007	59.18	80.63	0.31
213	SLV 5	-554	126	6160	-131.15	-23.61	-0.67
213	SLV 6	-554	126	6160	-131.15	-23.61	-0.67
213	SLV 7	574	-137	5573	141.97	26.1	0.73
213	SLV 8	574	-137	5573	141.97	26.1	0.73
213	SLV 9	-1934	137	5964	-142.12	-85.26	-0.73
213	SLV 10	-1934	137	5964	-142.12	-85.26	-0.73
213	SLV 11	-806	-126	5378	131	-35.55	0.67
213	SLV 12	-806	-126	5378	131	-35.55	0.67
213	SLV 13	-3148	58	5531	-59.33	-139.8	-0.31
213	SLV 14	-3148	58	5531	-59.33	-139.8	-0.31
213	SLV 15	-2810	-21	5355	22.61	-124.88	0.11
213	SLV 16	-2810	-21	5355	22.61	-124.88	0.11
214	SLU 1	-671	0	5272	0.01	-29.77	0
214	SLU 2	-603	-1	5251	1.44	-26.85	0.01
214	SLU 3	-712	0	5407	0.01	-31.62	0
214	SLU 4	-672	-1	5394	0.86	-29.88	0
214	SLU 5	-630	-1	5334	1.44	-28.04	0.01
214	SLU 6	-739	0	5490	0	-32.81	0
214	SLU 7	-698	-1	5477	0.86	-31.07	0
214	SLU 8	-724	0	5439	0	-32.15	0
214	SLU 9	-683	-1	5426	0.86	-30.4	0
214	SLU 10	-811	-1	6168	1.43	-35.91	0.01
214	SLU 11	-920	0	6324	-0.01	-40.68	0
214	SLU 12	-879	-1	6311	0.85	-38.93	0
214	SLU 13	-837	-1	6251	1.42	-37.1	0.01
214	SLU 14	-947	0	6408	-0.01	-41.87	0
214	SLU 15	-906	-1	6395	0.85	-40.12	0
214	SLU 16	-932	0	6356	-0.01	-41.2	0
214	SLU 17	-891	-1	6343	0.85	-39.46	0
214	SLU 18	-968	0	6583	-0.01	-42.71	0
214	SLU 19	-927	-1	6570	0.85	-40.96	0
214	SLU 20	-994	0	6666	-0.01	-43.9	0
214	SLU 21	-953	-1	6653	0.85	-42.15	0
214	SLU 22	-857	0	6097	-0.01	-37.9	0
214	SLU 23	-789	-1	6075	1.42	-34.99	0.01
214	SLU 24	-899	0	6231	-0.01	-39.76	0
214	SLU 25	-858	-1	6218	0.85	-38.01	0
214	SLU 26	-816	-1	6158	1.42	-36.18	0.01
214	SLU 27	-925	0	6315	-0.01	-40.95	0
214	SLU 28	-884	-1	6302	0.85	-39.2	0
214	SLU 29	-910	0	6264	-0.01	-40.28	0
214	SLU 30	-869	-1	6250	0.85	-38.54	0
214	SLU 31	-997	-1	6992	1.41	-44.04	0.01
214	SLU 32	-1106	0	7149	-0.02	-48.81	0
214	SLU 33	-1065	-1	7136	0.84	-47.06	0
214	SLU 34	-1023	-1	7076	1.41	-45.23	0.01
214	SLU 35	-1133	0	7232	-0.03	-50	0
214	SLU 36	-1092	-1	7219	0.83	-48.25	0
214	SLU 37	-1118	0	7181	-0.02	-49.34	0
214	SLU 38	-1077	-1	7168	0.83	-47.59	0
214	SLU 39	-1154	0	7407	-0.02	-50.84	0
214	SLU 40	-1113	-1	7394	0.83	-49.09	0
214	SLU 41	-1180	0	7491	-0.03	-52.03	0
214	SLU 42	-1140	-1	7478	0.83	-50.28	0
214	SLU 43	-808	0	6571	0.02	-35.91	0
214	SLU 44	-740	-1	6550	1.45	-33	0.01
214	SLU 45	-850	0	6706	0.01	-37.77	0
214	SLU 46	-809	-1	6693	0.87	-36.02	0
214	SLU 47	-767	-1	6633	1.44	-34.19	0.01
214	SLU 48	-877	0	6789	0.01	-38.96	0
214	SLU 49	-836	-1	6776	0.87	-37.21	0
214	SLU 50	-862	0	6738	0.01	-38.29	0
214	SLU 51	-821	-1	6725	0.87	-36.54	0
214	SLU 52	-948	-1	7467	1.43	-42.05	0.01
214	SLU 53	-1058	0	7623	0	-46.82	0
214	SLU 54	-1017	-1	7610	0.86	-45.07	0
214	SLU 55	-975	-1	7550	1.43	-43.24	0.01
214	SLU 56	-1084	0	7707	0	-48.01	0
214	SLU 57	-1044	-1	7693	0.86	-46.26	0
214	SLU 58	-1069	0	7655	0	-47.35	0
214	SLU 59	-1029	-1	7642	0.86	-45.6	0
214	SLU 60	-1105	0	7882	0	-48.85	0
214	SLU 61	-1064	-1	7869	0.86	-47.1	0
214	SLU 62	-1132	0	7965	0	-50.04	0
214	SLU 63	-1091	-1	7952	0.85	-48.29	0
214	SLU 64	-994	0	7396	0	-44.05	0
214	SLU 65	-926	-1	7374	1.43	-41.13	0.01
214	SLU 66	-1036	0	7530	0	-45.9	0
214	SLU 67	-995	-1	7517	0.86	-44.15	0
214	SLU 68	-953	-1	7457	1.43	-42.32	0.01
214	SLU 69	-1063	0	7614	0	-47.09	0
214	SLU 70	-1022	-1	7601	0.85	-45.34	0
214	SLU 71	-1048	0	7562	0	-46.43	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
214	SLU 72	-1007	-1	7549	0.85	-44.68	0
214	SLU 73	-1134	-1	8291	1.42	-50.19	0.01
214	SLU 74	-1244	0	8448	-0.01	-54.96	0
214	SLU 75	-1203	-1	8435	0.84	-53.21	0
214	SLU 76	-1161	-1	8375	1.42	-51.38	0.01
214	SLU 77	-1270	0	8531	-0.02	-56.15	0
214	SLU 78	-1230	-1	8518	0.84	-54.4	0
214	SLU 79	-1255	0	8480	-0.02	-55.48	0
214	SLU 80	-1215	-1	8467	0.84	-53.73	0
214	SLU 81	-1291	0	8706	-0.02	-56.98	0
214	SLU 82	-1250	-1	8693	0.84	-55.23	0
214	SLU 83	-1318	0	8790	-0.02	-58.17	0
214	SLU 84	-1277	-1	8777	0.84	-56.42	0
214	SLE RA 1	-724	0	5508	0.01	-32.09	0
214	SLE RA 2	-679	-1	5493	0.96	-30.15	0
214	SLE RA 3	-752	0	5598	0	-33.33	0
214	SLE RA 4	-725	0	5589	0.57	-32.16	0
214	SLE RA 5	-696	-1	5549	0.96	-30.94	0
214	SLE RA 6	-770	0	5653	0	-34.12	0
214	SLE RA 7	-742	0	5644	0.57	-32.96	0
214	SLE RA 8	-760	0	5619	0	-33.68	0
214	SLE RA 9	-732	0	5610	0.57	-32.51	0
214	SLE RA 10	-817	-1	6105	0.95	-36.19	0
214	SLE RA 11	-890	0	6209	-0.01	-39.37	0
214	SLE RA 12	-863	0	6200	0.57	-38.2	0
214	SLE RA 13	-835	-1	6161	0.95	-36.98	0
214	SLE RA 14	-908	0	6265	-0.01	-40.16	0
214	SLE RA 15	-881	0	6256	0.56	-38.99	0
214	SLE RA 16	-898	0	6231	-0.01	-39.72	0
214	SLE RA 17	-871	0	6222	0.56	-38.55	0
214	SLE RA 18	-922	0	6382	-0.01	-40.72	0
214	SLE RA 19	-895	0	6373	0.56	-39.55	0
214	SLE RA 20	-940	0	6437	-0.01	-41.51	0
214	SLE RA 21	-912	0	6428	0.56	-40.34	0
214	SLE FR 1	-724	0	5508	0.01	-32.09	0
214	SLE FR 2	-715	0	5505	0.2	-31.71	0
214	SLE FR 3	-731	0	5530	0	-32.41	0
214	SLE FR 4	-774	0	5767	0.19	-34.29	0
214	SLE FR 5	-790	0	5792	0	-35	0
214	SLE FR 6	-823	0	5945	0	-36.41	0
214	SLE QP 1	-724	0	5508	0.01	-32.09	0
214	SLE QP 2	-783	0	5770	0	-34.68	0
214	SLD 1	122	9	5575	-9.49	5.73	-0.05
214	SLD 2	122	9	5575	-9.49	5.73	-0.05
214	SLD 3	266	-24	5518	24.12	12.09	0.12
214	SLD 4	266	-24	5518	24.12	12.09	0.12
214	SLD 5	-731	52	5799	-53.81	-32.2	-0.27
214	SLD 6	-731	52	5799	-53.81	-32.2	-0.27
214	SLD 7	-250	-57	5607	58.21	-11.01	0.3
214	SLD 8	-250	-57	5607	58.21	-11.01	0.3
214	SLD 9	-1317	56	5933	-58.2	-58.36	-0.3
214	SLD 10	-1317	56	5933	-58.2	-58.36	-0.3
214	SLD 11	-836	-52	5741	53.82	-37.16	0.27
214	SLD 12	-836	-52	5741	53.82	-37.16	0.27
214	SLD 13	-1833	23	6022	-24.12	-81.46	-0.12
214	SLD 14	-1833	23	6022	-24.12	-81.46	-0.12
214	SLD 15	-1688	-9	5965	9.49	-75.1	0.05
214	SLD 16	-1688	-9	5965	9.49	-75.1	0.05
214	SLV 1	1319	23	5320	-24.35	59.22	-0.12
214	SLV 2	1319	23	5320	-24.35	59.22	-0.12
214	SLV 3	1658	-60	5174	61.76	74.15	0.32
214	SLV 4	1658	-60	5174	61.76	74.15	0.32
214	SLV 5	-667	134	5856	-137.91	-29.16	-0.7
214	SLV 6	-667	134	5856	-137.91	-29.16	-0.7
214	SLV 7	463	-145	5370	149.14	20.62	0.76
214	SLV 8	463	-145	5370	149.14	20.62	0.76
214	SLV 9	-2030	145	6170	-149.13	-89.98	-0.76
214	SLV 10	-2030	145	6170	-149.13	-89.98	-0.76
214	SLV 11	-900	-134	5684	137.91	-40.2	0.7
214	SLV 12	-900	-134	5684	137.91	-40.2	0.7
214	SLV 13	-3225	60	6366	-61.76	-143.51	-0.32
214	SLV 14	-3225	60	6366	-61.76	-143.51	-0.32
214	SLV 15	-2886	-23	6220	24.35	-128.58	0.12
214	SLV 16	-2886	-23	6220	24.35	-128.58	0.12
215	SLU 1	-758	0	5288	0.07	-32.96	0
215	SLU 2	-694	-1	5279	1.68	-30.27	0.01
215	SLU 3	-801	0	5426	0.06	-34.84	0
215	SLU 4	-763	-1	5421	1.03	-33.22	0
215	SLU 5	-722	-1	5365	1.68	-31.46	0.01
215	SLU 6	-828	0	5512	0.06	-36.03	0
215	SLU 7	-790	-1	5507	1.03	-34.42	0
215	SLU 8	-812	0	5460	0.06	-35.34	0
215	SLU 9	-774	-1	5455	1.03	-33.73	0
215	SLU 10	-921	-1	6177	1.68	-40	0.01
215	SLU 11	-1027	0	6324	0.06	-44.57	0
215	SLU 12	-989	-1	6319	1.03	-42.95	0
215	SLU 13	-948	-1	6263	1.67	-41.19	0.01
215	SLU 14	-1054	0	6410	0.06	-45.76	0
215	SLU 15	-1016	-1	6405	1.03	-44.15	0
215	SLU 16	-1039	0	6358	0.06	-45.08	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
215	SLU 17	-1001	-1	6353	1.03	-43.46	0
215	SLU 18	-1082	0	6570	0.06	-46.86	0
215	SLU 19	-1043	-1	6565	1.03	-45.25	0
215	SLU 20	-1109	0	6657	0.06	-48.05	0
215	SLU 21	-1071	-1	6651	1.03	-46.44	0
215	SLU 22	-960	0	6099	0.06	-41.66	0
215	SLU 23	-897	-1	6090	1.67	-38.97	0.01
215	SLU 24	-1003	0	6237	0.06	-43.54	0
215	SLU 25	-965	-1	6232	1.03	-41.92	0
215	SLU 26	-924	-1	6176	1.67	-40.16	0.01
215	SLU 27	-1030	0	6323	0.06	-44.73	0
215	SLU 28	-992	-1	6318	1.03	-43.12	0
215	SLU 29	-1014	0	6271	0.06	-44.05	0
215	SLU 30	-976	-1	6266	1.03	-42.43	0
215	SLU 31	-1123	-1	6988	1.67	-48.7	0.01
215	SLU 32	-1229	0	7135	0.06	-53.27	0
215	SLU 33	-1191	-1	7130	1.02	-51.66	0
215	SLU 34	-1150	-1	7074	1.67	-49.9	0.01
215	SLU 35	-1257	0	7221	0.05	-54.46	0
215	SLU 36	-1218	-1	7216	1.02	-52.85	0
215	SLU 37	-1241	0	7169	0.05	-53.78	0
215	SLU 38	-1203	-1	7164	1.02	-52.16	0
215	SLU 39	-1284	0	7382	0.06	-55.56	0
215	SLU 40	-1246	-1	7376	1.02	-53.95	0
215	SLU 41	-1311	0	7468	0.05	-56.76	0
215	SLU 42	-1273	-1	7463	1.02	-55.14	0
215	SLU 43	-916	0	6596	0.09	-39.86	0
215	SLU 44	-853	-1	6587	1.7	-37.17	0.01
215	SLU 45	-959	0	6734	0.08	-41.74	0
215	SLU 46	-921	-1	6729	1.05	-40.13	0
215	SLU 47	-880	-1	6673	1.7	-38.37	0.01
215	SLU 48	-986	0	6820	0.08	-42.93	0
215	SLU 49	-948	-1	6815	1.05	-41.32	0
215	SLU 50	-970	0	6768	0.08	-42.25	0
215	SLU 51	-932	-1	6763	1.05	-40.63	0
215	SLU 52	-1079	-1	7485	1.7	-46.9	0.01
215	SLU 53	-1185	0	7632	0.08	-51.47	0
215	SLU 54	-1147	-1	7627	1.05	-49.86	0
215	SLU 55	-1106	-1	7571	1.7	-48.1	0.01
215	SLU 56	-1213	0	7718	0.08	-52.66	0
215	SLU 57	-1174	-1	7713	1.05	-51.05	0
215	SLU 58	-1197	0	7666	0.08	-51.98	0
215	SLU 59	-1159	-1	7661	1.05	-50.37	0
215	SLU 60	-1240	0	7879	0.08	-53.76	0
215	SLU 61	-1202	-1	7874	1.05	-52.15	0
215	SLU 62	-1267	0	7965	0.08	-54.96	0
215	SLU 63	-1229	-1	7960	1.05	-53.34	0
215	SLU 64	-1118	0	7407	0.08	-48.57	0
215	SLU 65	-1055	-1	7398	1.7	-45.88	0.01
215	SLU 66	-1161	0	7545	0.08	-50.44	0
215	SLU 67	-1123	-1	7540	1.05	-48.83	0
215	SLU 68	-1082	-1	7485	1.69	-47.07	0.01
215	SLU 69	-1188	0	7631	0.08	-51.64	0
215	SLU 70	-1150	-1	7626	1.05	-50.02	0
215	SLU 71	-1172	0	7579	0.08	-50.95	0
215	SLU 72	-1134	-1	7574	1.05	-49.34	0
215	SLU 73	-1281	-1	8296	1.69	-55.61	0.01
215	SLU 74	-1388	0	8443	0.08	-60.17	0
215	SLU 75	-1349	-1	8438	1.05	-58.56	0
215	SLU 76	-1308	-1	8383	1.69	-56.8	0.01
215	SLU 77	-1415	0	8529	0.07	-61.37	0
215	SLU 78	-1377	-1	8524	1.04	-59.75	0
215	SLU 79	-1399	0	8477	0.07	-60.68	0
215	SLU 80	-1361	-1	8472	1.04	-59.07	0
215	SLU 81	-1442	0	8690	0.08	-62.47	0
215	SLU 82	-1404	-1	8685	1.05	-60.85	0
215	SLU 83	-1469	0	8776	0.08	-63.66	0
215	SLU 84	-1431	-1	8771	1.04	-62.05	0
215	SLE RA 1	-816	0	5519	0.06	-35.45	0
215	SLE RA 2	-773	-1	5514	1.14	-33.65	0
215	SLE RA 3	-844	0	5611	0.06	-36.7	0
215	SLE RA 4	-819	-1	5608	0.71	-35.62	0
215	SLE RA 5	-791	-1	5571	1.14	-34.45	0
215	SLE RA 6	-862	0	5669	0.06	-37.49	0
215	SLE RA 7	-837	-1	5665	0.71	-36.42	0
215	SLE RA 8	-852	0	5634	0.06	-37.04	0
215	SLE RA 9	-827	-1	5631	0.71	-35.96	0
215	SLE RA 10	-924	-1	6112	1.14	-40.14	0
215	SLE RA 11	-995	0	6210	0.06	-43.18	0
215	SLE RA 12	-970	-1	6207	0.71	-42.11	0
215	SLE RA 13	-943	-1	6170	1.14	-40.93	0
215	SLE RA 14	-1013	0	6267	0.06	-43.98	0
215	SLE RA 15	-988	-1	6264	0.71	-42.9	0
215	SLE RA 16	-1003	0	6233	0.06	-43.52	0
215	SLE RA 17	-978	-1	6229	0.71	-42.45	0
215	SLE RA 18	-1031	0	6375	0.06	-44.71	0
215	SLE RA 19	-1006	-1	6371	0.71	-43.64	0
215	SLE RA 20	-1050	0	6432	0.06	-45.51	0
215	SLE RA 21	-1024	-1	6429	0.71	-44.43	0
215	SLE FR 1	-816	0	5519	0.06	-35.45	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
215	SLE FR 2	-807	0	5518	0.28	-35.09	0
215	SLE FR 3	-823	0	5542	0.06	-35.76	0
215	SLE FR 4	-872	0	5775	0.28	-37.87	0
215	SLE FR 5	-888	0	5799	0.06	-38.54	0
215	SLE FR 6	-924	0	5947	0.06	-40.08	0
215	SLE QP 1	-816	0	5519	0.06	-35.45	0
215	SLE QP 2	-880	0	5776	0.06	-38.23	0
215	SLD 1	5	9	5428	-9.25	0.96	-0.04
215	SLD 2	5	9	5428	-9.25	0.96	-0.04
215	SLD 3	147	-23	5378	23.38	7.18	0.11
215	SLD 4	147	-23	5378	23.38	7.18	0.11
215	SLD 5	-831	50	5748	-52.21	-35.91	-0.24
215	SLD 6	-831	50	5748	-52.21	-35.91	-0.24
215	SLD 7	-356	-54	5580	56.54	-15.16	0.27
215	SLD 8	-356	-54	5580	56.54	-15.16	0.27
215	SLD 9	-1405	54	5972	-56.41	-61.29	-0.26
215	SLD 10	-1405	54	5972	-56.41	-61.29	-0.26
215	SLD 11	-929	-50	5804	52.33	-40.54	0.25
215	SLD 12	-929	-50	5804	52.33	-40.54	0.25
215	SLD 13	-1908	22	6174	-23.25	-83.63	-0.11
215	SLD 14	-1908	22	6174	-23.25	-83.63	-0.11
215	SLD 15	-1766	-9	6123	9.37	-77.41	0.04
215	SLD 16	-1766	-9	6123	9.37	-77.41	0.04
215	SLV 1	1175	23	4968	-23.82	52.79	-0.11
215	SLV 2	1175	23	4968	-23.82	52.79	-0.11
215	SLV 3	1510	-57	4840	59.77	67.4	0.28
215	SLV 4	1510	-57	4840	59.77	67.4	0.28
215	SLV 5	-772	128	5727	-133.87	-33.08	-0.63
215	SLV 6	-772	128	5727	-133.87	-33.08	-0.63
215	SLV 7	345	-139	5302	144.74	15.62	0.68
215	SLV 8	345	-139	5302	144.74	15.62	0.68
215	SLV 9	-2106	139	6250	-144.61	-92.07	-0.68
215	SLV 10	-2106	139	6250	-144.61	-92.07	-0.68
215	SLV 11	-989	-128	5825	133.99	-43.37	0.63
215	SLV 12	-989	-128	5825	133.99	-43.37	0.63
215	SLV 13	-3271	57	6712	-59.64	-143.85	-0.28
215	SLV 14	-3271	57	6712	-59.64	-143.85	-0.28
215	SLV 15	-2936	-23	6584	23.94	-129.24	0.11
215	SLV 16	-2936	-23	6584	23.94	-129.24	0.11
216	SLU 1	-865	0	5306	0.11	-37.77	0
216	SLU 2	-805	-2	5308	1.83	-35.21	0.01
216	SLU 3	-910	0	5448	0.11	-39.75	0
216	SLU 4	-874	-1	5450	1.14	-38.21	0
216	SLU 5	-833	-2	5398	1.83	-36.46	0.01
216	SLU 6	-938	0	5538	0.11	-40.99	0
216	SLU 7	-902	-1	5539	1.14	-39.46	0
216	SLU 8	-922	0	5485	0.11	-40.26	0
216	SLU 9	-885	-1	5486	1.14	-38.73	0
216	SLU 10	-1054	-2	6186	1.84	-45.9	0.01
216	SLU 11	-1159	0	6326	0.11	-50.44	0
216	SLU 12	-1123	-1	6327	1.15	-48.9	0
216	SLU 13	-1082	-2	6275	1.84	-47.15	0.01
216	SLU 14	-1187	0	6415	0.11	-51.68	0
216	SLU 15	-1151	-1	6416	1.15	-50.15	0
216	SLU 16	-1170	0	6362	0.11	-50.95	0
216	SLU 17	-1134	-1	6364	1.15	-49.42	0
216	SLU 18	-1220	0	6559	0.12	-53.05	0
216	SLU 19	-1184	-1	6561	1.15	-51.51	0
216	SLU 20	-1249	0	6649	0.12	-54.29	0
216	SLU 21	-1213	-1	6650	1.15	-52.76	0
216	SLU 22	-1087	0	6103	0.11	-47.32	0
216	SLU 23	-1026	-2	6106	1.83	-44.76	0.01
216	SLU 24	-1131	0	6246	0.11	-49.3	0
216	SLU 25	-1095	-1	6247	1.14	-47.76	0
216	SLU 26	-1055	-2	6195	1.83	-46.01	0.01
216	SLU 27	-1160	0	6335	0.11	-50.54	0
216	SLU 28	-1123	-1	6336	1.14	-49.01	0
216	SLU 29	-1143	0	6282	0.11	-49.81	0
216	SLU 30	-1107	-1	6284	1.14	-48.28	0
216	SLU 31	-1275	-2	6983	1.84	-55.45	0.01
216	SLU 32	-1380	0	7123	0.12	-59.99	0
216	SLU 33	-1344	-1	7124	1.15	-58.45	0
216	SLU 34	-1303	-2	7072	1.84	-56.7	0.01
216	SLU 35	-1408	0	7212	0.12	-61.23	0
216	SLU 36	-1372	-1	7214	1.15	-59.7	0
216	SLU 37	-1392	0	7159	0.12	-60.5	0
216	SLU 38	-1356	-1	7161	1.15	-58.97	0
216	SLU 39	-1442	0	7356	0.12	-62.6	0
216	SLU 40	-1406	-1	7358	1.15	-61.06	0
216	SLU 41	-1470	0	7446	0.12	-63.84	0
216	SLU 42	-1434	-1	7447	1.15	-62.31	0
216	SLU 43	-1049	0	6624	0.14	-45.83	0
216	SLU 44	-989	-2	6627	1.86	-43.27	0.01
216	SLU 45	-1094	0	6767	0.14	-47.81	0
216	SLU 46	-1058	-1	6768	1.17	-46.27	0
216	SLU 47	-1017	-2	6716	1.86	-44.51	0.01
216	SLU 48	-1122	0	6856	0.14	-49.05	0
216	SLU 49	-1086	-1	6858	1.17	-47.51	0
216	SLU 50	-1105	0	6803	0.14	-48.32	0
216	SLU 51	-1069	-1	6805	1.17	-46.78	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
216	SLU 52	-1237	-2	7504	1.87	-53.96	0.01
216	SLU 53	-1342	0	7644	0.14	-58.5	0
216	SLU 54	-1306	-1	7646	1.18	-56.96	0
216	SLU 55	-1265	-2	7594	1.87	-55.21	0.01
216	SLU 56	-1370	0	7734	0.14	-59.74	0
216	SLU 57	-1334	-1	7735	1.18	-58.21	0
216	SLU 58	-1354	0	7681	0.14	-59.01	0
216	SLU 59	-1318	-1	7682	1.18	-57.48	0
216	SLU 60	-1404	0	7878	0.15	-61.11	0
216	SLU 61	-1368	-1	7879	1.18	-59.57	0
216	SLU 62	-1432	0	7967	0.15	-62.35	0
216	SLU 63	-1396	-1	7969	1.18	-60.81	0
216	SLU 64	-1270	0	7422	0.14	-55.38	0
216	SLU 65	-1210	-2	7424	1.86	-52.82	0.01
216	SLU 66	-1315	0	7564	0.14	-57.35	0
216	SLU 67	-1279	-1	7565	1.18	-55.82	0
216	SLU 68	-1238	-2	7513	1.86	-54.06	0.01
216	SLU 69	-1343	0	7653	0.14	-58.6	0
216	SLU 70	-1307	-1	7655	1.18	-57.06	0
216	SLU 71	-1327	0	7601	0.14	-57.87	0
216	SLU 72	-1290	-1	7602	1.17	-56.33	0
216	SLU 73	-1459	-2	8301	1.87	-63.51	0.01
216	SLU 74	-1564	0	8441	0.15	-68.05	0
216	SLU 75	-1528	-1	8443	1.18	-66.51	0
216	SLU 76	-1487	-2	8391	1.87	-64.76	0.01
216	SLU 77	-1592	0	8531	0.15	-69.29	0
216	SLU 78	-1556	-1	8532	1.18	-67.76	0
216	SLU 79	-1575	0	8478	0.15	-68.56	0
216	SLU 80	-1539	-1	8479	1.18	-67.03	0
216	SLU 81	-1626	0	8675	0.15	-70.65	0
216	SLU 82	-1589	-1	8676	1.18	-69.12	0
216	SLU 83	-1654	0	8764	0.15	-71.9	0
216	SLU 84	-1618	-1	8766	1.18	-70.36	0
216	SLE RA 1	-928	0	5534	0.11	-40.5	0
216	SLE RA 2	-888	-1	5535	1.26	-38.79	0
216	SLE RA 3	-958	0	5629	0.11	-41.82	0
216	SLE RA 4	-934	-1	5630	0.8	-40.79	0
216	SLE RA 5	-907	-1	5595	1.26	-39.62	0
216	SLE RA 6	-977	0	5688	0.11	-42.65	0
216	SLE RA 7	-953	-1	5689	0.8	-41.62	0
216	SLE RA 8	-966	0	5653	0.11	-42.16	0
216	SLE RA 9	-942	-1	5654	0.8	-41.14	0
216	SLE RA 10	-1054	-1	6120	1.26	-45.92	0
216	SLE RA 11	-1124	0	6214	0.11	-48.95	0
216	SLE RA 12	-1100	-1	6214	0.8	-47.92	0
216	SLE RA 13	-1073	-1	6180	1.26	-46.75	0
216	SLE RA 14	-1143	0	6273	0.11	-49.78	0
216	SLE RA 15	-1119	-1	6274	0.8	-48.75	0
216	SLE RA 16	-1132	0	6238	0.11	-49.29	0
216	SLE RA 17	-1108	-1	6239	0.8	-48.26	0
216	SLE RA 18	-1165	0	6369	0.11	-50.68	0
216	SLE RA 19	-1141	-1	6370	0.8	-49.66	0
216	SLE RA 20	-1184	0	6429	0.11	-51.51	0
216	SLE RA 21	-1160	-1	6430	0.8	-50.49	0
216	SLE FR 1	-928	0	5534	0.11	-40.5	0
216	SLE FR 2	-920	0	5534	0.34	-40.16	0
216	SLE FR 3	-936	0	5558	0.11	-40.83	0
216	SLE FR 4	-991	0	5785	0.34	-43.21	0
216	SLE FR 5	-1007	0	5808	0.11	-43.89	0
216	SLE FR 6	-1047	0	5952	0.11	-45.59	0
216	SLE QP 1	-928	0	5534	0.11	-40.5	0
216	SLE QP 2	-999	0	5784	0.11	-43.56	0
216	SLD 1	-130	19	5261	-20.73	-5.12	-0.08
216	SLD 2	-130	19	5261	-20.73	-5.12	-0.08
216	SLD 3	11	-8	5213	8.43	1.03	0.03
216	SLD 4	11	-8	5213	8.43	1.03	0.03
216	SLD 5	-953	46	5699	-50.36	-41.34	-0.2
216	SLD 6	-953	46	5699	-50.36	-41.34	-0.2
216	SLD 7	-483	-43	5541	46.82	-20.87	0.19
216	SLD 8	-483	-43	5541	46.82	-20.87	0.19
216	SLD 9	-1516	43	6028	-46.6	-66.24	-0.19
216	SLD 10	-1516	43	6028	-46.6	-66.24	-0.19
216	SLD 11	-1046	-47	5869	50.58	-45.78	0.2
216	SLD 12	-1046	-47	5869	50.58	-45.78	0.2
216	SLD 13	-2010	7	6356	-8.2	-88.14	-0.03
216	SLD 14	-2010	7	6356	-8.2	-88.14	-0.03
216	SLD 15	-1869	-20	6308	20.95	-82	0.08
216	SLD 16	-1869	-20	6308	20.95	-82	0.08
216	SLV 1	1019	49	4564	-53.22	45.73	-0.21
216	SLV 2	1019	49	4564	-53.22	45.73	-0.21
216	SLV 3	1349	-19	4444	21.44	60.13	0.09
216	SLV 4	1349	-19	4444	21.44	60.13	0.09
216	SLV 5	-896	119	5600	-129.12	-38.61	-0.52
216	SLV 6	-896	119	5600	-129.12	-38.61	-0.52
216	SLV 7	207	-110	5201	119.74	9.39	0.48
216	SLV 8	207	-110	5201	119.74	9.39	0.48
216	SLV 9	-2206	110	6368	-119.52	-96.5	-0.48
216	SLV 10	-2206	110	6368	-119.52	-96.5	-0.48
216	SLV 11	-1103	-119	5969	129.34	-48.5	0.52
216	SLV 12	-1103	-119	5969	129.34	-48.5	0.52



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
216	SLV 13	-3348	19	7125	-21.22	-147.24	-0.08
216	SLV 14	-3348	19	7125	-21.22	-147.24	-0.08
216	SLV 15	-3018	-50	7005	53.44	-132.84	0.22
216	SLV 16	-3018	-50	7005	53.44	-132.84	0.22
217	SLU 1	-986	0	5324	0.13	-42.51	0
217	SLU 2	-928	-2	5335	1.86	-40.1	0.01
217	SLU 3	-1033	0	5471	0.14	-44.58	0
217	SLU 4	-999	-1	5478	1.17	-43.13	0
217	SLU 5	-958	-2	5429	1.86	-41.39	0.01
217	SLU 6	-1062	0	5565	0.14	-45.87	0
217	SLU 7	-1028	-1	5571	1.17	-44.42	0
217	SLU 8	-1045	0	5510	0.13	-45.1	0
217	SLU 9	-1010	-1	5517	1.17	-43.65	0
217	SLU 10	-1201	-2	6189	1.87	-51.7	0.01
217	SLU 11	-1305	0	6325	0.15	-56.18	0
217	SLU 12	-1271	-1	6332	1.18	-54.73	0
217	SLU 13	-1230	-2	6283	1.87	-52.99	0.01
217	SLU 14	-1335	0	6419	0.15	-57.47	0
217	SLU 15	-1300	-1	6426	1.18	-56.02	0
217	SLU 16	-1317	0	6365	0.15	-56.7	0
217	SLU 17	-1283	-1	6371	1.18	-55.25	0
217	SLU 18	-1375	0	6544	0.15	-59.09	0
217	SLU 19	-1340	-1	6551	1.19	-57.64	0
217	SLU 20	-1404	0	6637	0.15	-60.38	0
217	SLU 21	-1370	-1	6644	1.19	-58.93	0
217	SLU 22	-1228	0	6106	0.14	-52.86	0
217	SLU 23	-1171	-2	6117	1.87	-50.44	0.01
217	SLU 24	-1275	0	6253	0.15	-54.92	0
217	SLU 25	-1241	-1	6260	1.18	-53.47	0
217	SLU 26	-1200	-2	6211	1.87	-51.74	0.01
217	SLU 27	-1305	0	6346	0.15	-56.22	0
217	SLU 28	-1270	-1	6353	1.18	-54.77	0
217	SLU 29	-1287	0	6292	0.14	-55.44	0
217	SLU 30	-1253	-1	6299	1.18	-54	0
217	SLU 31	-1443	-2	6971	1.88	-62.04	0.01
217	SLU 32	-1547	0	7107	0.16	-66.52	0
217	SLU 33	-1513	-1	7114	1.19	-65.07	0
217	SLU 34	-1472	-2	7065	1.88	-63.34	0.01
217	SLU 35	-1577	0	7201	0.16	-67.82	0
217	SLU 36	-1543	-1	7208	1.19	-66.37	0
217	SLU 37	-1559	0	7146	0.16	-67.05	0
217	SLU 38	-1525	-1	7153	1.19	-65.6	0
217	SLU 39	-1617	0	7326	0.16	-69.43	0
217	SLU 40	-1582	-1	7333	1.2	-67.98	0
217	SLU 41	-1646	0	7419	0.16	-70.73	0
217	SLU 42	-1612	-1	7426	1.2	-69.28	0
217	SLU 43	-1198	0	6653	0.17	-51.72	0
217	SLU 44	-1141	-2	6664	1.89	-49.31	0.01
217	SLU 45	-1246	0	6800	0.17	-53.79	0
217	SLU 46	-1211	-1	6807	1.21	-52.34	0
217	SLU 47	-1171	-2	6758	1.89	-50.6	0.01
217	SLU 48	-1275	0	6894	0.17	-55.08	0
217	SLU 49	-1241	-1	6901	1.21	-53.63	0
217	SLU 50	-1257	0	6839	0.17	-54.31	0
217	SLU 51	-1223	-1	6846	1.2	-52.86	0
217	SLU 52	-1413	-2	7518	1.91	-60.91	0.01
217	SLU 53	-1518	0	7654	0.18	-65.39	0
217	SLU 54	-1484	-1	7661	1.22	-63.94	0
217	SLU 55	-1443	-2	7612	1.91	-62.2	0.01
217	SLU 56	-1547	0	7748	0.18	-66.68	0
217	SLU 57	-1513	-1	7755	1.22	-65.23	0
217	SLU 58	-1530	0	7694	0.18	-65.91	0
217	SLU 59	-1495	-1	7701	1.22	-64.46	0
217	SLU 60	-1587	0	7873	0.19	-68.3	0
217	SLU 61	-1553	-1	7880	1.22	-66.85	0
217	SLU 62	-1617	0	7966	0.19	-69.59	0
217	SLU 63	-1583	-1	7973	1.22	-68.14	0
217	SLU 64	-1440	0	7435	0.18	-62.07	0
217	SLU 65	-1383	-2	7446	1.9	-59.65	0.01
217	SLU 66	-1488	0	7582	0.18	-64.13	0
217	SLU 67	-1453	-1	7589	1.22	-62.68	0
217	SLU 68	-1413	-2	7540	1.9	-60.94	0.01
217	SLU 69	-1517	0	7675	0.18	-65.42	0
217	SLU 70	-1483	-1	7682	1.22	-63.97	0
217	SLU 71	-1499	0	7621	0.18	-64.65	0
217	SLU 72	-1465	-1	7628	1.22	-63.2	0
217	SLU 73	-1656	-2	8300	1.92	-71.25	0.01
217	SLU 74	-1760	0	8436	0.2	-75.73	0
217	SLU 75	-1726	-1	8443	1.23	-74.28	0
217	SLU 76	-1685	-2	8394	1.92	-72.54	0.01
217	SLU 77	-1790	0	8530	0.2	-77.02	0
217	SLU 78	-1755	-1	8537	1.23	-75.58	0
217	SLU 79	-1772	0	8475	0.19	-76.25	0
217	SLU 80	-1737	-1	8482	1.23	-74.8	0
217	SLU 81	-1829	0	8655	0.2	-78.64	0
217	SLU 82	-1795	-1	8662	1.23	-77.19	0
217	SLU 83	-1859	0	8748	0.2	-79.93	0
217	SLU 84	-1825	-1	8755	1.23	-78.48	0
217	SLE RA 1	-1055	0	5547	0.14	-45.47	0
217	SLE RA 2	-1017	-1	5555	1.29	-43.86	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
217	SLE RA 3	-1086	0	5645	0.14	-46.85	0
217	SLE RA 4	-1063	-1	5650	0.83	-45.88	0
217	SLE RA 5	-1036	-1	5617	1.29	-44.72	0
217	SLE RA 6	-1106	0	5708	0.14	-47.71	0
217	SLE RA 7	-1083	-1	5712	0.83	-46.74	0
217	SLE RA 8	-1094	0	5672	0.14	-47.19	0
217	SLE RA 9	-1071	-1	5676	0.83	-46.23	0
217	SLE RA 10	-1198	-1	6124	1.29	-51.59	0
217	SLE RA 11	-1268	0	6215	0.15	-54.58	0
217	SLE RA 12	-1245	-1	6219	0.84	-53.61	0
217	SLE RA 13	-1218	-1	6187	1.29	-52.46	0
217	SLE RA 14	-1288	0	6277	0.15	-55.44	0
217	SLE RA 15	-1265	-1	6282	0.84	-54.48	0
217	SLE RA 16	-1276	0	6241	0.15	-54.93	0
217	SLE RA 17	-1253	-1	6246	0.84	-53.96	0
217	SLE RA 18	-1314	0	6361	0.15	-56.52	0
217	SLE RA 19	-1291	-1	6365	0.84	-55.55	0
217	SLE RA 20	-1334	0	6423	0.15	-57.38	0
217	SLE RA 21	-1311	-1	6427	0.84	-56.41	0
217	SLE FR 1	-1055	0	5547	0.14	-45.47	0
217	SLE FR 2	-1047	0	5549	0.37	-45.15	0
217	SLE FR 3	-1063	0	5572	0.14	-45.81	0
217	SLE FR 4	-1125	0	5793	0.37	-48.46	0
217	SLE FR 5	-1140	0	5816	0.14	-49.13	0
217	SLE FR 6	-1184	0	5954	0.14	-50.99	0
217	SLE QP 1	-1055	0	5547	0.14	-45.47	0
217	SLE QP 2	-1133	0	5791	0.14	-48.78	0
217	SLD 1	-277	15	5075	-16.87	-11.09	-0.05
217	SLD 2	-277	15	5075	-16.87	-11.09	-0.05
217	SLD 3	-139	-5	5027	6.78	-5.09	0.02
217	SLD 4	-139	-5	5027	6.78	-5.09	0.02
217	SLD 5	-1086	35	5650	-40.84	-46.57	-0.13
217	SLD 6	-1086	35	5650	-40.84	-46.57	-0.13
217	SLD 7	-625	-32	5488	38.01	-26.58	0.12
217	SLD 8	-625	-32	5488	38.01	-26.58	0.12
217	SLD 9	-1641	32	6094	-37.73	-70.99	-0.12
217	SLD 10	-1641	32	6094	-37.73	-70.99	-0.12
217	SLD 11	-1180	-35	5933	41.12	-51	0.13
217	SLD 12	-1180	-35	5933	41.12	-51	0.13
217	SLD 13	-2127	5	6556	-6.5	-92.48	-0.02
217	SLD 14	-2127	5	6556	-6.5	-92.48	-0.02
217	SLD 15	-1988	-15	6507	17.15	-86.48	0.06
217	SLD 16	-1988	-15	6507	17.15	-86.48	0.06
217	SLV 1	854	38	4119	-43.34	38.77	-0.14
217	SLV 2	854	38	4119	-43.34	38.77	-0.14
217	SLV 3	1179	-13	3999	17.19	52.83	0.05
217	SLV 4	1179	-13	3999	17.19	52.83	0.05
217	SLV 5	-1029	88	5472	-104.7	-43.84	-0.34
217	SLV 6	-1029	88	5472	-104.7	-43.84	-0.34
217	SLV 7	53	-81	5071	97.06	3.02	0.31
217	SLV 8	53	-81	5071	97.06	3.02	0.31
217	SLV 9	-2318	81	6511	-96.77	-100.59	-0.31
217	SLV 10	-2318	81	6511	-96.77	-100.59	-0.31
217	SLV 11	-1237	-89	6110	104.98	-53.73	0.34
217	SLV 12	-1237	-89	6110	104.98	-53.73	0.34
217	SLV 13	-3444	13	7583	-16.91	-150.4	-0.05
217	SLV 14	-3444	13	7583	-16.91	-150.4	-0.05
217	SLV 15	-3119	-38	7463	43.62	-136.34	0.14
217	SLV 16	-3119	-38	7463	43.62	-136.34	0.14
218	SLU 1	-1134	0	5348	0.14	-49.06	0
218	SLU 2	-1080	-2	5368	1.72	-46.77	0
218	SLU 3	-1185	0	5502	0.14	-51.28	0
218	SLU 4	-1153	-1	5514	1.09	-49.91	0
218	SLU 5	-1112	-2	5466	1.72	-48.16	0
218	SLU 6	-1217	0	5600	0.14	-52.67	0
218	SLU 7	-1184	-1	5612	1.09	-51.3	0
218	SLU 8	-1198	0	5544	0.14	-51.84	0
218	SLU 9	-1165	-1	5556	1.09	-50.46	0
218	SLU 10	-1379	-2	6198	1.73	-59.5	0
218	SLU 11	-1484	0	6332	0.16	-64.01	0
218	SLU 12	-1451	-1	6344	1.1	-62.64	0
218	SLU 13	-1410	-2	6296	1.73	-60.89	0
218	SLU 14	-1515	0	6430	0.16	-65.4	0
218	SLU 15	-1483	-1	6442	1.1	-64.03	0
218	SLU 16	-1496	0	6375	0.16	-64.57	0
218	SLU 17	-1464	-1	6386	1.1	-63.19	0
218	SLU 18	-1561	0	6534	0.16	-67.24	0
218	SLU 19	-1528	-1	6546	1.11	-65.87	0
218	SLU 20	-1593	0	6633	0.16	-68.63	0
218	SLU 21	-1560	-1	6644	1.11	-67.26	0
218	SLU 22	-1400	0	6115	0.15	-60.42	0
218	SLU 23	-1346	-2	6135	1.73	-58.13	0
218	SLU 24	-1451	0	6269	0.16	-62.64	0
218	SLU 25	-1418	-1	6281	1.1	-61.27	0
218	SLU 26	-1377	-2	6233	1.73	-59.52	0
218	SLU 27	-1482	0	6367	0.16	-64.03	0
218	SLU 28	-1450	-1	6379	1.1	-62.66	0
218	SLU 29	-1463	0	6311	0.15	-63.2	0
218	SLU 30	-1431	-1	6323	1.1	-61.82	0
218	SLU 31	-1644	-2	6965	1.75	-70.86	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
218	SLU 32	-1749	0	7099	0.17	-75.37	0
218	SLU 33	-1717	-1	7111	1.12	-74	0
218	SLU 34	-1676	-2	7063	1.75	-72.25	0
218	SLU 35	-1781	0	7197	0.17	-76.76	0
218	SLU 36	-1749	-1	7209	1.12	-75.39	0
218	SLU 37	-1762	0	7142	0.17	-75.93	0
218	SLU 38	-1729	-1	7153	1.12	-74.55	0
218	SLU 39	-1827	0	7301	0.18	-78.6	0
218	SLU 40	-1794	-1	7313	1.12	-77.23	0
218	SLU 41	-1858	0	7400	0.18	-79.99	0
218	SLU 42	-1826	-1	7411	1.13	-78.62	0
218	SLU 43	-1384	0	6690	0.18	-59.88	0
218	SLU 44	-1329	-2	6709	1.75	-57.59	0
218	SLU 45	-1434	0	6843	0.18	-62.11	0
218	SLU 46	-1402	-1	6855	1.12	-60.73	0
218	SLU 47	-1361	-2	6807	1.75	-58.98	0
218	SLU 48	-1466	0	6942	0.18	-63.49	0
218	SLU 49	-1434	-1	6953	1.12	-62.12	0
218	SLU 50	-1447	0	6886	0.18	-62.66	0
218	SLU 51	-1414	-1	6898	1.12	-61.29	0
218	SLU 52	-1628	-2	7540	1.77	-70.32	0
218	SLU 53	-1733	0	7674	0.19	-74.83	0
218	SLU 54	-1701	-1	7685	1.14	-73.46	0
218	SLU 55	-1660	-2	7638	1.77	-71.71	0
218	SLU 56	-1765	0	7772	0.2	-76.22	0
218	SLU 57	-1732	-1	7784	1.14	-74.85	0
218	SLU 58	-1745	0	7716	0.19	-75.39	0
218	SLU 59	-1713	-1	7728	1.14	-74.01	0
218	SLU 60	-1810	0	7876	0.2	-78.06	0
218	SLU 61	-1778	-1	7888	1.15	-76.69	0
218	SLU 62	-1842	0	7974	0.2	-79.45	0
218	SLU 63	-1809	-1	7986	1.15	-78.08	0
218	SLU 64	-1649	0	7457	0.19	-71.24	0
218	SLU 65	-1595	-2	7476	1.77	-68.95	0
218	SLU 66	-1700	0	7610	0.19	-73.47	0
218	SLU 67	-1668	-1	7622	1.14	-72.09	0
218	SLU 68	-1627	-2	7574	1.77	-70.34	0
218	SLU 69	-1732	0	7709	0.19	-74.85	0
218	SLU 70	-1699	-1	7720	1.14	-73.48	0
218	SLU 71	-1713	0	7653	0.19	-74.02	0
218	SLU 72	-1680	-1	7665	1.14	-72.65	0
218	SLU 73	-1894	-2	8307	1.78	-81.68	0
218	SLU 74	-1999	0	8441	0.21	-86.19	0
218	SLU 75	-1966	-1	8452	1.16	-84.82	0
218	SLU 76	-1925	-2	8405	1.78	-83.07	0
218	SLU 77	-2030	0	8539	0.21	-87.58	0
218	SLU 78	-1998	-1	8551	1.16	-86.21	0
218	SLU 79	-2011	0	8483	0.21	-86.75	0
218	SLU 80	-1979	-1	8495	1.15	-85.37	0
218	SLU 81	-2076	0	8643	0.21	-89.43	0
218	SLU 82	-2043	-1	8655	1.16	-88.05	0
218	SLU 83	-2107	0	8741	0.22	-90.81	0
218	SLU 84	-2075	-1	8753	1.16	-89.44	0
218	SLE RA 1	-1210	0	5567	0.14	-52.3	0
218	SLE RA 2	-1174	-1	5580	1.19	-50.78	0
218	SLE RA 3	-1244	0	5670	0.14	-53.79	0
218	SLE RA 4	-1222	-1	5678	0.78	-52.87	0
218	SLE RA 5	-1195	-1	5646	1.19	-51.7	0
218	SLE RA 6	-1265	0	5735	0.14	-54.71	0
218	SLE RA 7	-1244	-1	5743	0.78	-53.8	0
218	SLE RA 8	-1252	0	5698	0.14	-54.16	0
218	SLE RA 9	-1231	-1	5706	0.77	-53.24	0
218	SLE RA 10	-1373	-1	6134	1.21	-59.26	0
218	SLE RA 11	-1443	0	6223	0.16	-62.27	0
218	SLE RA 12	-1422	-1	6231	0.79	-61.36	0
218	SLE RA 13	-1394	-1	6199	1.21	-60.19	0
218	SLE RA 14	-1464	0	6289	0.16	-63.2	0
218	SLE RA 15	-1443	-1	6297	0.79	-62.28	0
218	SLE RA 16	-1452	0	6252	0.16	-62.64	0
218	SLE RA 17	-1430	-1	6260	0.79	-61.73	0
218	SLE RA 18	-1495	0	6358	0.16	-64.43	0
218	SLE RA 19	-1473	-1	6366	0.79	-63.51	0
218	SLE RA 20	-1516	0	6424	0.16	-65.35	0
218	SLE RA 21	-1494	-1	6431	0.79	-64.44	0
218	SLE FR 1	-1210	0	5567	0.14	-52.3	0
218	SLE FR 2	-1203	0	5570	0.35	-52	0
218	SLE FR 3	-1219	0	5594	0.14	-52.67	0
218	SLE FR 4	-1288	0	5807	0.36	-55.64	0
218	SLE FR 5	-1304	0	5831	0.15	-56.31	0
218	SLE FR 6	-1353	0	5963	0.15	-58.37	0
218	SLE QP 1	-1210	0	5567	0.14	-52.3	0
218	SLE QP 2	-1296	0	5805	0.15	-55.94	0
218	SLD 1	-448	9	4877	-12.23	-18.51	-0.03
218	SLD 2	-448	9	4877	-12.23	-18.51	-0.03
218	SLD 3	-312	-2	4824	4.7	-12.64	0.01
218	SLD 4	-312	-2	4824	4.7	-12.64	0.01
218	SLD 5	-1246	20	5608	-29.24	-53.61	-0.07
218	SLD 6	-1246	20	5608	-29.24	-53.61	-0.07
218	SLD 7	-796	-19	5429	27.19	-34.05	0.07
218	SLD 8	-796	-19	5429	27.19	-34.05	0.07



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
218	SLD 9	-1796	18	6180	-26.89	-77.83	-0.06
218	SLD 10	-1796	18	6180	-26.89	-77.83	-0.06
218	SLD 11	-1345	-21	6002	29.53	-58.27	0.07
218	SLD 12	-1345	-21	6002	29.53	-58.27	0.07
218	SLD 13	-2279	2	6786	-4.41	-99.24	-0.01
218	SLD 14	-2279	2	6786	-4.41	-99.24	-0.01
218	SLD 15	-2144	-10	6732	12.52	-93.37	0.03
218	SLD 16	-2144	-10	6732	12.52	-93.37	0.03
218	SLV 1	674	24	3638	-31.4	31.01	-0.08
218	SLV 2	674	24	3638	-31.4	31.01	-0.08
218	SLV 3	991	-5	3507	11.85	44.77	0.03
218	SLV 4	991	-5	3507	11.85	44.77	0.03
218	SLV 5	-1186	52	5354	-74.91	-50.72	-0.18
218	SLV 6	-1186	52	5354	-74.91	-50.72	-0.18
218	SLV 7	-129	-47	4916	69.26	-4.86	0.17
218	SLV 8	-129	-47	4916	69.26	-4.86	0.17
218	SLV 9	-2462	46	6693	-68.96	-107.02	-0.16
218	SLV 10	-2462	46	6693	-68.96	-107.02	-0.16
218	SLV 11	-1406	-52	6255	75.21	-61.16	0.18
218	SLV 12	-1406	-52	6255	75.21	-61.16	0.18
218	SLV 13	-3582	5	8102	-11.56	-156.65	-0.02
218	SLV 14	-3582	5	8102	-11.56	-156.65	-0.02
218	SLV 15	-3265	-25	7971	31.69	-142.89	0.08
218	SLV 16	-3265	-25	7971	31.69	-142.89	0.08
219	SLU 1	-1329	0	5389	0.12	-56.86	0
219	SLU 2	-1278	-2	5414	1.35	-54.72	0
219	SLU 3	-1385	0	5550	0.12	-59.29	0
219	SLU 4	-1354	-1	5566	0.86	-58	0
219	SLU 5	-1313	-2	5518	1.35	-56.23	0
219	SLU 6	-1420	0	5654	0.12	-60.8	0
219	SLU 7	-1389	-1	5670	0.86	-59.52	0
219	SLU 8	-1398	0	5597	0.12	-59.89	0
219	SLU 9	-1368	-1	5612	0.86	-58.61	0
219	SLU 10	-1607	-2	6224	1.37	-68.64	0
219	SLU 11	-1713	0	6360	0.14	-73.21	0
219	SLU 12	-1683	-1	6375	0.88	-71.92	0
219	SLU 13	-1641	-2	6328	1.37	-70.15	0
219	SLU 14	-1748	0	6464	0.14	-74.72	0
219	SLU 15	-1718	-1	6479	0.88	-73.44	0
219	SLU 16	-1727	0	6406	0.14	-73.81	0
219	SLU 17	-1697	-1	6422	0.88	-72.53	0
219	SLU 18	-1798	0	6545	0.14	-76.75	0
219	SLU 19	-1768	-1	6560	0.88	-75.46	0
219	SLU 20	-1833	0	6649	0.14	-78.26	0
219	SLU 21	-1803	-1	6664	0.88	-76.98	0
219	SLU 22	-1622	0	6144	0.13	-69.32	0
219	SLU 23	-1571	-2	6170	1.37	-67.17	0
219	SLU 24	-1678	0	6306	0.13	-71.75	0
219	SLU 25	-1647	-1	6321	0.87	-70.46	0
219	SLU 26	-1606	-2	6274	1.37	-68.69	0
219	SLU 27	-1713	0	6410	0.14	-73.26	0
219	SLU 28	-1682	-1	6425	0.88	-71.97	0
219	SLU 29	-1692	0	6352	0.13	-72.35	0
219	SLU 30	-1661	-1	6367	0.87	-71.06	0
219	SLU 31	-1900	-2	6979	1.38	-81.09	0
219	SLU 32	-2006	0	7115	0.15	-85.67	0
219	SLU 33	-1976	-1	7131	0.89	-84.38	0
219	SLU 34	-1935	-2	7083	1.38	-82.61	0
219	SLU 35	-2041	0	7219	0.15	-87.18	0
219	SLU 36	-2011	-1	7235	0.89	-85.89	0
219	SLU 37	-2020	0	7161	0.15	-86.27	0
219	SLU 38	-1990	-1	7177	0.89	-84.98	0
219	SLU 39	-2091	0	7300	0.16	-89.21	0
219	SLU 40	-2061	-1	7316	0.9	-87.92	0
219	SLU 41	-2126	0	7404	0.16	-90.72	0
219	SLU 42	-2096	-1	7420	0.9	-89.43	0
219	SLU 43	-1627	0	6746	0.15	-69.65	0
219	SLU 44	-1576	-2	6772	1.38	-67.51	0
219	SLU 45	-1683	0	6908	0.15	-72.08	0
219	SLU 46	-1653	-1	6923	0.89	-70.79	0
219	SLU 47	-1611	-2	6876	1.38	-69.02	0
219	SLU 48	-1718	0	7012	0.15	-73.59	0
219	SLU 49	-1687	-1	7027	0.89	-72.31	0
219	SLU 50	-1697	0	6954	0.15	-72.68	0
219	SLU 51	-1666	-1	6970	0.89	-71.39	0
219	SLU 52	-1905	-2	7582	1.4	-81.43	0
219	SLU 53	-2011	0	7717	0.17	-86	0
219	SLU 54	-1981	-1	7733	0.91	-84.71	0
219	SLU 55	-1940	-2	7685	1.4	-82.94	0
219	SLU 56	-2046	0	7821	0.17	-87.51	0
219	SLU 57	-2016	-1	7837	0.91	-86.23	0
219	SLU 58	-2025	0	7764	0.17	-86.6	0
219	SLU 59	-1995	-1	7779	0.91	-85.32	0
219	SLU 60	-2096	0	7903	0.17	-89.54	0
219	SLU 61	-2066	-1	7918	0.91	-88.25	0
219	SLU 62	-2131	0	8007	0.17	-91.05	0
219	SLU 63	-2101	-1	8022	0.91	-89.77	0
219	SLU 64	-1920	0	7502	0.16	-82.11	0
219	SLU 65	-1870	-2	7527	1.4	-79.96	0
219	SLU 66	-1976	0	7663	0.17	-84.53	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
219	SLU 67	-1946	-1	7679	0.9	-83.25	0
219	SLU 68	-1904	-2	7631	1.4	-81.48	0
219	SLU 69	-2011	0	7767	0.17	-86.05	0
219	SLU 70	-1980	-1	7783	0.91	-84.76	0
219	SLU 71	-1990	0	7710	0.16	-85.14	0
219	SLU 72	-1959	-1	7725	0.9	-83.85	0
219	SLU 73	-2198	-2	8337	1.41	-93.88	0
219	SLU 74	-2305	0	8473	0.18	-98.45	0
219	SLU 75	-2274	-1	8488	0.92	-97.17	0
219	SLU 76	-2233	-2	8441	1.41	-95.4	0
219	SLU 77	-2339	0	8577	0.18	-99.97	0
219	SLU 78	-2309	-1	8592	0.92	-98.68	0
219	SLU 79	-2318	0	8519	0.18	-99.06	0
219	SLU 80	-2288	-1	8535	0.92	-97.77	0
219	SLU 81	-2389	0	8658	0.19	-101.99	0
219	SLU 82	-2359	-1	8673	0.93	-100.71	0
219	SLU 83	-2424	0	8762	0.19	-103.51	0
219	SLU 84	-2394	-1	8777	0.93	-102.22	0
219	SLE RA 1	-1413	0	5605	0.12	-60.42	0
219	SLE RA 2	-1379	-1	5622	0.94	-58.99	0
219	SLE RA 3	-1450	0	5712	0.12	-62.04	0
219	SLE RA 4	-1430	-1	5723	0.62	-61.18	0
219	SLE RA 5	-1402	-1	5691	0.94	-60	0
219	SLE RA 6	-1473	0	5782	0.12	-63.05	0
219	SLE RA 7	-1453	-1	5792	0.62	-62.19	0
219	SLE RA 8	-1459	0	5743	0.12	-62.44	0
219	SLE RA 9	-1439	-1	5753	0.62	-61.58	0
219	SLE RA 10	-1598	-1	6161	0.96	-68.27	0
219	SLE RA 11	-1669	0	6252	0.14	-71.32	0
219	SLE RA 12	-1649	-1	6262	0.63	-70.46	0
219	SLE RA 13	-1621	-1	6231	0.96	-69.28	0
219	SLE RA 14	-1692	0	6321	0.14	-72.33	0
219	SLE RA 15	-1672	-1	6331	0.63	-71.47	0
219	SLE RA 16	-1678	0	6283	0.13	-71.72	0
219	SLE RA 17	-1658	-1	6293	0.63	-70.86	0
219	SLE RA 18	-1726	0	6375	0.14	-73.68	0
219	SLE RA 19	-1705	-1	6386	0.63	-72.82	0
219	SLE RA 20	-1749	0	6445	0.14	-74.69	0
219	SLE RA 21	-1728	-1	6455	0.63	-73.83	0
219	SLE FR 1	-1413	0	5605	0.12	-60.42	0
219	SLE FR 2	-1406	0	5608	0.29	-60.14	0
219	SLE FR 3	-1422	0	5632	0.12	-60.83	0
219	SLE FR 4	-1500	0	5839	0.29	-64.11	0
219	SLE FR 5	-1516	0	5864	0.13	-64.8	0
219	SLE FR 6	-1569	0	5990	0.13	-67.05	0
219	SLE QP 1	-1413	0	5605	0.12	-60.42	0
219	SLE QP 2	-1507	0	5836	0.13	-64.4	0
219	SLD 1	-656	0	4673	-7.53	-26.85	-0.02
219	SLD 2	-656	0	4673	-7.53	-26.85	-0.02
219	SLD 3	-525	6	4608	2.59	-21.15	0
219	SLD 4	-525	6	4608	2.59	-21.15	0
219	SLD 5	-1450	-9	5585	-17.53	-61.79	-0.03
219	SLD 6	-1450	-9	5585	-17.53	-61.79	-0.03
219	SLD 7	-1013	10	5369	16.22	-42.77	0.03
219	SLD 8	-1013	10	5369	16.22	-42.77	0.03
219	SLD 9	-2000	-11	6303	-15.97	-86.03	-0.03
219	SLD 10	-2000	-11	6303	-15.97	-86.03	-0.03
219	SLD 11	-1563	8	6086	17.78	-67.01	0.03
219	SLD 12	-1563	8	6086	17.78	-67.01	0.03
219	SLD 13	-2488	-6	7064	-2.33	-107.65	0
219	SLD 14	-2488	-6	7064	-2.33	-107.65	0
219	SLD 15	-2357	-1	6999	7.79	-101.95	0.02
219	SLD 16	-2357	-1	6999	7.79	-101.95	0.02
219	SLV 1	470	1	3117	-19.32	22.87	-0.04
219	SLV 2	470	1	3117	-19.32	22.87	-0.04
219	SLV 3	778	15	2961	6.47	36.24	0.01
219	SLV 4	778	15	2961	6.47	36.24	0.01
219	SLV 5	-1380	-22	5258	-44.84	-58.5	-0.08
219	SLV 6	-1380	-22	5258	-44.84	-58.5	-0.08
219	SLV 7	-355	26	4736	41.16	-13.93	0.08
219	SLV 8	-355	26	4736	41.16	-13.93	0.08
219	SLV 9	-2659	-27	6936	-40.91	-114.87	-0.08
219	SLV 10	-2659	-27	6936	-40.91	-114.87	-0.08
219	SLV 11	-1633	21	6414	45.09	-70.3	0.09
219	SLV 12	-1633	21	6414	45.09	-70.3	0.09
219	SLV 13	-3791	-15	8711	-6.22	-165.04	-0.01
219	SLV 14	-3791	-15	8711	-6.22	-165.04	-0.01
219	SLV 15	-3483	-1	8555	19.58	-151.66	0.04
219	SLV 16	-3483	-1	8555	19.58	-151.66	0.04
220	SLU 1	-1596	0	5609	0.06	-71.37	0
220	SLU 2	-1551	-1	5637	0.71	-69.44	0
220	SLU 3	-1659	0	5787	0.06	-74.23	0
220	SLU 4	-1632	-1	5803	0.45	-73.07	0
220	SLU 5	-1590	-1	5752	0.71	-71.24	0
220	SLU 6	-1698	0	5902	0.06	-76.03	0
220	SLU 7	-1671	-1	5919	0.45	-74.87	0
220	SLU 8	-1675	0	5840	0.06	-74.96	0
220	SLU 9	-1648	-1	5856	0.45	-73.8	0
220	SLU 10	-1912	-1	6464	0.72	-85.36	0
220	SLU 11	-2020	0	6614	0.07	-90.15	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
220	SLU 12	-1993	-1	6630	0.46	-88.99	0
220	SLU 13	-1952	-1	6579	0.72	-87.16	0
220	SLU 14	-2060	0	6729	0.07	-91.95	0
220	SLU 15	-2033	-1	6746	0.46	-90.79	0
220	SLU 16	-2036	0	6667	0.07	-90.88	0
220	SLU 17	-2009	-1	6683	0.46	-89.72	0
220	SLU 18	-2112	0	6791	0.07	-94.11	0
220	SLU 19	-2085	-1	6807	0.46	-92.95	0
220	SLU 20	-2151	0	6906	0.08	-95.91	0
220	SLU 21	-2124	-1	6922	0.46	-94.75	0
220	SLU 22	-1920	0	6389	0.07	-85.72	0
220	SLU 23	-1875	-1	6416	0.71	-83.8	0
220	SLU 24	-1983	0	6566	0.07	-88.59	0
220	SLU 25	-1957	-1	6583	0.46	-87.43	0
220	SLU 26	-1915	-1	6531	0.71	-85.59	0
220	SLU 27	-2023	0	6682	0.07	-90.38	0
220	SLU 28	-1996	-1	6698	0.46	-89.23	0
220	SLU 29	-1999	0	6619	0.07	-89.32	0
220	SLU 30	-1972	-1	6635	0.46	-88.16	0
220	SLU 31	-2237	-1	7243	0.73	-99.72	0
220	SLU 32	-2345	0	7393	0.08	-104.51	0
220	SLU 33	-2318	-1	7410	0.47	-103.35	0
220	SLU 34	-2276	-1	7358	0.73	-101.51	0
220	SLU 35	-2384	0	7509	0.08	-106.3	0
220	SLU 36	-2357	-1	7525	0.47	-105.15	0
220	SLU 37	-2361	0	7446	0.08	-105.24	0
220	SLU 38	-2334	-1	7462	0.47	-104.08	0
220	SLU 39	-2436	0	7570	0.08	-108.47	0
220	SLU 40	-2410	-1	7586	0.47	-107.31	0
220	SLU 41	-2476	0	7685	0.08	-110.26	0
220	SLU 42	-2449	-1	7702	0.47	-109.11	0
220	SLU 43	-1963	0	7025	0.08	-87.85	0
220	SLU 44	-1918	-1	7052	0.72	-85.93	0
220	SLU 45	-2026	0	7203	0.08	-90.72	0
220	SLU 46	-1999	-1	7219	0.46	-89.56	0
220	SLU 47	-1958	-1	7167	0.72	-87.72	0
220	SLU 48	-2066	0	7318	0.08	-92.51	0
220	SLU 49	-2039	-1	7334	0.46	-91.36	0
220	SLU 50	-2042	0	7255	0.08	-91.45	0
220	SLU 51	-2015	-1	7272	0.46	-90.29	0
220	SLU 52	-2279	-1	7879	0.73	-101.85	0
220	SLU 53	-2387	0	8030	0.09	-106.64	0
220	SLU 54	-2361	-1	8046	0.47	-105.48	0
220	SLU 55	-2319	-1	7994	0.73	-103.64	0
220	SLU 56	-2427	0	8145	0.09	-108.43	0
220	SLU 57	-2400	-1	8161	0.47	-107.28	0
220	SLU 58	-2403	0	8082	0.09	-107.37	0
220	SLU 59	-2376	-1	8099	0.47	-106.21	0
220	SLU 60	-2479	0	8206	0.09	-110.6	0
220	SLU 61	-2452	-1	8223	0.48	-109.44	0
220	SLU 62	-2519	0	8322	0.09	-112.39	0
220	SLU 63	-2492	-1	8338	0.48	-111.24	0
220	SLU 64	-2288	0	7804	0.08	-102.21	0
220	SLU 65	-2243	-1	7832	0.73	-100.28	0
220	SLU 66	-2351	0	7982	0.08	-105.07	0
220	SLU 67	-2324	-1	7998	0.47	-103.92	0
220	SLU 68	-2282	-1	7947	0.73	-102.08	0
220	SLU 69	-2390	0	8097	0.08	-106.87	0
220	SLU 70	-2363	-1	8114	0.47	-105.71	0
220	SLU 71	-2367	0	8035	0.08	-105.8	0
220	SLU 72	-2340	-1	8051	0.47	-104.65	0
220	SLU 73	-2604	-1	8659	0.74	-116.2	0
220	SLU 74	-2712	0	8809	0.09	-120.99	0
220	SLU 75	-2685	-1	8825	0.48	-119.84	0
220	SLU 76	-2644	-1	8774	0.74	-118	0
220	SLU 77	-2752	0	8924	0.1	-122.79	0
220	SLU 78	-2725	-1	8941	0.48	-121.63	0
220	SLU 79	-2728	0	8862	0.09	-121.72	0
220	SLU 80	-2701	-1	8878	0.48	-120.57	0
220	SLU 81	-2804	0	8986	0.1	-124.95	0
220	SLU 82	-2777	-1	9002	0.49	-123.8	0
220	SLU 83	-2843	0	9101	0.1	-126.75	0
220	SLU 84	-2816	-1	9117	0.49	-125.6	0
220	SLE RA 1	-1688	0	5832	0.06	-75.47	0
220	SLE RA 2	-1658	-1	5850	0.49	-74.18	0
220	SLE RA 3	-1730	0	5950	0.06	-77.38	0
220	SLE RA 4	-1713	-1	5961	0.32	-76.61	0
220	SLE RA 5	-1685	-1	5927	0.49	-75.38	0
220	SLE RA 6	-1757	0	6027	0.06	-78.57	0
220	SLE RA 7	-1739	-1	6038	0.32	-77.8	0
220	SLE RA 8	-1741	0	5986	0.06	-77.86	0
220	SLE RA 9	-1723	-1	5997	0.32	-77.09	0
220	SLE RA 10	-1899	-1	6401	0.5	-84.8	0
220	SLE RA 11	-1971	0	6502	0.07	-87.99	0
220	SLE RA 12	-1953	-1	6513	0.33	-87.22	0
220	SLE RA 13	-1926	-1	6478	0.5	-86	0
220	SLE RA 14	-1998	0	6579	0.07	-89.19	0
220	SLE RA 15	-1980	-1	6590	0.33	-88.42	0
220	SLE RA 16	-1982	0	6537	0.07	-88.48	0
220	SLE RA 17	-1964	-1	6548	0.33	-87.71	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
220	SLE RA 18	-2032	0	6620	0.07	-90.63	0
220	SLE RA 19	-2015	-1	6630	0.33	-89.86	0
220	SLE RA 20	-2059	0	6696	0.07	-91.83	0
220	SLE RA 21	-2041	-1	6707	0.33	-91.06	0
220	SLE FR 1	-1688	0	5832	0.06	-75.47	0
220	SLE FR 2	-1682	0	5836	0.15	-75.21	0
220	SLE FR 3	-1699	0	5863	0.06	-75.95	0
220	SLE FR 4	-1786	0	6072	0.15	-79.76	0
220	SLE FR 5	-1802	0	6099	0.07	-80.5	0
220	SLE FR 6	-1860	0	6226	0.07	-83.05	0
220	SLE QP 1	-1688	0	5832	0.06	-75.47	0
220	SLE QP 2	-1792	0	6068	0.07	-80.02	0
220	SLD 1	-929	0	4568	-3.56	-40.47	0
220	SLD 2	-929	0	4568	-3.56	-40.47	0
220	SLD 3	-804	5	4475	0.95	-34.84	-0.01
220	SLD 4	-804	5	4475	0.95	-34.84	-0.01
220	SLD 5	-1723	-8	5759	-7.85	-76.7	0.02
220	SLD 6	-1723	-8	5759	-7.85	-76.7	0.02
220	SLD 7	-1306	9	5449	7.16	-57.91	-0.03
220	SLD 8	-1306	9	5449	7.16	-57.91	-0.03
220	SLD 9	-2277	-9	6688	-7.03	-102.12	0.02
220	SLD 10	-2277	-9	6688	-7.03	-102.12	0.02
220	SLD 11	-1861	7	6377	7.98	-83.33	-0.02
220	SLD 12	-1861	7	6377	7.98	-83.33	-0.02
220	SLD 13	-2779	-5	7662	-0.82	-125.2	0.01
220	SLD 14	-2779	-5	7662	-0.82	-125.2	0.01
220	SLD 15	-2654	0	7568	3.69	-119.56	0
220	SLD 16	-2654	0	7568	3.69	-119.56	0
220	SLV 1	213	0	2562	-9.05	11.95	0
220	SLV 2	213	0	2562	-9.05	11.95	0
220	SLV 3	506	12	2341	2.35	25.16	-0.03
220	SLV 4	506	12	2341	2.35	25.16	-0.03
220	SLV 5	-1635	-19	5351	-19.97	-72.47	0.05
220	SLV 6	-1635	-19	5351	-19.97	-72.47	0.05
220	SLV 7	-658	22	4615	18.05	-28.42	-0.06
220	SLV 8	-658	22	4615	18.05	-28.42	-0.06
220	SLV 9	-2925	-23	7521	-17.92	-131.61	0.06
220	SLV 10	-2925	-23	7521	-17.92	-131.61	0.06
220	SLV 11	-1948	19	6785	20.1	-87.57	-0.06
220	SLV 12	-1948	19	6785	20.1	-87.57	-0.06
220	SLV 13	-4089	-12	9796	-2.22	-185.2	0.03
220	SLV 14	-4089	-12	9796	-2.22	-185.2	0.03
220	SLV 15	-3796	0	9575	9.19	-171.98	0
220	SLV 16	-3796	0	9575	9.19	-171.98	0
221	SLU 1	-1404	7	10284	-1.53	-47.82	0
221	SLU 2	-1384	48	10330	-3.41	-46.87	0
221	SLU 3	-1455	8	10628	-1.6	-49.67	0
221	SLU 4	-1444	33	10655	-2.72	-49.1	0
221	SLU 5	-1417	49	10554	-3.45	-48.04	0
221	SLU 6	-1488	9	10853	-1.64	-50.84	0
221	SLU 7	-1477	33	10880	-2.77	-50.27	0
221	SLU 8	-1469	9	10733	-1.62	-50.16	0
221	SLU 9	-1458	33	10761	-2.75	-49.59	0
221	SLU 10	-1655	47	11841	-3.58	-56.82	0
221	SLU 11	-1726	7	12139	-1.77	-59.61	0.01
221	SLU 12	-1714	32	12166	-2.89	-59.05	0
221	SLU 13	-1687	48	12065	-3.62	-57.99	0
221	SLU 14	-1759	8	12363	-1.81	-60.78	0.01
221	SLU 15	-1747	32	12391	-2.94	-60.22	0
221	SLU 16	-1740	8	12244	-1.79	-60.1	0.01
221	SLU 17	-1728	32	12271	-2.91	-59.53	0
221	SLU 18	-1790	6	12443	-1.78	-62.02	0.01
221	SLU 19	-1778	30	12470	-2.9	-61.46	0
221	SLU 20	-1823	7	12667	-1.82	-63.19	0.01
221	SLU 21	-1811	31	12694	-2.95	-62.62	0
221	SLU 22	-1651	7	11718	-1.72	-56.85	0
221	SLU 23	-1632	48	11764	-3.59	-55.91	0
221	SLU 24	-1703	8	12062	-1.78	-58.7	0.01
221	SLU 25	-1691	32	12090	-2.91	-58.14	0
221	SLU 26	-1665	49	11988	-3.64	-57.08	0
221	SLU 27	-1736	9	12287	-1.82	-59.87	0.01
221	SLU 28	-1724	33	12314	-2.95	-59.31	0
221	SLU 29	-1717	9	12167	-1.8	-59.19	0.01
221	SLU 30	-1705	33	12195	-2.93	-58.62	0
221	SLU 31	-1902	47	13275	-3.76	-65.85	0
221	SLU 32	-1973	7	13573	-1.95	-68.65	0.01
221	SLU 33	-1961	31	13600	-3.08	-68.08	0
221	SLU 34	-1935	48	13499	-3.81	-67.02	0
221	SLU 35	-2006	8	13797	-1.99	-69.82	0.01
221	SLU 36	-1994	32	13825	-3.12	-69.25	0
221	SLU 37	-1987	8	13678	-1.97	-69.13	0.01
221	SLU 38	-1975	32	13706	-3.1	-68.57	0
221	SLU 39	-2037	6	13877	-1.96	-71.06	0.01
221	SLU 40	-2025	30	13904	-3.09	-70.49	0
221	SLU 41	-2070	7	14101	-2	-72.22	0.01
221	SLU 42	-2058	31	14129	-3.13	-71.66	0
221	SLU 43	-1740	10	12878	-1.93	-59.07	0
221	SLU 44	-1721	50	12924	-3.81	-58.12	0
221	SLU 45	-1792	11	13222	-1.99	-60.92	0.01
221	SLU 46	-1780	35	13249	-3.12	-60.35	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
221	SLU 47	-1753	51	13148	-3.85	-59.29	0
221	SLU 48	-1825	11	13446	-2.04	-62.09	0.01
221	SLU 49	-1813	36	13474	-3.16	-61.52	0
221	SLU 50	-1806	11	13327	-2.02	-61.41	0.01
221	SLU 51	-1794	36	13354	-3.14	-60.84	0
221	SLU 52	-1991	49	14434	-3.98	-68.06	0
221	SLU 53	-2062	10	14733	-2.16	-70.86	0.01
221	SLU 54	-2050	34	14760	-3.29	-70.29	0
221	SLU 55	-2024	50	14659	-4.02	-69.23	0
221	SLU 56	-2095	10	14957	-2.21	-72.03	0.01
221	SLU 57	-2083	35	14984	-3.33	-71.46	0
221	SLU 58	-2076	10	14838	-2.19	-71.35	0.01
221	SLU 59	-2064	35	14865	-3.31	-70.78	0
221	SLU 60	-2126	8	15036	-2.17	-73.27	0.01
221	SLU 61	-2114	33	15064	-3.3	-72.7	0
221	SLU 62	-2159	9	15261	-2.22	-74.44	0.01
221	SLU 63	-2147	33	15288	-3.34	-73.87	0
221	SLU 64	-1987	10	14312	-2.12	-68.1	0.01
221	SLU 65	-1968	50	14358	-3.99	-67.16	0
221	SLU 66	-2039	10	14656	-2.18	-69.95	0.01
221	SLU 67	-2027	35	14683	-3.3	-69.38	0
221	SLU 68	-2001	51	14582	-4.03	-68.32	0
221	SLU 69	-2072	11	14880	-2.22	-71.12	0.01
221	SLU 70	-2060	36	14908	-3.35	-70.55	0
221	SLU 71	-2053	11	14761	-2.2	-70.44	0.01
221	SLU 72	-2041	36	14788	-3.33	-69.87	0
221	SLU 73	-2238	49	15868	-4.16	-77.1	0
221	SLU 74	-2309	9	16167	-2.35	-79.89	0.01
221	SLU 75	-2298	34	16194	-3.47	-79.33	0
221	SLU 76	-2271	50	16093	-4.2	-78.27	0
221	SLU 77	-2342	10	16391	-2.39	-81.06	0.01
221	SLU 78	-2331	35	16418	-3.52	-80.5	0
221	SLU 79	-2323	10	16272	-2.37	-80.38	0.01
221	SLU 80	-2312	35	16299	-3.5	-79.81	0
221	SLU 81	-2373	8	16470	-2.36	-82.3	0.01
221	SLU 82	-2362	32	16498	-3.48	-81.74	0
221	SLU 83	-2406	9	16695	-2.4	-83.47	0.01
221	SLU 84	-2395	33	16722	-3.53	-82.91	0
221	SLE RA 1	-1474	7	10694	-1.59	-50.4	0
221	SLE RA 2	-1461	34	10724	-2.84	-49.77	0
221	SLE RA 3	-1509	8	10923	-1.63	-51.63	0
221	SLE RA 4	-1501	24	10942	-2.38	-51.26	0
221	SLE RA 5	-1483	35	10874	-2.87	-50.55	0
221	SLE RA 6	-1531	9	11073	-1.66	-52.41	0
221	SLE RA 7	-1523	25	11091	-2.41	-52.04	0
221	SLE RA 8	-1518	9	10993	-1.64	-51.96	0
221	SLE RA 9	-1510	25	11012	-2.39	-51.58	0
221	SLE RA 10	-1642	34	11732	-2.95	-56.4	0
221	SLE RA 11	-1689	7	11930	-1.74	-58.26	0.01
221	SLE RA 12	-1681	24	11949	-2.49	-57.88	0
221	SLE RA 13	-1663	34	11881	-2.98	-57.18	0
221	SLE RA 14	-1711	8	12080	-1.77	-59.04	0.01
221	SLE RA 15	-1703	24	12098	-2.52	-58.66	0
221	SLE RA 16	-1698	8	12001	-1.76	-58.59	0.01
221	SLE RA 17	-1691	24	12019	-2.51	-58.21	0
221	SLE RA 18	-1732	6	12133	-1.75	-59.87	0.01
221	SLE RA 19	-1724	23	12151	-2.5	-59.49	0
221	SLE RA 20	-1754	7	12283	-1.78	-60.65	0.01
221	SLE RA 21	-1746	23	12301	-2.53	-60.27	0
221	SLE FR 1	-1474	7	10694	-1.59	-50.4	0
221	SLE FR 2	-1472	13	10700	-1.84	-50.27	0
221	SLE FR 3	-1483	8	10754	-1.6	-50.71	0
221	SLE FR 4	-1549	13	11132	-1.89	-53.11	0
221	SLE FR 5	-1560	7	11186	-1.65	-53.55	0
221	SLE FR 6	-1603	7	11414	-1.67	-55.13	0
221	SLE QP 1	-1474	7	10694	-1.59	-50.4	0
221	SLE QP 2	-1551	7	11126	-1.64	-53.24	0
221	SLD 1	-948	407	7869	-3.18	-29.34	-0.08
221	SLD 2	-948	407	7869	-3.18	-29.34	-0.08
221	SLD 3	-874	-26	7636	15.4	-26.15	0.01
221	SLD 4	-874	-26	7636	15.4	-26.15	0.01
221	SLD 5	-1483	784	10503	-30.27	-50.9	-0.15
221	SLD 6	-1483	784	10503	-30.27	-50.9	-0.15
221	SLD 7	-1236	-660	9725	31.65	-40.28	0.14
221	SLD 8	-1236	-660	9725	31.65	-40.28	0.14
221	SLD 9	-1867	674	12527	-34.92	-66.2	-0.13
221	SLD 10	-1867	674	12527	-34.92	-66.2	-0.13
221	SLD 11	-1620	-770	11749	27	-55.58	0.16
221	SLD 12	-1620	-770	11749	27	-55.58	0.16
221	SLD 13	-2229	40	14616	-18.67	-80.33	0
221	SLD 14	-2229	40	14616	-18.67	-80.33	0
221	SLD 15	-2155	-393	14382	-0.09	-77.14	0.08
221	SLD 16	-2155	-393	14382	-0.09	-77.14	0.08
221	SLV 1	-145	933	3516	-5.23	2.38	-0.18
221	SLV 2	-145	933	3516	-5.23	2.38	-0.18
221	SLV 3	28	-70	2968	37.81	9.85	0.02
221	SLV 4	28	-70	2968	37.81	9.85	0.02
221	SLV 5	-1393	1805	9675	-67.98	-47.88	-0.35
221	SLV 6	-1393	1805	9675	-67.98	-47.88	-0.35
221	SLV 7	-814	-1536	7847	75.46	-22.99	0.31



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
221	SLV 8	-814	-1536	7847	75.46	-22.99	0.31
221	SLV 9	-2288	1551	14405	-78.73	-83.49	-0.3
221	SLV 10	-2288	1551	14405	-78.73	-83.49	-0.3
221	SLV 11	-1710	-1791	12577	64.71	-58.6	0.36
221	SLV 12	-1710	-1791	12577	64.71	-58.6	0.36
221	SLV 13	-3131	84	19284	-41.08	-116.33	-0.01
221	SLV 14	-3131	84	19284	-41.08	-116.33	-0.01
221	SLV 15	-2958	-919	18735	1.95	-108.86	0.19
221	SLV 16	-2958	-919	18735	1.95	-108.86	0.19
222	SLU 1	15	-437	3679	16.09	1.95	0.04
222	SLU 2	16	-374	3670	13.43	2.36	0.04
222	SLU 3	15	-454	3778	16.71	2.01	0.04
222	SLU 4	16	-416	3772	15.11	2.26	0.04
222	SLU 5	16	-384	3727	13.81	2.38	0.04
222	SLU 6	16	-464	3834	17.09	2.04	0.05
222	SLU 7	16	-426	3829	15.49	2.28	0.04
222	SLU 8	15	-457	3793	16.85	2	0.05
222	SLU 9	16	-419	3787	15.25	2.25	0.04
222	SLU 10	18	-466	4194	16.63	2.9	0.05
222	SLU 11	18	-545	4302	19.91	2.56	0.05
222	SLU 12	18	-507	4296	18.31	2.8	0.05
222	SLU 13	19	-475	4251	17.01	2.93	0.05
222	SLU 14	18	-555	4359	20.29	2.58	0.05
222	SLU 15	19	-517	4353	18.69	2.83	0.05
222	SLU 16	18	-548	4317	20.06	2.54	0.05
222	SLU 17	19	-510	4312	18.46	2.79	0.05
222	SLU 18	19	-568	4428	20.67	2.73	0.06
222	SLU 19	19	-530	4423	19.07	2.97	0.05
222	SLU 20	19	-577	4485	21.05	2.75	0.06
222	SLU 21	19	-540	4480	19.45	3	0.06
222	SLU 22	17	-520	4164	19.04	2.41	0.05
222	SLU 23	18	-458	4155	16.37	2.82	0.05
222	SLU 24	18	-537	4262	19.66	2.48	0.05
222	SLU 25	18	-499	4257	18.06	2.72	0.05
222	SLU 26	18	-467	4211	16.75	2.85	0.05
222	SLU 27	18	-547	4319	20.04	2.5	0.05
222	SLU 28	19	-509	4313	18.44	2.75	0.05
222	SLU 29	18	-540	4277	19.8	2.47	0.05
222	SLU 30	18	-502	4272	18.2	2.71	0.05
222	SLU 31	21	-549	4679	19.57	3.37	0.06
222	SLU 32	21	-628	4786	22.86	3.02	0.06
222	SLU 33	21	-591	4781	21.26	3.27	0.06
222	SLU 34	21	-559	4736	19.95	3.4	0.06
222	SLU 35	21	-638	4843	23.24	3.05	0.06
222	SLU 36	21	-600	4838	21.64	3.29	0.06
222	SLU 37	21	-631	4802	23	3.01	0.06
222	SLU 38	21	-594	4796	21.4	3.26	0.06
222	SLU 39	21	-651	4913	23.62	3.19	0.06
222	SLU 40	22	-613	4907	22.01	3.44	0.06
222	SLU 41	22	-661	4970	24	3.22	0.06
222	SLU 42	22	-623	4964	22.39	3.46	0.06
222	SLU 43	18	-540	4617	19.91	2.37	0.05
222	SLU 44	19	-477	4608	17.24	2.78	0.05
222	SLU 45	19	-556	4715	20.53	2.44	0.06
222	SLU 46	19	-519	4710	18.93	2.68	0.05
222	SLU 47	19	-487	4664	17.62	2.81	0.05
222	SLU 48	19	-566	4772	20.91	2.46	0.06
222	SLU 49	20	-528	4767	19.31	2.71	0.06
222	SLU 50	19	-559	4730	20.67	2.42	0.06
222	SLU 51	19	-522	4725	19.07	2.67	0.05
222	SLU 52	22	-568	5132	20.45	3.33	0.06
222	SLU 53	22	-648	5240	23.73	2.98	0.06
222	SLU 54	22	-610	5234	22.13	3.23	0.06
222	SLU 55	22	-578	5189	20.83	3.35	0.06
222	SLU 56	22	-657	5296	24.11	3.01	0.06
222	SLU 57	22	-620	5291	22.51	3.25	0.06
222	SLU 58	22	-651	5255	23.87	2.97	0.06
222	SLU 59	22	-613	5249	22.27	3.22	0.06
222	SLU 60	22	-670	5366	24.49	3.15	0.07
222	SLU 61	23	-632	5360	22.89	3.4	0.07
222	SLU 62	23	-680	5423	24.87	3.18	0.07
222	SLU 63	23	-642	5417	23.27	3.42	0.07
222	SLU 64	21	-623	5101	22.86	2.84	0.06
222	SLU 65	22	-560	5092	20.19	3.25	0.06
222	SLU 66	21	-640	5200	23.48	2.9	0.06
222	SLU 67	22	-602	5194	21.88	3.15	0.06
222	SLU 68	22	-570	5149	20.57	3.27	0.06
222	SLU 69	22	-649	5257	23.86	2.93	0.06
222	SLU 70	22	-612	5251	22.26	3.17	0.06
222	SLU 71	22	-643	5215	23.62	2.89	0.06
222	SLU 72	22	-605	5209	22.02	3.14	0.06
222	SLU 73	24	-651	5617	23.39	3.79	0.07
222	SLU 74	24	-731	5724	26.68	3.45	0.07
222	SLU 75	25	-693	5719	25.08	3.69	0.07
222	SLU 76	25	-661	5673	23.77	3.82	0.07
222	SLU 77	24	-741	5781	27.06	3.47	0.07
222	SLU 78	25	-703	5775	25.46	3.72	0.07
222	SLU 79	24	-734	5739	26.82	3.43	0.07
222	SLU 80	25	-696	5734	25.22	3.68	0.07
222	SLU 81	25	-753	5850	27.43	3.62	0.07



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
		x	y	z		x	y	z	
222	SLU 82	25	-716	5845		25.83	3.86		0.07
222	SLU 83	25	-763	5907		27.81	3.64		0.07
222	SLU 84	26	-726	5902		26.21	3.89		0.07
222	SLE RA 1	16	-461	3818		16.94	2.08		0.05
222	SLE RA 2	16	-419	3812		15.16	2.35		0.04
222	SLE RA 3	16	-472	3883		17.35	2.12		0.05
222	SLE RA 4	16	-447	3880		16.28	2.29		0.05
222	SLE RA 5	16	-426	3849		15.41	2.37		0.05
222	SLE RA 6	16	-479	3921		17.6	2.14		0.05
222	SLE RA 7	16	-453	3917		16.53	2.3		0.05
222	SLE RA 8	16	-474	3893		17.44	2.12		0.05
222	SLE RA 9	16	-449	3890		16.38	2.28		0.05
222	SLE RA 10	18	-480	4161		17.29	2.72		0.05
222	SLE RA 11	18	-533	4233		19.48	2.49		0.05
222	SLE RA 12	18	-508	4229		18.42	2.65		0.05
222	SLE RA 13	18	-486	4199		17.55	2.74		0.05
222	SLE RA 14	18	-539	4271		19.74	2.5		0.05
222	SLE RA 15	18	-514	4267		18.67	2.67		0.05
222	SLE RA 16	18	-535	4243		19.58	2.48		0.05
222	SLE RA 17	18	-510	4239		18.51	2.64		0.05
222	SLE RA 18	18	-548	4317		19.99	2.6		0.05
222	SLE RA 19	18	-523	4313		18.92	2.76		0.05
222	SLE RA 20	18	-554	4355		20.24	2.62		0.05
222	SLE RA 21	19	-529	4351		19.17	2.78		0.05
222	SLE FR 1	16	-461	3818		16.94	2.08		0.05
222	SLE FR 2	16	-453	3816		16.58	2.13		0.05
222	SLE FR 3	16	-464	3833		17.04	2.09		0.05
222	SLE FR 4	16	-479	3966		17.5	2.29		0.05
222	SLE FR 5	16	-490	3983		17.95	2.24		0.05
222	SLE FR 6	17	-504	4067		18.46	2.34		0.05
222	SLE QP 1	16	-461	3818		16.94	2.08		0.05
222	SLE QP 2	16	-487	3967		17.85	2.24		0.05
222	SLD 1	18	-536	5336		18.82	3.77		0.08
222	SLD 2	18	-536	5336		18.82	3.77		0.08
222	SLD 3	25	-990	5240		37.81	6.47		0.07
222	SLD 4	25	-990	5240		37.81	6.47		0.07
222	SLD 5	8	188	4524		-10.65	-1.4		0.07
222	SLD 6	8	188	4524		-10.65	-1.4		0.07
222	SLD 7	28	-1328	4204		52.63	7.6		0.04
222	SLD 8	28	-1328	4204		52.63	7.6		0.04
222	SLD 9	5	354	3731		-16.93	-3.13		0.06
222	SLD 10	5	354	3731		-16.93	-3.13		0.06
222	SLD 11	25	-1162	3411		46.35	5.87		0.02
222	SLD 12	25	-1162	3411		46.35	5.87		0.02
222	SLD 13	8	16	2695		-2.11	-2		0.03
222	SLD 14	8	16	2695		-2.11	-2		0.03
222	SLD 15	14	-438	2599		16.88	0.7		0.02
222	SLD 16	14	-438	2599		16.88	0.7		0.02
222	SLV 1	21	-605	7161		20.29	5.57		0.11
222	SLV 2	21	-605	7161		20.29	5.57		0.11
222	SLV 3	36	-1653	6938		64.02	12.43		0.09
222	SLV 4	36	-1653	6938		64.02	12.43		0.09
222	SLV 5	-6	1066	5264		-47.73	-7.17		0.11
222	SLV 6	-6	1066	5264		-47.73	-7.17		0.11
222	SLV 7	46	-2425	4520		98.01	15.7		0.02
222	SLV 8	46	-2425	4520		98.01	15.7		0.02
222	SLV 9	-13	1451	3414		-62.31	-11.23		0.07
222	SLV 10	-13	1451	3414		-62.31	-11.23		0.07
222	SLV 11	39	-2040	2671		83.43	11.64		-0.01
222	SLV 12	39	-2040	2671		83.43	11.64		-0.01
222	SLV 13	-4	679	996		-28.31	-7.96		0.01
222	SLV 14	-4	679	996		-28.31	-7.96		0.01
222	SLV 15	12	-369	773		15.41	-1.1		-0.02
222	SLV 16	12	-369	773		15.41	-1.1		-0.02
223	SLU 1	-12	-259	6496		8.46	-3.97		-0.05
223	SLU 2	-13	-210	6517		6.42	-4.76		-0.05
223	SLU 3	-12	-269	6711		8.78	-4.12		-0.05
223	SLU 4	-13	-240	6724		7.56	-4.6		-0.05
223	SLU 5	-13	-215	6661		6.6	-4.86		-0.05
223	SLU 6	-13	-275	6855		8.96	-4.22		-0.05
223	SLU 7	-13	-245	6867		7.74	-4.7		-0.05
223	SLU 8	-13	-270	6783		8.82	-4.16		-0.05
223	SLU 9	-13	-241	6796		7.59	-4.64		-0.05
223	SLU 10	-15	-277	7389		8.56	-5.58		-0.05
223	SLU 11	-15	-337	7583		10.93	-4.94		-0.06
223	SLU 12	-15	-307	7595		9.71	-5.42		-0.06
223	SLU 13	-16	-283	7532		8.74	-5.68		-0.06
223	SLU 14	-15	-342	7726		11.11	-5.04		-0.06
223	SLU 15	-16	-313	7739		9.88	-5.51		-0.06
223	SLU 16	-15	-338	7655		10.96	-4.98		-0.06
223	SLU 17	-16	-308	7667		9.74	-5.46		-0.06
223	SLU 18	-15	-356	7741		11.52	-5.14		-0.06
223	SLU 19	-16	-326	7754		10.3	-5.61		-0.06
223	SLU 20	-16	-361	7885		11.7	-5.23		-0.06
223	SLU 21	-16	-331	7897		10.48	-5.71		-0.06
223	SLU 22	-14	-319	7338		10.36	-4.71		-0.06
223	SLU 23	-15	-269	7359		8.32	-5.51		-0.05
223	SLU 24	-15	-329	7553		10.68	-4.87		-0.06
223	SLU 25	-15	-299	7565		9.46	-5.34		-0.06
223	SLU 26	-16	-275	7502		8.5	-5.6		-0.05



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
223	SLU 27	-15	-334	7696	10.86	-4.96	-0.06
223	SLU 28	-16	-305	7708	9.64	-5.44	-0.06
223	SLU 29	-15	-330	7624	10.71	-4.91	-0.06
223	SLU 30	-15	-300	7637	9.49	-5.38	-0.06
223	SLU 31	-18	-337	8230	10.46	-6.32	-0.06
223	SLU 32	-17	-396	8424	12.82	-5.68	-0.07
223	SLU 33	-18	-366	8437	11.6	-6.16	-0.07
223	SLU 34	-18	-342	8373	10.64	-6.42	-0.06
223	SLU 35	-17	-402	8567	13	-5.78	-0.07
223	SLU 36	-18	-372	8580	11.78	-6.26	-0.07
223	SLU 37	-17	-397	8496	12.86	-5.72	-0.07
223	SLU 38	-18	-367	8508	11.64	-6.2	-0.07
223	SLU 39	-17	-415	8583	13.42	-5.88	-0.07
223	SLU 40	-18	-385	8595	12.2	-6.36	-0.07
223	SLU 41	-18	-420	8726	13.6	-5.98	-0.07
223	SLU 42	-18	-391	8739	12.37	-6.45	-0.07
223	SLU 43	-15	-317	8157	10.35	-4.9	-0.06
223	SLU 44	-16	-267	8178	8.31	-5.7	-0.06
223	SLU 45	-15	-327	8372	10.67	-5.06	-0.06
223	SLU 46	-16	-297	8384	9.45	-5.53	-0.06
223	SLU 47	-16	-273	8321	8.49	-5.79	-0.06
223	SLU 48	-16	-332	8515	10.85	-5.15	-0.06
223	SLU 49	-16	-303	8528	9.63	-5.63	-0.06
223	SLU 50	-15	-328	8444	10.7	-5.1	-0.06
223	SLU 51	-16	-298	8456	9.48	-5.57	-0.06
223	SLU 52	-18	-335	9049	10.45	-6.51	-0.07
223	SLU 53	-18	-394	9243	12.81	-5.87	-0.07
223	SLU 54	-18	-365	9256	11.59	-6.35	-0.07
223	SLU 55	-19	-340	9193	10.63	-6.61	-0.07
223	SLU 56	-18	-400	9387	12.99	-5.97	-0.07
223	SLU 57	-19	-370	9399	11.77	-6.45	-0.07
223	SLU 58	-18	-395	9315	12.85	-5.91	-0.07
223	SLU 59	-18	-365	9328	11.62	-6.39	-0.07
223	SLU 60	-18	-413	9402	13.41	-6.07	-0.07
223	SLU 61	-19	-383	9414	12.19	-6.55	-0.07
223	SLU 62	-18	-419	9545	13.59	-6.17	-0.07
223	SLU 63	-19	-389	9558	12.36	-6.64	-0.07
223	SLU 64	-17	-376	8998	12.24	-5.65	-0.07
223	SLU 65	-18	-327	9019	10.21	-6.44	-0.07
223	SLU 66	-17	-386	9213	12.57	-5.8	-0.07
223	SLU 67	-18	-357	9226	11.35	-6.28	-0.07
223	SLU 68	-18	-332	9162	10.38	-6.54	-0.07
223	SLU 69	-18	-392	9356	12.75	-5.9	-0.07
223	SLU 70	-18	-362	9369	11.52	-6.38	-0.07
223	SLU 71	-18	-387	9285	12.6	-5.84	-0.07
223	SLU 72	-18	-357	9297	11.38	-6.32	-0.07
223	SLU 73	-20	-394	9891	12.35	-7.26	-0.07
223	SLU 74	-20	-454	10085	14.71	-6.62	-0.08
223	SLU 75	-20	-424	10097	13.49	-7.1	-0.08
223	SLU 76	-21	-400	10034	12.53	-7.36	-0.08
223	SLU 77	-20	-459	10228	14.89	-6.72	-0.08
223	SLU 78	-21	-429	10240	13.67	-7.19	-0.08
223	SLU 79	-20	-455	10156	14.74	-6.66	-0.08
223	SLU 80	-21	-425	10169	13.52	-7.14	-0.08
223	SLU 81	-20	-472	10243	15.31	-6.81	-0.08
223	SLU 82	-21	-443	10256	14.08	-7.29	-0.08
223	SLU 83	-21	-478	10387	15.48	-6.91	-0.08
223	SLU 84	-21	-448	10399	14.26	-7.39	-0.08
223	SLE RA 1	-13	-276	6737	9	-4.18	-0.05
223	SLE RA 2	-13	-243	6751	7.64	-4.71	-0.05
223	SLE RA 3	-13	-283	6880	9.22	-4.28	-0.05
223	SLE RA 4	-13	-263	6888	8.4	-4.6	-0.05
223	SLE RA 5	-14	-247	6846	7.76	-4.77	-0.05
223	SLE RA 6	-13	-287	6976	9.34	-4.35	-0.05
223	SLE RA 7	-14	-267	6984	8.52	-4.67	-0.05
223	SLE RA 8	-13	-284	6928	9.24	-4.31	-0.05
223	SLE RA 9	-13	-264	6936	8.42	-4.63	-0.05
223	SLE RA 10	-15	-288	7332	9.07	-5.25	-0.05
223	SLE RA 11	-14	-328	7461	10.65	-4.83	-0.06
223	SLE RA 12	-15	-308	7469	9.83	-5.15	-0.06
223	SLE RA 13	-15	-292	7427	9.19	-5.32	-0.06
223	SLE RA 14	-15	-332	7557	10.77	-4.89	-0.06
223	SLE RA 15	-15	-312	7565	9.95	-5.21	-0.06
223	SLE RA 16	-15	-329	7509	10.67	-4.85	-0.06
223	SLE RA 17	-15	-309	7517	9.85	-5.17	-0.06
223	SLE RA 18	-15	-341	7567	11.04	-4.96	-0.06
223	SLE RA 19	-15	-321	7575	10.23	-5.28	-0.06
223	SLE RA 20	-15	-344	7662	11.16	-5.02	-0.06
223	SLE RA 21	-15	-324	7671	10.35	-5.34	-0.06
223	SLE FR 1	-13	-276	6737	9	-4.18	-0.05
223	SLE FR 2	-13	-270	6740	8.73	-4.29	-0.05
223	SLE FR 3	-13	-278	6775	9.05	-4.21	-0.05
223	SLE FR 4	-13	-289	6989	9.34	-4.52	-0.05
223	SLE FR 5	-13	-297	7024	9.66	-4.44	-0.05
223	SLE FR 6	-14	-308	7152	10.02	-4.57	-0.05
223	SLE QP 1	-13	-276	6737	9	-4.18	-0.05
223	SLE QP 2	-13	-296	6986	9.61	-4.41	-0.05
223	SLD 1	1	212	4956	-10.13	1.18	-0.03
223	SLD 2	1	212	4956	-10.13	1.18	-0.03
223	SLD 3	-8	-224	5065	8.01	-3.39	-0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
223	SLD 4	-8	-224	5065	8.01	-3.39	-0.02
223	SLD 5	3	518	6212	-23.82	4.18	-0.06
223	SLD 6	3	518	6212	-23.82	4.18	-0.06
223	SLD 7	-24	-935	6574	36.64	-11.02	-0.03
223	SLD 8	-24	-935	6574	36.64	-11.02	-0.03
223	SLD 9	-3	344	7397	-17.42	2.2	-0.07
223	SLD 10	-3	344	7397	-17.42	2.2	-0.07
223	SLD 11	-30	-1109	7760	43.05	-13.01	-0.05
223	SLD 12	-30	-1109	7760	43.05	-13.01	-0.05
223	SLD 13	-19	-368	8907	11.22	-5.44	-0.08
223	SLD 14	-19	-368	8907	11.22	-5.44	-0.08
223	SLD 15	-27	-803	9016	29.35	-10	-0.07
223	SLD 16	-27	-803	9016	29.35	-10	-0.07
223	SLV 1	20	882	2237	-36.14	9.23	0
223	SLV 2	20	882	2237	-36.14	9.23	0
223	SLV 3	0	-128	2494	5.86	-2.35	0.02
223	SLV 4	0	-128	2494	5.86	-2.35	0.02
223	SLV 5	28	1588	5171	-67.81	17.25	-0.07
223	SLV 6	28	1588	5171	-67.81	17.25	-0.07
223	SLV 7	-41	-1776	6028	72.19	-21.36	0
223	SLV 8	-41	-1776	6028	72.19	-21.36	0
223	SLV 9	14	1184	7943	-52.96	12.54	-0.11
223	SLV 10	14	1184	7943	-52.96	12.54	-0.11
223	SLV 11	-55	-2179	8800	87.04	-26.07	-0.03
223	SLV 12	-55	-2179	8800	87.04	-26.07	-0.03
223	SLV 13	-26	-464	11477	13.37	-6.47	-0.12
223	SLV 14	-26	-464	11477	13.37	-6.47	-0.12
223	SLV 15	-47	-1473	11734	55.37	-18.06	-0.1
223	SLV 16	-47	-1473	11734	55.37	-18.06	-0.1
224	SLU 1	-3	-499	3073	16.74	-3.58	0
224	SLU 2	-2	-441	3077	14.49	-2.77	0
224	SLU 3	-3	-517	3150	17.37	-3.71	0
224	SLU 4	-2	-482	3153	16.02	-3.22	0
224	SLU 5	-2	-452	3123	14.86	-2.86	0
224	SLU 6	-3	-528	3196	17.74	-3.8	0
224	SLU 7	-2	-493	3198	16.39	-3.31	0
224	SLU 8	-3	-520	3165	17.48	-3.76	0
224	SLU 9	-2	-486	3167	16.13	-3.28	0
224	SLU 10	-2	-538	3467	17.77	-3.08	0
224	SLU 11	-3	-614	3540	20.64	-4.02	0
224	SLU 12	-3	-579	3543	19.29	-3.53	0
224	SLU 13	-2	-549	3513	18.14	-3.18	0
224	SLU 14	-3	-625	3586	21.01	-4.11	0
224	SLU 15	-3	-590	3588	19.66	-3.63	0
224	SLU 16	-3	-617	3554	20.76	-4.08	0
224	SLU 17	-3	-583	3557	19.41	-3.59	0
224	SLU 18	-3	-637	3630	21.42	-4.03	0
224	SLU 19	-2	-602	3633	20.07	-3.54	0
224	SLU 20	-3	-648	3676	21.79	-4.12	0
224	SLU 21	-3	-613	3678	20.44	-3.63	0
224	SLU 22	-3	-588	3437	19.77	-3.93	0
224	SLU 23	-2	-530	3441	17.52	-3.12	0
224	SLU 24	-3	-606	3514	20.39	-4.06	0
224	SLU 25	-3	-572	3517	19.04	-3.57	0
224	SLU 26	-2	-541	3487	17.89	-3.21	0
224	SLU 27	-3	-617	3560	20.76	-4.15	0
224	SLU 28	-3	-583	3562	19.41	-3.66	0
224	SLU 29	-3	-610	3528	20.51	-4.12	0
224	SLU 30	-3	-575	3531	19.16	-3.63	0
224	SLU 31	-2	-627	3831	20.8	-3.44	0
224	SLU 32	-4	-703	3904	23.67	-4.37	0
224	SLU 33	-3	-668	3906	22.32	-3.89	0
224	SLU 34	-2	-638	3877	21.16	-3.53	0
224	SLU 35	-4	-714	3950	24.04	-4.47	0
224	SLU 36	-3	-679	3952	22.69	-3.98	0
224	SLU 37	-4	-706	3918	23.78	-4.43	0
224	SLU 38	-3	-672	3921	22.43	-3.94	0
224	SLU 39	-3	-726	3994	24.45	-4.38	0
224	SLU 40	-3	-691	3996	23.1	-3.9	0
224	SLU 41	-4	-737	4040	24.82	-4.47	0
224	SLU 42	-3	-702	4042	23.47	-3.99	0
224	SLU 43	-4	-618	3871	20.73	-4.53	0
224	SLU 44	-3	-560	3875	18.48	-3.72	0
224	SLU 45	-4	-636	3948	21.35	-4.66	0
224	SLU 46	-3	-601	3950	20	-4.17	0
224	SLU 47	-3	-571	3920	18.85	-3.81	0
224	SLU 48	-4	-647	3993	21.72	-4.75	0
224	SLU 49	-3	-612	3996	20.37	-4.26	0
224	SLU 50	-4	-639	3962	21.47	-4.71	0
224	SLU 51	-3	-605	3964	20.12	-4.23	0
224	SLU 52	-3	-657	4264	21.75	-4.04	0
224	SLU 53	-4	-733	4337	24.63	-4.97	0
224	SLU 54	-3	-698	4340	23.28	-4.49	0
224	SLU 55	-3	-668	4310	22.12	-4.13	0
224	SLU 56	-4	-743	4383	25	-5.06	0
224	SLU 57	-3	-709	4385	23.65	-4.58	0
224	SLU 58	-4	-736	4352	24.74	-5.03	0
224	SLU 59	-3	-701	4354	23.39	-4.54	0
224	SLU 60	-4	-756	4427	25.41	-4.98	0
224	SLU 61	-3	-721	4430	24.06	-4.5	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
224	SLU 62	-4	-766	4473	25.78	-5.07	0
224	SLU 63	-3	-732	4475	24.43	-4.59	0
224	SLU 64	-4	-707	4235	23.75	-4.89	0
224	SLU 65	-3	-649	4238	21.5	-4.08	0
224	SLU 66	-4	-725	4312	24.38	-5.01	0
224	SLU 67	-3	-691	4314	23.03	-4.53	0
224	SLU 68	-3	-660	4284	21.87	-4.17	0
224	SLU 69	-4	-736	4357	24.75	-5.1	0
224	SLU 70	-3	-702	4360	23.4	-4.62	0
224	SLU 71	-4	-729	4326	24.49	-5.07	0
224	SLU 72	-3	-694	4328	23.14	-4.58	0
224	SLU 73	-3	-746	4628	24.78	-4.39	0
224	SLU 74	-4	-822	4701	27.65	-5.33	0
224	SLU 75	-4	-787	4704	26.3	-4.84	0
224	SLU 76	-3	-757	4674	25.15	-4.48	0
224	SLU 77	-4	-833	4747	28.02	-5.42	0
224	SLU 78	-4	-798	4749	26.67	-4.93	0
224	SLU 79	-4	-825	4715	27.77	-5.38	0
224	SLU 80	-4	-791	4718	26.42	-4.9	0
224	SLU 81	-4	-845	4791	28.43	-5.33	0
224	SLU 82	-4	-810	4794	27.08	-4.85	0
224	SLU 83	-4	-856	4837	28.8	-5.43	0
224	SLU 84	-4	-821	4839	27.45	-4.94	0
224	SLE RA 1	-3	-524	3177	17.61	-3.68	0
224	SLE RA 2	-2	-486	3180	16.11	-3.14	0
224	SLE RA 3	-3	-536	3229	18.02	-3.76	0
224	SLE RA 4	-3	-513	3230	17.12	-3.44	0
224	SLE RA 5	-2	-493	3210	16.35	-3.2	0
224	SLE RA 6	-3	-544	3259	18.27	-3.83	0
224	SLE RA 7	-3	-521	3261	17.37	-3.5	0
224	SLE RA 8	-3	-539	3238	18.1	-3.8	0
224	SLE RA 9	-3	-516	3240	17.2	-3.48	0
224	SLE RA 10	-2	-550	3440	18.29	-3.35	0
224	SLE RA 11	-3	-601	3489	20.21	-3.97	0
224	SLE RA 12	-3	-578	3490	19.31	-3.65	0
224	SLE RA 13	-2	-557	3470	18.54	-3.41	0
224	SLE RA 14	-3	-608	3519	20.45	-4.04	0
224	SLE RA 15	-3	-585	3521	19.55	-3.71	0
224	SLE RA 16	-3	-603	3498	20.28	-4.01	0
224	SLE RA 17	-3	-580	3500	19.38	-3.69	0
224	SLE RA 18	-3	-616	3549	20.73	-3.98	0
224	SLE RA 19	-3	-593	3550	19.83	-3.66	0
224	SLE RA 20	-3	-623	3579	20.97	-4.04	0
224	SLE RA 21	-3	-600	3581	20.07	-3.72	0
224	SLE FR 1	-3	-524	3177	17.61	-3.68	0
224	SLE FR 2	-3	-516	3178	17.31	-3.57	0
224	SLE FR 3	-3	-527	3190	17.71	-3.7	0
224	SLE FR 4	-3	-544	3289	18.24	-3.66	0
224	SLE FR 5	-3	-555	3301	18.64	-3.79	0
224	SLE FR 6	-3	-570	3363	19.17	-3.83	0
224	SLE QP 1	-3	-524	3177	17.61	-3.68	0
224	SLE QP 2	-3	-552	3289	18.54	-3.77	0
224	SLD 1	-12	-596	4224	19.22	-0.71	-0.02
224	SLD 2	-12	-596	4224	19.22	-0.71	-0.02
224	SLD 3	-4	-1050	4303	38.12	3.58	-0.03
224	SLD 4	-4	-1050	4303	38.12	3.58	-0.03
224	SLD 5	-18	123	3450	-9.92	-9.36	0
224	SLD 6	-18	123	3450	-9.92	-9.36	0
224	SLD 7	8	-1389	3712	53.08	4.94	-0.02
224	SLD 8	8	-1389	3712	53.08	4.94	-0.02
224	SLD 9	-15	286	2865	-16	-12.48	0.02
224	SLD 10	-15	286	2865	-16	-12.48	0.02
224	SLD 11	12	-1226	3128	47.01	1.82	-0.01
224	SLD 12	12	-1226	3128	47.01	1.82	-0.01
224	SLD 13	-2	-54	2275	-1.03	-11.12	0.03
224	SLD 14	-2	-54	2275	-1.03	-11.12	0.03
224	SLD 15	6	-507	2354	17.87	-6.83	0.02
224	SLD 16	6	-507	2354	17.87	-6.83	0.02
224	SLV 1	-25	-660	5470	20.26	3.03	-0.05
224	SLV 2	-25	-660	5470	20.26	3.03	-0.05
224	SLV 3	-5	-1705	5659	63.82	13.91	-0.07
224	SLV 4	-5	-1705	5659	63.82	13.91	-0.07
224	SLV 5	-40	1000	3657	-47.01	-18.24	0.01
224	SLV 6	-40	1000	3657	-47.01	-18.24	0.01
224	SLV 7	27	-2482	4286	98.19	18.04	-0.05
224	SLV 8	27	-2482	4286	98.19	18.04	-0.05
224	SLV 9	-33	1379	2291	-61.11	-25.58	0.04
224	SLV 10	-33	1379	2291	-61.11	-25.58	0.04
224	SLV 11	34	-2104	2920	84.09	10.7	-0.01
224	SLV 12	34	-2104	2920	84.09	10.7	-0.01
224	SLV 13	-1	601	918	-26.74	-21.45	0.06
224	SLV 14	-1	601	918	-26.74	-21.45	0.06
224	SLV 15	19	-443	1107	16.82	-10.57	0.05
224	SLV 16	19	-443	1107	16.82	-10.57	0.05
225	SLU 1	-2	-219	6094	7.34	-1.66	0.02
225	SLU 2	-4	-167	6091	4.99	-3.12	0.02
225	SLU 3	-2	-227	6295	7.62	-1.72	0.02
225	SLU 4	-3	-196	6293	6.21	-2.6	0.02
225	SLU 5	-4	-171	6228	5.13	-3.16	0.02
225	SLU 6	-2	-231	6432	7.77	-1.76	0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
225	SLU 7	-3	-200	6430	6.36	-2.64	0.02
225	SLU 8	-2	-227	6368	7.63	-1.73	0.02
225	SLU 9	-3	-196	6366	6.22	-2.61	0.02
225	SLU 10	-4	-225	6854	6.96	-3.48	0.02
225	SLU 11	-3	-285	7058	9.6	-2.09	0.02
225	SLU 12	-4	-254	7056	8.19	-2.97	0.02
225	SLU 13	-4	-229	6991	7.11	-3.52	0.02
225	SLU 14	-3	-289	7195	9.74	-2.13	0.02
225	SLU 15	-4	-258	7193	8.33	-3	0.02
225	SLU 16	-3	-285	7131	9.6	-2.1	0.02
225	SLU 17	-4	-254	7129	8.19	-2.98	0.02
225	SLU 18	-3	-302	7184	10.16	-2.18	0.02
225	SLU 19	-4	-271	7183	8.75	-3.06	0.02
225	SLU 20	-3	-306	7321	10.3	-2.22	0.02
225	SLU 21	-4	-275	7319	8.89	-3.1	0.02
225	SLU 22	-3	-270	6841	9.08	-1.99	0.02
225	SLU 23	-4	-218	6838	6.73	-3.45	0.02
225	SLU 24	-3	-278	7042	9.36	-2.05	0.02
225	SLU 25	-4	-247	7040	7.95	-2.93	0.02
225	SLU 26	-4	-222	6975	6.87	-3.49	0.02
225	SLU 27	-3	-282	7179	9.51	-2.09	0.02
225	SLU 28	-4	-251	7177	8.1	-2.97	0.02
225	SLU 29	-3	-278	7115	9.37	-2.06	0.02
225	SLU 30	-4	-247	7113	7.96	-2.94	0.02
225	SLU 31	-5	-277	7601	8.7	-3.81	0.02
225	SLU 32	-3	-337	7805	11.34	-2.42	0.02
225	SLU 33	-4	-305	7803	9.93	-3.3	0.02
225	SLU 34	-5	-281	7738	8.85	-3.85	0.02
225	SLU 35	-3	-341	7942	11.48	-2.46	0.02
225	SLU 36	-4	-309	7940	10.07	-3.33	0.02
225	SLU 37	-3	-336	7878	11.34	-2.43	0.02
225	SLU 38	-4	-305	7876	9.93	-3.31	0.02
225	SLU 39	-3	-354	7931	11.9	-2.51	0.03
225	SLU 40	-4	-322	7930	10.49	-3.39	0.02
225	SLU 41	-3	-357	8068	12.04	-2.55	0.03
225	SLU 42	-4	-326	8066	10.63	-3.43	0.03
225	SLU 43	-3	-267	7666	8.94	-2.04	0.02
225	SLU 44	-5	-215	7663	6.59	-3.5	0.02
225	SLU 45	-3	-275	7867	9.23	-2.1	0.02
225	SLU 46	-4	-244	7866	7.82	-2.98	0.02
225	SLU 47	-5	-219	7800	6.74	-3.54	0.02
225	SLU 48	-3	-279	8004	9.37	-2.14	0.02
225	SLU 49	-4	-248	8002	7.96	-3.02	0.02
225	SLU 50	-3	-275	7940	9.23	-2.12	0.02
225	SLU 51	-4	-244	7938	7.82	-2.99	0.02
225	SLU 52	-5	-273	8427	8.57	-3.87	0.02
225	SLU 53	-3	-333	8630	11.2	-2.47	0.03
225	SLU 54	-4	-302	8629	9.79	-3.35	0.02
225	SLU 55	-5	-277	8563	8.71	-3.91	0.02
225	SLU 56	-3	-337	8767	11.35	-2.51	0.03
225	SLU 57	-4	-306	8765	9.94	-3.39	0.03
225	SLU 58	-3	-333	8703	11.21	-2.48	0.03
225	SLU 59	-4	-302	8701	9.8	-3.36	0.03
225	SLU 60	-3	-350	8756	11.76	-2.56	0.03
225	SLU 61	-4	-319	8755	10.35	-3.44	0.03
225	SLU 62	-3	-354	8893	11.91	-2.6	0.03
225	SLU 63	-4	-323	8891	10.5	-3.48	0.03
225	SLU 64	-3	-318	8413	10.68	-2.37	0.02
225	SLU 65	-5	-266	8410	8.33	-3.83	0.02
225	SLU 66	-3	-326	8614	10.97	-2.43	0.03
225	SLU 67	-4	-295	8612	9.56	-3.31	0.02
225	SLU 68	-5	-270	8547	8.48	-3.87	0.02
225	SLU 69	-3	-330	8751	11.11	-2.47	0.03
225	SLU 70	-4	-299	8749	9.7	-3.35	0.03
225	SLU 71	-3	-326	8687	10.97	-2.45	0.03
225	SLU 72	-4	-295	8685	9.56	-3.32	0.02
225	SLU 73	-5	-325	9174	10.31	-4.2	0.03
225	SLU 74	-3	-385	9377	12.94	-2.8	0.03
225	SLU 75	-5	-354	9376	11.53	-3.68	0.03
225	SLU 76	-5	-329	9310	10.45	-4.24	0.03
225	SLU 77	-4	-389	9514	13.09	-2.84	0.03
225	SLU 78	-5	-358	9512	11.68	-3.72	0.03
225	SLU 79	-4	-385	9450	12.95	-2.81	0.03
225	SLU 80	-5	-353	9448	11.54	-3.69	0.03
225	SLU 81	-4	-402	9503	13.5	-2.89	0.03
225	SLU 82	-5	-370	9502	12.09	-3.77	0.03
225	SLU 83	-4	-406	9640	13.65	-2.93	0.03
225	SLU 84	-5	-374	9638	12.24	-3.81	0.03
225	SLE RA 1	-2	-234	6308	7.84	-1.75	0.02
225	SLE RA 2	-4	-199	6306	6.27	-2.72	0.02
225	SLE RA 3	-2	-239	6442	8.03	-1.79	0.02
225	SLE RA 4	-3	-218	6440	7.09	-2.38	0.02
225	SLE RA 5	-4	-202	6397	6.37	-2.75	0.02
225	SLE RA 6	-2	-242	6533	8.12	-1.82	0.02
225	SLE RA 7	-3	-221	6532	7.18	-2.4	0.02
225	SLE RA 8	-2	-239	6490	8.03	-1.8	0.02
225	SLE RA 9	-3	-218	6489	7.09	-2.39	0.02
225	SLE RA 10	-4	-238	6814	7.59	-2.97	0.02
225	SLE RA 11	-3	-278	6950	9.34	-2.04	0.02
225	SLE RA 12	-3	-257	6949	8.4	-2.62	0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
225	SLE RA 13	-4	-240	6906	7.68	-2.99	0.02
225	SLE RA 14	-3	-281	7041	9.44	-2.06	0.02
225	SLE RA 15	-3	-260	7040	8.5	-2.65	0.02
225	SLE RA 16	-3	-278	6999	9.34	-2.05	0.02
225	SLE RA 17	-3	-257	6997	8.4	-2.63	0.02
225	SLE RA 18	-3	-289	7034	9.71	-2.1	0.02
225	SLE RA 19	-3	-268	7033	8.78	-2.68	0.02
225	SLE RA 20	-3	-292	7126	9.81	-2.13	0.02
225	SLE RA 21	-3	-271	7124	8.87	-2.71	0.02
225	SLE FR 1	-2	-234	6308	7.84	-1.75	0.02
225	SLE FR 2	-2	-227	6307	7.52	-1.94	0.02
225	SLE FR 3	-2	-235	6344	7.87	-1.76	0.02
225	SLE FR 4	-3	-243	6525	8.09	-2.05	0.02
225	SLE FR 5	-2	-251	6562	8.44	-1.87	0.02
225	SLE FR 6	-2	-261	6671	8.77	-1.92	0.02
225	SLE QP 1	-2	-234	6308	7.84	-1.75	0.02
225	SLE QP 2	-2	-250	6526	8.4	-1.85	0.02
225	SLD 1	-3	231	4710	-10.83	8.65	0
225	SLD 2	-3	231	4710	-10.83	8.65	0
225	SLD 3	-14	-208	4854	7.43	0.77	-0.01
225	SLD 4	-14	-208	4854	7.43	0.77	-0.01
225	SLD 5	14	560	5762	-25.06	13.24	0.02
225	SLD 6	14	560	5762	-25.06	13.24	0.02
225	SLD 7	-23	-904	6243	35.8	-13.01	0
225	SLD 8	-23	-904	6243	35.8	-13.01	0
225	SLD 9	18	403	6808	-19	9.3	0.04
225	SLD 10	18	403	6808	-19	9.3	0.04
225	SLD 11	-19	-1061	7289	41.86	-16.95	0.01
225	SLD 12	-19	-1061	7289	41.86	-16.95	0.01
225	SLD 13	10	-293	8197	9.37	-4.48	0.05
225	SLD 14	10	-293	8197	9.37	-4.48	0.05
225	SLD 15	-1	-732	8341	27.63	-12.36	0.04
225	SLD 16	-1	-732	8341	27.63	-12.36	0.04
225	SLV 1	-4	866	2276	-36.17	23.91	-0.03
225	SLV 2	-4	866	2276	-36.17	23.91	-0.03
225	SLV 3	-32	-151	2617	6.12	3.99	-0.05
225	SLV 4	-32	-151	2617	6.12	3.99	-0.05
225	SLV 5	40	1627	4732	-69.11	36.1	0.03
225	SLV 6	40	1627	4732	-69.11	36.1	0.03
225	SLV 7	-54	-1763	5872	71.85	-30.33	-0.03
225	SLV 8	-54	-1763	5872	71.85	-30.33	-0.03
225	SLV 9	49	1263	7180	-55.05	26.62	0.07
225	SLV 10	49	1263	7180	-55.05	26.62	0.07
225	SLV 11	-45	-2128	8319	85.91	-39.81	0.01
225	SLV 12	-45	-2128	8319	85.91	-39.81	0.01
225	SLV 13	28	-349	10434	10.68	-7.69	0.09
225	SLV 14	28	-349	10434	10.68	-7.69	0.09
225	SLV 15	-1	-1367	10776	52.97	-27.62	0.07
225	SLV 16	-1	-1367	10776	52.97	-27.62	0.07
226	SLU 1	0	636	2401	-16.71	0.1	-0.02
226	SLU 2	0	616	2326	-16.14	0.08	-0.01
226	SLU 3	0	656	2480	-17.28	0.11	-0.02
226	SLU 4	0	645	2435	-16.94	0.09	-0.02
226	SLU 5	0	629	2377	-16.51	0.08	-0.01
226	SLU 6	0	670	2531	-17.66	0.11	-0.02
226	SLU 7	0	658	2486	-17.31	0.09	-0.02
226	SLU 8	0	662	2502	-17.46	0.11	-0.02
226	SLU 9	0	651	2457	-17.12	0.09	-0.02
226	SLU 10	0	707	2681	-18.45	0.1	-0.02
226	SLU 11	0	747	2835	-19.59	0.13	-0.02
226	SLU 12	0	736	2790	-19.25	0.11	-0.02
226	SLU 13	0	720	2731	-18.82	0.1	-0.02
226	SLU 14	0	761	2885	-19.97	0.13	-0.02
226	SLU 15	0	749	2840	-19.62	0.12	-0.02
226	SLU 16	0	753	2857	-19.77	0.13	-0.02
226	SLU 17	0	742	2812	-19.43	0.11	-0.02
226	SLU 18	0	766	2908	-20.02	0.14	-0.02
226	SLU 19	0	754	2863	-19.67	0.12	-0.02
226	SLU 20	0	779	2958	-20.39	0.14	-0.02
226	SLU 21	0	767	2913	-20.04	0.12	-0.02
226	SLU 22	0	726	2749	-19.05	0.12	-0.02
226	SLU 23	0	706	2674	-18.47	0.1	-0.02
226	SLU 24	0	746	2828	-19.62	0.13	-0.02
226	SLU 25	0	735	2783	-19.27	0.11	-0.02
226	SLU 26	0	719	2724	-18.84	0.1	-0.02
226	SLU 27	0	760	2878	-19.99	0.13	-0.02
226	SLU 28	0	748	2833	-19.64	0.12	-0.02
226	SLU 29	0	752	2850	-19.8	0.13	-0.02
226	SLU 30	0	741	2805	-19.45	0.11	-0.02
226	SLU 31	0	797	3028	-20.78	0.12	-0.02
226	SLU 32	0	838	3182	-21.93	0.15	-0.02
226	SLU 33	0	826	3137	-21.58	0.13	-0.02
226	SLU 34	0	811	3079	-21.16	0.12	-0.02
226	SLU 35	0	851	3233	-22.3	0.15	-0.03
226	SLU 36	0	839	3188	-21.96	0.14	-0.02
226	SLU 37	0	844	3204	-22.11	0.15	-0.02
226	SLU 38	0	832	3159	-21.76	0.13	-0.02
226	SLU 39	0	856	3255	-22.35	0.16	-0.03
226	SLU 40	0	844	3210	-22	0.14	-0.02
226	SLU 41	0	869	3306	-22.72	0.16	-0.03



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
226	SLU 42	0	857	3261	-22.38	0.14	-0.02
226	SLU 43	0	795	3003	-20.93	0.13	-0.02
226	SLU 44	0	776	2928	-20.35	0.1	-0.02
226	SLU 45	0	816	3081	-21.5	0.13	-0.02
226	SLU 46	0	804	3036	-21.15	0.12	-0.02
226	SLU 47	0	789	2978	-20.73	0.1	-0.02
226	SLU 48	0	830	3132	-21.87	0.14	-0.02
226	SLU 49	0	818	3087	-21.53	0.12	-0.02
226	SLU 50	0	822	3104	-21.68	0.13	-0.02
226	SLU 51	0	810	3059	-21.33	0.12	-0.02
226	SLU 52	0	867	3282	-22.66	0.12	-0.02
226	SLU 53	0	907	3436	-23.81	0.16	-0.03
226	SLU 54	0	895	3391	-23.46	0.14	-0.02
226	SLU 55	0	880	3332	-23.04	0.12	-0.02
226	SLU 56	0	921	3486	-24.18	0.16	-0.03
226	SLU 57	0	909	3441	-23.84	0.14	-0.02
226	SLU 58	0	913	3458	-23.99	0.16	-0.03
226	SLU 59	0	901	3413	-23.64	0.14	-0.02
226	SLU 60	0	926	3509	-24.23	0.16	-0.03
226	SLU 61	0	914	3464	-23.88	0.14	-0.02
226	SLU 62	0	939	3559	-24.6	0.16	-0.03
226	SLU 63	0	927	3514	-24.26	0.14	-0.02
226	SLU 64	0	886	3350	-23.26	0.15	-0.02
226	SLU 65	0	866	3275	-22.68	0.12	-0.02
226	SLU 66	0	906	3429	-23.83	0.15	-0.03
226	SLU 67	0	894	3384	-23.48	0.14	-0.02
226	SLU 68	0	879	3326	-23.06	0.12	-0.02
226	SLU 69	0	920	3479	-24.21	0.16	-0.03
226	SLU 70	0	908	3434	-23.86	0.14	-0.02
226	SLU 71	0	912	3451	-24.01	0.15	-0.03
226	SLU 72	0	900	3406	-23.66	0.14	-0.02
226	SLU 73	0	957	3629	-24.99	0.14	-0.02
226	SLU 74	0	997	3783	-26.14	0.18	-0.03
226	SLU 75	0	986	3738	-25.79	0.16	-0.03
226	SLU 76	0	970	3680	-25.37	0.14	-0.02
226	SLU 77	0	1011	3834	-26.52	0.18	-0.03
226	SLU 78	0	999	3789	-26.17	0.16	-0.03
226	SLU 79	0	1003	3806	-26.32	0.18	-0.03
226	SLU 80	0	992	3761	-25.98	0.16	-0.03
226	SLU 81	0	1016	3856	-26.56	0.18	-0.03
226	SLU 82	0	1004	3811	-26.22	0.16	-0.03
226	SLU 83	0	1029	3907	-26.94	0.18	-0.03
226	SLU 84	0	1017	3862	-26.59	0.17	-0.03
226	SLE RA 1	0	661	2501	-17.38	0.11	-0.02
226	SLE RA 2	0	648	2451	-17	0.09	-0.02
226	SLE RA 3	0	675	2553	-17.76	0.11	-0.02
226	SLE RA 4	0	667	2523	-17.53	0.1	-0.02
226	SLE RA 5	0	657	2484	-17.25	0.09	-0.02
226	SLE RA 6	0	684	2587	-18.01	0.12	-0.02
226	SLE RA 7	0	676	2557	-17.78	0.1	-0.02
226	SLE RA 8	0	679	2568	-17.88	0.11	-0.02
226	SLE RA 9	0	671	2538	-17.65	0.1	-0.02
226	SLE RA 10	0	709	2687	-18.54	0.11	-0.02
226	SLE RA 11	0	736	2789	-19.3	0.13	-0.02
226	SLE RA 12	0	728	2759	-19.07	0.12	-0.02
226	SLE RA 13	0	718	2721	-18.79	0.11	-0.02
226	SLE RA 14	0	745	2823	-19.55	0.13	-0.02
226	SLE RA 15	0	737	2793	-19.32	0.12	-0.02
226	SLE RA 16	0	740	2804	-19.42	0.13	-0.02
226	SLE RA 17	0	732	2774	-19.19	0.12	-0.02
226	SLE RA 18	0	748	2838	-19.58	0.13	-0.02
226	SLE RA 19	0	740	2808	-19.35	0.12	-0.02
226	SLE RA 20	0	757	2872	-19.83	0.13	-0.02
226	SLE RA 21	0	749	2842	-19.6	0.12	-0.02
226	SLE FR 1	0	661	2501	-17.38	0.11	-0.02
226	SLE FR 2	0	659	2491	-17.3	0.11	-0.02
226	SLE FR 3	0	665	2514	-17.48	0.11	-0.02
226	SLE FR 4	0	685	2592	-17.96	0.11	-0.02
226	SLE FR 5	0	691	2615	-18.14	0.12	-0.02
226	SLE FR 6	0	705	2669	-18.48	0.12	-0.02
226	SLE QP 1	0	661	2501	-17.38	0.11	-0.02
226	SLE QP 2	0	687	2602	-18.04	0.12	-0.02
226	SLD 1	-10	957	3358	-28.05	3.53	-0.47
226	SLD 2	-10	957	3358	-28.05	3.53	-0.47
226	SLD 3	-14	641	2473	-16.37	2.25	-0.27
226	SLD 4	-14	641	2473	-16.37	2.25	-0.27
226	SLD 5	3	1248	4171	-38.75	3.08	-0.47
226	SLD 6	3	1248	4171	-38.75	3.08	-0.47
226	SLD 7	-10	194	1221	0.16	-1.19	0.22
226	SLD 8	-10	194	1221	0.16	-1.19	0.22
226	SLD 9	10	1181	3983	-36.25	1.42	-0.26
226	SLD 10	10	1181	3983	-36.25	1.42	-0.26
226	SLD 11	-3	127	1033	2.67	-2.85	0.43
226	SLD 12	-3	127	1033	2.67	-2.85	0.43
226	SLD 13	14	734	2731	-19.71	-2.02	0.23
226	SLD 14	14	734	2731	-19.71	-2.02	0.23
226	SLD 15	10	417	1846	-8.03	-3.3	0.44
226	SLD 16	10	417	1846	-8.03	-3.3	0.44
226	SLV 1	-26	1326	4394	-41.68	8.62	-1.14
226	SLV 2	-26	1326	4394	-41.68	8.62	-1.14



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
226	SLV 3	-36	579	2299	-14.13	5.38	-0.62
226	SLV 4	-36	579	2299	-14.13	5.38	-0.62
226	SLV 5	8	2013	6316	-66.92	7.58	-1.15
226	SLV 6	8	2013	6316	-66.92	7.58	-1.15
226	SLV 7	-26	-479	-665	24.92	-3.22	0.59
226	SLV 8	-26	-479	-665	24.92	-3.22	0.59
226	SLV 9	26	1854	5869	-61	3.45	-0.63
226	SLV 10	26	1854	5869	-61	3.45	-0.63
226	SLV 11	-7	-638	-1112	30.84	-7.35	1.11
226	SLV 12	-7	-638	-1112	30.84	-7.35	1.11
226	SLV 13	36	796	2905	-21.96	-5.15	0.59
226	SLV 14	36	796	2905	-21.96	-5.15	0.59
226	SLV 15	26	49	810	5.6	-8.39	1.11
226	SLV 16	26	49	810	5.6	-8.39	1.11
227	SLU 1	0	616	2262	-17.86	-0.1	0.01
227	SLU 2	0	595	2185	-17.26	-0.05	0.01
227	SLU 3	0	635	2335	-18.43	-0.1	0.01
227	SLU 4	0	623	2288	-18.07	-0.08	0.01
227	SLU 5	0	608	2232	-17.63	-0.06	0.01
227	SLU 6	0	648	2382	-18.81	-0.11	0.02
227	SLU 7	0	636	2335	-18.44	-0.08	0.01
227	SLU 8	0	641	2356	-18.6	-0.1	0.01
227	SLU 9	0	629	2310	-18.24	-0.08	0.01
227	SLU 10	0	684	2525	-19.68	-0.08	0.01
227	SLU 11	0	724	2676	-20.86	-0.13	0.02
227	SLU 12	0	712	2629	-20.5	-0.1	0.01
227	SLU 13	0	697	2572	-20.06	-0.08	0.01
227	SLU 14	0	737	2723	-21.24	-0.13	0.02
227	SLU 15	0	725	2676	-20.87	-0.1	0.01
227	SLU 16	0	730	2697	-21.03	-0.13	0.02
227	SLU 17	0	718	2650	-20.67	-0.1	0.01
227	SLU 18	0	743	2749	-21.33	-0.13	0.02
227	SLU 19	0	731	2702	-20.97	-0.1	0.01
227	SLU 20	0	755	2796	-21.7	-0.13	0.02
227	SLU 21	0	743	2749	-21.34	-0.11	0.02
227	SLU 22	0	704	2598	-20.34	-0.12	0.02
227	SLU 23	0	684	2520	-19.73	-0.07	0.01
227	SLU 24	0	724	2670	-20.91	-0.12	0.02
227	SLU 25	0	712	2624	-20.55	-0.1	0.01
227	SLU 26	0	697	2567	-20.11	-0.08	0.01
227	SLU 27	0	737	2717	-21.29	-0.13	0.02
227	SLU 28	0	724	2671	-20.92	-0.1	0.01
227	SLU 29	0	730	2692	-21.08	-0.13	0.02
227	SLU 30	0	717	2645	-20.72	-0.1	0.01
227	SLU 31	0	773	2861	-22.16	-0.1	0.01
227	SLU 32	0	813	3011	-23.34	-0.15	0.02
227	SLU 33	0	801	2965	-22.98	-0.12	0.02
227	SLU 34	0	786	2908	-22.54	-0.1	0.01
227	SLU 35	0	826	3058	-23.71	-0.15	0.02
227	SLU 36	0	813	3012	-23.35	-0.12	0.02
227	SLU 37	0	819	3033	-23.51	-0.15	0.02
227	SLU 38	0	806	2986	-23.15	-0.12	0.02
227	SLU 39	0	831	3084	-23.81	-0.15	0.02
227	SLU 40	0	819	3038	-23.45	-0.13	0.02
227	SLU 41	0	844	3131	-24.18	-0.16	0.02
227	SLU 42	0	832	3085	-23.82	-0.13	0.02
227	SLU 43	0	770	2826	-22.37	-0.12	0.02
227	SLU 44	0	750	2748	-21.76	-0.07	0.01
227	SLU 45	0	790	2898	-22.94	-0.12	0.02
227	SLU 46	0	777	2852	-22.58	-0.1	0.01
227	SLU 47	0	762	2795	-22.14	-0.08	0.01
227	SLU 48	0	802	2945	-23.31	-0.13	0.02
227	SLU 49	0	790	2899	-22.95	-0.1	0.01
227	SLU 50	0	795	2920	-23.11	-0.13	0.02
227	SLU 51	0	783	2873	-22.75	-0.1	0.01
227	SLU 52	0	839	3089	-24.19	-0.1	0.01
227	SLU 53	0	879	3239	-25.37	-0.15	0.02
227	SLU 54	0	866	3193	-25.01	-0.12	0.02
227	SLU 55	0	851	3136	-24.56	-0.1	0.01
227	SLU 56	0	891	3286	-25.74	-0.15	0.02
227	SLU 57	0	879	3240	-25.38	-0.12	0.02
227	SLU 58	0	884	3261	-25.54	-0.15	0.02
227	SLU 59	0	872	3214	-25.18	-0.12	0.02
227	SLU 60	0	897	3312	-25.84	-0.15	0.02
227	SLU 61	0	885	3266	-25.47	-0.12	0.02
227	SLU 62	0	910	3359	-26.21	-0.16	0.02
227	SLU 63	0	898	3313	-25.85	-0.13	0.02
227	SLU 64	0	859	3161	-24.84	-0.14	0.02
227	SLU 65	0	838	3084	-24.24	-0.1	0.01
227	SLU 66	0	878	3234	-25.42	-0.15	0.02
227	SLU 67	0	866	3187	-25.06	-0.12	0.02
227	SLU 68	0	851	3131	-24.61	-0.1	0.01
227	SLU 69	0	891	3281	-25.79	-0.15	0.02
227	SLU 70	0	879	3235	-25.43	-0.12	0.02
227	SLU 71	0	884	3255	-25.59	-0.15	0.02
227	SLU 72	0	872	3209	-25.23	-0.12	0.02
227	SLU 73	0	927	3424	-26.67	-0.12	0.02
227	SLU 74	0	967	3575	-27.85	-0.17	0.02
227	SLU 75	0	955	3528	-27.49	-0.14	0.02
227	SLU 76	0	940	3471	-27.04	-0.12	0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
227	SLU 77	0	980	3622	-28.22	-0.17	0.03
227	SLU 78	0	968	3575	-27.86	-0.15	0.02
227	SLU 79	0	973	3596	-28.02	-0.17	0.02
227	SLU 80	0	961	3550	-27.66	-0.14	0.02
227	SLU 81	0	986	3648	-28.31	-0.17	0.03
227	SLU 82	0	974	3601	-27.95	-0.15	0.02
227	SLU 83	0	998	3695	-28.69	-0.18	0.03
227	SLU 84	0	986	3649	-28.33	-0.15	0.02
227	SLE RA 1	0	641	2358	-18.57	-0.1	0.01
227	SLE RA 2	0	627	2306	-18.16	-0.07	0.01
227	SLE RA 3	0	654	2406	-18.95	-0.11	0.02
227	SLE RA 4	0	646	2375	-18.71	-0.09	0.01
227	SLE RA 5	0	636	2338	-18.41	-0.08	0.01
227	SLE RA 6	0	663	2438	-19.2	-0.11	0.02
227	SLE RA 7	0	654	2407	-18.96	-0.09	0.01
227	SLE RA 8	0	658	2421	-19.06	-0.11	0.02
227	SLE RA 9	0	650	2390	-18.82	-0.09	0.01
227	SLE RA 10	0	687	2533	-19.78	-0.09	0.01
227	SLE RA 11	0	713	2634	-20.57	-0.12	0.02
227	SLE RA 12	0	705	2603	-20.33	-0.1	0.02
227	SLE RA 13	0	695	2565	-20.03	-0.09	0.01
227	SLE RA 14	0	722	2665	-20.82	-0.12	0.02
227	SLE RA 15	0	714	2634	-20.58	-0.11	0.02
227	SLE RA 16	0	717	2648	-20.68	-0.12	0.02
227	SLE RA 17	0	709	2617	-20.44	-0.11	0.02
227	SLE RA 18	0	726	2682	-20.88	-0.13	0.02
227	SLE RA 19	0	718	2651	-20.64	-0.11	0.02
227	SLE RA 20	0	734	2714	-21.13	-0.13	0.02
227	SLE RA 21	0	726	2683	-20.89	-0.11	0.02
227	SLE FR 1	0	641	2358	-18.57	-0.1	0.01
227	SLE FR 2	0	638	2348	-18.49	-0.1	0.01
227	SLE FR 3	0	644	2371	-18.67	-0.1	0.02
227	SLE FR 4	0	664	2445	-19.18	-0.1	0.02
227	SLE FR 5	0	670	2468	-19.36	-0.11	0.02
227	SLE FR 6	0	683	2520	-19.72	-0.11	0.02
227	SLE QP 1	0	641	2358	-18.57	-0.1	0.01
227	SLE QP 2	0	666	2455	-19.26	-0.11	0.02
227	SLD 1	-16	692	2525	-20.32	1.69	-0.18
227	SLD 2	-16	692	2525	-20.32	1.69	-0.18
227	SLD 3	-12	452	1890	-10.56	3.09	-0.4
227	SLD 4	-12	452	1890	-10.56	3.09	-0.4
227	SLD 5	-11	1038	3438	-34.38	-1.69	0.29
227	SLD 6	-11	1038	3438	-34.38	-1.69	0.29
227	SLD 7	3	238	1324	-1.85	2.97	-0.45
227	SLD 8	3	238	1324	-1.85	2.97	-0.45
227	SLD 9	-2	1095	3587	-36.67	-3.19	0.48
227	SLD 10	-2	1095	3587	-36.67	-3.19	0.48
227	SLD 11	11	294	1472	-4.14	1.47	-0.26
227	SLD 12	11	294	1472	-4.14	1.47	-0.26
227	SLD 13	12	881	3020	-27.96	-3.31	0.44
227	SLD 14	12	881	3020	-27.96	-3.31	0.44
227	SLD 15	16	640	2386	-18.2	-1.91	0.21
227	SLD 16	16	640	2386	-18.2	-1.91	0.21
227	SLV 1	-41	729	2623	-21.82	4.28	-0.46
227	SLV 2	-41	729	2623	-21.82	4.28	-0.46
227	SLV 3	-30	163	1124	1.17	7.85	-1.02
227	SLV 4	-30	163	1124	1.17	7.85	-1.02
227	SLV 5	-28	1544	4778	-54.9	-4.2	0.73
227	SLV 6	-28	1544	4778	-54.9	-4.2	0.73
227	SLV 7	7	-343	-217	21.73	7.69	-1.15
227	SLV 8	7	-343	-217	21.73	7.69	-1.15
227	SLV 9	-7	1676	5127	-60.26	-7.91	1.19
227	SLV 10	-7	1676	5127	-60.26	-7.91	1.19
227	SLV 11	29	-211	132	16.37	3.98	-0.7
227	SLV 12	29	-211	132	16.37	3.98	-0.7
227	SLV 13	31	1170	3786	-39.69	-8.07	1.05
227	SLV 14	31	1170	3786	-39.69	-8.07	1.05
227	SLV 15	41	603	2288	-16.7	-4.5	0.49
227	SLV 16	41	603	2288	-16.7	-4.5	0.49
228	SLU 1	0	506	1693	-14.22	-0.03	0
228	SLU 2	0	504	1682	-14.17	-0.04	0
228	SLU 3	0	521	1741	-14.63	-0.04	0
228	SLU 4	0	519	1735	-14.6	-0.04	0
228	SLU 5	0	511	1708	-14.39	-0.04	0
228	SLU 6	0	528	1766	-14.85	-0.04	0
228	SLU 7	0	527	1760	-14.82	-0.04	0
228	SLU 8	0	522	1744	-14.66	-0.04	0
228	SLU 9	0	520	1737	-14.63	-0.04	0
228	SLU 10	0	585	1958	-16.43	-0.05	0.01
228	SLU 11	0	602	2017	-16.89	-0.04	0.01
228	SLU 12	0	601	2010	-16.86	-0.05	0.01
228	SLU 13	0	593	1983	-16.65	-0.05	0.01
228	SLU 14	0	610	2042	-17.11	-0.05	0.01
228	SLU 15	0	608	2036	-17.08	-0.05	0.01
228	SLU 16	0	603	2020	-16.92	-0.05	0.01
228	SLU 17	0	602	2013	-16.89	-0.05	0.01
228	SLU 18	0	623	2087	-17.45	-0.05	0.01
228	SLU 19	0	621	2081	-17.42	-0.05	0.01
228	SLU 20	0	630	2112	-17.67	-0.05	0.01
228	SLU 21	0	629	2106	-17.64	-0.05	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
228	SLU 22	0	583	1951	-16.36	-0.04	0
228	SLU 23	0	580	1940	-16.31	-0.04	0.01
228	SLU 24	0	597	1999	-16.76	-0.04	0
228	SLU 25	0	596	1993	-16.73	-0.04	0.01
228	SLU 26	0	588	1966	-16.53	-0.05	0.01
228	SLU 27	0	605	2024	-16.98	-0.04	0.01
228	SLU 28	0	603	2018	-16.95	-0.05	0.01
228	SLU 29	0	598	2002	-16.8	-0.04	0.01
228	SLU 30	0	597	1995	-16.77	-0.05	0.01
228	SLU 31	0	662	2216	-18.56	-0.05	0.01
228	SLU 32	0	679	2275	-19.02	-0.05	0.01
228	SLU 33	0	677	2268	-18.99	-0.05	0.01
228	SLU 34	0	669	2241	-18.78	-0.05	0.01
228	SLU 35	0	686	2300	-19.24	-0.05	0.01
228	SLU 36	0	685	2294	-19.21	-0.06	0.01
228	SLU 37	0	680	2278	-19.06	-0.05	0.01
228	SLU 38	0	678	2271	-19.03	-0.05	0.01
228	SLU 39	0	699	2345	-19.58	-0.05	0.01
228	SLU 40	0	698	2339	-19.55	-0.06	0.01
228	SLU 41	0	707	2371	-19.8	-0.05	0.01
228	SLU 42	0	705	2364	-19.77	-0.06	0.01
228	SLU 43	0	632	2113	-17.75	-0.04	0
228	SLU 44	0	629	2102	-17.7	-0.05	0.01
228	SLU 45	0	646	2161	-18.16	-0.04	0.01
228	SLU 46	0	645	2154	-18.13	-0.05	0.01
228	SLU 47	0	637	2127	-17.92	-0.05	0.01
228	SLU 48	0	654	2186	-18.38	-0.05	0.01
228	SLU 49	0	652	2179	-18.35	-0.05	0.01
228	SLU 50	0	647	2163	-18.19	-0.04	0.01
228	SLU 51	0	646	2157	-18.16	-0.05	0.01
228	SLU 52	0	711	2378	-19.96	-0.06	0.01
228	SLU 53	0	728	2436	-20.42	-0.05	0.01
228	SLU 54	0	726	2430	-20.39	-0.06	0.01
228	SLU 55	0	719	2403	-20.18	-0.06	0.01
228	SLU 56	0	735	2462	-20.64	-0.05	0.01
228	SLU 57	0	734	2455	-20.61	-0.06	0.01
228	SLU 58	0	729	2439	-20.45	-0.05	0.01
228	SLU 59	0	727	2432	-20.42	-0.06	0.01
228	SLU 60	0	748	2507	-20.98	-0.05	0.01
228	SLU 61	0	747	2500	-20.95	-0.06	0.01
228	SLU 62	0	756	2532	-21.2	-0.06	0.01
228	SLU 63	0	754	2525	-21.17	-0.06	0.01
228	SLU 64	0	708	2371	-19.89	-0.05	0.01
228	SLU 65	0	706	2360	-19.84	-0.05	0.01
228	SLU 66	0	723	2419	-20.3	-0.05	0.01
228	SLU 67	0	721	2412	-20.27	-0.05	0.01
228	SLU 68	0	714	2385	-20.06	-0.05	0.01
228	SLU 69	0	730	2444	-20.52	-0.05	0.01
228	SLU 70	0	729	2437	-20.49	-0.05	0.01
228	SLU 71	0	724	2421	-20.33	-0.05	0.01
228	SLU 72	0	722	2415	-20.3	-0.05	0.01
228	SLU 73	0	787	2636	-22.1	-0.06	0.01
228	SLU 74	0	804	2694	-22.55	-0.06	0.01
228	SLU 75	0	803	2688	-22.52	-0.06	0.01
228	SLU 76	0	795	2661	-22.32	-0.06	0.01
228	SLU 77	0	812	2720	-22.78	-0.06	0.01
228	SLU 78	0	810	2713	-22.75	-0.06	0.01
228	SLU 79	0	805	2697	-22.59	-0.06	0.01
228	SLU 80	0	804	2691	-22.56	-0.06	0.01
228	SLU 81	0	825	2765	-23.12	-0.06	0.01
228	SLU 82	0	823	2758	-23.09	-0.06	0.01
228	SLU 83	0	833	2790	-23.34	-0.06	0.01
228	SLU 84	0	831	2783	-23.31	-0.07	0.01
228	SLE RA 1	0	528	1767	-14.83	-0.04	0
228	SLE RA 2	0	526	1760	-14.8	-0.04	0
228	SLE RA 3	0	538	1799	-15.1	-0.04	0
228	SLE RA 4	0	537	1795	-15.08	-0.04	0
228	SLE RA 5	0	532	1777	-14.94	-0.04	0
228	SLE RA 6	0	543	1816	-15.25	-0.04	0
228	SLE RA 7	0	542	1811	-15.23	-0.04	0
228	SLE RA 8	0	538	1801	-15.12	-0.04	0
228	SLE RA 9	0	537	1796	-15.1	-0.04	0
228	SLE RA 10	0	581	1944	-16.3	-0.04	0.01
228	SLE RA 11	0	592	1983	-16.61	-0.04	0
228	SLE RA 12	0	591	1978	-16.59	-0.04	0.01
228	SLE RA 13	0	586	1960	-16.45	-0.05	0.01
228	SLE RA 14	0	597	2000	-16.75	-0.04	0.01
228	SLE RA 15	0	596	1995	-16.73	-0.05	0.01
228	SLE RA 16	0	593	1985	-16.63	-0.04	0.01
228	SLE RA 17	0	592	1980	-16.61	-0.05	0.01
228	SLE RA 18	0	606	2030	-16.98	-0.04	0.01
228	SLE RA 19	0	605	2025	-16.96	-0.05	0.01
228	SLE RA 20	0	611	2046	-17.13	-0.05	0.01
228	SLE RA 21	0	610	2042	-17.11	-0.05	0.01
228	SLE FR 1	0	528	1767	-14.83	-0.04	0
228	SLE FR 2	0	528	1766	-14.82	-0.04	0
228	SLE FR 3	0	530	1774	-14.89	-0.04	0
228	SLE FR 4	0	551	1844	-15.47	-0.04	0
228	SLE FR 5	0	553	1853	-15.53	-0.04	0
228	SLE FR 6	0	567	1898	-15.91	-0.04	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
228	SLE QP 1	0	528	1767	-14.83	-0.04	0
228	SLE QP 2	0	551	1846	-15.47	-0.04	0
228	SLD 1	-9	563	1880	-16.09	1.08	-0.21
228	SLD 2	-9	563	1880	-16.09	1.08	-0.21
228	SLD 3	-4	311	1129	-7.44	3.19	-0.6
228	SLD 4	-4	311	1129	-7.44	3.19	-0.6
228	SLD 5	-11	937	2995	-28.78	-2.9	0.53
228	SLD 6	-11	937	2995	-28.78	-2.9	0.53
228	SLD 7	7	97	492	0.06	4.12	-0.77
228	SLD 8	7	97	492	0.06	4.12	-0.77
228	SLD 9	-7	1005	3200	-31.01	-4.2	0.78
228	SLD 10	-7	1005	3200	-31.01	-4.2	0.78
228	SLD 11	11	166	697	-2.17	2.82	-0.52
228	SLD 12	11	166	697	-2.17	2.82	-0.52
228	SLD 13	4	792	2563	-23.51	-3.26	0.61
228	SLD 14	4	792	2563	-23.51	-3.26	0.61
228	SLD 15	9	540	1812	-14.86	-1.16	0.22
228	SLD 16	9	540	1812	-14.86	-1.16	0.22
228	SLV 1	-22	580	1932	-16.97	2.38	-0.47
228	SLV 2	-22	580	1932	-16.97	2.38	-0.47
228	SLV 3	-8	-19	143	3.56	7.76	-1.47
228	SLV 4	-8	-19	143	3.56	7.76	-1.47
228	SLV 5	-28	1468	4586	-47.07	-7.47	1.37
228	SLV 6	-28	1468	4586	-47.07	-7.47	1.37
228	SLV 7	19	-527	-1379	21.38	10.46	-1.95
228	SLV 8	19	-527	-1379	21.38	10.46	-1.95
228	SLV 9	-18	1630	5070	-52.33	-10.53	1.96
228	SLV 10	-18	1630	5070	-52.33	-10.53	1.96
228	SLV 11	28	-365	-894	16.12	7.39	-1.36
228	SLV 12	28	-365	-894	16.12	7.39	-1.36
228	SLV 13	9	1122	3549	-34.51	-7.84	1.48
228	SLV 14	9	1122	3549	-34.51	-7.84	1.48
228	SLV 15	23	523	1759	-13.98	-2.46	0.48
228	SLV 16	23	523	1759	-13.98	-2.46	0.48
229	SLU 1	-14	-605	2668	25.19	-8.52	0
229	SLU 2	-12	-546	2675	22.65	-7.51	0
229	SLU 3	-14	-626	2730	26.1	-8.82	0
229	SLU 4	-13	-591	2735	24.58	-8.21	0
229	SLU 5	-13	-559	2713	23.21	-7.71	0
229	SLU 6	-15	-640	2768	26.66	-9.02	0
229	SLU 7	-14	-604	2773	25.14	-8.41	0
229	SLU 8	-14	-631	2744	26.32	-8.93	0
229	SLU 9	-14	-596	2748	24.79	-8.32	0
229	SLU 10	-14	-653	2979	26.98	-8.53	0
229	SLU 11	-16	-733	3035	30.44	-9.84	0
229	SLU 12	-15	-698	3039	28.91	-9.23	0
229	SLU 13	-14	-666	3017	27.54	-8.73	0
229	SLU 14	-16	-746	3073	31	-10.05	0
229	SLU 15	-15	-711	3077	29.47	-9.44	0
229	SLU 16	-16	-738	3048	30.65	-9.95	0
229	SLU 17	-15	-703	3052	29.12	-9.34	0
229	SLU 18	-16	-757	3102	31.38	-9.98	0
229	SLU 19	-15	-722	3106	29.86	-9.37	0
229	SLU 20	-16	-771	3140	31.95	-10.18	0
229	SLU 21	-16	-735	3144	30.42	-9.58	0
229	SLU 22	-15	-705	2954	29.26	-9.56	0
229	SLU 23	-14	-646	2961	26.72	-8.55	0
229	SLU 24	-16	-726	3017	30.17	-9.86	0
229	SLU 25	-15	-691	3021	28.65	-9.25	0
229	SLU 26	-14	-659	2999	27.28	-8.75	0
229	SLU 27	-16	-740	3055	30.73	-10.07	0
229	SLU 28	-15	-704	3059	29.21	-9.46	0
229	SLU 29	-16	-731	3030	30.39	-9.97	0
229	SLU 30	-15	-696	3034	28.86	-9.36	0
229	SLU 31	-16	-753	3265	31.05	-9.57	0
229	SLU 32	-17	-833	3321	34.51	-10.89	0
229	SLU 33	-17	-798	3325	32.98	-10.28	0
229	SLU 34	-16	-766	3303	31.61	-9.78	0
229	SLU 35	-18	-846	3359	35.07	-11.09	0
229	SLU 36	-17	-811	3363	33.54	-10.48	0
229	SLU 37	-18	-838	3334	34.72	-10.99	0
229	SLU 38	-17	-803	3339	33.19	-10.39	0
229	SLU 39	-18	-857	3389	35.45	-11.03	0
229	SLU 40	-17	-822	3393	33.93	-10.42	0
229	SLU 41	-18	-870	3427	36.02	-11.23	0
229	SLU 42	-17	-835	3431	34.49	-10.62	0
229	SLU 43	-17	-752	3370	31.36	-10.72	0
229	SLU 44	-16	-693	3377	28.81	-9.7	0
229	SLU 45	-18	-774	3432	32.27	-11.02	0
229	SLU 46	-17	-738	3437	30.74	-10.41	0
229	SLU 47	-16	-706	3415	29.37	-9.91	0
229	SLU 48	-18	-787	3470	32.83	-11.22	0
229	SLU 49	-17	-752	3475	31.3	-10.61	0
229	SLU 50	-18	-778	3446	32.48	-11.12	0
229	SLU 51	-17	-743	3450	30.95	-10.52	0
229	SLU 52	-18	-800	3681	33.14	-10.73	0
229	SLU 53	-19	-880	3737	36.6	-12.04	0
229	SLU 54	-19	-845	3741	35.07	-11.43	0
229	SLU 55	-18	-813	3719	33.71	-10.93	0
229	SLU 56	-20	-894	3775	37.16	-12.24	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
229	SLU 57	-19	-858	3779	35.63	-11.64	0
229	SLU 58	-20	-885	3750	36.81	-12.15	0
229	SLU 59	-19	-850	3754	35.28	-11.54	0
229	SLU 60	-20	-905	3804	37.55	-12.18	0
229	SLU 61	-19	-869	3808	36.02	-11.57	0
229	SLU 62	-20	-918	3842	38.11	-12.38	0
229	SLU 63	-19	-883	3847	36.58	-11.77	0
229	SLU 64	-19	-852	3656	35.43	-11.76	0
229	SLU 65	-18	-793	3663	32.88	-10.75	0
229	SLU 66	-19	-874	3719	36.34	-12.06	0
229	SLU 67	-19	-838	3723	34.81	-11.45	0
229	SLU 68	-18	-806	3701	33.44	-10.95	0
229	SLU 69	-20	-887	3757	36.9	-12.26	0
229	SLU 70	-19	-851	3761	35.37	-11.66	0
229	SLU 71	-20	-878	3732	36.55	-12.17	0
229	SLU 72	-19	-843	3736	35.02	-11.56	0
229	SLU 73	-19	-900	3967	37.22	-11.77	0
229	SLU 74	-21	-980	4023	40.67	-13.08	0
229	SLU 75	-20	-945	4028	39.14	-12.48	0
229	SLU 76	-20	-913	4005	37.78	-11.97	0
229	SLU 77	-21	-994	4061	41.23	-13.29	0
229	SLU 78	-21	-958	4066	39.7	-12.68	0
229	SLU 79	-21	-985	4036	40.88	-13.19	0
229	SLU 80	-20	-950	4041	39.35	-12.58	0
229	SLU 81	-21	-1004	4091	41.62	-13.22	0
229	SLU 82	-20	-969	4095	40.09	-12.62	0
229	SLU 83	-22	-1018	4129	42.18	-13.43	0
229	SLU 84	-21	-982	4133	40.65	-12.82	0
229	SLE RA 1	-14	-633	2749	26.36	-8.82	0
229	SLE RA 2	-13	-594	2754	24.66	-8.14	0
229	SLE RA 3	-15	-648	2791	26.96	-9.02	0
229	SLE RA 4	-14	-624	2794	25.94	-8.61	0
229	SLE RA 5	-14	-603	2779	25.03	-8.28	0
229	SLE RA 6	-15	-657	2817	27.34	-9.15	0
229	SLE RA 7	-14	-633	2820	26.32	-8.75	0
229	SLE RA 8	-15	-651	2800	27.1	-9.09	0
229	SLE RA 9	-14	-627	2803	26.09	-8.68	0
229	SLE RA 10	-14	-665	2957	27.55	-8.82	0
229	SLE RA 11	-16	-719	2994	29.85	-9.7	0
229	SLE RA 12	-15	-696	2997	28.83	-9.29	0
229	SLE RA 13	-15	-674	2982	27.92	-8.96	0
229	SLE RA 14	-16	-728	3020	30.23	-9.84	0
229	SLE RA 15	-15	-704	3022	29.21	-9.43	0
229	SLE RA 16	-16	-722	3003	29.99	-9.77	0
229	SLE RA 17	-15	-699	3006	28.98	-9.37	0
229	SLE RA 18	-16	-735	3039	30.48	-9.79	0
229	SLE RA 19	-15	-712	3042	29.47	-9.39	0
229	SLE RA 20	-16	-744	3065	30.86	-9.93	0
229	SLE RA 21	-15	-720	3067	29.84	-9.52	0
229	SLE FR 1	-14	-633	2749	26.36	-8.82	0
229	SLE FR 2	-14	-625	2750	26.02	-8.68	0
229	SLE FR 3	-14	-637	2760	26.51	-8.87	0
229	SLE FR 4	-14	-656	2837	27.26	-8.97	0
229	SLE FR 5	-15	-667	2846	27.74	-9.16	0
229	SLE FR 6	-15	-684	2894	28.42	-9.3	0
229	SLE QP 1	-14	-633	2749	26.36	-8.82	0
229	SLE QP 2	-15	-664	2836	27.59	-9.11	0
229	SLD 1	-28	-719	3575	29.76	-20.69	-0.02
229	SLD 2	-28	-719	3575	29.76	-20.69	-0.02
229	SLD 3	-21	-1172	3658	48.75	-15.7	-0.01
229	SLD 4	-21	-1172	3658	48.75	-15.7	-0.01
229	SLD 5	-29	8	2933	-0.55	-20.16	-0.01
229	SLD 6	-29	8	2933	-0.55	-20.16	-0.01
229	SLD 7	-6	-1504	3208	62.73	-3.51	0
229	SLD 8	-6	-1504	3208	62.73	-3.51	0
229	SLD 9	-23	177	2465	-7.54	-14.71	0
229	SLD 10	-23	177	2465	-7.54	-14.71	0
229	SLD 11	0	-1335	2740	55.74	1.94	0.01
229	SLD 12	0	-1335	2740	55.74	1.94	0.01
229	SLD 13	-9	-155	2015	6.44	-2.52	0.01
229	SLD 14	-9	-155	2015	6.44	-2.52	0.01
229	SLD 15	-2	-609	2098	25.43	2.47	0.02
229	SLD 16	-2	-609	2098	25.43	2.47	0.02
229	SLV 1	-46	-796	4558	32.83	-36.77	-0.04
229	SLV 2	-46	-796	4558	32.83	-36.77	-0.04
229	SLV 3	-28	-1841	4760	76.58	-24.19	-0.03
229	SLV 4	-28	-1841	4760	76.58	-24.19	-0.03
229	SLV 5	-50	882	3046	-37.18	-36.48	-0.03
229	SLV 6	-50	882	3046	-37.18	-36.48	-0.03
229	SLV 7	8	-2603	3720	108.64	5.44	0.01
229	SLV 8	8	-2603	3720	108.64	5.44	0.01
229	SLV 9	-37	1275	1952	-53.45	-23.66	-0.01
229	SLV 10	-37	1275	1952	-53.45	-23.66	-0.01
229	SLV 11	21	-2210	2626	92.37	18.26	0.03
229	SLV 12	21	-2210	2626	92.37	18.26	0.03
229	SLV 13	-1	514	912	-21.39	5.97	0.03
229	SLV 14	-1	514	912	-21.39	5.97	0.03
229	SLV 15	16	-532	1115	22.36	18.55	0.04
229	SLV 16	16	-532	1115	22.36	18.55	0.04
230	SLU 1	0	645	2101	-17.96	0.37	-0.06



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
230	SLU 2	0	645	2096	-17.98	0.37	-0.06
230	SLU 3	0	666	2169	-18.53	0.38	-0.06
230	SLU 4	0	666	2166	-18.54	0.38	-0.06
230	SLU 5	0	657	2136	-18.31	0.37	-0.06
230	SLU 6	0	678	2209	-18.87	0.39	-0.06
230	SLU 7	0	678	2206	-18.88	0.39	-0.06
230	SLU 8	0	670	2180	-18.63	0.38	-0.06
230	SLU 9	0	669	2178	-18.64	0.38	-0.06
230	SLU 10	0	745	2423	-20.72	0.46	-0.07
230	SLU 11	0	767	2496	-21.27	0.47	-0.07
230	SLU 12	0	766	2493	-21.28	0.47	-0.07
230	SLU 13	0	757	2463	-21.06	0.46	-0.07
230	SLU 14	0	779	2536	-21.61	0.47	-0.07
230	SLU 15	0	778	2533	-21.62	0.47	-0.07
230	SLU 16	0	770	2507	-21.38	0.47	-0.07
230	SLU 17	0	770	2504	-21.39	0.47	-0.07
230	SLU 18	0	789	2567	-21.87	0.49	-0.08
230	SLU 19	0	788	2565	-21.88	0.49	-0.08
230	SLU 20	0	801	2607	-22.21	0.5	-0.08
230	SLU 21	0	800	2605	-22.22	0.5	-0.08
230	SLU 22	0	741	2412	-20.58	0.44	-0.07
230	SLU 23	0	740	2408	-20.6	0.44	-0.07
230	SLU 24	0	762	2481	-21.15	0.45	-0.07
230	SLU 25	0	762	2478	-21.16	0.45	-0.07
230	SLU 26	0	753	2448	-20.93	0.45	-0.07
230	SLU 27	0	774	2521	-21.49	0.46	-0.07
230	SLU 28	0	774	2518	-21.5	0.46	-0.07
230	SLU 29	0	765	2492	-21.25	0.45	-0.07
230	SLU 30	0	765	2489	-21.27	0.45	-0.07
230	SLU 31	0	841	2735	-23.34	0.53	-0.08
230	SLU 32	0	862	2808	-23.89	0.54	-0.08
230	SLU 33	0	862	2805	-23.9	0.54	-0.08
230	SLU 34	0	853	2774	-23.68	0.53	-0.08
230	SLU 35	0	874	2847	-24.23	0.55	-0.08
230	SLU 36	0	874	2845	-24.24	0.55	-0.08
230	SLU 37	0	866	2819	-24	0.54	-0.08
230	SLU 38	0	865	2816	-24.01	0.54	-0.08
230	SLU 39	0	884	2879	-24.49	0.57	-0.09
230	SLU 40	0	884	2876	-24.51	0.57	-0.09
230	SLU 41	0	897	2919	-24.83	0.57	-0.09
230	SLU 42	0	896	2916	-24.84	0.57	-0.09
230	SLU 43	0	806	2624	-22.45	0.46	-0.07
230	SLU 44	0	806	2619	-22.46	0.45	-0.07
230	SLU 45	0	827	2692	-23.02	0.47	-0.07
230	SLU 46	0	827	2690	-23.03	0.47	-0.07
230	SLU 47	0	818	2659	-22.8	0.46	-0.07
230	SLU 48	0	839	2732	-23.36	0.47	-0.07
230	SLU 49	0	839	2729	-23.37	0.47	-0.07
230	SLU 50	0	831	2704	-23.12	0.47	-0.07
230	SLU 51	0	830	2701	-23.13	0.47	-0.07
230	SLU 52	0	906	2946	-25.21	0.54	-0.08
230	SLU 53	0	927	3019	-25.76	0.55	-0.09
230	SLU 54	0	927	3016	-25.77	0.55	-0.09
230	SLU 55	0	918	2986	-25.54	0.55	-0.08
230	SLU 56	0	940	3059	-26.1	0.56	-0.09
230	SLU 57	0	939	3056	-26.11	0.56	-0.09
230	SLU 58	0	931	3030	-25.86	0.55	-0.09
230	SLU 59	0	931	3028	-25.88	0.55	-0.09
230	SLU 60	0	949	3091	-26.36	0.58	-0.09
230	SLU 61	0	949	3088	-26.37	0.58	-0.09
230	SLU 62	0	962	3131	-26.7	0.58	-0.09
230	SLU 63	0	961	3128	-26.71	0.58	-0.09
230	SLU 64	0	902	2935	-25.07	0.53	-0.08
230	SLU 65	0	901	2931	-25.09	0.53	-0.08
230	SLU 66	0	923	3004	-25.64	0.54	-0.08
230	SLU 67	0	922	3001	-25.65	0.54	-0.08
230	SLU 68	0	913	2971	-25.42	0.53	-0.08
230	SLU 69	0	935	3044	-25.98	0.54	-0.08
230	SLU 70	0	935	3041	-25.99	0.54	-0.08
230	SLU 71	0	926	3015	-25.74	0.54	-0.08
230	SLU 72	0	926	3012	-25.75	0.54	-0.08
230	SLU 73	0	1001	3258	-27.83	0.61	-0.09
230	SLU 74	0	1023	3331	-28.38	0.63	-0.1
230	SLU 75	0	1023	3328	-28.39	0.63	-0.1
230	SLU 76	0	1014	3298	-28.16	0.62	-0.1
230	SLU 77	0	1035	3371	-28.72	0.63	-0.1
230	SLU 78	0	1035	3368	-28.73	0.63	-0.1
230	SLU 79	0	1027	3342	-28.49	0.63	-0.1
230	SLU 80	0	1026	3339	-28.5	0.63	-0.1
230	SLU 81	0	1045	3402	-28.98	0.65	-0.1
230	SLU 82	0	1045	3400	-28.99	0.65	-0.1
230	SLU 83	0	1057	3442	-29.32	0.66	-0.1
230	SLU 84	0	1057	3440	-29.33	0.66	-0.1
230	SLE RA 1	0	673	2190	-18.71	0.39	-0.06
230	SLE RA 2	0	672	2187	-18.72	0.39	-0.06
230	SLE RA 3	0	687	2235	-19.09	0.4	-0.06
230	SLE RA 4	0	686	2233	-19.09	0.4	-0.06
230	SLE RA 5	0	680	2213	-18.94	0.39	-0.06
230	SLE RA 6	0	695	2262	-19.31	0.4	-0.06
230	SLE RA 7	0	695	2260	-19.32	0.4	-0.06



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
230	SLE RA 8	0	689	2243	-19.16	0.4	-0.06
230	SLE RA 9	0	689	2241	-19.16	0.4	-0.06
230	SLE RA 10	0	739	2404	-20.55	0.45	-0.07
230	SLE RA 11	0	753	2453	-20.92	0.46	-0.07
230	SLE RA 12	0	753	2451	-20.92	0.46	-0.07
230	SLE RA 13	0	747	2431	-20.77	0.45	-0.07
230	SLE RA 14	0	762	2480	-21.14	0.46	-0.07
230	SLE RA 15	0	761	2478	-21.15	0.46	-0.07
230	SLE RA 16	0	756	2461	-20.99	0.46	-0.07
230	SLE RA 17	0	756	2459	-20.99	0.46	-0.07
230	SLE RA 18	0	768	2501	-21.32	0.47	-0.07
230	SLE RA 19	0	768	2499	-21.32	0.47	-0.07
230	SLE RA 20	0	776	2527	-21.54	0.48	-0.07
230	SLE RA 21	0	776	2526	-21.55	0.48	-0.07
230	SLE FR 1	0	673	2190	-18.71	0.39	-0.06
230	SLE FR 2	0	673	2189	-18.71	0.39	-0.06
230	SLE FR 3	0	676	2200	-18.8	0.39	-0.06
230	SLE FR 4	0	701	2282	-19.49	0.42	-0.06
230	SLE FR 5	0	705	2294	-19.58	0.42	-0.06
230	SLE FR 6	0	720	2345	-20.01	0.43	-0.07
230	SLE QP 1	0	673	2190	-18.71	0.39	-0.06
230	SLE QP 2	0	701	2283	-19.49	0.42	-0.06
230	SLD 1	-4	979	3208	-26.63	4.7	0.14
230	SLD 2	-4	979	3208	-26.63	4.7	0.14
230	SLD 3	-14	727	2384	-20.04	1.49	0.72
230	SLD 4	-14	727	2384	-20.04	1.49	0.72
230	SLD 5	14	1166	3810	-31.63	6.57	-0.89
230	SLD 6	14	1166	3810	-31.63	6.57	-0.89
230	SLD 7	-19	328	1063	-9.66	-4.13	1.06
230	SLD 8	-19	328	1063	-9.66	-4.13	1.06
230	SLD 9	19	1075	3502	-29.32	4.96	-1.19
230	SLD 10	19	1075	3502	-29.32	4.96	-1.19
230	SLD 11	-14	237	756	-7.35	-5.74	0.76
230	SLD 12	-14	237	756	-7.35	-5.74	0.76
230	SLD 13	14	675	2182	-18.94	-0.66	-0.85
230	SLD 14	14	675	2182	-18.94	-0.66	-0.85
230	SLD 15	4	424	1358	-12.35	-3.87	-0.27
230	SLD 16	4	424	1358	-12.35	-3.87	-0.27
230	SLV 1	-8	1362	4490	-36.47	10.95	0.38
230	SLV 2	-8	1362	4490	-36.47	10.95	0.38
230	SLV 3	-34	753	2490	-20.56	2.73	1.87
230	SLV 4	-34	753	2490	-20.56	2.73	1.87
230	SLV 5	36	1822	5978	-48.71	16.04	-2.2
230	SLV 6	36	1822	5978	-48.71	16.04	-2.2
230	SLV 7	-48	-206	-688	4.32	-11.35	2.78
230	SLV 8	-48	-206	-688	4.32	-11.35	2.78
230	SLV 9	48	1609	5254	-43.3	12.18	-2.91
230	SLV 10	48	1609	5254	-43.3	12.18	-2.91
230	SLV 11	-36	-420	-1412	9.73	-15.21	2.07
230	SLV 12	-36	-420	-1412	9.73	-15.21	2.07
230	SLV 13	33	649	2076	-18.42	-1.9	-2
230	SLV 14	33	649	2076	-18.42	-1.9	-2
230	SLV 15	8	41	76	-2.51	-10.12	-0.5
230	SLV 16	8	41	76	-2.51	-10.12	-0.5
231	SLU 1	-1	-239	5938	9.56	-0.49	0
231	SLU 2	-3	-187	5904	7.32	-2.29	0
231	SLU 3	-1	-247	6135	9.89	-0.51	0
231	SLU 4	-2	-216	6115	8.55	-1.59	0
231	SLU 5	-3	-191	6041	7.48	-2.3	0
231	SLU 6	-1	-251	6272	10.05	-0.51	0
231	SLU 7	-2	-220	6252	8.71	-1.6	0
231	SLU 8	-1	-246	6211	9.88	-0.5	0
231	SLU 9	-2	-215	6191	8.54	-1.59	0
231	SLU 10	-3	-244	6616	9.53	-2.45	0
231	SLU 11	-1	-304	6847	12.1	-0.66	0
231	SLU 12	-2	-273	6827	10.76	-1.75	0
231	SLU 13	-3	-248	6753	9.69	-2.46	0
231	SLU 14	-1	-308	6984	12.26	-0.67	0
231	SLU 15	-2	-277	6964	10.92	-1.75	0
231	SLU 16	-1	-303	6923	12.08	-0.66	0
231	SLU 17	-2	-272	6903	10.74	-1.74	0
231	SLU 18	-1	-320	6955	12.71	-0.71	0
231	SLU 19	-2	-289	6935	11.37	-1.79	0
231	SLU 20	-1	-324	7092	12.87	-0.72	0
231	SLU 21	-2	-293	7071	11.53	-1.8	0
231	SLU 22	-1	-290	6642	11.54	-0.62	0
231	SLU 23	-3	-238	6608	9.3	-2.43	0
231	SLU 24	-1	-298	6840	11.87	-0.64	0
231	SLU 25	-2	-267	6819	10.53	-1.72	0
231	SLU 26	-3	-242	6745	9.46	-2.43	0
231	SLU 27	-1	-302	6976	12.03	-0.64	0
231	SLU 28	-2	-270	6956	10.69	-1.73	0
231	SLU 29	-1	-297	6916	11.86	-0.63	0
231	SLU 30	-2	-266	6895	10.52	-1.72	0
231	SLU 31	-3	-295	7320	11.51	-2.58	0
231	SLU 32	-1	-355	7551	14.08	-0.79	0
231	SLU 33	-2	-324	7531	12.74	-1.88	0
231	SLU 34	-3	-299	7457	11.67	-2.59	0
231	SLU 35	-1	-359	7688	14.24	-0.8	0
231	SLU 36	-2	-328	7668	12.9	-1.88	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
231	SLU 37	-1	-354	7627	14.06	-0.79	0
231	SLU 38	-2	-323	7607	12.72	-1.87	0
231	SLU 39	-1	-371	7659	14.69	-0.84	0
231	SLU 40	-2	-340	7639	13.35	-1.92	0
231	SLU 41	-1	-375	7796	14.85	-0.85	0
231	SLU 42	-3	-344	7776	13.51	-1.93	0
231	SLU 43	-1	-293	7478	11.75	-0.59	0
231	SLU 44	-3	-241	7444	9.51	-2.4	0
231	SLU 45	-1	-301	7675	12.08	-0.61	0
231	SLU 46	-2	-270	7655	10.74	-1.69	0
231	SLU 47	-3	-245	7581	9.67	-2.4	0
231	SLU 48	-1	-305	7812	12.24	-0.62	0
231	SLU 49	-2	-274	7792	10.9	-1.7	0
231	SLU 50	-1	-300	7751	12.07	-0.6	0
231	SLU 51	-2	-269	7731	10.73	-1.69	0
231	SLU 52	-3	-298	8156	11.72	-2.55	0
231	SLU 53	-1	-358	8387	14.29	-0.76	0
231	SLU 54	-3	-327	8367	12.95	-1.85	0
231	SLU 55	-3	-302	8293	11.88	-2.56	0
231	SLU 56	-1	-362	8524	14.45	-0.77	0
231	SLU 57	-3	-331	8504	13.11	-1.86	0
231	SLU 58	-1	-358	8463	14.27	-0.76	0
231	SLU 59	-3	-326	8443	12.93	-1.84	0
231	SLU 60	-1	-375	8495	14.9	-0.81	0
231	SLU 61	-3	-343	8475	13.56	-1.9	0
231	SLU 62	-1	-378	8632	15.06	-0.82	0
231	SLU 63	-3	-347	8611	13.72	-1.9	0
231	SLU 64	-1	-344	8182	13.73	-0.72	0
231	SLU 65	-3	-292	8148	11.49	-2.53	0
231	SLU 66	-1	-352	8380	14.06	-0.74	0
231	SLU 67	-2	-321	8359	12.72	-1.82	0
231	SLU 68	-3	-296	8285	11.65	-2.53	0
231	SLU 69	-1	-356	8516	14.22	-0.75	0
231	SLU 70	-3	-325	8496	12.88	-1.83	0
231	SLU 71	-1	-351	8456	14.05	-0.74	0
231	SLU 72	-2	-320	8435	12.71	-1.82	0
231	SLU 73	-3	-349	8860	13.7	-2.68	0
231	SLU 74	-1	-409	9091	16.27	-0.9	0
231	SLU 75	-3	-378	9071	14.93	-1.98	0
231	SLU 76	-3	-353	8997	13.86	-2.69	0
231	SLU 77	-1	-413	9228	16.43	-0.9	0
231	SLU 78	-3	-382	9208	15.09	-1.99	0
231	SLU 79	-1	-409	9167	16.25	-0.89	0
231	SLU 80	-3	-377	9147	14.91	-1.97	0
231	SLU 81	-2	-426	9199	16.88	-0.94	0
231	SLU 82	-3	-394	9179	15.54	-2.03	0
231	SLU 83	-2	-429	9336	17.04	-0.95	0
231	SLU 84	-3	-398	9316	15.7	-2.03	0
231	SLE RA 1	-1	-253	6139	10.12	-0.53	0
231	SLE RA 2	-2	-219	6117	8.63	-1.73	0
231	SLE RA 3	-1	-259	6271	10.35	-0.54	0
231	SLE RA 4	-2	-238	6257	9.45	-1.26	0
231	SLE RA 5	-2	-221	6208	8.74	-1.73	0
231	SLE RA 6	-1	-261	6362	10.45	-0.54	0
231	SLE RA 7	-2	-240	6348	9.56	-1.27	0
231	SLE RA 8	-1	-258	6321	10.34	-0.54	0
231	SLE RA 9	-2	-237	6308	9.44	-1.26	0
231	SLE RA 10	-2	-257	6591	10.1	-1.83	0
231	SLE RA 11	-1	-297	6745	11.82	-0.64	0
231	SLE RA 12	-2	-276	6732	10.92	-1.36	0
231	SLE RA 13	-2	-259	6682	10.21	-1.84	0
231	SLE RA 14	-1	-299	6836	11.92	-0.65	0
231	SLE RA 15	-2	-279	6823	11.03	-1.37	0
231	SLE RA 16	-1	-296	6796	11.81	-0.64	0
231	SLE RA 17	-2	-276	6783	10.91	-1.36	0
231	SLE RA 18	-1	-308	6817	12.22	-0.67	0
231	SLE RA 19	-2	-287	6804	11.33	-1.4	0
231	SLE RA 20	-1	-310	6908	12.33	-0.68	0
231	SLE RA 21	-2	-290	6895	11.44	-1.4	0
231	SLE FR 1	-1	-253	6139	10.12	-0.53	0
231	SLE FR 2	-1	-246	6135	9.83	-0.77	0
231	SLE FR 3	-1	-254	6176	10.17	-0.53	0
231	SLE FR 4	-1	-263	6338	10.46	-0.81	0
231	SLE FR 5	-1	-271	6379	10.8	-0.57	0
231	SLE FR 6	-1	-281	6478	11.17	-0.6	0
231	SLE QP 1	-1	-253	6139	10.12	-0.53	0
231	SLE QP 2	-1	-270	6343	10.75	-0.57	0
231	SLD 1	14	198	4586	-8.35	17.43	-0.01
231	SLD 2	14	198	4586	-8.35	17.43	-0.01
231	SLD 3	2	-241	4805	9.85	7.42	-0.02
231	SLD 4	2	-241	4805	9.85	7.42	-0.02
231	SLD 5	21	537	5483	-22.57	20.01	0.01
231	SLD 6	21	537	5483	-22.57	20.01	0.01
231	SLD 7	-17	-927	6213	38.08	-13.35	-0.01
231	SLD 8	-17	-927	6213	38.08	-13.35	-0.01
231	SLD 9	15	388	6472	-16.57	12.21	0.02
231	SLD 10	15	388	6472	-16.57	12.21	0.02
231	SLD 11	-23	-1076	7202	44.08	-21.15	0
231	SLD 12	-23	-1076	7202	44.08	-21.15	0
231	SLD 13	-4	-298	7881	11.66	-8.56	0.02



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
		x	y	z		x	y	z	
231	SLD 14	-4	-298	7881		11.66	-8.56	0.02	
231	SLD 15	-16	-737	8100		29.85	-18.57	0.01	
231	SLD 16	-16	-737	8100		29.85	-18.57	0.01	
231	SLV 1	35	814	2229		-33.53	43.28	-0.03	
231	SLV 2	35	814	2229		-33.53	43.28	-0.03	
231	SLV 3	6	-203	2747		8.62	18.08	-0.04	
231	SLV 4	6	-203	2747		8.62	18.08	-0.04	
231	SLV 5	54	1598	4323		-66.46	50.8	0.01	
231	SLV 6	54	1598	4323		-66.46	50.8	0.01	
231	SLV 7	-43	-1793	6050		74.04	-33.19	-0.03	
231	SLV 8	-43	-1793	6050		74.04	-33.19	-0.03	
231	SLV 9	41	1253	6636		-52.53	32.05	0.04	
231	SLV 10	41	1253	6636		-52.53	32.05	0.04	
231	SLV 11	-56	-2138	8362		87.97	-51.94	-0.01	
231	SLV 12	-56	-2138	8362		87.97	-51.94	-0.01	
231	SLV 13	-8	-336	9938		12.89	-19.22	0.05	
231	SLV 14	-8	-336	9938		12.89	-19.22	0.05	
231	SLV 15	-37	-1354	10456		55.04	-44.42	0.03	
231	SLV 16	-37	-1354	10456		55.04	-44.42	0.03	
232	SLU 1	0	447	3913		-21.67	-0.24	0	
232	SLU 2	0	437	3789		-21.01	-0.15	0	
232	SLU 3	0	460	4039		-22.24	-0.26	0	
232	SLU 4	0	453	3965		-21.84	-0.2	0	
232	SLU 5	0	445	3871		-21.36	-0.16	0	
232	SLU 6	0	468	4122		-22.58	-0.27	0	
232	SLU 7	0	462	4048		-22.19	-0.22	0	
232	SLU 8	0	463	4077		-22.36	-0.27	0	
232	SLU 9	0	457	4003		-21.97	-0.21	0	
232	SLU 10	0	495	4378		-24.09	-0.2	0	
232	SLU 11	0	518	4628		-25.32	-0.31	0	
232	SLU 12	0	512	4554		-24.92	-0.25	0	
232	SLU 13	0	503	4460		-24.44	-0.21	0	
232	SLU 14	0	526	4710		-25.67	-0.32	0	
232	SLU 15	0	520	4636		-25.27	-0.26	0	
232	SLU 16	0	522	4666		-25.45	-0.31	0	
232	SLU 17	0	515	4592		-25.05	-0.26	0	
232	SLU 18	0	530	4754		-26.08	-0.31	0	
232	SLU 19	0	524	4680		-25.68	-0.26	0	
232	SLU 20	0	539	4836		-26.42	-0.32	0	
232	SLU 21	0	532	4762		-26.02	-0.27	0	
232	SLU 22	0	505	4491		-24.66	-0.29	0	
232	SLU 23	0	495	4368		-24	-0.2	0	
232	SLU 24	0	518	4618		-25.22	-0.31	0	
232	SLU 25	0	512	4544		-24.83	-0.25	0	
232	SLU 26	0	503	4450		-24.34	-0.21	0	
232	SLU 27	0	526	4700		-25.57	-0.32	0	
232	SLU 28	0	520	4626		-25.17	-0.26	0	
232	SLU 29	0	521	4656		-25.35	-0.31	0	
232	SLU 30	0	515	4582		-24.95	-0.26	0	
232	SLU 31	0	553	4956		-27.08	-0.25	0	
232	SLU 32	0	577	5207		-28.31	-0.36	0	
232	SLU 33	0	570	5132		-27.91	-0.3	0	
232	SLU 34	0	562	5039		-27.42	-0.26	0	
232	SLU 35	0	585	5289		-28.65	-0.37	0	
232	SLU 36	0	579	5215		-28.25	-0.31	0	
232	SLU 37	0	580	5245		-28.43	-0.36	0	
232	SLU 38	0	574	5170		-28.03	-0.31	0	
232	SLU 39	0	589	5332		-29.06	-0.36	0	
232	SLU 40	0	583	5258		-28.67	-0.31	0	
232	SLU 41	0	597	5415		-29.41	-0.37	0	
232	SLU 42	0	591	5340		-29.01	-0.32	0	
232	SLU 43	0	561	4888		-27.15	-0.3	0	
232	SLU 44	0	551	4765		-26.49	-0.21	0	
232	SLU 45	0	574	5015		-27.72	-0.31	0	
232	SLU 46	0	567	4941		-27.32	-0.26	0	
232	SLU 47	0	559	4847		-26.83	-0.22	0	
232	SLU 48	0	582	5097		-28.06	-0.33	0	
232	SLU 49	0	576	5023		-27.66	-0.27	0	
232	SLU 50	0	577	5053		-27.84	-0.32	0	
232	SLU 51	0	571	4979		-27.44	-0.27	0	
232	SLU 52	0	609	5354		-29.57	-0.26	0	
232	SLU 53	0	632	5604		-30.8	-0.36	0	
232	SLU 54	0	626	5530		-30.4	-0.31	0	
232	SLU 55	0	617	5436		-29.92	-0.27	0	
232	SLU 56	0	640	5686		-31.14	-0.37	0	
232	SLU 57	0	634	5612		-30.75	-0.32	0	
232	SLU 58	0	636	5642		-30.92	-0.37	0	
232	SLU 59	0	629	5568		-30.53	-0.32	0	
232	SLU 60	0	644	5729		-31.55	-0.37	0	
232	SLU 61	0	638	5655		-31.16	-0.32	0	
232	SLU 62	0	653	5812		-31.9	-0.38	0	
232	SLU 63	0	646	5738		-31.5	-0.33	0	
232	SLU 64	0	619	5467		-30.14	-0.35	0	
232	SLU 65	0	609	5343		-29.47	-0.26	0	
232	SLU 66	0	632	5593		-30.7	-0.36	0	
232	SLU 67	0	626	5519		-30.31	-0.31	0	
232	SLU 68	0	617	5425		-29.82	-0.27	0	
232	SLU 69	0	640	5676		-31.05	-0.37	0	
232	SLU 70	0	634	5601		-30.65	-0.32	0	
232	SLU 71	0	635	5631		-30.83	-0.37	0	



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
232	SLU 72	0	629	5557	-30.43	-0.32	0
232	SLU 73	0	667	5932	-32.56	-0.31	0
232	SLU 74	0	691	6182	-33.79	-0.41	0
232	SLU 75	0	684	6108	-33.39	-0.36	0
232	SLU 76	0	676	6014	-32.9	-0.32	0
232	SLU 77	0	699	6264	-34.13	-0.42	0
232	SLU 78	0	693	6190	-33.73	-0.37	0
232	SLU 79	0	694	6220	-33.91	-0.42	0
232	SLU 80	0	688	6146	-33.51	-0.37	0
232	SLU 81	0	703	6308	-34.54	-0.42	0.01
232	SLU 82	0	697	6234	-34.14	-0.36	0
232	SLU 83	0	711	6390	-34.89	-0.43	0.01
232	SLU 84	0	705	6316	-34.49	-0.37	0
232	SLE RA 1	0	463	4078	-22.53	-0.26	0
232	SLE RA 2	0	457	3996	-22.08	-0.2	0
232	SLE RA 3	0	472	4163	-22.9	-0.27	0
232	SLE RA 4	0	468	4113	-22.64	-0.23	0
232	SLE RA 5	0	462	4051	-22.31	-0.2	0
232	SLE RA 6	0	477	4217	-23.13	-0.27	0
232	SLE RA 7	0	473	4168	-22.87	-0.24	0
232	SLE RA 8	0	474	4188	-22.99	-0.27	0
232	SLE RA 9	0	470	4138	-22.72	-0.24	0
232	SLE RA 10	0	496	4388	-24.14	-0.23	0
232	SLE RA 11	0	511	4555	-24.96	-0.3	0
232	SLE RA 12	0	507	4506	-24.69	-0.26	0
232	SLE RA 13	0	501	4443	-24.37	-0.24	0
232	SLE RA 14	0	516	4610	-25.19	-0.31	0
232	SLE RA 15	0	512	4560	-24.92	-0.27	0
232	SLE RA 16	0	513	4580	-25.04	-0.3	0
232	SLE RA 17	0	509	4531	-24.78	-0.27	0
232	SLE RA 18	0	519	4639	-25.46	-0.3	0
232	SLE RA 19	0	515	4589	-25.2	-0.27	0
232	SLE RA 20	0	525	4694	-25.69	-0.31	0
232	SLE RA 21	0	521	4644	-25.43	-0.27	0
232	SLE FR 1	0	463	4078	-22.53	-0.26	0
232	SLE FR 2	0	462	4062	-22.44	-0.24	0
232	SLE FR 3	0	466	4100	-22.62	-0.26	0
232	SLE FR 4	0	479	4230	-23.32	-0.26	0
232	SLE FR 5	0	482	4268	-23.5	-0.27	0
232	SLE FR 6	0	491	4358	-23.99	-0.28	0
232	SLE QP 1	0	463	4078	-22.53	-0.26	0
232	SLE QP 2	0	480	4246	-23.41	-0.27	0
232	SLD 1	7	675	4329	-36.81	6.9	-0.05
232	SLD 2	7	675	4329	-36.81	6.9	-0.05
232	SLD 3	11	458	3623	-22.15	9.69	-0.1
232	SLD 4	11	458	3623	-22.15	9.69	-0.1
232	SLD 5	-3	867	5342	-49.67	-2.36	0.06
232	SLD 6	-3	867	5342	-49.67	-2.36	0.06
232	SLD 7	8	145	2988	-0.79	6.96	-0.1
232	SLD 8	8	145	2988	-0.79	6.96	-0.1
232	SLD 9	-9	815	5504	-46.03	-7.5	0.1
232	SLD 10	-9	815	5504	-46.03	-7.5	0.1
232	SLD 11	3	94	3151	2.85	1.82	-0.05
232	SLD 12	3	94	3151	2.85	1.82	-0.05
232	SLD 13	-11	502	4870	-24.67	-10.24	0.1
232	SLD 14	-11	502	4870	-24.67	-10.24	0.1
232	SLD 15	-8	286	4164	-10	-7.44	0.06
232	SLD 16	-8	286	4164	-10	-7.44	0.06
232	SLV 1	19	936	4443	-54.86	17.68	-0.12
232	SLV 2	19	936	4443	-54.86	17.68	-0.12
232	SLV 3	28	427	2773	-20.33	24.81	-0.24
232	SLV 4	28	427	2773	-20.33	24.81	-0.24
232	SLV 5	-8	1389	6839	-85.21	-5.69	0.15
232	SLV 6	-8	1389	6839	-85.21	-5.69	0.15
232	SLV 7	21	-308	1271	29.89	18.06	-0.25
232	SLV 8	21	-308	1271	29.89	18.06	-0.25
232	SLV 9	-22	1268	7222	-76.7	-18.6	0.26
232	SLV 10	-22	1268	7222	-76.7	-18.6	0.26
232	SLV 11	7	-429	1654	38.4	5.15	-0.14
232	SLV 12	7	-429	1654	38.4	5.15	-0.14
232	SLV 13	-28	533	5720	-26.49	-25.35	0.25
232	SLV 14	-28	533	5720	-26.49	-25.35	0.25
232	SLV 15	-19	24	4049	8.04	-18.23	0.13
232	SLV 16	-19	24	4049	8.04	-18.23	0.13
233	SLU 1	0	423	4065	-19.94	0.17	0
233	SLU 2	0	412	3953	-19.37	0.11	0
233	SLU 3	0	435	4196	-20.52	0.18	0
233	SLU 4	0	429	4128	-20.17	0.14	0
233	SLU 5	0	420	4034	-19.75	0.12	0
233	SLU 6	0	443	4278	-20.9	0.18	0
233	SLU 7	0	437	4210	-20.56	0.15	0
233	SLU 8	0	439	4229	-20.71	0.18	0
233	SLU 9	0	433	4161	-20.37	0.14	0
233	SLU 10	0	466	4554	-21.98	0.15	0
233	SLU 11	0	489	4797	-23.12	0.22	0
233	SLU 12	0	483	4730	-22.78	0.18	0
233	SLU 13	0	474	4636	-22.36	0.15	0
233	SLU 14	0	497	4879	-23.51	0.22	0
233	SLU 15	0	491	4811	-23.17	0.19	0
233	SLU 16	0	493	4830	-23.32	0.22	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
233	SLU 17	0	487	4762	-22.97	0.18	0
233	SLU 18	0	500	4925	-23.66	0.22	0
233	SLU 19	0	494	4857	-23.32	0.19	0
233	SLU 20	0	508	5006	-24.05	0.23	0
233	SLU 21	0	502	4939	-23.71	0.19	0
233	SLU 22	0	477	4652	-22.53	0.21	0
233	SLU 23	0	466	4539	-21.96	0.15	0
233	SLU 24	0	490	4783	-23.1	0.22	0
233	SLU 25	0	483	4715	-22.76	0.18	0
233	SLU 26	0	474	4621	-22.34	0.15	0
233	SLU 27	0	498	4864	-23.49	0.22	0
233	SLU 28	0	491	4797	-23.15	0.18	0
233	SLU 29	0	493	4816	-23.3	0.22	0
233	SLU 30	0	487	4748	-22.96	0.18	0
233	SLU 31	0	520	5141	-24.56	0.18	0
233	SLU 32	0	543	5384	-25.71	0.25	0
233	SLU 33	0	537	5316	-25.37	0.22	0
233	SLU 34	0	528	5222	-24.95	0.19	0
233	SLU 35	0	552	5466	-26.1	0.26	0
233	SLU 36	0	545	5398	-25.76	0.22	0
233	SLU 37	0	547	5417	-25.91	0.26	0
233	SLU 38	0	541	5349	-25.56	0.22	0
233	SLU 39	0	554	5511	-26.25	0.26	0
233	SLU 40	0	548	5444	-25.91	0.22	0
233	SLU 41	0	562	5593	-26.64	0.27	0
233	SLU 42	0	556	5525	-26.3	0.23	0
233	SLU 43	0	531	5084	-25.03	0.21	0
233	SLU 44	0	521	4971	-24.46	0.15	0
233	SLU 45	0	544	5214	-25.61	0.22	0
233	SLU 46	0	537	5147	-25.27	0.18	0
233	SLU 47	0	529	5053	-24.85	0.15	0
233	SLU 48	0	552	5296	-26	0.22	0
233	SLU 49	0	545	5228	-25.65	0.19	0
233	SLU 50	0	547	5247	-25.8	0.22	0
233	SLU 51	0	541	5180	-25.46	0.18	0
233	SLU 52	0	575	5572	-27.07	0.19	0
233	SLU 53	0	598	5816	-28.22	0.26	0
233	SLU 54	0	591	5748	-27.88	0.22	0
233	SLU 55	0	583	5654	-27.45	0.19	0
233	SLU 56	0	606	5897	-28.6	0.26	0
233	SLU 57	0	599	5830	-28.26	0.23	0
233	SLU 58	0	601	5849	-28.41	0.26	0
233	SLU 59	0	595	5781	-28.07	0.22	0
233	SLU 60	0	609	5943	-28.76	0.26	0
233	SLU 61	0	602	5875	-28.42	0.23	0
233	SLU 62	0	617	6025	-29.14	0.27	0
233	SLU 63	0	610	5957	-28.8	0.23	0
233	SLU 64	0	586	5671	-27.62	0.24	0
233	SLU 65	0	575	5558	-27.05	0.18	0
233	SLU 66	0	598	5801	-28.2	0.25	0
233	SLU 67	0	591	5733	-27.86	0.22	0
233	SLU 68	0	583	5639	-27.44	0.19	0
233	SLU 69	0	606	5883	-28.58	0.26	0
233	SLU 70	0	599	5815	-28.24	0.22	0
233	SLU 71	0	602	5834	-28.39	0.26	0
233	SLU 72	0	595	5766	-28.05	0.22	0
233	SLU 73	0	629	6159	-29.66	0.22	0
233	SLU 74	0	652	6402	-30.81	0.29	0
233	SLU 75	0	645	6335	-30.46	0.26	0
233	SLU 76	0	637	6241	-30.04	0.23	0
233	SLU 77	0	660	6484	-31.19	0.3	0
233	SLU 78	0	653	6416	-30.85	0.26	0
233	SLU 79	0	656	6435	-31	0.29	0
233	SLU 80	0	649	6368	-30.66	0.26	0
233	SLU 81	0	663	6530	-31.35	0.3	0
233	SLU 82	0	656	6462	-31	0.26	0
233	SLU 83	0	671	6611	-31.73	0.3	0
233	SLU 84	0	664	6544	-31.39	0.27	0
233	SLE RA 1	0	439	4233	-20.68	0.18	0
233	SLE RA 2	0	431	4158	-20.3	0.14	0
233	SLE RA 3	0	447	4320	-21.06	0.19	0
233	SLE RA 4	0	442	4275	-20.83	0.16	0
233	SLE RA 5	0	437	4212	-20.55	0.14	0
233	SLE RA 6	0	452	4375	-21.32	0.19	0
233	SLE RA 7	0	448	4329	-21.09	0.17	0
233	SLE RA 8	0	449	4342	-21.19	0.19	0
233	SLE RA 9	0	445	4297	-20.96	0.16	0
233	SLE RA 10	0	467	4559	-22.04	0.17	0
233	SLE RA 11	0	483	4721	-22.8	0.21	0
233	SLE RA 12	0	478	4676	-22.57	0.19	0
233	SLE RA 13	0	473	4613	-22.29	0.17	0
233	SLE RA 14	0	488	4775	-23.06	0.22	0
233	SLE RA 15	0	484	4730	-22.83	0.19	0
233	SLE RA 16	0	485	4743	-22.93	0.21	0
233	SLE RA 17	0	481	4698	-22.7	0.19	0
233	SLE RA 18	0	490	4806	-23.16	0.22	0
233	SLE RA 19	0	486	4761	-22.93	0.19	0
233	SLE RA 20	0	495	4860	-23.42	0.22	0
233	SLE RA 21	0	491	4815	-23.19	0.2	0
233	SLE FR 1	0	439	4233	-20.68	0.18	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
233	SLE FR 2	0	437	4218	-20.6	0.17	0
233	SLE FR 3	0	441	4255	-20.78	0.18	0
233	SLE FR 4	0	453	4390	-21.35	0.18	0
233	SLE FR 5	0	456	4427	-21.53	0.19	0
233	SLE FR 6	0	464	4519	-21.92	0.2	0
233	SLE QP 1	0	439	4233	-20.68	0.18	0
233	SLE QP 2	0	454	4405	-21.42	0.19	0
233	SLD 1	12	779	5216	-23.72	10.58	0.03
233	SLD 2	12	779	5216	-23.72	10.58	0.03
233	SLD 3	9	410	4311	-3.63	7.95	0.02
233	SLD 4	9	410	4311	-3.63	7.95	0.02
233	SLD 5	9	1112	6020	-52.58	7.3	0.02
233	SLD 6	9	1112	6020	-52.58	7.3	0.02
233	SLD 7	-2	-119	3005	14.38	-1.48	-0.01
233	SLD 8	-2	-119	3005	14.38	-1.48	-0.01
233	SLD 9	3	1027	5805	-57.23	1.86	0.01
233	SLD 10	3	1027	5805	-57.23	1.86	0.01
233	SLD 11	-8	-204	2790	9.73	-6.92	-0.02
233	SLD 12	-8	-204	2790	9.73	-6.92	-0.02
233	SLD 13	-8	498	4499	-39.22	-7.57	-0.02
233	SLD 14	-8	498	4499	-39.22	-7.57	-0.02
233	SLD 15	-12	129	3594	-19.13	-10.2	-0.03
233	SLD 16	-12	129	3594	-19.13	-10.2	-0.03
233	SLV 1	30	1221	6329	-26.82	26.27	0.07
233	SLV 2	30	1221	6329	-26.82	26.27	0.07
233	SLV 3	22	351	4184	20.57	19.66	0.05
233	SLV 4	22	351	4184	20.57	19.66	0.05
233	SLV 5	22	2005	8236	-94.92	18.04	0.05
233	SLV 6	22	2005	8236	-94.92	18.04	0.05
233	SLV 7	-6	-898	1085	63.06	-4	-0.02
233	SLV 8	-6	-898	1085	63.06	-4	-0.02
233	SLV 9	7	1806	7725	-105.9	4.38	0.02
233	SLV 10	7	1806	7725	-105.9	4.38	0.02
233	SLV 11	-22	-1097	574	52.08	-17.66	-0.05
233	SLV 12	-22	-1097	574	52.08	-17.66	-0.05
233	SLV 13	-21	557	4626	-63.42	-19.28	-0.05
233	SLV 14	-21	557	4626	-63.42	-19.28	-0.05
233	SLV 15	-30	-314	2480	-16.02	-25.89	-0.07
233	SLV 16	-30	-314	2480	-16.02	-25.89	-0.07
234	SLU 1	0	396	2780	-22.94	-0.14	0
234	SLU 2	0	395	2761	-22.9	-0.14	0
234	SLU 3	0	407	2857	-23.59	-0.14	0
234	SLU 4	0	407	2846	-23.56	-0.15	0
234	SLU 5	0	402	2801	-23.25	-0.15	0
234	SLU 6	0	413	2897	-23.94	-0.15	0
234	SLU 7	0	413	2886	-23.92	-0.15	0
234	SLU 8	0	408	2861	-23.65	-0.14	0
234	SLU 9	0	408	2849	-23.63	-0.15	0
234	SLU 10	0	456	3212	-26.46	-0.18	0
234	SLU 11	0	468	3308	-27.14	-0.18	0
234	SLU 12	0	467	3297	-27.12	-0.18	0
234	SLU 13	0	462	3253	-26.81	-0.18	0
234	SLU 14	0	474	3349	-27.5	-0.18	0
234	SLU 15	0	473	3338	-27.48	-0.18	0
234	SLU 16	0	469	3312	-27.21	-0.18	0
234	SLU 17	0	468	3301	-27.19	-0.18	0
234	SLU 18	0	483	3425	-28.02	-0.19	0
234	SLU 19	0	482	3414	-28	-0.19	0
234	SLU 20	0	489	3465	-28.38	-0.19	0
234	SLU 21	0	488	3454	-28.35	-0.19	0
234	SLU 22	0	453	3200	-26.32	-0.16	0
234	SLU 23	0	453	3181	-26.28	-0.17	0
234	SLU 24	0	464	3278	-26.97	-0.17	0
234	SLU 25	0	464	3266	-26.94	-0.17	0
234	SLU 26	0	459	3222	-26.63	-0.17	0
234	SLU 27	0	470	3318	-27.32	-0.17	0
234	SLU 28	0	470	3307	-27.3	-0.17	0
234	SLU 29	0	465	3281	-27.03	-0.17	0
234	SLU 30	0	465	3270	-27.01	-0.17	0
234	SLU 31	0	514	3633	-29.83	-0.2	0
234	SLU 32	0	525	3729	-30.52	-0.2	0
234	SLU 33	0	525	3718	-30.5	-0.2	0
234	SLU 34	0	520	3673	-30.19	-0.21	0
234	SLU 35	0	531	3770	-30.88	-0.2	0
234	SLU 36	0	531	3758	-30.86	-0.21	0
234	SLU 37	0	526	3733	-30.59	-0.2	0
234	SLU 38	0	526	3721	-30.57	-0.21	0
234	SLU 39	0	540	3846	-31.4	-0.21	0
234	SLU 40	0	540	3834	-31.38	-0.21	0
234	SLU 41	0	546	3886	-31.76	-0.21	0
234	SLU 42	0	546	3875	-31.73	-0.22	0
234	SLU 43	0	495	3470	-28.66	-0.17	0
234	SLU 44	0	495	3451	-28.62	-0.18	0
234	SLU 45	0	506	3547	-29.31	-0.18	0
234	SLU 46	0	506	3535	-29.28	-0.18	0
234	SLU 47	0	501	3491	-28.98	-0.18	0
234	SLU 48	0	512	3587	-29.67	-0.18	0
234	SLU 49	0	512	3576	-29.64	-0.18	0
234	SLU 50	0	507	3550	-29.37	-0.18	0
234	SLU 51	0	507	3539	-29.35	-0.18	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
234	SLU 52	0	555	3902	-32.18	-0.21	0
234	SLU 53	0	567	3998	-32.87	-0.21	0
234	SLU 54	0	566	3987	-32.84	-0.21	0
234	SLU 55	0	561	3943	-32.54	-0.21	0
234	SLU 56	0	573	4039	-33.22	-0.21	0
234	SLU 57	0	572	4027	-33.2	-0.21	0
234	SLU 58	0	568	4002	-32.93	-0.21	0
234	SLU 59	0	568	3991	-32.91	-0.21	0
234	SLU 60	0	582	4115	-33.74	-0.22	0
234	SLU 61	0	581	4103	-33.72	-0.22	0
234	SLU 62	0	588	4155	-34.1	-0.22	0
234	SLU 63	0	587	4144	-34.08	-0.22	0
234	SLU 64	0	552	3890	-32.04	-0.2	0
234	SLU 65	0	552	3871	-32	-0.2	0
234	SLU 66	0	563	3967	-32.69	-0.2	0
234	SLU 67	0	563	3956	-32.66	-0.2	0
234	SLU 68	0	558	3912	-32.36	-0.21	0
234	SLU 69	0	569	4008	-33.05	-0.2	0
234	SLU 70	0	569	3996	-33.02	-0.21	0
234	SLU 71	0	565	3971	-32.75	-0.2	0
234	SLU 72	0	564	3960	-32.73	-0.21	0
234	SLU 73	0	613	4323	-35.56	-0.24	0
234	SLU 74	0	624	4419	-36.25	-0.23	0
234	SLU 75	0	624	4407	-36.22	-0.24	0
234	SLU 76	0	619	4363	-35.91	-0.24	0
234	SLU 77	0	630	4459	-36.6	-0.24	0
234	SLU 78	0	630	4448	-36.58	-0.24	0
234	SLU 79	0	625	4423	-36.31	-0.24	0
234	SLU 80	0	625	4411	-36.29	-0.24	0
234	SLU 81	0	639	4535	-37.12	-0.24	0
234	SLU 82	0	639	4524	-37.1	-0.25	0
234	SLU 83	0	645	4576	-37.48	-0.25	0
234	SLU 84	0	645	4564	-37.46	-0.25	0
234	SLE RA 1	0	412	2900	-23.9	-0.15	0
234	SLE RA 2	0	412	2887	-23.88	-0.15	0
234	SLE RA 3	0	420	2951	-24.34	-0.15	0
234	SLE RA 4	0	419	2944	-24.32	-0.15	0
234	SLE RA 5	0	416	2914	-24.11	-0.15	0
234	SLE RA 6	0	424	2978	-24.57	-0.15	0
234	SLE RA 7	0	424	2971	-24.56	-0.15	0
234	SLE RA 8	0	420	2954	-24.38	-0.15	0
234	SLE RA 9	0	420	2946	-24.36	-0.15	0
234	SLE RA 10	0	452	3188	-26.25	-0.17	0
234	SLE RA 11	0	460	3252	-26.71	-0.17	0
234	SLE RA 12	0	460	3245	-26.69	-0.17	0
234	SLE RA 13	0	456	3215	-26.49	-0.17	0
234	SLE RA 14	0	464	3279	-26.95	-0.17	0
234	SLE RA 15	0	464	3272	-26.93	-0.17	0
234	SLE RA 16	0	461	3255	-26.75	-0.17	0
234	SLE RA 17	0	461	3247	-26.74	-0.17	0
234	SLE RA 18	0	470	3330	-27.29	-0.18	0
234	SLE RA 19	0	470	3322	-27.28	-0.18	0
234	SLE RA 20	0	474	3357	-27.53	-0.18	0
234	SLE RA 21	0	474	3349	-27.51	-0.18	0
234	SLE FR 1	0	412	2900	-23.9	-0.15	0
234	SLE FR 2	0	412	2897	-23.9	-0.15	0
234	SLE FR 3	0	414	2911	-24	-0.15	0
234	SLE FR 4	0	430	3026	-24.91	-0.16	0
234	SLE FR 5	0	431	3040	-25.01	-0.16	0
234	SLE FR 6	0	441	3115	-25.6	-0.16	0
234	SLE QP 1	0	412	2900	-23.9	-0.15	0
234	SLE QP 2	0	430	3029	-24.92	-0.16	0
234	SLD 1	1	433	2980	-26.09	1.21	0.04
234	SLD 2	1	433	2980	-26.09	1.21	0.04
234	SLD 3	7	193	2063	-9.82	4.5	0.01
234	SLD 4	7	193	2063	-9.82	4.5	0.01
234	SLD 5	-9	795	4404	-49.95	-4.73	0.06
234	SLD 6	-9	795	4404	-49.95	-4.73	0.06
234	SLD 7	11	-6	1349	4.29	6.23	-0.05
234	SLD 8	11	-6	1349	4.29	6.23	-0.05
234	SLD 9	-11	865	4709	-54.12	-6.54	0.05
234	SLD 10	-11	865	4709	-54.12	-6.54	0.05
234	SLD 11	8	64	1654	0.11	4.42	-0.06
234	SLD 12	8	64	1654	0.11	4.42	-0.06
234	SLD 13	-7	666	3995	-40.02	-4.81	-0.01
234	SLD 14	-7	666	3995	-40.02	-4.81	-0.01
234	SLD 15	-1	426	3078	-23.75	-1.52	-0.04
234	SLD 16	-1	426	3078	-23.75	-1.52	-0.04
234	SLV 1	2	440	2924	-27.77	2.73	0.1
234	SLV 2	2	440	2924	-27.77	2.73	0.1
234	SLV 3	17	-129	738	10.78	11.13	0.01
234	SLV 4	17	-129	738	10.78	11.13	0.01
234	SLV 5	-22	1296	6314	-84.25	-12.03	0.16
234	SLV 6	-22	1296	6314	-84.25	-12.03	0.16
234	SLV 7	28	-601	-975	44.26	15.97	-0.12
234	SLV 8	28	-601	-975	44.26	15.97	-0.12
234	SLV 9	-28	1460	7033	-94.1	-16.28	0.13
234	SLV 10	-28	1460	7033	-94.1	-16.28	0.13
234	SLV 11	22	-437	-256	34.41	11.72	-0.16
234	SLV 12	22	-437	-256	34.41	11.72	-0.16



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
234	SLV 13	-17	988	5320	-60.62	-11.44	-0.01
234	SLV 14	-17	988	5320	-60.62	-11.44	-0.01
234	SLV 15	-2	419	3134	-22.07	-3.04	-0.1
234	SLV 16	-2	419	3134	-22.07	-3.04	-0.1
235	SLU 1	1	549	3387	-24.98	0.87	0.01
235	SLU 2	1	549	3377	-24.96	0.87	0.01
235	SLU 3	1	566	3496	-25.81	0.9	0.01
235	SLU 4	1	566	3490	-25.8	0.9	0.01
235	SLU 5	1	559	3440	-25.44	0.88	0.01
235	SLU 6	1	577	3559	-26.3	0.91	0.01
235	SLU 7	1	577	3553	-26.29	0.91	0.01
235	SLU 8	1	569	3513	-25.96	0.9	0.01
235	SLU 9	1	570	3507	-25.94	0.9	0.01
235	SLU 10	2	635	3905	-28.95	1.08	0.01
235	SLU 11	2	653	4024	-29.8	1.1	0.01
235	SLU 12	2	653	4018	-29.79	1.1	0.01
235	SLU 13	2	645	3968	-29.43	1.09	0.01
235	SLU 14	2	663	4087	-30.29	1.12	0.01
235	SLU 15	2	663	4081	-30.28	1.11	0.01
235	SLU 16	2	656	4041	-29.95	1.1	0.01
235	SLU 17	2	656	4035	-29.93	1.1	0.01
235	SLU 18	2	672	4141	-30.68	1.17	0.01
235	SLU 19	2	672	4135	-30.67	1.16	0.01
235	SLU 20	2	682	4204	-31.17	1.18	0.01
235	SLU 21	2	682	4198	-31.15	1.18	0.01
235	SLU 22	2	631	3888	-28.79	1.05	0.01
235	SLU 23	2	631	3878	-28.76	1.05	0.01
235	SLU 24	2	648	3997	-29.62	1.07	0.01
235	SLU 25	2	648	3991	-29.61	1.07	0.01
235	SLU 26	2	641	3942	-29.25	1.06	0.01
235	SLU 27	2	659	4060	-30.11	1.09	0.01
235	SLU 28	2	659	4055	-30.1	1.09	0.01
235	SLU 29	2	651	4014	-29.77	1.07	0.01
235	SLU 30	2	652	4009	-29.75	1.07	0.01
235	SLU 31	2	717	4406	-32.75	1.25	0.01
235	SLU 32	2	734	4525	-33.61	1.28	0.01
235	SLU 33	2	735	4519	-33.6	1.28	0.01
235	SLU 34	2	727	4470	-33.24	1.26	0.01
235	SLU 35	2	745	4588	-34.1	1.29	0.01
235	SLU 36	2	745	4583	-34.09	1.29	0.01
235	SLU 37	2	738	4542	-33.76	1.28	0.01
235	SLU 38	2	738	4537	-33.74	1.28	0.01
235	SLU 39	2	754	4642	-34.49	1.34	0.01
235	SLU 40	2	754	4636	-34.47	1.34	0.01
235	SLU 41	2	764	4705	-34.98	1.35	0.01
235	SLU 42	2	764	4699	-34.96	1.35	0.01
235	SLU 43	2	685	4231	-31.17	1.08	0.01
235	SLU 44	2	685	4221	-31.14	1.07	0.01
235	SLU 45	2	703	4340	-32	1.1	0.01
235	SLU 46	2	703	4334	-31.99	1.1	0.01
235	SLU 47	2	696	4284	-31.63	1.09	0.01
235	SLU 48	2	713	4403	-32.49	1.12	0.01
235	SLU 49	2	713	4397	-32.48	1.11	0.01
235	SLU 50	2	706	4357	-32.15	1.1	0.01
235	SLU 51	2	706	4352	-32.13	1.1	0.01
235	SLU 52	2	771	4749	-35.13	1.28	0.01
235	SLU 53	2	789	4868	-35.99	1.31	0.01
235	SLU 54	2	789	4862	-35.98	1.3	0.01
235	SLU 55	2	782	4812	-35.62	1.29	0.01
235	SLU 56	2	799	4931	-36.48	1.32	0.01
235	SLU 57	2	799	4925	-36.47	1.32	0.01
235	SLU 58	2	792	4885	-36.14	1.31	0.01
235	SLU 59	2	792	4879	-36.12	1.3	0.01
235	SLU 60	2	808	4985	-36.87	1.37	0.01
235	SLU 61	2	808	4979	-36.85	1.37	0.01
235	SLU 62	2	819	5048	-37.36	1.38	0.01
235	SLU 63	2	819	5042	-37.34	1.38	0.01
235	SLU 64	2	767	4732	-34.98	1.25	0.01
235	SLU 65	2	767	4723	-34.95	1.25	0.01
235	SLU 66	2	785	4841	-35.81	1.28	0.01
235	SLU 67	2	785	4836	-35.8	1.28	0.01
235	SLU 68	2	778	4786	-35.44	1.26	0.01
235	SLU 69	2	795	4904	-36.3	1.29	0.01
235	SLU 70	2	795	4899	-36.28	1.29	0.01
235	SLU 71	2	788	4859	-35.96	1.28	0.01
235	SLU 72	2	788	4853	-35.94	1.28	0.01
235	SLU 73	2	853	5250	-38.94	1.45	0.01
235	SLU 74	2	871	5369	-39.8	1.48	0.01
235	SLU 75	2	871	5363	-39.79	1.48	0.01
235	SLU 76	2	864	5314	-39.43	1.47	0.01
235	SLU 77	2	881	5432	-40.29	1.49	0.01
235	SLU 78	2	881	5427	-40.27	1.49	0.01
235	SLU 79	2	874	5386	-39.95	1.48	0.01
235	SLU 80	2	874	5381	-39.93	1.48	0.01
235	SLU 81	2	890	5486	-40.68	1.54	0.01
235	SLU 82	2	890	5480	-40.66	1.54	0.01
235	SLU 83	2	901	5549	-41.17	1.56	0.01
235	SLU 84	2	901	5544	-41.15	1.55	0.01
235	SLE RA 1	1	572	3530	-26.07	0.92	0.01
235	SLE RA 2	1	572	3524	-26.05	0.92	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
235	SLE RA 3	1	584	3603	-26.62	0.94	0.01
235	SLE RA 4	1	584	3599	-26.61	0.94	0.01
235	SLE RA 5	1	579	3566	-26.38	0.93	0.01
235	SLE RA 6	1	591	3645	-26.95	0.95	0.01
235	SLE RA 7	1	591	3641	-26.94	0.95	0.01
235	SLE RA 8	1	586	3614	-26.72	0.94	0.01
235	SLE RA 9	1	586	3610	-26.71	0.94	0.01
235	SLE RA 10	2	630	3875	-28.71	1.06	0.01
235	SLE RA 11	2	641	3954	-29.28	1.08	0.01
235	SLE RA 12	2	641	3951	-29.27	1.08	0.01
235	SLE RA 13	2	637	3918	-29.04	1.07	0.01
235	SLE RA 14	2	648	3997	-29.61	1.09	0.01
235	SLE RA 15	2	648	3993	-29.6	1.08	0.01
235	SLE RA 16	2	643	3966	-29.38	1.08	0.01
235	SLE RA 17	2	643	3962	-29.37	1.08	0.01
235	SLE RA 18	2	654	4032	-29.87	1.12	0.01
235	SLE RA 19	2	654	4029	-29.86	1.12	0.01
235	SLE RA 20	2	661	4075	-30.19	1.13	0.01
235	SLE RA 21	2	661	4071	-30.18	1.13	0.01
235	SLE FR 1	1	572	3530	-26.07	0.92	0.01
235	SLE FR 2	1	572	3529	-26.07	0.92	0.01
235	SLE FR 3	1	575	3547	-26.2	0.93	0.01
235	SLE FR 4	2	597	3679	-27.21	0.98	0.01
235	SLE FR 5	2	600	3697	-27.34	0.99	0.01
235	SLE FR 6	2	613	3781	-27.97	1.02	0.01
235	SLE QP 1	1	572	3530	-26.07	0.92	0.01
235	SLE QP 2	2	597	3681	-27.21	0.98	0.01
235	SLD 1	10	845	4999	-42.25	6.82	0.05
235	SLD 2	10	845	4999	-42.25	6.82	0.05
235	SLD 3	3	610	3926	-26.91	2.29	0.02
235	SLD 4	3	610	3926	-26.91	2.29	0.02
235	SLD 5	14	1029	5702	-54.99	9.6	0.07
235	SLD 6	14	1029	5702	-54.99	9.6	0.07
235	SLD 7	-8	243	2128	-3.85	-5.5	-0.04
235	SLD 8	-8	243	2128	-3.85	-5.5	-0.04
235	SLD 9	12	950	5233	-50.57	7.46	0.05
235	SLD 10	12	950	5233	-50.57	7.46	0.05
235	SLD 11	-11	165	1659	0.57	-7.64	-0.06
235	SLD 12	-11	165	1659	0.57	-7.64	-0.06
235	SLD 13	0	584	3435	-27.51	-0.33	-0.01
235	SLD 14	0	584	3435	-27.51	-0.33	-0.01
235	SLD 15	-7	348	2362	-12.17	-4.86	-0.04
235	SLD 16	-7	348	2362	-12.17	-4.86	-0.04
235	SLV 1	22	1188	6821	-63.09	15.37	0.12
235	SLV 2	22	1188	6821	-63.09	15.37	0.12
235	SLV 3	4	619	4213	-26.01	3.78	0.04
235	SLV 4	4	619	4213	-26.01	3.78	0.04
235	SLV 5	34	1637	8578	-94.22	22.89	0.18
235	SLV 6	34	1637	8578	-94.22	22.89	0.18
235	SLV 7	-24	-259	-115	29.4	-15.77	-0.12
235	SLV 8	-24	-259	-115	29.4	-15.77	-0.12
235	SLV 9	27	1453	7476	-83.81	17.74	0.13
235	SLV 10	27	1453	7476	-83.81	17.74	0.13
235	SLV 11	-31	-443	-1217	39.8	-20.93	-0.16
235	SLV 12	-31	-443	-1217	39.8	-20.93	-0.16
235	SLV 13	-1	574	3148	-28.41	-1.81	-0.02
235	SLV 14	-1	574	3148	-28.41	-1.81	-0.02
235	SLV 15	-19	5	540	8.68	-13.41	-0.11
235	SLV 16	-19	5	540	8.68	-13.41	-0.11
236	SLU 1	-20	-603	2327	21.7	-11.98	0
236	SLU 2	-19	-546	2334	19.39	-10.89	0
236	SLU 3	-21	-624	2378	22.46	-12.4	0
236	SLU 4	-20	-590	2382	21.07	-11.75	0
236	SLU 5	-19	-558	2365	19.85	-11.18	0
236	SLU 6	-21	-637	2410	22.91	-12.69	0
236	SLU 7	-20	-602	2414	21.53	-12.03	0
236	SLU 8	-21	-628	2391	22.61	-12.55	0
236	SLU 9	-20	-594	2395	21.22	-11.9	0
236	SLU 10	-21	-646	2570	23.03	-12.41	0
236	SLU 11	-23	-724	2614	26.1	-13.92	-0.01
236	SLU 12	-22	-690	2618	24.72	-13.27	0
236	SLU 13	-22	-659	2601	23.49	-12.7	0
236	SLU 14	-24	-737	2646	26.55	-14.21	-0.01
236	SLU 15	-23	-703	2650	25.17	-13.56	-0.01
236	SLU 16	-23	-729	2627	26.25	-14.07	-0.01
236	SLU 17	-23	-695	2631	24.86	-13.42	0
236	SLU 18	-23	-746	2664	26.9	-14.15	-0.01
236	SLU 19	-23	-712	2668	25.52	-13.5	-0.01
236	SLU 20	-24	-759	2696	27.35	-14.44	-0.01
236	SLU 21	-23	-725	2700	25.97	-13.79	-0.01
236	SLU 22	-22	-698	2551	25.13	-13.51	-0.01
236	SLU 23	-21	-640	2558	22.82	-12.42	0
236	SLU 24	-23	-719	2603	25.89	-13.93	-0.01
236	SLU 25	-22	-684	2607	24.51	-13.28	0
236	SLU 26	-22	-653	2590	23.28	-12.71	0
236	SLU 27	-24	-731	2635	26.34	-14.22	-0.01
236	SLU 28	-23	-697	2638	24.96	-13.56	-0.01
236	SLU 29	-23	-723	2615	26.04	-14.08	-0.01
236	SLU 30	-23	-689	2619	24.66	-13.43	0
236	SLU 31	-24	-741	2794	26.47	-13.94	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
236	SLU 32	-26	-819	2839	29.53	-15.45	-0.01
236	SLU 33	-25	-785	2843	28.15	-14.8	-0.01
236	SLU 34	-24	-754	2826	26.92	-14.23	-0.01
236	SLU 35	-26	-832	2871	29.98	-15.74	-0.01
236	SLU 36	-25	-798	2874	28.6	-15.09	-0.01
236	SLU 37	-26	-824	2851	29.68	-15.6	-0.01
236	SLU 38	-25	-789	2855	28.3	-14.95	-0.01
236	SLU 39	-26	-841	2889	30.33	-15.68	-0.01
236	SLU 40	-25	-807	2892	28.95	-15.03	-0.01
236	SLU 41	-26	-854	2920	30.79	-15.97	-0.01
236	SLU 42	-26	-820	2924	29.4	-15.32	-0.01
236	SLU 43	-25	-751	2948	27.03	-15.05	-0.01
236	SLU 44	-24	-694	2955	24.73	-13.96	-0.01
236	SLU 45	-26	-772	3000	27.79	-15.47	-0.01
236	SLU 46	-25	-738	3004	26.41	-14.82	-0.01
236	SLU 47	-24	-707	2987	25.18	-14.25	-0.01
236	SLU 48	-26	-785	3031	28.24	-15.75	-0.01
236	SLU 49	-25	-751	3035	26.86	-15.1	-0.01
236	SLU 50	-26	-777	3012	27.94	-15.62	-0.01
236	SLU 51	-25	-742	3016	26.56	-14.96	-0.01
236	SLU 52	-26	-795	3191	28.37	-15.48	-0.01
236	SLU 53	-28	-873	3236	31.43	-16.99	-0.01
236	SLU 54	-27	-838	3240	30.05	-16.34	-0.01
236	SLU 55	-27	-807	3223	28.82	-15.77	-0.01
236	SLU 56	-29	-886	3267	31.89	-17.28	-0.01
236	SLU 57	-28	-851	3271	30.5	-16.63	-0.01
236	SLU 58	-28	-877	3248	31.58	-17.14	-0.01
236	SLU 59	-28	-843	3252	30.2	-16.49	-0.01
236	SLU 60	-29	-895	3285	32.23	-17.22	-0.01
236	SLU 61	-28	-860	3289	30.85	-16.57	-0.01
236	SLU 62	-29	-907	3317	32.69	-17.51	-0.01
236	SLU 63	-28	-873	3321	31.3	-16.85	-0.01
236	SLU 64	-28	-846	3173	30.46	-16.58	-0.01
236	SLU 65	-26	-789	3179	28.16	-15.49	-0.01
236	SLU 66	-28	-867	3224	31.22	-17	-0.01
236	SLU 67	-27	-833	3228	29.84	-16.35	-0.01
236	SLU 68	-27	-802	3211	28.61	-15.78	-0.01
236	SLU 69	-29	-880	3256	31.68	-17.28	-0.01
236	SLU 70	-28	-846	3260	30.29	-16.63	-0.01
236	SLU 71	-28	-871	3236	31.37	-17.15	-0.01
236	SLU 72	-28	-837	3240	29.99	-16.49	-0.01
236	SLU 73	-29	-889	3415	31.8	-17.01	-0.01
236	SLU 74	-31	-967	3460	34.86	-18.52	-0.01
236	SLU 75	-30	-933	3464	33.48	-17.87	-0.01
236	SLU 76	-29	-902	3447	32.25	-17.3	-0.01
236	SLU 77	-31	-980	3492	35.32	-18.81	-0.01
236	SLU 78	-30	-946	3496	33.93	-18.16	-0.01
236	SLU 79	-31	-972	3472	35.01	-18.67	-0.01
236	SLU 80	-30	-938	3476	33.63	-18.02	-0.01
236	SLU 81	-31	-989	3510	35.66	-18.75	-0.01
236	SLU 82	-30	-955	3514	34.28	-18.1	-0.01
236	SLU 83	-32	-1002	3542	36.12	-19.04	-0.01
236	SLU 84	-31	-968	3545	34.74	-18.38	-0.01
236	SLE RA 1	-21	-630	2391	22.68	-12.42	0
236	SLE RA 2	-20	-592	2396	21.14	-11.69	0
236	SLE RA 3	-21	-644	2425	23.18	-12.7	0
236	SLE RA 4	-21	-621	2428	22.26	-12.26	0
236	SLE RA 5	-20	-600	2417	21.44	-11.88	0
236	SLE RA 6	-21	-652	2447	23.49	-12.89	-0.01
236	SLE RA 7	-21	-630	2449	22.57	-12.45	0
236	SLE RA 8	-21	-647	2434	23.28	-12.8	0
236	SLE RA 9	-21	-624	2436	22.36	-12.36	0
236	SLE RA 10	-21	-659	2553	23.57	-12.71	0
236	SLE RA 11	-23	-711	2583	25.61	-13.71	-0.01
236	SLE RA 12	-22	-688	2585	24.69	-13.28	-0.01
236	SLE RA 13	-22	-667	2574	23.87	-12.9	0
236	SLE RA 14	-23	-719	2604	25.91	-13.9	-0.01
236	SLE RA 15	-23	-697	2607	24.99	-13.47	-0.01
236	SLE RA 16	-23	-714	2591	25.71	-13.81	-0.01
236	SLE RA 17	-22	-691	2594	24.79	-13.38	-0.01
236	SLE RA 18	-23	-726	2616	26.15	-13.87	-0.01
236	SLE RA 19	-22	-703	2619	25.22	-13.43	-0.01
236	SLE RA 20	-23	-734	2637	26.45	-14.06	-0.01
236	SLE RA 21	-23	-711	2640	25.53	-13.62	-0.01
236	SLE FR 1	-21	-630	2391	22.68	-12.42	0
236	SLE FR 2	-20	-622	2392	22.37	-12.27	0
236	SLE FR 3	-21	-633	2400	22.8	-12.49	0
236	SLE FR 4	-21	-651	2459	23.41	-12.71	0
236	SLE FR 5	-21	-662	2467	23.84	-12.93	-0.01
236	SLE FR 6	-22	-678	2504	24.41	-13.14	-0.01
236	SLE QP 1	-21	-630	2391	22.68	-12.42	0
236	SLE QP 2	-21	-659	2459	23.72	-12.85	-0.01
236	SLD 1	-39	-700	3053	24.65	-22.96	-0.02
236	SLD 2	-39	-700	3053	24.65	-22.96	-0.02
236	SLD 3	-33	-1153	3145	43.53	-28.45	-0.02
236	SLD 4	-33	-1153	3145	43.53	-28.45	-0.02
236	SLD 5	-36	15	2498	-4.64	-7.55	0
236	SLD 6	-36	15	2498	-4.64	-7.55	0
236	SLD 7	-16	-1493	2804	58.3	-25.86	-0.02
236	SLD 8	-16	-1493	2804	58.3	-25.86	-0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
236	SLD 9	-27	176	2114	-10.86	0.16	0.01
236	SLD 10	-27	176	2114	-10.86	0.16	0.01
236	SLD 11	-7	-1332	2420	52.07	-18.15	-0.01
236	SLD 12	-7	-1332	2420	52.07	-18.15	-0.01
236	SLD 13	-10	-165	1773	3.91	2.75	0.01
236	SLD 14	-10	-165	1773	3.91	2.75	0.01
236	SLD 15	-4	-617	1864	22.79	-2.74	0.01
236	SLD 16	-4	-617	1864	22.79	-2.74	0.01
236	SLV 1	-62	-759	3843	25.99	-36.29	-0.03
236	SLV 2	-62	-759	3843	25.99	-36.29	-0.03
236	SLV 3	-47	-1803	4068	69.57	-49.97	-0.04
236	SLV 4	-47	-1803	4068	69.57	-49.97	-0.04
236	SLV 5	-56	895	2532	-41.7	0.86	0
236	SLV 6	-56	895	2532	-41.7	0.86	0
236	SLV 7	-7	-2585	3283	103.58	-44.74	-0.03
236	SLV 8	-7	-2585	3283	103.58	-44.74	-0.03
236	SLV 9	-36	1268	1634	-56.14	19.03	0.02
236	SLV 10	-36	1268	1634	-56.14	19.03	0.02
236	SLV 11	14	-2212	2385	89.14	-26.57	-0.01
236	SLV 12	14	-2212	2385	89.14	-26.57	-0.01
236	SLV 13	5	485	849	-22.14	24.27	0.03
236	SLV 14	5	485	849	-22.14	24.27	0.03
236	SLV 15	20	-558	1075	21.45	10.59	0.02
236	SLV 16	20	-558	1075	21.45	10.59	0.02
237	SLU 1	0	-259	5842	10.24	0.38	0
237	SLU 2	-2	-204	5774	7.76	-1.52	0
237	SLU 3	0	-267	6039	10.6	0.4	0
237	SLU 4	-1	-234	5998	9.11	-0.74	0
237	SLU 5	-2	-208	5913	7.94	-1.5	0
237	SLU 6	0	-271	6177	10.77	0.41	0
237	SLU 7	-1	-238	6137	9.28	-0.72	0
237	SLU 8	0	-266	6119	10.58	0.42	0
237	SLU 9	-1	-233	6079	9.1	-0.72	0
237	SLU 10	-2	-259	6451	9.87	-1.53	0
237	SLU 11	0	-322	6715	12.7	0.39	0
237	SLU 12	-1	-289	6675	11.22	-0.75	0
237	SLU 13	-2	-262	6590	10.04	-1.51	0
237	SLU 14	0	-326	6854	12.88	0.4	0
237	SLU 15	-1	-293	6813	11.39	-0.74	0
237	SLU 16	0	-321	6796	12.69	0.4	0
237	SLU 17	-1	-288	6755	11.21	-0.73	0
237	SLU 18	0	-337	6809	13.25	0.36	0
237	SLU 19	-1	-304	6768	11.77	-0.78	0
237	SLU 20	0	-341	6947	13.42	0.38	0
237	SLU 21	-1	-308	6907	11.94	-0.76	0
237	SLU 22	0	-308	6518	12.17	0.39	0
237	SLU 23	-2	-254	6450	9.69	-1.51	0
237	SLU 24	0	-317	6714	12.52	0.4	0
237	SLU 25	-1	-284	6674	11.04	-0.73	0
237	SLU 26	-2	-257	6589	9.86	-1.49	0
237	SLU 27	0	-321	6853	12.7	0.42	0
237	SLU 28	-1	-288	6812	11.21	-0.72	0
237	SLU 29	0	-316	6795	12.51	0.42	0
237	SLU 30	-1	-283	6754	11.03	-0.71	0
237	SLU 31	-2	-308	7127	11.8	-1.52	0
237	SLU 32	0	-372	7391	14.63	0.39	0
237	SLU 33	-1	-339	7350	13.15	-0.75	0
237	SLU 34	-2	-312	7265	11.97	-1.5	0
237	SLU 35	0	-375	7530	14.8	0.41	0
237	SLU 36	-1	-343	7489	13.32	-0.73	0
237	SLU 37	0	-371	7472	14.62	0.41	0
237	SLU 38	-1	-338	7431	13.14	-0.73	0
237	SLU 39	0	-387	7484	15.18	0.37	0
237	SLU 40	-1	-354	7444	13.7	-0.77	0
237	SLU 41	0	-390	7623	15.35	0.39	0
237	SLU 42	-1	-358	7582	13.87	-0.75	0
237	SLU 43	0	-319	7363	12.65	0.49	0
237	SLU 44	-2	-265	7295	10.17	-1.41	0
237	SLU 45	0	-328	7559	13.01	0.51	0
237	SLU 46	-1	-295	7519	11.52	-0.63	0
237	SLU 47	-2	-268	7434	10.35	-1.39	0
237	SLU 48	0	-332	7698	13.18	0.53	0
237	SLU 49	-1	-299	7658	11.69	-0.61	0
237	SLU 50	0	-327	7640	12.99	0.53	0
237	SLU 51	-1	-294	7600	11.51	-0.61	0
237	SLU 52	-2	-319	7972	12.28	-1.42	0
237	SLU 53	0	-383	8236	15.12	0.5	0
237	SLU 54	-1	-350	8196	13.63	-0.64	0
237	SLU 55	-2	-323	8111	12.46	-1.4	0
237	SLU 56	0	-386	8375	15.29	0.51	0
237	SLU 57	-1	-354	8334	13.8	-0.63	0
237	SLU 58	0	-382	8317	15.1	0.52	0
237	SLU 59	-1	-349	8276	13.62	-0.62	0
237	SLU 60	0	-398	8330	15.66	0.47	0
237	SLU 61	-1	-365	8289	14.18	-0.66	0
237	SLU 62	0	-401	8468	15.84	0.49	0
237	SLU 63	-1	-368	8428	14.35	-0.65	0
237	SLU 64	0	-369	8039	14.58	0.5	0
237	SLU 65	-2	-314	7971	12.1	-1.4	0
237	SLU 66	0	-378	8235	14.93	0.52	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
237	SLU 67	-1	-345	8195	13.45	-0.62	0
237	SLU 68	-2	-318	8110	12.28	-1.38	0
237	SLU 69	0	-381	8374	15.11	0.53	0
237	SLU 70	-1	-348	8333	13.62	-0.61	0
237	SLU 71	0	-376	8316	14.92	0.54	0
237	SLU 72	-1	-344	8275	13.44	-0.6	0
237	SLU 73	-2	-369	8648	14.21	-1.41	0
237	SLU 74	0	-432	8912	17.04	0.5	0
237	SLU 75	-1	-399	8871	15.56	-0.63	0
237	SLU 76	-2	-373	8786	14.38	-1.39	0
237	SLU 77	0	-436	9050	17.22	0.52	0
237	SLU 78	-1	-403	9010	15.73	-0.62	0
237	SLU 79	0	-431	8992	17.03	0.52	0
237	SLU 80	-1	-398	8952	15.55	-0.62	0
237	SLU 81	0	-447	9005	17.59	0.48	0
237	SLU 82	-1	-414	8965	16.11	-0.66	0
237	SLU 83	0	-451	9144	17.76	0.5	0
237	SLU 84	-1	-418	9103	16.28	-0.64	0
237	SLE RA 1	0	-273	6035	10.79	0.38	0
237	SLE RA 2	-1	-236	5990	9.14	-0.88	0
237	SLE RA 3	0	-279	6166	11.03	0.39	0
237	SLE RA 4	-1	-257	6139	10.04	-0.37	0
237	SLE RA 5	-1	-239	6082	9.25	-0.87	0
237	SLE RA 6	0	-281	6258	11.14	0.41	0
237	SLE RA 7	-1	-259	6231	10.15	-0.35	0
237	SLE RA 8	0	-278	6220	11.02	0.41	0
237	SLE RA 9	-1	-256	6193	10.03	-0.35	0
237	SLE RA 10	-1	-273	6441	10.55	-0.89	0
237	SLE RA 11	0	-315	6617	12.43	0.39	0
237	SLE RA 12	-1	-293	6590	11.44	-0.37	0
237	SLE RA 13	-1	-275	6534	10.66	-0.88	0
237	SLE RA 14	0	-318	6710	12.55	0.4	0
237	SLE RA 15	-1	-296	6683	11.56	-0.36	0
237	SLE RA 16	0	-314	6671	12.43	0.4	0
237	SLE RA 17	-1	-293	6644	11.44	-0.36	0
237	SLE RA 18	0	-325	6679	12.8	0.37	0
237	SLE RA 19	-1	-303	6652	11.81	-0.39	0
237	SLE RA 20	0	-328	6772	12.91	0.38	0
237	SLE RA 21	-1	-306	6745	11.92	-0.38	0
237	SLE FR 1	0	-273	6035	10.79	0.38	0
237	SLE FR 2	0	-266	6026	10.46	0.13	0
237	SLE FR 3	0	-274	6072	10.84	0.39	0
237	SLE FR 4	0	-281	6219	11.06	0.13	0
237	SLE FR 5	0	-290	6265	11.44	0.38	0
237	SLE FR 6	0	-299	6357	11.8	0.38	0
237	SLE QP 1	0	-273	6035	10.79	0.38	0
237	SLE QP 2	0	-289	6228	11.39	0.38	0
237	SLD 1	25	165	4485	-7.26	25.74	-0.01
237	SLD 2	25	165	4485	-7.26	25.74	-0.01
237	SLD 3	13	-273	4788	10.91	14.44	-0.01
237	SLD 4	13	-273	4788	10.91	14.44	-0.01
237	SLD 5	25	512	5246	-21.75	25.12	0
237	SLD 6	25	512	5246	-21.75	25.12	0
237	SLD 7	-14	-948	6255	38.8	-12.54	-0.01
237	SLD 8	-14	-948	6255	38.8	-12.54	-0.01
237	SLD 9	14	371	6202	-16.01	13.3	0.01
237	SLD 10	14	371	6202	-16.01	13.3	0.01
237	SLD 11	-25	-1089	7210	44.54	-24.36	0
237	SLD 12	-25	-1089	7210	44.54	-24.36	0
237	SLD 13	-13	-304	7669	11.88	-13.68	0.01
237	SLD 14	-13	-304	7669	11.88	-13.68	0.01
237	SLD 15	-25	-742	7972	30.05	-24.98	0.01
237	SLD 16	-25	-742	7972	30.05	-24.98	0.01
237	SLV 1	59	763	2146	-31.88	61.93	-0.02
237	SLV 2	59	763	2146	-31.88	61.93	-0.02
237	SLV 3	30	-251	2861	10.22	33.59	-0.03
237	SLV 4	30	-251	2861	10.22	33.59	-0.03
237	SLV 5	62	1566	3919	-65.44	61.82	0.01
237	SLV 6	62	1566	3919	-65.44	61.82	0.01
237	SLV 7	-35	-1816	6302	74.89	-32.63	-0.02
237	SLV 8	-35	-1816	6302	74.89	-32.63	-0.02
237	SLV 9	35	1239	6154	-52.1	33.39	0.02
237	SLV 10	35	1239	6154	-52.1	33.39	0.02
237	SLV 11	-62	-2143	8537	88.23	-61.06	-0.01
237	SLV 12	-62	-2143	8537	88.23	-61.06	-0.01
237	SLV 13	-30	-326	9596	12.57	-32.83	0.03
237	SLV 14	-30	-326	9596	12.57	-32.83	0.03
237	SLV 15	-59	-1341	10311	54.67	-61.17	0.02
237	SLV 16	-59	-1341	10311	54.67	-61.17	0.02
238	SLU 1	0	258	3884	-9.55	-0.26	0
238	SLU 2	0	252	3780	-9.24	-0.18	0
238	SLU 3	0	265	4010	-9.81	-0.27	0
238	SLU 4	0	261	3947	-9.63	-0.23	0
238	SLU 5	0	256	3862	-9.41	-0.19	0
238	SLU 6	0	269	4092	-9.98	-0.29	0
238	SLU 7	0	265	4029	-9.79	-0.24	0
238	SLU 8	0	266	4048	-9.88	-0.29	0
238	SLU 9	0	263	3986	-9.69	-0.24	0
238	SLU 10	0	277	4355	-10.16	-0.22	0
238	SLU 11	0	290	4585	-10.73	-0.32	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
238	SLU 12	0	286	4523	-10.54	-0.27	0
238	SLU 13	0	281	4437	-10.32	-0.24	0
238	SLU 14	0	294	4667	-10.89	-0.33	0.01
238	SLU 15	0	290	4605	-10.7	-0.29	0
238	SLU 16	0	291	4624	-10.79	-0.33	0.01
238	SLU 17	0	287	4561	-10.61	-0.28	0
238	SLU 18	0	294	4706	-10.85	-0.32	0.01
238	SLU 19	0	290	4644	-10.67	-0.27	0
238	SLU 20	0	298	4788	-11.02	-0.33	0.01
238	SLU 21	0	294	4726	-10.83	-0.29	0
238	SLU 22	0	285	4449	-10.58	-0.3	0
238	SLU 23	0	279	4345	-10.27	-0.22	0
238	SLU 24	0	292	4574	-10.84	-0.32	0.01
238	SLU 25	0	288	4512	-10.66	-0.27	0
238	SLU 26	0	283	4427	-10.44	-0.24	0
238	SLU 27	0	296	4656	-11.01	-0.34	0.01
238	SLU 28	0	292	4594	-10.82	-0.29	0
238	SLU 29	0	293	4613	-10.91	-0.33	0.01
238	SLU 30	0	290	4550	-10.72	-0.28	0
238	SLU 31	0	304	4920	-11.19	-0.27	0
238	SLU 32	0	317	5150	-11.76	-0.36	0.01
238	SLU 33	0	313	5087	-11.57	-0.32	0.01
238	SLU 34	0	308	5002	-11.35	-0.28	0
238	SLU 35	0	321	5232	-11.92	-0.38	0.01
238	SLU 36	0	317	5169	-11.74	-0.33	0.01
238	SLU 37	0	318	5188	-11.82	-0.38	0.01
238	SLU 38	0	314	5126	-11.64	-0.33	0.01
238	SLU 39	0	321	5271	-11.88	-0.37	0.01
238	SLU 40	0	317	5208	-11.7	-0.32	0.01
238	SLU 41	0	325	5353	-12.05	-0.38	0.01
238	SLU 42	0	321	5290	-11.86	-0.33	0.01
238	SLU 43	0	326	4856	-12.06	-0.32	0.01
238	SLU 44	0	320	4752	-11.76	-0.24	0
238	SLU 45	0	333	4981	-12.33	-0.34	0.01
238	SLU 46	0	329	4919	-12.14	-0.29	0
238	SLU 47	0	324	4834	-11.92	-0.25	0
238	SLU 48	0	337	5063	-12.49	-0.35	0.01
238	SLU 49	0	333	5001	-12.31	-0.3	0
238	SLU 50	0	335	5020	-12.39	-0.35	0.01
238	SLU 51	0	331	4957	-12.21	-0.3	0
238	SLU 52	0	345	5327	-12.67	-0.28	0
238	SLU 53	0	358	5557	-13.24	-0.38	0.01
238	SLU 54	0	354	5494	-13.05	-0.33	0.01
238	SLU 55	0	349	5409	-12.83	-0.3	0
238	SLU 56	0	362	5639	-13.4	-0.39	0.01
238	SLU 57	0	358	5576	-13.22	-0.35	0.01
238	SLU 58	0	359	5595	-13.3	-0.39	0.01
238	SLU 59	0	355	5533	-13.12	-0.34	0.01
238	SLU 60	0	362	5678	-13.36	-0.38	0.01
238	SLU 61	0	358	5615	-13.18	-0.33	0.01
238	SLU 62	0	366	5760	-13.53	-0.4	0.01
238	SLU 63	0	362	5697	-13.34	-0.35	0.01
238	SLU 64	0	354	5420	-13.09	-0.36	0.01
238	SLU 65	0	347	5316	-12.79	-0.29	0
238	SLU 66	0	360	5546	-13.36	-0.38	0.01
238	SLU 67	0	356	5484	-13.17	-0.34	0.01
238	SLU 68	0	351	5398	-12.95	-0.3	0
238	SLU 69	0	364	5628	-13.52	-0.4	0.01
238	SLU 70	0	360	5566	-13.34	-0.35	0.01
238	SLU 71	0	362	5584	-13.42	-0.39	0.01
238	SLU 72	0	358	5522	-13.24	-0.35	0.01
238	SLU 73	0	372	5892	-13.7	-0.33	0.01
238	SLU 74	0	385	6121	-14.27	-0.43	0.01
238	SLU 75	0	381	6059	-14.08	-0.38	0.01
238	SLU 76	0	376	5974	-13.86	-0.34	0.01
238	SLU 77	0	389	6203	-14.43	-0.44	0.01
238	SLU 78	0	385	6141	-14.25	-0.39	0.01
238	SLU 79	0	386	6160	-14.33	-0.44	0.01
238	SLU 80	0	383	6097	-14.15	-0.39	0.01
238	SLU 81	0	389	6242	-14.4	-0.43	0.01
238	SLU 82	0	385	6180	-14.21	-0.38	0.01
238	SLU 83	0	393	6324	-14.56	-0.44	0.01
238	SLU 84	0	389	6262	-14.37	-0.39	0.01
238	SLE RA 1	0	266	4045	-9.85	-0.27	0
238	SLE RA 2	0	262	3976	-9.64	-0.22	0
238	SLE RA 3	0	270	4129	-10.02	-0.28	0
238	SLE RA 4	0	268	4088	-9.9	-0.25	0
238	SLE RA 5	0	265	4031	-9.75	-0.23	0
238	SLE RA 6	0	273	4184	-10.13	-0.29	0
238	SLE RA 7	0	271	4142	-10.01	-0.26	0
238	SLE RA 8	0	271	4155	-10.06	-0.29	0
238	SLE RA 9	0	269	4113	-9.94	-0.26	0
238	SLE RA 10	0	278	4360	-10.25	-0.25	0
238	SLE RA 11	0	287	4513	-10.63	-0.31	0.01
238	SLE RA 12	0	284	4471	-10.51	-0.28	0
238	SLE RA 13	0	281	4414	-10.36	-0.26	0
238	SLE RA 14	0	290	4568	-10.74	-0.32	0.01
238	SLE RA 15	0	287	4526	-10.61	-0.29	0
238	SLE RA 16	0	288	4538	-10.67	-0.32	0.01
238	SLE RA 17	0	285	4497	-10.55	-0.29	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
238	SLE RA 18	0	290	4593	-10.71	-0.31	0.01
238	SLE RA 19	0	287	4552	-10.59	-0.28	0
238	SLE RA 20	0	292	4648	-10.82	-0.32	0.01
238	SLE RA 21	0	290	4606	-10.7	-0.29	0
238	SLE FR 1	0	266	4045	-9.85	-0.27	0
238	SLE FR 2	0	265	4032	-9.8	-0.26	0
238	SLE FR 3	0	267	4067	-9.89	-0.27	0
238	SLE FR 4	0	272	4196	-10.06	-0.27	0
238	SLE FR 5	0	274	4232	-10.15	-0.29	0
238	SLE FR 6	0	278	4319	-10.28	-0.29	0
238	SLE QP 1	0	266	4045	-9.85	-0.27	0
238	SLE QP 2	0	273	4210	-10.11	-0.28	0
238	SLD 1	12	576	4245	-22.69	10.14	-0.22
238	SLD 2	12	576	4245	-22.69	10.14	-0.22
238	SLD 3	14	240	3940	-8.7	13.01	-0.28
238	SLD 4	14	240	3940	-8.7	13.01	-0.28
238	SLD 5	-1	873	4683	-35.09	-1.51	0.03
238	SLD 6	-1	873	4683	-35.09	-1.51	0.03
238	SLD 7	9	-246	3667	11.53	8.06	-0.18
238	SLD 8	9	-246	3667	11.53	8.06	-0.18
238	SLD 9	-9	792	4753	-31.74	-8.63	0.19
238	SLD 10	-9	792	4753	-31.74	-8.63	0.19
238	SLD 11	1	-327	3737	14.88	0.95	-0.02
238	SLD 12	1	-327	3737	14.88	0.95	-0.02
238	SLD 13	-15	306	4480	-11.51	-13.58	0.29
238	SLD 14	-15	306	4480	-11.51	-13.58	0.29
238	SLD 15	-12	-29	4175	2.48	-10.71	0.23
238	SLD 16	-12	-29	4175	2.48	-10.71	0.23
238	SLV 1	29	982	4292	-39.59	25.98	-0.55
238	SLV 2	29	982	4292	-39.59	25.98	-0.55
238	SLV 3	37	192	3568	-6.69	33.28	-0.71
238	SLV 4	37	192	3568	-6.69	33.28	-0.71
238	SLV 5	-2	1683	5333	-68.85	-3.48	0.08
238	SLV 6	-2	1683	5333	-68.85	-3.48	0.08
238	SLV 7	22	-949	2919	40.82	20.86	-0.45
238	SLV 8	22	-949	2919	40.82	20.86	-0.45
238	SLV 9	-22	1495	5501	-61.03	-21.43	0.46
238	SLV 10	-22	1495	5501	-61.03	-21.43	0.46
238	SLV 11	2	-1137	3087	48.64	2.91	-0.07
238	SLV 12	2	-1137	3087	48.64	2.91	-0.07
238	SLV 13	-37	354	4852	-13.53	-33.85	0.72
238	SLV 14	-37	354	4852	-13.53	-33.85	0.72
238	SLV 15	-30	-435	4128	19.38	-26.55	0.56
238	SLV 16	-30	-435	4128	19.38	-26.55	0.56
239	SLU 1	0	256	3938	-11.9	0.09	0
239	SLU 2	0	248	3850	-11.38	0.04	0
239	SLU 3	0	263	4059	-12.3	0.1	0
239	SLU 4	0	259	4006	-11.99	0.07	0
239	SLU 5	0	253	3923	-11.67	0.04	0
239	SLU 6	0	268	4133	-12.6	0.11	0
239	SLU 7	0	264	4080	-12.28	0.07	0
239	SLU 8	0	266	4085	-12.49	0.1	0
239	SLU 9	0	262	4032	-12.17	0.07	0
239	SLU 10	0	273	4425	-12.64	0.06	0
239	SLU 11	0	288	4634	-13.57	0.13	0
239	SLU 12	0	284	4581	-13.25	0.09	0
239	SLU 13	0	278	4498	-12.93	0.07	0
239	SLU 14	0	294	4708	-13.86	0.13	0
239	SLU 15	0	289	4655	-13.55	0.1	0
239	SLU 16	0	291	4660	-13.75	0.13	0
239	SLU 17	0	287	4607	-13.44	0.1	0
239	SLU 18	0	292	4760	-13.7	0.13	0
239	SLU 19	0	287	4706	-13.39	0.1	0
239	SLU 20	0	297	4833	-14	0.14	0
239	SLU 21	0	292	4780	-13.68	0.1	0
239	SLU 22	0	283	4497	-13.3	0.12	0
239	SLU 23	0	276	4409	-12.77	0.06	0
239	SLU 24	0	291	4619	-13.7	0.12	0
239	SLU 25	0	286	4565	-13.39	0.09	0
239	SLU 26	0	281	4482	-13.07	0.07	0
239	SLU 27	0	296	4692	-13.99	0.13	0
239	SLU 28	0	291	4639	-13.68	0.1	0
239	SLU 29	0	294	4645	-13.88	0.13	0
239	SLU 30	0	289	4591	-13.57	0.09	0
239	SLU 31	0	301	4984	-14.04	0.09	0
239	SLU 32	0	316	5194	-14.96	0.15	0
239	SLU 33	0	311	5140	-14.65	0.12	0
239	SLU 34	0	306	5057	-14.33	0.09	0
239	SLU 35	0	321	5267	-15.26	0.16	0
239	SLU 36	0	317	5214	-14.94	0.12	0
239	SLU 37	0	319	5220	-15.15	0.15	0
239	SLU 38	0	314	5166	-14.83	0.12	0
239	SLU 39	0	319	5319	-15.1	0.15	0
239	SLU 40	0	315	5266	-14.79	0.12	0
239	SLU 41	0	325	5393	-15.39	0.16	0
239	SLU 42	0	320	5339	-15.08	0.13	0
239	SLU 43	0	323	4928	-14.99	0.11	0
239	SLU 44	0	315	4839	-14.47	0.06	0
239	SLU 45	0	331	5049	-15.4	0.12	0
239	SLU 46	0	326	4996	-15.08	0.09	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
239	SLU 47	0	321	4913	-14.76	0.06	0
239	SLU 48	0	336	5123	-15.69	0.13	0
239	SLU 49	0	331	5070	-15.38	0.09	0
239	SLU 50	0	334	5075	-15.58	0.12	0
239	SLU 51	0	329	5022	-15.26	0.09	0
239	SLU 52	0	341	5414	-15.73	0.08	0
239	SLU 53	0	356	5624	-16.66	0.15	0
239	SLU 54	0	351	5571	-16.34	0.11	0
239	SLU 55	0	346	5488	-16.02	0.09	0
239	SLU 56	0	361	5698	-16.95	0.15	0
239	SLU 57	0	356	5645	-16.64	0.12	0
239	SLU 58	0	359	5650	-16.84	0.15	0
239	SLU 59	0	354	5597	-16.53	0.12	0
239	SLU 60	0	359	5749	-16.79	0.15	0
239	SLU 61	0	354	5696	-16.48	0.12	0
239	SLU 62	0	364	5823	-17.09	0.15	0
239	SLU 63	0	360	5770	-16.77	0.12	0
239	SLU 64	0	351	5487	-16.39	0.14	0
239	SLU 65	0	343	5398	-15.87	0.08	0
239	SLU 66	0	358	5608	-16.79	0.14	0
239	SLU 67	0	353	5555	-16.48	0.11	0
239	SLU 68	0	348	5472	-16.16	0.09	0
239	SLU 69	0	363	5682	-17.09	0.15	0
239	SLU 70	0	359	5629	-16.77	0.12	0
239	SLU 71	0	361	5634	-16.97	0.15	0
239	SLU 72	0	357	5581	-16.66	0.11	0
239	SLU 73	0	368	5973	-17.13	0.11	0
239	SLU 74	0	383	6183	-18.05	0.17	0
239	SLU 75	0	379	6130	-17.74	0.14	0
239	SLU 76	0	373	6047	-17.42	0.11	0
239	SLU 77	0	389	6257	-18.35	0.18	0
239	SLU 78	0	384	6204	-18.03	0.14	0
239	SLU 79	0	386	6209	-18.24	0.17	0
239	SLU 80	0	382	6156	-17.92	0.14	0
239	SLU 81	0	387	6309	-18.19	0.17	0
239	SLU 82	0	382	6255	-17.88	0.14	0
239	SLU 83	0	392	6382	-18.48	0.18	0
239	SLU 84	0	387	6329	-18.17	0.15	0
239	SLE RA 1	0	264	4098	-12.3	0.1	0
239	SLE RA 2	0	259	4039	-11.95	0.06	0
239	SLE RA 3	0	269	4179	-12.57	0.11	0
239	SLE RA 4	0	266	4143	-12.36	0.08	0
239	SLE RA 5	0	262	4088	-12.15	0.07	0
239	SLE RA 6	0	272	4228	-12.76	0.11	0
239	SLE RA 7	0	269	4192	-12.56	0.09	0
239	SLE RA 8	0	271	4196	-12.69	0.11	0
239	SLE RA 9	0	268	4161	-12.48	0.08	0
239	SLE RA 10	0	275	4422	-12.79	0.08	0
239	SLE RA 11	0	285	4562	-13.41	0.12	0
239	SLE RA 12	0	282	4527	-13.2	0.1	0
239	SLE RA 13	0	279	4471	-12.99	0.08	0
239	SLE RA 14	0	289	4611	-13.61	0.13	0
239	SLE RA 15	0	286	4576	-13.4	0.1	0
239	SLE RA 16	0	288	4579	-13.53	0.12	0
239	SLE RA 17	0	284	4544	-13.32	0.1	0
239	SLE RA 18	0	288	4646	-13.5	0.12	0
239	SLE RA 19	0	285	4610	-13.29	0.1	0
239	SLE RA 20	0	291	4695	-13.7	0.13	0
239	SLE RA 21	0	288	4659	-13.49	0.11	0
239	SLE FR 1	0	264	4098	-12.3	0.1	0
239	SLE FR 2	0	263	4086	-12.23	0.09	0
239	SLE FR 3	0	265	4118	-12.38	0.1	0
239	SLE FR 4	0	270	4250	-12.59	0.1	0
239	SLE FR 5	0	272	4282	-12.74	0.11	0
239	SLE FR 6	0	276	4372	-12.9	0.11	0
239	SLE QP 1	0	264	4098	-12.3	0.1	0
239	SLE QP 2	0	271	4262	-12.66	0.11	0
239	SLD 1	15	321	4702	-32.9	13.29	-0.01
239	SLD 2	15	321	4702	-32.9	13.29	-0.01
239	SLD 3	12	-148	4339	-9.95	10.5	-0.01
239	SLD 4	12	-148	4339	-9.95	10.5	-0.01
239	SLD 5	9	997	4946	-53.54	8.29	-0.01
239	SLD 6	9	997	4946	-53.54	8.29	-0.01
239	SLD 7	-1	-566	3733	22.96	-1	0
239	SLD 8	-1	-566	3733	22.96	-1	0
239	SLD 9	1	1108	4791	-48.28	1.22	0
239	SLD 10	1	1108	4791	-48.28	1.22	0
239	SLD 11	-9	-456	3578	28.22	-8.08	0.01
239	SLD 12	-9	-456	3578	28.22	-8.08	0.01
239	SLD 13	-11	690	4186	-15.37	-10.29	0.01
239	SLD 14	-11	690	4186	-15.37	-10.29	0.01
239	SLD 15	-15	221	3822	7.58	-13.08	0.01
239	SLD 16	-15	221	3822	7.58	-13.08	0.01
239	SLV 1	37	388	5306	-60.37	33.29	-0.03
239	SLV 2	37	388	5306	-60.37	33.29	-0.03
239	SLV 3	29	-717	4436	-6.27	26.31	-0.02
239	SLV 4	29	-717	4436	-6.27	26.31	-0.02
239	SLV 5	23	1983	5896	-109.01	20.66	-0.02
239	SLV 6	23	1983	5896	-109.01	20.66	-0.02
239	SLV 7	-3	-1702	2994	71.3	-2.63	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
239	SLV 8	-3	-1702	2994	71.3	-2.63	0.01
239	SLV 9	3	2244	5530	-96.62	2.84	-0.01
239	SLV 10	3	2244	5530	-96.62	2.84	-0.01
239	SLV 11	-23	-1441	2629	83.69	-20.44	0.02
239	SLV 12	-23	-1441	2629	83.69	-20.44	0.02
239	SLV 13	-29	1259	4089	-19.05	-26.09	0.02
239	SLV 14	-29	1259	4089	-19.05	-26.09	0.02
239	SLV 15	-37	154	3218	35.05	-33.08	0.03
239	SLV 16	-37	154	3218	35.05	-33.08	0.03
240	SLU 1	-1	354	2683	-16.62	-0.35	0.01
240	SLU 2	-1	355	2666	-16.65	-0.35	0.01
240	SLU 3	-1	364	2756	-17.1	-0.36	0.01
240	SLU 4	-1	364	2745	-17.12	-0.36	0.01
240	SLU 5	-1	360	2704	-16.92	-0.35	0.01
240	SLU 6	-1	369	2793	-17.38	-0.36	0.01
240	SLU 7	-1	370	2783	-17.39	-0.36	0.01
240	SLU 8	-1	365	2759	-17.17	-0.36	0.01
240	SLU 9	-1	366	2749	-17.18	-0.36	0.01
240	SLU 10	-1	408	3101	-19.14	-0.43	0.02
240	SLU 11	-2	417	3190	-19.59	-0.43	0.02
240	SLU 12	-2	417	3180	-19.61	-0.43	0.02
240	SLU 13	-2	413	3138	-19.41	-0.43	0.02
240	SLU 14	-2	422	3228	-19.87	-0.44	0.02
240	SLU 15	-2	423	3217	-19.88	-0.44	0.02
240	SLU 16	-2	418	3193	-19.66	-0.43	0.02
240	SLU 17	-2	418	3183	-19.67	-0.43	0.02
240	SLU 18	-2	429	3304	-20.18	-0.46	0.02
240	SLU 19	-2	430	3294	-20.2	-0.46	0.02
240	SLU 20	-2	435	3342	-20.45	-0.46	0.02
240	SLU 21	-2	435	3331	-20.47	-0.46	0.02
240	SLU 22	-1	404	3085	-19.02	-0.41	0.02
240	SLU 23	-1	405	3068	-19.05	-0.41	0.02
240	SLU 24	-1	414	3157	-19.5	-0.42	0.02
240	SLU 25	-1	415	3147	-19.52	-0.42	0.02
240	SLU 26	-1	411	3106	-19.32	-0.42	0.02
240	SLU 27	-1	420	3195	-19.77	-0.42	0.02
240	SLU 28	-1	420	3185	-19.79	-0.42	0.02
240	SLU 29	-1	415	3161	-19.56	-0.42	0.02
240	SLU 30	-1	416	3150	-19.58	-0.42	0.02
240	SLU 31	-2	458	3502	-21.54	-0.49	0.02
240	SLU 32	-2	467	3592	-21.99	-0.5	0.02
240	SLU 33	-2	467	3581	-22.01	-0.5	0.02
240	SLU 34	-2	463	3540	-21.81	-0.49	0.02
240	SLU 35	-2	472	3629	-22.26	-0.5	0.02
240	SLU 36	-2	473	3619	-22.28	-0.5	0.02
240	SLU 37	-2	468	3595	-22.06	-0.5	0.02
240	SLU 38	-2	469	3585	-22.07	-0.5	0.02
240	SLU 39	-2	480	3706	-22.58	-0.52	0.02
240	SLU 40	-2	480	3695	-22.59	-0.52	0.02
240	SLU 41	-2	485	3743	-22.85	-0.53	0.02
240	SLU 42	-2	486	3733	-22.87	-0.53	0.02
240	SLU 43	-2	443	3351	-20.79	-0.43	0.02
240	SLU 44	-2	444	3334	-20.81	-0.43	0.02
240	SLU 45	-2	453	3423	-21.27	-0.44	0.02
240	SLU 46	-2	453	3413	-21.28	-0.44	0.02
240	SLU 47	-2	449	3371	-21.09	-0.44	0.02
240	SLU 48	-2	458	3461	-21.54	-0.44	0.02
240	SLU 49	-2	459	3450	-21.56	-0.44	0.02
240	SLU 50	-2	454	3426	-21.33	-0.44	0.02
240	SLU 51	-2	455	3416	-21.35	-0.44	0.02
240	SLU 52	-2	496	3768	-23.3	-0.51	0.02
240	SLU 53	-2	505	3857	-23.76	-0.52	0.02
240	SLU 54	-2	506	3847	-23.77	-0.52	0.02
240	SLU 55	-2	502	3806	-23.58	-0.51	0.02
240	SLU 56	-2	511	3895	-24.03	-0.52	0.02
240	SLU 57	-2	512	3885	-24.05	-0.52	0.02
240	SLU 58	-2	507	3861	-23.82	-0.52	0.02
240	SLU 59	-2	507	3850	-23.84	-0.52	0.02
240	SLU 60	-2	518	3971	-24.34	-0.54	0.02
240	SLU 61	-2	519	3961	-24.36	-0.54	0.02
240	SLU 62	-2	524	4009	-24.62	-0.55	0.02
240	SLU 63	-2	524	3999	-24.63	-0.55	0.02
240	SLU 64	-2	493	3752	-23.18	-0.5	0.02
240	SLU 65	-2	494	3735	-23.21	-0.5	0.02
240	SLU 66	-2	503	3825	-23.67	-0.5	0.02
240	SLU 67	-2	504	3814	-23.68	-0.5	0.02
240	SLU 68	-2	500	3773	-23.48	-0.5	0.02
240	SLU 69	-2	509	3862	-23.94	-0.51	0.02
240	SLU 70	-2	509	3852	-23.95	-0.51	0.02
240	SLU 71	-2	504	3828	-23.73	-0.5	0.02
240	SLU 72	-2	505	3818	-23.75	-0.5	0.02
240	SLU 73	-2	547	4170	-25.7	-0.57	0.02
240	SLU 74	-2	556	4259	-26.16	-0.58	0.02
240	SLU 75	-2	556	4249	-26.17	-0.58	0.02
240	SLU 76	-2	552	4207	-25.97	-0.58	0.02
240	SLU 77	-2	561	4297	-26.43	-0.58	0.02
240	SLU 78	-2	562	4286	-26.44	-0.58	0.02
240	SLU 79	-2	557	4262	-26.22	-0.58	0.02
240	SLU 80	-2	558	4252	-26.24	-0.58	0.02
240	SLU 81	-2	569	4373	-26.74	-0.61	0.03



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
240	SLU 82	-2	569	4363	-26.76	-0.61	0.03
240	SLU 83	-2	574	4411	-27.01	-0.61	0.03
240	SLU 84	-2	575	4400	-27.03	-0.61	0.03
240	SLE RA 1	-1	368	2798	-17.31	-0.37	0.02
240	SLE RA 2	-1	369	2787	-17.32	-0.37	0.02
240	SLE RA 3	-1	375	2846	-17.63	-0.37	0.02
240	SLE RA 4	-1	375	2839	-17.64	-0.37	0.02
240	SLE RA 5	-1	373	2812	-17.51	-0.37	0.02
240	SLE RA 6	-1	379	2871	-17.81	-0.38	0.02
240	SLE RA 7	-1	379	2865	-17.82	-0.38	0.02
240	SLE RA 8	-1	376	2849	-17.67	-0.37	0.02
240	SLE RA 9	-1	376	2842	-17.68	-0.37	0.02
240	SLE RA 10	-1	404	3076	-18.98	-0.42	0.02
240	SLE RA 11	-1	410	3136	-19.29	-0.42	0.02
240	SLE RA 12	-1	410	3129	-19.3	-0.42	0.02
240	SLE RA 13	-1	408	3101	-19.17	-0.42	0.02
240	SLE RA 14	-1	414	3161	-19.47	-0.43	0.02
240	SLE RA 15	-1	414	3154	-19.48	-0.43	0.02
240	SLE RA 16	-1	411	3138	-19.33	-0.42	0.02
240	SLE RA 17	-1	411	3131	-19.34	-0.42	0.02
240	SLE RA 18	-2	419	3212	-19.68	-0.44	0.02
240	SLE RA 19	-2	419	3205	-19.69	-0.44	0.02
240	SLE RA 20	-2	422	3237	-19.86	-0.44	0.02
240	SLE RA 21	-2	423	3230	-19.87	-0.44	0.02
240	SLE FR 1	-1	368	2798	-17.31	-0.37	0.02
240	SLE FR 2	-1	368	2796	-17.31	-0.37	0.02
240	SLE FR 3	-1	370	2808	-17.38	-0.37	0.02
240	SLE FR 4	-1	384	2920	-18.02	-0.39	0.02
240	SLE FR 5	-1	385	2932	-18.09	-0.39	0.02
240	SLE FR 6	-1	393	3005	-18.49	-0.4	0.02
240	SLE QP 1	-1	368	2798	-17.31	-0.37	0.02
240	SLE QP 2	-1	383	2922	-18.02	-0.39	0.02
240	SLD 1	-1	388	2642	-19.29	0.2	0.01
240	SLD 2	-1	388	2642	-19.29	0.2	0.01
240	SLD 3	2	96	2114	-4.14	1.97	-0.02
240	SLD 4	2	96	2114	-4.14	1.97	-0.02
240	SLD 5	-6	827	3639	-41.38	-2.9	0.05
240	SLD 6	-6	827	3639	-41.38	-2.9	0.05
240	SLD 7	4	-145	1879	9.12	3.01	-0.03
240	SLD 8	4	-145	1879	9.12	3.01	-0.03
240	SLD 9	-7	912	3966	-45.16	-3.79	0.07
240	SLD 10	-7	912	3966	-45.16	-3.79	0.07
240	SLD 11	3	-60	2205	5.34	2.12	-0.02
240	SLD 12	3	-60	2205	5.34	2.12	-0.02
240	SLD 13	-4	671	3730	-31.9	-2.75	0.05
240	SLD 14	-4	671	3730	-31.9	-2.75	0.05
240	SLD 15	-1	379	3202	-16.74	-0.98	0.02
240	SLD 16	-1	379	3202	-16.74	-0.98	0.02
240	SLV 1	-1	395	2278	-21.1	0.83	0.01
240	SLV 2	-1	395	2278	-21.1	0.83	0.01
240	SLV 3	6	-293	1017	14.74	5.36	-0.06
240	SLV 4	6	-293	1017	14.74	5.36	-0.06
240	SLV 5	-12	1431	4642	-73.29	-6.89	0.12
240	SLV 6	-12	1431	4642	-73.29	-6.89	0.12
240	SLV 7	12	-863	438	46.16	8.2	-0.11
240	SLV 8	12	-863	438	46.16	8.2	-0.11
240	SLV 9	-14	1630	5407	-82.2	-8.98	0.14
240	SLV 10	-14	1630	5407	-82.2	-8.98	0.14
240	SLV 11	10	-664	1203	37.25	6.11	-0.08
240	SLV 12	10	-664	1203	37.25	6.11	-0.08
240	SLV 13	-9	1060	4828	-50.77	-6.14	0.09
240	SLV 14	-9	1060	4828	-50.77	-6.14	0.09
240	SLV 15	-1	372	3567	-14.94	-1.61	0.03
240	SLV 16	-1	372	3567	-14.94	-1.61	0.03
241	SLU 1	2	554	3348	-28.76	1.01	0
241	SLU 2	2	556	3338	-28.88	1.01	0
241	SLU 3	2	571	3454	-29.65	1.04	0
241	SLU 4	2	572	3448	-29.73	1.04	0
241	SLU 5	2	566	3399	-29.42	1.02	0
241	SLU 6	2	582	3515	-30.19	1.05	0
241	SLU 7	2	583	3509	-30.27	1.05	0
241	SLU 8	2	575	3471	-29.84	1.04	0
241	SLU 9	2	576	3464	-29.91	1.04	0
241	SLU 10	2	642	3867	-33.2	1.24	0
241	SLU 11	2	657	3983	-33.98	1.27	0
241	SLU 12	2	658	3977	-34.05	1.27	0
241	SLU 13	2	652	3928	-33.74	1.25	0
241	SLU 14	2	668	4044	-34.52	1.28	0
241	SLU 15	2	669	4038	-34.59	1.28	0
241	SLU 16	2	661	3999	-34.16	1.27	0
241	SLU 17	2	662	3993	-34.23	1.27	0
241	SLU 18	2	677	4104	-34.93	1.34	0
241	SLU 19	2	678	4097	-35.01	1.34	0
241	SLU 20	2	687	4165	-35.47	1.35	0
241	SLU 21	2	688	4159	-35.55	1.35	0
241	SLU 22	2	636	3847	-32.9	1.21	0
241	SLU 23	2	638	3836	-33.02	1.2	0
241	SLU 24	2	653	3953	-33.79	1.24	0
241	SLU 25	2	654	3946	-33.87	1.23	0
241	SLU 26	2	648	3897	-33.56	1.22	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
241	SLU 27	2	663	4014	-34.33	1.25	0
241	SLU 28	2	664	4007	-34.41	1.25	0
241	SLU 29	2	656	3969	-33.98	1.24	0
241	SLU 30	2	658	3963	-34.05	1.24	0
241	SLU 31	3	724	4365	-37.35	1.43	0
241	SLU 32	3	739	4481	-38.12	1.47	0
241	SLU 33	3	740	4475	-38.19	1.47	0
241	SLU 34	3	734	4426	-37.89	1.45	0
241	SLU 35	3	750	4542	-38.66	1.48	0
241	SLU 36	3	751	4536	-38.73	1.48	0
241	SLU 37	3	743	4498	-38.3	1.47	0
241	SLU 38	3	744	4491	-38.38	1.47	0
241	SLU 39	3	759	4602	-39.08	1.54	0
241	SLU 40	3	760	4596	-39.15	1.53	0
241	SLU 41	3	769	4663	-39.62	1.55	0
241	SLU 42	3	770	4657	-39.69	1.55	0
241	SLU 43	2	692	4182	-35.96	1.24	0
241	SLU 44	2	694	4172	-36.09	1.24	0
241	SLU 45	2	709	4288	-36.86	1.27	0
241	SLU 46	2	710	4282	-36.93	1.27	0
241	SLU 47	2	704	4233	-36.63	1.26	0
241	SLU 48	2	720	4349	-37.4	1.29	0
241	SLU 49	2	721	4343	-37.47	1.29	0
241	SLU 50	2	713	4304	-37.04	1.27	0
241	SLU 51	2	714	4298	-37.12	1.27	0
241	SLU 52	3	780	4700	-40.41	1.47	0
241	SLU 53	3	796	4817	-41.18	1.5	0
241	SLU 54	3	797	4810	-41.26	1.5	0
241	SLU 55	3	790	4761	-40.95	1.49	0
241	SLU 56	3	806	4878	-41.72	1.52	0
241	SLU 57	3	807	4872	-41.8	1.52	0
241	SLU 58	3	799	4833	-41.37	1.5	0
241	SLU 59	3	800	4827	-41.44	1.5	0
241	SLU 60	3	815	4937	-42.14	1.57	0
241	SLU 61	3	816	4931	-42.21	1.57	0
241	SLU 62	3	826	4998	-42.68	1.59	0
241	SLU 63	3	827	4992	-42.75	1.59	0
241	SLU 64	3	774	4680	-40.11	1.44	0
241	SLU 65	3	776	4670	-40.23	1.44	0
241	SLU 66	3	791	4786	-41	1.47	0
241	SLU 67	3	792	4780	-41.08	1.47	0
241	SLU 68	3	786	4731	-40.77	1.45	0
241	SLU 69	3	802	4847	-41.54	1.49	0
241	SLU 70	3	803	4841	-41.61	1.48	0
241	SLU 71	3	795	4803	-41.19	1.47	0
241	SLU 72	3	796	4796	-41.26	1.47	0
241	SLU 73	3	862	5199	-44.55	1.67	0
241	SLU 74	3	877	5315	-45.33	1.7	0
241	SLU 75	3	878	5309	-45.4	1.7	0
241	SLU 76	3	872	5260	-45.09	1.68	0
241	SLU 77	3	888	5376	-45.86	1.72	0
241	SLU 78	3	889	5370	-45.94	1.72	0
241	SLU 79	3	881	5331	-45.51	1.7	0
241	SLU 80	3	882	5325	-45.58	1.7	0
241	SLU 81	3	897	5436	-46.28	1.77	0
241	SLU 82	3	898	5429	-46.36	1.77	0
241	SLU 83	3	907	5497	-46.82	1.79	0
241	SLU 84	3	908	5491	-46.9	1.78	0
241	SLE RA 1	2	577	3491	-29.94	1.07	0
241	SLE RA 2	2	579	3484	-30.02	1.06	0
241	SLE RA 3	2	589	3561	-30.54	1.09	0
241	SLE RA 4	2	590	3557	-30.59	1.08	0
241	SLE RA 5	2	585	3525	-30.38	1.07	0
241	SLE RA 6	2	596	3602	-30.9	1.1	0
241	SLE RA 7	2	596	3598	-30.95	1.09	0
241	SLE RA 8	2	591	3572	-30.66	1.09	0
241	SLE RA 9	2	592	3568	-30.71	1.08	0
241	SLE RA 10	2	636	3836	-32.9	1.22	0
241	SLE RA 11	2	646	3914	-33.42	1.24	0
241	SLE RA 12	2	647	3910	-33.47	1.24	0
241	SLE RA 13	2	643	3877	-33.26	1.23	0
241	SLE RA 14	2	653	3955	-33.78	1.25	0
241	SLE RA 15	2	654	3950	-33.83	1.25	0
241	SLE RA 16	2	649	3925	-33.54	1.24	0
241	SLE RA 17	2	649	3921	-33.59	1.24	0
241	SLE RA 18	2	659	3994	-34.06	1.29	0
241	SLE RA 19	2	660	3990	-34.11	1.28	0
241	SLE RA 20	2	666	4035	-34.42	1.3	0
241	SLE RA 21	2	667	4031	-34.47	1.29	0
241	SLE FR 1	2	577	3491	-29.94	1.07	0
241	SLE FR 2	2	578	3489	-29.96	1.07	0
241	SLE FR 3	2	580	3507	-30.08	1.07	0
241	SLE FR 4	2	602	3640	-31.19	1.13	0
241	SLE FR 5	2	605	3658	-31.32	1.14	0
241	SLE FR 6	2	618	3743	-32	1.18	0
241	SLE QP 1	2	577	3491	-29.94	1.07	0
241	SLE QP 2	2	602	3642	-31.18	1.13	0
241	SLD 1	6	846	4698	-42.84	3.74	0.01
241	SLD 2	6	846	4698	-42.84	3.74	0.01
241	SLD 3	4	610	4008	-31.25	1.66	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
241	SLD 4	4	610	4008	-31.25	1.66	0.01
241	SLD 5	6	1034	5006	-52.26	5.07	0
241	SLD 6	6	1034	5006	-52.26	5.07	0
241	SLD 7	0	246	2704	-13.62	-1.87	0.01
241	SLD 8	0	246	2704	-13.62	-1.87	0.01
241	SLD 9	5	958	4580	-48.73	4.13	-0.01
241	SLD 10	5	958	4580	-48.73	4.13	-0.01
241	SLD 11	-2	170	2277	-10.09	-2.81	0.01
241	SLD 12	-2	170	2277	-10.09	-2.81	0.01
241	SLD 13	1	594	3276	-31.1	0.6	-0.01
241	SLD 14	1	594	3276	-31.1	0.6	-0.01
241	SLD 15	-1	358	2585	-19.51	-1.48	0
241	SLD 16	-1	358	2585	-19.51	-1.48	0
241	SLV 1	10	1180	6152	-58.82	7.58	0.01
241	SLV 2	10	1180	6152	-58.82	7.58	0.01
241	SLV 3	6	613	4465	-31.04	2.25	0.02
241	SLV 4	6	613	4465	-31.04	2.25	0.02
241	SLV 5	12	1636	6953	-81.6	11.15	-0.01
241	SLV 6	12	1636	6953	-81.6	11.15	-0.01
241	SLV 7	-4	-256	1331	10.99	-6.62	0.02
241	SLV 8	-4	-256	1331	10.99	-6.62	0.02
241	SLV 9	9	1460	5953	-73.34	8.88	-0.02
241	SLV 10	9	1460	5953	-73.34	8.88	-0.02
241	SLV 11	-8	-433	331	19.24	-8.89	0.01
241	SLV 12	-8	-433	331	19.24	-8.89	0.01
241	SLV 13	-1	591	2818	-31.31	0.01	-0.02
241	SLV 14	-1	591	2818	-31.31	0.01	-0.02
241	SLV 15	-6	24	1132	-3.53	-5.32	-0.01
241	SLV 16	-6	24	1132	-3.53	-5.32	-0.01
242	SLU 1	-22	-653	2041	28.19	-13.78	-0.01
242	SLU 2	-21	-593	2045	25.58	-12.71	0
242	SLU 3	-23	-676	2083	29.17	-14.27	-0.01
242	SLU 4	-23	-640	2085	27.6	-13.63	-0.01
242	SLU 5	-22	-607	2072	26.2	-13.04	0
242	SLU 6	-24	-690	2110	29.78	-14.6	-0.01
242	SLU 7	-23	-654	2112	28.22	-13.95	-0.01
242	SLU 8	-23	-681	2095	29.42	-14.44	-0.01
242	SLU 9	-23	-645	2097	27.86	-13.8	-0.01
242	SLU 10	-24	-693	2227	29.8	-14.51	-0.01
242	SLU 11	-26	-775	2266	33.38	-16.07	-0.01
242	SLU 12	-25	-739	2268	31.82	-15.42	-0.01
242	SLU 13	-25	-707	2254	30.41	-14.83	-0.01
242	SLU 14	-27	-789	2292	34	-16.4	-0.01
242	SLU 15	-26	-753	2294	32.43	-15.75	-0.01
242	SLU 16	-26	-781	2277	33.64	-16.24	-0.01
242	SLU 17	-26	-745	2279	32.07	-15.59	-0.01
242	SLU 18	-26	-796	2302	34.21	-16.35	-0.01
242	SLU 19	-26	-760	2304	32.65	-15.71	-0.01
242	SLU 20	-27	-810	2329	34.83	-16.68	-0.01
242	SLU 21	-26	-774	2331	33.26	-16.03	-0.01
242	SLU 22	-25	-749	2216	32.23	-15.58	-0.01
242	SLU 23	-24	-688	2220	29.62	-14.5	-0.01
242	SLU 24	-26	-771	2258	33.21	-16.07	-0.01
242	SLU 25	-25	-735	2261	31.64	-15.42	-0.01
242	SLU 26	-25	-702	2247	30.24	-14.83	-0.01
242	SLU 27	-27	-785	2285	33.83	-16.4	-0.01
242	SLU 28	-26	-749	2287	32.26	-15.75	-0.01
242	SLU 29	-26	-776	2270	33.47	-16.24	-0.01
242	SLU 30	-26	-740	2272	31.9	-15.59	-0.01
242	SLU 31	-27	-788	2402	33.84	-16.3	-0.01
242	SLU 32	-29	-871	2441	37.42	-17.86	-0.01
242	SLU 33	-28	-835	2443	35.86	-17.22	-0.01
242	SLU 34	-28	-802	2429	34.45	-16.63	-0.01
242	SLU 35	-29	-885	2467	38.04	-18.19	-0.01
242	SLU 36	-29	-849	2470	36.47	-17.55	-0.01
242	SLU 37	-29	-876	2452	37.68	-18.03	-0.01
242	SLU 38	-28	-840	2454	36.11	-17.39	-0.01
242	SLU 39	-29	-891	2477	38.25	-18.15	-0.01
242	SLU 40	-29	-855	2479	36.69	-17.5	-0.01
242	SLU 41	-30	-905	2504	38.87	-18.47	-0.01
242	SLU 42	-29	-869	2506	37.3	-17.83	-0.01
242	SLU 43	-28	-817	2594	35.27	-17.3	-0.01
242	SLU 44	-27	-757	2597	32.65	-16.23	-0.01
242	SLU 45	-29	-839	2635	36.24	-17.79	-0.01
242	SLU 46	-28	-803	2638	34.67	-17.14	-0.01
242	SLU 47	-28	-770	2624	33.27	-16.56	-0.01
242	SLU 48	-29	-853	2662	36.86	-18.12	-0.01
242	SLU 49	-29	-817	2664	35.29	-17.47	-0.01
242	SLU 50	-29	-844	2647	36.5	-17.96	-0.01
242	SLU 51	-29	-808	2649	34.93	-17.31	-0.01
242	SLU 52	-30	-856	2780	36.87	-18.02	-0.01
242	SLU 53	-32	-939	2818	40.45	-19.59	-0.01
242	SLU 54	-31	-903	2820	38.89	-18.94	-0.01
242	SLU 55	-30	-870	2806	37.48	-18.35	-0.01
242	SLU 56	-32	-953	2845	41.07	-19.92	-0.01
242	SLU 57	-32	-917	2847	39.5	-19.27	-0.01
242	SLU 58	-32	-944	2829	40.71	-19.76	-0.01
242	SLU 59	-31	-908	2832	39.14	-19.11	-0.01
242	SLU 60	-32	-959	2854	41.28	-19.87	-0.01
242	SLU 61	-32	-923	2856	39.72	-19.22	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
242	SLU 62	-33	-973	2881	41.9	-20.2	-0.01
242	SLU 63	-32	-937	2883	40.33	-19.55	-0.01
242	SLU 64	-31	-912	2769	39.31	-19.1	-0.01
242	SLU 65	-30	-852	2772	36.7	-18.02	-0.01
242	SLU 66	-32	-934	2811	40.28	-19.59	-0.01
242	SLU 67	-31	-898	2813	38.72	-18.94	-0.01
242	SLU 68	-30	-866	2799	37.31	-18.35	-0.01
242	SLU 69	-32	-948	2837	40.9	-19.91	-0.01
242	SLU 70	-32	-912	2840	39.33	-19.27	-0.01
242	SLU 71	-32	-940	2822	40.54	-19.75	-0.01
242	SLU 72	-31	-904	2824	38.97	-19.11	-0.01
242	SLU 73	-33	-952	2955	40.91	-19.82	-0.01
242	SLU 74	-35	-1034	2993	44.5	-21.38	-0.01
242	SLU 75	-34	-998	2995	42.93	-20.74	-0.01
242	SLU 76	-33	-965	2981	41.52	-20.15	-0.01
242	SLU 77	-35	-1048	3020	45.11	-21.71	-0.01
242	SLU 78	-34	-1012	3022	43.54	-21.07	-0.01
242	SLU 79	-35	-1039	3005	44.75	-21.55	-0.01
242	SLU 80	-34	-1003	3007	43.18	-20.91	-0.01
242	SLU 81	-35	-1054	3029	45.33	-21.66	-0.01
242	SLU 82	-34	-1018	3032	43.76	-21.02	-0.01
242	SLU 83	-36	-1068	3056	45.94	-21.99	-0.01
242	SLU 84	-35	-1032	3058	44.37	-21.35	-0.01
242	SLE RA 1	-23	-681	2091	29.35	-14.3	-0.01
242	SLE RA 2	-22	-640	2094	27.61	-13.58	-0.01
242	SLE RA 3	-24	-696	2119	30	-14.62	-0.01
242	SLE RA 4	-23	-671	2121	28.95	-14.19	-0.01
242	SLE RA 5	-23	-650	2112	28.02	-13.8	-0.01
242	SLE RA 6	-24	-705	2137	30.41	-14.84	-0.01
242	SLE RA 7	-24	-681	2139	29.36	-14.41	-0.01
242	SLE RA 8	-24	-699	2127	30.17	-14.73	-0.01
242	SLE RA 9	-23	-675	2128	29.12	-14.3	-0.01
242	SLE RA 10	-24	-707	2215	30.42	-14.78	-0.01
242	SLE RA 11	-26	-762	2241	32.81	-15.82	-0.01
242	SLE RA 12	-25	-738	2242	31.76	-15.39	-0.01
242	SLE RA 13	-25	-716	2233	30.83	-15	-0.01
242	SLE RA 14	-26	-771	2259	33.22	-16.04	-0.01
242	SLE RA 15	-26	-747	2260	32.17	-15.61	-0.01
242	SLE RA 16	-26	-766	2249	32.98	-15.93	-0.01
242	SLE RA 17	-25	-741	2250	31.93	-15.5	-0.01
242	SLE RA 18	-26	-776	2265	33.36	-16.01	-0.01
242	SLE RA 19	-25	-751	2266	32.32	-15.58	-0.01
242	SLE RA 20	-26	-785	2283	33.77	-16.23	-0.01
242	SLE RA 21	-26	-761	2284	32.73	-15.8	-0.01
242	SLE FR 1	-23	-681	2091	29.35	-14.3	-0.01
242	SLE FR 2	-23	-673	2092	29	-14.15	-0.01
242	SLE FR 3	-23	-684	2098	29.51	-14.38	-0.01
242	SLE FR 4	-24	-701	2144	30.2	-14.67	-0.01
242	SLE FR 5	-24	-713	2151	30.72	-14.9	-0.01
242	SLE FR 6	-25	-728	2178	31.35	-15.15	-0.01
242	SLE QP 1	-23	-681	2091	29.35	-14.3	-0.01
242	SLE QP 2	-24	-709	2143	30.55	-14.81	-0.01
242	SLD 1	-39	-753	2629	32.56	-27.47	-0.01
242	SLD 2	-39	-753	2629	32.56	-27.47	-0.01
242	SLD 3	-45	-1205	2734	51.47	-33.65	-0.02
242	SLD 4	-45	-1205	2734	51.47	-33.65	-0.02
242	SLD 5	-19	-37	2129	2.49	-9.25	0
242	SLD 6	-19	-37	2129	2.49	-9.25	0
242	SLD 7	-40	-1543	2481	65.49	-29.82	-0.01
242	SLD 8	-40	-1543	2481	65.49	-29.82	-0.01
242	SLD 9	-8	125	1806	-4.39	0.2	0
242	SLD 10	-8	125	1806	-4.39	0.2	0
242	SLD 11	-29	-1381	2158	58.62	-20.37	-0.01
242	SLD 12	-29	-1381	2158	58.62	-20.37	-0.01
242	SLD 13	-3	-213	1552	9.64	4.03	0
242	SLD 14	-3	-213	1552	9.64	4.03	0
242	SLD 15	-9	-665	1658	28.54	-2.14	0
242	SLD 16	-9	-665	1658	28.54	-2.14	0
242	SLV 1	-59	-815	3274	35.38	-44.35	-0.02
242	SLV 2	-59	-815	3274	35.38	-44.35	-0.02
242	SLV 3	-74	-1857	3531	78.98	-59.54	-0.03
242	SLV 4	-74	-1857	3531	78.98	-59.54	-0.03
242	SLV 5	-12	840	2093	-34.13	-0.64	0
242	SLV 6	-12	840	2093	-34.13	-0.64	0
242	SLV 7	-62	-2635	2949	111.21	-51.26	-0.03
242	SLV 8	-62	-2635	2949	111.21	-51.26	-0.03
242	SLV 9	14	1216	1338	-50.11	21.64	0.01
242	SLV 10	14	1216	1338	-50.11	21.64	0.01
242	SLV 11	-37	-2259	2194	95.24	-28.98	-0.01
242	SLV 12	-37	-2259	2194	95.24	-28.98	-0.01
242	SLV 13	26	439	756	-17.88	29.92	0.02
242	SLV 14	26	439	756	-17.88	29.92	0.02
242	SLV 15	11	-604	1013	25.73	14.74	0.01
242	SLV 16	11	-604	1013	25.73	14.74	0.01
243	SLU 1	1	-293	5795	11.84	1.12	0
243	SLU 2	-1	-237	5692	9.41	-0.69	0
243	SLU 3	1	-302	5993	12.22	1.17	0
243	SLU 4	0	-269	5931	10.76	0.08	0
243	SLU 5	0	-241	5834	9.59	-0.65	0
243	SLU 6	1	-306	6135	12.39	1.2	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
243	SLU 7	0	-273	6073	10.94	0.12	0
243	SLU 8	1	-301	6079	12.19	1.2	0
243	SLU 9	0	-267	6017	10.73	0.11	0
243	SLU 10	0	-290	6346	11.51	-0.59	0
243	SLU 11	1	-355	6647	14.31	1.27	0
243	SLU 12	0	-322	6586	12.86	0.19	0
243	SLU 13	0	-294	6488	11.68	-0.55	0
243	SLU 14	1	-359	6790	14.49	1.31	0
243	SLU 15	0	-326	6728	13.03	0.22	0
243	SLU 16	1	-354	6734	14.28	1.3	0
243	SLU 17	0	-321	6672	12.83	0.22	0
243	SLU 18	1	-369	6730	14.83	1.27	0
243	SLU 19	0	-336	6668	13.38	0.18	0
243	SLU 20	1	-373	6872	15.01	1.31	0
243	SLU 21	0	-339	6810	13.55	0.22	0
243	SLU 22	1	-342	6453	13.8	1.24	0
243	SLU 23	0	-287	6350	11.37	-0.57	0
243	SLU 24	1	-352	6652	14.18	1.29	0
243	SLU 25	0	-318	6590	12.72	0.2	0
243	SLU 26	0	-291	6493	11.55	-0.53	0
243	SLU 27	1	-356	6794	14.35	1.33	0
243	SLU 28	0	-322	6732	12.9	0.24	0
243	SLU 29	1	-350	6738	14.15	1.32	0
243	SLU 30	0	-317	6676	12.69	0.23	0
243	SLU 31	0	-340	7005	13.47	-0.46	0
243	SLU 32	1	-405	7306	16.27	1.39	0
243	SLU 33	0	-371	7244	14.82	0.31	0
243	SLU 34	0	-344	7147	13.64	-0.42	0
243	SLU 35	1	-409	7448	16.45	1.43	0
243	SLU 36	0	-375	7386	14.99	0.35	0
243	SLU 37	1	-404	7392	16.24	1.43	0
243	SLU 38	0	-370	7330	14.79	0.34	0
243	SLU 39	1	-418	7388	16.79	1.39	0
243	SLU 40	0	-385	7326	15.34	0.31	0
243	SLU 41	1	-422	7531	16.97	1.43	0
243	SLU 42	0	-389	7469	15.51	0.35	0
243	SLU 43	1	-364	7307	14.72	1.41	0
243	SLU 44	0	-308	7204	12.29	-0.4	0
243	SLU 45	1	-373	7506	15.1	1.46	0
243	SLU 46	0	-340	7444	13.64	0.37	0
243	SLU 47	0	-312	7347	12.47	-0.36	0
243	SLU 48	1	-377	7648	15.27	1.5	0
243	SLU 49	0	-344	7586	13.82	0.41	0
243	SLU 50	1	-372	7592	15.07	1.49	0
243	SLU 51	0	-338	7530	13.61	0.41	0
243	SLU 52	0	-361	7859	14.39	-0.29	0
243	SLU 53	1	-426	8160	17.19	1.56	0
243	SLU 54	0	-393	8098	15.74	0.48	0
243	SLU 55	0	-365	8001	14.56	-0.25	0
243	SLU 56	1	-430	8302	17.37	1.6	0
243	SLU 57	1	-397	8241	15.91	0.52	0
243	SLU 58	1	-425	8246	17.16	1.6	0
243	SLU 59	1	-392	8185	15.71	0.51	0
243	SLU 60	1	-440	8242	17.71	1.56	0
243	SLU 61	0	-407	8181	16.26	0.48	0
243	SLU 62	1	-444	8385	17.89	1.6	0
243	SLU 63	1	-410	8323	16.43	0.52	0
243	SLU 64	1	-413	7966	16.68	1.53	0
243	SLU 65	0	-358	7863	14.25	-0.28	0
243	SLU 66	1	-423	8164	17.06	1.58	0
243	SLU 67	0	-389	8102	15.6	0.5	0
243	SLU 68	0	-361	8005	14.43	-0.24	0
243	SLU 69	1	-426	8306	17.23	1.62	0
243	SLU 70	1	-393	8245	15.78	0.54	0
243	SLU 71	1	-421	8250	17.03	1.61	0
243	SLU 72	1	-388	8189	15.57	0.53	0
243	SLU 73	0	-411	8517	16.35	-0.17	0
243	SLU 74	2	-476	8819	19.15	1.69	0
243	SLU 75	1	-442	8757	17.7	0.6	0
243	SLU 76	0	-415	8660	16.52	-0.13	0
243	SLU 77	2	-480	8961	19.33	1.73	0
243	SLU 78	1	-446	8899	17.87	0.64	0
243	SLU 79	2	-474	8905	19.12	1.72	0
243	SLU 80	1	-441	8843	17.67	0.63	0
243	SLU 81	2	-489	8901	19.67	1.69	0
243	SLU 82	1	-456	8839	18.22	0.6	0
243	SLU 83	2	-493	9043	19.85	1.72	0
243	SLU 84	1	-460	8981	18.39	0.64	0
243	SLE RA 1	1	-307	5983	12.4	1.15	0
243	SLE RA 2	0	-270	5914	10.78	-0.05	0
243	SLE RA 3	1	-313	6115	12.65	1.18	0
243	SLE RA 4	0	-291	6074	11.68	0.46	0
243	SLE RA 5	0	-273	6009	10.9	-0.03	0
243	SLE RA 6	1	-316	6210	12.77	1.21	0
243	SLE RA 7	0	-294	6169	11.8	0.49	0
243	SLE RA 8	1	-312	6173	12.63	1.21	0
243	SLE RA 9	0	-290	6131	11.66	0.48	0
243	SLE RA 10	0	-305	6351	12.18	0.02	0
243	SLE RA 11	1	-349	6551	14.05	1.25	0
243	SLE RA 12	1	-326	6510	13.08	0.53	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
243	SLE RA 13	0	-308	6445	12.29	0.04	0
243	SLE RA 14	1	-351	6646	14.17	1.28	0
243	SLE RA 15	1	-329	6605	13.19	0.56	0
243	SLE RA 16	1	-348	6609	14.03	1.28	0
243	SLE RA 17	1	-326	6568	13.06	0.55	0
243	SLE RA 18	1	-358	6606	14.39	1.25	0
243	SLE RA 19	1	-335	6565	13.42	0.53	0
243	SLE RA 20	1	-360	6701	14.51	1.28	0
243	SLE RA 21	1	-338	6660	13.54	0.56	0
243	SLE FR 1	1	-307	5983	12.4	1.15	0
243	SLE FR 2	1	-300	5969	12.08	0.91	0
243	SLE FR 3	1	-308	6021	12.45	1.16	0
243	SLE FR 4	1	-315	6156	12.67	0.94	0
243	SLE FR 5	1	-323	6208	13.04	1.19	0
243	SLE FR 6	1	-332	6295	13.4	1.2	0
243	SLE QP 1	1	-307	5983	12.4	1.15	0
243	SLE QP 2	1	-322	6170	13	1.18	0
243	SLD 1	33	118	4406	-5.18	31.83	-0.01
243	SLD 2	33	118	4406	-5.18	31.83	-0.01
243	SLD 3	22	-317	4797	12.86	19.97	-0.01
243	SLD 4	22	-317	4797	12.86	19.97	-0.01
243	SLD 5	28	469	5049	-19.82	28.37	0
243	SLD 6	28	469	5049	-19.82	28.37	0
243	SLD 7	-10	-980	6350	40.32	-11.18	-0.01
243	SLD 8	-10	-980	6350	40.32	-11.18	-0.01
243	SLD 9	12	335	5990	-14.32	13.54	0.01
243	SLD 10	12	335	5990	-14.32	13.54	0.01
243	SLD 11	-26	-1114	7291	45.81	-26	0
243	SLD 12	-26	-1114	7291	45.81	-26	0
243	SLD 13	-19	-328	7543	13.13	-17.6	0.01
243	SLD 14	-19	-328	7543	13.13	-17.6	0.01
243	SLD 15	-31	-763	7934	31.17	-29.46	0
243	SLD 16	-31	-763	7934	31.17	-29.46	0
243	SLV 1	78	700	2039	-29.18	75.48	-0.01
243	SLV 2	78	700	2039	-29.18	75.48	-0.01
243	SLV 3	49	-308	2960	12.64	45.76	-0.02
243	SLV 4	49	-308	2960	12.64	45.76	-0.02
243	SLV 5	68	1512	3533	-63.09	68.55	0.01
243	SLV 6	68	1512	3533	-63.09	68.55	0.01
243	SLV 7	-28	-1846	6605	76.32	-30.52	-0.01
243	SLV 8	-28	-1846	6605	76.32	-30.52	-0.01
243	SLV 9	30	1201	5735	-50.33	32.89	0.01
243	SLV 10	30	1201	5735	-50.33	32.89	0.01
243	SLV 11	-66	-2157	8807	89.08	-66.18	-0.01
243	SLV 12	-66	-2157	8807	89.08	-66.18	-0.01
243	SLV 13	-47	-337	9380	13.35	-43.39	0.02
243	SLV 14	-47	-337	9380	13.35	-43.39	0.02
243	SLV 15	-76	-1344	10301	55.18	-73.11	0.01
243	SLV 16	-76	-1344	10301	55.18	-73.11	0.01
244	SLU 1	0	137	3981	-3.8	-0.22	0
244	SLU 2	0	135	3892	-3.73	-0.16	0
244	SLU 3	0	139	4110	-3.83	-0.24	0
244	SLU 4	0	138	4056	-3.79	-0.2	0
244	SLU 5	0	136	3976	-3.73	-0.18	0
244	SLU 6	0	140	4194	-3.83	-0.26	0
244	SLU 7	0	138	4140	-3.79	-0.22	0
244	SLU 8	0	138	4150	-3.8	-0.25	0
244	SLU 9	0	137	4096	-3.76	-0.22	0
244	SLU 10	0	142	4465	-3.95	-0.19	0
244	SLU 11	0	146	4683	-4.05	-0.27	0
244	SLU 12	0	144	4629	-4.01	-0.24	0
244	SLU 13	0	143	4549	-3.95	-0.21	0
244	SLU 14	0	146	4767	-4.05	-0.29	0
244	SLU 15	0	145	4713	-4.01	-0.25	0
244	SLU 16	0	145	4723	-4.02	-0.29	0
244	SLU 17	0	144	4669	-3.98	-0.25	0
244	SLU 18	0	147	4800	-4.12	-0.27	0
244	SLU 19	0	145	4746	-4.07	-0.23	0
244	SLU 20	0	147	4885	-4.12	-0.29	0
244	SLU 21	0	146	4831	-4.08	-0.25	0
244	SLU 22	0	146	4546	-4.05	-0.26	0
244	SLU 23	0	144	4456	-3.98	-0.2	0
244	SLU 24	0	148	4674	-4.08	-0.28	0
244	SLU 25	0	146	4620	-4.04	-0.24	0
244	SLU 26	0	144	4540	-3.98	-0.21	0
244	SLU 27	0	148	4758	-4.08	-0.29	0
244	SLU 28	0	147	4704	-4.04	-0.26	0
244	SLU 29	0	147	4714	-4.05	-0.29	0
244	SLU 30	0	146	4660	-4.01	-0.25	0
244	SLU 31	0	150	5029	-4.2	-0.23	0
244	SLU 32	0	154	5247	-4.3	-0.31	0
244	SLU 33	0	153	5193	-4.26	-0.27	0
244	SLU 34	0	151	5113	-4.2	-0.25	0
244	SLU 35	0	155	5332	-4.3	-0.33	0
244	SLU 36	0	154	5278	-4.26	-0.29	0
244	SLU 37	0	154	5287	-4.27	-0.32	0
244	SLU 38	0	153	5233	-4.23	-0.29	0
244	SLU 39	0	155	5365	-4.37	-0.31	0
244	SLU 40	0	154	5311	-4.32	-0.27	0
244	SLU 41	0	156	5449	-4.37	-0.32	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
244	SLU 42	0	155	5395	-4.32	-0.29	0
244	SLU 43	0	175	4982	-4.86	-0.28	0
244	SLU 44	0	173	4892	-4.79	-0.21	0
244	SLU 45	0	177	5111	-4.89	-0.3	0
244	SLU 46	0	176	5057	-4.84	-0.26	0
244	SLU 47	0	174	4977	-4.79	-0.23	0
244	SLU 48	0	178	5195	-4.89	-0.31	0
244	SLU 49	0	176	5141	-4.84	-0.27	0
244	SLU 50	0	176	5151	-4.86	-0.31	0
244	SLU 51	0	175	5097	-4.82	-0.27	0
244	SLU 52	0	180	5466	-5.01	-0.25	0
244	SLU 53	0	184	5684	-5.11	-0.33	0
244	SLU 54	0	182	5630	-5.06	-0.29	0
244	SLU 55	0	181	5550	-5.01	-0.26	0
244	SLU 56	0	184	5768	-5.11	-0.34	0
244	SLU 57	0	183	5714	-5.06	-0.31	0
244	SLU 58	0	183	5724	-5.08	-0.34	0
244	SLU 59	0	182	5670	-5.04	-0.3	0
244	SLU 60	0	185	5801	-5.17	-0.32	0
244	SLU 61	0	183	5747	-5.13	-0.29	0
244	SLU 62	0	185	5886	-5.17	-0.34	0
244	SLU 63	0	184	5832	-5.13	-0.3	0
244	SLU 64	0	184	5547	-5.11	-0.31	0
244	SLU 65	0	182	5457	-5.04	-0.25	0
244	SLU 66	0	186	5675	-5.13	-0.33	0
244	SLU 67	0	184	5621	-5.09	-0.29	0
244	SLU 68	0	182	5541	-5.04	-0.27	0
244	SLU 69	0	186	5759	-5.14	-0.35	0
244	SLU 70	0	185	5705	-5.09	-0.31	0
244	SLU 71	0	185	5715	-5.11	-0.35	0
244	SLU 72	0	184	5661	-5.07	-0.31	0
244	SLU 73	0	189	6030	-5.26	-0.28	0
244	SLU 74	0	192	6248	-5.35	-0.37	0
244	SLU 75	0	191	6194	-5.31	-0.33	0
244	SLU 76	0	189	6114	-5.26	-0.3	0
244	SLU 77	0	193	6333	-5.36	-0.38	0
244	SLU 78	0	192	6279	-5.31	-0.34	0
244	SLU 79	0	192	6288	-5.33	-0.38	0
244	SLU 80	0	191	6234	-5.29	-0.34	0
244	SLU 81	0	193	6366	-5.42	-0.36	0
244	SLU 82	0	192	6312	-5.38	-0.32	0
244	SLU 83	0	194	6450	-5.42	-0.38	0
244	SLU 84	0	193	6396	-5.38	-0.34	0
244	SLE RA 1	0	139	4143	-3.87	-0.23	0
244	SLE RA 2	0	138	4083	-3.83	-0.19	0
244	SLE RA 3	0	141	4228	-3.89	-0.25	0
244	SLE RA 4	0	140	4192	-3.86	-0.22	0
244	SLE RA 5	0	139	4139	-3.83	-0.2	0
244	SLE RA 6	0	141	4284	-3.89	-0.26	0
244	SLE RA 7	0	140	4248	-3.86	-0.23	0
244	SLE RA 8	0	140	4255	-3.87	-0.25	0
244	SLE RA 9	0	140	4219	-3.85	-0.23	0
244	SLE RA 10	0	143	4465	-3.97	-0.21	0
244	SLE RA 11	0	145	4610	-4.04	-0.27	0
244	SLE RA 12	0	144	4575	-4.01	-0.24	0
244	SLE RA 13	0	143	4521	-3.97	-0.22	0
244	SLE RA 14	0	146	4667	-4.04	-0.28	0
244	SLE RA 15	0	145	4631	-4.01	-0.25	0
244	SLE RA 16	0	145	4637	-4.02	-0.28	0
244	SLE RA 17	0	144	4601	-3.99	-0.25	0
244	SLE RA 18	0	146	4689	-4.08	-0.27	0
244	SLE RA 19	0	145	4653	-4.06	-0.24	0
244	SLE RA 20	0	146	4745	-4.08	-0.28	0
244	SLE RA 21	0	146	4709	-4.06	-0.25	0
244	SLE FR 1	0	139	4143	-3.87	-0.23	0
244	SLE FR 2	0	139	4131	-3.86	-0.23	0
244	SLE FR 3	0	140	4165	-3.87	-0.24	0
244	SLE FR 4	0	141	4294	-3.93	-0.23	0
244	SLE FR 5	0	141	4329	-3.94	-0.25	0
244	SLE FR 6	0	143	4416	-3.98	-0.25	0
244	SLE QP 1	0	139	4143	-3.87	-0.23	0
244	SLE QP 2	0	141	4306	-3.94	-0.24	0
244	SLD 1	13	455	4135	-14.12	11.89	-0.15
244	SLD 2	13	455	4135	-14.12	11.89	-0.15
244	SLD 3	16	106	4313	-2.78	14.81	-0.18
244	SLD 4	16	106	4313	-2.78	14.81	-0.18
244	SLD 5	-1	766	3985	-24.18	-1.04	0.01
244	SLD 6	-1	766	3985	-24.18	-1.04	0.01
244	SLD 7	9	-399	4578	13.6	8.71	-0.1
244	SLD 8	9	-399	4578	13.6	8.71	-0.1
244	SLD 9	-9	682	4034	-21.47	-9.2	0.11
244	SLD 10	-9	682	4034	-21.47	-9.2	0.11
244	SLD 11	0	-483	4628	16.31	0.55	0
244	SLD 12	0	-483	4628	16.31	0.55	0
244	SLD 13	-16	177	4299	-5.09	-15.3	0.18
244	SLD 14	-16	177	4299	-5.09	-15.3	0.18
244	SLD 15	-13	-173	4477	6.24	-12.37	0.15
244	SLD 16	-13	-173	4477	6.24	-12.37	0.15
244	SLV 1	33	877	3899	-27.78	30.32	-0.37
244	SLV 2	33	877	3899	-27.78	30.32	-0.37



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
244	SLV 3	40	55	4323	-1.13	37.76	-0.46
244	SLV 4	40	55	4323	-1.13	37.76	-0.46
244	SLV 5	-1	1608	3542	-51.5	-2.35	0.02
244	SLV 6	-1	1608	3542	-51.5	-2.35	0.02
244	SLV 7	23	-1131	4953	37.32	22.44	-0.26
244	SLV 8	23	-1131	4953	37.32	22.44	-0.26
244	SLV 9	-23	1413	3659	-45.19	-22.92	0.26
244	SLV 10	-23	1413	3659	-45.19	-22.92	0.26
244	SLV 11	1	-1326	5071	43.63	1.87	-0.01
244	SLV 12	1	-1326	5071	43.63	1.87	-0.01
244	SLV 13	-40	227	4290	-6.74	-38.25	0.46
244	SLV 14	-40	227	4290	-6.74	-38.25	0.46
244	SLV 15	-33	-594	4714	19.9	-30.81	0.38
244	SLV 16	-33	-594	4714	19.9	-30.81	0.38
245	SLU 1	0	85	3961	-3.02	-0.01	0
245	SLU 2	0	82	3890	-2.86	-0.06	0
245	SLU 3	0	86	4078	-3.05	0	0
245	SLU 4	0	85	4036	-2.96	-0.03	0
245	SLU 5	0	84	3959	-2.92	-0.05	0
245	SLU 6	0	88	4147	-3.11	0	0
245	SLU 7	0	86	4105	-3.01	-0.03	0
245	SLU 8	0	88	4099	-3.13	0	0
245	SLU 9	0	86	4057	-3.04	-0.03	0
245	SLU 10	0	80	4456	-2.76	-0.05	0
245	SLU 11	0	85	4643	-2.95	0.01	0
245	SLU 12	0	83	4601	-2.85	-0.02	0
245	SLU 13	0	82	4525	-2.81	-0.04	0
245	SLU 14	0	87	4712	-3.01	0.01	0
245	SLU 15	0	85	4670	-2.91	-0.02	0
245	SLU 16	0	87	4665	-3.03	0.01	0
245	SLU 17	0	85	4622	-2.93	-0.02	0
245	SLU 18	0	83	4768	-2.87	0.01	0
245	SLU 19	0	81	4726	-2.78	-0.02	0
245	SLU 20	0	84	4838	-2.93	0.01	0
245	SLU 21	0	83	4795	-2.83	-0.02	0
245	SLU 22	0	87	4511	-3.02	0	0
245	SLU 23	0	83	4440	-2.86	-0.05	0
245	SLU 24	0	88	4628	-3.05	0	0
245	SLU 25	0	86	4586	-2.96	-0.02	0
245	SLU 26	0	85	4509	-2.92	-0.04	0
245	SLU 27	0	90	4697	-3.11	0.01	0
245	SLU 28	0	88	4655	-3.02	-0.02	0
245	SLU 29	0	90	4649	-3.13	0.01	0
245	SLU 30	0	88	4607	-3.04	-0.02	0
245	SLU 31	0	82	5006	-2.76	-0.04	0
245	SLU 32	0	86	5193	-2.95	0.01	0
245	SLU 33	0	85	5151	-2.86	-0.01	0
245	SLU 34	0	83	5075	-2.82	-0.03	0
245	SLU 35	0	88	5262	-3.01	0.02	0
245	SLU 36	0	86	5220	-2.91	-0.01	0
245	SLU 37	0	88	5215	-3.03	0.02	0
245	SLU 38	0	86	5172	-2.94	-0.01	0
245	SLU 39	0	84	5318	-2.87	0.02	0
245	SLU 40	0	83	5276	-2.78	-0.01	0
245	SLU 41	0	86	5388	-2.93	0.02	0
245	SLU 42	0	84	5345	-2.84	-0.01	0
245	SLU 43	0	110	4960	-3.92	-0.01	0
245	SLU 44	0	107	4890	-3.77	-0.06	0
245	SLU 45	0	112	5078	-3.96	-0.01	0
245	SLU 46	0	110	5035	-3.86	-0.04	0
245	SLU 47	0	109	4959	-3.82	-0.06	0
245	SLU 48	0	113	5147	-4.01	-0.01	0
245	SLU 49	0	111	5104	-3.92	-0.04	0
245	SLU 50	0	113	5099	-4.03	-0.01	0
245	SLU 51	0	111	5057	-3.94	-0.04	0
245	SLU 52	0	105	5455	-3.66	-0.05	0
245	SLU 53	0	110	5643	-3.85	0	0
245	SLU 54	0	108	5601	-3.76	-0.03	0
245	SLU 55	0	107	5524	-3.72	-0.05	0
245	SLU 56	0	112	5712	-3.91	0	0
245	SLU 57	0	110	5670	-3.82	-0.03	0
245	SLU 58	0	112	5664	-3.93	0	0
245	SLU 59	0	110	5622	-3.84	-0.03	0
245	SLU 60	0	108	5768	-3.77	0	0
245	SLU 61	0	106	5726	-3.68	-0.03	0
245	SLU 62	0	109	5837	-3.83	0	0
245	SLU 63	0	108	5795	-3.74	-0.02	0
245	SLU 64	0	112	5510	-3.92	0	0
245	SLU 65	0	108	5440	-3.77	-0.05	0
245	SLU 66	0	113	5628	-3.96	0	0
245	SLU 67	0	111	5585	-3.86	-0.03	0
245	SLU 68	0	110	5509	-3.82	-0.05	0
245	SLU 69	0	115	5697	-4.02	0	0
245	SLU 70	0	113	5654	-3.92	-0.03	0
245	SLU 71	0	115	5649	-4.04	0	0
245	SLU 72	0	113	5607	-3.94	-0.03	0
245	SLU 73	0	107	6005	-3.67	-0.04	0
245	SLU 74	0	111	6193	-3.86	0.01	0
245	SLU 75	0	110	6151	-3.76	-0.02	0
245	SLU 76	0	108	6074	-3.72	-0.04	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
245	SLU 77	0	113	6262	-3.91	0.01	0
245	SLU 78	0	111	6220	-3.82	-0.02	0
245	SLU 79	0	113	6214	-3.93	0.01	0
245	SLU 80	0	111	6172	-3.84	-0.02	0
245	SLU 81	0	109	6318	-3.78	0.01	0
245	SLU 82	0	108	6276	-3.68	-0.02	0
245	SLU 83	0	111	6387	-3.83	0.01	0
245	SLU 84	0	109	6345	-3.74	-0.02	0
245	SLE RA 1	0	86	4118	-3.02	-0.01	0
245	SLE RA 2	0	83	4071	-2.91	-0.04	0
245	SLE RA 3	0	86	4196	-3.04	0	0
245	SLE RA 4	0	85	4168	-2.98	-0.02	0
245	SLE RA 5	0	84	4117	-2.95	-0.04	0
245	SLE RA 6	0	87	4242	-3.08	0	0
245	SLE RA 7	0	86	4214	-3.02	-0.02	0
245	SLE RA 8	0	88	4210	-3.09	0	0
245	SLE RA 9	0	86	4182	-3.03	-0.02	0
245	SLE RA 10	0	82	4448	-2.85	-0.03	0
245	SLE RA 11	0	85	4573	-2.97	0	0
245	SLE RA 12	0	84	4545	-2.91	-0.02	0
245	SLE RA 13	0	83	4494	-2.88	-0.03	0
245	SLE RA 14	0	86	4619	-3.01	0.01	0
245	SLE RA 15	0	85	4591	-2.95	-0.01	0
245	SLE RA 16	0	87	4587	-3.02	0.01	0
245	SLE RA 17	0	85	4559	-2.96	-0.01	0
245	SLE RA 18	0	84	4656	-2.92	0	0
245	SLE RA 19	0	83	4628	-2.86	-0.02	0
245	SLE RA 20	0	85	4702	-2.96	0.01	0
245	SLE RA 21	0	84	4674	-2.9	-0.01	0
245	SLE FR 1	0	86	4118	-3.02	-0.01	0
245	SLE FR 2	0	85	4108	-3	-0.01	0
245	SLE FR 3	0	86	4136	-3.03	0	0
245	SLE FR 4	0	85	4270	-2.97	-0.01	0
245	SLE FR 5	0	86	4298	-3	0	0
245	SLE FR 6	0	85	4387	-2.97	0	0
245	SLE QP 1	0	86	4118	-3.02	-0.01	0
245	SLE QP 2	0	85	4279	-2.99	0	0
245	SLD 1	15	127	4594	-4.81	14.11	-0.02
245	SLD 2	15	127	4594	-4.81	14.11	-0.02
245	SLD 3	12	-374	4450	17.8	11.25	-0.02
245	SLD 4	12	-374	4450	17.8	11.25	-0.02
245	SLD 5	9	857	4593	-37.83	8.56	-0.01
245	SLD 6	9	857	4593	-37.83	8.56	-0.01
245	SLD 7	-1	-812	4111	37.54	-0.96	0
245	SLD 8	-1	-812	4111	37.54	-0.96	0
245	SLD 9	1	982	4448	-43.52	0.95	0
245	SLD 10	1	982	4448	-43.52	0.95	0
245	SLD 11	-9	-687	3966	31.85	-8.57	0.01
245	SLD 12	-9	-687	3966	31.85	-8.57	0.01
245	SLD 13	-12	544	4109	-23.77	-11.26	0.02
245	SLD 14	-12	544	4109	-23.77	-11.26	0.02
245	SLD 15	-15	43	3965	-1.16	-14.11	0.02
245	SLD 16	-15	43	3965	-1.16	-14.11	0.02
245	SLV 1	39	184	5024	-7.3	35.54	-0.06
245	SLV 2	39	184	5024	-7.3	35.54	-0.06
245	SLV 3	31	-996	4672	45.98	28.36	-0.05
245	SLV 4	31	-996	4672	45.98	28.36	-0.05
245	SLV 5	24	1903	5035	-85.1	21.55	-0.03
245	SLV 6	24	1903	5035	-85.1	21.55	-0.03
245	SLV 7	-3	-2028	3865	92.52	-2.38	0
245	SLV 8	-3	-2028	3865	92.52	-2.38	0
245	SLV 9	3	2198	4694	-98.49	2.37	0
245	SLV 10	3	2198	4694	-98.49	2.37	0
245	SLV 11	-23	-1733	3523	79.12	-21.55	0.03
245	SLV 12	-23	-1733	3523	79.12	-21.55	0.03
245	SLV 13	-31	1166	3886	-51.96	-28.37	0.04
245	SLV 14	-31	1166	3886	-51.96	-28.37	0.04
245	SLV 15	-38	-13	3535	1.33	-35.55	0.06
245	SLV 16	-38	-13	3535	1.33	-35.55	0.06
246	SLU 1	325	299	4805	-7.76	9.48	0.04
246	SLU 2	324	302	4791	-7.83	9.44	0.04
246	SLU 3	335	309	4956	-8.02	9.75	0.04
246	SLU 4	335	310	4947	-8.07	9.73	0.04
246	SLU 5	330	308	4878	-8	9.58	0.04
246	SLU 6	341	315	5042	-8.19	9.89	0.04
246	SLU 7	340	316	5034	-8.24	9.87	0.04
246	SLU 8	337	311	4979	-8.1	9.76	0.04
246	SLU 9	336	313	4970	-8.14	9.73	0.04
246	SLU 10	378	341	5535	-8.85	11.69	0.04
246	SLU 11	389	348	5700	-9.04	12	0.04
246	SLU 12	389	350	5692	-9.09	11.98	0.04
246	SLU 13	384	347	5622	-9.02	11.83	0.04
246	SLU 14	395	354	5787	-9.21	12.14	0.04
246	SLU 15	395	356	5778	-9.25	12.12	0.04
246	SLU 16	391	351	5724	-9.11	12.01	0.04
246	SLU 17	390	352	5715	-9.16	11.99	0.04
246	SLU 18	403	356	5869	-9.21	12.7	0.04
246	SLU 19	402	357	5861	-9.26	12.68	0.04
246	SLU 20	408	362	5956	-9.38	12.84	0.05
246	SLU 21	408	363	5947	-9.42	12.82	0.05



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
246	SLU 22	375	339	5509	-8.8	11.4	0.04
246	SLU 23	374	341	5494	-8.88	11.36	0.04
246	SLU 24	386	348	5659	-9.07	11.67	0.04
246	SLU 25	385	350	5650	-9.11	11.65	0.04
246	SLU 26	380	347	5581	-9.04	11.5	0.04
246	SLU 27	391	354	5746	-9.24	11.81	0.04
246	SLU 28	391	356	5737	-9.28	11.79	0.04
246	SLU 29	387	351	5682	-9.14	11.68	0.04
246	SLU 30	386	352	5674	-9.18	11.66	0.04
246	SLU 31	429	381	6239	-9.89	13.62	0.05
246	SLU 32	440	388	6404	-10.09	13.93	0.05
246	SLU 33	439	389	6395	-10.13	13.9	0.05
246	SLU 34	434	387	6326	-10.06	13.76	0.05
246	SLU 35	446	394	6491	-10.25	14.07	0.05
246	SLU 36	445	395	6482	-10.3	14.04	0.05
246	SLU 37	441	390	6427	-10.16	13.93	0.05
246	SLU 38	441	392	6418	-10.2	13.91	0.05
246	SLU 39	453	395	6573	-10.26	14.62	0.05
246	SLU 40	452	397	6564	-10.3	14.6	0.05
246	SLU 41	459	401	6660	-10.43	14.76	0.05
246	SLU 42	458	403	6651	-10.47	14.74	0.05
246	SLU 43	405	376	6006	-9.73	11.66	0.05
246	SLU 44	404	378	5991	-9.8	11.62	0.05
246	SLU 45	416	385	6156	-9.99	11.93	0.05
246	SLU 46	415	387	6147	-10.04	11.91	0.05
246	SLU 47	410	384	6078	-9.97	11.76	0.05
246	SLU 48	421	391	6243	-10.16	12.07	0.05
246	SLU 49	421	393	6234	-10.21	12.05	0.05
246	SLU 50	417	388	6180	-10.07	11.94	0.05
246	SLU 51	416	389	6171	-10.11	11.92	0.05
246	SLU 52	459	417	6736	-10.82	13.88	0.05
246	SLU 53	470	425	6901	-11.01	14.19	0.05
246	SLU 54	469	426	6892	-11.06	14.17	0.05
246	SLU 55	464	423	6823	-10.99	14.02	0.05
246	SLU 56	476	431	6988	-11.18	14.33	0.05
246	SLU 57	475	432	6979	-11.22	14.31	0.05
246	SLU 58	471	427	6925	-11.08	14.2	0.05
246	SLU 59	471	429	6916	-11.13	14.17	0.05
246	SLU 60	483	432	7070	-11.18	14.88	0.05
246	SLU 61	482	433	7061	-11.23	14.86	0.05
246	SLU 62	489	438	7157	-11.35	15.02	0.05
246	SLU 63	488	439	7148	-11.39	15	0.05
246	SLU 64	456	415	6709	-10.77	13.58	0.05
246	SLU 65	455	418	6694	-10.85	13.55	0.05
246	SLU 66	466	425	6859	-11.04	13.86	0.05
246	SLU 67	465	426	6851	-11.08	13.83	0.05
246	SLU 68	460	424	6781	-11.01	13.69	0.05
246	SLU 69	472	431	6946	-11.21	14	0.05
246	SLU 70	471	432	6937	-11.25	13.97	0.05
246	SLU 71	467	427	6883	-11.11	13.86	0.05
246	SLU 72	467	429	6874	-11.15	13.84	0.05
246	SLU 73	509	457	7439	-11.86	15.8	0.06
246	SLU 74	520	464	7604	-12.06	16.11	0.06
246	SLU 75	519	466	7595	-12.1	16.09	0.06
246	SLU 76	515	463	7526	-12.03	15.94	0.06
246	SLU 77	526	470	7691	-12.22	16.25	0.06
246	SLU 78	525	472	7682	-12.27	16.23	0.06
246	SLU 79	522	467	7628	-12.13	16.12	0.06
246	SLU 80	521	468	7619	-12.17	16.1	0.06
246	SLU 81	533	472	7773	-12.23	16.81	0.06
246	SLU 82	533	473	7764	-12.27	16.78	0.06
246	SLU 83	539	478	7860	-12.4	16.94	0.06
246	SLU 84	538	479	7851	-12.44	16.92	0.06
246	SLE RA 1	340	311	5006	-8.06	10.03	0.04
246	SLE RA 2	339	312	4997	-8.11	10	0.04
246	SLE RA 3	346	317	5107	-8.23	10.21	0.04
246	SLE RA 4	346	318	5101	-8.26	10.19	0.04
246	SLE RA 5	343	316	5054	-8.22	10.09	0.04
246	SLE RA 6	350	321	5164	-8.35	10.3	0.04
246	SLE RA 7	350	322	5158	-8.38	10.29	0.04
246	SLE RA 8	347	319	5122	-8.28	10.21	0.04
246	SLE RA 9	347	320	5116	-8.31	10.2	0.04
246	SLE RA 10	375	339	5493	-8.78	11.5	0.04
246	SLE RA 11	382	343	5603	-8.91	11.71	0.04
246	SLE RA 12	382	344	5597	-8.94	11.7	0.04
246	SLE RA 13	379	343	5551	-8.9	11.6	0.04
246	SLE RA 14	386	347	5661	-9.02	11.8	0.04
246	SLE RA 15	386	348	5655	-9.05	11.79	0.04
246	SLE RA 16	383	345	5619	-8.96	11.72	0.04
246	SLE RA 17	383	346	5613	-8.99	11.7	0.04
246	SLE RA 18	391	348	5716	-9.03	12.17	0.04
246	SLE RA 19	391	349	5710	-9.06	12.16	0.04
246	SLE RA 20	395	352	5774	-9.14	12.27	0.04
246	SLE RA 21	395	353	5768	-9.17	12.25	0.04
246	SLE FR 1	340	311	5006	-8.06	10.03	0.04
246	SLE FR 2	339	311	5004	-8.07	10.02	0.04
246	SLE FR 3	341	312	5030	-8.1	10.06	0.04
246	SLE FR 4	355	322	5217	-8.36	10.67	0.04
246	SLE FR 5	357	324	5242	-8.39	10.71	0.04
246	SLE FR 6	365	329	5361	-8.54	11.1	0.04



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
246	SLE QP 1	340	311	5006	-8.06	10.03	0.04
246	SLE QP 2	355	322	5219	-8.35	10.67	0.04
246	SLD 1	426	557	6397	-21.67	15.77	0.07
246	SLD 2	426	557	6397	-21.67	15.77	0.07
246	SLD 3	394	272	5738	-5.12	16.76	0.03
246	SLD 4	394	272	5738	-5.12	16.76	0.03
246	SLD 5	424	824	6573	-37.45	10.7	0.1
246	SLD 6	424	824	6573	-37.45	10.7	0.1
246	SLD 7	319	-125	4375	17.73	13.99	-0.01
246	SLD 8	319	-125	4375	17.73	13.99	-0.01
246	SLD 9	391	769	6064	-34.42	7.35	0.09
246	SLD 10	391	769	6064	-34.42	7.35	0.09
246	SLD 11	286	-181	3866	20.75	10.64	-0.02
246	SLD 12	286	-181	3866	20.75	10.64	-0.02
246	SLD 13	316	372	4700	-11.58	4.59	0.04
246	SLD 14	316	372	4700	-11.58	4.59	0.04
246	SLD 15	285	87	4041	4.98	5.57	0.01
246	SLD 16	285	87	4041	4.98	5.57	0.01
246	SLV 1	522	882	8016	-40.21	22.54	0.11
246	SLV 2	522	882	8016	-40.21	22.54	0.11
246	SLV 3	445	199	6400	-0.38	24.83	0.03
246	SLV 4	445	199	6400	-0.38	24.83	0.03
246	SLV 5	522	1526	8510	-78.32	10.75	0.18
246	SLV 6	522	1526	8510	-78.32	10.75	0.18
246	SLV 7	265	-750	3122	54.46	18.4	-0.08
246	SLV 8	265	-750	3122	54.46	18.4	-0.08
246	SLV 9	445	1394	7317	-71.15	2.94	0.16
246	SLV 10	445	1394	7317	-71.15	2.94	0.16
246	SLV 11	188	-882	1928	61.63	10.59	-0.1
246	SLV 12	188	-882	1928	61.63	10.59	-0.1
246	SLV 13	265	445	4039	-16.32	-3.49	0.05
246	SLV 14	265	445	4039	-16.32	-3.49	0.05
246	SLV 15	188	-238	2422	23.52	-1.2	-0.03
246	SLV 16	188	-238	2422	23.52	-1.2	-0.03
247	SLU 1	-47	1	692	-0.16	10.24	-0.04
247	SLU 2	-47	1	690	-0.16	10.2	-0.04
247	SLU 3	-49	1	715	-0.16	10.54	-0.04
247	SLU 4	-49	1	714	-0.16	10.51	-0.04
247	SLU 5	-48	1	705	-0.16	10.35	-0.04
247	SLU 6	-51	1	730	-0.17	10.69	-0.04
247	SLU 7	-51	1	728	-0.17	10.67	-0.04
247	SLU 8	-50	1	721	-0.16	10.55	-0.04
247	SLU 9	-50	1	720	-0.16	10.52	-0.04
247	SLU 10	-35	1	738	-0.18	12.62	-0.04
247	SLU 11	-37	1	763	-0.19	12.96	-0.04
247	SLU 12	-37	1	762	-0.19	12.94	-0.04
247	SLU 13	-37	1	752	-0.19	12.78	-0.04
247	SLU 14	-39	1	777	-0.19	13.12	-0.04
247	SLU 15	-39	1	776	-0.19	13.09	-0.04
247	SLU 16	-38	1	769	-0.19	12.97	-0.04
247	SLU 17	-38	1	768	-0.19	12.95	-0.04
247	SLU 18	-30	1	760	-0.19	13.7	-0.04
247	SLU 19	-30	1	759	-0.19	13.68	-0.04
247	SLU 20	-32	1	775	-0.19	13.86	-0.04
247	SLU 21	-32	1	774	-0.19	13.83	-0.04
247	SLU 22	-41	1	752	-0.18	12.31	-0.04
247	SLU 23	-41	1	750	-0.18	12.27	-0.04
247	SLU 24	-43	1	775	-0.19	12.61	-0.04
247	SLU 25	-43	1	774	-0.19	12.59	-0.04
247	SLU 26	-42	1	765	-0.18	12.43	-0.04
247	SLU 27	-44	1	790	-0.19	12.77	-0.04
247	SLU 28	-44	1	789	-0.19	12.74	-0.04
247	SLU 29	-44	1	782	-0.19	12.62	-0.04
247	SLU 30	-44	1	780	-0.19	12.6	-0.04
247	SLU 31	-29	1	798	-0.21	14.7	-0.05
247	SLU 32	-31	1	823	-0.21	15.04	-0.05
247	SLU 33	-31	1	822	-0.21	15.01	-0.05
247	SLU 34	-30	1	813	-0.21	14.85	-0.05
247	SLU 35	-33	1	838	-0.21	15.19	-0.05
247	SLU 36	-33	1	837	-0.21	15.17	-0.05
247	SLU 37	-32	1	829	-0.21	15.05	-0.05
247	SLU 38	-32	1	828	-0.21	15.02	-0.05
247	SLU 39	-24	1	821	-0.21	15.78	-0.05
247	SLU 40	-24	1	819	-0.21	15.75	-0.05
247	SLU 41	-25	1	835	-0.22	15.93	-0.05
247	SLU 42	-25	1	834	-0.22	15.91	-0.05
247	SLU 43	-63	1	878	-0.2	12.6	-0.04
247	SLU 44	-63	1	877	-0.2	12.56	-0.04
247	SLU 45	-65	1	902	-0.2	12.9	-0.05
247	SLU 46	-65	1	901	-0.2	12.87	-0.05
247	SLU 47	-65	1	891	-0.2	12.71	-0.05
247	SLU 48	-67	1	916	-0.21	13.05	-0.05
247	SLU 49	-67	1	915	-0.21	13.03	-0.05
247	SLU 50	-66	1	908	-0.2	12.91	-0.05
247	SLU 51	-66	1	907	-0.2	12.88	-0.05
247	SLU 52	-51	1	925	-0.22	14.98	-0.05
247	SLU 53	-53	1	950	-0.23	15.32	-0.05
247	SLU 54	-53	1	948	-0.23	15.3	-0.05
247	SLU 55	-53	1	939	-0.22	15.14	-0.05
247	SLU 56	-55	1	964	-0.23	15.48	-0.05



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
247	SLU 57	-55	1	963	-0.23	15.45	-0.05
247	SLU 58	-54	1	956	-0.23	15.33	-0.05
247	SLU 59	-54	1	955	-0.23	15.31	-0.05
247	SLU 60	-46	1	947	-0.23	16.06	-0.05
247	SLU 61	-46	1	946	-0.23	16.04	-0.05
247	SLU 62	-48	1	962	-0.23	16.22	-0.05
247	SLU 63	-48	1	960	-0.23	16.19	-0.05
247	SLU 64	-57	1	939	-0.22	14.67	-0.05
247	SLU 65	-57	1	937	-0.22	14.63	-0.05
247	SLU 66	-59	1	962	-0.22	14.97	-0.05
247	SLU 67	-59	1	961	-0.23	14.95	-0.05
247	SLU 68	-58	1	952	-0.22	14.79	-0.05
247	SLU 69	-61	1	977	-0.23	15.13	-0.05
247	SLU 70	-61	1	976	-0.23	15.1	-0.05
247	SLU 71	-60	1	968	-0.23	14.98	-0.05
247	SLU 72	-60	1	967	-0.23	14.96	-0.05
247	SLU 73	-45	1	985	-0.24	17.06	-0.05
247	SLU 74	-47	1	1010	-0.25	17.4	-0.06
247	SLU 75	-47	1	1009	-0.25	17.37	-0.06
247	SLU 76	-47	1	1000	-0.25	17.21	-0.06
247	SLU 77	-49	1	1025	-0.25	17.55	-0.06
247	SLU 78	-49	1	1024	-0.25	17.53	-0.06
247	SLU 79	-48	1	1016	-0.25	17.41	-0.06
247	SLU 80	-48	1	1015	-0.25	17.38	-0.06
247	SLU 81	-40	1	1007	-0.25	18.14	-0.06
247	SLU 82	-40	1	1006	-0.25	18.11	-0.06
247	SLU 83	-42	1	1022	-0.26	18.29	-0.06
247	SLU 84	-42	1	1021	-0.26	18.27	-0.06
247	SLE RA 1	-45	1	709	-0.16	10.83	-0.04
247	SLE RA 2	-45	1	708	-0.16	10.8	-0.04
247	SLE RA 3	-46	1	724	-0.17	11.03	-0.04
247	SLE RA 4	-46	1	724	-0.17	11.01	-0.04
247	SLE RA 5	-46	1	718	-0.17	10.91	-0.04
247	SLE RA 6	-48	1	734	-0.17	11.13	-0.04
247	SLE RA 7	-48	1	734	-0.17	11.12	-0.04
247	SLE RA 8	-47	1	729	-0.17	11.04	-0.04
247	SLE RA 9	-47	1	728	-0.17	11.02	-0.04
247	SLE RA 10	-37	1	740	-0.18	12.42	-0.04
247	SLE RA 11	-39	1	756	-0.18	12.65	-0.04
247	SLE RA 12	-39	1	756	-0.18	12.63	-0.04
247	SLE RA 13	-38	1	749	-0.18	12.52	-0.04
247	SLE RA 14	-40	1	766	-0.19	12.75	-0.04
247	SLE RA 15	-40	1	765	-0.19	12.73	-0.04
247	SLE RA 16	-39	1	760	-0.18	12.66	-0.04
247	SLE RA 17	-39	1	760	-0.18	12.64	-0.04
247	SLE RA 18	-34	1	755	-0.19	13.14	-0.04
247	SLE RA 19	-34	1	754	-0.19	13.12	-0.04
247	SLE RA 20	-35	1	764	-0.19	13.24	-0.04
247	SLE RA 21	-35	1	764	-0.19	13.23	-0.04
247	SLE FR 1	-45	1	709	-0.16	10.83	-0.04
247	SLE FR 2	-45	1	709	-0.16	10.83	-0.04
247	SLE FR 3	-46	1	713	-0.16	10.87	-0.04
247	SLE FR 4	-42	1	722	-0.17	11.52	-0.04
247	SLE FR 5	-42	1	727	-0.17	11.57	-0.04
247	SLE FR 6	-39	1	732	-0.18	11.99	-0.04
247	SLE QP 1	-45	1	709	-0.16	10.83	-0.04
247	SLE QP 2	-42	1	723	-0.17	11.52	-0.04
247	SLD 1	25	0	538	-0.08	15.89	-0.02
247	SLD 2	25	0	538	-0.08	15.89	-0.02
247	SLD 3	76	-7	324	0.74	16.79	0.2
247	SLD 4	76	-7	324	0.74	16.79	0.2
247	SLD 5	-100	11	991	-1.39	11.47	-0.37
247	SLD 6	-100	11	991	-1.39	11.47	-0.37
247	SLD 7	72	-13	279	1.35	14.47	0.37
247	SLD 8	72	-13	279	1.35	14.47	0.37
247	SLD 9	-156	14	1167	-1.7	8.58	-0.45
247	SLD 10	-156	14	1167	-1.7	8.58	-0.45
247	SLD 11	17	-10	454	1.05	11.58	0.29
247	SLD 12	17	-10	454	1.05	11.58	0.29
247	SLD 13	-160	8	1122	-1.09	6.26	-0.28
247	SLD 14	-160	8	1122	-1.09	6.26	-0.28
247	SLD 15	-108	1	908	-0.26	7.16	-0.06
247	SLD 16	-108	1	908	-0.26	7.16	-0.06
247	SLV 1	111	-1	302	0	21.69	0
247	SLV 2	111	-1	302	0	21.69	0
247	SLV 3	235	-19	-215	2.11	23.78	0.57
247	SLV 4	235	-19	-215	2.11	23.78	0.57
247	SLV 5	-185	28	1380	-3.32	11.39	-0.89
247	SLV 6	-185	28	1380	-3.32	11.39	-0.89
247	SLV 7	230	-33	-342	3.72	18.39	1.01
247	SLV 8	230	-33	-342	3.72	18.39	1.01
247	SLV 9	-313	34	1787	-4.06	4.66	-1.09
247	SLV 10	-313	34	1787	-4.06	4.66	-1.09
247	SLV 11	101	-27	66	2.98	11.66	0.82
247	SLV 12	101	-27	66	2.98	11.66	0.82
247	SLV 13	-318	20	1660	-2.46	-0.74	-0.65
247	SLV 14	-318	20	1660	-2.46	-0.74	-0.65
247	SLV 15	-194	2	1144	-0.35	1.36	-0.08
247	SLV 16	-194	2	1144	-0.35	1.36	-0.08
248	SLU 1	669	0	2694	-0.03	16.87	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
248	SLU 2	667	0	2686	-0.03	16.83	0.01
248	SLU 3	687	0	2766	-0.03	17.29	0.01
248	SLU 4	685	0	2761	-0.03	17.26	0.01
248	SLU 5	676	0	2723	-0.03	17.03	0.01
248	SLU 6	695	0	2803	-0.03	17.49	0.01
248	SLU 7	694	0	2798	-0.03	17.46	0.01
248	SLU 8	687	0	2768	-0.03	17.28	0.01
248	SLU 9	686	0	2763	-0.03	17.25	0.01
248	SLU 10	811	0	3245	-0.04	20.59	0.01
248	SLU 11	830	0	3325	-0.04	21.05	0.01
248	SLU 12	829	0	3320	-0.04	21.02	0.01
248	SLU 13	819	0	3282	-0.04	20.79	0.01
248	SLU 14	839	0	3362	-0.04	21.25	0.01
248	SLU 15	837	0	3357	-0.04	21.22	0.01
248	SLU 16	830	0	3327	-0.04	21.04	0.01
248	SLU 17	829	0	3322	-0.04	21.02	0.01
248	SLU 18	874	0	3493	-0.04	22.25	0.01
248	SLU 19	873	0	3488	-0.04	22.22	0.01
248	SLU 20	883	0	3530	-0.04	22.45	0.01
248	SLU 21	882	0	3525	-0.04	22.43	0.01
248	SLU 22	792	0	3178	-0.04	20.05	0.01
248	SLU 23	790	0	3169	-0.04	20.01	0.01
248	SLU 24	809	0	3249	-0.04	20.46	0.01
248	SLU 25	808	0	3244	-0.04	20.44	0.01
248	SLU 26	799	0	3206	-0.04	20.21	0.01
248	SLU 27	818	0	3286	-0.04	20.67	0.01
248	SLU 28	817	0	3281	-0.04	20.64	0.01
248	SLU 29	809	0	3252	-0.04	20.46	0.01
248	SLU 30	808	0	3246	-0.04	20.43	0.01
248	SLU 31	933	0	3728	-0.04	23.77	0.01
248	SLU 32	952	0	3808	-0.04	24.23	0.01
248	SLU 33	951	0	3803	-0.04	24.2	0.01
248	SLU 34	942	0	3765	-0.04	23.97	0.01
248	SLU 35	961	0	3845	-0.05	24.43	0.01
248	SLU 36	960	0	3840	-0.05	24.4	0.01
248	SLU 37	953	0	3810	-0.04	24.22	0.01
248	SLU 38	951	0	3805	-0.04	24.19	0.01
248	SLU 39	997	0	3976	-0.05	25.43	0.01
248	SLU 40	995	0	3971	-0.05	25.4	0.01
248	SLU 41	1005	0	4013	-0.05	25.63	0.01
248	SLU 42	1004	0	4008	-0.05	25.6	0.01
248	SLU 43	828	0	3337	-0.04	20.85	0.01
248	SLU 44	826	0	3328	-0.04	20.8	0.01
248	SLU 45	845	0	3409	-0.04	21.26	0.01
248	SLU 46	844	0	3403	-0.04	21.23	0.01
248	SLU 47	835	0	3365	-0.04	21	0.01
248	SLU 48	854	0	3446	-0.04	21.46	0.01
248	SLU 49	853	0	3440	-0.04	21.43	0.01
248	SLU 50	846	0	3411	-0.04	21.25	0.01
248	SLU 51	844	0	3406	-0.04	21.22	0.01
248	SLU 52	969	0	3887	-0.05	24.56	0.01
248	SLU 53	989	0	3968	-0.05	25.02	0.01
248	SLU 54	987	0	3962	-0.05	24.99	0.01
248	SLU 55	978	0	3924	-0.05	24.77	0.01
248	SLU 56	997	0	4005	-0.05	25.23	0.01
248	SLU 57	996	0	3999	-0.05	25.2	0.01
248	SLU 58	989	0	3970	-0.05	25.02	0.01
248	SLU 59	988	0	3965	-0.05	24.99	0.01
248	SLU 60	1033	0	4136	-0.05	26.22	0.01
248	SLU 61	1032	0	4130	-0.05	26.2	0.01
248	SLU 62	1042	0	4173	-0.05	26.43	0.01
248	SLU 63	1040	0	4167	-0.05	26.4	0.01
248	SLU 64	951	0	3820	-0.05	24.03	0.01
248	SLU 65	949	0	3812	-0.05	23.98	0.01
248	SLU 66	968	0	3892	-0.05	24.44	0.01
248	SLU 67	967	0	3887	-0.05	24.41	0.01
248	SLU 68	957	0	3849	-0.05	24.18	0.01
248	SLU 69	977	0	3929	-0.05	24.64	0.01
248	SLU 70	975	0	3923	-0.05	24.61	0.01
248	SLU 71	968	0	3894	-0.05	24.43	0.01
248	SLU 72	967	0	3889	-0.05	24.4	0.01
248	SLU 73	1092	0	4371	-0.05	27.74	0.01
248	SLU 74	1111	0	4451	-0.05	28.2	0.01
248	SLU 75	1110	0	4445	-0.05	28.17	0.01
248	SLU 76	1101	0	4407	-0.05	27.94	0.01
248	SLU 77	1120	0	4488	-0.05	28.4	0.01
248	SLU 78	1119	0	4482	-0.05	28.38	0.01
248	SLU 79	1111	0	4453	-0.05	28.2	0.01
248	SLU 80	1110	0	4448	-0.05	28.17	0.01
248	SLU 81	1155	0	4619	-0.05	29.4	0.01
248	SLU 82	1154	0	4614	-0.05	29.37	0.01
248	SLU 83	1164	0	4656	-0.05	29.61	0.01
248	SLU 84	1163	0	4651	-0.05	29.58	0.01
248	SLE RA 1	704	0	2833	-0.03	17.78	0.01
248	SLE RA 2	703	0	2827	-0.03	17.75	0.01
248	SLE RA 3	716	0	2880	-0.03	18.06	0.01
248	SLE RA 4	715	0	2877	-0.03	18.04	0.01
248	SLE RA 5	709	0	2851	-0.03	17.89	0.01
248	SLE RA 6	722	0	2905	-0.03	18.19	0.01
248	SLE RA 7	721	0	2901	-0.03	18.17	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
248	SLE RA 8	716	0	2882	-0.03	18.05	0.01
248	SLE RA 9	715	0	2878	-0.03	18.03	0.01
248	SLE RA 10	799	0	3199	-0.04	20.26	0.01
248	SLE RA 11	811	0	3253	-0.04	20.57	0.01
248	SLE RA 12	811	0	3249	-0.04	20.55	0.01
248	SLE RA 13	804	0	3224	-0.04	20.4	0.01
248	SLE RA 14	817	0	3277	-0.04	20.7	0.01
248	SLE RA 15	816	0	3274	-0.04	20.68	0.01
248	SLE RA 16	812	0	3254	-0.04	20.56	0.01
248	SLE RA 17	811	0	3251	-0.04	20.54	0.01
248	SLE RA 18	841	0	3365	-0.04	21.37	0.01
248	SLE RA 19	840	0	3361	-0.04	21.35	0.01
248	SLE RA 20	847	0	3389	-0.04	21.5	0.01
248	SLE RA 21	846	0	3386	-0.04	21.48	0.01
248	SLE FR 1	704	0	2833	-0.03	17.78	0.01
248	SLE FR 2	704	0	2831	-0.03	17.78	0.01
248	SLE FR 3	707	0	2842	-0.03	17.84	0.01
248	SLE FR 4	745	0	2991	-0.04	18.85	0.01
248	SLE FR 5	748	0	3002	-0.04	18.91	0.01
248	SLE FR 6	773	0	3099	-0.04	19.58	0.01
248	SLE QP 1	704	0	2833	-0.03	17.78	0.01
248	SLE QP 2	745	0	2992	-0.04	18.86	0.01
248	SLD 1	1051	-14	3905	0.02	30.23	-0.09
248	SLD 2	1051	-14	3905	0.02	30.23	-0.09
248	SLD 3	1004	4	3762	5.31	28.54	-0.8
248	SLD 4	1004	4	3762	5.31	28.54	-0.8
248	SLD 5	907	-31	3483	-8.05	24.85	1.06
248	SLD 6	907	-31	3483	-8.05	24.85	1.06
248	SLD 7	753	28	3006	9.6	19.19	-1.32
248	SLD 8	753	28	3006	9.6	19.19	-1.32
248	SLD 9	738	-28	2979	-9.67	18.53	1.33
248	SLD 10	738	-28	2979	-9.67	18.53	1.33
248	SLD 11	584	31	2501	7.98	12.87	-1.05
248	SLD 12	584	31	2501	7.98	12.87	-1.05
248	SLD 13	487	-4	2223	-5.38	9.18	0.82
248	SLD 14	487	-4	2223	-5.38	9.18	0.82
248	SLD 15	440	14	2080	-0.09	7.48	0.1
248	SLD 16	440	14	2080	-0.09	7.48	0.1
248	SLV 1	1455	-35	5117	-0.01	45.28	-0.23
248	SLV 2	1455	-35	5117	-0.01	45.28	-0.23
248	SLV 3	1345	10	4775	13.53	41.31	-2.04
248	SLV 4	1345	10	4775	13.53	41.31	-2.04
248	SLV 5	1124	-79	4148	-20.56	32.81	2.69
248	SLV 6	1124	-79	4148	-20.56	32.81	2.69
248	SLV 7	760	71	3008	24.57	19.57	-3.37
248	SLV 8	760	71	3008	24.57	19.57	-3.37
248	SLV 9	731	-71	2976	-24.64	18.14	3.38
248	SLV 10	731	-71	2976	-24.64	18.14	3.38
248	SLV 11	367	79	1836	20.49	4.91	-2.68
248	SLV 12	367	79	1836	20.49	4.91	-2.68
248	SLV 13	145	-10	1210	-13.6	-3.59	2.06
248	SLV 14	145	-10	1210	-13.6	-3.59	2.06
248	SLV 15	36	35	868	-0.06	-7.56	0.24
248	SLV 16	36	35	868	-0.06	-7.56	0.24
249	SLU 1	374	0	4410	-0.06	22.49	0
249	SLU 2	373	0	4395	-0.06	22.42	0
249	SLU 3	382	0	4527	-0.06	23.01	0
249	SLU 4	382	0	4518	-0.06	22.97	0
249	SLU 5	377	0	4456	-0.06	22.68	0
249	SLU 6	386	0	4587	-0.06	23.26	0
249	SLU 7	386	0	4579	-0.06	23.23	0
249	SLU 8	382	0	4531	-0.06	22.99	0
249	SLU 9	381	0	4522	-0.06	22.95	0
249	SLU 10	460	0	5292	-0.07	27.6	0
249	SLU 11	469	0	5424	-0.07	28.18	0
249	SLU 12	469	0	5415	-0.07	28.14	0
249	SLU 13	464	0	5353	-0.07	27.85	0
249	SLU 14	473	0	5485	-0.07	28.43	0
249	SLU 15	473	0	5476	-0.07	28.4	0
249	SLU 16	469	0	5429	-0.07	28.16	0
249	SLU 17	468	0	5420	-0.07	28.12	0
249	SLU 18	499	0	5692	-0.07	29.87	0
249	SLU 19	498	0	5683	-0.07	29.84	0
249	SLU 20	502	0	5752	-0.07	30.13	0
249	SLU 21	502	0	5744	-0.07	30.09	0
249	SLU 22	446	0	5188	-0.07	26.81	0
249	SLU 23	445	0	5173	-0.07	26.75	0
249	SLU 24	454	0	5305	-0.07	27.34	0
249	SLU 25	454	0	5296	-0.07	27.3	0
249	SLU 26	449	0	5234	-0.07	27	0
249	SLU 27	458	0	5366	-0.07	27.59	0
249	SLU 28	458	0	5357	-0.07	27.55	0
249	SLU 29	454	0	5310	-0.07	27.32	0
249	SLU 30	453	0	5301	-0.07	27.28	0
249	SLU 31	532	0	6071	-0.08	31.92	0
249	SLU 32	541	0	6202	-0.08	32.51	0
249	SLU 33	541	0	6194	-0.08	32.47	0
249	SLU 34	536	0	6132	-0.08	32.17	0
249	SLU 35	545	0	6263	-0.08	32.76	0
249	SLU 36	545	0	6255	-0.08	32.72	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
249	SLU 37	541	0	6207	-0.08	32.49	0
249	SLU 38	540	0	6198	-0.08	32.45	0
249	SLU 39	571	0	6470	-0.08	34.2	0
249	SLU 40	570	0	6461	-0.08	34.16	0
249	SLU 41	574	0	6531	-0.08	34.45	0
249	SLU 42	574	0	6522	-0.08	34.42	0
249	SLU 43	462	0	5465	-0.07	27.75	0
249	SLU 44	461	0	5451	-0.07	27.69	0
249	SLU 45	470	0	5583	-0.07	28.27	0
249	SLU 46	469	0	5574	-0.07	28.24	0
249	SLU 47	465	0	5512	-0.07	27.94	0
249	SLU 48	474	0	5643	-0.07	28.52	0
249	SLU 49	473	0	5635	-0.07	28.49	0
249	SLU 50	469	0	5587	-0.07	28.25	0
249	SLU 51	469	0	5578	-0.07	28.22	0
249	SLU 52	548	0	6348	-0.08	32.86	0
249	SLU 53	557	0	6480	-0.08	33.44	0
249	SLU 54	556	0	6471	-0.08	33.41	0
249	SLU 55	552	0	6409	-0.08	33.11	0
249	SLU 56	561	0	6541	-0.08	33.69	0
249	SLU 57	560	0	6532	-0.09	33.66	0
249	SLU 58	556	0	6485	-0.08	33.42	0
249	SLU 59	556	0	6476	-0.08	33.39	0
249	SLU 60	586	0	6747	-0.09	35.14	0
249	SLU 61	586	0	6739	-0.09	35.1	0
249	SLU 62	590	0	6808	-0.09	35.39	0
249	SLU 63	589	0	6800	-0.09	35.35	0
249	SLU 64	534	0	6244	-0.08	32.07	0
249	SLU 65	533	0	6229	-0.08	32.01	0
249	SLU 66	542	0	6361	-0.08	32.6	0
249	SLU 67	541	0	6352	-0.08	32.56	0
249	SLU 68	537	0	6290	-0.08	32.27	0
249	SLU 69	546	0	6422	-0.08	32.85	0
249	SLU 70	545	0	6413	-0.08	32.81	0
249	SLU 71	541	0	6366	-0.08	32.58	0
249	SLU 72	541	0	6357	-0.08	32.54	0
249	SLU 73	620	0	7127	-0.09	37.18	0
249	SLU 74	629	0	7258	-0.09	37.77	0
249	SLU 75	628	0	7250	-0.09	37.73	0
249	SLU 76	624	0	7188	-0.09	37.44	0
249	SLU 77	633	0	7319	-0.09	38.02	0
249	SLU 78	632	0	7310	-0.1	37.98	0
249	SLU 79	628	0	7263	-0.09	37.75	0
249	SLU 80	628	0	7254	-0.09	37.71	0
249	SLU 81	658	0	7526	-0.1	39.46	0
249	SLU 82	658	0	7517	-0.1	39.43	0
249	SLU 83	662	0	7587	-0.1	39.71	0
249	SLU 84	661	0	7578	-0.1	39.68	0
249	SLE RA 1	395	0	4632	-0.06	23.72	0
249	SLE RA 2	394	0	4622	-0.06	23.68	0
249	SLE RA 3	400	0	4710	-0.06	24.07	0
249	SLE RA 4	400	0	4704	-0.06	24.05	0
249	SLE RA 5	397	0	4663	-0.06	23.85	0
249	SLE RA 6	403	0	4751	-0.06	24.24	0
249	SLE RA 7	402	0	4745	-0.06	24.21	0
249	SLE RA 8	400	0	4713	-0.06	24.06	0
249	SLE RA 9	400	0	4707	-0.06	24.03	0
249	SLE RA 10	452	0	5220	-0.07	27.13	0
249	SLE RA 11	458	0	5308	-0.07	27.52	0
249	SLE RA 12	458	0	5302	-0.07	27.49	0
249	SLE RA 13	455	0	5261	-0.07	27.3	0
249	SLE RA 14	461	0	5349	-0.07	27.69	0
249	SLE RA 15	460	0	5343	-0.07	27.66	0
249	SLE RA 16	458	0	5311	-0.07	27.51	0
249	SLE RA 17	457	0	5305	-0.07	27.48	0
249	SLE RA 18	478	0	5487	-0.07	28.65	0
249	SLE RA 19	477	0	5481	-0.07	28.62	0
249	SLE RA 20	480	0	5527	-0.07	28.81	0
249	SLE RA 21	480	0	5521	-0.07	28.79	0
249	SLE FR 1	395	0	4632	-0.06	23.72	0
249	SLE FR 2	395	0	4630	-0.06	23.71	0
249	SLE FR 3	396	0	4648	-0.06	23.79	0
249	SLE FR 4	420	0	4886	-0.06	25.19	0
249	SLE FR 5	421	0	4905	-0.06	25.27	0
249	SLE FR 6	436	0	5059	-0.06	26.18	0
249	SLE QP 1	395	0	4632	-0.06	23.72	0
249	SLE QP 2	420	0	4888	-0.06	25.2	0
249	SLD 1	698	2	5870	-3.38	41.93	0
249	SLD 2	698	2	5870	-3.38	41.93	0
249	SLD 3	749	-15	5692	12.67	44.87	-0.04
249	SLD 4	749	-15	5692	12.67	44.87	-0.04
249	SLD 5	427	25	5452	-25.41	25.75	0.06
249	SLD 6	427	25	5452	-25.41	25.75	0.06
249	SLD 7	595	-29	4861	28.11	35.57	-0.08
249	SLD 8	595	-29	4861	28.11	35.57	-0.08
249	SLD 9	244	29	4916	-28.24	14.83	0.08
249	SLD 10	244	29	4916	-28.24	14.83	0.08
249	SLD 11	413	-25	4325	25.29	24.65	-0.06
249	SLD 12	413	-25	4325	25.29	24.65	-0.06
249	SLD 13	91	15	4084	-12.8	5.53	0.04



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
249	SLD 14	91	15	4084	-12.8	5.53	0.04
249	SLD 15	141	-2	3907	3.26	8.47	0
249	SLD 16	141	-2	3907	3.26	8.47	0
249	SLV 1	1066	5	7175	-8.81	64	0
249	SLV 2	1066	5	7175	-8.81	64	0
249	SLV 3	1184	-37	6746	32.4	70.88	-0.11
249	SLV 4	1184	-37	6746	32.4	70.88	-0.11
249	SLV 5	435	64	6225	-65.18	26.4	0.16
249	SLV 6	435	64	6225	-65.18	26.4	0.16
249	SLV 7	827	-74	4795	72.17	49.34	-0.19
249	SLV 8	827	-74	4795	72.17	49.34	-0.19
249	SLV 9	12	74	4982	-72.3	1.06	0.19
249	SLV 10	12	74	4982	-72.3	1.06	0.19
249	SLV 11	404	-64	3552	65.06	23.99	-0.16
249	SLV 12	404	-64	3552	65.06	23.99	-0.16
249	SLV 13	-344	37	3031	-32.52	-20.48	0.11
249	SLV 14	-344	37	3031	-32.52	-20.48	0.11
249	SLV 15	-227	-4	2602	8.68	-13.6	0
249	SLV 16	-227	-4	2602	8.68	-13.6	0
250	SLU 1	131	0	3936	-0.04	7.02	0
250	SLU 2	131	0	3923	-0.05	7.02	0
250	SLU 3	132	0	4038	-0.04	7.09	0
250	SLU 4	132	0	4030	-0.05	7.09	0
250	SLU 5	131	0	3976	-0.05	7.03	0
250	SLU 6	131	0	4092	-0.05	7.11	0
250	SLU 7	131	0	4084	-0.05	7.1	0
250	SLU 8	130	0	4042	-0.05	7.04	0
250	SLU 9	130	0	4034	-0.05	7.04	0
250	SLU 10	171	0	4713	-0.05	9.12	0
250	SLU 11	172	0	4829	-0.05	9.2	0
250	SLU 12	172	0	4821	-0.06	9.2	0
250	SLU 13	171	0	4767	-0.06	9.13	0
250	SLU 14	172	0	4882	-0.06	9.21	0
250	SLU 15	172	0	4874	-0.06	9.21	0
250	SLU 16	171	0	4833	-0.05	9.15	0
250	SLU 17	171	0	4825	-0.06	9.15	0
250	SLU 18	189	0	5066	-0.06	10.03	0
250	SLU 19	189	0	5058	-0.06	10.03	0
250	SLU 20	188	0	5119	-0.06	10.04	0
250	SLU 21	188	0	5111	-0.06	10.04	0
250	SLU 22	161	0	4622	-0.05	8.63	0
250	SLU 23	161	0	4609	-0.05	8.63	0
250	SLU 24	162	0	4725	-0.05	8.71	0
250	SLU 25	162	0	4717	-0.05	8.7	0
250	SLU 26	161	0	4662	-0.05	8.64	0
250	SLU 27	162	0	4778	-0.05	8.72	0
250	SLU 28	162	0	4770	-0.06	8.72	0
250	SLU 29	161	0	4728	-0.05	8.65	0
250	SLU 30	161	0	4720	-0.05	8.65	0
250	SLU 31	202	0	5399	-0.06	10.73	0
250	SLU 32	203	0	5515	-0.06	10.81	0
250	SLU 33	203	0	5507	-0.06	10.81	0
250	SLU 34	202	0	5453	-0.06	10.75	0
250	SLU 35	202	0	5569	-0.06	10.82	0
250	SLU 36	202	0	5561	-0.07	10.82	0
250	SLU 37	201	0	5519	-0.06	10.76	0
250	SLU 38	201	0	5511	-0.06	10.76	0
250	SLU 39	219	0	5752	-0.06	11.64	0
250	SLU 40	219	0	5744	-0.07	11.64	0
250	SLU 41	219	0	5805	-0.07	11.65	0
250	SLU 42	219	0	5797	-0.07	11.65	0
250	SLU 43	160	0	4881	-0.05	8.57	0
250	SLU 44	160	0	4868	-0.06	8.57	0
250	SLU 45	160	0	4984	-0.05	8.65	0
250	SLU 46	160	0	4976	-0.06	8.65	0
250	SLU 47	159	0	4921	-0.06	8.58	0
250	SLU 48	160	0	5037	-0.06	8.66	0
250	SLU 49	160	0	5029	-0.06	8.66	0
250	SLU 50	159	0	4988	-0.06	8.6	0
250	SLU 51	159	0	4980	-0.06	8.6	0
250	SLU 52	200	0	5659	-0.06	10.68	0
250	SLU 53	201	0	5775	-0.06	10.75	0
250	SLU 54	201	0	5767	-0.07	10.75	0
250	SLU 55	200	0	5712	-0.07	10.69	0
250	SLU 56	201	0	5828	-0.07	10.76	0
250	SLU 57	201	0	5820	-0.07	10.76	0
250	SLU 58	200	0	5779	-0.06	10.7	0
250	SLU 59	200	0	5771	-0.07	10.7	0
250	SLU 60	217	0	6011	-0.07	11.58	0
250	SLU 61	217	0	6003	-0.07	11.58	0
250	SLU 62	217	0	6064	-0.07	11.59	0
250	SLU 63	217	0	6056	-0.07	11.59	0
250	SLU 64	190	0	5567	-0.06	10.19	0
250	SLU 65	190	0	5554	-0.06	10.18	0
250	SLU 66	191	0	5670	-0.06	10.26	0
250	SLU 67	191	0	5662	-0.06	10.26	0
250	SLU 68	190	0	5607	-0.06	10.19	0
250	SLU 69	191	0	5723	-0.06	10.27	0
250	SLU 70	191	0	5715	-0.07	10.27	0
250	SLU 71	190	0	5674	-0.06	10.21	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
250	SLU 72	190	0	5666	-0.06	10.21	0
250	SLU 73	230	0	6345	-0.07	12.29	0
250	SLU 74	231	0	6461	-0.07	12.36	0
250	SLU 75	231	0	6453	-0.07	12.36	0
250	SLU 76	230	0	6398	-0.07	12.3	0
250	SLU 77	231	0	6514	-0.07	12.38	0
250	SLU 78	231	0	6506	-0.08	12.37	0
250	SLU 79	230	0	6465	-0.07	12.31	0
250	SLU 80	230	0	6457	-0.07	12.31	0
250	SLU 81	248	0	6697	-0.08	13.19	0
250	SLU 82	248	0	6689	-0.08	13.19	0
250	SLU 83	248	0	6750	-0.08	13.2	0
250	SLU 84	248	0	6742	-0.08	13.2	0
250	SLE RA 1	139	0	4132	-0.05	7.48	0
250	SLE RA 2	139	0	4123	-0.05	7.48	0
250	SLE RA 3	140	0	4200	-0.05	7.53	0
250	SLE RA 4	140	0	4195	-0.05	7.53	0
250	SLE RA 5	139	0	4158	-0.05	7.49	0
250	SLE RA 6	140	0	4236	-0.05	7.54	0
250	SLE RA 7	140	0	4230	-0.05	7.54	0
250	SLE RA 8	139	0	4203	-0.05	7.5	0
250	SLE RA 9	139	0	4197	-0.05	7.5	0
250	SLE RA 10	166	0	4650	-0.05	8.88	0
250	SLE RA 11	167	0	4727	-0.05	8.93	0
250	SLE RA 12	167	0	4722	-0.05	8.93	0
250	SLE RA 13	166	0	4686	-0.05	8.89	0
250	SLE RA 14	167	0	4763	-0.05	8.94	0
250	SLE RA 15	167	0	4758	-0.05	8.94	0
250	SLE RA 16	166	0	4730	-0.05	8.9	0
250	SLE RA 17	166	0	4725	-0.05	8.9	0
250	SLE RA 18	178	0	4885	-0.05	9.49	0
250	SLE RA 19	178	0	4880	-0.06	9.48	0
250	SLE RA 20	178	0	4920	-0.06	9.49	0
250	SLE RA 21	178	0	4915	-0.06	9.49	0
250	SLE FR 1	139	0	4132	-0.05	7.48	0
250	SLE FR 2	139	0	4130	-0.05	7.48	0
250	SLE FR 3	139	0	4146	-0.05	7.48	0
250	SLE FR 4	151	0	4356	-0.05	8.08	0
250	SLE FR 5	151	0	4372	-0.05	8.09	0
250	SLE FR 6	159	0	4508	-0.05	8.48	0
250	SLE QP 1	139	0	4132	-0.05	7.48	0
250	SLE QP 2	151	0	4358	-0.05	8.08	0
250	SLD 1	501	6	4789	-6.44	26.08	0.06
250	SLD 2	501	6	4789	-6.44	26.08	0.06
250	SLD 3	565	-13	4672	13.37	29.29	-0.16
250	SLD 4	565	-13	4672	13.37	29.29	-0.16
250	SLD 5	159	31	4664	-32.02	8.61	0.35
250	SLD 6	159	31	4664	-32.02	8.61	0.35
250	SLD 7	372	-33	4275	34.03	19.31	-0.38
250	SLD 8	372	-33	4275	34.03	19.31	-0.38
250	SLD 9	-70	33	4441	-34.12	-3.15	0.38
250	SLD 10	-70	33	4441	-34.12	-3.15	0.38
250	SLD 11	143	-31	4051	31.92	7.55	-0.35
250	SLD 12	143	-31	4051	31.92	7.55	-0.35
250	SLD 13	-263	13	4044	-13.46	-13.13	0.16
250	SLD 14	-263	13	4044	-13.46	-13.13	0.16
250	SLD 15	-199	-6	3927	6.35	-9.92	-0.06
250	SLD 16	-199	-6	3927	6.35	-9.92	-0.06
250	SLV 1	964	15	5363	-16.64	49.86	0.16
250	SLV 2	964	15	5363	-16.64	49.86	0.16
250	SLV 3	1112	-33	5076	34.25	57.33	-0.4
250	SLV 4	1112	-33	5076	34.25	57.33	-0.4
250	SLV 5	170	79	5094	-82.2	9.28	0.89
250	SLV 6	170	79	5094	-82.2	9.28	0.89
250	SLV 7	665	-84	4138	87.42	34.19	-0.96
250	SLV 8	665	-84	4138	87.42	34.19	-0.96
250	SLV 9	-363	84	4577	-87.51	-18.03	0.96
250	SLV 10	-363	84	4577	-87.51	-18.03	0.96
250	SLV 11	133	-78	3621	82.11	6.88	-0.89
250	SLV 12	133	-78	3621	82.11	6.88	-0.89
250	SLV 13	-810	33	3639	-34.34	-41.17	0.4
250	SLV 14	-810	33	3639	-34.34	-41.17	0.4
250	SLV 15	-662	-15	3352	16.54	-33.7	-0.16
250	SLV 16	-662	-15	3352	16.54	-33.7	-0.16
251	SLU 1	-18	0	3600	-0.03	1.77	0
251	SLU 2	-18	0	3588	-0.04	1.78	0
251	SLU 3	-21	0	3691	-0.04	1.71	0
251	SLU 4	-21	0	3684	-0.04	1.72	0
251	SLU 5	-20	0	3635	-0.04	1.73	0
251	SLU 6	-24	0	3738	-0.04	1.67	0
251	SLU 7	-23	0	3731	-0.04	1.67	0
251	SLU 8	-23	0	3694	-0.04	1.67	0
251	SLU 9	-22	0	3687	-0.04	1.68	0
251	SLU 10	-9	0	4310	-0.04	2.69	0
251	SLU 11	-13	0	4413	-0.04	2.62	0
251	SLU 12	-12	0	4406	-0.05	2.63	0
251	SLU 13	-11	0	4357	-0.05	2.64	0
251	SLU 14	-15	0	4460	-0.04	2.58	0
251	SLU 15	-15	0	4452	-0.05	2.58	0
251	SLU 16	-14	0	4416	-0.04	2.58	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
251	SLU 17	-14	0	4408	-0.05	2.59	0
251	SLU 18	-6	0	4631	-0.05	3.07	0
251	SLU 19	-6	0	4624	-0.05	3.07	0
251	SLU 20	-8	0	4678	-0.05	3.02	0
251	SLU 21	-8	0	4671	-0.05	3.03	0
251	SLU 22	-15	0	4224	-0.04	2.37	0
251	SLU 23	-15	0	4212	-0.04	2.39	0
251	SLU 24	-18	0	4315	-0.04	2.32	0
251	SLU 25	-18	0	4308	-0.04	2.33	0
251	SLU 26	-17	0	4259	-0.04	2.34	0
251	SLU 27	-21	0	4362	-0.04	2.28	0
251	SLU 28	-20	0	4355	-0.04	2.28	0
251	SLU 29	-20	0	4318	-0.04	2.28	0
251	SLU 30	-19	0	4311	-0.04	2.29	0
251	SLU 31	-6	0	4934	-0.05	3.3	0
251	SLU 32	-10	0	5037	-0.05	3.23	0
251	SLU 33	-9	0	5030	-0.05	3.24	0
251	SLU 34	-8	0	4980	-0.05	3.25	0
251	SLU 35	-12	0	5084	-0.05	3.19	0
251	SLU 36	-11	0	5076	-0.05	3.19	0
251	SLU 37	-11	0	5039	-0.05	3.19	0
251	SLU 38	-10	0	5032	-0.05	3.2	0
251	SLU 39	-3	0	5255	-0.05	3.67	0
251	SLU 40	-2	0	5248	-0.05	3.68	0
251	SLU 41	-5	0	5302	-0.05	3.63	0
251	SLU 42	-5	0	5295	-0.05	3.63	0
251	SLU 43	-25	0	4466	-0.04	2.09	0
251	SLU 44	-24	0	4454	-0.04	2.1	0
251	SLU 45	-28	0	4558	-0.04	2.04	0
251	SLU 46	-28	0	4550	-0.04	2.04	0
251	SLU 47	-27	0	4501	-0.05	2.05	0
251	SLU 48	-30	0	4604	-0.04	1.99	0
251	SLU 49	-30	0	4597	-0.05	1.99	0
251	SLU 50	-29	0	4560	-0.04	1.99	0
251	SLU 51	-29	0	4553	-0.05	2	0
251	SLU 52	-16	0	5176	-0.05	3.01	0
251	SLU 53	-19	0	5279	-0.05	2.95	0
251	SLU 54	-19	0	5272	-0.05	2.95	0
251	SLU 55	-18	0	5223	-0.05	2.96	0
251	SLU 56	-21	0	5326	-0.05	2.9	0
251	SLU 57	-21	0	5319	-0.05	2.91	0
251	SLU 58	-20	0	5282	-0.05	2.9	0
251	SLU 59	-20	0	5274	-0.05	2.91	0
251	SLU 60	-12	0	5497	-0.05	3.39	0
251	SLU 61	-12	0	5490	-0.05	3.39	0
251	SLU 62	-15	0	5544	-0.05	3.34	0
251	SLU 63	-14	0	5537	-0.06	3.35	0
251	SLU 64	-22	0	5090	-0.05	2.7	0
251	SLU 65	-21	0	5078	-0.05	2.71	0
251	SLU 66	-25	0	5181	-0.05	2.64	0
251	SLU 67	-25	0	5174	-0.05	2.65	0
251	SLU 68	-23	0	5125	-0.05	2.66	0
251	SLU 69	-27	0	5228	-0.05	2.6	0
251	SLU 70	-27	0	5221	-0.05	2.6	0
251	SLU 71	-26	0	5184	-0.05	2.6	0
251	SLU 72	-26	0	5177	-0.05	2.61	0
251	SLU 73	-13	0	5800	-0.06	3.62	0
251	SLU 74	-16	0	5903	-0.06	3.55	0
251	SLU 75	-16	0	5896	-0.06	3.56	0
251	SLU 76	-15	0	5847	-0.06	3.57	0
251	SLU 77	-18	0	5950	-0.06	3.51	0
251	SLU 78	-18	0	5943	-0.06	3.51	0
251	SLU 79	-17	0	5906	-0.06	3.51	0
251	SLU 80	-17	0	5898	-0.06	3.52	0
251	SLU 81	-9	0	6121	-0.06	4	0
251	SLU 82	-9	0	6114	-0.06	4	0
251	SLU 83	-11	0	6168	-0.06	3.95	0
251	SLU 84	-11	0	6161	-0.06	3.96	0
251	SLE RA 1	-17	0	3779	-0.04	1.94	0
251	SLE RA 2	-17	0	3770	-0.04	1.95	0
251	SLE RA 3	-20	0	3839	-0.04	1.91	0
251	SLE RA 4	-19	0	3834	-0.04	1.91	0
251	SLE RA 5	-19	0	3802	-0.04	1.92	0
251	SLE RA 6	-21	0	3871	-0.04	1.87	0
251	SLE RA 7	-21	0	3866	-0.04	1.88	0
251	SLE RA 8	-20	0	3841	-0.04	1.88	0
251	SLE RA 9	-20	0	3836	-0.04	1.88	0
251	SLE RA 10	-11	0	4251	-0.04	2.55	0
251	SLE RA 11	-14	0	4320	-0.04	2.51	0
251	SLE RA 12	-13	0	4315	-0.04	2.52	0
251	SLE RA 13	-13	0	4283	-0.04	2.52	0
251	SLE RA 14	-15	0	4352	-0.04	2.48	0
251	SLE RA 15	-15	0	4347	-0.04	2.49	0
251	SLE RA 16	-14	0	4322	-0.04	2.48	0
251	SLE RA 17	-14	0	4317	-0.04	2.49	0
251	SLE RA 18	-9	0	4466	-0.04	2.81	0
251	SLE RA 19	-9	0	4461	-0.04	2.81	0
251	SLE RA 20	-11	0	4497	-0.04	2.77	0
251	SLE RA 21	-10	0	4492	-0.05	2.78	0
251	SLE FR 1	-17	0	3779	-0.04	1.94	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
251	SLE FR 2	-17	0	3777	-0.04	1.94	0
251	SLE FR 3	-18	0	3791	-0.04	1.93	0
251	SLE FR 4	-15	0	3983	-0.04	2.2	0
251	SLE FR 5	-16	0	3997	-0.04	2.19	0
251	SLE FR 6	-13	0	4122	-0.04	2.37	0
251	SLE QP 1	-17	0	3779	-0.04	1.94	0
251	SLE QP 2	-15	0	3985	-0.04	2.2	0
251	SLD 1	398	7	3750	-7.96	21.94	0.11
251	SLD 2	398	7	3750	-7.96	21.94	0.11
251	SLD 3	470	-12	3661	12.85	25.28	-0.19
251	SLD 4	470	-12	3661	12.85	25.28	-0.19
251	SLD 5	0	31	4049	-33.97	3.05	0.48
251	SLD 6	0	31	4049	-33.97	3.05	0.48
251	SLD 7	239	-33	3753	35.38	14.19	-0.51
251	SLD 8	239	-33	3753	35.38	14.19	-0.51
251	SLD 9	-269	33	4217	-35.46	-9.79	0.51
251	SLD 10	-269	33	4217	-35.46	-9.79	0.51
251	SLD 11	-30	-31	3920	33.9	1.35	-0.48
251	SLD 12	-30	-31	3920	33.9	1.35	-0.48
251	SLD 13	-500	12	4308	-12.92	-20.88	0.19
251	SLD 14	-500	12	4308	-12.92	-20.88	0.19
251	SLD 15	-428	-7	4219	7.88	-17.54	-0.11
251	SLD 16	-428	-7	4219	7.88	-17.54	-0.11
251	SLV 1	944	18	3444	-20.47	48.04	0.28
251	SLV 2	944	18	3444	-20.47	48.04	0.28
251	SLV 3	1111	-31	3226	32.97	55.83	-0.48
251	SLV 4	1111	-31	3226	32.97	55.83	-0.48
251	SLV 5	19	80	4153	-87.21	4.15	1.24
251	SLV 6	19	80	4153	-87.21	4.15	1.24
251	SLV 7	576	-83	3426	90.91	30.09	-1.3
251	SLV 8	576	-83	3426	90.91	30.09	-1.3
251	SLV 9	-606	83	4543	-90.98	-25.69	1.3
251	SLV 10	-606	83	4543	-90.98	-25.69	1.3
251	SLV 11	-49	-80	3816	87.14	0.25	-1.24
251	SLV 12	-49	-80	3816	87.14	0.25	-1.24
251	SLV 13	-1140	31	4744	-33.04	-51.43	0.48
251	SLV 14	-1140	31	4744	-33.04	-51.43	0.48
251	SLV 15	-973	-18	4526	20.39	-43.64	-0.28
251	SLV 16	-973	-18	4526	20.39	-43.64	-0.28
252	SLU 1	-114	0	3285	-0.03	-3.63	0
252	SLU 2	-113	0	3274	-0.03	-3.6	0
252	SLU 3	-119	0	3365	-0.03	-3.81	0
252	SLU 4	-118	0	3359	-0.03	-3.79	0
252	SLU 5	-116	0	3315	-0.03	-3.71	0
252	SLU 6	-122	0	3406	-0.03	-3.92	0
252	SLU 7	-121	0	3399	-0.03	-3.91	0
252	SLU 8	-120	0	3367	-0.03	-3.85	0
252	SLU 9	-119	0	3360	-0.03	-3.83	0
252	SLU 10	-128	0	3931	-0.04	-3.95	0
252	SLU 11	-134	0	4022	-0.04	-4.16	0
252	SLU 12	-133	0	4016	-0.04	-4.15	0
252	SLU 13	-131	0	3972	-0.04	-4.06	0
252	SLU 14	-137	0	4063	-0.04	-4.28	0
252	SLU 15	-136	0	4056	-0.04	-4.26	0
252	SLU 16	-135	0	4024	-0.04	-4.2	0
252	SLU 17	-134	0	4017	-0.04	-4.18	0
252	SLU 18	-135	0	4224	-0.04	-4.13	0
252	SLU 19	-134	0	4217	-0.04	-4.11	0
252	SLU 20	-138	0	4264	-0.04	-4.24	0
252	SLU 21	-138	0	4258	-0.04	-4.22	0
252	SLU 22	-130	0	3851	-0.04	-4.08	0
252	SLU 23	-129	0	3840	-0.04	-4.05	0
252	SLU 24	-135	0	3931	-0.04	-4.27	0
252	SLU 25	-135	0	3925	-0.04	-4.25	0
252	SLU 26	-132	0	3881	-0.04	-4.16	0
252	SLU 27	-138	0	3972	-0.04	-4.38	0
252	SLU 28	-138	0	3965	-0.04	-4.36	0
252	SLU 29	-136	0	3933	-0.04	-4.3	0
252	SLU 30	-136	0	3926	-0.04	-4.29	0
252	SLU 31	-144	0	4497	-0.05	-4.4	0
252	SLU 32	-150	0	4588	-0.04	-4.62	0
252	SLU 33	-150	0	4582	-0.05	-4.6	0
252	SLU 34	-147	0	4538	-0.05	-4.52	0
252	SLU 35	-153	0	4629	-0.05	-4.73	0
252	SLU 36	-153	0	4622	-0.05	-4.71	0
252	SLU 37	-151	0	4590	-0.05	-4.66	0
252	SLU 38	-151	0	4583	-0.05	-4.64	0
252	SLU 39	-151	0	4790	-0.05	-4.58	0
252	SLU 40	-151	0	4783	-0.05	-4.57	0
252	SLU 41	-154	0	4830	-0.05	-4.7	0
252	SLU 42	-154	0	4824	-0.05	-4.68	0
252	SLU 43	-142	0	4077	-0.04	-4.56	0
252	SLU 44	-141	0	4065	-0.04	-4.53	0
252	SLU 45	-147	0	4157	-0.04	-4.74	0
252	SLU 46	-147	0	4150	-0.04	-4.73	0
252	SLU 47	-144	0	4106	-0.04	-4.64	0
252	SLU 48	-150	0	4198	-0.04	-4.85	0
252	SLU 49	-150	0	4191	-0.04	-4.84	0
252	SLU 50	-148	0	4158	-0.04	-4.78	0
252	SLU 51	-148	0	4152	-0.04	-4.76	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
252	SLU 52	-156	0	4722	-0.05	-4.88	0
252	SLU 53	-162	0	4814	-0.05	-5.09	0
252	SLU 54	-162	0	4807	-0.05	-5.08	0
252	SLU 55	-159	0	4763	-0.05	-4.99	0
252	SLU 56	-165	0	4855	-0.05	-5.21	0
252	SLU 57	-165	0	4848	-0.05	-5.19	0
252	SLU 58	-163	0	4815	-0.05	-5.13	0
252	SLU 59	-163	0	4809	-0.05	-5.12	0
252	SLU 60	-163	0	5015	-0.05	-5.06	0
252	SLU 61	-163	0	5008	-0.05	-5.04	0
252	SLU 62	-166	0	5056	-0.05	-5.17	0
252	SLU 63	-166	0	5049	-0.05	-5.16	0
252	SLU 64	-158	0	4643	-0.04	-5.01	0
252	SLU 65	-158	0	4631	-0.05	-4.98	0
252	SLU 66	-164	0	4723	-0.04	-5.2	0
252	SLU 67	-163	0	4716	-0.05	-5.18	0
252	SLU 68	-161	0	4672	-0.05	-5.1	0
252	SLU 69	-167	0	4764	-0.05	-5.31	0
252	SLU 70	-166	0	4757	-0.05	-5.29	0
252	SLU 71	-165	0	4724	-0.04	-5.24	0
252	SLU 72	-164	0	4718	-0.05	-5.22	0
252	SLU 73	-173	0	5288	-0.05	-5.34	0
252	SLU 74	-179	0	5380	-0.05	-5.55	0
252	SLU 75	-178	0	5373	-0.05	-5.53	0
252	SLU 76	-176	0	5329	-0.05	-5.45	0
252	SLU 77	-182	0	5421	-0.05	-5.66	0
252	SLU 78	-181	0	5414	-0.05	-5.64	0
252	SLU 79	-180	0	5381	-0.05	-5.59	0
252	SLU 80	-179	0	5375	-0.05	-5.57	0
252	SLU 81	-180	0	5581	-0.05	-5.52	0
252	SLU 82	-179	0	5574	-0.05	-5.5	0
252	SLU 83	-183	0	5622	-0.05	-5.63	0
252	SLU 84	-182	0	5615	-0.06	-5.61	0
252	SLE RA 1	-118	0	3447	-0.03	-3.76	0
252	SLE RA 2	-118	0	3439	-0.03	-3.74	0
252	SLE RA 3	-122	0	3500	-0.03	-3.88	0
252	SLE RA 4	-121	0	3496	-0.03	-3.87	0
252	SLE RA 5	-120	0	3467	-0.03	-3.81	0
252	SLE RA 6	-124	0	3527	-0.03	-3.95	0
252	SLE RA 7	-124	0	3523	-0.03	-3.94	0
252	SLE RA 8	-122	0	3501	-0.03	-3.9	0
252	SLE RA 9	-122	0	3497	-0.03	-3.89	0
252	SLE RA 10	-128	0	3877	-0.04	-3.97	0
252	SLE RA 11	-132	0	3938	-0.04	-4.11	0
252	SLE RA 12	-131	0	3934	-0.04	-4.1	0
252	SLE RA 13	-130	0	3905	-0.04	-4.05	0
252	SLE RA 14	-134	0	3966	-0.04	-4.19	0
252	SLE RA 15	-133	0	3961	-0.04	-4.18	0
252	SLE RA 16	-132	0	3939	-0.04	-4.14	0
252	SLE RA 17	-132	0	3935	-0.04	-4.13	0
252	SLE RA 18	-132	0	4072	-0.04	-4.09	0
252	SLE RA 19	-132	0	4068	-0.04	-4.08	0
252	SLE RA 20	-135	0	4100	-0.04	-4.17	0
252	SLE RA 21	-134	0	4095	-0.04	-4.15	0
252	SLE FR 1	-118	0	3447	-0.03	-3.76	0
252	SLE FR 2	-118	0	3445	-0.03	-3.75	0
252	SLE FR 3	-119	0	3458	-0.03	-3.78	0
252	SLE FR 4	-122	0	3633	-0.03	-3.85	0
252	SLE FR 5	-123	0	3645	-0.03	-3.89	0
252	SLE FR 6	-125	0	3760	-0.03	-3.92	0
252	SLE QP 1	-118	0	3447	-0.03	-3.76	0
252	SLE QP 2	-123	0	3634	-0.03	-3.86	0
252	SLD 1	350	11	3272	-8.09	17.88	0.19
252	SLD 2	350	11	3272	-8.09	17.88	0.19
252	SLD 3	427	-7	3196	11.94	21.38	-0.11
252	SLD 4	427	-7	3196	11.94	21.38	-0.11
252	SLD 5	-96	30	3640	-32.82	-2.64	0.52
252	SLD 6	-96	30	3640	-32.82	-2.64	0.52
252	SLD 7	158	-29	3389	33.93	9.02	-0.49
252	SLD 8	158	-29	3389	33.93	9.02	-0.49
252	SLD 9	-403	29	3880	-33.99	-16.73	0.49
252	SLD 10	-403	29	3880	-33.99	-16.73	0.49
252	SLD 11	-149	-30	3629	32.75	-5.07	-0.52
252	SLD 12	-149	-30	3629	32.75	-5.07	-0.52
252	SLD 13	-672	7	4073	-12	-29.09	0.11
252	SLD 14	-672	7	4073	-12	-29.09	0.11
252	SLD 15	-595	-11	3997	8.02	-25.59	-0.19
252	SLD 16	-595	-11	3997	8.02	-25.59	-0.19
252	SLV 1	976	29	2789	-20.74	46.66	0.49
252	SLV 2	976	29	2789	-20.74	46.66	0.49
252	SLV 3	1154	-17	2606	30.68	54.81	-0.29
252	SLV 4	1154	-17	2606	30.68	54.81	-0.29
252	SLV 5	-63	78	3659	-84.23	-1.06	1.32
252	SLV 6	-63	78	3659	-84.23	-1.06	1.32
252	SLV 7	530	-74	3048	87.17	26.1	-1.26
252	SLV 8	530	-74	3048	87.17	26.1	-1.26
252	SLV 9	-775	74	4221	-87.23	-33.81	1.26
252	SLV 10	-775	74	4221	-87.23	-33.81	1.26
252	SLV 11	-182	-78	3610	84.16	-6.65	-1.32
252	SLV 12	-182	-78	3610	84.16	-6.65	-1.32



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
252	SLV 13	-1399	17	4663	-30.75	-62.52	0.29
252	SLV 14	-1399	17	4663	-30.75	-62.52	0.29
252	SLV 15	-1221	-29	4480	20.67	-54.37	-0.49
252	SLV 16	-1221	-29	4480	20.67	-54.37	-0.49
253	SLU 1	-153	0	3003	-0.03	-4.92	0
253	SLU 2	-153	0	2993	-0.03	-4.9	0
253	SLU 3	-159	0	3074	-0.03	-5.1	0
253	SLU 4	-158	0	3068	-0.03	-5.09	0
253	SLU 5	-155	0	3029	-0.03	-5	0
253	SLU 6	-161	0	3110	-0.03	-5.19	0
253	SLU 7	-161	0	3104	-0.04	-5.18	0
253	SLU 8	-159	0	3075	-0.03	-5.11	0
253	SLU 9	-159	0	3069	-0.03	-5.1	0
253	SLU 10	-183	0	3589	-0.04	-5.84	0
253	SLU 11	-189	0	3671	-0.04	-6.04	0
253	SLU 12	-189	0	3664	-0.04	-6.03	0
253	SLU 13	-186	0	3625	-0.04	-5.94	0
253	SLU 14	-192	0	3706	-0.04	-6.14	0
253	SLU 15	-191	0	3700	-0.04	-6.12	0
253	SLU 16	-189	0	3671	-0.04	-6.05	0
253	SLU 17	-189	0	3665	-0.04	-6.04	0
253	SLU 18	-197	0	3855	-0.04	-6.27	0
253	SLU 19	-196	0	3849	-0.04	-6.26	0
253	SLU 20	-200	0	3891	-0.04	-6.36	0
253	SLU 21	-199	0	3885	-0.04	-6.35	0
253	SLU 22	-181	0	3516	-0.04	-5.79	0
253	SLU 23	-180	0	3505	-0.04	-5.77	0
253	SLU 24	-186	0	3587	-0.04	-5.97	0
253	SLU 25	-186	0	3580	-0.04	-5.96	0
253	SLU 26	-183	0	3541	-0.04	-5.87	0
253	SLU 27	-189	0	3622	-0.04	-6.06	0
253	SLU 28	-189	0	3616	-0.04	-6.05	0
253	SLU 29	-187	0	3587	-0.04	-5.98	0
253	SLU 30	-186	0	3581	-0.04	-5.97	0
253	SLU 31	-211	0	4102	-0.05	-6.71	0
253	SLU 32	-217	0	4183	-0.05	-6.91	0
253	SLU 33	-216	0	4177	-0.05	-6.9	0
253	SLU 34	-214	0	4137	-0.05	-6.81	0
253	SLU 35	-220	0	4219	-0.05	-7.01	0
253	SLU 36	-219	0	4212	-0.05	-6.99	0
253	SLU 37	-217	0	4184	-0.05	-6.92	0
253	SLU 38	-217	0	4177	-0.05	-6.91	0
253	SLU 39	-224	0	4368	-0.05	-7.14	0
253	SLU 40	-224	0	4361	-0.05	-7.13	0
253	SLU 41	-227	0	4403	-0.05	-7.23	0
253	SLU 42	-227	0	4397	-0.05	-7.22	0
253	SLU 43	-190	0	3729	-0.04	-6.1	0
253	SLU 44	-189	0	3718	-0.04	-6.08	0
253	SLU 45	-195	0	3800	-0.04	-6.28	0
253	SLU 46	-195	0	3793	-0.04	-6.26	0
253	SLU 47	-192	0	3754	-0.04	-6.17	0
253	SLU 48	-198	0	3835	-0.04	-6.37	0
253	SLU 49	-198	0	3829	-0.04	-6.36	0
253	SLU 50	-195	0	3800	-0.04	-6.29	0
253	SLU 51	-195	0	3794	-0.04	-6.28	0
253	SLU 52	-220	0	4315	-0.05	-7.02	0
253	SLU 53	-225	0	4396	-0.05	-7.22	0
253	SLU 54	-225	0	4390	-0.05	-7.21	0
253	SLU 55	-222	0	4350	-0.05	-7.12	0
253	SLU 56	-228	0	4432	-0.05	-7.31	0
253	SLU 57	-228	0	4425	-0.05	-7.3	0
253	SLU 58	-226	0	4397	-0.05	-7.23	0
253	SLU 59	-226	0	4390	-0.05	-7.22	0
253	SLU 60	-233	0	4581	-0.05	-7.45	0
253	SLU 61	-233	0	4574	-0.05	-7.43	0
253	SLU 62	-236	0	4616	-0.05	-7.54	0
253	SLU 63	-236	0	4610	-0.05	-7.53	0
253	SLU 64	-217	0	4241	-0.04	-6.97	0
253	SLU 65	-217	0	4231	-0.05	-6.95	0
253	SLU 66	-223	0	4312	-0.05	-7.15	0
253	SLU 67	-222	0	4306	-0.05	-7.13	0
253	SLU 68	-220	0	4267	-0.05	-7.04	0
253	SLU 69	-226	0	4348	-0.05	-7.24	0
253	SLU 70	-225	0	4342	-0.05	-7.23	0
253	SLU 71	-223	0	4313	-0.05	-7.16	0
253	SLU 72	-223	0	4306	-0.05	-7.15	0
253	SLU 73	-247	0	4827	-0.05	-7.89	0
253	SLU 74	-253	0	4908	-0.05	-8.09	0
253	SLU 75	-253	0	4902	-0.05	-8.08	0
253	SLU 76	-250	0	4863	-0.05	-7.99	0
253	SLU 77	-256	0	4944	-0.05	-8.18	0
253	SLU 78	-256	0	4938	-0.06	-8.17	0
253	SLU 79	-254	0	4909	-0.05	-8.1	0
253	SLU 80	-253	0	4903	-0.05	-8.09	0
253	SLU 81	-261	0	5093	-0.05	-8.32	0
253	SLU 82	-260	0	5087	-0.06	-8.3	0
253	SLU 83	-264	0	5129	-0.05	-8.41	0
253	SLU 84	-263	0	5123	-0.06	-8.4	0
253	SLE RA 1	-161	0	3150	-0.03	-5.17	0
253	SLE RA 2	-161	0	3143	-0.03	-5.16	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
253	SLE RA 3	-165	0	3197	-0.03	-5.29	0
253	SLE RA 4	-164	0	3193	-0.03	-5.28	0
253	SLE RA 5	-163	0	3167	-0.04	-5.22	0
253	SLE RA 6	-167	0	3221	-0.03	-5.35	0
253	SLE RA 7	-166	0	3217	-0.04	-5.34	0
253	SLE RA 8	-165	0	3197	-0.03	-5.3	0
253	SLE RA 9	-165	0	3193	-0.04	-5.29	0
253	SLE RA 10	-181	0	3540	-0.04	-5.79	0
253	SLE RA 11	-185	0	3595	-0.04	-5.92	0
253	SLE RA 12	-185	0	3590	-0.04	-5.91	0
253	SLE RA 13	-183	0	3564	-0.04	-5.85	0
253	SLE RA 14	-187	0	3618	-0.04	-5.98	0
253	SLE RA 15	-187	0	3614	-0.04	-5.97	0
253	SLE RA 16	-185	0	3595	-0.04	-5.93	0
253	SLE RA 17	-185	0	3591	-0.04	-5.92	0
253	SLE RA 18	-190	0	3718	-0.04	-6.07	0
253	SLE RA 19	-190	0	3714	-0.04	-6.06	0
253	SLE RA 20	-192	0	3742	-0.04	-6.13	0
253	SLE RA 21	-192	0	3737	-0.04	-6.12	0
253	SLE FR 1	-161	0	3150	-0.03	-5.17	0
253	SLE FR 2	-161	0	3148	-0.03	-5.17	0
253	SLE FR 3	-162	0	3159	-0.03	-5.2	0
253	SLE FR 4	-170	0	3319	-0.03	-5.44	0
253	SLE FR 5	-171	0	3330	-0.03	-5.47	0
253	SLE FR 6	-176	0	3434	-0.04	-5.62	0
253	SLE QP 1	-161	0	3150	-0.03	-5.17	0
253	SLE QP 2	-170	0	3320	-0.03	-5.44	0
253	SLD 1	363	10	2858	-10.94	18.54	0.17
253	SLD 2	363	10	2858	-10.94	18.54	0.17
253	SLD 3	441	-4	2783	6.73	22.07	-0.08
253	SLD 4	441	-4	2783	6.73	22.07	-0.08
253	SLD 5	-129	26	3295	-30.1	-3.61	0.42
253	SLD 6	-129	26	3295	-30.1	-3.61	0.42
253	SLD 7	132	-24	3046	28.78	8.17	-0.4
253	SLD 8	132	-24	3046	28.78	8.17	-0.4
253	SLD 9	-472	24	3594	-28.85	-19.05	0.4
253	SLD 10	-472	24	3594	-28.85	-19.05	0.4
253	SLD 11	-211	-25	3346	30.03	-7.28	-0.42
253	SLD 12	-211	-25	3346	30.03	-7.28	-0.42
253	SLD 13	-781	5	3857	-6.79	-32.95	0.08
253	SLD 14	-781	5	3857	-6.79	-32.95	0.08
253	SLD 15	-702	-10	3782	10.87	-29.42	-0.17
253	SLD 16	-702	-10	3782	10.87	-29.42	-0.17
253	SLV 1	1069	26	2241	-28	50.33	0.44
253	SLV 2	1069	26	2241	-28	50.33	0.44
253	SLV 3	1252	-12	2062	17.35	58.58	-0.19
253	SLV 4	1252	-12	2062	17.35	58.58	-0.19
253	SLV 5	-76	65	3269	-77.21	-1.21	1.09
253	SLV 6	-76	65	3269	-77.21	-1.21	1.09
253	SLV 7	534	-61	2670	73.96	26.26	-1.01
253	SLV 8	534	-61	2670	73.96	26.26	-1.01
253	SLV 9	-874	61	3970	-74.03	-37.15	1.01
253	SLV 10	-874	61	3970	-74.03	-37.15	1.01
253	SLV 11	-264	-65	3372	77.14	-9.67	-1.08
253	SLV 12	-264	-65	3372	77.14	-9.67	-1.08
253	SLV 13	-1591	12	4579	-17.42	-69.46	0.19
253	SLV 14	-1591	12	4579	-17.42	-69.46	0.19
253	SLV 15	-1408	-26	4399	27.94	-61.22	-0.43
253	SLV 16	-1408	-26	4399	27.94	-61.22	-0.43
254	SLU 1	-164	0	2784	-0.04	-6.07	0
254	SLU 2	-163	0	2774	-0.04	-6.05	0
254	SLU 3	-168	0	2848	-0.04	-6.23	0
254	SLU 4	-168	0	2842	-0.04	-6.22	0
254	SLU 5	-165	0	2806	-0.04	-6.13	0
254	SLU 6	-170	0	2880	-0.04	-6.3	0
254	SLU 7	-170	0	2874	-0.04	-6.29	0
254	SLU 8	-168	0	2849	-0.04	-6.22	0
254	SLU 9	-168	0	2843	-0.04	-6.21	0
254	SLU 10	-204	0	3316	-0.05	-7.53	0
254	SLU 11	-209	0	3391	-0.05	-7.71	0
254	SLU 12	-209	0	3385	-0.05	-7.7	0
254	SLU 13	-206	0	3349	-0.05	-7.61	0
254	SLU 14	-211	0	3423	-0.05	-7.79	0
254	SLU 15	-211	0	3417	-0.05	-7.78	0
254	SLU 16	-209	0	3391	-0.05	-7.7	0
254	SLU 17	-209	0	3385	-0.05	-7.69	0
254	SLU 18	-222	0	3559	-0.05	-8.18	0
254	SLU 19	-222	0	3553	-0.05	-8.17	0
254	SLU 20	-224	0	3591	-0.05	-8.26	0
254	SLU 21	-224	0	3585	-0.05	-8.25	0
254	SLU 22	-198	0	3251	-0.04	-7.31	0
254	SLU 23	-197	0	3241	-0.05	-7.29	0
254	SLU 24	-202	0	3315	-0.05	-7.47	0
254	SLU 25	-202	0	3309	-0.05	-7.46	0
254	SLU 26	-200	0	3273	-0.05	-7.37	0
254	SLU 27	-204	0	3347	-0.05	-7.55	0
254	SLU 28	-204	0	3341	-0.05	-7.54	0
254	SLU 29	-202	0	3315	-0.05	-7.46	0
254	SLU 30	-202	0	3309	-0.05	-7.45	0
254	SLU 31	-238	0	3783	-0.05	-8.78	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
254	SLU 32	-243	0	3857	-0.05	-8.95	0
254	SLU 33	-243	0	3851	-0.05	-8.94	0
254	SLU 34	-240	0	3816	-0.06	-8.85	0
254	SLU 35	-245	0	3890	-0.05	-9.03	0
254	SLU 36	-245	0	3884	-0.06	-9.02	0
254	SLU 37	-243	0	3858	-0.05	-8.95	0
254	SLU 38	-243	0	3852	-0.06	-8.94	0
254	SLU 39	-256	0	4026	-0.05	-9.43	0
254	SLU 40	-256	0	4020	-0.06	-9.42	0
254	SLU 41	-258	0	4058	-0.06	-9.5	0
254	SLU 42	-258	0	4052	-0.06	-9.49	0
254	SLU 43	-201	0	3459	-0.05	-7.46	0
254	SLU 44	-201	0	3449	-0.05	-7.44	0
254	SLU 45	-205	0	3523	-0.05	-7.62	0
254	SLU 46	-205	0	3517	-0.05	-7.61	0
254	SLU 47	-203	0	3481	-0.05	-7.52	0
254	SLU 48	-207	0	3556	-0.05	-7.7	0
254	SLU 49	-207	0	3550	-0.05	-7.69	0
254	SLU 50	-205	0	3524	-0.05	-7.62	0
254	SLU 51	-205	0	3518	-0.05	-7.61	0
254	SLU 52	-242	0	3992	-0.06	-8.93	0
254	SLU 53	-246	0	4066	-0.06	-9.1	0
254	SLU 54	-246	0	4060	-0.06	-9.09	0
254	SLU 55	-244	0	4024	-0.06	-9	0
254	SLU 56	-248	0	4098	-0.06	-9.18	0
254	SLU 57	-248	0	4092	-0.06	-9.17	0
254	SLU 58	-246	0	4066	-0.06	-9.1	0
254	SLU 59	-246	0	4060	-0.06	-9.09	0
254	SLU 60	-260	0	4234	-0.06	-9.58	0
254	SLU 61	-259	0	4228	-0.06	-9.57	0
254	SLU 62	-262	0	4266	-0.06	-9.65	0
254	SLU 63	-261	0	4260	-0.06	-9.64	0
254	SLU 64	-235	0	3926	-0.05	-8.7	0
254	SLU 65	-235	0	3916	-0.06	-8.69	0
254	SLU 66	-240	0	3990	-0.05	-8.86	0
254	SLU 67	-239	0	3984	-0.06	-8.85	0
254	SLU 68	-237	0	3948	-0.06	-8.76	0
254	SLU 69	-242	0	4022	-0.06	-8.94	0
254	SLU 70	-241	0	4016	-0.06	-8.93	0
254	SLU 71	-239	0	3991	-0.06	-8.86	0
254	SLU 72	-239	0	3984	-0.06	-8.85	0
254	SLU 73	-276	0	4458	-0.06	-10.17	0
254	SLU 74	-280	0	4533	-0.06	-10.35	0
254	SLU 75	-280	0	4527	-0.06	-10.34	0
254	SLU 76	-278	0	4491	-0.06	-10.25	0
254	SLU 77	-283	0	4565	-0.06	-10.42	0
254	SLU 78	-282	0	4559	-0.07	-10.41	0
254	SLU 79	-280	0	4533	-0.06	-10.34	0
254	SLU 80	-280	0	4527	-0.06	-10.33	0
254	SLU 81	-294	0	4701	-0.06	-10.82	0
254	SLU 82	-293	0	4695	-0.06	-10.81	0
254	SLU 83	-296	0	4733	-0.06	-10.9	0
254	SLU 84	-296	0	4727	-0.07	-10.89	0
254	SLE RA 1	-173	0	2917	-0.04	-6.42	0
254	SLE RA 2	-173	0	2911	-0.04	-6.41	0
254	SLE RA 3	-176	0	2960	-0.04	-6.53	0
254	SLE RA 4	-176	0	2956	-0.04	-6.52	0
254	SLE RA 5	-175	0	2932	-0.04	-6.46	0
254	SLE RA 6	-178	0	2982	-0.04	-6.58	0
254	SLE RA 7	-178	0	2978	-0.04	-6.57	0
254	SLE RA 8	-176	0	2960	-0.04	-6.53	0
254	SLE RA 9	-176	0	2956	-0.04	-6.52	0
254	SLE RA 10	-200	0	3272	-0.05	-7.4	0
254	SLE RA 11	-204	0	3322	-0.05	-7.52	0
254	SLE RA 12	-203	0	3318	-0.05	-7.51	0
254	SLE RA 13	-202	0	3294	-0.05	-7.45	0
254	SLE RA 14	-205	0	3343	-0.05	-7.57	0
254	SLE RA 15	-205	0	3339	-0.05	-7.56	0
254	SLE RA 16	-203	0	3322	-0.05	-7.51	0
254	SLE RA 17	-203	0	3318	-0.05	-7.51	0
254	SLE RA 18	-212	0	3434	-0.05	-7.83	0
254	SLE RA 19	-212	0	3430	-0.05	-7.83	0
254	SLE RA 20	-214	0	3456	-0.05	-7.88	0
254	SLE RA 21	-214	0	3452	-0.05	-7.88	0
254	SLE FR 1	-173	0	2917	-0.04	-6.42	0
254	SLE FR 2	-173	0	2916	-0.04	-6.42	0
254	SLE FR 3	-174	0	2926	-0.04	-6.44	0
254	SLE FR 4	-185	0	3071	-0.04	-6.84	0
254	SLE FR 5	-186	0	3081	-0.04	-6.87	0
254	SLE FR 6	-193	0	3176	-0.04	-7.13	0
254	SLE QP 1	-173	0	2917	-0.04	-6.42	0
254	SLE QP 2	-185	0	3072	-0.04	-6.85	0
254	SLD 1	465	8	2573	-9.37	21.37	0.13
254	SLD 2	465	8	2573	-9.37	21.37	0.13
254	SLD 3	387	-2	2486	4.67	17.91	-0.03
254	SLD 4	387	-2	2486	4.67	17.91	-0.03
254	SLD 5	129	18	3054	-24.14	6.86	0.27
254	SLD 6	129	18	3054	-24.14	6.86	0.27
254	SLD 7	-132	-16	2765	22.67	-4.66	-0.24
254	SLD 8	-132	-16	2765	22.67	-4.66	-0.24



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
254	SLD 9	-238	16	3380	-22.75	-9.03	0.24
254	SLD 10	-238	16	3380	-22.75	-9.03	0.24
254	SLD 11	-499	-18	3091	24.06	-20.55	-0.27
254	SLD 12	-499	-18	3091	24.06	-20.55	-0.27
254	SLD 13	-757	2	3658	-4.76	-31.6	0.03
254	SLD 14	-757	2	3658	-4.76	-31.6	0.03
254	SLD 15	-835	-8	3572	9.29	-35.06	-0.12
254	SLD 16	-835	-8	3572	9.29	-35.06	-0.12
254	SLV 1	1329	21	1906	-23.9	58.83	0.32
254	SLV 2	1329	21	1906	-23.9	58.83	0.32
254	SLV 3	1145	-4	1698	12.14	50.75	-0.07
254	SLV 4	1145	-4	1698	12.14	50.75	-0.07
254	SLV 5	547	46	3037	-61.86	25.11	0.69
254	SLV 6	547	46	3037	-61.86	25.11	0.69
254	SLV 7	-64	-41	2345	58.28	-1.82	-0.61
254	SLV 8	-64	-41	2345	58.28	-1.82	-0.61
254	SLV 9	-306	41	3800	-58.36	-11.87	0.61
254	SLV 10	-306	41	3800	-58.36	-11.87	0.61
254	SLV 11	-917	-46	3107	61.78	-38.8	-0.68
254	SLV 12	-917	-46	3107	61.78	-38.8	-0.68
254	SLV 13	-1516	5	4447	-12.22	-64.44	0.07
254	SLV 14	-1516	5	4447	-12.22	-64.44	0.07
254	SLV 15	-1699	-21	4239	23.82	-72.52	-0.32
254	SLV 16	-1699	-21	4239	23.82	-72.52	-0.32
255	SLU 1	-162	0	2640	-0.05	-6.45	0
255	SLU 2	-162	0	2629	-0.06	-6.45	0
255	SLU 3	-165	0	2700	-0.06	-6.56	0
255	SLU 4	-165	0	2694	-0.06	-6.56	0
255	SLU 5	-163	0	2660	-0.06	-6.49	0
255	SLU 6	-166	0	2731	-0.06	-6.6	0
255	SLU 7	-166	0	2725	-0.06	-6.6	0
255	SLU 8	-164	0	2701	-0.06	-6.53	0
255	SLU 9	-164	0	2695	-0.06	-6.53	0
255	SLU 10	-211	0	3126	-0.06	-8.36	0
255	SLU 11	-214	0	3197	-0.06	-8.47	0
255	SLU 12	-214	0	3191	-0.07	-8.47	0
255	SLU 13	-212	0	3157	-0.07	-8.4	0
255	SLU 14	-215	0	3228	-0.07	-8.51	0
255	SLU 15	-215	0	3222	-0.07	-8.51	0
255	SLU 16	-213	0	3198	-0.07	-8.44	0
255	SLU 17	-213	0	3191	-0.07	-8.44	0
255	SLU 18	-232	0	3349	-0.07	-9.18	0
255	SLU 19	-232	0	3343	-0.07	-9.18	0
255	SLU 20	-233	0	3380	-0.07	-9.22	0
255	SLU 21	-233	0	3374	-0.07	-9.22	0
255	SLU 22	-200	0	3071	-0.06	-7.95	0
255	SLU 23	-200	0	3060	-0.06	-7.95	0
255	SLU 24	-203	0	3131	-0.06	-8.06	0
255	SLU 25	-203	0	3125	-0.07	-8.06	0
255	SLU 26	-201	0	3091	-0.07	-7.99	0
255	SLU 27	-204	0	3162	-0.07	-8.1	0
255	SLU 28	-204	0	3156	-0.07	-8.1	0
255	SLU 29	-202	0	3132	-0.06	-8.03	0
255	SLU 30	-202	0	3125	-0.07	-8.03	0
255	SLU 31	-249	0	3557	-0.07	-9.86	0
255	SLU 32	-252	0	3628	-0.07	-9.97	0
255	SLU 33	-252	0	3622	-0.07	-9.97	0
255	SLU 34	-250	0	3588	-0.07	-9.89	0
255	SLU 35	-253	0	3659	-0.07	-10.01	0
255	SLU 36	-253	0	3652	-0.08	-10.01	0
255	SLU 37	-251	0	3629	-0.07	-9.94	0
255	SLU 38	-251	0	3622	-0.08	-9.94	0
255	SLU 39	-270	0	3780	-0.07	-10.68	0
255	SLU 40	-270	0	3774	-0.08	-10.68	0
255	SLU 41	-271	0	3811	-0.08	-10.72	0
255	SLU 42	-271	0	3805	-0.08	-10.72	0
255	SLU 43	-197	0	3284	-0.07	-7.88	0
255	SLU 44	-197	0	3273	-0.07	-7.87	0
255	SLU 45	-200	0	3344	-0.07	-7.99	0
255	SLU 46	-200	0	3338	-0.07	-7.98	0
255	SLU 47	-198	0	3304	-0.07	-7.91	0
255	SLU 48	-201	0	3375	-0.07	-8.03	0
255	SLU 49	-201	0	3369	-0.07	-8.02	0
255	SLU 50	-200	0	3345	-0.07	-7.95	0
255	SLU 51	-199	0	3339	-0.07	-7.95	0
255	SLU 52	-246	0	3770	-0.08	-9.78	0
255	SLU 53	-249	0	3841	-0.08	-9.9	0
255	SLU 54	-249	0	3835	-0.08	-9.89	0
255	SLU 55	-247	0	3801	-0.08	-9.82	0
255	SLU 56	-250	0	3872	-0.08	-9.93	0
255	SLU 57	-250	0	3866	-0.08	-9.93	0
255	SLU 58	-248	0	3842	-0.08	-9.86	0
255	SLU 59	-248	0	3836	-0.08	-9.86	0
255	SLU 60	-267	0	3994	-0.08	-10.6	0
255	SLU 61	-267	0	3987	-0.08	-10.6	0
255	SLU 62	-268	0	4024	-0.08	-10.64	0
255	SLU 63	-268	0	4018	-0.08	-10.64	0
255	SLU 64	-236	0	3715	-0.07	-9.37	0
255	SLU 65	-236	0	3704	-0.08	-9.37	0
255	SLU 66	-239	0	3775	-0.08	-9.48	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
255	SLU 67	-238	0	3769	-0.08	-9.48	0
255	SLU 68	-237	0	3735	-0.08	-9.41	0
255	SLU 69	-240	0	3806	-0.08	-9.52	0
255	SLU 70	-239	0	3800	-0.08	-9.52	0
255	SLU 71	-238	0	3776	-0.08	-9.45	0
255	SLU 72	-238	0	3770	-0.08	-9.45	0
255	SLU 73	-285	0	4201	-0.09	-11.28	0
255	SLU 74	-287	0	4272	-0.09	-11.39	0
255	SLU 75	-287	0	4266	-0.09	-11.39	0
255	SLU 76	-286	0	4232	-0.09	-11.32	0
255	SLU 77	-288	0	4303	-0.09	-11.43	0
255	SLU 78	-288	0	4297	-0.09	-11.43	0
255	SLU 79	-287	0	4273	-0.09	-11.36	0
255	SLU 80	-287	0	4267	-0.09	-11.36	0
255	SLU 81	-306	0	4425	-0.09	-12.1	0
255	SLU 82	-306	0	4418	-0.09	-12.1	0
255	SLU 83	-307	0	4455	-0.09	-12.14	0
255	SLU 84	-307	0	4449	-0.09	-12.14	0
255	SLE RA 1	-173	0	2763	-0.06	-6.88	0
255	SLE RA 2	-173	0	2756	-0.06	-6.88	0
255	SLE RA 3	-175	0	2803	-0.06	-6.96	0
255	SLE RA 4	-175	0	2799	-0.06	-6.95	0
255	SLE RA 5	-174	0	2776	-0.06	-6.9	0
255	SLE RA 6	-175	0	2824	-0.06	-6.98	0
255	SLE RA 7	-175	0	2819	-0.06	-6.98	0
255	SLE RA 8	-174	0	2804	-0.06	-6.93	0
255	SLE RA 9	-174	0	2799	-0.06	-6.93	0
255	SLE RA 10	-206	0	3087	-0.06	-8.15	0
255	SLE RA 11	-207	0	3134	-0.06	-8.23	0
255	SLE RA 12	-207	0	3130	-0.06	-8.23	0
255	SLE RA 13	-206	0	3108	-0.06	-8.18	0
255	SLE RA 14	-208	0	3155	-0.06	-8.25	0
255	SLE RA 15	-208	0	3151	-0.07	-8.25	0
255	SLE RA 16	-207	0	3135	-0.06	-8.21	0
255	SLE RA 17	-207	0	3131	-0.06	-8.2	0
255	SLE RA 18	-220	0	3236	-0.06	-8.7	0
255	SLE RA 19	-220	0	3232	-0.06	-8.7	0
255	SLE RA 20	-220	0	3256	-0.06	-8.73	0
255	SLE RA 21	-220	0	3252	-0.07	-8.72	0
255	SLE FR 1	-173	0	2763	-0.06	-6.88	0
255	SLE FR 2	-173	0	2761	-0.06	-6.88	0
255	SLE FR 3	-173	0	2771	-0.06	-6.89	0
255	SLE FR 4	-187	0	2903	-0.06	-7.43	0
255	SLE FR 5	-187	0	2913	-0.06	-7.44	0
255	SLE FR 6	-196	0	2999	-0.06	-7.79	0
255	SLE QP 1	-173	0	2763	-0.06	-6.88	0
255	SLE QP 2	-187	0	2905	-0.06	-7.43	0
255	SLD 1	500	6	2415	-7.15	22.52	0.07
255	SLD 2	500	6	2415	-7.15	22.52	0.07
255	SLD 3	421	1	2304	2.57	19.05	0.01
255	SLD 4	421	1	2304	2.57	19.05	0.01
255	SLD 5	139	9	2927	-16.92	6.82	0.11
255	SLD 6	139	9	2927	-16.92	6.82	0.11
255	SLD 7	-124	-7	2555	15.46	-4.75	-0.09
255	SLD 8	-124	-7	2555	15.46	-4.75	-0.09
255	SLD 9	-250	7	3255	-15.58	-10.11	0.09
255	SLD 10	-250	7	3255	-15.58	-10.11	0.09
255	SLD 11	-513	-9	2882	16.8	-21.67	-0.11
255	SLD 12	-513	-9	2882	16.8	-21.67	-0.11
255	SLD 13	-795	-1	3506	-2.68	-33.9	-0.01
255	SLD 14	-795	-1	3506	-2.68	-33.9	-0.01
255	SLD 15	-874	-6	3394	7.03	-37.37	-0.07
255	SLD 16	-874	-6	3394	7.03	-37.37	-0.07
255	SLV 1	1414	14	1763	-18.11	62.34	0.17
255	SLV 2	1414	14	1763	-18.11	62.34	0.17
255	SLV 3	1228	2	1495	6.81	54.2	0.02
255	SLV 4	1228	2	1495	6.81	54.2	0.02
255	SLV 5	574	23	2968	-43.26	25.85	0.28
255	SLV 6	574	23	2968	-43.26	25.85	0.28
255	SLV 7	-43	-18	2076	39.8	-1.28	-0.22
255	SLV 8	-43	-18	2076	39.8	-1.28	-0.22
255	SLV 9	-331	18	3734	-39.91	-13.57	0.22
255	SLV 10	-331	18	3734	-39.91	-13.57	0.22
255	SLV 11	-948	-23	2841	43.15	-40.7	-0.28
255	SLV 12	-948	-23	2841	43.15	-40.7	-0.28
255	SLV 13	-1602	-2	4315	-6.93	-69.05	-0.02
255	SLV 14	-1602	-2	4315	-6.93	-69.05	-0.02
255	SLV 15	-1787	-14	4047	17.99	-77.19	-0.17
255	SLV 16	-1787	-14	4047	17.99	-77.19	-0.17
256	SLU 1	-175	0	2585	-0.09	-6.96	0
256	SLU 2	-175	0	2574	-0.09	-6.96	0
256	SLU 3	-176	0	2646	-0.09	-7.03	0
256	SLU 4	-176	0	2639	-0.1	-7.03	0
256	SLU 5	-175	0	2605	-0.1	-6.97	0
256	SLU 6	-177	0	2677	-0.1	-7.04	0
256	SLU 7	-177	0	2670	-0.1	-7.04	0
256	SLU 8	-175	0	2647	-0.09	-6.99	0
256	SLU 9	-175	0	2640	-0.1	-6.99	0
256	SLU 10	-231	0	3037	-0.11	-9.09	0
256	SLU 11	-232	0	3109	-0.11	-9.17	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
256	SLU 12	-232	0	3103	-0.11	-9.17	0
256	SLU 13	-231	0	3068	-0.11	-9.11	0
256	SLU 14	-233	0	3140	-0.11	-9.18	0
256	SLU 15	-233	0	3134	-0.11	-9.18	0
256	SLU 16	-231	0	3111	-0.11	-9.13	0
256	SLU 17	-231	0	3104	-0.11	-9.13	0
256	SLU 18	-255	0	3247	-0.11	-10.01	0
256	SLU 19	-255	0	3240	-0.11	-10.01	0
256	SLU 20	-255	0	3278	-0.11	-10.03	0
256	SLU 21	-255	0	3271	-0.11	-10.03	0
256	SLU 22	-217	0	2993	-0.1	-8.58	0
256	SLU 23	-217	0	2982	-0.11	-8.58	0
256	SLU 24	-219	0	3054	-0.11	-8.66	0
256	SLU 25	-219	0	3047	-0.11	-8.66	0
256	SLU 26	-217	0	3013	-0.11	-8.6	0
256	SLU 27	-219	0	3085	-0.11	-8.67	0
256	SLU 28	-219	0	3078	-0.11	-8.67	0
256	SLU 29	-217	0	3055	-0.11	-8.62	0
256	SLU 30	-218	0	3048	-0.11	-8.62	0
256	SLU 31	-273	0	3445	-0.12	-10.72	0
256	SLU 32	-274	0	3517	-0.12	-10.79	0
256	SLU 33	-275	0	3511	-0.12	-10.79	0
256	SLU 34	-273	0	3476	-0.12	-10.74	0
256	SLU 35	-275	0	3548	-0.12	-10.81	0
256	SLU 36	-275	0	3542	-0.12	-10.81	0
256	SLU 37	-273	0	3518	-0.12	-10.76	0
256	SLU 38	-273	0	3512	-0.12	-10.76	0
256	SLU 39	-297	0	3655	-0.12	-11.64	0
256	SLU 40	-297	0	3648	-0.12	-11.64	0
256	SLU 41	-297	0	3686	-0.12	-11.66	0
256	SLU 42	-297	0	3679	-0.13	-11.66	0
256	SLU 43	-212	0	3221	-0.11	-8.48	0
256	SLU 44	-213	0	3210	-0.11	-8.48	0
256	SLU 45	-214	0	3282	-0.12	-8.56	0
256	SLU 46	-214	0	3275	-0.12	-8.56	0
256	SLU 47	-213	0	3241	-0.12	-8.5	0
256	SLU 48	-214	0	3313	-0.12	-8.57	0
256	SLU 49	-215	0	3306	-0.12	-8.57	0
256	SLU 50	-213	0	3283	-0.12	-8.52	0
256	SLU 51	-213	0	3276	-0.12	-8.52	0
256	SLU 52	-269	0	3673	-0.13	-10.62	0
256	SLU 53	-270	0	3745	-0.13	-10.69	0
256	SLU 54	-270	0	3738	-0.13	-10.69	0
256	SLU 55	-269	0	3704	-0.13	-10.64	0
256	SLU 56	-270	0	3776	-0.13	-10.71	0
256	SLU 57	-270	0	3769	-0.13	-10.71	0
256	SLU 58	-269	0	3746	-0.13	-10.66	0
256	SLU 59	-269	0	3739	-0.13	-10.66	0
256	SLU 60	-292	0	3883	-0.13	-11.54	0
256	SLU 61	-292	0	3876	-0.13	-11.54	0
256	SLU 62	-293	0	3914	-0.13	-11.56	0
256	SLU 63	-293	0	3907	-0.14	-11.56	0
256	SLU 64	-255	0	3629	-0.13	-10.11	0
256	SLU 65	-255	0	3617	-0.13	-10.11	0
256	SLU 66	-256	0	3690	-0.13	-10.18	0
256	SLU 67	-256	0	3683	-0.13	-10.18	0
256	SLU 68	-255	0	3648	-0.13	-10.13	0
256	SLU 69	-257	0	3721	-0.13	-10.2	0
256	SLU 70	-257	0	3714	-0.13	-10.2	0
256	SLU 71	-255	0	3691	-0.13	-10.15	0
256	SLU 72	-255	0	3684	-0.13	-10.15	0
256	SLU 73	-311	0	4081	-0.14	-12.25	0
256	SLU 74	-312	0	4153	-0.14	-12.32	0
256	SLU 75	-312	0	4146	-0.14	-12.32	0
256	SLU 76	-311	0	4112	-0.14	-12.27	0
256	SLU 77	-313	0	4184	-0.14	-12.34	0
256	SLU 78	-313	0	4177	-0.15	-12.34	0
256	SLU 79	-311	0	4154	-0.14	-12.28	0
256	SLU 80	-311	0	4147	-0.15	-12.28	0
256	SLU 81	-335	0	4291	-0.14	-13.17	0
256	SLU 82	-335	0	4284	-0.15	-13.17	0
256	SLU 83	-335	0	4322	-0.15	-13.18	0
256	SLU 84	-335	0	4315	-0.15	-13.18	0
256	SLE RA 1	-187	0	2702	-0.09	-7.42	0
256	SLE RA 2	-187	0	2694	-0.1	-7.42	0
256	SLE RA 3	-188	0	2742	-0.1	-7.47	0
256	SLE RA 4	-188	0	2738	-0.1	-7.47	0
256	SLE RA 5	-187	0	2715	-0.1	-7.43	0
256	SLE RA 6	-188	0	2763	-0.1	-7.48	0
256	SLE RA 7	-188	0	2758	-0.1	-7.48	0
256	SLE RA 8	-187	0	2743	-0.1	-7.44	0
256	SLE RA 9	-187	0	2739	-0.1	-7.44	0
256	SLE RA 10	-224	0	3003	-0.1	-8.85	0
256	SLE RA 11	-225	0	3051	-0.1	-8.89	0
256	SLE RA 12	-225	0	3047	-0.11	-8.89	0
256	SLE RA 13	-224	0	3024	-0.11	-8.86	0
256	SLE RA 14	-225	0	3072	-0.11	-8.91	0
256	SLE RA 15	-225	0	3067	-0.11	-8.91	0
256	SLE RA 16	-224	0	3052	-0.11	-8.87	0
256	SLE RA 17	-224	0	3047	-0.11	-8.87	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
256	SLE RA 18	-240	0	3143	-0.11	-9.46	0
256	SLE RA 19	-240	0	3138	-0.11	-9.46	0
256	SLE RA 20	-240	0	3164	-0.11	-9.47	0
256	SLE RA 21	-240	0	3159	-0.11	-9.47	0
256	SLE FR 1	-187	0	2702	-0.09	-7.42	0
256	SLE FR 2	-187	0	2700	-0.09	-7.42	0
256	SLE FR 3	-187	0	2710	-0.09	-7.43	0
256	SLE FR 4	-203	0	2833	-0.1	-8.03	0
256	SLE FR 5	-203	0	2842	-0.1	-8.04	0
256	SLE FR 6	-213	0	2922	-0.1	-8.44	0
256	SLE QP 1	-187	0	2702	-0.09	-7.42	0
256	SLE QP 2	-203	0	2834	-0.1	-8.03	0
256	SLD 1	488	2	2373	-4.65	21.04	0.02
256	SLD 2	488	2	2373	-4.65	21.04	0.02
256	SLD 3	411	4	2222	0.84	17.69	0.04
256	SLD 4	411	4	2222	0.84	17.69	0.04
256	SLD 5	123	-2	2924	-9.79	5.77	-0.02
256	SLD 6	123	-2	2924	-9.79	5.77	-0.02
256	SLD 7	-137	4	2422	8.51	-5.39	0.03
256	SLD 8	-137	4	2422	8.51	-5.39	0.03
256	SLD 9	-268	-4	3246	-8.7	-10.67	-0.03
256	SLD 10	-268	-4	3246	-8.7	-10.67	-0.03
256	SLD 11	-528	2	2744	9.59	-21.83	0.02
256	SLD 12	-528	2	2744	9.59	-21.83	0.02
256	SLD 13	-816	-4	3446	-1.03	-33.75	-0.03
256	SLD 14	-816	-4	3446	-1.03	-33.75	-0.03
256	SLD 15	-894	-2	3295	4.46	-37.1	-0.02
256	SLD 16	-894	-2	3295	4.46	-37.1	-0.02
256	SLV 1	1408	5	1760	-11.58	59.71	0.05
256	SLV 2	1408	5	1760	-11.58	59.71	0.05
256	SLV 3	1225	10	1399	2.48	51.84	0.08
256	SLV 4	1225	10	1399	2.48	51.84	0.08
256	SLV 5	559	-6	3059	-24.86	24.22	-0.04
256	SLV 6	559	-6	3059	-24.86	24.22	-0.04
256	SLV 7	-53	10	1857	21.99	-2	0.08
256	SLV 8	-53	10	1857	21.99	-2	0.08
256	SLV 9	-353	-10	3812	-22.19	-14.06	-0.08
256	SLV 10	-353	-10	3812	-22.19	-14.06	-0.08
256	SLV 11	-964	6	2609	24.66	-40.28	0.04
256	SLV 12	-964	6	2609	24.66	-40.28	0.04
256	SLV 13	-1630	-10	4269	-2.67	-67.9	-0.08
256	SLV 14	-1630	-10	4269	-2.67	-67.9	-0.08
256	SLV 15	-1814	-5	3908	11.39	-75.77	-0.04
256	SLV 16	-1814	-5	3908	11.39	-75.77	-0.04
257	SLU 1	-281	1	2634	-0.19	-13.17	0
257	SLU 2	-281	1	2621	-0.19	-13.14	0
257	SLU 3	-285	1	2698	-0.2	-13.37	0
257	SLU 4	-285	1	2691	-0.2	-13.35	0
257	SLU 5	-282	1	2654	-0.2	-13.22	0
257	SLU 6	-286	1	2732	-0.2	-13.45	0
257	SLU 7	-286	1	2724	-0.2	-13.43	0
257	SLU 8	-284	1	2700	-0.2	-13.32	0
257	SLU 9	-284	1	2693	-0.2	-13.31	0
257	SLU 10	-357	1	3068	-0.22	-16.48	0
257	SLU 11	-361	1	3146	-0.22	-16.71	0
257	SLU 12	-361	1	3138	-0.22	-16.7	0
257	SLU 13	-358	1	3102	-0.22	-16.56	0
257	SLU 14	-362	1	3180	-0.23	-16.79	0
257	SLU 15	-362	1	3172	-0.23	-16.78	0
257	SLU 16	-360	1	3148	-0.22	-16.67	0
257	SLU 17	-359	1	3141	-0.22	-16.65	0
257	SLU 18	-390	1	3273	-0.23	-17.94	0
257	SLU 19	-390	1	3266	-0.23	-17.93	0
257	SLU 20	-391	1	3307	-0.23	-18.02	0
257	SLU 21	-391	1	3299	-0.23	-18	0
257	SLU 22	-341	1	3036	-0.22	-15.83	0
257	SLU 23	-340	1	3023	-0.22	-15.8	0
257	SLU 24	-344	1	3101	-0.22	-16.04	0
257	SLU 25	-344	1	3093	-0.22	-16.02	0
257	SLU 26	-341	1	3056	-0.22	-15.88	0
257	SLU 27	-345	1	3134	-0.23	-16.11	0
257	SLU 28	-345	1	3126	-0.23	-16.1	0
257	SLU 29	-343	1	3103	-0.22	-15.99	0
257	SLU 30	-343	1	3095	-0.22	-15.97	0
257	SLU 31	-416	1	3471	-0.24	-19.15	0.01
257	SLU 32	-420	1	3548	-0.25	-19.38	0.01
257	SLU 33	-420	1	3541	-0.25	-19.36	0.01
257	SLU 34	-417	1	3504	-0.25	-19.23	0.01
257	SLU 35	-421	1	3582	-0.25	-19.46	0.01
257	SLU 36	-421	1	3574	-0.25	-19.44	0.01
257	SLU 37	-419	1	3551	-0.25	-19.33	0.01
257	SLU 38	-419	1	3543	-0.25	-19.32	0.01
257	SLU 39	-449	1	3676	-0.25	-20.61	0.01
257	SLU 40	-449	1	3668	-0.25	-20.59	0.01
257	SLU 41	-450	1	3709	-0.26	-20.69	0.01
257	SLU 42	-450	1	3701	-0.26	-20.67	0.01
257	SLU 43	-345	1	3286	-0.24	-16.2	0
257	SLU 44	-345	1	3273	-0.24	-16.17	0
257	SLU 45	-349	1	3351	-0.24	-16.41	0.01
257	SLU 46	-349	1	3343	-0.24	-16.39	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
257	SLU 47	-346	1	3306	-0.24	-16.25	0.01
257	SLU 48	-350	1	3384	-0.25	-16.48	0.01
257	SLU 49	-350	1	3376	-0.25	-16.47	0.01
257	SLU 50	-348	1	3353	-0.25	-16.36	0.01
257	SLU 51	-348	1	3345	-0.25	-16.34	0.01
257	SLU 52	-421	1	3721	-0.27	-19.52	0.01
257	SLU 53	-425	1	3798	-0.27	-19.75	0.01
257	SLU 54	-425	1	3791	-0.27	-19.73	0.01
257	SLU 55	-422	1	3754	-0.27	-19.6	0.01
257	SLU 56	-426	1	3832	-0.27	-19.83	0.01
257	SLU 57	-426	1	3824	-0.27	-19.81	0.01
257	SLU 58	-424	1	3801	-0.27	-19.7	0.01
257	SLU 59	-424	1	3793	-0.27	-19.69	0.01
257	SLU 60	-454	1	3926	-0.27	-20.98	0.01
257	SLU 61	-454	1	3918	-0.28	-20.96	0.01
257	SLU 62	-455	1	3959	-0.28	-21.06	0.01
257	SLU 63	-455	1	3951	-0.28	-21.04	0.01
257	SLU 64	-405	1	3688	-0.26	-18.87	0.01
257	SLU 65	-404	1	3675	-0.27	-18.84	0.01
257	SLU 66	-408	1	3753	-0.27	-19.07	0.01
257	SLU 67	-408	1	3745	-0.27	-19.06	0.01
257	SLU 68	-406	1	3708	-0.27	-18.92	0.01
257	SLU 69	-410	1	3786	-0.27	-19.15	0.01
257	SLU 70	-409	1	3778	-0.28	-19.13	0.01
257	SLU 71	-407	1	3755	-0.27	-19.02	0.01
257	SLU 72	-407	1	3747	-0.27	-19.01	0.01
257	SLU 73	-480	1	4123	-0.29	-22.18	0.01
257	SLU 74	-484	1	4201	-0.3	-22.42	0.01
257	SLU 75	-484	1	4193	-0.3	-22.4	0.01
257	SLU 76	-481	1	4156	-0.3	-22.26	0.01
257	SLU 77	-485	1	4234	-0.3	-22.49	0.01
257	SLU 78	-485	1	4226	-0.3	-22.48	0.01
257	SLU 79	-483	1	4203	-0.3	-22.37	0.01
257	SLU 80	-483	1	4195	-0.3	-22.35	0.01
257	SLU 81	-513	1	4328	-0.3	-23.65	0.01
257	SLU 82	-513	1	4320	-0.3	-23.63	0.01
257	SLU 83	-514	1	4361	-0.3	-23.72	0.01
257	SLU 84	-514	1	4353	-0.31	-23.71	0.01
257	SLE RA 1	-298	1	2748	-0.2	-13.93	0
257	SLE RA 2	-298	1	2740	-0.2	-13.91	0
257	SLE RA 3	-301	1	2792	-0.2	-14.06	0
257	SLE RA 4	-301	1	2787	-0.2	-14.05	0
257	SLE RA 5	-299	1	2762	-0.2	-13.96	0
257	SLE RA 6	-302	1	2814	-0.2	-14.12	0
257	SLE RA 7	-301	1	2809	-0.2	-14.1	0
257	SLE RA 8	-300	1	2793	-0.2	-14.03	0
257	SLE RA 9	-300	1	2788	-0.2	-14.02	0
257	SLE RA 10	-349	1	3038	-0.22	-16.14	0
257	SLE RA 11	-351	1	3090	-0.22	-16.29	0
257	SLE RA 12	-351	1	3085	-0.22	-16.28	0
257	SLE RA 13	-349	1	3061	-0.22	-16.19	0
257	SLE RA 14	-352	1	3113	-0.22	-16.35	0
257	SLE RA 15	-352	1	3107	-0.22	-16.33	0
257	SLE RA 16	-350	1	3092	-0.22	-16.26	0
257	SLE RA 17	-350	1	3086	-0.22	-16.25	0
257	SLE RA 18	-371	1	3175	-0.22	-17.11	0
257	SLE RA 19	-370	1	3170	-0.22	-17.1	0
257	SLE RA 20	-371	1	3197	-0.22	-17.17	0
257	SLE RA 21	-371	1	3192	-0.22	-17.15	0
257	SLE FR 1	-298	1	2748	-0.2	-13.93	0
257	SLE FR 2	-298	1	2747	-0.2	-13.92	0
257	SLE FR 3	-299	1	2757	-0.2	-13.95	0
257	SLE FR 4	-320	1	2875	-0.2	-14.88	0
257	SLE FR 5	-320	1	2885	-0.21	-14.9	0
257	SLE FR 6	-334	1	2962	-0.21	-15.52	0
257	SLE QP 1	-298	1	2748	-0.2	-13.93	0
257	SLE QP 2	-320	1	2876	-0.2	-14.88	0
257	SLD 1	368	2	2379	-2.43	15.67	0.02
257	SLD 2	368	2	2379	-2.43	15.67	0.02
257	SLD 3	292	5	2170	-0.17	12.25	0.01
257	SLD 4	292	5	2170	-0.17	12.25	0.01
257	SLD 5	1	-3	3044	-4.3	-0.52	0.02
257	SLD 6	1	-3	3044	-4.3	-0.52	0.02
257	SLD 7	-251	6	2347	3.24	-11.95	0
257	SLD 8	-251	6	2347	3.24	-11.95	0
257	SLD 9	-389	-5	3406	-3.64	-17.82	0.01
257	SLD 10	-389	-5	3406	-3.64	-17.82	0.01
257	SLD 11	-641	5	2708	3.89	-29.25	-0.01
257	SLD 12	-641	5	2708	3.89	-29.25	-0.01
257	SLD 13	-932	-3	3583	-0.24	-42.01	0
257	SLD 14	-932	-3	3583	-0.24	-42.01	0
257	SLD 15	-1008	-1	3374	2.02	-45.44	-0.01
257	SLD 16	-1008	-1	3374	2.02	-45.44	-0.01
257	SLV 1	1284	3	1719	-5.73	56.36	0.04
257	SLV 2	1284	3	1719	-5.73	56.36	0.04
257	SLV 3	1106	10	1220	0.03	48.3	0.02
257	SLV 4	1106	10	1220	0.03	48.3	0.02
257	SLV 5	432	-10	3287	-10.6	18.72	0.04
257	SLV 6	432	-10	3287	-10.6	18.72	0.04
257	SLV 7	-163	14	1622	8.6	-8.16	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
257	SLV 8	-163	14	1622	8.6	-8.16	-0.01
257	SLV 9	-477	-13	4131	-9.01	-21.61	0.02
257	SLV 10	-477	-13	4131	-9.01	-21.61	0.02
257	SLV 11	-1072	11	2466	10.19	-48.49	-0.03
257	SLV 12	-1072	11	2466	10.19	-48.49	-0.03
257	SLV 13	-1746	-9	4533	-0.44	-78.07	-0.01
257	SLV 14	-1746	-9	4533	-0.44	-78.07	-0.01
257	SLV 15	-1924	-2	4034	5.32	-86.13	-0.03
257	SLV 16	-1924	-2	4034	5.32	-86.13	-0.03
258	SLU 1	-392	272	4265	-10.61	-9.66	-0.02
258	SLU 2	-390	273	4242	-10.67	-9.63	-0.02
258	SLU 3	-400	280	4375	-10.94	-9.84	-0.02
258	SLU 4	-399	281	4361	-10.98	-9.82	-0.02
258	SLU 5	-394	278	4299	-10.87	-9.71	-0.02
258	SLU 6	-404	285	4432	-11.14	-9.92	-0.02
258	SLU 7	-403	286	4419	-11.17	-9.9	-0.02
258	SLU 8	-399	282	4380	-11	-9.82	-0.02
258	SLU 9	-399	282	4366	-11.04	-9.8	-0.02
258	SLU 10	-469	308	4941	-12.04	-11.78	-0.02
258	SLU 11	-479	314	5074	-12.31	-11.99	-0.03
258	SLU 12	-478	315	5060	-12.34	-11.97	-0.03
258	SLU 13	-473	313	4998	-12.23	-11.86	-0.03
258	SLU 14	-483	319	5131	-12.5	-12.07	-0.03
258	SLU 15	-482	320	5118	-12.54	-12.05	-0.03
258	SLU 16	-478	316	5079	-12.37	-11.97	-0.03
258	SLU 17	-477	317	5065	-12.41	-11.95	-0.03
258	SLU 18	-504	321	5263	-12.56	-12.74	-0.03
258	SLU 19	-503	322	5250	-12.6	-12.72	-0.03
258	SLU 20	-508	326	5321	-12.76	-12.82	-0.03
258	SLU 21	-507	327	5307	-12.79	-12.8	-0.03
258	SLU 22	-459	307	4904	-12.01	-11.43	-0.02
258	SLU 23	-457	308	4881	-12.07	-11.4	-0.02
258	SLU 24	-467	315	5014	-12.34	-11.61	-0.03
258	SLU 25	-466	316	5000	-12.37	-11.59	-0.03
258	SLU 26	-461	313	4938	-12.26	-11.48	-0.03
258	SLU 27	-471	320	5071	-12.53	-11.69	-0.03
258	SLU 28	-470	321	5057	-12.57	-11.67	-0.03
258	SLU 29	-467	317	5018	-12.4	-11.59	-0.03
258	SLU 30	-466	318	5005	-12.44	-11.57	-0.03
258	SLU 31	-536	343	5580	-13.43	-13.56	-0.03
258	SLU 32	-546	350	5713	-13.7	-13.76	-0.03
258	SLU 33	-545	351	5699	-13.74	-13.74	-0.03
258	SLU 34	-540	348	5637	-13.63	-13.63	-0.03
258	SLU 35	-550	355	5770	-13.9	-13.84	-0.03
258	SLU 36	-549	356	5757	-13.93	-13.82	-0.03
258	SLU 37	-545	351	5718	-13.77	-13.74	-0.03
258	SLU 38	-545	352	5704	-13.8	-13.72	-0.03
258	SLU 39	-571	356	5902	-13.96	-14.51	-0.03
258	SLU 40	-570	357	5889	-14	-14.49	-0.03
258	SLU 41	-575	361	5960	-14.16	-14.59	-0.03
258	SLU 42	-574	362	5946	-14.19	-14.57	-0.03
258	SLU 43	-486	341	5325	-13.32	-11.95	-0.03
258	SLU 44	-484	342	5302	-13.38	-11.92	-0.03
258	SLU 45	-494	349	5435	-13.65	-12.13	-0.03
258	SLU 46	-493	350	5422	-13.68	-12.11	-0.03
258	SLU 47	-488	347	5360	-13.57	-12	-0.03
258	SLU 48	-498	354	5493	-13.84	-12.21	-0.03
258	SLU 49	-497	355	5479	-13.88	-12.19	-0.03
258	SLU 50	-494	351	5440	-13.71	-12.11	-0.03
258	SLU 51	-493	352	5426	-13.75	-12.09	-0.03
258	SLU 52	-563	377	6001	-14.74	-14.08	-0.03
258	SLU 53	-573	384	6134	-15.01	-14.28	-0.03
258	SLU 54	-572	385	6121	-15.05	-14.26	-0.03
258	SLU 55	-567	382	6059	-14.94	-14.15	-0.03
258	SLU 56	-577	389	6192	-15.21	-14.36	-0.03
258	SLU 57	-576	390	6178	-15.24	-14.34	-0.03
258	SLU 58	-573	385	6139	-15.08	-14.26	-0.03
258	SLU 59	-572	386	6125	-15.11	-14.24	-0.03
258	SLU 60	-599	390	6324	-15.27	-15.03	-0.03
258	SLU 61	-598	391	6310	-15.3	-15.01	-0.03
258	SLU 62	-603	395	6381	-15.46	-15.11	-0.03
258	SLU 63	-602	396	6368	-15.5	-15.09	-0.03
258	SLU 64	-553	376	5964	-14.71	-13.73	-0.03
258	SLU 65	-552	378	5941	-14.77	-13.69	-0.03
258	SLU 66	-561	385	6074	-15.04	-13.9	-0.03
258	SLU 67	-560	385	6060	-15.08	-13.88	-0.03
258	SLU 68	-556	383	5999	-14.97	-13.77	-0.03
258	SLU 69	-565	390	6132	-15.24	-13.98	-0.03
258	SLU 70	-564	390	6118	-15.27	-13.96	-0.03
258	SLU 71	-561	386	6079	-15.11	-13.88	-0.03
258	SLU 72	-560	387	6065	-15.14	-13.86	-0.03
258	SLU 73	-630	412	6640	-16.14	-15.85	-0.03
258	SLU 74	-640	419	6773	-16.41	-16.05	-0.03
258	SLU 75	-639	420	6760	-16.44	-16.03	-0.03
258	SLU 76	-634	417	6698	-16.33	-15.93	-0.03
258	SLU 77	-644	424	6831	-16.6	-16.13	-0.03
258	SLU 78	-643	425	6817	-16.64	-16.11	-0.03
258	SLU 79	-640	421	6778	-16.47	-16.03	-0.03
258	SLU 80	-639	422	6764	-16.51	-16.02	-0.03
258	SLU 81	-666	425	6963	-16.66	-16.8	-0.03



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
258	SLU 82	-665	426	6949	-16.7	-16.78	-0.03
258	SLU 83	-670	430	7020	-16.86	-16.88	-0.03
258	SLU 84	-669	431	7006	-16.9	-16.86	-0.03
258	SLE RA 1	-411	282	4447	-11.01	-10.17	-0.02
258	SLE RA 2	-410	283	4432	-11.05	-10.15	-0.02
258	SLE RA 3	-416	287	4521	-11.23	-10.28	-0.02
258	SLE RA 4	-416	288	4512	-11.25	-10.27	-0.02
258	SLE RA 5	-412	286	4470	-11.18	-10.2	-0.02
258	SLE RA 6	-419	291	4559	-11.36	-10.34	-0.02
258	SLE RA 7	-418	291	4550	-11.39	-10.32	-0.02
258	SLE RA 8	-416	288	4524	-11.27	-10.27	-0.02
258	SLE RA 9	-415	289	4515	-11.3	-10.26	-0.02
258	SLE RA 10	-462	306	4898	-11.96	-11.58	-0.02
258	SLE RA 11	-469	310	4987	-12.14	-11.72	-0.03
258	SLE RA 12	-468	311	4978	-12.17	-11.71	-0.03
258	SLE RA 13	-465	309	4936	-12.09	-11.64	-0.02
258	SLE RA 14	-471	313	5025	-12.27	-11.77	-0.03
258	SLE RA 15	-471	314	5016	-12.3	-11.76	-0.03
258	SLE RA 16	-469	311	4990	-12.18	-11.71	-0.03
258	SLE RA 17	-468	312	4981	-12.21	-11.7	-0.03
258	SLE RA 18	-486	314	5113	-12.31	-12.22	-0.03
258	SLE RA 19	-485	315	5104	-12.34	-12.21	-0.03
258	SLE RA 20	-489	318	5151	-12.44	-12.27	-0.03
258	SLE RA 21	-488	318	5142	-12.47	-12.26	-0.03
258	SLE FR 1	-411	282	4447	-11.01	-10.17	-0.02
258	SLE FR 2	-411	282	4444	-11.02	-10.16	-0.02
258	SLE FR 3	-412	283	4463	-11.06	-10.19	-0.02
258	SLE FR 4	-433	292	4644	-11.41	-10.78	-0.02
258	SLE FR 5	-434	293	4662	-11.45	-10.8	-0.02
258	SLE FR 6	-448	298	4780	-11.66	-11.19	-0.02
258	SLE QP 1	-411	282	4447	-11.01	-10.17	-0.02
258	SLE QP 2	-433	291	4647	-11.4	-10.78	-0.02
258	SLD 1	-78	338	3683	-13.6	3.12	-0.06
258	SLD 2	-78	338	3683	-13.6	3.12	-0.06
258	SLD 3	-27	13	3223	1.41	4.96	-0.02
258	SLD 4	-27	13	3223	1.41	4.96	-0.02
258	SLD 5	-404	799	5055	-34.84	-9.41	-0.09
258	SLD 6	-404	799	5055	-34.84	-9.41	-0.09
258	SLD 7	-234	-285	3523	15.22	-3.26	0.03
258	SLD 8	-234	-285	3523	15.22	-3.26	0.03
258	SLD 9	-632	868	5771	-38.02	-18.3	-0.08
258	SLD 10	-632	868	5771	-38.02	-18.3	-0.08
258	SLD 11	-463	-216	4240	12.03	-12.16	0.04
258	SLD 12	-463	-216	4240	12.03	-12.16	0.04
258	SLD 13	-840	570	6071	-24.22	-26.53	-0.03
258	SLD 14	-840	570	6071	-24.22	-26.53	-0.03
258	SLD 15	-789	245	5611	-9.2	-24.69	0.01
258	SLD 16	-789	245	5611	-9.2	-24.69	0.01
258	SLV 1	395	403	2406	-16.63	21.59	-0.1
258	SLV 2	395	403	2406	-16.63	21.59	-0.1
258	SLV 3	514	-366	1312	18.91	25.91	-0.01
258	SLV 4	514	-366	1312	18.91	25.91	-0.01
258	SLV 5	-366	1491	5634	-66.87	-7.63	-0.17
258	SLV 6	-366	1491	5634	-66.87	-7.63	-0.17
258	SLV 7	32	-1072	1988	51.59	6.78	0.11
258	SLV 8	32	-1072	1988	51.59	6.78	0.11
258	SLV 9	-899	1655	7307	-74.4	-28.35	-0.15
258	SLV 10	-899	1655	7307	-74.4	-28.35	-0.15
258	SLV 11	-501	-908	3660	44.07	-13.94	0.13
258	SLV 12	-501	-908	3660	44.07	-13.94	0.13
258	SLV 13	-1381	949	7982	-41.71	-47.48	-0.03
258	SLV 14	-1381	949	7982	-41.71	-47.48	-0.03
258	SLV 15	-1261	180	6888	-6.17	-43.16	0.05
258	SLV 16	-1261	180	6888	-6.17	-43.16	0.05
259	SLU 1	-23	-604	1820	21.86	-14.16	0
259	SLU 2	-22	-544	1819	19.4	-13.16	0
259	SLU 3	-23	-624	1855	22.58	-14.67	0
259	SLU 4	-23	-588	1855	21.1	-14.07	0
259	SLU 5	-22	-556	1842	19.83	-13.5	0
259	SLU 6	-24	-636	1878	23.01	-15.01	0
259	SLU 7	-23	-600	1878	21.53	-14.41	0
259	SLU 8	-24	-628	1866	22.72	-14.84	0
259	SLU 9	-23	-592	1866	21.24	-14.24	0
259	SLU 10	-24	-629	1963	22.52	-15.04	0
259	SLU 11	-26	-710	1999	25.7	-16.54	0
259	SLU 12	-26	-673	1998	24.22	-15.94	0
259	SLU 13	-25	-641	1986	22.95	-15.38	0
259	SLU 14	-27	-722	2022	26.13	-16.88	0
259	SLU 15	-26	-686	2021	24.65	-16.28	0
259	SLU 16	-27	-714	2010	25.85	-16.72	0
259	SLU 17	-26	-678	2009	24.37	-16.12	0
259	SLU 18	-27	-726	2025	26.32	-16.84	0
259	SLU 19	-26	-690	2025	24.84	-16.24	0
259	SLU 20	-27	-739	2048	26.75	-17.19	0
259	SLU 21	-27	-702	2048	25.27	-16.58	0
259	SLU 22	-26	-687	1959	24.87	-16.03	0
259	SLU 23	-24	-626	1959	22.4	-15.03	0
259	SLU 24	-26	-706	1994	25.59	-16.54	0
259	SLU 25	-26	-670	1994	24.11	-15.94	0
259	SLU 26	-25	-638	1982	22.83	-15.37	0



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
		x	y	z		x	y	z	
259	SLU 27	-27	-719	2018		26.02	-16.88		0
259	SLU 28	-26	-682	2017		24.54	-16.28		0
259	SLU 29	-27	-711	2006		25.73	-16.71		0
259	SLU 30	-26	-675	2005		24.25	-16.11		0
259	SLU 31	-27	-712	2102		25.53	-16.91		0
259	SLU 32	-29	-792	2138		28.71	-18.41		0
259	SLU 33	-29	-756	2138		27.23	-17.81		0
259	SLU 34	-28	-724	2125		25.96	-17.25		0
259	SLU 35	-30	-804	2161		29.14	-18.75		0
259	SLU 36	-29	-768	2161		27.66	-18.15		0
259	SLU 37	-29	-797	2149		28.85	-18.59		0
259	SLU 38	-29	-760	2149		27.37	-17.99		0
259	SLU 39	-30	-809	2164		29.33	-18.72		0
259	SLU 40	-29	-773	2164		27.85	-18.11		0
259	SLU 41	-30	-821	2188		29.76	-19.06		0
259	SLU 42	-30	-785	2187		28.28	-18.45		0
259	SLU 43	-28	-757	2318		27.39	-17.77		0
259	SLU 44	-27	-696	2317		24.92	-16.77		0
259	SLU 45	-29	-777	2353		28.1	-18.27		0
259	SLU 46	-29	-740	2353		26.63	-17.67		0
259	SLU 47	-28	-709	2341		25.35	-17.11		0
259	SLU 48	-30	-789	2376		28.54	-18.62		0
259	SLU 49	-29	-753	2376		27.06	-18.01		0
259	SLU 50	-29	-781	2364		28.25	-18.45		0
259	SLU 51	-29	-745	2364		26.77	-17.85		0
259	SLU 52	-30	-782	2461		28.65	-18.65		0
259	SLU 53	-32	-862	2497		31.23	-20.15		0
259	SLU 54	-31	-826	2496		29.75	-19.55		0
259	SLU 55	-31	-794	2484		28.48	-18.99		0
259	SLU 56	-33	-875	2520		31.66	-20.49		-0.01
259	SLU 57	-32	-838	2520		30.18	-19.89		0
259	SLU 58	-32	-867	2508		31.37	-20.33		0
259	SLU 59	-32	-831	2508		29.89	-19.73		0
259	SLU 60	-33	-879	2523		31.85	-20.45		-0.01
259	SLU 61	-32	-843	2523		30.37	-19.85		0
259	SLU 62	-33	-891	2546		32.28	-20.79		-0.01
259	SLU 63	-32	-855	2546		30.8	-20.19		0
259	SLU 64	-31	-839	2457		30.4	-19.64		0
259	SLU 65	-30	-779	2457		27.93	-18.64		0
259	SLU 66	-32	-859	2493		31.11	-20.15		0
259	SLU 67	-31	-823	2492		29.63	-19.54		0
259	SLU 68	-31	-791	2480		28.36	-18.98		0
259	SLU 69	-33	-871	2516		31.54	-20.49		-0.01
259	SLU 70	-32	-835	2515		30.06	-19.88		0
259	SLU 71	-32	-864	2504		31.26	-20.32		0
259	SLU 72	-32	-828	2503		29.78	-19.72		0
259	SLU 73	-33	-865	2600		31.05	-20.52		0
259	SLU 74	-35	-945	2636		34.24	-22.02		-0.01
259	SLU 75	-34	-909	2636		32.76	-21.42		-0.01
259	SLU 76	-34	-877	2624		31.48	-20.86		0
259	SLU 77	-36	-957	2659		34.67	-22.36		-0.01
259	SLU 78	-35	-921	2659		33.19	-21.76		-0.01
259	SLU 79	-35	-949	2647		34.38	-22.2		-0.01
259	SLU 80	-35	-913	2647		32.9	-21.6		-0.01
259	SLU 81	-35	-962	2663		34.86	-22.32		-0.01
259	SLU 82	-35	-926	2662		33.38	-21.72		-0.01
259	SLU 83	-36	-974	2686		35.29	-22.66		-0.01
259	SLU 84	-35	-938	2685		33.81	-22.06		-0.01
259	SLE RA 1	-23	-627	1860		22.72	-14.7		0
259	SLE RA 2	-23	-587	1859		21.08	-14.03		0
259	SLE RA 3	-24	-641	1883		23.2	-15.03		0
259	SLE RA 4	-24	-617	1883		22.21	-14.63		0
259	SLE RA 5	-23	-595	1875		21.36	-14.26		0
259	SLE RA 6	-24	-649	1899		23.49	-15.26		0
259	SLE RA 7	-24	-625	1898		22.5	-14.86		0
259	SLE RA 8	-24	-644	1891		23.3	-15.15		0
259	SLE RA 9	-24	-620	1890		22.31	-14.75		0
259	SLE RA 10	-25	-644	1955		23.16	-15.28		0
259	SLE RA 11	-26	-698	1979		25.28	-16.28		0
259	SLE RA 12	-25	-674	1979		24.29	-15.88		0
259	SLE RA 13	-25	-653	1970		23.45	-15.51		0
259	SLE RA 14	-26	-706	1994		25.57	-16.51		0
259	SLE RA 15	-26	-682	1994		24.58	-16.11		0
259	SLE RA 16	-26	-701	1986		25.38	-16.4		0
259	SLE RA 17	-26	-677	1986		24.39	-16		0
259	SLE RA 18	-26	-709	1996		25.7	-16.49		0
259	SLE RA 19	-26	-685	1996		24.71	-16.08		0
259	SLE RA 20	-27	-717	2012		25.98	-16.71		0
259	SLE RA 21	-26	-693	2012		25	-16.31		0
259	SLE FR 1	-23	-627	1860		22.72	-14.7		0
259	SLE FR 2	-23	-619	1860		22.39	-14.56		0
259	SLE FR 3	-24	-631	1866		22.84	-14.79		0
259	SLE FR 4	-24	-644	1901		23.28	-15.1		0
259	SLE FR 5	-24	-655	1907		23.73	-15.32		0
259	SLE FR 6	-25	-668	1928		24.21	-15.59		0
259	SLE QP 1	-23	-627	1860		22.72	-14.7		0
259	SLE QP 2	-24	-652	1901		23.61	-15.23		0
259	SLD 1	-41	-680	2301		24.14	5.57		-0.01
259	SLD 2	-41	-680	2301		24.14	5.57		-0.01
259	SLD 3	-48	-1129	2432		42.93	-1.44		-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
259	SLD 4	-48	-1129	2432	42.93	-1.44	-0.01
259	SLD 5	-18	20	1822	-4.73	1.65	0
259	SLD 6	-18	20	1822	-4.73	1.65	0
259	SLD 7	-43	-1476	2259	57.91	-21.74	-0.01
259	SLD 8	-43	-1476	2259	57.91	-21.74	-0.01
259	SLD 9	-6	172	1542	-10.68	-8.73	0
259	SLD 10	-6	172	1542	-10.68	-8.73	0
259	SLD 11	-30	-1324	1980	51.95	-32.12	-0.01
259	SLD 12	-30	-1324	1980	51.95	-32.12	-0.01
259	SLD 13	0	-175	1369	4.3	-29.02	0
259	SLD 14	0	-175	1369	4.3	-29.02	0
259	SLD 15	-8	-624	1500	23.09	-36.04	0
259	SLD 16	-8	-624	1500	23.09	-36.04	0
259	SLV 1	-63	-719	2833	24.89	34.12	-0.01
259	SLV 2	-63	-719	2833	24.89	34.12	-0.01
259	SLV 3	-81	-1757	3149	68.35	17.01	-0.02
259	SLV 4	-81	-1757	3149	68.35	17.01	-0.02
259	SLV 5	-9	902	1702	-41.93	25.52	0.01
259	SLV 6	-9	902	1702	-41.93	25.52	0.01
259	SLV 7	-68	-2557	2754	102.96	-31.51	-0.02
259	SLV 8	-68	-2557	2754	102.96	-31.51	-0.02
259	SLV 9	20	1253	1047	-55.73	1.04	0.01
259	SLV 10	20	1253	1047	-55.73	1.04	0.01
259	SLV 11	-40	-2206	2100	89.15	-55.99	-0.02
259	SLV 12	-40	-2206	2100	89.15	-55.99	-0.02
259	SLV 13	32	453	652	-21.13	-47.48	0.01
259	SLV 14	32	453	652	-21.13	-47.48	0.01
259	SLV 15	15	-585	968	22.34	-64.59	0
259	SLV 16	15	-585	968	22.34	-64.59	0
260	SLU 1	2	-348	5775	14.54	1.67	0
260	SLU 2	1	-288	5635	11.86	0.08	0
260	SLU 3	2	-359	5977	15.01	1.74	0
260	SLU 4	1	-323	5892	13.41	0.79	0
260	SLU 5	1	-293	5782	12.1	0.14	0
260	SLU 6	2	-364	6124	15.26	1.79	0
260	SLU 7	1	-328	6039	13.65	0.84	0
260	SLU 8	2	-358	6069	15.03	1.78	0
260	SLU 9	1	-322	5985	13.42	0.83	0
260	SLU 10	1	-342	6276	14.07	0.28	0
260	SLU 11	2	-413	6618	17.22	1.93	0
260	SLU 12	1	-377	6533	15.62	0.98	0
260	SLU 13	1	-347	6423	14.31	0.33	0
260	SLU 14	2	-418	6765	17.47	1.99	0
260	SLU 15	1	-382	6680	15.86	1.03	0
260	SLU 16	2	-412	6710	17.24	1.97	0
260	SLU 17	1	-376	6626	15.63	1.02	0
260	SLU 18	2	-425	6691	17.69	1.95	0
260	SLU 19	1	-389	6607	16.08	0.99	0
260	SLU 20	2	-430	6838	17.94	2	0
260	SLU 21	1	-394	6754	16.33	1.05	0
260	SLU 22	2	-399	6424	16.67	1.88	0
260	SLU 23	1	-340	6284	13.99	0.29	0
260	SLU 24	2	-410	6626	17.15	1.95	0
260	SLU 25	1	-375	6542	15.54	0.99	0
260	SLU 26	1	-345	6431	14.24	0.35	0
260	SLU 27	2	-415	6773	17.39	2	0
260	SLU 28	1	-380	6689	15.79	1.05	0
260	SLU 29	2	-410	6718	17.16	1.99	0
260	SLU 30	1	-374	6634	15.55	1.04	0
260	SLU 31	1	-394	6925	16.2	0.48	0
260	SLU 32	2	-464	7267	19.35	2.14	0
260	SLU 33	2	-428	7183	17.75	1.19	0
260	SLU 34	1	-399	7072	16.44	0.54	0
260	SLU 35	2	-469	7414	19.6	2.2	0
260	SLU 36	2	-433	7330	17.99	1.24	0
260	SLU 37	2	-463	7359	19.37	2.18	0
260	SLU 38	2	-428	7275	17.76	1.23	0
260	SLU 39	2	-476	7340	19.82	2.16	0
260	SLU 40	2	-441	7256	18.21	1.2	0
260	SLU 41	2	-481	7487	20.07	2.21	0
260	SLU 42	2	-446	7403	18.46	1.26	0
260	SLU 43	2	-435	7285	18.17	2.1	0
260	SLU 44	1	-375	7145	15.49	0.51	0
260	SLU 45	2	-445	7487	18.65	2.17	0
260	SLU 46	2	-410	7402	17.04	1.21	0
260	SLU 47	1	-380	7292	15.73	0.57	0
260	SLU 48	2	-450	7634	18.89	2.22	0
260	SLU 49	2	-415	7549	17.28	1.27	0
260	SLU 50	2	-445	7579	18.66	2.21	0
260	SLU 51	2	-409	7495	17.05	1.26	0
260	SLU 52	1	-429	7786	17.7	0.71	0
260	SLU 53	2	-499	8128	20.85	2.36	0
260	SLU 54	2	-464	8043	19.25	1.41	0
260	SLU 55	1	-434	7933	17.94	0.76	0
260	SLU 56	3	-504	8275	21.1	2.42	0
260	SLU 57	2	-469	8190	19.49	1.46	0
260	SLU 58	3	-499	8220	20.87	2.4	0
260	SLU 59	2	-463	8136	19.26	1.45	0
260	SLU 60	2	-512	8201	21.32	2.38	0
260	SLU 61	2	-476	8117	19.71	1.42	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
260	SLU 62	3	-517	8348	21.57	2.43	0
260	SLU 63	2	-481	8264	19.96	1.48	0
260	SLU 64	2	-486	7934	20.3	2.31	0
260	SLU 65	1	-427	7794	17.62	0.72	0
260	SLU 66	2	-497	8136	20.78	2.38	0
260	SLU 67	2	-461	8052	19.17	1.42	0
260	SLU 68	1	-432	7941	17.87	0.77	0
260	SLU 69	3	-502	8283	21.02	2.43	0
260	SLU 70	2	-466	8199	19.42	1.48	0
260	SLU 71	3	-496	8228	20.79	2.42	0
260	SLU 72	2	-461	8144	19.18	1.47	0
260	SLU 73	1	-480	8435	19.83	0.91	0
260	SLU 74	3	-551	8777	22.98	2.57	0
260	SLU 75	2	-515	8692	21.38	1.62	0
260	SLU 76	2	-485	8582	20.07	0.97	0
260	SLU 77	3	-556	8924	23.23	2.63	0
260	SLU 78	2	-520	8840	21.62	1.67	0
260	SLU 79	3	-550	8869	23	2.61	0
260	SLU 80	2	-514	8785	21.39	1.66	0
260	SLU 81	3	-563	8850	23.45	2.58	0
260	SLU 82	2	-527	8766	21.85	1.63	0
260	SLU 83	3	-568	8997	23.7	2.64	0
260	SLU 84	2	-532	8913	22.09	1.69	0
260	SLE RA 1	2	-363	5961	15.15	1.73	0
260	SLE RA 2	1	-323	5867	13.36	0.67	0
260	SLE RA 3	2	-370	6095	15.46	1.77	0
260	SLE RA 4	1	-346	6039	14.39	1.14	0
260	SLE RA 5	1	-326	5965	13.52	0.71	0
260	SLE RA 6	2	-373	6193	15.63	1.81	0
260	SLE RA 7	1	-349	6137	14.56	1.18	0
260	SLE RA 8	2	-369	6157	15.47	1.8	0
260	SLE RA 9	1	-346	6101	14.4	1.17	0
260	SLE RA 10	1	-359	6294	14.83	0.8	0
260	SLE RA 11	2	-406	6522	16.94	1.9	0
260	SLE RA 12	2	-382	6466	15.86	1.27	0
260	SLE RA 13	1	-362	6392	15	0.84	0
260	SLE RA 14	2	-409	6620	17.1	1.94	0
260	SLE RA 15	2	-385	6564	16.03	1.31	0
260	SLE RA 16	2	-405	6584	16.95	1.93	0
260	SLE RA 17	2	-381	6528	15.88	1.3	0
260	SLE RA 18	2	-414	6571	17.25	1.91	0
260	SLE RA 19	2	-390	6515	16.18	1.28	0
260	SLE RA 20	2	-417	6669	17.41	1.95	0
260	SLE RA 21	2	-393	6613	16.34	1.32	0
260	SLE FR 1	2	-363	5961	15.15	1.73	0
260	SLE FR 2	2	-355	5942	14.79	1.52	0
260	SLE FR 3	2	-364	6000	15.21	1.74	0
260	SLE FR 4	2	-370	6125	15.42	1.57	0
260	SLE FR 5	2	-379	6183	15.84	1.8	0
260	SLE FR 6	2	-388	6266	16.2	1.82	0
260	SLE QP 1	2	-363	5961	15.15	1.73	0
260	SLE QP 2	2	-378	6144	15.78	1.78	0
260	SLD 1	26	54	4334	-2.29	22.8	0
260	SLD 2	26	54	4334	-2.29	22.8	0
260	SLD 3	37	-375	4816	15.56	34.53	0
260	SLD 4	37	-375	4816	15.56	34.53	0
260	SLD 5	-8	403	4869	-16.73	-9.7	0
260	SLD 6	-8	403	4869	-16.73	-9.7	0
260	SLD 7	29	-1028	6477	42.8	29.4	0
260	SLD 8	29	-1028	6477	42.8	29.4	0
260	SLD 9	-26	272	5811	-11.24	-25.83	0
260	SLD 10	-26	272	5811	-11.24	-25.83	0
260	SLD 11	12	-1159	7418	48.28	13.27	0
260	SLD 12	12	-1159	7418	48.28	13.27	0
260	SLD 13	-33	-381	7471	15.99	-30.96	0
260	SLD 14	-33	-381	7471	15.99	-30.96	0
260	SLD 15	-22	-810	7954	33.85	-19.23	0
260	SLD 16	-22	-810	7954	33.85	-19.23	0
260	SLV 1	58	625	1904	-26.19	51.71	0
260	SLV 2	58	625	1904	-26.19	51.71	0
260	SLV 3	86	-370	3042	15.24	81.17	-0.01
260	SLV 4	86	-370	3042	15.24	81.17	-0.01
260	SLV 5	-24	1433	3147	-59.65	-27.92	0.01
260	SLV 6	-24	1433	3147	-59.65	-27.92	0.01
260	SLV 7	70	-1886	6938	78.45	70.28	-0.01
260	SLV 8	70	-1886	6938	78.45	70.28	-0.01
260	SLV 9	-66	1130	5349	-46.9	-66.71	0.01
260	SLV 10	-66	1130	5349	-46.9	-66.71	0.01
260	SLV 11	28	-2189	9141	91.21	31.49	-0.01
260	SLV 12	28	-2189	9141	91.21	31.49	-0.01
260	SLV 13	-83	-386	9246	16.31	-77.6	0
260	SLV 14	-83	-386	9246	16.31	-77.6	0
260	SLV 15	-55	-1381	10384	57.75	-48.14	0
260	SLV 16	-55	-1381	10384	57.75	-48.14	0
261	SLU 1	0	102	4095	-2.67	-0.15	0
261	SLU 2	0	100	4018	-2.52	-0.1	0
261	SLU 3	0	103	4226	-2.7	-0.16	0
261	SLU 4	0	102	4180	-2.61	-0.13	0
261	SLU 5	0	100	4104	-2.53	-0.11	0
261	SLU 6	0	103	4313	-2.7	-0.18	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
261	SLU 7	0	102	4267	-2.61	-0.15	0
261	SLU 8	0	102	4268	-2.68	-0.18	0
261	SLU 9	0	101	4222	-2.59	-0.15	0
261	SLU 10	0	103	4592	-2.56	-0.12	0
261	SLU 11	0	106	4800	-2.73	-0.18	0
261	SLU 12	0	104	4754	-2.65	-0.15	0
261	SLU 13	0	103	4678	-2.56	-0.13	0
261	SLU 14	0	106	4886	-2.74	-0.19	0
261	SLU 15	0	104	4840	-2.65	-0.17	0
261	SLU 16	0	105	4841	-2.71	-0.19	0
261	SLU 17	0	104	4795	-2.63	-0.16	0
261	SLU 18	0	106	4914	-2.72	-0.17	0
261	SLU 19	0	105	4868	-2.63	-0.14	0
261	SLU 20	0	106	5001	-2.73	-0.19	0
261	SLU 21	0	105	4955	-2.64	-0.16	0
261	SLU 22	0	107	4661	-2.79	-0.17	0
261	SLU 23	0	105	4584	-2.64	-0.12	0
261	SLU 24	0	108	4793	-2.81	-0.19	0
261	SLU 25	0	106	4747	-2.73	-0.16	0
261	SLU 26	0	105	4671	-2.64	-0.14	0
261	SLU 27	0	108	4879	-2.82	-0.2	0
261	SLU 28	0	106	4833	-2.73	-0.17	0
261	SLU 29	0	107	4834	-2.79	-0.2	0
261	SLU 30	0	106	4788	-2.71	-0.17	0
261	SLU 31	0	107	5158	-2.68	-0.14	0
261	SLU 32	0	110	5366	-2.85	-0.2	0
261	SLU 33	0	109	5320	-2.76	-0.17	0
261	SLU 34	0	107	5244	-2.68	-0.15	0
261	SLU 35	0	110	5453	-2.86	-0.22	0
261	SLU 36	0	109	5407	-2.77	-0.19	0
261	SLU 37	0	110	5408	-2.83	-0.22	0
261	SLU 38	0	108	5362	-2.74	-0.19	0
261	SLU 39	0	110	5481	-2.84	-0.19	0
261	SLU 40	0	109	5435	-2.75	-0.17	0
261	SLU 41	0	111	5567	-2.84	-0.21	0
261	SLU 42	0	109	5521	-2.76	-0.18	0
261	SLU 43	0	131	5129	-3.43	-0.18	0
261	SLU 44	0	129	5052	-3.28	-0.13	0
261	SLU 45	0	132	5260	-3.46	-0.2	0
261	SLU 46	0	131	5214	-3.37	-0.17	0
261	SLU 47	0	129	5138	-3.28	-0.15	0
261	SLU 48	0	132	5347	-3.46	-0.21	0
261	SLU 49	0	131	5301	-3.37	-0.18	0
261	SLU 50	0	131	5302	-3.44	-0.21	0
261	SLU 51	0	130	5256	-3.35	-0.18	0
261	SLU 52	0	132	5626	-3.32	-0.15	0
261	SLU 53	0	135	5834	-3.49	-0.22	0
261	SLU 54	0	133	5788	-3.41	-0.19	0
261	SLU 55	0	132	5712	-3.32	-0.17	0
261	SLU 56	0	135	5921	-3.5	-0.23	0
261	SLU 57	0	133	5875	-3.41	-0.2	0
261	SLU 58	0	134	5875	-3.47	-0.23	0
261	SLU 59	0	133	5829	-3.39	-0.2	0
261	SLU 60	0	135	5948	-3.48	-0.21	0
261	SLU 61	0	134	5902	-3.39	-0.18	0
261	SLU 62	0	135	6035	-3.49	-0.22	0
261	SLU 63	0	134	5989	-3.4	-0.19	0
261	SLU 64	0	136	5695	-3.55	-0.2	0
261	SLU 65	0	134	5618	-3.4	-0.16	0
261	SLU 66	0	137	5827	-3.57	-0.22	0
261	SLU 67	0	135	5781	-3.49	-0.19	0
261	SLU 68	0	134	5705	-3.4	-0.17	0
261	SLU 69	0	137	5913	-3.58	-0.24	0
261	SLU 70	0	136	5867	-3.49	-0.21	0
261	SLU 71	0	136	5868	-3.55	-0.23	0
261	SLU 72	0	135	5822	-3.47	-0.21	0
261	SLU 73	0	136	6192	-3.44	-0.17	0
261	SLU 74	0	139	6401	-3.61	-0.24	0
261	SLU 75	0	138	6354	-3.52	-0.21	0
261	SLU 76	0	136	6279	-3.44	-0.19	0
261	SLU 77	0	139	6487	-3.62	-0.25	0
261	SLU 78	0	138	6441	-3.53	-0.22	0
261	SLU 79	0	139	6442	-3.59	-0.25	0
261	SLU 80	0	137	6396	-3.5	-0.22	0
261	SLU 81	0	140	6515	-3.6	-0.23	0
261	SLU 82	0	138	6469	-3.51	-0.2	0
261	SLU 83	0	140	6601	-3.6	-0.24	0
261	SLU 84	0	138	6555	-3.52	-0.22	0
261	SLE RA 1	0	103	4256	-2.7	-0.15	0
261	SLE RA 2	0	102	4205	-2.6	-0.12	0
261	SLE RA 3	0	104	4344	-2.72	-0.16	0
261	SLE RA 4	0	103	4313	-2.66	-0.14	0
261	SLE RA 5	0	102	4263	-2.61	-0.13	0
261	SLE RA 6	0	104	4402	-2.72	-0.17	0
261	SLE RA 7	0	103	4371	-2.66	-0.15	0
261	SLE RA 8	0	104	4372	-2.71	-0.17	0
261	SLE RA 9	0	103	4341	-2.65	-0.15	0
261	SLE RA 10	0	104	4588	-2.63	-0.13	0
261	SLE RA 11	0	106	4727	-2.75	-0.17	0
261	SLE RA 12	0	105	4696	-2.69	-0.16	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
261	SLE RA 13	0	104	4645	-2.63	-0.14	0
261	SLE RA 14	0	106	4784	-2.75	-0.18	0
261	SLE RA 15	0	105	4754	-2.69	-0.17	0
261	SLE RA 16	0	105	4754	-2.73	-0.18	0
261	SLE RA 17	0	104	4724	-2.67	-0.16	0
261	SLE RA 18	0	106	4803	-2.74	-0.17	0
261	SLE RA 19	0	105	4772	-2.68	-0.15	0
261	SLE RA 20	0	106	4860	-2.74	-0.18	0
261	SLE RA 21	0	105	4830	-2.68	-0.16	0
261	SLE FR 1	0	103	4256	-2.7	-0.15	0
261	SLE FR 2	0	103	4246	-2.68	-0.15	0
261	SLE FR 3	0	103	4279	-2.7	-0.16	0
261	SLE FR 4	0	104	4410	-2.69	-0.15	0
261	SLE FR 5	0	104	4443	-2.71	-0.16	0
261	SLE FR 6	0	105	4530	-2.72	-0.16	0
261	SLE QP 1	0	103	4256	-2.7	-0.15	0
261	SLE QP 2	0	104	4420	-2.71	-0.16	0
261	SLD 1	13	444	4221	-13.98	12.33	-0.07
261	SLD 2	13	444	4221	-13.98	12.33	-0.07
261	SLD 3	16	64	4425	-1.43	15.19	-0.09
261	SLD 4	16	64	4425	-1.43	15.19	-0.09
261	SLD 5	0	783	4050	-25.13	-0.74	0
261	SLD 6	0	783	4050	-25.13	-0.74	0
261	SLD 7	9	-485	4732	16.71	8.78	-0.05
261	SLD 8	9	-485	4732	16.71	8.78	-0.05
261	SLD 9	-9	694	4108	-22.13	-9.09	0.05
261	SLD 10	-9	694	4108	-22.13	-9.09	0.05
261	SLD 11	0	-575	4791	19.71	0.43	0
261	SLD 12	0	-575	4791	19.71	0.43	0
261	SLD 13	-16	145	4415	-3.99	-15.5	0.09
261	SLD 14	-16	145	4415	-3.99	-15.5	0.09
261	SLD 15	-14	-236	4620	8.56	-12.65	0.07
261	SLD 16	-14	-236	4620	8.56	-12.65	0.07
261	SLV 1	34	900	3949	-29.12	31.23	-0.18
261	SLV 2	34	900	3949	-29.12	31.23	-0.18
261	SLV 3	41	6	4434	0.42	38.49	-0.22
261	SLV 4	41	6	4434	0.42	38.49	-0.22
261	SLV 5	-1	1700	3544	-55.43	-1.75	0
261	SLV 6	-1	1700	3544	-55.43	-1.75	0
261	SLV 7	23	-1282	5159	43.02	22.45	-0.13
261	SLV 8	23	-1282	5159	43.02	22.45	-0.13
261	SLV 9	-23	1491	3682	-48.44	-22.76	0.13
261	SLV 10	-23	1491	3682	-48.44	-22.76	0.13
261	SLV 11	1	-1492	5296	50	1.43	0
261	SLV 12	1	-1492	5296	50	1.43	0
261	SLV 13	-41	203	4407	-5.84	-38.8	0.22
261	SLV 14	-41	203	4407	-5.84	-38.8	0.22
261	SLV 15	-34	-692	4892	23.69	-31.55	0.18
261	SLV 16	-34	-692	4892	23.69	-31.55	0.18
262	SLU 1	0	-31	3989	1.38	-0.15	0
262	SLU 2	0	-33	3936	1.66	-0.19	0
262	SLU 3	0	-32	4102	1.39	-0.16	0
262	SLU 4	0	-34	4070	1.56	-0.18	0
262	SLU 5	0	-33	4001	1.61	-0.19	0
262	SLU 6	0	-32	4167	1.35	-0.15	0
262	SLU 7	0	-34	4135	1.51	-0.18	0
262	SLU 8	0	-31	4119	1.29	-0.15	0
262	SLU 9	0	-32	4087	1.46	-0.18	0
262	SLU 10	0	-51	4491	2.33	-0.2	0
262	SLU 11	0	-49	4657	2.06	-0.17	0
262	SLU 12	0	-51	4626	2.23	-0.19	0
262	SLU 13	0	-51	4556	2.28	-0.2	0
262	SLU 14	0	-49	4722	2.02	-0.17	0
262	SLU 15	0	-51	4691	2.18	-0.19	0
262	SLU 16	0	-48	4674	1.96	-0.16	0
262	SLU 17	0	-50	4642	2.13	-0.19	0
262	SLU 18	0	-55	4782	2.34	-0.17	0
262	SLU 19	0	-57	4750	2.5	-0.19	0
262	SLU 20	0	-55	4847	2.29	-0.17	0
262	SLU 21	0	-57	4815	2.46	-0.19	0
262	SLU 22	0	-44	4529	1.87	-0.17	0
262	SLU 23	0	-47	4477	2.16	-0.21	0
262	SLU 24	0	-46	4643	1.89	-0.17	0
262	SLU 25	0	-47	4611	2.06	-0.19	0
262	SLU 26	0	-47	4542	2.11	-0.2	0
262	SLU 27	0	-46	4708	1.84	-0.17	0
262	SLU 28	0	-47	4676	2.01	-0.19	0
262	SLU 29	0	-44	4660	1.78	-0.16	0
262	SLU 30	0	-46	4628	1.95	-0.19	0
262	SLU 31	0	-64	5032	2.83	-0.22	0
262	SLU 32	0	-63	5198	2.56	-0.18	0
262	SLU 33	0	-65	5166	2.73	-0.2	0
262	SLU 34	0	-64	5097	2.78	-0.22	0
262	SLU 35	0	-63	5263	2.51	-0.18	0
262	SLU 36	0	-65	5231	2.68	-0.2	0
262	SLU 37	0	-62	5215	2.45	-0.17	0
262	SLU 38	0	-63	5183	2.62	-0.2	0
262	SLU 39	0	-69	5322	2.83	-0.18	0
262	SLU 40	0	-71	5291	3	-0.21	0
262	SLU 41	0	-69	5388	2.79	-0.18	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
262	SLU 42	0	-71	5356	2.95	-0.2	0
262	SLU 43	0	-35	5000	1.62	-0.2	0
262	SLU 44	0	-38	4947	1.9	-0.24	0
262	SLU 45	0	-37	5113	1.63	-0.2	0
262	SLU 46	0	-38	5082	1.8	-0.22	0
262	SLU 47	0	-38	5012	1.86	-0.23	0
262	SLU 48	0	-36	5178	1.59	-0.2	0
262	SLU 49	0	-38	5147	1.76	-0.22	0
262	SLU 50	0	-35	5130	1.53	-0.19	0
262	SLU 51	0	-37	5098	1.7	-0.22	0
262	SLU 52	0	-55	5502	2.57	-0.25	0
262	SLU 53	0	-54	5668	2.31	-0.21	0
262	SLU 54	0	-56	5637	2.47	-0.23	0
262	SLU 55	0	-55	5567	2.53	-0.25	0
262	SLU 56	0	-54	5733	2.26	-0.21	0
262	SLU 57	0	-56	5702	2.43	-0.23	0
262	SLU 58	0	-52	5685	2.2	-0.21	0
262	SLU 59	0	-54	5653	2.37	-0.23	0
262	SLU 60	0	-60	5793	2.58	-0.21	0
262	SLU 61	0	-62	5761	2.75	-0.24	0
262	SLU 62	0	-60	5858	2.53	-0.21	0
262	SLU 63	0	-62	5826	2.7	-0.23	0
262	SLU 64	0	-49	5541	2.12	-0.21	0
262	SLU 65	0	-52	5488	2.4	-0.25	0
262	SLU 66	0	-50	5654	2.13	-0.21	0
262	SLU 67	0	-52	5622	2.3	-0.23	0
262	SLU 68	0	-52	5553	2.35	-0.25	0
262	SLU 69	0	-50	5719	2.08	-0.21	0
262	SLU 70	0	-52	5687	2.25	-0.23	0
262	SLU 71	0	-49	5671	2.03	-0.21	0
262	SLU 72	0	-50	5639	2.2	-0.23	0
262	SLU 73	0	-69	6043	3.07	-0.26	0
262	SLU 74	0	-68	6209	2.8	-0.22	0
262	SLU 75	0	-69	6178	2.97	-0.24	0
262	SLU 76	0	-69	6108	3.02	-0.26	0
262	SLU 77	0	-67	6274	2.76	-0.22	0
262	SLU 78	0	-69	6243	2.92	-0.24	0
262	SLU 79	0	-66	6226	2.7	-0.22	0
262	SLU 80	0	-68	6194	2.87	-0.24	0
262	SLU 81	0	-74	6334	3.08	-0.22	0
262	SLU 82	0	-75	6302	3.24	-0.25	0
262	SLU 83	0	-74	6399	3.03	-0.22	0
262	SLU 84	0	-75	6367	3.2	-0.25	0
262	SLE RA 1	0	-34	4143	1.52	-0.16	0
262	SLE RA 2	0	-36	4108	1.71	-0.18	0
262	SLE RA 3	0	-35	4219	1.53	-0.16	0
262	SLE RA 4	0	-37	4198	1.64	-0.17	0
262	SLE RA 5	0	-36	4151	1.68	-0.18	0
262	SLE RA 6	0	-35	4262	1.5	-0.16	0
262	SLE RA 7	0	-37	4241	1.61	-0.17	0
262	SLE RA 8	0	-34	4230	1.46	-0.16	0
262	SLE RA 9	0	-36	4209	1.57	-0.17	0
262	SLE RA 10	0	-48	4478	2.15	-0.19	0
262	SLE RA 11	0	-47	4589	1.98	-0.17	0
262	SLE RA 12	0	-48	4568	2.09	-0.18	0
262	SLE RA 13	0	-48	4522	2.12	-0.19	0
262	SLE RA 14	0	-47	4632	1.95	-0.17	0
262	SLE RA 15	0	-48	4611	2.06	-0.18	0
262	SLE RA 16	0	-46	4600	1.91	-0.16	0
262	SLE RA 17	0	-47	4579	2.02	-0.18	0
262	SLE RA 18	0	-51	4672	2.16	-0.17	0
262	SLE RA 19	0	-52	4651	2.27	-0.18	0
262	SLE RA 20	0	-51	4715	2.13	-0.17	0
262	SLE RA 21	0	-52	4694	2.24	-0.18	0
262	SLE FR 1	0	-34	4143	1.52	-0.16	0
262	SLE FR 2	0	-35	4136	1.56	-0.16	0
262	SLE FR 3	0	-34	4161	1.51	-0.16	0
262	SLE FR 4	0	-40	4295	1.75	-0.17	0
262	SLE FR 5	0	-39	4319	1.7	-0.16	0
262	SLE FR 6	0	-43	4407	1.84	-0.16	0
262	SLE QP 1	0	-34	4143	1.52	-0.16	0
262	SLE QP 2	0	-39	4302	1.71	-0.16	0
262	SLD 1	15	3	4424	-0.67	13.51	-0.02
262	SLD 2	15	3	4424	-0.67	13.51	-0.02
262	SLD 3	12	-511	4676	23.37	10.7	-0.02
262	SLD 4	12	-511	4676	23.37	10.7	-0.02
262	SLD 5	9	753	3956	-35.46	8.2	-0.01
262	SLD 6	9	753	3956	-35.46	8.2	-0.01
262	SLD 7	-1	-961	4796	44.66	-1.17	0
262	SLD 8	-1	-961	4796	44.66	-1.17	0
262	SLD 9	1	882	3807	-41.24	0.84	0
262	SLD 10	1	882	3807	-41.24	0.84	0
262	SLD 11	-9	-832	4647	38.88	-8.52	0.01
262	SLD 12	-9	-832	4647	38.88	-8.52	0.01
262	SLD 13	-12	432	3928	-19.95	-11.02	0.02
262	SLD 14	-12	432	3928	-19.95	-11.02	0.02
262	SLD 15	-15	-82	4180	4.09	-13.83	0.02
262	SLD 16	-15	-82	4180	4.09	-13.83	0.02
262	SLV 1	37	62	4585	-3.9	34.25	-0.05
262	SLV 2	37	62	4585	-3.9	34.25	-0.05



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
262	SLV 3	30	-1150	5179	52.74	27.15	-0.04
262	SLV 4	30	-1150	5179	52.74	27.15	-0.04
262	SLV 5	23	1828	3487	-85.87	20.92	-0.03
262	SLV 6	23	1828	3487	-85.87	20.92	-0.03
262	SLV 7	-3	-2210	5465	102.92	-2.73	0
262	SLV 8	-3	-2210	5465	102.92	-2.73	0
262	SLV 9	3	2131	3139	-99.49	2.41	0
262	SLV 10	3	2131	3139	-99.49	2.41	0
262	SLV 11	-23	-1907	5117	89.29	-21.24	0.03
262	SLV 12	-23	-1907	5117	89.29	-21.24	0.03
262	SLV 13	-30	1071	3425	-49.31	-27.47	0.04
262	SLV 14	-30	1071	3425	-49.31	-27.47	0.04
262	SLV 15	-37	-141	4018	7.32	-34.57	0.05
262	SLV 16	-37	-141	4018	7.32	-34.57	0.05
263	SLU 1	2	233	3602	-20.12	0.92	0
263	SLU 2	2	238	3592	-20.35	0.91	0
263	SLU 3	2	241	3713	-20.77	0.95	0
263	SLU 4	2	244	3707	-20.91	0.94	0
263	SLU 5	2	243	3656	-20.77	0.93	0
263	SLU 6	2	246	3778	-21.19	0.96	0
263	SLU 7	2	249	3772	-21.33	0.96	0
263	SLU 8	2	244	3731	-20.96	0.95	0
263	SLU 9	2	246	3725	-21.09	0.94	0
263	SLU 10	2	257	4147	-22.73	1.12	0
263	SLU 11	2	260	4268	-23.15	1.15	0
263	SLU 12	2	263	4263	-23.29	1.15	0
263	SLU 13	2	262	4212	-23.15	1.14	0
263	SLU 14	2	266	4333	-23.57	1.17	0
263	SLU 15	2	268	4327	-23.71	1.17	0
263	SLU 16	2	263	4286	-23.34	1.16	0
263	SLU 17	2	266	4280	-23.48	1.15	0
263	SLU 18	2	261	4395	-23.52	1.22	0
263	SLU 19	2	264	4389	-23.66	1.21	0
263	SLU 20	2	266	4460	-23.94	1.23	0
263	SLU 21	2	269	4454	-24.08	1.23	0
263	SLU 22	2	257	4126	-22.6	1.1	0
263	SLU 23	2	261	4116	-22.83	1.09	0
263	SLU 24	2	264	4237	-23.25	1.13	0
263	SLU 25	2	267	4231	-23.39	1.12	0
263	SLU 26	2	266	4181	-23.25	1.11	0
263	SLU 27	2	269	4302	-23.67	1.14	0
263	SLU 28	2	272	4296	-23.81	1.14	0
263	SLU 29	2	267	4255	-23.44	1.13	0
263	SLU 30	2	270	4249	-23.57	1.13	0
263	SLU 31	2	280	4671	-25.21	1.3	0
263	SLU 32	3	284	4793	-25.63	1.33	0
263	SLU 33	3	286	4787	-25.77	1.33	0
263	SLU 34	3	286	4736	-25.63	1.32	0
263	SLU 35	3	289	4857	-26.05	1.35	0
263	SLU 36	3	291	4851	-26.19	1.35	0
263	SLU 37	3	286	4810	-25.82	1.34	0
263	SLU 38	3	289	4804	-25.96	1.33	0
263	SLU 39	3	284	4919	-26	1.4	0
263	SLU 40	3	287	4913	-26.14	1.39	0
263	SLU 41	3	290	4984	-26.42	1.41	0
263	SLU 42	3	292	4978	-26.56	1.41	0
263	SLU 43	2	296	4502	-25.31	1.13	0
263	SLU 44	2	300	4493	-25.53	1.13	0
263	SLU 45	2	303	4614	-25.96	1.16	0
263	SLU 46	2	306	4608	-26.09	1.16	0
263	SLU 47	2	305	4557	-25.95	1.14	0
263	SLU 48	2	308	4678	-26.38	1.17	0
263	SLU 49	2	311	4673	-26.51	1.17	0
263	SLU 50	2	306	4632	-26.15	1.16	0
263	SLU 51	2	308	4626	-26.28	1.16	0
263	SLU 52	3	319	5048	-27.91	1.34	0
263	SLU 53	3	323	5169	-28.34	1.37	0
263	SLU 54	3	325	5163	-28.47	1.37	0
263	SLU 55	3	324	5113	-28.33	1.35	0
263	SLU 56	3	328	5234	-28.76	1.38	0
263	SLU 57	3	330	5228	-28.89	1.38	0
263	SLU 58	3	325	5187	-28.53	1.37	0
263	SLU 59	3	328	5181	-28.66	1.37	0
263	SLU 60	3	323	5296	-28.71	1.43	0
263	SLU 61	3	326	5290	-28.84	1.43	0
263	SLU 62	3	329	5360	-29.13	1.44	0
263	SLU 63	3	331	5355	-29.26	1.44	0
263	SLU 64	3	319	5027	-27.79	1.31	0
263	SLU 65	3	323	5017	-28.01	1.31	0
263	SLU 66	3	326	5138	-28.44	1.34	0
263	SLU 67	3	329	5132	-28.57	1.34	0
263	SLU 68	3	328	5081	-28.43	1.32	0
263	SLU 69	3	331	5203	-28.86	1.35	0
263	SLU 70	3	334	5197	-28.99	1.35	0
263	SLU 71	3	329	5156	-28.63	1.34	0
263	SLU 72	3	332	5150	-28.76	1.34	0
263	SLU 73	3	342	5572	-30.39	1.52	0
263	SLU 74	3	346	5693	-30.82	1.55	0
263	SLU 75	3	348	5687	-30.95	1.55	0
263	SLU 76	3	348	5637	-30.81	1.53	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
263	SLU 77	3	351	5758	-31.24	1.56	0
263	SLU 78	3	353	5752	-31.37	1.56	0
263	SLU 79	3	349	5711	-31.01	1.55	0
263	SLU 80	3	351	5705	-31.14	1.55	0
263	SLU 81	3	347	5820	-31.19	1.61	0
263	SLU 82	3	349	5814	-31.32	1.61	0
263	SLU 83	3	352	5885	-31.61	1.63	0
263	SLU 84	3	354	5879	-31.74	1.62	0
263	SLE RA 1	2	240	3751	-20.83	0.97	0
263	SLE RA 2	2	243	3745	-20.98	0.97	0
263	SLE RA 3	2	245	3826	-21.26	0.99	0
263	SLE RA 4	2	247	3822	-21.35	0.99	0
263	SLE RA 5	2	246	3788	-21.26	0.98	0
263	SLE RA 6	2	249	3869	-21.54	1	0
263	SLE RA 7	2	250	3865	-21.63	1	0
263	SLE RA 8	2	247	3838	-21.39	0.99	0
263	SLE RA 9	2	249	3834	-21.48	0.99	0
263	SLE RA 10	2	256	4115	-22.57	1.11	0
263	SLE RA 11	2	258	4196	-22.85	1.13	0
263	SLE RA 12	2	260	4192	-22.94	1.13	0
263	SLE RA 13	2	259	4158	-22.85	1.12	0
263	SLE RA 14	2	262	4239	-23.13	1.14	0
263	SLE RA 15	2	263	4235	-23.22	1.14	0
263	SLE RA 16	2	260	4208	-22.98	1.13	0
263	SLE RA 17	2	262	4204	-23.07	1.13	0
263	SLE RA 18	2	259	4280	-23.1	1.17	0
263	SLE RA 19	2	260	4276	-23.19	1.17	0
263	SLE RA 20	2	262	4323	-23.38	1.18	0
263	SLE RA 21	2	264	4319	-23.47	1.18	0
263	SLE FR 1	2	240	3751	-20.83	0.97	0
263	SLE FR 2	2	241	3750	-20.86	0.97	0
263	SLE FR 3	2	241	3769	-20.94	0.97	0
263	SLE FR 4	2	246	3909	-21.54	1.03	0
263	SLE FR 5	2	247	3927	-21.62	1.03	0
263	SLE FR 6	2	249	4016	-21.96	1.07	0
263	SLE QP 1	2	240	3751	-20.83	0.97	0
263	SLE QP 2	2	246	3910	-21.51	1.03	0
263	SLD 1	3	306	4678	-23.97	1.52	0.01
263	SLD 2	3	306	4678	-23.97	1.52	0.01
263	SLD 3	7	0	4362	-9.92	3.31	0
263	SLD 4	7	0	4362	-9.92	3.31	0
263	SLD 5	-5	727	4618	-43.57	-1.55	0
263	SLD 6	-5	727	4618	-43.57	-1.55	0
263	SLD 7	11	-291	3568	3.29	4.44	0
263	SLD 8	11	-291	3568	3.29	4.44	0
263	SLD 9	-7	783	4252	-46.3	-2.38	0
263	SLD 10	-7	783	4252	-46.3	-2.38	0
263	SLD 11	9	-236	3202	0.55	3.61	0
263	SLD 12	9	-236	3202	0.55	3.61	0
263	SLD 13	-3	491	3458	-33.1	-1.25	0
263	SLD 14	-3	491	3458	-33.1	-1.25	0
263	SLD 15	1	186	3142	-19.04	0.54	0
263	SLD 16	1	186	3142	-19.04	0.54	0
263	SLV 1	3	391	5727	-27.51	2.07	0.01
263	SLV 2	3	391	5727	-27.51	2.07	0.01
263	SLV 3	16	-338	4949	6.02	6.66	0.01
263	SLV 4	16	-338	4949	6.02	6.66	0.01
263	SLV 5	-16	1396	5634	-74.16	-5.62	0.01
263	SLV 6	-16	1396	5634	-74.16	-5.62	0.01
263	SLV 7	25	-1036	3043	37.61	9.68	0
263	SLV 8	25	-1036	3043	37.61	9.68	0
263	SLV 9	-21	1528	4778	-80.63	-7.62	0
263	SLV 10	-21	1528	4778	-80.63	-7.62	0
263	SLV 11	20	-905	2186	31.15	7.68	0
263	SLV 12	20	-905	2186	31.15	7.68	0
263	SLV 13	-12	830	2871	-49.04	-4.6	0
263	SLV 14	-12	830	2871	-49.04	-4.6	0
263	SLV 15	1	100	2093	-15.51	-0.01	0
263	SLV 16	1	100	2093	-15.51	-0.01	0
264	SLU 1	-1	244	2837	-10.95	-0.36	-0.01
264	SLU 2	-1	245	2824	-11.01	-0.36	-0.01
264	SLU 3	-1	252	2913	-11.33	-0.37	-0.01
264	SLU 4	-1	253	2905	-11.37	-0.37	-0.01
264	SLU 5	-1	251	2864	-11.25	-0.36	-0.01
264	SLU 6	-2	258	2954	-11.56	-0.37	-0.01
264	SLU 7	-2	259	2945	-11.6	-0.37	-0.01
264	SLU 8	-1	254	2918	-11.41	-0.37	-0.01
264	SLU 9	-1	255	2910	-11.45	-0.37	-0.01
264	SLU 10	-2	271	3264	-12.29	-0.44	-0.01
264	SLU 11	-2	278	3353	-12.61	-0.45	-0.01
264	SLU 12	-2	279	3345	-12.64	-0.44	-0.01
264	SLU 13	-2	277	3304	-12.52	-0.44	-0.01
264	SLU 14	-2	283	3393	-12.84	-0.45	-0.01
264	SLU 15	-2	284	3385	-12.88	-0.45	-0.01
264	SLU 16	-2	280	3358	-12.69	-0.44	-0.01
264	SLU 17	-2	281	3350	-12.73	-0.44	-0.01
264	SLU 18	-2	281	3466	-12.77	-0.47	-0.01
264	SLU 19	-2	282	3458	-12.81	-0.47	-0.01
264	SLU 20	-2	286	3506	-13.01	-0.47	-0.01
264	SLU 21	-2	287	3498	-13.05	-0.47	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
264	SLU 22	-2	273	3247	-12.32	-0.43	-0.01
264	SLU 23	-2	274	3233	-12.39	-0.42	-0.01
264	SLU 24	-2	281	3323	-12.7	-0.43	-0.01
264	SLU 25	-2	282	3315	-12.74	-0.43	-0.01
264	SLU 26	-2	280	3274	-12.62	-0.43	-0.01
264	SLU 27	-2	286	3363	-12.93	-0.44	-0.01
264	SLU 28	-2	287	3355	-12.97	-0.43	-0.01
264	SLU 29	-2	283	3327	-12.79	-0.43	-0.01
264	SLU 30	-2	284	3319	-12.83	-0.43	-0.01
264	SLU 31	-2	300	3673	-13.67	-0.5	-0.01
264	SLU 32	-2	307	3763	-13.98	-0.51	-0.01
264	SLU 33	-2	308	3755	-14.02	-0.51	-0.01
264	SLU 34	-2	305	3714	-13.9	-0.5	-0.01
264	SLU 35	-2	312	3803	-14.21	-0.51	-0.01
264	SLU 36	-2	313	3795	-14.25	-0.51	-0.01
264	SLU 37	-2	309	3767	-14.07	-0.51	-0.01
264	SLU 38	-2	310	3759	-14.1	-0.51	-0.01
264	SLU 39	-2	310	3875	-14.15	-0.54	-0.01
264	SLU 40	-2	311	3867	-14.19	-0.54	-0.01
264	SLU 41	-2	315	3915	-14.38	-0.54	-0.01
264	SLU 42	-2	316	3907	-14.42	-0.54	-0.01
264	SLU 43	-2	307	3548	-13.76	-0.45	-0.01
264	SLU 44	-2	309	3535	-13.83	-0.44	-0.01
264	SLU 45	-2	316	3624	-14.14	-0.45	-0.01
264	SLU 46	-2	317	3616	-14.18	-0.45	-0.01
264	SLU 47	-2	314	3575	-14.06	-0.45	-0.01
264	SLU 48	-2	321	3664	-14.37	-0.46	-0.01
264	SLU 49	-2	322	3656	-14.41	-0.46	-0.01
264	SLU 50	-2	318	3629	-14.23	-0.45	-0.01
264	SLU 51	-2	319	3621	-14.27	-0.45	-0.01
264	SLU 52	-2	335	3975	-15.11	-0.52	-0.01
264	SLU 53	-2	341	4064	-15.42	-0.53	-0.01
264	SLU 54	-2	342	4056	-15.46	-0.53	-0.01
264	SLU 55	-2	340	4015	-15.34	-0.53	-0.01
264	SLU 56	-2	347	4104	-15.65	-0.53	-0.01
264	SLU 57	-2	348	4096	-15.69	-0.53	-0.01
264	SLU 58	-2	343	4069	-15.51	-0.53	-0.01
264	SLU 59	-2	344	4061	-15.54	-0.53	-0.01
264	SLU 60	-2	344	4177	-15.59	-0.56	-0.01
264	SLU 61	-2	345	4169	-15.63	-0.56	-0.01
264	SLU 62	-2	349	4217	-15.82	-0.56	-0.01
264	SLU 63	-2	350	4209	-15.86	-0.56	-0.01
264	SLU 64	-2	336	3958	-15.14	-0.51	-0.01
264	SLU 65	-2	338	3944	-15.2	-0.51	-0.01
264	SLU 66	-2	344	4033	-15.52	-0.52	-0.01
264	SLU 67	-2	345	4025	-15.55	-0.52	-0.01
264	SLU 68	-2	343	3984	-15.43	-0.51	-0.01
264	SLU 69	-2	350	4074	-15.75	-0.52	-0.01
264	SLU 70	-2	351	4066	-15.79	-0.52	-0.01
264	SLU 71	-2	346	4038	-15.6	-0.52	-0.01
264	SLU 72	-2	347	4030	-15.64	-0.52	-0.01
264	SLU 73	-2	363	4384	-16.48	-0.59	-0.01
264	SLU 74	-2	370	4473	-16.79	-0.6	-0.01
264	SLU 75	-2	371	4465	-16.83	-0.59	-0.01
264	SLU 76	-2	369	4424	-16.71	-0.59	-0.01
264	SLU 77	-2	376	4514	-17.03	-0.6	-0.01
264	SLU 78	-2	377	4506	-17.06	-0.6	-0.01
264	SLU 79	-2	372	4478	-16.88	-0.6	-0.01
264	SLU 80	-2	373	4470	-16.92	-0.59	-0.01
264	SLU 81	-2	373	4586	-16.96	-0.62	-0.01
264	SLU 82	-2	374	4578	-17	-0.62	-0.01
264	SLU 83	-2	378	4626	-17.19	-0.63	-0.01
264	SLU 84	-2	379	4618	-17.23	-0.62	-0.01
264	SLE RA 1	-2	252	2954	-11.34	-0.38	-0.01
264	SLE RA 2	-2	253	2945	-11.39	-0.38	-0.01
264	SLE RA 3	-2	258	3005	-11.59	-0.38	-0.01
264	SLE RA 4	-2	258	3000	-11.62	-0.38	-0.01
264	SLE RA 5	-2	257	2972	-11.54	-0.38	-0.01
264	SLE RA 6	-2	261	3032	-11.75	-0.39	-0.01
264	SLE RA 7	-2	262	3026	-11.78	-0.39	-0.01
264	SLE RA 8	-2	259	3008	-11.65	-0.38	-0.01
264	SLE RA 9	-2	260	3003	-11.68	-0.38	-0.01
264	SLE RA 10	-2	270	3239	-12.24	-0.43	-0.01
264	SLE RA 11	-2	275	3298	-12.45	-0.44	-0.01
264	SLE RA 12	-2	276	3293	-12.47	-0.43	-0.01
264	SLE RA 13	-2	274	3265	-12.39	-0.43	-0.01
264	SLE RA 14	-2	278	3325	-12.6	-0.44	-0.01
264	SLE RA 15	-2	279	3320	-12.63	-0.44	-0.01
264	SLE RA 16	-2	276	3301	-12.5	-0.44	-0.01
264	SLE RA 17	-2	277	3296	-12.53	-0.43	-0.01
264	SLE RA 18	-2	277	3373	-12.56	-0.45	-0.01
264	SLE RA 19	-2	277	3368	-12.58	-0.45	-0.01
264	SLE RA 20	-2	280	3400	-12.71	-0.46	-0.01
264	SLE RA 21	-2	281	3395	-12.74	-0.45	-0.01
264	SLE FR 1	-2	252	2954	-11.34	-0.38	-0.01
264	SLE FR 2	-2	252	2953	-11.35	-0.38	-0.01
264	SLE FR 3	-2	253	2965	-11.4	-0.38	-0.01
264	SLE FR 4	-2	260	3078	-11.72	-0.4	-0.01
264	SLE FR 5	-2	261	3091	-11.77	-0.4	-0.01
264	SLE FR 6	-2	264	3164	-11.95	-0.42	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
264	SLE QP 1	-2	252	2954	-11.34	-0.38	-0.01
264	SLE QP 2	-2	259	3080	-11.71	-0.4	-0.01
264	SLD 1	1	590	2663	-25.68	1.7	0
264	SLD 2	1	590	2663	-25.68	1.7	0
264	SLD 3	-2	243	2481	-10.3	0.2	0
264	SLD 4	-2	243	2481	-10.3	0.2	0
264	SLD 5	4	885	3231	-39.22	2.5	-0.01
264	SLD 6	4	885	3231	-39.22	2.5	-0.01
264	SLD 7	-7	-272	2625	12.04	-2.49	0
264	SLD 8	-7	-272	2625	12.04	-2.49	0
264	SLD 9	4	791	3535	-35.45	1.68	-0.02
264	SLD 10	4	791	3535	-35.45	1.68	-0.02
264	SLD 11	-8	-366	2929	15.81	-3.3	0
264	SLD 12	-8	-366	2929	15.81	-3.3	0
264	SLD 13	-1	276	3679	-13.11	-1.01	-0.01
264	SLD 14	-1	276	3679	-13.11	-1.01	-0.01
264	SLD 15	-5	-71	3497	2.27	-2.5	-0.01
264	SLD 16	-5	-71	3497	2.27	-2.5	-0.01
264	SLV 1	6	1039	2110	-44.7	4.7	0
264	SLV 2	6	1039	2110	-44.7	4.7	0
264	SLV 3	-3	218	1677	-8.3	0.88	0.01
264	SLV 4	-3	218	1677	-8.3	0.88	0.01
264	SLV 5	14	1738	3446	-76.8	6.93	-0.02
264	SLV 6	14	1738	3446	-76.8	6.93	-0.02
264	SLV 7	-15	-998	2002	44.51	-5.82	0.02
264	SLV 8	-15	-998	2002	44.51	-5.82	0.02
264	SLV 9	12	1517	4158	-67.92	5.01	-0.03
264	SLV 10	12	1517	4158	-67.92	5.01	-0.03
264	SLV 11	-17	-1219	2714	53.39	-7.73	0.01
264	SLV 12	-17	-1219	2714	53.39	-7.73	0.01
264	SLV 13	-1	301	4483	-15.11	-1.68	-0.02
264	SLV 14	-1	301	4483	-15.11	-1.68	-0.02
264	SLV 15	-9	-520	4050	21.28	-5.5	-0.01
264	SLV 16	-9	-520	4050	21.28	-5.5	-0.01
265	SLU 1	-21	-651	1644	29.1	-13.35	0
265	SLU 2	-20	-588	1638	26.34	-12.47	0
265	SLU 3	-22	-672	1674	30.05	-13.83	0
265	SLU 4	-21	-634	1671	28.4	-13.3	0
265	SLU 5	-21	-601	1659	26.95	-12.79	0
265	SLU 6	-23	-685	1695	30.66	-14.15	0
265	SLU 7	-22	-647	1691	29	-13.62	0
265	SLU 8	-22	-677	1685	30.32	-14	0
265	SLU 9	-22	-639	1682	28.66	-13.47	0
265	SLU 10	-23	-671	1754	30.06	-14.26	0
265	SLU 11	-25	-756	1791	33.77	-15.62	0
265	SLU 12	-24	-718	1787	32.11	-15.09	0
265	SLU 13	-24	-684	1775	30.66	-14.58	0
265	SLU 14	-25	-769	1812	34.38	-15.94	0
265	SLU 15	-25	-731	1808	32.72	-15.41	0
265	SLU 16	-25	-761	1802	34.04	-15.79	0
265	SLU 17	-25	-723	1799	32.38	-15.26	0
265	SLU 18	-25	-771	1810	34.41	-15.91	0
265	SLU 19	-25	-733	1807	32.75	-15.38	0
265	SLU 20	-26	-784	1831	35.02	-16.23	0
265	SLU 21	-25	-746	1828	33.36	-15.7	0
265	SLU 22	-24	-733	1758	32.75	-15.13	0
265	SLU 23	-23	-670	1752	29.99	-14.25	0
265	SLU 24	-25	-754	1789	33.7	-15.61	0
265	SLU 25	-24	-716	1785	32.04	-15.08	0
265	SLU 26	-24	-683	1773	30.59	-14.57	0
265	SLU 27	-25	-767	1810	34.31	-15.93	0
265	SLU 28	-25	-729	1806	32.65	-15.4	0
265	SLU 29	-25	-759	1800	33.97	-15.78	0
265	SLU 30	-25	-721	1796	32.31	-15.25	0
265	SLU 31	-26	-753	1869	33.7	-16.04	0
265	SLU 32	-27	-838	1905	37.42	-17.4	0
265	SLU 33	-27	-800	1902	35.76	-16.87	0
265	SLU 34	-26	-766	1890	34.31	-16.36	0
265	SLU 35	-28	-851	1926	38.03	-17.72	0
265	SLU 36	-27	-813	1923	36.37	-17.19	0
265	SLU 37	-28	-843	1917	37.68	-17.57	0
265	SLU 38	-27	-805	1913	36.03	-17.04	0
265	SLU 39	-28	-853	1925	38.06	-17.69	0
265	SLU 40	-27	-815	1921	36.4	-17.16	0
265	SLU 41	-28	-866	1946	38.67	-18.01	0
265	SLU 42	-28	-828	1942	37.01	-17.48	0
265	SLU 43	-27	-819	2097	36.58	-16.75	0
265	SLU 44	-26	-755	2092	33.82	-15.87	0
265	SLU 45	-27	-839	2128	37.53	-17.22	0
265	SLU 46	-27	-801	2124	35.88	-16.69	0
265	SLU 47	-26	-768	2112	34.43	-16.19	0
265	SLU 48	-28	-852	2149	38.14	-17.55	0
265	SLU 49	-27	-814	2145	36.48	-17.02	0
265	SLU 50	-28	-845	2139	37.8	-17.39	0
265	SLU 51	-27	-806	2136	36.14	-16.86	0
265	SLU 52	-29	-839	2208	37.54	-17.66	0
265	SLU 53	-30	-923	2245	41.25	-19.01	0
265	SLU 54	-30	-885	2241	39.59	-18.48	0
265	SLU 55	-29	-852	2229	38.14	-17.98	0
265	SLU 56	-31	-936	2266	41.86	-19.34	0



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
		x	y	z		x	y	z	
265	SLU 57	-30	-898	2262		40.2	-18.81		0
265	SLU 58	-30	-928	2256		41.52	-19.18		0
265	SLU 59	-30	-890	2252		39.86	-18.65		0
265	SLU 60	-31	-938	2264		41.89	-19.3		0
265	SLU 61	-30	-900	2261		40.23	-18.78		0
265	SLU 62	-31	-951	2285		42.5	-19.63		0
265	SLU 63	-31	-913	2282		40.84	-19.1		0
265	SLU 64	-29	-901	2212		40.23	-18.53		0
265	SLU 65	-29	-837	2206		37.47	-17.65		0
265	SLU 66	-30	-921	2242		41.18	-19		0
265	SLU 67	-30	-883	2239		39.52	-18.47		0
265	SLU 68	-29	-850	2227		38.07	-17.97		0
265	SLU 69	-31	-934	2263		41.79	-19.33		0
265	SLU 70	-30	-896	2260		40.13	-18.8		0
265	SLU 71	-30	-927	2254		41.45	-19.17		0
265	SLU 72	-30	-888	2250		39.79	-18.64		0
265	SLU 73	-31	-921	2323		41.18	-19.44		0
265	SLU 74	-33	-1005	2359		44.9	-20.79		0
265	SLU 75	-32	-967	2356		43.24	-20.26		0
265	SLU 76	-32	-934	2344		41.79	-19.76		0
265	SLU 77	-33	-1018	2380		45.51	-21.12		0
265	SLU 78	-33	-980	2377		43.85	-20.59		0
265	SLU 79	-33	-1010	2371		45.16	-20.96		0
265	SLU 80	-33	-972	2367		43.51	-20.43		0
265	SLU 81	-33	-1020	2379		45.54	-21.08		0
265	SLU 82	-33	-982	2375		43.88	-20.56		0
265	SLU 83	-34	-1033	2400		46.15	-21.41		0
265	SLU 84	-33	-995	2396		44.49	-20.88		0
265	SLE RA 1	-22	-675	1676		30.14	-13.86		0
265	SLE RA 2	-21	-632	1672		28.3	-13.27		0
265	SLE RA 3	-23	-689	1697		30.78	-14.18		0
265	SLE RA 4	-22	-663	1694		29.67	-13.82		0
265	SLE RA 5	-22	-641	1686		28.71	-13.49		0
265	SLE RA 6	-23	-697	1711		31.18	-14.39		0
265	SLE RA 7	-23	-672	1708		30.08	-14.04		0
265	SLE RA 8	-23	-692	1704		30.96	-14.29		0
265	SLE RA 9	-22	-667	1702		29.85	-13.94		0
265	SLE RA 10	-23	-688	1750		30.78	-14.47		0
265	SLE RA 11	-24	-744	1774		33.26	-15.37		0
265	SLE RA 12	-24	-719	1772		32.15	-15.02		0
265	SLE RA 13	-24	-697	1764		31.19	-14.68		0
265	SLE RA 14	-25	-753	1788		33.66	-15.59		0
265	SLE RA 15	-24	-728	1786		32.56	-15.23		0
265	SLE RA 16	-25	-748	1782		33.43	-15.48		0
265	SLE RA 17	-24	-722	1780		32.33	-15.13		0
265	SLE RA 18	-25	-754	1788		33.68	-15.56		0
265	SLE RA 19	-24	-729	1785		32.58	-15.21		0
265	SLE RA 20	-25	-763	1801		34.09	-15.78		0
265	SLE RA 21	-25	-738	1799		32.98	-15.43		0
265	SLE FR 1	-22	-675	1676		30.14	-13.86		0
265	SLE FR 2	-22	-666	1676		29.77	-13.74		0
265	SLE FR 3	-22	-678	1682		30.31	-13.95		0
265	SLE FR 4	-23	-690	1709		30.84	-14.25		0
265	SLE FR 5	-23	-702	1715		31.37	-14.46		0
265	SLE FR 6	-23	-715	1732		31.91	-14.71		0
265	SLE QP 1	-22	-675	1676		30.14	-13.86		0
265	SLE QP 2	-23	-699	1710		31.21	-14.37		0
265	SLD 1	-39	-734	2040		33	6.77		0
265	SLD 2	-39	-734	2040		33	6.77		0
265	SLD 3	-48	-1177	2202		51.59	-1.07		-0.01
265	SLD 4	-48	-1177	2202		51.59	-1.07		-0.01
265	SLD 5	-14	-37	1564		3.55	3.87		0
265	SLD 6	-14	-37	1564		3.55	3.87		0
265	SLD 7	-44	-1515	2102		65.51	-22.28		-0.01
265	SLD 8	-44	-1515	2102		65.51	-22.28		-0.01
265	SLD 9	-2	117	1317		-3.1	-6.46		0.01
265	SLD 10	-2	117	1317		-3.1	-6.46		0.01
265	SLD 11	-32	-1361	1856		58.86	-32.61		-0.01
265	SLD 12	-32	-1361	1856		58.86	-32.61		-0.01
265	SLD 13	2	-220	1218		10.82	-27.67		0
265	SLD 14	2	-220	1218		10.82	-27.67		0
265	SLD 15	-7	-664	1380		29.41	-35.52		0
265	SLD 16	-7	-664	1380		29.41	-35.52		0
265	SLV 1	-60	-782	2479		35.49	35.77		0
265	SLV 2	-60	-782	2479		35.49	35.77		0
265	SLV 3	-82	-1807	2865		78.4	16.77		-0.01
265	SLV 4	-82	-1807	2865		78.4	16.77		-0.01
265	SLV 5	-1	831	1355		-32.59	29.5		0.01
265	SLV 6	-1	831	1355		-32.59	29.5		0.01
265	SLV 7	-73	-2585	2642		110.44	-33.86		-0.02
265	SLV 8	-73	-2585	2642		110.44	-33.86		-0.02
265	SLV 9	28	1188	778		-48.03	5.12		0.02
265	SLV 10	28	1188	778		-48.03	5.12		0.02
265	SLV 11	-45	-2228	2065		95	-58.24		-0.02
265	SLV 12	-45	-2228	2065		95	-58.24		-0.02
265	SLV 13	36	410	555		-15.99	-45.51		0.01
265	SLV 14	36	410	555		-15.99	-45.51		0.01
265	SLV 15	14	-615	941		26.92	-64.52		0
265	SLV 16	14	-615	941		26.92	-64.52		0
266	SLU 1	2	-416	5782		16.8	1.91		0



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
		x	y	z		x	y	z	
266	SLU 2	1	-354	5602	14.08	0.64		0	
266	SLU 3	2	-429	5988	17.33	1.99		0	
266	SLU 4	2	-392	5880	15.7	1.22		0	
266	SLU 5	1	-360	5755	14.36	0.7		0	
266	SLU 6	2	-436	6140	17.61	2.05		0	
266	SLU 7	2	-398	6033	15.98	1.29		0	
266	SLU 8	2	-429	6087	17.35	2.04		0	
266	SLU 9	2	-392	5980	15.72	1.27		0	
266	SLU 10	2	-410	6238	16.31	0.88		0	
266	SLU 11	3	-485	6623	19.56	2.23		0	
266	SLU 12	2	-447	6516	17.93	1.47		0	
266	SLU 13	2	-416	6391	16.59	0.94		0	
266	SLU 14	3	-491	6776	19.84	2.29		0	
266	SLU 15	2	-454	6668	18.21	1.53		0	
266	SLU 16	3	-485	6723	19.58	2.28		0	
266	SLU 17	2	-447	6615	17.95	1.51		0	
266	SLU 18	3	-496	6689	19.98	2.26		0	
266	SLU 19	2	-458	6582	18.35	1.49		0	
266	SLU 20	3	-502	6842	20.26	2.32		0	
266	SLU 21	2	-465	6735	18.63	1.55		0	
266	SLU 22	2	-471	6428	19.01	2.16		0	
266	SLU 23	2	-409	6249	16.29	0.89		0	
266	SLU 24	3	-484	6634	19.54	2.24		0	
266	SLU 25	2	-447	6527	17.91	1.48		0	
266	SLU 26	2	-415	6402	16.57	0.95		0	
266	SLU 27	3	-491	6787	19.82	2.3		0	
266	SLU 28	2	-453	6680	18.19	1.54		0	
266	SLU 29	3	-484	6734	19.56	2.29		0	
266	SLU 30	2	-447	6627	17.93	1.52		0	
266	SLU 31	2	-465	6885	18.52	1.13		0	
266	SLU 32	3	-540	7270	21.77	2.48		0	
266	SLU 33	2	-502	7162	20.14	1.72		0	
266	SLU 34	2	-471	7038	18.8	1.19		0	
266	SLU 35	3	-546	7423	22.05	2.54		0	
266	SLU 36	3	-509	7315	20.42	1.78		0	
266	SLU 37	3	-540	7370	21.79	2.53		0	
266	SLU 38	2	-502	7262	20.16	1.76		0	
266	SLU 39	3	-551	7336	22.19	2.51		0	
266	SLU 40	2	-513	7229	20.56	1.74		0	
266	SLU 41	3	-557	7489	22.47	2.57		0	
266	SLU 42	3	-520	7382	20.84	1.81		0	
266	SLU 43	3	-522	7294	21.08	2.4		0	
266	SLU 44	2	-460	7115	18.36	1.12		0	
266	SLU 45	3	-535	7500	21.61	2.48		0	
266	SLU 46	2	-498	7393	19.98	1.71		0	
266	SLU 47	2	-466	7268	18.64	1.19		0	
266	SLU 48	3	-542	7653	21.89	2.54		0	
266	SLU 49	2	-504	7546	20.26	1.77		0	
266	SLU 50	3	-535	7600	21.64	2.52		0	
266	SLU 51	2	-498	7492	20	1.76		0	
266	SLU 52	2	-516	7750	20.59	1.37		0	
266	SLU 53	3	-591	8136	23.84	2.72		0	
266	SLU 54	3	-553	8028	22.21	1.95		0	
266	SLU 55	2	-522	7903	20.87	1.43		0	
266	SLU 56	3	-597	8289	24.12	2.78		0	
266	SLU 57	3	-560	8181	22.49	2.01		0	
266	SLU 58	3	-591	8236	23.86	2.76		0	
266	SLU 59	3	-553	8128	22.23	2		0	
266	SLU 60	3	-602	8202	24.27	2.75		0	
266	SLU 61	3	-564	8095	22.63	1.98		0	
266	SLU 62	3	-608	8355	24.54	2.81		0	
266	SLU 63	3	-571	8247	22.91	2.04		0	
266	SLU 64	3	-577	7941	23.29	2.65		0	
266	SLU 65	2	-515	7762	20.57	1.38		0	
266	SLU 66	3	-590	8147	23.82	2.73		0	
266	SLU 67	3	-553	8040	22.19	1.96		0	
266	SLU 68	2	-521	7915	20.85	1.44		0	
266	SLU 69	3	-597	8300	24.1	2.79		0	
266	SLU 70	3	-559	8192	22.47	2.03		0	
266	SLU 71	3	-590	8247	23.84	2.77		0	
266	SLU 72	3	-553	8139	22.21	2.01		0	
266	SLU 73	3	-571	8397	22.8	1.62		0	
266	SLU 74	3	-646	8783	26.05	2.97		0	
266	SLU 75	3	-608	8675	24.42	2.21		0	
266	SLU 76	3	-577	8550	23.08	1.68		0	
266	SLU 77	4	-652	8936	26.33	3.03		0	
266	SLU 78	3	-615	8828	24.7	2.27		0	
266	SLU 79	3	-646	8882	26.07	3.02		0	
266	SLU 80	3	-608	8775	24.44	2.25		0	
266	SLU 81	3	-657	8849	26.48	3		0	
266	SLU 82	3	-619	8741	24.84	2.23		0	
266	SLU 83	4	-663	9002	26.75	3.06		0	
266	SLU 84	3	-626	8894	25.12	2.29		0	
266	SLE RA 1	2	-432	5966	17.43	1.98		0	
266	SLE RA 2	2	-390	5847	15.62	1.13		0	
266	SLE RA 3	2	-440	6104	17.79	2.04		0	
266	SLE RA 4	2	-416	6032	16.7	1.53		0	
266	SLE RA 5	2	-395	5949	15.8	1.18		0	
266	SLE RA 6	2	-445	6206	17.97	2.08		0	
266	SLE RA 7	2	-420	6134	16.88	1.57		0	



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
266	SLE RA 8	2	-441	6170	17.8	2.07	0
266	SLE RA 9	2	-416	6098	16.71	1.56	0
266	SLE RA 10	2	-427	6271	17.1	1.3	0
266	SLE RA 11	3	-478	6527	19.27	2.2	0
266	SLE RA 12	2	-453	6456	18.18	1.69	0
266	SLE RA 13	2	-432	6372	17.29	1.34	0
266	SLE RA 14	3	-482	6629	19.46	2.24	0
266	SLE RA 15	2	-457	6558	18.37	1.73	0
266	SLE RA 16	3	-478	6594	19.29	2.23	0
266	SLE RA 17	2	-453	6522	18.2	1.72	0
266	SLE RA 18	3	-485	6572	19.55	2.21	0
266	SLE RA 19	2	-460	6500	18.47	1.7	0
266	SLE RA 20	3	-489	6674	19.74	2.26	0
266	SLE RA 21	2	-464	6602	18.65	1.75	0
266	SLE FR 1	2	-432	5966	17.43	1.98	0
266	SLE FR 2	2	-424	5942	17.07	1.81	0
266	SLE FR 3	2	-434	6007	17.5	2	0
266	SLE FR 4	2	-440	6124	17.71	1.88	0
266	SLE FR 5	2	-450	6189	18.14	2.07	0
266	SLE FR 6	2	-458	6269	18.49	2.1	0
266	SLE QP 1	2	-432	5966	17.43	1.98	0
266	SLE QP 2	2	-448	6148	18.07	2.05	0
266	SLD 1	25	-23	4266	0.39	22.35	0.01
266	SLD 2	25	-23	4266	0.39	22.35	0.01
266	SLD 3	36	-445	4845	18.01	33.34	0
266	SLD 4	36	-445	4845	18.01	33.34	0
266	SLD 5	-7	320	4705	-13.97	-8.52	0.01
266	SLD 6	-7	320	4705	-13.97	-8.52	0.01
266	SLD 7	29	-1088	6635	44.78	28.1	-0.01
266	SLD 8	29	-1088	6635	44.78	28.1	-0.01
266	SLD 9	-24	192	5661	-8.65	-24	0
266	SLD 10	-24	192	5661	-8.65	-24	0
266	SLD 11	12	-1216	7591	50.1	12.63	-0.01
266	SLD 12	12	-1216	7591	50.1	12.63	-0.01
266	SLD 13	-31	-451	7451	18.12	-29.23	-0.01
266	SLD 14	-31	-451	7451	18.12	-29.23	-0.01
266	SLD 15	-20	-873	8030	35.75	-18.24	-0.01
266	SLD 16	-20	-873	8030	35.75	-18.24	-0.01
266	SLV 1	56	541	1739	-23.04	50.23	0.02
266	SLV 2	56	541	1739	-23.04	50.23	0.02
266	SLV 3	83	-440	3103	17.9	77.98	0.01
266	SLV 4	83	-440	3103	17.9	77.98	0.01
266	SLV 5	-23	1336	2756	-56.35	-25.58	0.02
266	SLV 6	-23	1336	2756	-56.35	-25.58	0.02
266	SLV 7	67	-1933	7304	80.11	66.92	-0.01
266	SLV 8	67	-1933	7304	80.11	66.92	-0.01
266	SLV 9	-63	1038	4992	-43.97	-62.81	0.01
266	SLV 10	-63	1038	4992	-43.97	-62.81	0.01
266	SLV 11	27	-2232	9540	92.49	29.69	-0.02
266	SLV 12	27	-2232	9540	92.49	29.69	-0.02
266	SLV 13	-78	-455	9193	18.24	-73.88	-0.01
266	SLV 14	-78	-455	9193	18.24	-73.88	-0.01
266	SLV 15	-51	-1436	10557	59.18	-46.13	-0.02
266	SLV 16	-51	-1436	10557	59.18	-46.13	-0.02
267	SLU 1	1	34	3500	8.78	0.65	0
267	SLU 2	1	38	3492	8.64	0.65	0
267	SLU 3	1	35	3607	9.07	0.67	0
267	SLU 4	1	37	3603	8.99	0.67	0
267	SLU 5	1	39	3555	8.79	0.66	0
267	SLU 6	1	36	3670	9.23	0.68	0
267	SLU 7	1	39	3666	9.14	0.68	0
267	SLU 8	1	36	3626	9.09	0.67	0
267	SLU 9	1	39	3621	9	0.67	0
267	SLU 10	1	31	4012	10.42	0.8	0
267	SLU 11	1	28	4128	10.85	0.83	0
267	SLU 12	1	30	4123	10.77	0.83	0
267	SLU 13	1	32	4075	10.57	0.82	0
267	SLU 14	1	29	4190	11.01	0.84	0
267	SLU 15	1	31	4186	10.92	0.84	0
267	SLU 16	1	29	4146	10.87	0.83	0
267	SLU 17	1	32	4141	10.78	0.83	0
267	SLU 18	1	24	4243	11.33	0.87	0
267	SLU 19	1	26	4238	11.24	0.87	0
267	SLU 20	1	25	4306	11.48	0.88	0
267	SLU 21	1	27	4301	11.39	0.88	0
267	SLU 22	1	30	3995	10.37	0.79	0
267	SLU 23	1	35	3987	10.22	0.78	0
267	SLU 24	1	31	4102	10.66	0.81	0
267	SLU 25	1	34	4097	10.57	0.8	0
267	SLU 26	1	36	4050	10.38	0.79	0
267	SLU 27	1	33	4165	10.81	0.82	0
267	SLU 28	1	35	4160	10.73	0.81	0
267	SLU 29	1	33	4120	10.67	0.81	0
267	SLU 30	1	35	4116	10.59	0.81	0
267	SLU 31	1	27	4507	12	0.94	0
267	SLU 32	1	24	4622	12.44	0.96	0
267	SLU 33	1	27	4618	12.36	0.96	0
267	SLU 34	1	28	4570	12.16	0.95	0
267	SLU 35	1	25	4685	12.59	0.97	0
267	SLU 36	1	28	4680	12.51	0.97	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
267	SLU 37	1	25	4641	12.46	0.96	0
267	SLU 38	1	28	4636	12.37	0.96	0
267	SLU 39	1	20	4738	12.91	1.01	0
267	SLU 40	1	22	4733	12.83	1	0
267	SLU 41	1	21	4801	13.07	1.02	0
267	SLU 42	1	24	4796	12.98	1.02	0
267	SLU 43	1	46	4380	10.87	0.8	0
267	SLU 44	1	50	4373	10.73	0.8	0
267	SLU 45	1	47	4488	11.16	0.82	0
267	SLU 46	1	49	4483	11.08	0.82	0
267	SLU 47	1	51	4435	10.88	0.81	0
267	SLU 48	1	48	4551	11.32	0.83	0
267	SLU 49	1	50	4546	11.23	0.83	0
267	SLU 50	1	48	4506	11.18	0.82	0
267	SLU 51	1	50	4501	11.09	0.82	0
267	SLU 52	1	42	4893	12.51	0.96	0
267	SLU 53	1	39	5008	12.95	0.98	0
267	SLU 54	1	42	5003	12.86	0.98	0
267	SLU 55	1	43	4955	12.66	0.97	0
267	SLU 56	1	40	5071	13.1	0.99	0
267	SLU 57	1	43	5066	13.01	0.99	0
267	SLU 58	1	41	5026	12.96	0.98	0
267	SLU 59	1	43	5021	12.87	0.98	0
267	SLU 60	1	35	5124	13.42	1.02	0
267	SLU 61	1	38	5119	13.33	1.02	0
267	SLU 62	1	36	5186	13.57	1.03	0
267	SLU 63	1	39	5182	13.48	1.03	0
267	SLU 64	1	42	4875	12.46	0.94	0
267	SLU 65	1	46	4867	12.31	0.93	0
267	SLU 66	1	43	4983	12.75	0.96	0
267	SLU 67	1	45	4978	12.66	0.95	0
267	SLU 68	1	47	4930	12.47	0.94	0
267	SLU 69	1	44	5045	12.9	0.97	0
267	SLU 70	1	47	5041	12.82	0.96	0
267	SLU 71	1	44	5001	12.76	0.96	0
267	SLU 72	1	47	4996	12.68	0.96	0
267	SLU 73	1	39	5387	14.1	1.09	0
267	SLU 74	1	36	5503	14.53	1.11	0
267	SLU 75	1	38	5498	14.45	1.11	0
267	SLU 76	1	40	5450	14.25	1.1	0
267	SLU 77	1	37	5566	14.69	1.12	0
267	SLU 78	1	39	5561	14.6	1.12	0
267	SLU 79	1	37	5521	14.55	1.11	0
267	SLU 80	1	39	5516	14.46	1.11	0
267	SLU 81	1	31	5618	15	1.16	0
267	SLU 82	1	34	5614	14.92	1.16	0
267	SLU 83	1	33	5681	15.16	1.17	0
267	SLU 84	1	35	5676	15.07	1.17	0
267	SLE RA 1	1	33	3641	9.24	0.69	0
267	SLE RA 2	1	36	3636	9.14	0.69	0
267	SLE RA 3	1	34	3713	9.43	0.7	0
267	SLE RA 4	1	35	3710	9.37	0.7	0
267	SLE RA 5	1	37	3678	9.24	0.7	0
267	SLE RA 6	1	34	3755	9.53	0.71	0
267	SLE RA 7	1	36	3752	9.47	0.71	0
267	SLE RA 8	1	35	3725	9.44	0.71	0
267	SLE RA 9	1	36	3722	9.38	0.7	0
267	SLE RA 10	1	31	3983	10.33	0.79	0
267	SLE RA 11	1	29	4060	10.62	0.81	0
267	SLE RA 12	1	30	4057	10.56	0.81	0
267	SLE RA 13	1	32	4025	10.43	0.8	0
267	SLE RA 14	1	30	4102	10.72	0.81	0
267	SLE RA 15	1	31	4099	10.66	0.81	0
267	SLE RA 16	1	30	4072	10.63	0.81	0
267	SLE RA 17	1	31	4069	10.57	0.81	0
267	SLE RA 18	1	26	4137	10.93	0.84	0
267	SLE RA 19	1	28	4134	10.87	0.84	0
267	SLE RA 20	1	27	4179	11.03	0.85	0
267	SLE RA 21	1	29	4176	10.98	0.84	0
267	SLE FR 1	1	33	3641	9.24	0.69	0
267	SLE FR 2	1	34	3640	9.22	0.69	0
267	SLE FR 3	1	33	3658	9.28	0.69	0
267	SLE FR 4	1	32	3789	9.72	0.73	0
267	SLE FR 5	1	31	3807	9.78	0.74	0
267	SLE FR 6	1	30	3889	10.08	0.76	0
267	SLE QP 1	1	33	3641	9.24	0.69	0
267	SLE QP 2	1	31	3790	9.74	0.74	0
267	SLD 1	1	108	4378	5.16	1.9	-0.01
267	SLD 2	1	108	4378	5.16	1.9	-0.01
267	SLD 3	6	-241	4187	23.69	4.69	-0.01
267	SLD 4	6	-241	4187	23.69	4.69	-0.01
267	SLD 5	-7	584	4256	-19.75	-3.15	0
267	SLD 6	-7	584	4256	-19.75	-3.15	0
267	SLD 7	11	-580	3620	42.04	6.16	-0.01
267	SLD 8	11	-580	3620	42.04	6.16	-0.01
267	SLD 9	-9	642	3961	-22.55	-4.68	0
267	SLD 10	-9	642	3961	-22.55	-4.68	0
267	SLD 11	9	-522	3324	39.23	4.62	0
267	SLD 12	9	-522	3324	39.23	4.62	0
267	SLD 13	-5	303	3393	-4.2	-3.22	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
267	SLD 14	-5	303	3393	-4.2	-3.22	0.01
267	SLD 15	1	-46	3202	14.33	-0.43	0.01
267	SLD 16	1	-46	3202	14.33	-0.43	0.01
267	SLV 1	1	219	5179	-1.38	3.29	-0.02
267	SLV 2	1	219	5179	-1.38	3.29	-0.02
267	SLV 3	15	-617	4707	43.12	10.42	-0.02
267	SLV 4	15	-617	4707	43.12	10.42	-0.02
267	SLV 5	-20	1355	4924	-61.08	-9.32	0
267	SLV 6	-20	1355	4924	-61.08	-9.32	0
267	SLV 7	26	-1431	3348	87.24	14.46	-0.01
267	SLV 8	26	-1431	3348	87.24	14.46	-0.01
267	SLV 9	-24	1493	4232	-67.75	-12.99	0.01
267	SLV 10	-24	1493	4232	-67.75	-12.99	0.01
267	SLV 11	22	-1293	2656	80.57	10.79	0
267	SLV 12	22	-1293	2656	80.57	10.79	0
267	SLV 13	-13	679	2874	-23.63	-8.95	0.02
267	SLV 14	-13	679	2874	-23.63	-8.95	0.02
267	SLV 15	1	-157	2401	20.87	-1.82	0.02
267	SLV 16	1	-157	2401	20.87	-1.82	0.02
268	SLU 1	0	188	2984	-5.63	-0.12	0
268	SLU 2	0	190	2972	-5.71	-0.12	0
268	SLU 3	0	195	3066	-5.84	-0.12	0
268	SLU 4	0	196	3058	-5.88	-0.12	0
268	SLU 5	0	195	3016	-5.85	-0.12	0
268	SLU 6	0	199	3109	-5.98	-0.12	0
268	SLU 7	0	201	3102	-6.02	-0.12	0
268	SLU 8	0	197	3072	-5.91	-0.12	0
268	SLU 9	0	198	3064	-5.96	-0.12	0
268	SLU 10	0	209	3420	-6.21	-0.15	0
268	SLU 11	0	214	3514	-6.34	-0.15	0
268	SLU 12	0	215	3506	-6.39	-0.15	0
268	SLU 13	0	214	3464	-6.35	-0.15	0
268	SLU 14	0	218	3557	-6.48	-0.15	0
268	SLU 15	0	220	3550	-6.52	-0.15	0
268	SLU 16	0	216	3519	-6.41	-0.15	0
268	SLU 17	0	217	3512	-6.46	-0.15	0
268	SLU 18	0	215	3624	-6.35	-0.16	0
268	SLU 19	0	217	3617	-6.39	-0.16	0
268	SLU 20	0	220	3668	-6.49	-0.16	0
268	SLU 21	0	221	3660	-6.53	-0.16	0
268	SLU 22	0	210	3405	-6.24	-0.15	0
268	SLU 23	0	212	3393	-6.31	-0.14	0
268	SLU 24	0	217	3487	-6.44	-0.15	0
268	SLU 25	0	218	3480	-6.49	-0.14	0
268	SLU 26	0	216	3437	-6.45	-0.14	0
268	SLU 27	0	221	3530	-6.58	-0.15	0
268	SLU 28	0	222	3523	-6.63	-0.14	0
268	SLU 29	0	219	3493	-6.52	-0.14	0
268	SLU 30	0	220	3485	-6.56	-0.14	0
268	SLU 31	0	231	3841	-6.81	-0.17	0
268	SLU 32	0	236	3935	-6.94	-0.18	0
268	SLU 33	0	237	3927	-6.99	-0.17	0
268	SLU 34	0	235	3885	-6.95	-0.17	0
268	SLU 35	0	240	3978	-7.08	-0.18	0
268	SLU 36	0	241	3971	-7.13	-0.17	0
268	SLU 37	0	238	3941	-7.02	-0.17	0
268	SLU 38	0	239	3933	-7.06	-0.17	0
268	SLU 39	0	237	4045	-6.95	-0.19	0
268	SLU 40	0	238	4038	-7	-0.19	0
268	SLU 41	0	241	4089	-7.09	-0.19	0
268	SLU 42	0	242	4082	-7.14	-0.19	0
268	SLU 43	0	237	3735	-7.11	-0.15	0
268	SLU 44	0	239	3723	-7.19	-0.15	0
268	SLU 45	0	244	3817	-7.32	-0.15	0
268	SLU 46	0	245	3809	-7.37	-0.15	0
268	SLU 47	0	244	3767	-7.33	-0.15	0
268	SLU 48	0	249	3860	-7.46	-0.15	0
268	SLU 49	0	250	3853	-7.51	-0.15	0
268	SLU 50	0	246	3822	-7.39	-0.15	0
268	SLU 51	0	247	3815	-7.44	-0.15	0
268	SLU 52	0	258	4171	-7.69	-0.18	0
268	SLU 53	0	263	4264	-7.82	-0.18	0
268	SLU 54	0	264	4257	-7.87	-0.18	0
268	SLU 55	0	263	4215	-7.83	-0.18	0
268	SLU 56	0	267	4308	-7.96	-0.18	0
268	SLU 57	0	269	4301	-8.01	-0.18	0
268	SLU 58	0	265	4270	-7.89	-0.18	0
268	SLU 59	0	266	4263	-7.94	-0.18	0
268	SLU 60	0	264	4375	-7.83	-0.19	0
268	SLU 61	0	266	4368	-7.87	-0.19	0
268	SLU 62	0	269	4419	-7.97	-0.19	0
268	SLU 63	0	270	4411	-8.01	-0.19	0
268	SLU 64	0	259	4156	-7.72	-0.17	0
268	SLU 65	0	261	4144	-7.8	-0.17	0
268	SLU 66	0	266	4238	-7.92	-0.17	0
268	SLU 67	0	267	4230	-7.97	-0.17	0
268	SLU 68	0	265	4188	-7.94	-0.17	0
268	SLU 69	0	270	4281	-8.06	-0.17	0
268	SLU 70	0	271	4274	-8.11	-0.17	0
268	SLU 71	0	268	4244	-8	-0.17	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
268	SLU 72	0	269	4236	-8.04	-0.17	0
268	SLU 73	0	280	4592	-8.3	-0.2	0
268	SLU 74	0	285	4686	-8.43	-0.2	0
268	SLU 75	0	286	4678	-8.47	-0.2	0
268	SLU 76	0	284	4636	-8.44	-0.2	0
268	SLU 77	0	289	4729	-8.57	-0.2	0
268	SLU 78	0	290	4722	-8.61	-0.2	0
268	SLU 79	0	287	4691	-8.5	-0.2	0
268	SLU 80	0	288	4684	-8.54	-0.2	0
268	SLU 81	0	286	4796	-8.43	-0.22	0
268	SLU 82	0	287	4789	-8.48	-0.21	0
268	SLU 83	0	290	4840	-8.57	-0.22	0
268	SLU 84	0	292	4832	-8.62	-0.21	0
268	SLE RA 1	0	194	3105	-5.8	-0.13	0
268	SLE RA 2	0	196	3097	-5.86	-0.13	0
268	SLE RA 3	0	199	3159	-5.94	-0.13	0
268	SLE RA 4	0	200	3154	-5.97	-0.13	0
268	SLE RA 5	0	199	3126	-5.95	-0.13	0
268	SLE RA 6	0	202	3188	-6.03	-0.13	0
268	SLE RA 7	0	203	3183	-6.07	-0.13	0
268	SLE RA 8	0	200	3163	-5.99	-0.13	0
268	SLE RA 9	0	201	3158	-6.02	-0.13	0
268	SLE RA 10	0	208	3395	-6.19	-0.15	0
268	SLE RA 11	0	212	3457	-6.28	-0.15	0
268	SLE RA 12	0	212	3453	-6.31	-0.15	0
268	SLE RA 13	0	211	3424	-6.28	-0.15	0
268	SLE RA 14	0	214	3487	-6.37	-0.15	0
268	SLE RA 15	0	215	3482	-6.4	-0.15	0
268	SLE RA 16	0	213	3461	-6.32	-0.15	0
268	SLE RA 17	0	214	3457	-6.35	-0.15	0
268	SLE RA 18	0	212	3531	-6.28	-0.16	0
268	SLE RA 19	0	213	3526	-6.31	-0.16	0
268	SLE RA 20	0	215	3560	-6.37	-0.16	0
268	SLE RA 21	0	216	3555	-6.4	-0.16	0
268	SLE FR 1	0	194	3105	-5.8	-0.13	0
268	SLE FR 2	0	195	3103	-5.81	-0.13	0
268	SLE FR 3	0	196	3116	-5.84	-0.13	0
268	SLE FR 4	0	200	3231	-5.96	-0.14	0
268	SLE FR 5	0	201	3244	-5.98	-0.14	0
268	SLE FR 6	0	203	3318	-6.04	-0.14	0
268	SLE QP 1	0	194	3105	-5.8	-0.13	0
268	SLE QP 2	0	200	3233	-5.95	-0.14	0
268	SLD 1	5	535	2919	-20.43	3.62	-0.01
268	SLD 2	5	535	2919	-20.43	3.62	-0.01
268	SLD 3	0	166	2809	-4.04	1.21	-0.01
268	SLD 4	0	166	2809	-4.04	1.21	-0.01
268	SLD 5	8	861	3306	-35.14	4.64	0
268	SLD 6	8	861	3306	-35.14	4.64	0
268	SLD 7	-7	-371	2938	19.48	-3.39	0
268	SLD 8	-7	-371	2938	19.48	-3.39	0
268	SLD 9	7	771	3527	-31.37	3.11	0.01
268	SLD 10	7	771	3527	-31.37	3.11	0.01
268	SLD 11	-9	-461	3159	23.25	-4.92	0
268	SLD 12	-9	-461	3159	23.25	-4.92	0
268	SLD 13	0	234	3656	-7.85	-1.48	0.01
268	SLD 14	0	234	3656	-7.85	-1.48	0.01
268	SLD 15	-5	-135	3546	8.53	-3.89	0.01
268	SLD 16	-5	-135	3546	8.53	-3.89	0.01
268	SLV 1	11	991	2502	-40.16	8.95	-0.01
268	SLV 2	11	991	2502	-40.16	8.95	-0.01
268	SLV 3	-1	117	2241	-1.38	2.8	-0.02
268	SLV 4	-1	117	2241	-1.38	2.8	-0.02
268	SLV 5	22	1764	3410	-75.04	11.92	0.01
268	SLV 6	22	1764	3410	-75.04	11.92	0.01
268	SLV 7	-19	-1151	2539	54.25	-8.59	-0.01
268	SLV 8	-19	-1151	2539	54.25	-8.59	-0.01
268	SLV 9	18	1551	3926	-66.15	8.31	0.02
268	SLV 10	18	1551	3926	-66.15	8.31	0.02
268	SLV 11	-22	-1364	3055	63.15	-12.19	0
268	SLV 12	-22	-1364	3055	63.15	-12.19	0
268	SLV 13	0	283	4224	-10.52	-3.07	0.02
268	SLV 14	0	283	4224	-10.52	-3.07	0.02
268	SLV 15	-12	-592	3963	28.27	-9.22	0.02
268	SLV 16	-12	-592	3963	28.27	-9.22	0.02
269	SLU 1	0	103	4277	-2.82	-0.02	0
269	SLU 2	0	101	4212	-2.77	0.01	0
269	SLU 3	0	103	4415	-2.81	-0.03	0
269	SLU 4	0	102	4375	-2.78	-0.01	0
269	SLU 5	0	100	4302	-2.73	0	0
269	SLU 6	0	102	4505	-2.77	-0.05	0
269	SLU 7	0	102	4466	-2.74	-0.03	0
269	SLU 8	0	101	4458	-2.74	-0.05	0
269	SLU 9	0	100	4419	-2.71	-0.03	0
269	SLU 10	0	107	4797	-2.99	0.02	0
269	SLU 11	0	109	5000	-3.03	-0.03	0
269	SLU 12	0	108	4960	-3	-0.01	0
269	SLU 13	0	107	4887	-2.95	0	0
269	SLU 14	0	109	5090	-3	-0.04	0
269	SLU 15	0	108	5051	-2.97	-0.02	0
269	SLU 16	0	108	5043	-2.97	-0.04	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
269	SLU 17	0	107	5004	-2.94	-0.02	0
269	SLU 18	0	112	5113	-3.14	-0.02	0
269	SLU 19	0	111	5074	-3.11	0	0
269	SLU 20	0	111	5204	-3.1	-0.03	0
269	SLU 21	0	110	5164	-3.07	-0.01	0
269	SLU 22	0	109	4857	-3.02	-0.02	0
269	SLU 23	0	108	4791	-2.97	0.01	0
269	SLU 24	0	110	4994	-3.01	-0.04	0
269	SLU 25	0	109	4955	-2.98	-0.02	0
269	SLU 26	0	107	4882	-2.93	0	0
269	SLU 27	0	109	5085	-2.98	-0.05	0
269	SLU 28	0	108	5045	-2.95	-0.03	0
269	SLU 29	0	108	5038	-2.95	-0.05	0
269	SLU 30	0	107	4999	-2.92	-0.03	0
269	SLU 31	0	114	5376	-3.19	0.01	0
269	SLU 32	0	116	5579	-3.24	-0.03	0
269	SLU 33	0	115	5540	-3.21	-0.01	0
269	SLU 34	0	113	5467	-3.16	0	0
269	SLU 35	0	115	5670	-3.2	-0.05	0
269	SLU 36	0	115	5630	-3.17	-0.03	0
269	SLU 37	0	114	5623	-3.17	-0.05	0
269	SLU 38	0	113	5583	-3.14	-0.03	0
269	SLU 39	0	118	5693	-3.34	-0.02	0
269	SLU 40	0	117	5653	-3.31	0	0
269	SLU 41	0	118	5783	-3.3	-0.03	0
269	SLU 42	0	117	5744	-3.27	-0.01	0
269	SLU 43	0	131	5362	-3.59	-0.03	0
269	SLU 44	0	130	5296	-3.54	0.01	0
269	SLU 45	0	132	5499	-3.59	-0.04	0
269	SLU 46	0	131	5460	-3.56	-0.02	0
269	SLU 47	0	129	5387	-3.51	-0.01	0
269	SLU 48	0	131	5590	-3.55	-0.05	0
269	SLU 49	0	130	5550	-3.52	-0.03	0
269	SLU 50	0	130	5543	-3.52	-0.05	0
269	SLU 51	0	129	5504	-3.49	-0.03	0
269	SLU 52	0	136	5881	-3.77	0.01	0
269	SLU 53	0	138	6084	-3.81	-0.03	0
269	SLU 54	0	137	6045	-3.78	-0.02	0
269	SLU 55	0	135	5972	-3.73	0	0
269	SLU 56	0	137	6175	-3.77	-0.05	0
269	SLU 57	0	136	6135	-3.74	-0.03	0
269	SLU 58	0	136	6128	-3.74	-0.05	0
269	SLU 59	0	135	6088	-3.71	-0.03	0
269	SLU 60	0	140	6198	-3.91	-0.02	0
269	SLU 61	0	139	6158	-3.88	0	0
269	SLU 62	0	140	6288	-3.88	-0.03	0
269	SLU 63	0	139	6249	-3.85	-0.01	0
269	SLU 64	0	138	5941	-3.8	-0.03	0
269	SLU 65	0	136	5876	-3.75	0	0
269	SLU 66	0	138	6079	-3.79	-0.04	0
269	SLU 67	0	137	6039	-3.76	-0.02	0
269	SLU 68	0	136	5966	-3.71	-0.01	0
269	SLU 69	0	138	6169	-3.75	-0.05	0
269	SLU 70	0	137	6130	-3.72	-0.03	0
269	SLU 71	0	137	6122	-3.72	-0.05	0
269	SLU 72	0	136	6083	-3.69	-0.04	0
269	SLU 73	0	143	6461	-3.97	0.01	0
269	SLU 74	0	145	6664	-4.01	-0.04	0
269	SLU 75	0	144	6624	-3.98	-0.02	0
269	SLU 76	0	142	6551	-3.93	-0.01	0
269	SLU 77	0	144	6754	-3.98	-0.05	0
269	SLU 78	0	143	6715	-3.94	-0.03	0
269	SLU 79	0	143	6707	-3.95	-0.05	0
269	SLU 80	0	142	6668	-3.92	-0.03	0
269	SLU 81	0	147	6777	-4.11	-0.02	0
269	SLU 82	0	146	6738	-4.08	0	0
269	SLU 83	0	146	6868	-4.08	-0.04	0
269	SLU 84	0	145	6828	-4.05	-0.02	0
269	SLE RA 1	0	105	4443	-2.88	-0.02	0
269	SLE RA 2	0	103	4399	-2.84	0	0
269	SLE RA 3	0	105	4535	-2.87	-0.03	0
269	SLE RA 4	0	104	4508	-2.85	-0.02	0
269	SLE RA 5	0	103	4460	-2.82	-0.01	0
269	SLE RA 6	0	104	4595	-2.85	-0.04	0
269	SLE RA 7	0	104	4569	-2.83	-0.03	0
269	SLE RA 8	0	104	4564	-2.83	-0.04	0
269	SLE RA 9	0	103	4537	-2.81	-0.03	0
269	SLE RA 10	0	108	4789	-2.99	0	0
269	SLE RA 11	0	109	4925	-3.02	-0.03	0
269	SLE RA 12	0	108	4898	-3	-0.01	0
269	SLE RA 13	0	107	4849	-2.97	-0.01	0
269	SLE RA 14	0	109	4985	-2.99	-0.04	0
269	SLE RA 15	0	108	4959	-2.97	-0.02	0
269	SLE RA 16	0	108	4954	-2.98	-0.04	0
269	SLE RA 17	0	107	4927	-2.96	-0.02	0
269	SLE RA 18	0	111	5000	-3.09	-0.02	0
269	SLE RA 19	0	110	4974	-3.07	-0.01	0
269	SLE RA 20	0	110	5060	-3.06	-0.03	0
269	SLE RA 21	0	110	5034	-3.04	-0.01	0
269	SLE FR 1	0	105	4443	-2.88	-0.02	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
269	SLE FR 2	0	104	4434	-2.87	-0.02	0
269	SLE FR 3	0	104	4467	-2.87	-0.02	0
269	SLE FR 4	0	106	4601	-2.93	-0.02	0
269	SLE FR 5	0	106	4634	-2.93	-0.02	0
269	SLE FR 6	0	108	4722	-2.98	-0.02	0
269	SLE QP 1	0	105	4443	-2.88	-0.02	0
269	SLE QP 2	0	106	4610	-2.94	-0.02	0
269	SLD 1	15	154	4334	-4.48	11.83	-0.03
269	SLD 2	15	154	4334	-4.48	11.83	-0.03
269	SLD 3	13	-228	4626	7.14	14.45	-0.04
269	SLD 4	13	-228	4626	7.14	14.45	-0.04
269	SLD 5	9	699	4084	-21.02	-0.43	0
269	SLD 6	9	699	4084	-21.02	-0.43	0
269	SLD 7	0	-572	5058	17.7	8.28	-0.02
269	SLD 8	0	-572	5058	17.7	8.28	-0.02
269	SLD 9	0	785	4162	-23.58	-8.32	0.02
269	SLD 10	0	785	4162	-23.58	-8.32	0.02
269	SLD 11	-8	-486	5136	15.14	0.39	0
269	SLD 12	-8	-486	5136	15.14	0.39	0
269	SLD 13	-13	441	4594	-13.02	-14.49	0.04
269	SLD 14	-13	441	4594	-13.02	-14.49	0.04
269	SLD 15	-15	59	4886	-1.4	-11.87	0.03
269	SLD 16	-15	59	4886	-1.4	-11.87	0.03
269	SLV 1	38	221	3960	-6.66	29.63	-0.09
269	SLV 2	38	221	3960	-6.66	29.63	-0.09
269	SLV 3	31	-676	4651	20.65	36.27	-0.1
269	SLV 4	31	-676	4651	20.65	36.27	-0.1
269	SLV 5	21	1500	3368	-45.47	-1.2	0
269	SLV 6	21	1500	3368	-45.47	-1.2	0
269	SLV 7	-1	-1488	5670	45.55	20.94	-0.06
269	SLV 8	-1	-1488	5670	45.55	20.94	-0.06
269	SLV 9	1	1700	3551	-51.43	-20.98	0.06
269	SLV 10	1	1700	3551	-51.43	-20.98	0.06
269	SLV 11	-21	-1287	5853	39.59	1.15	0
269	SLV 12	-21	-1287	5853	39.59	1.15	0
269	SLV 13	-31	888	4570	-26.52	-36.31	0.1
269	SLV 14	-31	888	4570	-26.52	-36.31	0.1
269	SLV 15	-38	-8	5260	0.78	-29.67	0.08
269	SLV 16	-38	-8	5260	0.78	-29.67	0.08
270	SLU 1	0	-192	4042	8.23	-0.37	0
270	SLU 2	0	-192	4007	8.28	-0.4	0
270	SLU 3	0	-198	4152	8.51	-0.38	0
270	SLU 4	0	-198	4132	8.53	-0.4	0
270	SLU 5	0	-195	4069	8.4	-0.4	0
270	SLU 6	0	-201	4214	8.63	-0.38	0
270	SLU 7	0	-201	4193	8.65	-0.4	0
270	SLU 8	0	-198	4165	8.48	-0.38	0
270	SLU 9	0	-198	4144	8.5	-0.4	0
270	SLU 10	0	-230	4556	9.9	-0.44	0
270	SLU 11	0	-237	4701	10.13	-0.42	0
270	SLU 12	0	-237	4680	10.15	-0.44	0
270	SLU 13	0	-233	4617	10.02	-0.45	0
270	SLU 14	0	-240	4762	10.25	-0.43	0
270	SLU 15	0	-240	4742	10.27	-0.44	0
270	SLU 16	0	-236	4713	10.09	-0.42	0
270	SLU 17	0	-236	4693	10.12	-0.44	0
270	SLU 18	0	-247	4826	10.55	-0.43	0
270	SLU 19	0	-247	4805	10.57	-0.45	0
270	SLU 20	0	-250	4887	10.67	-0.43	0
270	SLU 21	0	-250	4866	10.69	-0.45	0
270	SLU 22	0	-227	4578	9.71	-0.41	0
270	SLU 23	0	-227	4543	9.76	-0.44	0
270	SLU 24	0	-233	4688	9.99	-0.42	0
270	SLU 25	0	-233	4668	10.01	-0.44	0
270	SLU 26	0	-230	4605	9.88	-0.45	0
270	SLU 27	0	-236	4750	10.11	-0.43	0
270	SLU 28	0	-236	4729	10.13	-0.44	0
270	SLU 29	0	-233	4701	9.95	-0.42	0
270	SLU 30	0	-233	4680	9.98	-0.44	0
270	SLU 31	0	-265	5092	11.37	-0.49	0
270	SLU 32	0	-272	5237	11.61	-0.46	0
270	SLU 33	0	-272	5216	11.63	-0.48	0
270	SLU 34	0	-268	5153	11.5	-0.49	0
270	SLU 35	0	-275	5298	11.73	-0.47	0
270	SLU 36	0	-275	5278	11.75	-0.48	0
270	SLU 37	0	-271	5249	11.57	-0.46	0
270	SLU 38	0	-271	5228	11.6	-0.48	0
270	SLU 39	0	-282	5362	12.03	-0.47	0
270	SLU 40	0	-282	5341	12.05	-0.49	0
270	SLU 41	0	-285	5423	12.15	-0.48	0
270	SLU 42	0	-285	5402	12.17	-0.49	0
270	SLU 43	0	-237	5071	10.2	-0.47	0
270	SLU 44	0	-237	5036	10.24	-0.5	0
270	SLU 45	0	-244	5181	10.47	-0.48	0
270	SLU 46	0	-244	5160	10.5	-0.5	0
270	SLU 47	0	-240	5097	10.36	-0.5	0
270	SLU 48	0	-247	5243	10.59	-0.48	0
270	SLU 49	0	-247	5222	10.62	-0.5	0
270	SLU 50	0	-243	5193	10.44	-0.48	0
270	SLU 51	0	-243	5173	10.46	-0.49	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
270	SLU 52	0	-276	5585	11.86	-0.54	0
270	SLU 53	0	-282	5730	12.09	-0.52	0
270	SLU 54	0	-282	5709	12.12	-0.54	0
270	SLU 55	0	-279	5646	11.98	-0.54	0
270	SLU 56	0	-285	5791	12.21	-0.52	0
270	SLU 57	0	-285	5770	12.24	-0.54	0
270	SLU 58	0	-282	5742	12.06	-0.52	0
270	SLU 59	0	-282	5721	12.08	-0.53	0
270	SLU 60	0	-293	5854	12.51	-0.53	0
270	SLU 61	0	-293	5834	12.54	-0.55	0
270	SLU 62	0	-295	5916	12.63	-0.53	0
270	SLU 63	0	-295	5895	12.66	-0.55	0
270	SLU 64	0	-272	5607	11.68	-0.51	0
270	SLU 65	0	-272	5572	11.72	-0.54	0
270	SLU 66	0	-279	5717	11.95	-0.52	0
270	SLU 67	0	-279	5696	11.98	-0.54	0
270	SLU 68	0	-275	5633	11.84	-0.54	0
270	SLU 69	0	-281	5779	12.07	-0.52	0
270	SLU 70	0	-281	5758	12.1	-0.54	0
270	SLU 71	0	-278	5729	11.92	-0.52	0
270	SLU 72	0	-278	5709	11.94	-0.53	0
270	SLU 73	0	-311	6121	13.34	-0.58	0
270	SLU 74	0	-317	6266	13.57	-0.56	0
270	SLU 75	0	-317	6245	13.59	-0.58	0
270	SLU 76	0	-314	6182	13.46	-0.59	0
270	SLU 77	0	-320	6327	13.69	-0.56	0
270	SLU 78	0	-320	6306	13.72	-0.58	0
270	SLU 79	0	-317	6278	13.54	-0.56	0
270	SLU 80	0	-317	6257	13.56	-0.58	0
270	SLU 81	0	-328	6390	13.99	-0.57	0
270	SLU 82	0	-328	6370	14.01	-0.59	0
270	SLU 83	0	-330	6452	14.11	-0.57	0
270	SLU 84	0	-330	6431	14.14	-0.59	0
270	SLE RA 1	0	-202	4195	8.66	-0.38	0
270	SLE RA 2	0	-202	4172	8.69	-0.4	0
270	SLE RA 3	0	-206	4269	8.84	-0.39	0
270	SLE RA 4	0	-206	4255	8.86	-0.4	0
270	SLE RA 5	0	-204	4213	8.77	-0.41	0
270	SLE RA 6	0	-208	4310	8.92	-0.39	0
270	SLE RA 7	0	-208	4296	8.94	-0.4	0
270	SLE RA 8	0	-206	4277	8.82	-0.39	0
270	SLE RA 9	0	-206	4263	8.83	-0.4	0
270	SLE RA 10	0	-228	4538	9.76	-0.43	0
270	SLE RA 11	0	-232	4634	9.92	-0.42	0
270	SLE RA 12	0	-232	4621	9.94	-0.43	0
270	SLE RA 13	0	-229	4579	9.85	-0.43	0
270	SLE RA 14	0	-234	4675	10	-0.42	0
270	SLE RA 15	0	-234	4662	10.02	-0.43	0
270	SLE RA 16	0	-231	4643	9.9	-0.42	0
270	SLE RA 17	0	-231	4629	9.91	-0.43	0
270	SLE RA 18	0	-239	4717	10.2	-0.42	0
270	SLE RA 19	0	-239	4704	10.22	-0.44	0
270	SLE RA 20	0	-241	4758	10.28	-0.43	0
270	SLE RA 21	0	-241	4745	10.3	-0.44	0
270	SLE FR 1	0	-202	4195	8.66	-0.38	0
270	SLE FR 2	0	-202	4190	8.66	-0.39	0
270	SLE FR 3	0	-203	4211	8.69	-0.39	0
270	SLE FR 4	0	-213	4347	9.12	-0.4	0
270	SLE FR 5	0	-214	4368	9.15	-0.4	0
270	SLE FR 6	0	-220	4456	9.43	-0.4	0
270	SLE QP 1	0	-202	4195	8.66	-0.38	0
270	SLE QP 2	0	-213	4352	9.12	-0.4	0
270	SLD 1	10	-180	4382	7.54	11.5	-0.02
270	SLD 2	10	-180	4382	7.54	11.5	-0.02
270	SLD 3	13	-657	4901	29.87	8.78	-0.02
270	SLD 4	13	-657	4901	29.87	8.78	-0.02
270	SLD 5	-2	520	3574	-25.22	7.29	-0.01
270	SLD 6	-2	520	3574	-25.22	7.29	-0.01
270	SLD 7	8	-1069	5304	49.21	-1.76	0
270	SLD 8	8	-1069	5304	49.21	-1.76	0
270	SLD 9	-9	644	3400	-30.97	0.96	0
270	SLD 10	-9	644	3400	-30.97	0.96	0
270	SLD 11	1	-946	5130	43.46	-8.08	0.01
270	SLD 12	1	-946	5130	43.46	-8.08	0.01
270	SLD 13	-14	232	3802	-11.64	-9.58	0.02
270	SLD 14	-14	232	3802	-11.64	-9.58	0.02
270	SLD 15	-11	-245	4321	10.69	-12.29	0.02
270	SLD 16	-11	-245	4321	10.69	-12.29	0.02
270	SLV 1	26	-136	4420	5.39	29.45	-0.05
270	SLV 2	26	-136	4420	5.39	29.45	-0.05
270	SLV 3	33	-1259	5641	58	22.61	-0.04
270	SLV 4	33	-1259	5641	58	22.61	-0.04
270	SLV 5	-4	1514	2520	-71.8	18.93	-0.03
270	SLV 6	-4	1514	2520	-71.8	18.93	-0.03
270	SLV 7	21	-2230	6591	103.58	-3.87	0
270	SLV 8	21	-2230	6591	103.58	-3.87	0
270	SLV 9	-22	1805	2112	-85.34	3.08	0
270	SLV 10	-22	1805	2112	-85.34	3.08	0
270	SLV 11	3	-1939	6184	90.04	-19.73	0.03
270	SLV 12	3	-1939	6184	90.04	-19.73	0.03



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
270	SLV 13	-34	834	3062	-39.76	-23.41	0.04
270	SLV 14	-34	834	3062	-39.76	-23.41	0.04
270	SLV 15	-26	-290	4283	12.85	-30.25	0.05
270	SLV 16	-26	-290	4283	12.85	-30.25	0.05
271	SLU 1	-18	-585	1523	21.2	-11.38	0
271	SLU 2	-17	-522	1511	18.58	-10.67	0
271	SLU 3	-19	-602	1551	21.82	-11.79	0
271	SLU 4	-18	-564	1544	20.25	-11.36	0
271	SLU 5	-18	-532	1531	18.94	-10.94	0
271	SLU 6	-19	-613	1572	22.18	-12.06	0
271	SLU 7	-19	-575	1564	20.61	-11.64	0
271	SLU 8	-19	-606	1564	21.92	-11.93	0
271	SLU 9	-19	-568	1557	20.35	-11.51	0
271	SLU 10	-20	-590	1613	21.06	-12.21	0
271	SLU 11	-21	-671	1654	24.3	-13.33	0
271	SLU 12	-21	-633	1646	22.73	-12.9	0
271	SLU 13	-20	-600	1633	21.43	-12.49	0
271	SLU 14	-22	-681	1674	24.66	-13.61	0
271	SLU 15	-21	-643	1667	23.09	-13.18	0
271	SLU 16	-21	-674	1667	24.4	-13.48	0
271	SLU 17	-21	-636	1659	22.83	-13.05	0
271	SLU 18	-21	-682	1669	24.74	-13.59	0
271	SLU 19	-21	-644	1662	23.17	-13.16	0
271	SLU 20	-22	-693	1690	25.1	-13.86	0
271	SLU 21	-22	-655	1682	23.53	-13.44	0
271	SLU 22	-20	-652	1624	23.65	-12.91	0
271	SLU 23	-20	-589	1612	21.03	-12.2	0
271	SLU 24	-21	-670	1653	24.27	-13.32	0
271	SLU 25	-21	-632	1645	22.7	-12.89	0
271	SLU 26	-20	-600	1632	21.39	-12.47	0
271	SLU 27	-22	-680	1673	24.63	-13.59	0
271	SLU 28	-21	-642	1666	23.06	-13.17	0
271	SLU 29	-21	-673	1665	24.37	-13.46	0
271	SLU 30	-21	-635	1658	22.8	-13.04	0
271	SLU 31	-22	-657	1714	23.51	-13.74	0
271	SLU 32	-23	-738	1755	26.75	-14.86	0
271	SLU 33	-23	-700	1748	25.18	-14.43	0
271	SLU 34	-23	-668	1735	23.88	-14.02	0
271	SLU 35	-24	-749	1776	27.11	-15.14	0
271	SLU 36	-24	-711	1768	25.54	-14.71	0
271	SLU 37	-24	-742	1768	26.85	-15.01	0
271	SLU 38	-23	-704	1760	25.28	-14.58	0
271	SLU 39	-24	-750	1771	27.19	-15.12	0
271	SLU 40	-23	-712	1763	25.62	-14.69	0
271	SLU 41	-24	-760	1791	27.55	-15.39	0
271	SLU 42	-24	-722	1784	25.98	-14.97	0
271	SLU 43	-23	-737	1945	26.71	-14.27	0
271	SLU 44	-22	-674	1933	24.1	-13.56	0
271	SLU 45	-23	-755	1974	27.34	-14.68	0
271	SLU 46	-23	-717	1966	25.77	-14.25	0
271	SLU 47	-23	-684	1953	24.46	-13.83	0
271	SLU 48	-24	-765	1994	27.7	-14.95	0
271	SLU 49	-23	-727	1987	26.13	-14.53	0
271	SLU 50	-24	-758	1986	27.44	-14.82	0
271	SLU 51	-23	-720	1979	25.87	-14.4	0
271	SLU 52	-24	-742	2035	26.58	-15.1	0
271	SLU 53	-26	-823	2076	29.82	-16.22	0
271	SLU 54	-25	-785	2069	28.25	-15.79	0
271	SLU 55	-25	-753	2056	26.94	-15.38	0
271	SLU 56	-26	-833	2097	30.18	-16.5	0
271	SLU 57	-26	-795	2089	28.61	-16.07	0
271	SLU 58	-26	-827	2089	29.92	-16.37	0
271	SLU 59	-26	-788	2081	28.35	-15.94	0
271	SLU 60	-26	-835	2092	30.26	-16.48	0
271	SLU 61	-26	-797	2084	28.69	-16.05	0
271	SLU 62	-27	-845	2112	30.62	-16.75	0
271	SLU 63	-26	-807	2105	29.05	-16.33	0
271	SLU 64	-25	-805	2047	29.16	-15.8	0
271	SLU 65	-24	-741	2034	26.55	-15.09	0
271	SLU 66	-26	-822	2075	29.79	-16.21	0
271	SLU 67	-25	-784	2067	28.22	-15.78	0
271	SLU 68	-25	-752	2055	26.91	-15.36	0
271	SLU 69	-26	-833	2095	30.15	-16.48	0
271	SLU 70	-26	-795	2088	28.58	-16.06	0
271	SLU 71	-26	-826	2088	29.89	-16.35	0
271	SLU 72	-26	-788	2080	28.32	-15.93	0
271	SLU 73	-27	-810	2136	29.03	-16.63	0
271	SLU 74	-28	-890	2177	32.27	-17.75	0
271	SLU 75	-28	-852	2170	30.7	-17.32	0
271	SLU 76	-27	-820	2157	29.39	-16.91	0
271	SLU 77	-29	-901	2198	32.63	-18.03	0
271	SLU 78	-28	-863	2190	31.06	-17.6	0
271	SLU 79	-28	-894	2190	32.37	-17.9	0
271	SLU 80	-28	-856	2182	30.8	-17.47	0
271	SLU 81	-28	-902	2193	32.71	-18.01	0
271	SLU 82	-28	-864	2185	31.14	-17.58	0
271	SLU 83	-29	-913	2213	33.07	-18.29	0
271	SLU 84	-29	-875	2206	31.5	-17.86	0
271	SLE RA 1	-19	-604	1552	21.9	-11.82	0
271	SLE RA 2	-18	-562	1544	20.15	-11.34	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
271	SLE RA 3	-19	-616	1571	22.31	-12.09	0
271	SLE RA 4	-19	-591	1566	21.26	-11.8	0
271	SLE RA 5	-19	-569	1557	20.39	-11.53	0
271	SLE RA 6	-20	-623	1585	22.55	-12.27	0
271	SLE RA 7	-19	-597	1580	21.51	-11.99	0
271	SLE RA 8	-19	-618	1579	22.38	-12.19	0
271	SLE RA 9	-19	-593	1574	21.33	-11.9	0
271	SLE RA 10	-20	-608	1612	21.81	-12.37	0
271	SLE RA 11	-21	-661	1639	23.96	-13.12	0
271	SLE RA 12	-21	-636	1634	22.92	-12.83	0
271	SLE RA 13	-20	-614	1626	22.05	-12.56	0
271	SLE RA 14	-21	-668	1653	24.21	-13.3	0
271	SLE RA 15	-21	-643	1648	23.16	-13.02	0
271	SLE RA 16	-21	-664	1648	24.03	-13.22	0
271	SLE RA 17	-21	-638	1643	22.99	-12.93	0
271	SLE RA 18	-21	-669	1650	24.26	-13.29	0
271	SLE RA 19	-21	-644	1645	23.21	-13	0
271	SLE RA 20	-21	-676	1663	24.5	-13.47	0
271	SLE RA 21	-21	-651	1658	23.45	-13.19	0
271	SLE FR 1	-19	-604	1552	21.9	-11.82	0
271	SLE FR 2	-19	-596	1550	21.55	-11.72	0
271	SLE FR 3	-19	-607	1558	21.99	-11.89	0
271	SLE FR 4	-19	-615	1580	22.26	-12.17	0
271	SLE FR 5	-20	-627	1587	22.7	-12.33	0
271	SLE FR 6	-20	-637	1601	23.08	-12.56	0
271	SLE QP 1	-19	-604	1552	21.9	-11.82	0
271	SLE QP 2	-19	-624	1581	22.6	-12.26	0
271	SLD 1	-32	-647	1856	23.01	7.45	0.01
271	SLD 2	-32	-647	1856	23.01	7.45	0.01
271	SLD 3	-43	-1082	2057	41.39	-0.95	0
271	SLD 4	-43	-1082	2057	41.39	-0.95	0
271	SLD 5	-7	28	1358	-5.15	6.39	0.01
271	SLD 6	-7	28	1358	-5.15	6.39	0.01
271	SLD 7	-43	-1420	2029	56.12	-21.61	-0.01
271	SLD 8	-43	-1420	2029	56.12	-21.61	-0.01
271	SLD 9	4	173	1133	-10.91	-2.91	0
271	SLD 10	4	173	1133	-10.91	-2.91	0
271	SLD 11	-32	-1276	1805	50.36	-30.92	-0.01
271	SLD 12	-32	-1276	1805	50.36	-30.92	-0.01
271	SLD 13	4	-166	1106	3.81	-23.57	-0.01
271	SLD 14	4	-166	1106	3.81	-23.57	-0.01
271	SLD 15	-7	-600	1307	22.2	-31.98	-0.01
271	SLD 16	-7	-600	1307	22.2	-31.98	-0.01
271	SLV 1	-50	-679	2219	23.56	34.49	0.02
271	SLV 2	-50	-679	2219	23.56	34.49	0.02
271	SLV 3	-75	-1686	2698	66.16	14.22	0.01
271	SLV 4	-75	-1686	2698	66.16	14.22	0.01
271	SLV 5	11	885	1046	-41.72	32.52	0.02
271	SLV 6	11	885	1046	-41.72	32.52	0.02
271	SLV 7	-75	-2468	2642	100.29	-35.07	-0.02
271	SLV 8	-75	-2468	2642	100.29	-35.07	-0.02
271	SLV 9	36	1221	520	-55.08	10.55	0.01
271	SLV 10	36	1221	520	-55.08	10.55	0.01
271	SLV 11	-49	-2133	2116	86.93	-57.04	-0.03
271	SLV 12	-49	-2133	2116	86.93	-57.04	-0.03
271	SLV 13	36	438	465	-20.95	-38.74	-0.01
271	SLV 14	36	438	465	-20.95	-38.74	-0.01
271	SLV 15	11	-568	944	21.65	-59.01	-0.02
271	SLV 16	11	-568	944	21.65	-59.01	-0.02
272	SLU 1	0	151	3536	-20.04	0.45	0
272	SLU 2	0	156	3529	-20.29	0.45	0
272	SLU 3	0	156	3643	-20.7	0.46	0
272	SLU 4	0	159	3639	-20.85	0.46	0
272	SLU 5	0	159	3593	-20.72	0.46	0
272	SLU 6	0	159	3707	-21.12	0.47	0
272	SLU 7	0	162	3703	-21.27	0.47	0
272	SLU 8	0	158	3662	-20.89	0.47	0
272	SLU 9	0	161	3658	-21.04	0.46	0
272	SLU 10	1	168	4044	-22.88	0.56	0
272	SLU 11	1	168	4158	-23.28	0.57	0
272	SLU 12	1	171	4154	-23.43	0.57	0
272	SLU 13	1	172	4107	-23.3	0.57	0
272	SLU 14	1	172	4221	-23.71	0.58	0
272	SLU 15	1	175	4217	-23.86	0.58	0
272	SLU 16	1	170	4177	-23.47	0.58	0
272	SLU 17	1	173	4173	-23.63	0.57	0
272	SLU 18	1	169	4271	-23.73	0.61	0
272	SLU 19	1	172	4267	-23.88	0.61	0
272	SLU 20	1	172	4334	-24.16	0.62	0
272	SLU 21	1	175	4330	-24.31	0.61	0
272	SLU 22	1	166	4027	-22.67	0.55	0
272	SLU 23	1	171	4021	-22.92	0.54	0
272	SLU 24	1	171	4135	-23.32	0.56	0
272	SLU 25	1	173	4131	-23.48	0.56	0
272	SLU 26	1	174	4084	-23.34	0.55	0
272	SLU 27	1	174	4198	-23.75	0.57	0
272	SLU 28	1	177	4194	-23.9	0.57	0
272	SLU 29	1	173	4154	-23.52	0.56	0
272	SLU 30	1	176	4150	-23.67	0.56	0
272	SLU 31	1	183	4535	-25.5	0.65	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
272	SLU 32	1	183	4649	-25.91	0.67	0
272	SLU 33	1	186	4645	-26.06	0.67	0
272	SLU 34	1	187	4598	-25.93	0.66	0
272	SLU 35	1	186	4713	-26.33	0.68	0
272	SLU 36	1	189	4709	-26.48	0.68	0
272	SLU 37	1	185	4668	-26.1	0.67	0
272	SLU 38	1	188	4664	-26.25	0.67	0
272	SLU 39	1	184	4762	-26.36	0.7	0
272	SLU 40	1	187	4758	-26.51	0.7	0
272	SLU 41	1	187	4825	-26.78	0.71	0
272	SLU 42	1	190	4822	-26.93	0.71	0
272	SLU 43	1	191	4428	-25.15	0.55	0
272	SLU 44	1	196	4421	-25.4	0.55	0
272	SLU 45	1	196	4535	-25.81	0.57	0
272	SLU 46	1	199	4532	-25.96	0.57	0
272	SLU 47	1	200	4485	-25.83	0.56	0
272	SLU 48	1	199	4599	-26.24	0.58	0
272	SLU 49	1	202	4595	-26.39	0.57	0
272	SLU 50	1	198	4554	-26	0.57	0
272	SLU 51	1	201	4551	-26.15	0.57	0
272	SLU 52	1	209	4936	-27.99	0.66	0
272	SLU 53	1	208	5050	-28.39	0.68	0
272	SLU 54	1	211	5046	-28.55	0.68	0
272	SLU 55	1	212	4999	-28.41	0.67	0
272	SLU 56	1	212	5113	-28.82	0.69	0
272	SLU 57	1	215	5110	-28.97	0.68	0
272	SLU 58	1	211	5069	-28.59	0.68	0
272	SLU 59	1	214	5065	-28.74	0.68	0
272	SLU 60	1	209	5163	-28.84	0.71	0
272	SLU 61	1	212	5159	-29	0.71	0
272	SLU 62	1	212	5226	-29.27	0.72	0
272	SLU 63	1	215	5222	-29.42	0.72	0
272	SLU 64	1	206	4919	-27.78	0.65	0
272	SLU 65	1	211	4913	-28.03	0.65	0
272	SLU 66	1	211	5027	-28.44	0.66	0
272	SLU 67	1	214	5023	-28.59	0.66	0
272	SLU 68	1	214	4976	-28.45	0.65	0
272	SLU 69	1	214	5090	-28.86	0.67	0
272	SLU 70	1	217	5086	-29.01	0.67	0
272	SLU 71	1	213	5046	-28.63	0.66	0
272	SLU 72	1	216	5042	-28.78	0.66	0
272	SLU 73	1	223	5427	-30.61	0.76	0
272	SLU 74	1	223	5541	-31.02	0.77	0
272	SLU 75	1	226	5538	-31.17	0.77	0
272	SLU 76	1	227	5491	-31.04	0.76	0
272	SLU 77	1	227	5605	-31.45	0.78	0
272	SLU 78	1	230	5601	-31.6	0.78	0
272	SLU 79	1	225	5560	-31.21	0.77	0
272	SLU 80	1	228	5557	-31.36	0.77	0
272	SLU 81	1	224	5654	-31.47	0.81	0
272	SLU 82	1	227	5650	-31.62	0.8	0
272	SLU 83	1	227	5718	-31.89	0.81	0
272	SLU 84	1	230	5714	-32.05	0.81	0
272	SLE RA 1	0	155	3676	-20.79	0.48	0
272	SLE RA 2	0	159	3672	-20.96	0.48	0
272	SLE RA 3	0	158	3748	-21.23	0.49	0
272	SLE RA 4	0	160	3745	-21.33	0.49	0
272	SLE RA 5	0	161	3714	-21.24	0.48	0
272	SLE RA 6	0	161	3790	-21.51	0.49	0
272	SLE RA 7	0	163	3787	-21.61	0.49	0
272	SLE RA 8	0	160	3760	-21.36	0.49	0
272	SLE RA 9	0	162	3758	-21.46	0.49	0
272	SLE RA 10	1	167	4015	-22.68	0.55	0
272	SLE RA 11	1	167	4091	-22.95	0.56	0
272	SLE RA 12	1	169	4088	-23.05	0.56	0
272	SLE RA 13	1	169	4057	-22.96	0.55	0
272	SLE RA 14	1	169	4133	-23.24	0.57	0
272	SLE RA 15	1	171	4130	-23.34	0.56	0
272	SLE RA 16	1	168	4103	-23.08	0.56	0
272	SLE RA 17	1	170	4101	-23.18	0.56	0
272	SLE RA 18	1	167	4166	-23.25	0.58	0
272	SLE RA 19	1	169	4163	-23.35	0.58	0
272	SLE RA 20	1	169	4208	-23.53	0.59	0
272	SLE RA 21	1	171	4206	-23.64	0.59	0
272	SLE FR 1	0	155	3676	-20.79	0.48	0
272	SLE FR 2	0	156	3675	-20.82	0.48	0
272	SLE FR 3	0	156	3693	-20.9	0.48	0
272	SLE FR 4	0	159	3822	-21.56	0.51	0
272	SLE FR 5	0	160	3840	-21.64	0.51	0
272	SLE FR 6	0	161	3921	-22.02	0.53	0
272	SLE QP 1	0	155	3676	-20.79	0.48	0
272	SLE QP 2	0	159	3823	-21.53	0.51	0
272	SLD 1	3	231	4182	-24.26	2.78	-0.01
272	SLD 2	3	231	4182	-24.26	2.78	-0.01
272	SLD 3	8	-117	4307	-9.02	5.85	-0.01
272	SLD 4	8	-117	4307	-9.02	5.85	-0.01
272	SLD 5	-6	709	3742	-45.46	-3.48	0
272	SLD 6	-6	709	3742	-45.46	-3.48	0
272	SLD 7	10	-452	4157	5.34	6.78	-0.01
272	SLD 8	10	-452	4157	5.34	6.78	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
272	SLD 9	-9	770	3489	-48.39	-5.76	0
272	SLD 10	-9	770	3489	-48.39	-5.76	0
272	SLD 11	7	-391	3904	2.4	4.5	0
272	SLD 12	7	-391	3904	2.4	4.5	0
272	SLD 13	-7	435	3339	-34.04	-4.83	0.01
272	SLD 14	-7	435	3339	-34.04	-4.83	0.01
272	SLD 15	-2	86	3464	-18.8	-1.76	0.01
272	SLD 16	-2	86	3464	-18.8	-1.76	0.01
272	SLV 1	6	335	4658	-28.18	5.61	-0.02
272	SLV 2	6	335	4658	-28.18	5.61	-0.02
272	SLV 3	18	-498	4961	8.18	13.45	-0.02
272	SLV 4	18	-498	4961	8.18	13.45	-0.02
272	SLV 5	-17	1475	3615	-78.68	-9.85	0
272	SLV 6	-17	1475	3615	-78.68	-9.85	0
272	SLV 7	25	-1301	4623	42.54	16.28	-0.01
272	SLV 8	25	-1301	4623	42.54	16.28	-0.01
272	SLV 9	-24	1619	3023	-85.59	-15.27	0.01
272	SLV 10	-24	1619	3023	-85.59	-15.27	0.01
272	SLV 11	18	-1157	4031	35.62	10.87	0
272	SLV 12	18	-1157	4031	35.62	10.87	0
272	SLV 13	-17	816	2685	-51.24	-12.43	0.02
272	SLV 14	-17	816	2685	-51.24	-12.43	0.02
272	SLV 15	-5	-17	2988	-14.87	-4.59	0.02
272	SLV 16	-5	-17	2988	-14.87	-4.59	0.02
273	SLU 1	0	149	3163	-7.76	-0.02	0
273	SLU 2	0	151	3153	-7.84	-0.02	0
273	SLU 3	0	154	3251	-8.04	-0.02	0
273	SLU 4	0	156	3244	-8.09	-0.02	0
273	SLU 5	0	155	3200	-8.03	-0.02	0
273	SLU 6	0	158	3298	-8.23	-0.02	0
273	SLU 7	0	160	3291	-8.28	-0.02	0
273	SLU 8	0	157	3258	-8.13	-0.02	0
273	SLU 9	0	158	3251	-8.18	-0.02	0
273	SLU 10	0	166	3618	-8.72	-0.03	0
273	SLU 11	0	169	3716	-8.92	-0.03	0
273	SLU 12	0	170	3710	-8.97	-0.03	0
273	SLU 13	0	170	3665	-8.91	-0.03	0
273	SLU 14	0	173	3763	-9.11	-0.03	0
273	SLU 15	0	174	3757	-9.16	-0.03	0
273	SLU 16	0	171	3723	-9.02	-0.03	0
273	SLU 17	0	173	3717	-9.07	-0.03	0
273	SLU 18	0	170	3829	-9.02	-0.04	0
273	SLU 19	0	171	3822	-9.06	-0.04	0
273	SLU 20	0	174	3876	-9.2	-0.04	0
273	SLU 21	0	175	3869	-9.25	-0.04	0
273	SLU 22	0	166	3604	-8.71	-0.03	0
273	SLU 23	0	168	3593	-8.79	-0.03	0
273	SLU 24	0	171	3691	-8.99	-0.03	0
273	SLU 25	0	172	3684	-9.04	-0.03	0
273	SLU 26	0	172	3640	-8.98	-0.03	0
273	SLU 27	0	175	3738	-9.18	-0.03	0
273	SLU 28	0	176	3732	-9.23	-0.03	0
273	SLU 29	0	173	3698	-9.09	-0.03	0
273	SLU 30	0	175	3692	-9.14	-0.03	0
273	SLU 31	0	182	4059	-9.67	-0.04	0
273	SLU 32	0	186	4157	-9.87	-0.04	0
273	SLU 33	0	187	4150	-9.92	-0.04	0
273	SLU 34	0	186	4106	-9.86	-0.04	0
273	SLU 35	0	190	4204	-10.06	-0.04	0
273	SLU 36	0	191	4197	-10.11	-0.04	0
273	SLU 37	0	188	4164	-9.97	-0.04	0
273	SLU 38	0	189	4157	-10.02	-0.04	0
273	SLU 39	0	187	4269	-9.97	-0.05	0
273	SLU 40	0	188	4262	-10.02	-0.05	0
273	SLU 41	0	190	4316	-10.16	-0.04	0
273	SLU 42	0	192	4310	-10.21	-0.04	0
273	SLU 43	0	188	3961	-9.76	-0.03	0
273	SLU 44	0	190	3951	-9.84	-0.02	0
273	SLU 45	0	193	4049	-10.04	-0.02	0
273	SLU 46	0	195	4042	-10.09	-0.02	0
273	SLU 47	0	194	3998	-10.03	-0.02	0
273	SLU 48	0	197	4096	-10.23	-0.02	0
273	SLU 49	0	199	4089	-10.28	-0.02	0
273	SLU 50	0	196	4056	-10.13	-0.02	0
273	SLU 51	0	197	4049	-10.18	-0.02	0
273	SLU 52	0	205	4416	-10.72	-0.03	0
273	SLU 53	0	208	4514	-10.92	-0.04	0
273	SLU 54	0	209	4508	-10.97	-0.03	0
273	SLU 55	0	209	4463	-10.91	-0.03	0
273	SLU 56	0	212	4561	-11.11	-0.03	0
273	SLU 57	0	213	4555	-11.16	-0.03	0
273	SLU 58	0	210	4521	-11.02	-0.03	0
273	SLU 59	0	211	4515	-11.07	-0.03	0
273	SLU 60	0	209	4627	-11.02	-0.04	0
273	SLU 61	0	210	4620	-11.06	-0.04	0
273	SLU 62	0	213	4674	-11.21	-0.04	0
273	SLU 63	0	214	4667	-11.25	-0.04	0
273	SLU 64	0	205	4402	-10.71	-0.03	0
273	SLU 65	0	207	4391	-10.79	-0.03	0
273	SLU 66	0	210	4489	-10.99	-0.03	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
273	SLU 67	0	211	4483	-11.04	-0.03	0
273	SLU 68	0	211	4438	-10.98	-0.03	0
273	SLU 69	0	214	4536	-11.18	-0.03	0
273	SLU 70	0	215	4530	-11.23	-0.03	0
273	SLU 71	0	212	4496	-11.09	-0.03	0
273	SLU 72	0	214	4490	-11.14	-0.03	0
273	SLU 73	0	221	4857	-11.67	-0.04	0
273	SLU 74	0	225	4955	-11.87	-0.04	0
273	SLU 75	0	226	4948	-11.92	-0.04	0
273	SLU 76	0	225	4904	-11.86	-0.04	0
273	SLU 77	0	229	5002	-12.06	-0.04	0
273	SLU 78	0	230	4995	-12.11	-0.04	0
273	SLU 79	0	227	4962	-11.97	-0.04	0
273	SLU 80	0	228	4955	-12.02	-0.04	0
273	SLU 81	0	226	5067	-11.97	-0.05	0
273	SLU 82	0	227	5060	-12.02	-0.05	0
273	SLU 83	0	229	5114	-12.16	-0.05	0
273	SLU 84	0	231	5108	-12.21	-0.05	0
273	SLE RA 1	0	154	3289	-8.03	-0.02	0
273	SLE RA 2	0	155	3282	-8.08	-0.02	0
273	SLE RA 3	0	157	3347	-8.22	-0.02	0
273	SLE RA 4	0	158	3343	-8.25	-0.02	0
273	SLE RA 5	0	158	3313	-8.21	-0.02	0
273	SLE RA 6	0	160	3379	-8.34	-0.02	0
273	SLE RA 7	0	161	3374	-8.38	-0.02	0
273	SLE RA 8	0	159	3352	-8.28	-0.02	0
273	SLE RA 9	0	160	3348	-8.31	-0.02	0
273	SLE RA 10	0	165	3592	-8.67	-0.03	0
273	SLE RA 11	0	167	3658	-8.8	-0.03	0
273	SLE RA 12	0	168	3653	-8.84	-0.03	0
273	SLE RA 13	0	167	3624	-8.8	-0.03	0
273	SLE RA 14	0	170	3689	-8.93	-0.03	0
273	SLE RA 15	0	171	3685	-8.96	-0.03	0
273	SLE RA 16	0	169	3662	-8.87	-0.03	0
273	SLE RA 17	0	169	3658	-8.9	-0.03	0
273	SLE RA 18	0	168	3733	-8.87	-0.04	0
273	SLE RA 19	0	169	3728	-8.9	-0.03	0
273	SLE RA 20	0	170	3764	-8.99	-0.03	0
273	SLE RA 21	0	171	3760	-9.03	-0.03	0
273	SLE FR 1	0	154	3289	-8.03	-0.02	0
273	SLE FR 2	0	154	3288	-8.04	-0.02	0
273	SLE FR 3	0	155	3302	-8.08	-0.02	0
273	SLE FR 4	0	158	3421	-8.29	-0.03	0
273	SLE FR 5	0	159	3435	-8.33	-0.03	0
273	SLE FR 6	0	161	3511	-8.45	-0.03	0
273	SLE QP 1	0	154	3289	-8.03	-0.02	0
273	SLE QP 2	0	158	3422	-8.28	-0.03	0
273	SLD 1	7	498	3049	-22.95	5.2	0
273	SLD 2	7	498	3049	-22.95	5.2	0
273	SLD 3	3	115	3164	-6.31	2.52	-0.01
273	SLD 4	3	115	3164	-6.31	2.52	-0.01
273	SLD 5	9	841	3136	-37.9	5.6	0
273	SLD 6	9	841	3136	-37.9	5.6	0
273	SLD 7	-6	-436	3520	17.54	-3.33	0
273	SLD 8	-6	-436	3520	17.54	-3.33	0
273	SLD 9	6	752	3325	-34.09	3.27	0.01
273	SLD 10	6	752	3325	-34.09	3.27	0.01
273	SLD 11	-9	-525	3709	21.35	-5.66	0
273	SLD 12	-9	-525	3709	21.35	-5.66	0
273	SLD 13	-3	200	3680	-10.24	-2.57	0.01
273	SLD 14	-3	200	3680	-10.24	-2.57	0.01
273	SLD 15	-7	-183	3795	6.39	-5.25	0
273	SLD 16	-7	-183	3795	6.39	-5.25	0
273	SLV 1	17	962	2549	-42.92	12.51	-0.01
273	SLV 2	17	962	2549	-42.92	12.51	-0.01
273	SLV 3	6	56	2821	-3.58	5.69	-0.01
273	SLV 4	6	56	2821	-3.58	5.69	-0.01
273	SLV 5	22	1773	2748	-78.33	14.07	0.01
273	SLV 6	22	1773	2748	-78.33	14.07	0.01
273	SLV 7	-15	-1247	3654	52.8	-8.64	-0.01
273	SLV 8	-15	-1247	3654	52.8	-8.64	-0.01
273	SLV 9	15	1562	3190	-69.35	8.59	0.01
273	SLV 10	15	1562	3190	-69.35	8.59	0.01
273	SLV 11	-22	-1457	4097	61.78	-14.12	-0.01
273	SLV 12	-22	-1457	4097	61.78	-14.12	-0.01
273	SLV 13	-6	260	4024	-12.98	-5.75	0.02
273	SLV 14	-6	260	4024	-12.98	-5.75	0.02
273	SLV 15	-17	-646	4296	26.36	-12.56	0.01
273	SLV 16	-17	-646	4296	26.36	-12.56	0.01
274	SLU 1	2	-529	5799	22.55	1.7	0
274	SLU 2	2	-460	5578	19.49	0.79	0
274	SLU 3	2	-546	6010	23.32	1.76	0
274	SLU 4	2	-505	5878	21.47	1.22	0
274	SLU 5	2	-470	5738	19.94	0.84	0
274	SLU 6	2	-555	6170	23.77	1.81	0
274	SLU 7	2	-514	6038	21.93	1.27	0
274	SLU 8	2	-548	6118	23.46	1.8	0
274	SLU 9	2	-507	5985	21.62	1.25	0
274	SLU 10	2	-524	6215	22.2	1.01	0
274	SLU 11	2	-609	6646	26.03	1.99	0



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
Ind.	N.br.	x	y	z		x	y	z	
274	SLU 12	2	-568	6514		24.19	1.44		0
274	SLU 13	2	-533	6374		22.66	1.07		0
274	SLU 14	2	-619	6806		26.49	2.04		0
274	SLU 15	2	-578	6674		24.65	1.5		0
274	SLU 16	2	-611	6754		26.18	2.03		0
274	SLU 17	2	-570	6622		24.34	1.48		0
274	SLU 18	2	-619	6707		26.44	2.02		0
274	SLU 19	2	-578	6575		24.6	1.48		0
274	SLU 20	2	-629	6867		26.89	2.07		0
274	SLU 21	2	-588	6735		25.05	1.53		0
274	SLU 22	2	-593	6448		25.32	1.93		0
274	SLU 23	2	-524	6228		22.25	1.02		0
274	SLU 24	2	-610	6660		26.08	2		0
274	SLU 25	2	-569	6528		24.24	1.45		0
274	SLU 26	2	-534	6387		22.7	1.07		0
274	SLU 27	2	-619	6819		26.53	2.05		0
274	SLU 28	2	-578	6687		24.69	1.5		0
274	SLU 29	2	-612	6767		26.23	2.03		0
274	SLU 30	2	-571	6635		24.38	1.49		0
274	SLU 31	2	-588	6864		24.97	1.25		0
274	SLU 32	3	-673	7296		28.8	2.22		0
274	SLU 33	2	-632	7164		26.96	1.68		0
274	SLU 34	2	-597	7024		25.42	1.3		0
274	SLU 35	3	-683	7455		29.25	2.28		0
274	SLU 36	2	-642	7323		27.41	1.73		0
274	SLU 37	3	-675	7403		28.94	2.26		0
274	SLU 38	2	-634	7271		27.1	1.72		0
274	SLU 39	3	-683	7357		29.2	2.26		0
274	SLU 40	2	-642	7225		27.36	1.71		0
274	SLU 41	3	-693	7516		29.66	2.31		0
274	SLU 42	3	-652	7384		27.81	1.76		0
274	SLU 43	2	-665	7315		28.37	2.12		0
274	SLU 44	2	-597	7095		25.3	1.21		0
274	SLU 45	3	-682	7527		29.13	2.19		0
274	SLU 46	2	-641	7395		27.29	1.64		0
274	SLU 47	2	-606	7255		25.76	1.27		0
274	SLU 48	3	-692	7686		29.59	2.24		0
274	SLU 49	2	-651	7554		27.75	1.7		0
274	SLU 50	3	-684	7634		29.28	2.23		0
274	SLU 51	2	-643	7502		27.44	1.68		0
274	SLU 52	2	-660	7731		28.02	1.44		0
274	SLU 53	3	-746	8163		31.85	2.42		0
274	SLU 54	3	-705	8031		30.01	1.87		0
274	SLU 55	2	-670	7891		28.48	1.49		0
274	SLU 56	3	-755	8323		32.31	2.47		0
274	SLU 57	3	-714	8190		30.47	1.92		0
274	SLU 58	3	-748	8270		32	2.46		0
274	SLU 59	3	-707	8138		30.16	1.91		0
274	SLU 60	3	-756	8224		32.26	2.45		0
274	SLU 61	3	-715	8092		30.42	1.9		0
274	SLU 62	3	-765	8384		32.71	2.5		0
274	SLU 63	3	-724	8252		30.87	1.96		0
274	SLU 64	3	-730	7965		31.14	2.36		0
274	SLU 65	2	-661	7745		28.07	1.45		0
274	SLU 66	3	-747	8177		31.9	2.42		0
274	SLU 67	3	-705	8044		30.06	1.88		0
274	SLU 68	2	-671	7904		28.52	1.5		0
274	SLU 69	3	-756	8336		32.35	2.48		0
274	SLU 70	3	-715	8204		30.51	1.93		0
274	SLU 71	3	-749	8284		32.04	2.46		0
274	SLU 72	3	-708	8152		30.2	1.92		0
274	SLU 73	3	-724	8381		30.79	1.68		0
274	SLU 74	3	-810	8813		34.62	2.65		0
274	SLU 75	3	-769	8681		32.78	2.11		0
274	SLU 76	3	-734	8540		31.24	1.73		0
274	SLU 77	3	-819	8972		35.07	2.7		0
274	SLU 78	3	-778	8840		33.23	2.16		0
274	SLU 79	3	-812	8920		34.76	2.69		0
274	SLU 80	3	-771	8788		32.92	2.14		0
274	SLU 81	3	-820	8874		35.02	2.68		0
274	SLU 82	3	-779	8742		33.18	2.14		0
274	SLU 83	3	-830	9033		35.48	2.74		0
274	SLU 84	3	-789	8901		33.63	2.19		0
274	SLE RA 1	2	-547	5984		23.34	1.76		0
274	SLE RA 2	2	-501	5837		21.3	1.16		0
274	SLE RA 3	2	-558	6125		23.85	1.81		0
274	SLE RA 4	2	-531	6037		22.62	1.44		0
274	SLE RA 5	2	-508	5944		21.6	1.19		0
274	SLE RA 6	2	-565	6232		24.15	1.84		0
274	SLE RA 7	2	-537	6143		22.93	1.48		0
274	SLE RA 8	2	-560	6197		23.95	1.83		0
274	SLE RA 9	2	-532	6109		22.72	1.47		0
274	SLE RA 10	2	-544	6261		23.11	1.31		0
274	SLE RA 11	2	-601	6549		25.66	1.96		0
274	SLE RA 12	2	-573	6461		24.44	1.59		0
274	SLE RA 13	2	-550	6368		23.41	1.34		0
274	SLE RA 14	2	-607	6656		25.97	1.99		0
274	SLE RA 15	2	-580	6568		24.74	1.63		0
274	SLE RA 16	2	-602	6621		25.76	1.98		0
274	SLE RA 17	2	-575	6533		24.53	1.62		0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
274	SLE RA 18	2	-607	6590	25.93	1.98	0
274	SLE RA 19	2	-580	6502	24.71	1.62	0
274	SLE RA 20	2	-614	6696	26.24	2.01	0
274	SLE RA 21	2	-586	6608	25.01	1.65	0
274	SLE FR 1	2	-547	5984	23.34	1.76	0
274	SLE FR 2	2	-538	5955	22.94	1.64	0
274	SLE FR 3	2	-550	6027	23.47	1.78	0
274	SLE FR 4	2	-556	6137	23.71	1.71	0
274	SLE FR 5	2	-568	6208	24.24	1.84	0
274	SLE FR 6	2	-577	6287	24.64	1.87	0
274	SLE QP 1	2	-547	5984	23.34	1.76	0
274	SLE QP 2	2	-565	6166	24.12	1.83	0
274	SLD 1	19	-136	4189	5.83	18.65	0.01
274	SLD 2	19	-136	4189	5.83	18.65	0.01
274	SLD 3	30	-549	4871	23.2	28.5	0.01
274	SLD 4	30	-549	4871	23.2	28.5	0.01
274	SLD 5	-9	190	4539	-7.71	-8.06	0.01
274	SLD 6	-9	190	4539	-7.71	-8.06	0.01
274	SLD 7	27	-1187	6811	50.19	24.77	-0.01
274	SLD 8	27	-1187	6811	50.19	24.77	-0.01
274	SLD 9	-22	56	5520	-1.95	-21.11	0
274	SLD 10	-22	56	5520	-1.95	-21.11	0
274	SLD 11	13	-1320	7793	55.96	11.72	-0.01
274	SLD 12	13	-1320	7793	55.96	11.72	-0.01
274	SLD 13	-25	-581	7461	25.05	-24.84	-0.01
274	SLD 14	-25	-581	7461	25.05	-24.84	-0.01
274	SLD 15	-15	-994	8143	42.42	-15	-0.01
274	SLD 16	-15	-994	8143	42.42	-15	-0.01
274	SLV 1	42	434	1534	-18.48	41.65	0.03
274	SLV 2	42	434	1534	-18.48	41.65	0.03
274	SLV 3	69	-527	3139	21.92	66.69	0.02
274	SLV 4	69	-527	3139	21.92	66.69	0.02
274	SLV 5	-27	1192	2342	-49.93	-24.19	0.03
274	SLV 6	-27	1192	2342	-49.93	-24.19	0.03
274	SLV 7	63	-2011	7692	84.74	59.25	-0.01
274	SLV 8	63	-2011	7692	84.74	59.25	-0.01
274	SLV 9	-59	881	4640	-36.5	-55.6	0.01
274	SLV 10	-59	881	4640	-36.5	-55.6	0.01
274	SLV 11	31	-2322	9990	98.18	27.85	-0.03
274	SLV 12	31	-2322	9990	98.18	27.85	-0.03
274	SLV 13	-64	-603	9193	26.32	-63.03	-0.02
274	SLV 14	-64	-603	9193	26.32	-63.03	-0.02
274	SLV 15	-37	-1564	10798	66.72	-38	-0.03
274	SLV 16	-37	-1564	10798	66.72	-38	-0.03
275	SLU 1	0	85	4518	-0.83	0.15	0
275	SLU 2	0	82	4461	-0.69	0.17	0
275	SLU 3	0	85	4663	-0.79	0.14	0
275	SLU 4	0	83	4629	-0.7	0.15	0
275	SLU 5	0	81	4557	-0.63	0.16	0
275	SLU 6	0	84	4758	-0.73	0.13	0
275	SLU 7	0	82	4725	-0.65	0.14	0
275	SLU 8	0	83	4709	-0.72	0.13	0
275	SLU 9	0	81	4675	-0.64	0.14	0
275	SLU 10	0	89	5068	-0.66	0.2	0
275	SLU 11	0	92	5269	-0.76	0.17	0
275	SLU 12	0	90	5235	-0.68	0.18	0
275	SLU 13	0	88	5163	-0.61	0.19	0
275	SLU 14	0	91	5365	-0.71	0.16	0
275	SLU 15	0	89	5331	-0.62	0.17	0
275	SLU 16	0	90	5315	-0.7	0.16	0
275	SLU 17	0	88	5282	-0.61	0.17	0
275	SLU 18	0	95	5384	-0.8	0.19	0
275	SLU 19	0	93	5350	-0.71	0.2	0
275	SLU 20	0	94	5479	-0.74	0.18	0
275	SLU 21	0	92	5446	-0.66	0.19	0
275	SLU 22	0	92	5120	-0.82	0.17	0
275	SLU 23	0	89	5064	-0.67	0.19	0
275	SLU 24	0	92	5265	-0.77	0.16	0
275	SLU 25	0	90	5231	-0.69	0.17	0
275	SLU 26	0	88	5159	-0.62	0.18	0
275	SLU 27	0	91	5360	-0.72	0.16	0
275	SLU 28	0	89	5327	-0.63	0.17	0
275	SLU 29	0	90	5311	-0.71	0.15	0
275	SLU 30	0	88	5278	-0.62	0.16	0
275	SLU 31	0	96	5670	-0.65	0.22	0
275	SLU 32	0	99	5871	-0.75	0.19	0
275	SLU 33	0	97	5837	-0.66	0.2	0
275	SLU 34	0	95	5766	-0.59	0.21	0
275	SLU 35	0	98	5967	-0.69	0.19	0
275	SLU 36	0	96	5933	-0.61	0.2	0
275	SLU 37	0	97	5917	-0.68	0.18	0
275	SLU 38	0	95	5884	-0.6	0.19	0
275	SLU 39	0	102	5986	-0.78	0.21	0
275	SLU 40	0	100	5952	-0.7	0.22	0
275	SLU 41	0	101	6081	-0.73	0.2	0
275	SLU 42	0	99	6048	-0.64	0.21	0
275	SLU 43	0	108	5666	-1.09	0.19	0
275	SLU 44	0	105	5610	-0.94	0.2	0
275	SLU 45	0	108	5811	-1.04	0.18	0
275	SLU 46	0	106	5778	-0.96	0.19	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
275	SLU 47	0	104	5706	-0.89	0.2	0
275	SLU 48	0	107	5907	-0.99	0.17	0
275	SLU 49	0	105	5874	-0.9	0.18	0
275	SLU 50	0	106	5858	-0.98	0.17	0
275	SLU 51	0	104	5824	-0.89	0.18	0
275	SLU 52	0	112	6216	-0.92	0.23	0
275	SLU 53	1	115	6418	-1.02	0.21	0
275	SLU 54	0	113	6384	-0.93	0.22	0
275	SLU 55	0	111	6312	-0.86	0.22	0
275	SLU 56	1	114	6513	-0.96	0.2	0
275	SLU 57	0	112	6480	-0.88	0.21	0
275	SLU 58	0	113	6464	-0.95	0.2	0
275	SLU 59	0	111	6430	-0.87	0.21	0
275	SLU 60	1	118	6532	-1.05	0.23	0
275	SLU 61	1	116	6499	-0.97	0.24	0
275	SLU 62	1	117	6628	-1	0.22	0
275	SLU 63	1	115	6594	-0.91	0.23	0
275	SLU 64	0	115	6269	-1.07	0.21	0
275	SLU 65	0	112	6212	-0.93	0.23	0
275	SLU 66	0	115	6414	-1.03	0.2	0
275	SLU 67	0	113	6380	-0.94	0.21	0
275	SLU 68	0	111	6308	-0.87	0.22	0
275	SLU 69	0	114	6509	-0.97	0.19	0
275	SLU 70	0	112	6476	-0.89	0.2	0
275	SLU 71	0	113	6460	-0.96	0.19	0
275	SLU 72	0	111	6426	-0.88	0.2	0
275	SLU 73	1	119	6819	-0.9	0.25	0
275	SLU 74	1	122	7020	-1	0.23	0
275	SLU 75	1	120	6986	-0.92	0.24	0
275	SLU 76	1	118	6914	-0.85	0.25	0
275	SLU 77	1	121	7116	-0.95	0.22	0
275	SLU 78	1	119	7082	-0.86	0.23	0
275	SLU 79	1	120	7066	-0.94	0.22	0
275	SLU 80	1	118	7033	-0.85	0.23	0
275	SLU 81	1	125	7135	-1.04	0.25	0
275	SLU 82	1	123	7101	-0.95	0.26	0
275	SLU 83	1	124	7230	-0.98	0.24	0
275	SLU 84	1	122	7197	-0.9	0.25	0
275	SLE RA 1	0	87	4690	-0.83	0.16	0
275	SLE RA 2	0	85	4652	-0.73	0.17	0
275	SLE RA 3	0	87	4786	-0.8	0.15	0
275	SLE RA 4	0	86	4764	-0.74	0.16	0
275	SLE RA 5	0	84	4716	-0.7	0.16	0
275	SLE RA 6	0	86	4850	-0.76	0.15	0
275	SLE RA 7	0	85	4828	-0.7	0.15	0
275	SLE RA 8	0	86	4817	-0.76	0.14	0
275	SLE RA 9	0	84	4795	-0.7	0.15	0
275	SLE RA 10	0	89	5056	-0.72	0.19	0
275	SLE RA 11	0	92	5190	-0.78	0.17	0
275	SLE RA 12	0	90	5168	-0.72	0.18	0
275	SLE RA 13	0	89	5120	-0.68	0.18	0
275	SLE RA 14	0	91	5254	-0.75	0.17	0
275	SLE RA 15	0	90	5232	-0.69	0.17	0
275	SLE RA 16	0	90	5221	-0.74	0.16	0
275	SLE RA 17	0	89	5199	-0.68	0.17	0
275	SLE RA 18	0	94	5267	-0.81	0.18	0
275	SLE RA 19	0	92	5244	-0.75	0.19	0
275	SLE RA 20	0	93	5331	-0.77	0.18	0
275	SLE RA 21	0	92	5308	-0.71	0.18	0
275	SLE FR 1	0	87	4690	-0.83	0.16	0
275	SLE FR 2	0	86	4682	-0.81	0.16	0
275	SLE FR 3	0	87	4715	-0.81	0.15	0
275	SLE FR 4	0	88	4855	-0.8	0.17	0
275	SLE FR 5	0	89	4888	-0.81	0.16	0
275	SLE FR 6	0	90	4978	-0.82	0.17	0
275	SLE QP 1	0	87	4690	-0.83	0.16	0
275	SLE QP 2	0	89	4863	-0.82	0.16	0
275	SLD 1	14	138	4500	-2.22	10.77	0.01
275	SLD 2	14	138	4500	-2.22	10.77	0.01
275	SLD 3	12	-250	4893	9.9	12.98	0.01
275	SLD 4	12	-250	4893	9.9	12.98	0.01
275	SLD 5	8	692	4158	-19.62	0	0
275	SLD 6	8	692	4158	-19.62	0	0
275	SLD 7	0	-601	5468	20.78	7.36	0
275	SLD 8	0	-601	5468	20.78	7.36	0
275	SLD 9	0	779	4258	-22.42	-7.03	0
275	SLD 10	0	779	4258	-22.42	-7.03	0
275	SLD 11	-7	-514	5568	17.98	0.33	0
275	SLD 12	-7	-514	5568	17.98	0.33	0
275	SLD 13	-11	427	4833	-11.55	-12.65	-0.01
275	SLD 14	-11	427	4833	-11.55	-12.65	-0.01
275	SLD 15	-13	39	5226	0.57	-10.45	-0.01
275	SLD 16	-13	39	5226	0.57	-10.45	-0.01
275	SLV 1	34	209	4008	-4.22	26.46	0.02
275	SLV 2	34	209	4008	-4.22	26.46	0.02
275	SLV 3	28	-704	4938	24.31	32.07	0.01
275	SLV 4	28	-704	4938	24.31	32.07	0.01
275	SLV 5	19	1509	3197	-45.1	-0.44	0.01
275	SLV 6	19	1509	3197	-45.1	-0.44	0.01
275	SLV 7	0	-1533	6295	49.98	18.23	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
275	SLV 8	0	-1533	6295	49.98	18.23	0
275	SLV 9	0	1710	3431	-51.62	-17.9	0
275	SLV 10	0	1710	3431	-51.62	-17.9	0
275	SLV 11	-18	-1331	6529	43.46	0.77	-0.01
275	SLV 12	-18	-1331	6529	43.46	0.77	-0.01
275	SLV 13	-28	881	4788	-25.95	-31.74	-0.01
275	SLV 14	-28	881	4788	-25.95	-31.74	-0.01
275	SLV 15	-33	-31	5717	2.57	-26.14	-0.02
275	SLV 16	-33	-31	5717	2.57	-26.14	-0.02
276	SLU 1	-1	-415	4211	21.61	-0.68	0
276	SLU 2	-1	-414	4197	21.74	-0.7	0
276	SLU 3	-1	-426	4322	22.17	-0.7	0
276	SLU 4	-1	-426	4313	22.25	-0.71	0
276	SLU 5	-1	-420	4256	22.01	-0.71	0
276	SLU 6	-1	-432	4381	22.44	-0.71	0
276	SLU 7	-1	-432	4372	22.52	-0.72	0
276	SLU 8	-1	-426	4329	22.13	-0.7	0
276	SLU 9	-1	-426	4320	22.21	-0.71	0
276	SLU 10	-1	-479	4758	25.04	-0.78	0
276	SLU 11	-1	-492	4883	25.47	-0.79	0
276	SLU 12	-1	-491	4875	25.55	-0.8	0
276	SLU 13	-1	-485	4817	25.3	-0.79	0
276	SLU 14	-1	-498	4942	25.73	-0.8	0
276	SLU 15	-1	-497	4934	25.81	-0.81	0
276	SLU 16	-1	-492	4890	25.43	-0.79	0
276	SLU 17	-1	-491	4882	25.51	-0.79	0
276	SLU 18	-1	-508	5013	26.32	-0.81	0
276	SLU 19	-1	-508	5005	26.4	-0.81	0
276	SLU 20	-1	-514	5072	26.58	-0.81	0
276	SLU 21	-1	-513	5064	26.66	-0.82	0
276	SLU 22	-1	-476	4760	24.71	-0.77	0
276	SLU 23	-1	-475	4746	24.85	-0.78	0
276	SLU 24	-1	-488	4871	25.28	-0.79	0
276	SLU 25	-1	-487	4863	25.36	-0.8	0
276	SLU 26	-1	-481	4805	25.11	-0.79	0
276	SLU 27	-1	-494	4930	25.54	-0.8	0
276	SLU 28	-1	-493	4922	25.62	-0.81	0
276	SLU 29	-1	-488	4878	25.24	-0.79	0
276	SLU 30	-1	-487	4870	25.32	-0.8	0
276	SLU 31	-1	-541	5308	28.14	-0.87	0
276	SLU 32	-1	-553	5433	28.57	-0.87	0
276	SLU 33	-1	-553	5424	28.66	-0.88	0
276	SLU 34	-1	-547	5367	28.41	-0.88	0
276	SLU 35	-1	-559	5492	28.84	-0.88	0
276	SLU 36	-1	-559	5483	28.92	-0.89	0
276	SLU 37	-1	-553	5440	28.54	-0.87	0
276	SLU 38	-1	-553	5431	28.62	-0.88	0
276	SLU 39	-1	-570	5562	29.42	-0.89	0
276	SLU 40	-1	-569	5554	29.5	-0.9	0
276	SLU 41	-1	-575	5621	29.69	-0.9	0
276	SLU 42	-1	-575	5613	29.77	-0.91	0
276	SLU 43	-1	-518	5286	27.03	-0.86	0
276	SLU 44	-1	-517	5271	27.16	-0.88	0
276	SLU 45	-1	-530	5397	27.59	-0.88	0
276	SLU 46	-1	-529	5388	27.67	-0.89	0
276	SLU 47	-1	-523	5330	27.42	-0.88	0
276	SLU 48	-1	-535	5456	27.85	-0.89	0
276	SLU 49	-1	-535	5447	27.93	-0.9	0
276	SLU 50	-1	-530	5404	27.55	-0.88	0
276	SLU 51	-1	-529	5395	27.63	-0.89	0
276	SLU 52	-1	-583	5833	30.46	-0.96	0.01
276	SLU 53	-1	-595	5958	30.89	-0.96	0.01
276	SLU 54	-1	-594	5950	30.97	-0.97	0.01
276	SLU 55	-1	-588	5892	30.72	-0.97	0.01
276	SLU 56	-1	-601	6017	31.15	-0.97	0.01
276	SLU 57	-1	-600	6009	31.23	-0.98	0.01
276	SLU 58	-1	-595	5965	30.85	-0.96	0.01
276	SLU 59	-1	-595	5957	30.93	-0.97	0.01
276	SLU 60	-1	-611	6088	31.74	-0.98	0.01
276	SLU 61	-1	-611	6080	31.82	-0.99	0.01
276	SLU 62	-1	-617	6147	32	-0.99	0.01
276	SLU 63	-1	-617	6139	32.08	-1	0.01
276	SLU 64	-1	-579	5835	30.13	-0.95	0.01
276	SLU 65	-1	-579	5821	30.27	-0.96	0.01
276	SLU 66	-1	-591	5946	30.7	-0.96	0.01
276	SLU 67	-1	-591	5938	30.78	-0.97	0.01
276	SLU 68	-1	-585	5880	30.53	-0.97	0.01
276	SLU 69	-1	-597	6005	30.96	-0.97	0.01
276	SLU 70	-1	-597	5997	31.04	-0.98	0.01
276	SLU 71	-1	-591	5953	30.66	-0.96	0.01
276	SLU 72	-1	-591	5944	30.74	-0.97	0.01
276	SLU 73	-2	-644	6382	33.56	-1.05	0.01
276	SLU 74	-2	-656	6508	33.99	-1.05	0.01
276	SLU 75	-2	-656	6499	34.07	-1.06	0.01
276	SLU 76	-2	-650	6441	33.83	-1.05	0.01
276	SLU 77	-2	-662	6567	34.26	-1.06	0.01
276	SLU 78	-2	-662	6558	34.34	-1.07	0.01
276	SLU 79	-2	-657	6515	33.95	-1.05	0.01
276	SLU 80	-2	-656	6506	34.03	-1.06	0.01
276	SLU 81	-2	-673	6637	34.84	-1.07	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
276	SLU 82	-2	-672	6629	34.92	-1.08	0.01
276	SLU 83	-2	-679	6696	35.11	-1.08	0.01
276	SLU 84	-2	-678	6688	35.19	-1.08	0.01
276	SLE RA 1	-1	-432	4368	22.5	-0.71	0
276	SLE RA 2	-1	-432	4358	22.58	-0.72	0
276	SLE RA 3	-1	-440	4442	22.87	-0.72	0
276	SLE RA 4	-1	-440	4436	22.93	-0.73	0
276	SLE RA 5	-1	-436	4398	22.76	-0.72	0
276	SLE RA 6	-1	-444	4481	23.05	-0.73	0
276	SLE RA 7	-1	-444	4475	23.1	-0.73	0
276	SLE RA 8	-1	-440	4446	22.85	-0.72	0
276	SLE RA 9	-1	-440	4441	22.9	-0.73	0
276	SLE RA 10	-1	-475	4733	24.78	-0.78	0
276	SLE RA 11	-1	-484	4816	25.07	-0.78	0
276	SLE RA 12	-1	-483	4811	25.12	-0.78	0
276	SLE RA 13	-1	-479	4772	24.96	-0.78	0
276	SLE RA 14	-1	-487	4855	25.25	-0.78	0
276	SLE RA 15	-1	-487	4850	25.3	-0.79	0
276	SLE RA 16	-1	-484	4821	25.04	-0.78	0
276	SLE RA 17	-1	-483	4815	25.1	-0.78	0
276	SLE RA 18	-1	-494	4903	25.64	-0.79	0
276	SLE RA 19	-1	-494	4897	25.69	-0.8	0
276	SLE RA 20	-1	-498	4942	25.81	-0.8	0
276	SLE RA 21	-1	-498	4936	25.87	-0.8	0
276	SLE FR 1	-1	-432	4368	22.5	-0.71	0
276	SLE FR 2	-1	-432	4366	22.51	-0.71	0
276	SLE FR 3	-1	-434	4383	22.57	-0.71	0
276	SLE FR 4	-1	-451	4526	23.46	-0.74	0
276	SLE FR 5	-1	-452	4544	23.51	-0.74	0
276	SLE FR 6	-1	-463	4635	24.07	-0.75	0
276	SLE QP 1	-1	-432	4368	22.5	-0.71	0
276	SLE QP 2	-1	-451	4528	23.44	-0.73	0
276	SLD 1	5	-423	4451	21.4	5.02	-0.01
276	SLD 2	5	-423	4451	21.4	5.02	-0.01
276	SLD 3	9	-824	5513	43.89	7.76	-0.03
276	SLD 4	9	-824	5513	43.89	7.76	-0.03
276	SLD 5	-5	166	2894	-11.28	-3.16	0.02
276	SLD 6	-5	166	2894	-11.28	-3.16	0.02
276	SLD 7	7	-1171	6434	63.68	5.97	-0.03
276	SLD 8	7	-1171	6434	63.68	5.97	-0.03
276	SLD 9	-10	269	2622	-16.81	-7.43	0.03
276	SLD 10	-10	269	2622	-16.81	-7.43	0.03
276	SLD 11	3	-1067	6162	58.16	1.69	-0.01
276	SLD 12	3	-1067	6162	58.16	1.69	-0.01
276	SLD 13	-11	-78	3543	2.99	-9.22	0.04
276	SLD 14	-11	-78	3543	2.99	-9.22	0.04
276	SLD 15	-7	-479	4605	25.48	-6.48	0.02
276	SLD 16	-7	-479	4605	25.48	-6.48	0.02
276	SLV 1	14	-384	4344	18.61	13.52	-0.04
276	SLV 2	14	-384	4344	18.61	13.52	-0.04
276	SLV 3	23	-1329	6846	71.6	20.31	-0.07
276	SLV 4	23	-1329	6846	71.6	20.31	-0.07
276	SLV 5	-10	1002	678	-58.38	-6.75	0.04
276	SLV 6	-10	1002	678	-58.38	-6.75	0.04
276	SLV 7	20	-2147	9019	118.25	15.88	-0.07
276	SLV 8	20	-2147	9019	118.25	15.88	-0.07
276	SLV 9	-22	1245	38	-71.38	-17.34	0.08
276	SLV 10	-22	1245	38	-71.38	-17.34	0.08
276	SLV 11	8	-1904	8378	105.25	5.29	-0.03
276	SLV 12	8	-1904	8378	105.25	5.29	-0.03
276	SLV 13	-25	427	2210	-24.73	-21.77	0.08
276	SLV 14	-25	427	2210	-24.73	-21.77	0.08
276	SLV 15	-16	-518	4712	28.26	-14.99	0.05
276	SLV 16	-16	-518	4712	28.26	-14.99	0.05
277	SLU 1	-12	-631	1460	29.15	-8.24	-0.01
277	SLU 2	-12	-566	1438	26.32	-7.73	0
277	SLU 3	-13	-649	1489	30.01	-8.53	-0.01
277	SLU 4	-13	-610	1476	28.32	-8.22	-0.01
277	SLU 5	-12	-577	1460	26.87	-7.92	0
277	SLU 6	-13	-660	1511	30.56	-8.73	-0.01
277	SLU 7	-13	-621	1498	28.87	-8.42	-0.01
277	SLU 8	-13	-653	1504	30.24	-8.63	-0.01
277	SLU 9	-13	-614	1491	28.54	-8.33	-0.01
277	SLU 10	-14	-633	1538	29.46	-8.87	-0.01
277	SLU 11	-14	-716	1589	33.16	-9.67	-0.01
277	SLU 12	-14	-677	1576	31.46	-9.36	-0.01
277	SLU 13	-14	-644	1561	30.01	-9.06	-0.01
277	SLU 14	-15	-726	1612	33.71	-9.87	-0.01
277	SLU 15	-15	-688	1599	32.01	-9.56	-0.01
277	SLU 16	-15	-719	1605	33.38	-9.77	-0.01
277	SLU 17	-14	-680	1592	31.69	-9.47	-0.01
277	SLU 18	-15	-726	1603	33.64	-9.87	-0.01
277	SLU 19	-14	-687	1590	31.94	-9.56	-0.01
277	SLU 20	-15	-737	1626	34.18	-10.06	-0.01
277	SLU 21	-15	-698	1613	32.49	-9.76	-0.01
277	SLU 22	-14	-698	1559	32.29	-9.36	-0.01
277	SLU 23	-14	-633	1538	29.47	-8.85	-0.01
277	SLU 24	-14	-716	1589	33.16	-9.65	-0.01
277	SLU 25	-14	-677	1576	31.47	-9.35	-0.01
277	SLU 26	-14	-644	1560	30.02	-9.05	-0.01



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
		Ind.	N.br.	x	y	z	x	y	z
277	SLU 27			-15	-726	1611	33.71	-9.85	-0.01
277	SLU 28			-15	-688	1598	32.01	-9.54	-0.01
277	SLU 29			-15	-719	1604	33.39	-9.76	-0.01
277	SLU 30			-14	-680	1591	31.69	-9.45	-0.01
277	SLU 31			-15	-700	1638	32.61	-9.99	-0.01
277	SLU 32			-16	-782	1689	36.31	-10.79	-0.01
277	SLU 33			-16	-743	1676	34.61	-10.48	-0.01
277	SLU 34			-16	-710	1661	33.16	-10.19	-0.01
277	SLU 35			-16	-793	1712	36.85	-10.99	-0.01
277	SLU 36			-16	-754	1699	35.16	-10.68	-0.01
277	SLU 37			-16	-786	1705	36.53	-10.9	-0.01
277	SLU 38			-16	-747	1692	34.84	-10.59	-0.01
277	SLU 39			-16	-793	1703	36.79	-10.99	-0.01
277	SLU 40			-16	-754	1690	35.09	-10.68	-0.01
277	SLU 41			-17	-804	1726	37.33	-11.19	-0.01
277	SLU 42			-16	-765	1713	35.64	-10.88	-0.01
277	SLU 43			-16	-798	1863	36.81	-10.33	-0.01
277	SLU 44			-15	-733	1841	33.98	-9.81	-0.01
277	SLU 45			-16	-816	1892	37.68	-10.62	-0.01
277	SLU 46			-16	-777	1879	35.98	-10.31	-0.01
277	SLU 47			-15	-744	1864	34.53	-10.01	-0.01
277	SLU 48			-16	-826	1915	38.23	-10.81	-0.01
277	SLU 49			-16	-788	1902	36.53	-10.51	-0.01
277	SLU 50			-16	-819	1908	37.9	-10.72	-0.01
277	SLU 51			-16	-780	1895	36.21	-10.41	-0.01
277	SLU 52			-17	-800	1942	37.13	-10.95	-0.01
277	SLU 53			-18	-882	1993	40.82	-11.76	-0.01
277	SLU 54			-17	-843	1980	39.13	-11.45	-0.01
277	SLU 55			-17	-810	1964	37.67	-11.15	-0.01
277	SLU 56			-18	-893	2015	41.37	-11.95	-0.01
277	SLU 57			-18	-854	2002	39.67	-11.65	-0.01
277	SLU 58			-18	-886	2009	41.05	-11.86	-0.01
277	SLU 59			-18	-847	1995	39.35	-11.55	-0.01
277	SLU 60			-18	-893	2007	41.3	-11.95	-0.01
277	SLU 61			-18	-854	1994	39.61	-11.65	-0.01
277	SLU 62			-18	-904	2029	41.85	-12.15	-0.01
277	SLU 63			-18	-865	2016	40.15	-11.84	-0.01
277	SLU 64			-17	-864	1963	39.96	-11.45	-0.01
277	SLU 65			-17	-800	1941	37.13	-10.94	-0.01
277	SLU 66			-18	-882	1992	40.83	-11.74	-0.01
277	SLU 67			-17	-843	1979	39.13	-11.43	-0.01
277	SLU 68			-17	-810	1964	37.68	-11.13	-0.01
277	SLU 69			-18	-893	2015	41.37	-11.94	-0.01
277	SLU 70			-18	-854	2002	39.68	-11.63	-0.01
277	SLU 71			-18	-886	2008	41.05	-11.84	-0.01
277	SLU 72			-18	-847	1995	39.36	-11.54	-0.01
277	SLU 73			-18	-866	2042	40.28	-12.08	-0.01
277	SLU 74			-19	-949	2093	43.97	-12.88	-0.01
277	SLU 75			-19	-910	2080	42.28	-12.57	-0.01
277	SLU 76			-19	-877	2064	40.82	-12.27	-0.01
277	SLU 77			-20	-960	2115	44.52	-13.08	-0.01
277	SLU 78			-19	-921	2102	42.82	-12.77	-0.01
277	SLU 79			-19	-952	2109	44.2	-12.98	-0.01
277	SLU 80			-19	-913	2095	42.5	-12.68	-0.01
277	SLU 81			-20	-959	2107	44.45	-13.08	-0.01
277	SLU 82			-19	-920	2094	42.75	-12.77	-0.01
277	SLU 83			-20	-970	2129	45	-13.27	-0.01
277	SLU 84			-20	-931	2116	43.3	-12.97	-0.01
277	SLE RA 1			-13	-650	1488	30.05	-8.56	-0.01
277	SLE RA 2			-13	-607	1474	28.16	-8.22	-0.01
277	SLE RA 3			-13	-662	1508	30.62	-8.75	-0.01
277	SLE RA 4			-13	-636	1499	29.49	-8.55	-0.01
277	SLE RA 5			-13	-614	1488	28.53	-8.35	-0.01
277	SLE RA 6			-13	-669	1522	30.99	-8.89	-0.01
277	SLE RA 7			-13	-643	1514	29.86	-8.68	-0.01
277	SLE RA 8			-13	-665	1518	30.78	-8.82	-0.01
277	SLE RA 9			-13	-639	1509	29.64	-8.62	-0.01
277	SLE RA 10			-14	-651	1541	30.26	-8.98	-0.01
277	SLE RA 11			-14	-707	1575	32.72	-9.51	-0.01
277	SLE RA 12			-14	-681	1566	31.59	-9.31	-0.01
277	SLE RA 13			-14	-659	1556	30.62	-9.11	-0.01
277	SLE RA 14			-14	-714	1590	33.09	-9.65	-0.01
277	SLE RA 15			-14	-688	1581	31.95	-9.44	-0.01
277	SLE RA 16			-14	-709	1585	32.87	-9.58	-0.01
277	SLE RA 17			-14	-683	1576	31.74	-9.38	-0.01
277	SLE RA 18			-14	-714	1584	33.04	-9.65	-0.01
277	SLE RA 19			-14	-688	1575	31.91	-9.44	-0.01
277	SLE RA 20			-15	-721	1599	33.4	-9.78	-0.01
277	SLE RA 21			-14	-695	1590	32.27	-9.57	-0.01
277	SLE FR 1			-13	-650	1488	30.05	-8.56	-0.01
277	SLE FR 2			-13	-642	1485	29.67	-8.49	-0.01
277	SLE FR 3			-13	-653	1494	30.19	-8.61	-0.01
277	SLE FR 4			-13	-661	1514	30.57	-8.82	-0.01
277	SLE FR 5			-13	-672	1523	31.09	-8.94	-0.01
277	SLE FR 6			-14	-682	1536	31.54	-9.1	-0.01
277	SLE QP 1			-13	-650	1488	30.05	-8.56	-0.01
277	SLE QP 2			-13	-669	1517	30.94	-8.89	-0.01
277	SLD 1			-21	-705	1762	32.73	7.68	0.01
277	SLD 2			-21	-705	1762	32.73	7.68	0.01
277	SLD 3			-34	-1121	2007	50.38	-0.66	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
277	SLD 4	-34	-1121	2007	50.38	-0.66	0
277	SLD 5	3	-49	1219	4.72	8.74	0.01
277	SLD 6	3	-49	1219	4.72	8.74	0.01
277	SLD 7	-38	-1436	2036	63.54	-19.07	-0.01
277	SLD 8	-38	-1436	2036	63.54	-19.07	-0.01
277	SLD 9	11	97	998	-1.65	1.3	0
277	SLD 10	11	97	998	-1.65	1.3	0
277	SLD 11	-29	-1290	1815	57.17	-26.51	-0.02
277	SLD 12	-29	-1290	1815	57.17	-26.51	-0.02
277	SLD 13	7	-217	1026	11.51	-17.11	-0.01
277	SLD 14	7	-217	1026	11.51	-17.11	-0.01
277	SLD 15	-5	-633	1271	29.16	-25.45	-0.02
277	SLD 16	-5	-633	1271	29.16	-25.45	-0.02
277	SLV 1	-32	-754	2086	35.2	30.43	0.02
277	SLV 2	-32	-754	2086	35.2	30.43	0.02
277	SLV 3	-61	-1716	2666	75.93	10.33	0.01
277	SLV 4	-61	-1716	2666	75.93	10.33	0.01
277	SLV 5	25	765	809	-29.56	33.39	0.02
277	SLV 6	25	765	809	-29.56	33.39	0.02
277	SLV 7	-72	-2443	2740	106.22	-33.6	-0.02
277	SLV 8	-72	-2443	2740	106.22	-33.6	-0.02
277	SLV 9	45	1104	294	-44.33	15.83	0.01
277	SLV 10	45	1104	294	-44.33	15.83	0.01
277	SLV 11	-52	-2103	2224	91.45	-51.16	-0.04
277	SLV 12	-52	-2103	2224	91.45	-51.16	-0.04
277	SLV 13	35	377	368	-14.04	-28.1	-0.02
277	SLV 14	35	377	368	-14.04	-28.1	-0.02
277	SLV 15	6	-585	947	26.69	-48.2	-0.04
277	SLV 16	6	-585	947	26.69	-48.2	-0.04
278	SLU 1	0	-195	3523	25	0.31	0
278	SLU 2	0	-190	3518	24.84	0.31	0
278	SLU 3	0	-202	3629	25.85	0.32	0
278	SLU 4	0	-199	3626	25.76	0.32	0
278	SLU 5	0	-194	3581	25.33	0.31	0
278	SLU 6	0	-205	3692	26.34	0.33	0
278	SLU 7	0	-203	3689	26.24	0.32	0
278	SLU 8	0	-202	3649	25.98	0.32	0
278	SLU 9	0	-199	3646	25.88	0.32	0
278	SLU 10	0	-227	4023	28.92	0.39	0
278	SLU 11	0	-239	4134	29.93	0.4	0
278	SLU 12	0	-236	4131	29.84	0.4	0
278	SLU 13	0	-231	4086	29.41	0.39	0
278	SLU 14	0	-242	4197	30.42	0.4	0
278	SLU 15	0	-240	4194	30.32	0.4	0
278	SLU 16	0	-239	4154	30.06	0.4	0
278	SLU 17	0	-236	4151	29.96	0.4	0
278	SLU 18	0	-247	4245	30.83	0.42	0
278	SLU 19	0	-245	4242	30.73	0.42	0
278	SLU 20	0	-251	4307	31.32	0.43	0
278	SLU 21	0	-248	4304	31.22	0.43	0
278	SLU 22	0	-229	4006	28.88	0.38	0
278	SLU 23	0	-224	4002	28.72	0.38	0
278	SLU 24	0	-236	4113	29.73	0.39	0
278	SLU 25	0	-233	4110	29.63	0.39	0
278	SLU 26	0	-228	4064	29.2	0.38	0
278	SLU 27	0	-239	4175	30.22	0.39	0
278	SLU 28	0	-237	4172	30.12	0.39	0
278	SLU 29	0	-236	4132	29.85	0.39	0
278	SLU 30	0	-233	4129	29.76	0.39	0
278	SLU 31	0	-261	4507	32.8	0.45	0
278	SLU 32	0	-272	4618	33.81	0.47	0
278	SLU 33	0	-270	4615	33.71	0.46	0
278	SLU 34	0	-265	4569	33.28	0.46	0
278	SLU 35	0	-276	4680	34.3	0.47	0
278	SLU 36	0	-273	4677	34.2	0.47	0
278	SLU 37	0	-273	4637	33.93	0.47	0
278	SLU 38	0	-270	4634	33.84	0.47	0
278	SLU 39	0	-281	4728	34.71	0.49	0
278	SLU 40	0	-279	4725	34.61	0.49	0
278	SLU 41	0	-285	4791	35.19	0.5	0
278	SLU 42	0	-282	4788	35.1	0.49	0
278	SLU 43	0	-242	4414	31.17	0.38	0
278	SLU 44	0	-237	4410	31.01	0.38	0
278	SLU 45	0	-249	4521	32.02	0.39	0
278	SLU 46	0	-246	4518	31.93	0.39	0
278	SLU 47	0	-241	4472	31.5	0.38	0
278	SLU 48	0	-252	4583	32.51	0.4	0
278	SLU 49	0	-250	4580	32.41	0.39	0
278	SLU 50	0	-249	4540	32.15	0.39	0
278	SLU 51	0	-246	4537	32.05	0.39	0
278	SLU 52	0	-274	4915	35.09	0.46	0
278	SLU 53	0	-285	5026	36.1	0.47	0
278	SLU 54	0	-283	5023	36.01	0.47	0
278	SLU 55	0	-278	4977	35.58	0.46	0
278	SLU 56	0	-289	5088	36.59	0.47	0
278	SLU 57	0	-286	5085	36.5	0.47	0
278	SLU 58	0	-286	5045	36.23	0.47	0
278	SLU 59	0	-283	5042	36.13	0.47	0
278	SLU 60	0	-294	5136	37	0.49	0
278	SLU 61	0	-292	5133	36.9	0.49	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
278	SLU 62	0	-298	5199	37.49	0.5	0
278	SLU 63	0	-295	5196	37.39	0.5	0
278	SLU 64	0	-276	4898	35.05	0.45	0
278	SLU 65	0	-271	4893	34.89	0.45	0
278	SLU 66	0	-283	5004	35.9	0.46	0
278	SLU 67	0	-280	5001	35.8	0.46	0
278	SLU 68	0	-275	4956	35.37	0.45	0
278	SLU 69	0	-286	5067	36.39	0.46	0
278	SLU 70	0	-283	5064	36.29	0.46	0
278	SLU 71	0	-283	5023	36.02	0.46	0
278	SLU 72	0	-280	5020	35.93	0.46	0
278	SLU 73	0	-308	5398	38.97	0.52	0
278	SLU 74	0	-319	5509	39.98	0.54	0
278	SLU 75	0	-317	5506	39.88	0.53	0
278	SLU 76	0	-311	5461	39.46	0.53	0
278	SLU 77	0	-323	5572	40.47	0.54	0
278	SLU 78	0	-320	5569	40.37	0.54	0
278	SLU 79	0	-320	5528	40.1	0.54	0
278	SLU 80	0	-317	5525	40.01	0.54	0
278	SLU 81	0	-328	5619	40.88	0.56	0
278	SLU 82	0	-325	5616	40.78	0.56	0
278	SLU 83	0	-332	5682	41.36	0.57	0
278	SLU 84	0	-329	5679	41.27	0.56	0
278	SLE RA 1	0	-205	3661	26.11	0.33	0
278	SLE RA 2	0	-202	3658	26	0.33	0
278	SLE RA 3	0	-209	3732	26.68	0.34	0
278	SLE RA 4	0	-207	3730	26.61	0.33	0
278	SLE RA 5	0	-204	3700	26.33	0.33	0
278	SLE RA 6	0	-212	3774	27	0.34	0
278	SLE RA 7	0	-210	3772	26.94	0.34	0
278	SLE RA 8	0	-209	3745	26.76	0.34	0
278	SLE RA 9	0	-208	3743	26.69	0.34	0
278	SLE RA 10	0	-226	3995	28.72	0.38	0
278	SLE RA 11	0	-234	4069	29.4	0.39	0
278	SLE RA 12	0	-232	4067	29.33	0.39	0
278	SLE RA 13	0	-228	4037	29.05	0.38	0
278	SLE RA 14	0	-236	4111	29.72	0.39	0
278	SLE RA 15	0	-234	4109	29.66	0.39	0
278	SLE RA 16	0	-234	4082	29.48	0.39	0
278	SLE RA 17	0	-232	4080	29.41	0.39	0
278	SLE RA 18	0	-240	4142	29.99	0.4	0
278	SLE RA 19	0	-238	4140	29.93	0.4	0
278	SLE RA 20	0	-242	4184	30.32	0.41	0
278	SLE RA 21	0	-240	4182	30.25	0.41	0
278	SLE FR 1	0	-205	3661	26.11	0.33	0
278	SLE FR 2	0	-204	3661	26.09	0.33	0
278	SLE FR 3	0	-205	3678	26.24	0.33	0
278	SLE FR 4	0	-214	3805	27.25	0.35	0
278	SLE FR 5	0	-216	3822	27.4	0.35	0
278	SLE FR 6	0	-222	3902	28.05	0.37	0
278	SLE QP 1	0	-205	3661	26.11	0.33	0
278	SLE QP 2	0	-215	3806	27.27	0.35	0
278	SLD 1	5	-123	4093	22.05	3.51	0
278	SLD 2	5	-123	4093	22.05	3.51	0
278	SLD 3	9	-521	4240	42.68	6.38	-0.01
278	SLD 4	9	-521	4240	42.68	6.38	-0.01
278	SLD 5	-4	417	3669	-5.58	-3.04	0
278	SLD 6	-4	417	3669	-5.58	-3.04	0
278	SLD 7	9	-911	4159	63.18	6.5	0
278	SLD 8	9	-911	4159	63.18	6.5	0
278	SLD 9	-8	481	3452	-8.64	-5.8	0
278	SLD 10	-8	481	3452	-8.64	-5.8	0
278	SLD 11	5	-847	3942	60.13	3.75	0
278	SLD 12	5	-847	3942	60.13	3.75	0
278	SLD 13	-8	91	3371	11.87	-5.68	0.01
278	SLD 14	-8	91	3371	11.87	-5.68	0.01
278	SLD 15	-4	-307	3518	32.5	-2.81	0
278	SLD 16	-4	-307	3518	32.5	-2.81	0
278	SLV 1	11	9	4478	14.6	7.56	-0.01
278	SLV 2	11	9	4478	14.6	7.56	-0.01
278	SLV 3	21	-945	4825	64.13	14.83	-0.01
278	SLV 4	21	-945	4825	64.13	14.83	-0.01
278	SLV 5	-12	1300	3482	-51.64	-8.51	0
278	SLV 6	-12	1300	3482	-51.64	-8.51	0
278	SLV 7	22	-1881	4637	113.44	15.72	-0.01
278	SLV 8	22	-1881	4637	113.44	15.72	-0.01
278	SLV 9	-21	1451	2974	-58.89	-15.01	0.01
278	SLV 10	-21	1451	2974	-58.89	-15.01	0.01
278	SLV 11	12	-1730	4129	106.18	9.21	0
278	SLV 12	12	-1730	4129	106.18	9.21	0
278	SLV 13	-20	515	2786	-9.58	-14.13	0.01
278	SLV 14	-20	515	2786	-9.58	-14.13	0.01
278	SLV 15	-10	-439	3133	39.94	-6.86	0.01
278	SLV 16	-10	-439	3133	39.94	-6.86	0.01
279	SLU 1	0	2	3302	3.7	0.01	0
279	SLU 2	0	5	3292	3.61	0.02	0
279	SLU 3	0	3	3393	3.79	0.02	0
279	SLU 4	0	5	3387	3.74	0.02	0
279	SLU 5	0	6	3342	3.62	0.02	0
279	SLU 6	0	4	3443	3.81	0.02	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
279	SLU 7	0	6	3437	3.75	0.02	0
279	SLU 8	0	5	3401	3.73	0.02	0
279	SLU 9	0	6	3395	3.68	0.02	0
279	SLU 10	0	-1	3772	4.39	0.01	0
279	SLU 11	0	-2	3873	4.58	0.01	0
279	SLU 12	0	-1	3867	4.52	0.01	0
279	SLU 13	0	0	3821	4.41	0.01	0
279	SLU 14	0	-1	3922	4.6	0.01	0
279	SLU 15	0	0	3917	4.54	0.01	0
279	SLU 16	0	-1	3881	4.52	0.01	0
279	SLU 17	0	1	3875	4.46	0.01	0
279	SLU 18	0	-5	3987	4.83	0	0
279	SLU 19	0	-4	3981	4.77	0	0
279	SLU 20	0	-4	4036	4.84	0.01	0
279	SLU 21	0	-3	4031	4.79	0.01	0
279	SLU 22	0	-1	3757	4.4	0.01	0
279	SLU 23	0	1	3747	4.3	0.01	0
279	SLU 24	0	-1	3848	4.49	0.01	0
279	SLU 25	0	1	3842	4.43	0.01	0
279	SLU 26	0	2	3797	4.32	0.01	0
279	SLU 27	0	1	3898	4.5	0.01	0
279	SLU 28	0	2	3892	4.45	0.02	0
279	SLU 29	0	1	3856	4.43	0.01	0
279	SLU 30	0	3	3850	4.37	0.02	0
279	SLU 31	0	-4	4227	5.09	0	0
279	SLU 32	0	-6	4328	5.27	0.01	0
279	SLU 33	0	-5	4322	5.22	0.01	0
279	SLU 34	0	-3	4276	5.1	0.01	0
279	SLU 35	0	-5	4377	5.29	0.01	0
279	SLU 36	0	-3	4372	5.23	0.01	0
279	SLU 37	0	-4	4336	5.22	0.01	0
279	SLU 38	0	-3	4330	5.16	0.01	0
279	SLU 39	0	-9	4442	5.52	0	0
279	SLU 40	0	-8	4436	5.46	0	0
279	SLU 41	0	-8	4491	5.54	0	0
279	SLU 42	0	-6	4486	5.48	0	0
279	SLU 43	0	4	4136	4.57	0.02	0
279	SLU 44	0	7	4126	4.48	0.02	0
279	SLU 45	0	5	4227	4.66	0.02	0
279	SLU 46	0	6	4222	4.61	0.02	0
279	SLU 47	0	8	4176	4.5	0.02	0
279	SLU 48	0	6	4277	4.68	0.02	0
279	SLU 49	0	8	4272	4.62	0.02	0
279	SLU 50	0	7	4236	4.61	0.02	0
279	SLU 51	0	8	4230	4.55	0.02	0
279	SLU 52	0	1	4606	5.27	0.01	0
279	SLU 53	0	0	4707	5.45	0.01	0
279	SLU 54	0	1	4701	5.39	0.02	0
279	SLU 55	0	2	4656	5.28	0.02	0
279	SLU 56	0	1	4757	5.47	0.02	0
279	SLU 57	0	2	4751	5.41	0.02	0
279	SLU 58	0	1	4715	5.39	0.02	0
279	SLU 59	0	3	4709	5.34	0.02	0
279	SLU 60	0	-4	4821	5.7	0.01	0
279	SLU 61	0	-2	4815	5.64	0.01	0
279	SLU 62	0	-2	4871	5.72	0.01	0
279	SLU 63	0	-1	4865	5.66	0.01	0
279	SLU 64	0	1	4591	5.27	0.01	0
279	SLU 65	0	3	4582	5.17	0.02	0
279	SLU 66	0	1	4682	5.36	0.02	0
279	SLU 67	0	3	4677	5.3	0.02	0
279	SLU 68	0	4	4631	5.19	0.02	0
279	SLU 69	0	3	4732	5.38	0.02	0
279	SLU 70	0	4	4727	5.32	0.02	0
279	SLU 71	0	3	4691	5.3	0.02	0
279	SLU 72	0	5	4685	5.24	0.02	0
279	SLU 73	0	-3	5061	5.96	0.01	0
279	SLU 74	0	-4	5162	6.15	0.01	0
279	SLU 75	0	-3	5156	6.09	0.01	0
279	SLU 76	0	-1	5111	5.98	0.01	0
279	SLU 77	0	-3	5212	6.16	0.01	0
279	SLU 78	0	-1	5206	6.11	0.01	0
279	SLU 79	0	-2	5170	6.09	0.01	0
279	SLU 80	0	-1	5164	6.03	0.01	0
279	SLU 81	0	-7	5276	6.39	0	0
279	SLU 82	0	-6	5270	6.34	0.01	0
279	SLU 83	0	-6	5326	6.41	0.01	0
279	SLU 84	0	-5	5320	6.35	0.01	0
279	SLE RA 1	0	1	3432	3.9	0.01	0
279	SLE RA 2	0	3	3425	3.84	0.01	0
279	SLE RA 3	0	2	3493	3.96	0.01	0
279	SLE RA 4	0	3	3489	3.92	0.01	0
279	SLE RA 5	0	4	3458	3.85	0.02	0
279	SLE RA 6	0	3	3526	3.97	0.02	0
279	SLE RA 7	0	4	3522	3.93	0.02	0
279	SLE RA 8	0	3	3498	3.92	0.02	0
279	SLE RA 9	0	4	3494	3.88	0.02	0
279	SLE RA 10	0	-1	3745	4.36	0.01	0
279	SLE RA 11	0	-2	3812	4.49	0.01	0
279	SLE RA 12	0	-1	3808	4.45	0.01	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
279	SLE RA 13	0	0	3778	4.37	0.01	0
279	SLE RA 14	0	-1	3845	4.5	0.01	0
279	SLE RA 15	0	0	3842	4.46	0.01	0
279	SLE RA 16	0	-1	3818	4.45	0.01	0
279	SLE RA 17	0	0	3814	4.41	0.01	0
279	SLE RA 18	0	-4	3888	4.65	0.01	0
279	SLE RA 19	0	-3	3884	4.61	0.01	0
279	SLE RA 20	0	-3	3921	4.66	0.01	0
279	SLE RA 21	0	-2	3918	4.62	0.01	0
279	SLE FR 1	0	1	3432	3.9	0.01	0
279	SLE FR 2	0	2	3430	3.89	0.01	0
279	SLE FR 3	0	2	3445	3.9	0.01	0
279	SLE FR 4	0	0	3567	4.11	0.01	0
279	SLE FR 5	0	0	3582	4.13	0.01	0
279	SLE FR 6	0	-1	3660	4.28	0.01	0
279	SLE QP 1	0	1	3432	3.9	0.01	0
279	SLE QP 2	0	0	3569	4.13	0.01	0
279	SLD 1	9	348	3201	-11.12	5.96	0
279	SLD 2	9	348	3201	-11.12	5.96	0
279	SLD 3	5	-50	3366	6.48	3.46	0
279	SLD 4	5	-50	3366	6.48	3.46	0
279	SLD 5	8	708	3208	-27.14	5.6	0
279	SLD 6	8	708	3208	-27.14	5.6	0
279	SLD 7	-4	-619	3759	31.53	-2.76	0
279	SLD 8	-4	-619	3759	31.53	-2.76	0
279	SLD 9	4	619	3379	-23.28	2.78	0
279	SLD 10	4	619	3379	-23.28	2.78	0
279	SLD 11	-8	-709	3930	35.39	-5.58	0
279	SLD 12	-8	-709	3930	35.39	-5.58	0
279	SLD 13	-5	50	3771	1.77	-3.44	0
279	SLD 14	-5	50	3771	1.77	-3.44	0
279	SLD 15	-9	-349	3936	19.37	-5.94	0
279	SLD 16	-9	-349	3936	19.37	-5.94	0
279	SLV 1	21	823	2706	-31.93	14.21	0
279	SLV 2	21	823	2706	-31.93	14.21	0
279	SLV 3	12	-120	3098	9.75	7.88	-0.01
279	SLV 4	12	-120	3098	9.75	7.88	-0.01
279	SLV 5	20	1676	2716	-69.9	13.87	0.01
279	SLV 6	20	1676	2716	-69.9	13.87	0.01
279	SLV 7	-10	-1465	4022	69.03	-7.23	-0.01
279	SLV 8	-10	-1465	4022	69.03	-7.23	-0.01
279	SLV 9	10	1465	3115	-60.78	7.25	0.01
279	SLV 10	10	1465	3115	-60.78	7.25	0.01
279	SLV 11	-20	-1676	4421	78.16	-13.85	-0.01
279	SLV 12	-20	-1676	4421	78.16	-13.85	-0.01
279	SLV 13	-12	119	4039	-1.5	-7.86	0.01
279	SLV 14	-12	119	4039	-1.5	-7.86	0.01
279	SLV 15	-21	-823	4431	40.18	-14.19	0
279	SLV 16	-21	-823	4431	40.18	-14.19	0
280	SLU 1	1	100	4853	-3.53	0.33	0
280	SLU 2	1	97	4805	-3.43	0.34	0
280	SLU 3	1	100	5009	-3.54	0.33	0
280	SLU 4	1	99	4980	-3.49	0.34	0
280	SLU 5	1	96	4908	-3.39	0.33	0
280	SLU 6	1	99	5112	-3.51	0.33	0
280	SLU 7	1	97	5083	-3.45	0.33	0
280	SLU 8	1	98	5059	-3.45	0.33	0
280	SLU 9	1	96	5030	-3.4	0.33	0
280	SLU 10	1	111	5448	-3.99	0.39	0
280	SLU 11	1	114	5652	-4.1	0.39	0
280	SLU 12	1	112	5623	-4.04	0.39	0
280	SLU 13	1	110	5551	-3.95	0.39	0
280	SLU 14	1	113	5755	-4.06	0.39	0
280	SLU 15	1	111	5726	-4.01	0.39	0
280	SLU 16	1	112	5702	-4.01	0.38	0
280	SLU 17	1	110	5673	-3.95	0.38	0
280	SLU 18	1	120	5771	-4.32	0.41	0
280	SLU 19	1	118	5742	-4.27	0.41	0
280	SLU 20	1	119	5875	-4.28	0.41	0
280	SLU 21	1	117	5846	-4.23	0.41	0
280	SLU 22	1	112	5493	-3.99	0.38	0
280	SLU 23	1	109	5444	-3.9	0.38	0
280	SLU 24	1	112	5649	-4.01	0.38	0
280	SLU 25	1	110	5620	-3.95	0.38	0
280	SLU 26	1	108	5548	-3.86	0.38	0
280	SLU 27	1	111	5752	-3.97	0.38	0
280	SLU 28	1	109	5723	-3.91	0.38	0
280	SLU 29	1	109	5699	-3.92	0.38	0
280	SLU 30	1	108	5670	-3.86	0.38	0
280	SLU 31	1	123	6087	-4.45	0.44	0
280	SLU 32	1	126	6292	-4.56	0.44	0
280	SLU 33	1	124	6263	-4.51	0.44	0
280	SLU 34	1	121	6191	-4.42	0.44	0
280	SLU 35	1	125	6395	-4.53	0.44	0
280	SLU 36	1	123	6366	-4.47	0.44	0
280	SLU 37	1	123	6342	-4.47	0.43	0
280	SLU 38	1	121	6313	-4.42	0.43	0
280	SLU 39	1	131	6411	-4.79	0.46	0
280	SLU 40	1	130	6382	-4.73	0.46	0
280	SLU 41	1	130	6514	-4.75	0.46	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
280	SLU 42	1	129	6485	-4.69	0.46	0
280	SLU 43	1	126	6089	-4.42	0.42	0
280	SLU 44	1	123	6041	-4.33	0.42	0
280	SLU 45	1	126	6246	-4.44	0.42	0
280	SLU 46	1	124	6217	-4.38	0.42	0
280	SLU 47	1	122	6144	-4.29	0.42	0
280	SLU 48	1	125	6349	-4.4	0.42	0
280	SLU 49	1	123	6320	-4.35	0.42	0
280	SLU 50	1	124	6296	-4.35	0.41	0
280	SLU 51	1	122	6267	-4.29	0.41	0
280	SLU 52	1	137	6684	-4.89	0.47	0
280	SLU 53	1	140	6889	-5	0.47	0
280	SLU 54	1	138	6860	-4.94	0.47	0
280	SLU 55	1	136	6787	-4.85	0.47	0
280	SLU 56	1	139	6992	-4.96	0.47	0
280	SLU 57	1	137	6963	-4.9	0.47	0
280	SLU 58	1	137	6939	-4.91	0.47	0
280	SLU 59	1	136	6910	-4.85	0.47	0
280	SLU 60	1	146	7008	-5.22	0.5	0
280	SLU 61	1	144	6979	-5.16	0.5	0
280	SLU 62	1	145	7111	-5.18	0.49	0
280	SLU 63	1	143	7082	-5.13	0.49	0
280	SLU 64	1	138	6729	-4.89	0.47	0
280	SLU 65	1	135	6681	-4.79	0.47	0
280	SLU 66	1	138	6885	-4.91	0.47	0
280	SLU 67	1	136	6856	-4.85	0.47	0
280	SLU 68	1	134	6784	-4.76	0.46	0
280	SLU 69	1	137	6988	-4.87	0.46	0
280	SLU 70	1	135	6960	-4.81	0.46	0
280	SLU 71	1	135	6935	-4.81	0.46	0
280	SLU 72	1	134	6907	-4.76	0.46	0
280	SLU 73	1	149	7324	-5.35	0.52	0
280	SLU 74	1	152	7528	-5.46	0.52	0
280	SLU 75	1	150	7499	-5.41	0.52	0
280	SLU 76	1	147	7427	-5.32	0.52	0
280	SLU 77	1	151	7631	-5.43	0.52	0
280	SLU 78	1	149	7603	-5.37	0.52	0
280	SLU 79	1	149	7578	-5.37	0.51	0
280	SLU 80	1	147	7550	-5.32	0.52	0
280	SLU 81	1	157	7648	-5.68	0.54	0
280	SLU 82	1	156	7619	-5.63	0.55	0
280	SLU 83	1	156	7751	-5.65	0.54	0
280	SLU 84	1	155	7722	-5.59	0.54	0
280	SLE RA 1	1	103	5036	-3.66	0.35	0
280	SLE RA 2	1	101	5004	-3.6	0.35	0
280	SLE RA 3	1	104	5140	-3.67	0.35	0
280	SLE RA 4	1	102	5120	-3.63	0.35	0
280	SLE RA 5	1	101	5072	-3.57	0.35	0
280	SLE RA 6	1	103	5209	-3.64	0.35	0
280	SLE RA 7	1	102	5189	-3.61	0.35	0
280	SLE RA 8	1	102	5173	-3.61	0.34	0
280	SLE RA 9	1	101	5154	-3.57	0.34	0
280	SLE RA 10	1	111	5432	-3.97	0.39	0
280	SLE RA 11	1	113	5568	-4.04	0.38	0
280	SLE RA 12	1	112	5549	-4	0.39	0
280	SLE RA 13	1	110	5501	-3.94	0.38	0
280	SLE RA 14	1	112	5637	-4.02	0.38	0
280	SLE RA 15	1	111	5618	-3.98	0.38	0
280	SLE RA 16	1	111	5602	-3.98	0.38	0
280	SLE RA 17	1	110	5583	-3.94	0.38	0
280	SLE RA 18	1	117	5648	-4.19	0.4	0
280	SLE RA 19	1	115	5629	-4.15	0.4	0
280	SLE RA 20	1	116	5717	-4.16	0.4	0
280	SLE RA 21	1	115	5697	-4.13	0.4	0
280	SLE FR 1	1	103	5036	-3.66	0.35	0
280	SLE FR 2	1	103	5029	-3.65	0.35	0
280	SLE FR 3	1	103	5063	-3.65	0.35	0
280	SLE FR 4	1	107	5213	-3.8	0.36	0
280	SLE FR 5	1	107	5247	-3.81	0.36	0
280	SLE FR 6	1	110	5342	-3.92	0.37	0
280	SLE QP 1	1	103	5036	-3.66	0.35	0
280	SLE QP 2	1	107	5219	-3.82	0.36	0
280	SLD 1	11	163	4754	-5.65	9.58	0.02
280	SLD 2	11	163	4754	-5.65	9.58	0.02
280	SLD 3	13	-209	5260	5.73	11.26	0.02
280	SLD 4	13	-209	5260	5.73	11.26	0.02
280	SLD 5	1	687	4311	-21.62	0.57	0.01
280	SLD 6	1	687	4311	-21.62	0.57	0.01
280	SLD 7	7	-551	6000	16.3	6.19	0
280	SLD 8	7	-551	6000	16.3	6.19	0
280	SLD 9	-5	765	4439	-23.94	-5.46	0
280	SLD 10	-5	765	4439	-23.94	-5.46	0
280	SLD 11	0	-472	6127	13.99	0.15	-0.01
280	SLD 12	0	-472	6127	13.99	0.15	-0.01
280	SLD 13	-11	423	5178	-13.37	-10.53	-0.01
280	SLD 14	-11	423	5178	-13.37	-10.53	-0.01
280	SLD 15	-10	52	5685	-1.99	-8.85	-0.02
280	SLD 16	-10	52	5685	-1.99	-8.85	-0.02
280	SLV 1	26	241	4122	-8.22	22.85	0.04
280	SLV 2	26	241	4122	-8.22	22.85	0.04



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
280	SLV 3	30	-632	5320	18.51	27.1	0.04
280	SLV 4	30	-632	5320	18.51	27.1	0.04
280	SLV 5	2	1471	3072	-45.68	0.66	0.02
280	SLV 6	2	1471	3072	-45.68	0.66	0.02
280	SLV 7	16	-1438	7067	43.43	14.83	0
280	SLV 8	16	-1438	7067	43.43	14.83	0
280	SLV 9	-14	1652	3371	-51.06	-14.11	0
280	SLV 10	-14	1652	3371	-51.06	-14.11	0
280	SLV 11	-1	-1256	7367	38.05	0.07	-0.02
280	SLV 12	-1	-1256	7367	38.05	0.07	-0.02
280	SLV 13	-28	846	5118	-26.15	-26.37	-0.04
280	SLV 14	-28	846	5118	-26.15	-26.37	-0.04
280	SLV 15	-24	-26	6317	0.58	-22.12	-0.04
280	SLV 16	-24	-26	6317	0.58	-22.12	-0.04
281	SLU 1	0	-654	5839	26.14	0.9	0
281	SLU 2	1	-580	5575	22.92	0.36	0
281	SLU 3	0	-676	6057	27.01	0.93	0
281	SLU 4	1	-631	5899	25.08	0.61	0
281	SLU 5	1	-593	5742	23.46	0.38	0
281	SLU 6	1	-689	6225	27.55	0.95	0
281	SLU 7	1	-645	6066	25.62	0.63	0
281	SLU 8	1	-681	6173	27.21	0.95	0
281	SLU 9	1	-636	6015	25.28	0.62	0
281	SLU 10	1	-653	6219	25.82	0.5	0
281	SLU 11	1	-749	6701	29.91	1.07	0
281	SLU 12	1	-704	6543	27.98	0.74	0
281	SLU 13	1	-666	6386	26.36	0.52	0
281	SLU 14	1	-762	6869	30.45	1.09	0
281	SLU 15	1	-717	6710	28.52	0.77	0
281	SLU 16	1	-753	6817	30.11	1.08	0
281	SLU 17	1	-709	6659	28.18	0.76	0
281	SLU 18	1	-758	6759	30.28	1.1	0
281	SLU 19	1	-714	6601	28.35	0.77	0
281	SLU 20	1	-771	6926	30.82	1.12	0
281	SLU 21	1	-727	6768	28.89	0.8	0
281	SLU 22	1	-730	6498	29.15	1.03	0
281	SLU 23	1	-655	6234	25.93	0.5	0
281	SLU 24	1	-751	6716	30.02	1.07	0
281	SLU 25	1	-707	6558	28.09	0.74	0
281	SLU 26	1	-668	6401	26.47	0.52	0
281	SLU 27	1	-764	6883	30.56	1.09	0
281	SLU 28	1	-720	6725	28.63	0.77	0
281	SLU 29	1	-756	6832	30.22	1.08	0
281	SLU 30	1	-711	6674	28.29	0.76	0
281	SLU 31	1	-728	6878	28.83	0.64	0
281	SLU 32	1	-824	7360	32.92	1.2	0
281	SLU 33	1	-779	7202	30.99	0.88	0
281	SLU 34	1	-741	7045	29.37	0.66	0
281	SLU 35	1	-837	7527	33.46	1.23	0
281	SLU 36	1	-792	7369	31.53	0.9	0
281	SLU 37	1	-828	7476	33.12	1.22	0
281	SLU 38	1	-784	7318	31.19	0.9	0
281	SLU 39	1	-833	7418	33.29	1.23	0
281	SLU 40	1	-789	7259	31.36	0.91	0
281	SLU 41	1	-846	7585	33.83	1.26	0
281	SLU 42	1	-802	7426	31.9	0.93	0
281	SLU 43	1	-825	7365	32.95	1.12	0
281	SLU 44	1	-751	7101	29.73	0.58	0
281	SLU 45	1	-847	7583	33.82	1.15	0
281	SLU 46	1	-802	7425	31.89	0.83	0
281	SLU 47	1	-764	7268	30.27	0.61	0
281	SLU 48	1	-860	7750	34.36	1.17	0
281	SLU 49	1	-815	7592	32.43	0.85	0
281	SLU 50	1	-851	7699	34.02	1.17	0
281	SLU 51	1	-807	7541	32.09	0.85	0
281	SLU 52	1	-823	7745	32.63	0.72	0
281	SLU 53	1	-919	8227	36.72	1.29	0
281	SLU 54	1	-875	8069	34.79	0.97	0
281	SLU 55	1	-836	7912	33.17	0.75	0
281	SLU 56	1	-932	8394	37.26	1.31	0
281	SLU 57	1	-888	8236	35.33	0.99	0
281	SLU 58	1	-924	8343	36.92	1.31	0
281	SLU 59	1	-879	8185	34.99	0.98	0
281	SLU 60	1	-929	8285	37.09	1.32	0
281	SLU 61	1	-884	8126	35.16	1	0
281	SLU 62	1	-942	8452	37.63	1.34	0
281	SLU 63	1	-897	8294	35.7	1.02	0
281	SLU 64	1	-900	8023	35.96	1.26	0
281	SLU 65	1	-826	7759	32.74	0.72	0
281	SLU 66	1	-922	8242	36.83	1.29	0
281	SLU 67	1	-877	8084	34.9	0.97	0
281	SLU 68	1	-839	7927	33.28	0.74	0
281	SLU 69	1	-935	8409	37.37	1.31	0
281	SLU 70	1	-890	8251	35.44	0.99	0
281	SLU 71	1	-926	8358	37.03	1.3	0
281	SLU 72	1	-882	8199	35.1	0.98	0
281	SLU 73	1	-898	8404	35.64	0.86	0
281	SLU 74	1	-994	8886	39.73	1.43	0
281	SLU 75	1	-950	8728	37.8	1.1	0
281	SLU 76	1	-912	8571	36.18	0.88	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
281	SLU 77	1	-1007	9053	40.27	1.45	0
281	SLU 78	1	-963	8895	38.34	1.13	0
281	SLU 79	1	-999	9002	39.93	1.44	0
281	SLU 80	1	-954	8843	38	1.12	0
281	SLU 81	1	-1004	8943	40.1	1.46	0
281	SLU 82	1	-959	8785	38.17	1.13	0
281	SLU 83	1	-1017	9111	40.64	1.48	0
281	SLU 84	1	-972	8952	38.71	1.16	0
281	SLE RA 1	1	-676	6027	27	0.94	0
281	SLE RA 2	1	-626	5851	24.85	0.58	0
281	SLE RA 3	1	-690	6173	27.58	0.96	0
281	SLE RA 4	1	-661	6067	26.3	0.74	0
281	SLE RA 5	1	-635	5963	25.21	0.59	0
281	SLE RA 6	1	-699	6284	27.94	0.97	0
281	SLE RA 7	1	-669	6179	26.65	0.76	0
281	SLE RA 8	1	-693	6250	27.71	0.97	0
281	SLE RA 9	1	-664	6144	26.43	0.75	0
281	SLE RA 10	1	-675	6280	26.79	0.67	0
281	SLE RA 11	1	-739	6602	29.51	1.05	0
281	SLE RA 12	1	-709	6497	28.23	0.83	0
281	SLE RA 13	1	-683	6392	27.14	0.69	0
281	SLE RA 14	1	-747	6714	29.87	1.07	0
281	SLE RA 15	1	-718	6608	28.59	0.85	0
281	SLE RA 16	1	-742	6679	29.65	1.06	0
281	SLE RA 17	1	-712	6574	28.36	0.85	0
281	SLE RA 18	1	-745	6640	29.76	1.07	0
281	SLE RA 19	1	-715	6535	28.47	0.85	0
281	SLE RA 20	1	-754	6752	30.12	1.08	0
281	SLE RA 21	1	-724	6646	28.83	0.87	0
281	SLE FR 1	1	-676	6027	27	0.94	0
281	SLE FR 2	1	-666	5992	26.57	0.87	0
281	SLE FR 3	1	-679	6072	27.14	0.94	0
281	SLE FR 4	1	-687	6176	27.4	0.91	0
281	SLE FR 5	1	-700	6256	27.97	0.98	0
281	SLE FR 6	1	-710	6334	28.38	1	0
281	SLE QP 1	1	-676	6027	27	0.94	0
281	SLE QP 2	1	-697	6211	27.83	0.98	0
281	SLD 1	8	-262	4105	9.68	12.41	0.02
281	SLD 2	8	-262	4105	9.68	12.41	0.02
281	SLD 3	20	-662	4902	26.56	20.87	0.01
281	SLD 4	20	-662	4902	26.56	20.87	0.01
281	SLD 5	-15	40	4370	-3.23	-8.42	0.02
281	SLD 6	-15	40	4370	-3.23	-8.42	0.02
281	SLD 7	25	-1292	7028	53.06	19.77	-0.01
281	SLD 8	25	-1292	7028	53.06	19.77	-0.01
281	SLD 9	-24	-101	5395	2.59	-17.82	0.01
281	SLD 10	-24	-101	5395	2.59	-17.82	0.01
281	SLD 11	16	-1433	8052	58.88	10.38	-0.01
281	SLD 12	16	-1433	8052	58.88	10.38	-0.01
281	SLD 13	-19	-732	7520	29.09	-18.91	-0.01
281	SLD 14	-19	-732	7520	29.09	-18.91	-0.01
281	SLD 15	-7	-1131	8318	45.98	-10.45	-0.01
281	SLD 16	-7	-1131	8318	45.98	-10.45	-0.01
281	SLV 1	18	317	1276	-14.5	27.91	0.04
281	SLV 2	18	317	1276	-14.5	27.91	0.04
281	SLV 3	49	-614	3151	24.85	49.47	0.02
281	SLV 4	49	-614	3151	24.85	49.47	0.02
281	SLV 5	-40	1020	1886	-44.54	-23.65	0.04
281	SLV 6	-40	1020	1886	-44.54	-23.65	0.04
281	SLV 7	61	-2085	8137	86.61	48.23	-0.02
281	SLV 8	61	-2085	8137	86.61	48.23	-0.02
281	SLV 9	-60	691	4285	-30.95	-46.28	0.02
281	SLV 10	-60	691	4285	-30.95	-46.28	0.02
281	SLV 11	41	-2413	10536	100.2	25.6	-0.04
281	SLV 12	41	-2413	10536	100.2	25.6	-0.04
281	SLV 13	-47	-779	9271	30.8	-47.52	-0.02
281	SLV 14	-47	-779	9271	30.8	-47.52	-0.02
281	SLV 15	-17	-1710	11146	70.15	-25.95	-0.04
281	SLV 16	-17	-1710	11146	70.15	-25.95	-0.04
282	SLU 1	-1	-629	2486	14.67	-0.47	-0.08
282	SLU 2	-1	-629	2486	14.67	-0.47	-0.08
282	SLU 3	-1	-646	2550	15.08	-0.48	-0.08
282	SLU 4	-1	-646	2551	15.08	-0.48	-0.08
282	SLU 5	-1	-637	2519	14.88	-0.47	-0.08
282	SLU 6	-1	-654	2584	15.29	-0.49	-0.08
282	SLU 7	-1	-654	2584	15.29	-0.49	-0.08
282	SLU 8	-1	-646	2552	15.08	-0.48	-0.08
282	SLU 9	-1	-646	2552	15.08	-0.48	-0.08
282	SLU 10	-1	-717	2819	16.81	-0.53	-0.09
282	SLU 11	-1	-734	2883	17.22	-0.54	-0.09
282	SLU 12	-1	-734	2884	17.22	-0.54	-0.09
282	SLU 13	-1	-725	2852	17.01	-0.53	-0.09
282	SLU 14	-1	-743	2917	17.42	-0.55	-0.09
282	SLU 15	-1	-742	2917	17.42	-0.55	-0.09
282	SLU 16	-1	-734	2885	17.22	-0.54	-0.09
282	SLU 17	-1	-734	2885	17.22	-0.54	-0.09
282	SLU 18	-1	-755	2962	17.72	-0.55	-0.09
282	SLU 19	-1	-755	2962	17.72	-0.55	-0.09
282	SLU 20	-2	-764	2995	17.93	-0.56	-0.09
282	SLU 21	-1	-763	2995	17.93	-0.56	-0.09



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
282	SLU 22	-1	-714	2811	16.73	-0.53	-0.09
282	SLU 23	-1	-714	2811	16.73	-0.53	-0.09
282	SLU 24	-1	-731	2875	17.14	-0.54	-0.09
282	SLU 25	-1	-731	2876	17.14	-0.54	-0.09
282	SLU 26	-1	-723	2844	16.94	-0.53	-0.09
282	SLU 27	-1	-740	2908	17.34	-0.55	-0.09
282	SLU 28	-1	-740	2909	17.34	-0.55	-0.09
282	SLU 29	-1	-732	2877	17.14	-0.54	-0.09
282	SLU 30	-1	-731	2877	17.14	-0.54	-0.09
282	SLU 31	-2	-802	3144	18.86	-0.59	-0.1
282	SLU 32	-2	-819	3208	19.27	-0.6	-0.1
282	SLU 33	-2	-819	3209	19.27	-0.6	-0.1
282	SLU 34	-2	-811	3177	19.07	-0.59	-0.1
282	SLU 35	-2	-828	3241	19.48	-0.61	-0.1
282	SLU 36	-2	-828	3242	19.48	-0.61	-0.1
282	SLU 37	-2	-820	3210	19.28	-0.6	-0.1
282	SLU 38	-2	-819	3210	19.28	-0.6	-0.1
282	SLU 39	-2	-840	3286	19.78	-0.61	-0.1
282	SLU 40	-2	-840	3287	19.78	-0.61	-0.1
282	SLU 41	-2	-849	3320	19.99	-0.62	-0.11
282	SLU 42	-2	-849	3320	19.99	-0.62	-0.1
282	SLU 43	-2	-788	3120	18.37	-0.59	-0.1
282	SLU 44	-1	-788	3121	18.37	-0.59	-0.1
282	SLU 45	-2	-805	3185	18.78	-0.6	-0.1
282	SLU 46	-2	-805	3185	18.78	-0.6	-0.1
282	SLU 47	-2	-797	3154	18.57	-0.59	-0.1
282	SLU 48	-2	-814	3218	18.98	-0.61	-0.1
282	SLU 49	-2	-814	3218	18.98	-0.61	-0.1
282	SLU 50	-2	-806	3186	18.78	-0.6	-0.1
282	SLU 51	-2	-805	3187	18.78	-0.6	-0.1
282	SLU 52	-2	-876	3454	20.5	-0.65	-0.11
282	SLU 53	-2	-893	3518	20.91	-0.66	-0.11
282	SLU 54	-2	-893	3518	20.91	-0.66	-0.11
282	SLU 55	-2	-885	3487	20.71	-0.65	-0.11
282	SLU 56	-2	-902	3551	21.12	-0.67	-0.11
282	SLU 57	-2	-902	3551	21.12	-0.67	-0.11
282	SLU 58	-2	-894	3519	20.92	-0.66	-0.11
282	SLU 59	-2	-894	3520	20.92	-0.66	-0.11
282	SLU 60	-2	-914	3596	21.42	-0.67	-0.11
282	SLU 61	-2	-914	3596	21.42	-0.67	-0.11
282	SLU 62	-2	-923	3629	21.63	-0.68	-0.12
282	SLU 63	-2	-923	3629	21.62	-0.68	-0.11
282	SLU 64	-2	-874	3445	20.43	-0.65	-0.11
282	SLU 65	-2	-873	3446	20.43	-0.65	-0.11
282	SLU 66	-2	-891	3510	20.83	-0.66	-0.11
282	SLU 67	-2	-890	3510	20.83	-0.66	-0.11
282	SLU 68	-2	-882	3479	20.63	-0.65	-0.11
282	SLU 69	-2	-899	3543	21.04	-0.67	-0.11
282	SLU 70	-2	-899	3543	21.04	-0.67	-0.11
282	SLU 71	-2	-891	3511	20.84	-0.66	-0.11
282	SLU 72	-2	-891	3512	20.84	-0.66	-0.11
282	SLU 73	-2	-961	3779	22.56	-0.71	-0.12
282	SLU 74	-2	-979	3843	22.97	-0.72	-0.12
282	SLU 75	-2	-978	3843	22.97	-0.72	-0.12
282	SLU 76	-2	-970	3812	22.77	-0.71	-0.12
282	SLU 77	-2	-987	3876	23.18	-0.73	-0.12
282	SLU 78	-2	-987	3876	23.18	-0.73	-0.12
282	SLU 79	-2	-979	3844	22.97	-0.72	-0.12
282	SLU 80	-2	-979	3845	22.97	-0.72	-0.12
282	SLU 81	-2	-1000	3921	23.48	-0.73	-0.12
282	SLU 82	-2	-999	3921	23.48	-0.73	-0.12
282	SLU 83	-2	-1008	3954	23.68	-0.74	-0.13
282	SLU 84	-2	-1008	3954	23.68	-0.74	-0.13
282	SLE RA 1	-1	-653	2579	15.26	-0.48	-0.08
282	SLE RA 2	-1	-653	2579	15.26	-0.48	-0.08
282	SLE RA 3	-1	-665	2622	15.53	-0.49	-0.08
282	SLE RA 4	-1	-664	2622	15.53	-0.49	-0.08
282	SLE RA 5	-1	-659	2601	15.4	-0.49	-0.08
282	SLE RA 6	-1	-670	2644	15.67	-0.5	-0.08
282	SLE RA 7	-1	-670	2644	15.67	-0.5	-0.08
282	SLE RA 8	-1	-665	2623	15.54	-0.49	-0.08
282	SLE RA 9	-1	-665	2623	15.53	-0.49	-0.08
282	SLE RA 10	-1	-712	2801	16.68	-0.52	-0.09
282	SLE RA 11	-1	-723	2844	16.96	-0.53	-0.09
282	SLE RA 12	-1	-723	2844	16.96	-0.53	-0.09
282	SLE RA 13	-1	-718	2823	16.82	-0.53	-0.09
282	SLE RA 14	-1	-729	2866	17.09	-0.54	-0.09
282	SLE RA 15	-1	-729	2866	17.09	-0.54	-0.09
282	SLE RA 16	-1	-724	2845	16.96	-0.53	-0.09
282	SLE RA 17	-1	-723	2845	16.96	-0.53	-0.09
282	SLE RA 18	-1	-737	2896	17.29	-0.54	-0.09
282	SLE RA 19	-1	-737	2896	17.29	-0.54	-0.09
282	SLE RA 20	-1	-743	2918	17.43	-0.54	-0.09
282	SLE RA 21	-1	-743	2918	17.43	-0.54	-0.09
282	SLE FR 1	-1	-653	2579	15.26	-0.48	-0.08
282	SLE FR 2	-1	-653	2579	15.26	-0.48	-0.08
282	SLE FR 3	-1	-656	2588	15.32	-0.49	-0.08
282	SLE FR 4	-1	-678	2674	15.87	-0.5	-0.08
282	SLE FR 5	-1	-681	2683	15.93	-0.5	-0.09
282	SLE FR 6	-1	-695	2737	16.28	-0.51	-0.09



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
282	SLE QP 1	-1	-653	2579	15.26	-0.48	-0.08
282	SLE QP 2	-1	-679	2674	15.87	-0.5	-0.09
282	SLD 1	-19	-651	2582	14.99	-3.17	-0.47
282	SLD 2	-19	-651	2582	14.99	-3.17	-0.47
282	SLD 3	-14	-989	3561	26.57	-1.68	-0.23
282	SLD 4	-14	-989	3561	26.57	-1.68	-0.23
282	SLD 5	-14	-158	1161	-1.96	-3.56	-0.58
282	SLD 6	-14	-158	1161	-1.96	-3.56	-0.58
282	SLD 7	2	-1283	4426	36.64	1.41	0.25
282	SLD 8	2	-1283	4426	36.64	1.41	0.25
282	SLD 9	-5	-74	922	-4.9	-2.41	-0.42
282	SLD 10	-5	-74	922	-4.9	-2.41	-0.42
282	SLD 11	11	-1199	4187	33.7	2.56	0.41
282	SLD 12	11	-1199	4187	33.7	2.56	0.41
282	SLD 13	11	-368	1787	5.17	0.68	0.06
282	SLD 14	11	-368	1787	5.17	0.68	0.06
282	SLD 15	16	-706	2766	16.76	2.17	0.3
282	SLD 16	16	-706	2766	16.76	2.17	0.3
282	SLV 1	-45	-614	2455	13.77	-6.91	-1.01
282	SLV 2	-45	-614	2455	13.77	-6.91	-1.01
282	SLV 3	-34	-1409	4763	41.06	-3.29	-0.42
282	SLV 4	-34	-1409	4763	41.06	-3.29	-0.42
282	SLV 5	-32	547	-893	-26.15	-7.92	-1.27
282	SLV 6	-32	547	-893	-26.15	-7.92	-1.27
282	SLV 7	7	-2104	6802	64.82	4.16	0.72
282	SLV 8	7	-2104	6802	64.82	4.16	0.72
282	SLV 9	-9	747	-1454	-33.08	-5.16	-0.89
282	SLV 10	-9	747	-1454	-33.08	-5.16	-0.89
282	SLV 11	29	-1904	6241	57.9	6.92	1.1
282	SLV 12	29	-1904	6241	57.9	6.92	1.1
282	SLV 13	31	52	584	-9.32	2.29	0.25
282	SLV 14	31	52	584	-9.32	2.29	0.25
282	SLV 15	43	-743	2893	17.97	5.91	0.84
282	SLV 16	43	-743	2893	17.97	5.91	0.84
283	SLU 1	-4	-555	1479	20.72	-4.25	-0.01
283	SLU 2	-4	-492	1443	18.09	-3.95	-0.01
283	SLU 3	-4	-568	1513	21.23	-4.39	-0.01
283	SLU 4	-4	-531	1492	19.65	-4.21	-0.01
283	SLU 5	-4	-500	1471	18.36	-4.04	-0.01
283	SLU 6	-4	-576	1541	21.5	-4.48	-0.01
283	SLU 7	-4	-538	1519	19.92	-4.31	-0.01
283	SLU 8	-4	-569	1534	21.25	-4.43	-0.01
283	SLU 9	-4	-532	1513	19.68	-4.26	-0.01
283	SLU 10	-4	-543	1558	20.01	-4.56	-0.01
283	SLU 11	-4	-619	1628	23.15	-5	-0.01
283	SLU 12	-4	-582	1606	21.57	-4.83	-0.01
283	SLU 13	-4	-550	1585	20.28	-4.66	-0.01
283	SLU 14	-4	-626	1656	23.41	-5.1	-0.01
283	SLU 15	-4	-589	1634	21.83	-4.92	-0.01
283	SLU 16	-4	-620	1649	23.17	-5.05	-0.01
283	SLU 17	-4	-583	1628	21.59	-4.87	-0.01
283	SLU 18	-4	-627	1643	23.46	-5.12	-0.01
283	SLU 19	-4	-590	1621	21.88	-4.95	-0.01
283	SLU 20	-5	-634	1670	23.73	-5.22	-0.01
283	SLU 21	-5	-597	1649	22.15	-5.04	-0.01
283	SLU 22	-4	-606	1593	22.66	-4.84	-0.01
283	SLU 23	-4	-544	1557	20.03	-4.55	-0.01
283	SLU 24	-4	-620	1627	23.17	-4.99	-0.01
283	SLU 25	-4	-582	1605	21.59	-4.81	-0.01
283	SLU 26	-4	-551	1585	20.3	-4.64	-0.01
283	SLU 27	-4	-627	1655	23.43	-5.08	-0.01
283	SLU 28	-4	-589	1633	21.86	-4.9	-0.01
283	SLU 29	-4	-621	1648	23.19	-5.03	-0.01
283	SLU 30	-4	-583	1627	21.61	-4.85	-0.01
283	SLU 31	-5	-594	1671	21.95	-5.16	-0.01
283	SLU 32	-5	-670	1742	25.09	-5.6	-0.01
283	SLU 33	-5	-633	1720	23.51	-5.42	-0.01
283	SLU 34	-5	-602	1699	22.21	-5.26	-0.01
283	SLU 35	-5	-678	1769	25.35	-5.69	-0.02
283	SLU 36	-5	-640	1748	23.77	-5.52	-0.01
283	SLU 37	-5	-671	1763	25.11	-5.64	-0.01
283	SLU 38	-5	-634	1741	23.53	-5.47	-0.01
283	SLU 39	-5	-678	1756	25.4	-5.72	-0.02
283	SLU 40	-5	-641	1735	23.82	-5.54	-0.01
283	SLU 41	-5	-686	1784	25.67	-5.81	-0.02
283	SLU 42	-5	-648	1763	24.09	-5.64	-0.01
283	SLU 43	-5	-703	1883	26.28	-5.31	-0.02
283	SLU 44	-4	-641	1847	23.65	-5.02	-0.01
283	SLU 45	-5	-717	1918	26.78	-5.46	-0.02
283	SLU 46	-5	-680	1896	25.21	-5.28	-0.01
283	SLU 47	-5	-648	1875	23.91	-5.11	-0.01
283	SLU 48	-5	-724	1945	27.05	-5.55	-0.02
283	SLU 49	-5	-687	1924	25.47	-5.37	-0.02
283	SLU 50	-5	-718	1939	26.81	-5.5	-0.02
283	SLU 51	-5	-681	1917	25.23	-5.33	-0.01
283	SLU 52	-5	-692	1962	25.56	-5.63	-0.02
283	SLU 53	-5	-768	2032	28.7	-6.07	-0.02
283	SLU 54	-5	-730	2011	27.12	-5.89	-0.02
283	SLU 55	-5	-699	1990	25.83	-5.73	-0.02
283	SLU 56	-5	-775	2060	28.97	-6.17	-0.02



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
		x	y	z		x	y	z	
283	SLU 57	-5	-738	2039		27.39	-5.99	-0.02	
283	SLU 58	-5	-769	2054		28.72	-6.12	-0.02	
283	SLU 59	-5	-731	2032		27.15	-5.94	-0.02	
283	SLU 60	-5	-776	2047		29.02	-6.19	-0.02	
283	SLU 61	-5	-738	2026		27.44	-6.01	-0.02	
283	SLU 62	-5	-783	2075		29.28	-6.29	-0.02	
283	SLU 63	-5	-746	2054		27.7	-6.11	-0.02	
283	SLU 64	-5	-755	1997		28.21	-5.91	-0.02	
283	SLU 65	-5	-692	1961		25.58	-5.62	-0.02	
283	SLU 66	-5	-768	2031		28.72	-6.05	-0.02	
283	SLU 67	-5	-731	2010		27.14	-5.88	-0.02	
283	SLU 68	-5	-700	1989		25.85	-5.71	-0.02	
283	SLU 69	-5	-776	2059		28.99	-6.15	-0.02	
283	SLU 70	-5	-738	2038		27.41	-5.97	-0.02	
283	SLU 71	-5	-769	2053		28.75	-6.1	-0.02	
283	SLU 72	-5	-732	2031		27.17	-5.92	-0.02	
283	SLU 73	-6	-743	2076		27.5	-6.23	-0.02	
283	SLU 74	-6	-819	2146		30.64	-6.67	-0.02	
283	SLU 75	-6	-782	2125		29.06	-6.49	-0.02	
283	SLU 76	-6	-750	2104		27.77	-6.32	-0.02	
283	SLU 77	-6	-826	2174		30.9	-6.76	-0.02	
283	SLU 78	-6	-789	2153		29.33	-6.59	-0.02	
283	SLU 79	-6	-820	2168		30.66	-6.71	-0.02	
283	SLU 80	-6	-783	2146		29.08	-6.54	-0.02	
283	SLU 81	-6	-827	2161		30.95	-6.79	-0.02	
283	SLU 82	-6	-790	2140		29.38	-6.61	-0.02	
283	SLU 83	-6	-834	2189		31.22	-6.88	-0.02	
283	SLU 84	-6	-797	2167		29.64	-6.71	-0.02	
283	SLE RA 1	-4	-569	1511		21.28	-4.42	-0.01	
283	SLE RA 2	-4	-528	1487		19.52	-4.22	-0.01	
283	SLE RA 3	-4	-578	1534		21.62	-4.51	-0.01	
283	SLE RA 4	-4	-553	1520		20.56	-4.39	-0.01	
283	SLE RA 5	-4	-533	1506		19.7	-4.28	-0.01	
283	SLE RA 6	-4	-583	1553		21.79	-4.57	-0.01	
283	SLE RA 7	-4	-558	1538		20.74	-4.46	-0.01	
283	SLE RA 8	-4	-579	1548		21.63	-4.54	-0.01	
283	SLE RA 9	-4	-554	1534		20.58	-4.42	-0.01	
283	SLE RA 10	-4	-562	1564		20.8	-4.63	-0.01	
283	SLE RA 11	-4	-612	1611		22.89	-4.92	-0.01	
283	SLE RA 12	-4	-587	1596		21.84	-4.8	-0.01	
283	SLE RA 13	-4	-566	1582		20.98	-4.69	-0.01	
283	SLE RA 14	-4	-617	1629		23.07	-4.98	-0.01	
283	SLE RA 15	-4	-592	1615		22.02	-4.87	-0.01	
283	SLE RA 16	-4	-613	1625		22.91	-4.95	-0.01	
283	SLE RA 17	-4	-588	1611		21.86	-4.83	-0.01	
283	SLE RA 18	-4	-618	1621		23.1	-5	-0.01	
283	SLE RA 19	-4	-593	1606		22.05	-4.88	-0.01	
283	SLE RA 20	-4	-622	1639		23.28	-5.06	-0.01	
283	SLE RA 21	-4	-598	1625		22.23	-4.95	-0.01	
283	SLE FR 1	-4	-569	1511		21.28	-4.42	-0.01	
283	SLE FR 2	-4	-561	1506		20.93	-4.38	-0.01	
283	SLE FR 3	-4	-571	1519		21.35	-4.44	-0.01	
283	SLE FR 4	-4	-575	1539		21.47	-4.55	-0.01	
283	SLE FR 5	-4	-586	1551		21.9	-4.62	-0.01	
283	SLE FR 6	-4	-593	1566		22.19	-4.71	-0.01	
283	SLE QP 1	-4	-569	1511		21.28	-4.42	-0.01	
283	SLE QP 2	-4	-584	1544		21.83	-4.59	-0.01	
283	SLD 1	11	-620	1806		22.7	7.38	0.01	
283	SLD 2	11	-620	1806		22.7	7.38	0.01	
283	SLD 3	-2	-1013	2124		39.87	0.17	0	
283	SLD 4	-2	-1013	2124		39.87	0.17	0	
283	SLD 5	19	2	1141		-3.95	9.94	0	
283	SLD 6	19	2	1141		-3.95	9.94	0	
283	SLD 7	-22	-1310	2199		53.28	-14.1	-0.02	
283	SLD 8	-22	-1310	2199		53.28	-14.1	-0.02	
283	SLD 9	14	142	889		-9.62	4.92	0	
283	SLD 10	14	142	889		-9.62	4.92	0	
283	SLD 11	-27	-1170	1947		47.6	-19.12	-0.03	
283	SLD 12	-27	-1170	1947		47.6	-19.12	-0.03	
283	SLD 13	-6	-154	965		3.78	-9.35	-0.02	
283	SLD 14	-6	-154	965		3.78	-9.35	-0.02	
283	SLD 15	-19	-548	1282		20.95	-16.56	-0.03	
283	SLD 16	-19	-548	1282		20.95	-16.56	-0.03	
283	SLV 1	31	-668	2151		23.85	23.86	0.03	
283	SLV 2	31	-668	2151		23.85	23.86	0.03	
283	SLV 3	1	-1580	2895		63.69	6.5	0.01	
283	SLV 4	1	-1580	2895		63.69	6.5	0.01	
283	SLV 5	52	774	598		-38	30.28	0.03	
283	SLV 6	52	774	598		-38	30.28	0.03	
283	SLV 7	-48	-2265	3078		94.81	-27.59	-0.03	
283	SLV 8	-48	-2265	3078		94.81	-27.59	-0.03	
283	SLV 9	40	1098	10		-51.16	18.41	0.01	
283	SLV 10	40	1098	10		-51.16	18.41	0.01	
283	SLV 11	-59	-1941	2490		81.65	-39.46	-0.05	
283	SLV 12	-59	-1941	2490		81.65	-39.46	-0.05	
283	SLV 13	-9	412	193		-20.04	-15.68	-0.04	
283	SLV 14	-9	412	193		-20.04	-15.68	-0.04	
283	SLV 15	-39	-500	937		19.81	-33.05	-0.06	
283	SLV 16	-39	-500	937		19.81	-33.05	-0.06	
284	SLU 1	0	-12	3552		-18.44	0.22	0	



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
284	SLU 2	0	-7	3548	-18.69	0.22	0
284	SLU 3	0	-13	3658	-19.05	0.23	0
284	SLU 4	0	-10	3656	-19.2	0.23	0
284	SLU 5	0	-7	3611	-19.09	0.23	0
284	SLU 6	0	-13	3720	-19.45	0.24	0
284	SLU 7	0	-9	3718	-19.6	0.23	0
284	SLU 8	0	-12	3677	-19.23	0.23	0
284	SLU 9	0	-9	3675	-19.38	0.23	0
284	SLU 10	0	-12	4054	-21.35	0.28	0
284	SLU 11	0	-18	4163	-21.7	0.29	0
284	SLU 12	0	-15	4161	-21.85	0.29	0
284	SLU 13	0	-12	4116	-21.74	0.28	0
284	SLU 14	0	-18	4226	-22.1	0.29	0
284	SLU 15	0	-15	4224	-22.25	0.29	0
284	SLU 16	0	-17	4182	-21.88	0.29	0
284	SLU 17	0	-14	4180	-22.03	0.29	0
284	SLU 18	0	-20	4274	-22.22	0.31	0
284	SLU 19	0	-17	4272	-22.38	0.31	0
284	SLU 20	0	-20	4336	-22.62	0.31	0
284	SLU 21	0	-17	4334	-22.77	0.31	0
284	SLU 22	0	-16	4035	-21.04	0.27	0
284	SLU 23	0	-11	4032	-21.3	0.27	0
284	SLU 24	0	-17	4141	-21.66	0.28	0
284	SLU 25	0	-14	4139	-21.81	0.28	0
284	SLU 26	0	-11	4095	-21.7	0.28	0
284	SLU 27	0	-17	4204	-22.05	0.29	0
284	SLU 28	0	-14	4202	-22.21	0.28	0
284	SLU 29	0	-16	4161	-21.84	0.28	0
284	SLU 30	0	-13	4159	-21.99	0.28	0
284	SLU 31	0	-17	4537	-23.95	0.33	0
284	SLU 32	0	-23	4646	-24.31	0.34	0
284	SLU 33	0	-20	4644	-24.46	0.34	0
284	SLU 34	0	-17	4600	-24.35	0.33	0
284	SLU 35	0	-23	4709	-24.7	0.34	0
284	SLU 36	0	-20	4707	-24.86	0.34	0
284	SLU 37	0	-22	4666	-24.49	0.34	0
284	SLU 38	0	-19	4664	-24.64	0.34	0
284	SLU 39	0	-24	4757	-24.83	0.36	0
284	SLU 40	0	-21	4755	-24.99	0.36	0
284	SLU 41	0	-24	4820	-25.23	0.36	0
284	SLU 42	0	-21	4818	-25.38	0.36	0
284	SLU 43	0	-14	4452	-23.07	0.27	0
284	SLU 44	0	-9	4448	-23.33	0.27	0
284	SLU 45	0	-15	4557	-23.69	0.28	0
284	SLU 46	0	-12	4555	-23.84	0.28	0
284	SLU 47	0	-9	4511	-23.73	0.28	0
284	SLU 48	0	-14	4620	-24.08	0.28	0
284	SLU 49	0	-11	4618	-24.24	0.28	0
284	SLU 50	0	-14	4577	-23.87	0.28	0
284	SLU 51	0	-10	4575	-24.02	0.28	0
284	SLU 52	0	-14	4953	-25.98	0.33	0
284	SLU 53	0	-20	5063	-26.34	0.34	0
284	SLU 54	0	-17	5061	-26.49	0.34	0
284	SLU 55	0	-14	5016	-26.38	0.33	0
284	SLU 56	0	-20	5125	-26.73	0.34	0
284	SLU 57	0	-17	5123	-26.89	0.34	0
284	SLU 58	0	-19	5082	-26.52	0.34	0
284	SLU 59	0	-16	5080	-26.67	0.34	0
284	SLU 60	0	-22	5173	-26.86	0.36	0
284	SLU 61	0	-19	5171	-27.02	0.35	0
284	SLU 62	0	-22	5236	-27.26	0.36	0
284	SLU 63	0	-19	5234	-27.41	0.36	0
284	SLU 64	0	-18	4935	-25.68	0.32	0
284	SLU 65	0	-13	4932	-25.94	0.32	0
284	SLU 66	0	-19	5041	-26.29	0.33	0
284	SLU 67	0	-16	5039	-26.45	0.33	0
284	SLU 68	0	-13	4994	-26.33	0.33	0
284	SLU 69	0	-19	5104	-26.69	0.33	0
284	SLU 70	0	-16	5102	-26.84	0.33	0
284	SLU 71	0	-18	5060	-26.47	0.33	0
284	SLU 72	0	-15	5058	-26.63	0.33	0
284	SLU 73	0	-19	5437	-28.59	0.38	0
284	SLU 74	0	-25	5546	-28.94	0.39	0
284	SLU 75	0	-22	5544	-29.1	0.39	0
284	SLU 76	0	-19	5500	-28.99	0.38	0
284	SLU 77	0	-25	5609	-29.34	0.39	0
284	SLU 78	0	-22	5607	-29.49	0.39	0
284	SLU 79	0	-24	5566	-29.12	0.39	0
284	SLU 80	0	-21	5564	-29.28	0.39	0
284	SLU 81	0	-26	5657	-29.47	0.41	0
284	SLU 82	0	-23	5655	-29.62	0.41	0
284	SLU 83	0	-26	5719	-29.86	0.41	0
284	SLU 84	0	-23	5717	-30.02	0.41	0
284	SLE RA 1	0	-13	3690	-19.18	0.24	0
284	SLE RA 2	0	-10	3688	-19.35	0.24	0
284	SLE RA 3	0	-14	3760	-19.59	0.24	0
284	SLE RA 4	0	-12	3759	-19.69	0.24	0
284	SLE RA 5	0	-10	3729	-19.62	0.24	0
284	SLE RA 6	0	-14	3802	-19.85	0.25	0
284	SLE RA 7	0	-12	3801	-19.96	0.24	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
284	SLE RA 8	0	-13	3774	-19.71	0.24	0
284	SLE RA 9	0	-11	3772	-19.81	0.24	0
284	SLE RA 10	0	-13	4024	-21.12	0.27	0
284	SLE RA 11	0	-17	4097	-21.36	0.28	0
284	SLE RA 12	0	-15	4096	-21.46	0.28	0
284	SLE RA 13	0	-13	4066	-21.38	0.28	0
284	SLE RA 14	0	-17	4139	-21.62	0.28	0
284	SLE RA 15	0	-15	4138	-21.72	0.28	0
284	SLE RA 16	0	-17	4110	-21.48	0.28	0
284	SLE RA 17	0	-15	4109	-21.58	0.28	0
284	SLE RA 18	0	-18	4171	-21.71	0.29	0
284	SLE RA 19	0	-16	4170	-21.81	0.29	0
284	SLE RA 20	0	-18	4213	-21.97	0.3	0
284	SLE RA 21	0	-16	4212	-22.07	0.3	0
284	SLE FR 1	0	-13	3690	-19.18	0.24	0
284	SLE FR 2	0	-12	3689	-19.22	0.24	0
284	SLE FR 3	0	-13	3707	-19.29	0.24	0
284	SLE FR 4	0	-14	3834	-19.97	0.25	0
284	SLE FR 5	0	-15	3851	-20.04	0.25	0
284	SLE FR 6	0	-16	3930	-20.44	0.26	0
284	SLE QP 1	0	-13	3690	-19.18	0.24	0
284	SLE QP 2	0	-15	3834	-19.94	0.25	0
284	SLD 1	5	70	4040	-22.87	3.58	0
284	SLD 2	5	70	4040	-22.87	3.58	0
284	SLD 3	8	-316	4255	-6.87	5.93	0
284	SLD 4	8	-316	4255	-6.87	5.93	0
284	SLD 5	-3	595	3569	-45.09	-2.31	0
284	SLD 6	-3	595	3569	-45.09	-2.31	0
284	SLD 7	7	-689	4287	8.26	5.51	0
284	SLD 8	7	-689	4287	8.26	5.51	0
284	SLD 9	-6	660	3381	-48.14	-5.01	0
284	SLD 10	-6	660	3381	-48.14	-5.01	0
284	SLD 11	3	-624	4099	5.22	2.81	0
284	SLD 12	3	-624	4099	5.22	2.81	0
284	SLD 13	-8	286	3413	-33.01	-5.42	0
284	SLD 14	-8	286	3413	-33.01	-5.42	0
284	SLD 15	-5	-99	3628	-17	-3.07	0
284	SLD 16	-5	-99	3628	-17	-3.07	0
284	SLV 1	12	191	4313	-27.11	7.89	0
284	SLV 2	12	191	4313	-27.11	7.89	0
284	SLV 3	19	-732	4823	11.12	13.8	0.01
284	SLV 4	19	-732	4823	11.12	13.8	0.01
284	SLV 5	-7	1446	3205	-80.08	-6.41	0
284	SLV 6	-7	1446	3205	-80.08	-6.41	0
284	SLV 7	16	-1628	4903	47.37	13.28	0.01
284	SLV 8	16	-1628	4903	47.37	13.28	0.01
284	SLV 9	-16	1599	2765	-87.25	-12.77	-0.01
284	SLV 10	-16	1599	2765	-87.25	-12.77	-0.01
284	SLV 11	7	-1475	4463	40.2	6.92	0
284	SLV 12	7	-1475	4463	40.2	6.92	0
284	SLV 13	-19	702	2846	-51	-13.29	-0.01
284	SLV 14	-19	702	2846	-51	-13.29	-0.01
284	SLV 15	-12	-220	3355	-12.77	-7.39	0
284	SLV 16	-12	-220	3355	-12.77	-7.39	0
285	SLU 1	0	-63	3422	-1.06	0.02	0
285	SLU 2	0	-61	3414	-1.15	0.02	0
285	SLU 3	0	-64	3517	-1.13	0.02	0
285	SLU 4	0	-63	3512	-1.18	0.02	0
285	SLU 5	0	-60	3466	-1.23	0.02	0
285	SLU 6	0	-64	3569	-1.21	0.02	0
285	SLU 7	0	-63	3564	-1.26	0.03	0
285	SLU 8	0	-63	3526	-1.22	0.02	0
285	SLU 9	0	-61	3522	-1.27	0.03	0
285	SLU 10	0	-73	3908	-1.21	0.01	0
285	SLU 11	0	-77	4011	-1.18	0.01	0
285	SLU 12	0	-76	4006	-1.24	0.01	0
285	SLU 13	0	-73	3960	-1.29	0.01	0
285	SLU 14	0	-77	4063	-1.26	0.02	0
285	SLU 15	0	-75	4058	-1.32	0.02	0
285	SLU 16	0	-75	4020	-1.27	0.02	0
285	SLU 17	0	-74	4015	-1.33	0.02	0
285	SLU 18	0	-81	4127	-1.13	0.01	0
285	SLU 19	0	-80	4122	-1.19	0.01	0
285	SLU 20	0	-81	4179	-1.21	0.01	0
285	SLU 21	0	-79	4174	-1.27	0.01	0
285	SLU 22	0	-75	3891	-1.14	0.01	0
285	SLU 23	0	-72	3883	-1.23	0.02	0
285	SLU 24	0	-76	3986	-1.21	0.02	0
285	SLU 25	0	-74	3981	-1.27	0.02	0
285	SLU 26	0	-72	3935	-1.31	0.02	0
285	SLU 27	0	-76	4038	-1.29	0.02	0
285	SLU 28	0	-74	4033	-1.35	0.02	0
285	SLU 29	0	-74	3995	-1.3	0.02	0
285	SLU 30	0	-73	3990	-1.35	0.02	0
285	SLU 31	0	-85	4376	-1.29	0.01	0
285	SLU 32	0	-89	4479	-1.26	0.01	0
285	SLU 33	0	-87	4474	-1.32	0.01	0
285	SLU 34	0	-85	4428	-1.37	0.01	0
285	SLU 35	0	-88	4531	-1.34	0.01	0
285	SLU 36	0	-87	4526	-1.4	0.01	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
285	SLU 37	0	-87	4488	-1.35	0.01	0
285	SLU 38	0	-85	4483	-1.41	0.01	0
285	SLU 39	0	-93	4596	-1.22	0	0
285	SLU 40	0	-91	4591	-1.27	0	0
285	SLU 41	0	-92	4648	-1.3	0.01	0
285	SLU 42	0	-91	4643	-1.35	0.01	0
285	SLU 43	0	-78	4288	-1.34	0.03	0
285	SLU 44	0	-76	4280	-1.44	0.03	0
285	SLU 45	0	-79	4383	-1.42	0.03	0
285	SLU 46	0	-78	4378	-1.47	0.03	0
285	SLU 47	0	-75	4332	-1.52	0.03	0
285	SLU 48	0	-79	4435	-1.5	0.03	0
285	SLU 49	0	-78	4431	-1.55	0.03	0
285	SLU 50	0	-78	4392	-1.51	0.03	0
285	SLU 51	0	-76	4388	-1.56	0.03	0
285	SLU 52	0	-88	4774	-1.5	0.02	0
285	SLU 53	0	-92	4877	-1.47	0.02	0
285	SLU 54	0	-91	4872	-1.53	0.02	0
285	SLU 55	0	-88	4826	-1.58	0.02	0
285	SLU 56	0	-92	4929	-1.55	0.02	0
285	SLU 57	0	-90	4924	-1.61	0.02	0
285	SLU 58	0	-90	4886	-1.56	0.02	0
285	SLU 59	0	-89	4881	-1.62	0.02	0
285	SLU 60	0	-96	4993	-1.42	0.01	0
285	SLU 61	0	-95	4988	-1.48	0.01	0
285	SLU 62	0	-96	5045	-1.5	0.02	0
285	SLU 63	0	-94	5040	-1.56	0.02	0
285	SLU 64	0	-90	4757	-1.43	0.02	0
285	SLU 65	0	-87	4749	-1.52	0.02	0
285	SLU 66	0	-91	4852	-1.5	0.02	0
285	SLU 67	0	-89	4847	-1.55	0.02	0
285	SLU 68	0	-87	4801	-1.6	0.03	0
285	SLU 69	0	-91	4904	-1.58	0.03	0
285	SLU 70	0	-89	4899	-1.63	0.03	0
285	SLU 71	0	-89	4861	-1.59	0.03	0
285	SLU 72	0	-88	4856	-1.64	0.03	0
285	SLU 73	0	-100	5242	-1.58	0.01	0
285	SLU 74	0	-104	5345	-1.55	0.02	0
285	SLU 75	0	-102	5340	-1.61	0.02	0
285	SLU 76	0	-100	5294	-1.66	0.02	0
285	SLU 77	0	-103	5397	-1.63	0.02	0
285	SLU 78	0	-102	5392	-1.69	0.02	0
285	SLU 79	0	-102	5354	-1.64	0.02	0
285	SLU 80	0	-100	5350	-1.7	0.02	0
285	SLU 81	0	-108	5462	-1.5	0.01	0
285	SLU 82	0	-106	5457	-1.56	0.01	0
285	SLU 83	0	-107	5514	-1.58	0.01	0
285	SLU 84	0	-106	5509	-1.64	0.01	0
285	SLE RA 1	0	-66	3556	-1.08	0.02	0
285	SLE RA 2	0	-65	3551	-1.14	0.02	0
285	SLE RA 3	0	-67	3620	-1.13	0.02	0
285	SLE RA 4	0	-66	3616	-1.16	0.02	0
285	SLE RA 5	0	-65	3585	-1.2	0.02	0
285	SLE RA 6	0	-67	3654	-1.18	0.02	0
285	SLE RA 7	0	-66	3651	-1.22	0.02	0
285	SLE RA 8	0	-66	3626	-1.19	0.02	0
285	SLE RA 9	0	-65	3622	-1.22	0.02	0
285	SLE RA 10	0	-73	3880	-1.18	0.01	0
285	SLE RA 11	0	-76	3948	-1.16	0.01	0
285	SLE RA 12	0	-75	3945	-1.2	0.01	0
285	SLE RA 13	0	-73	3914	-1.23	0.01	0
285	SLE RA 14	0	-76	3983	-1.22	0.02	0
285	SLE RA 15	0	-75	3980	-1.25	0.02	0
285	SLE RA 16	0	-75	3955	-1.22	0.02	0
285	SLE RA 17	0	-74	3951	-1.26	0.02	0
285	SLE RA 18	0	-78	4026	-1.13	0.01	0
285	SLE RA 19	0	-77	4023	-1.17	0.01	0
285	SLE RA 20	0	-78	4061	-1.18	0.01	0
285	SLE RA 21	0	-77	4058	-1.22	0.01	0
285	SLE FR 1	0	-66	3556	-1.08	0.02	0
285	SLE FR 2	0	-66	3555	-1.09	0.02	0
285	SLE FR 3	0	-66	3570	-1.1	0.02	0
285	SLE FR 4	0	-70	3696	-1.11	0.01	0
285	SLE FR 5	0	-70	3711	-1.12	0.02	0
285	SLE FR 6	0	-72	3791	-1.11	0.01	0
285	SLE QP 1	0	-66	3556	-1.08	0.02	0
285	SLE QP 2	0	-70	3697	-1.09	0.01	0
285	SLD 1	8	280	3318	-16.07	5.63	0
285	SLD 2	8	280	3318	-16.07	5.63	0
285	SLD 3	6	-124	3544	1.26	3.56	0
285	SLD 4	6	-124	3544	1.26	3.56	0
285	SLD 5	6	647	3241	-31.87	4.85	0
285	SLD 6	6	647	3241	-31.87	4.85	0
285	SLD 7	-2	-698	3994	25.89	-2.08	0
285	SLD 8	-2	-698	3994	25.89	-2.08	0
285	SLD 9	2	558	3400	-28.08	2.1	0
285	SLD 10	2	558	3400	-28.08	2.1	0
285	SLD 11	-6	-787	4154	29.68	-4.82	0
285	SLD 12	-6	-787	4154	29.68	-4.82	0
285	SLD 13	-5	-16	3850	-3.44	-3.53	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
285	SLD 14	-5	-16	3850	-3.44	-3.53	0
285	SLD 15	-8	-420	4076	13.88	-5.6	0
285	SLD 16	-8	-420	4076	13.88	-5.6	0
285	SLV 1	19	757	2806	-36.49	13.36	0.01
285	SLV 2	19	757	2806	-36.49	13.36	0.01
285	SLV 3	13	-198	3343	4.5	8.16	0
285	SLV 4	13	-198	3343	4.5	8.16	0
285	SLV 5	15	1626	2615	-73.88	11.91	0.01
285	SLV 6	15	1626	2615	-73.88	11.91	0.01
285	SLV 7	-6	-1557	4406	62.75	-5.43	0
285	SLV 8	-6	-1557	4406	62.75	-5.43	0
285	SLV 9	6	1416	2989	-64.94	5.46	0
285	SLV 10	6	1416	2989	-64.94	5.46	0
285	SLV 11	-15	-1766	4780	71.69	-11.88	-0.01
285	SLV 12	-15	-1766	4780	71.69	-11.88	-0.01
285	SLV 13	-13	58	4052	-6.69	-8.13	0
285	SLV 14	-13	58	4052	-6.69	-8.13	0
285	SLV 15	-19	-897	4589	34.3	-13.33	-0.01
285	SLV 16	-19	-897	4589	34.3	-13.33	-0.01
286	SLU 1	1	-15	5223	4.25	0.47	0
286	SLU 2	1	-19	5182	4.39	0.46	0
286	SLU 3	1	-19	5391	4.47	0.48	0
286	SLU 4	1	-21	5367	4.56	0.47	0
286	SLU 5	1	-22	5294	4.57	0.47	0
286	SLU 6	1	-22	5503	4.65	0.48	0
286	SLU 7	1	-24	5479	4.73	0.48	0
286	SLU 8	1	-22	5446	4.6	0.48	0
286	SLU 9	1	-24	5422	4.69	0.47	0
286	SLU 10	1	-19	5867	4.94	0.54	0
286	SLU 11	1	-19	6077	5.02	0.55	0
286	SLU 12	1	-21	6053	5.11	0.55	0
286	SLU 13	1	-22	5979	5.12	0.54	0
286	SLU 14	1	-22	6189	5.2	0.56	0
286	SLU 15	1	-24	6164	5.28	0.55	0
286	SLU 16	1	-22	6132	5.15	0.55	0
286	SLU 17	1	-24	6107	5.24	0.55	0
286	SLU 18	1	-16	6202	5.03	0.58	0
286	SLU 19	1	-18	6178	5.12	0.57	0
286	SLU 20	1	-19	6314	5.21	0.58	0
286	SLU 21	1	-21	6289	5.3	0.57	0
286	SLU 22	1	-18	5906	4.84	0.54	0
286	SLU 23	1	-21	5865	4.99	0.53	0
286	SLU 24	1	-21	6074	5.06	0.55	0
286	SLU 25	1	-23	6050	5.15	0.54	0
286	SLU 26	1	-25	5977	5.16	0.53	0
286	SLU 27	1	-24	6186	5.24	0.55	0
286	SLU 28	1	-26	6162	5.33	0.55	0
286	SLU 29	1	-25	6129	5.2	0.55	0
286	SLU 30	1	-27	6105	5.29	0.54	0
286	SLU 31	1	-21	6550	5.54	0.6	0
286	SLU 32	1	-21	6760	5.61	0.62	0
286	SLU 33	1	-23	6736	5.7	0.61	0
286	SLU 34	1	-25	6662	5.71	0.61	0
286	SLU 35	1	-25	6872	5.79	0.62	0
286	SLU 36	1	-27	6847	5.88	0.62	0
286	SLU 37	1	-25	6815	5.75	0.62	0
286	SLU 38	1	-27	6790	5.83	0.61	0
286	SLU 39	1	-18	6885	5.63	0.64	0
286	SLU 40	1	-20	6861	5.71	0.64	0
286	SLU 41	1	-22	6997	5.81	0.65	0
286	SLU 42	1	-24	6972	5.89	0.64	0
286	SLU 43	1	-19	6555	5.32	0.59	0
286	SLU 44	1	-23	6514	5.46	0.58	0
286	SLU 45	1	-22	6724	5.54	0.6	0
286	SLU 46	1	-24	6700	5.63	0.59	0
286	SLU 47	1	-26	6626	5.64	0.58	0
286	SLU 48	1	-26	6836	5.72	0.6	0
286	SLU 49	1	-28	6811	5.8	0.6	0
286	SLU 50	1	-26	6779	5.68	0.6	0
286	SLU 51	1	-28	6754	5.76	0.59	0
286	SLU 52	1	-23	7200	6.01	0.65	0
286	SLU 53	2	-23	7410	6.09	0.67	0
286	SLU 54	1	-25	7385	6.18	0.67	0
286	SLU 55	1	-26	7312	6.19	0.66	0
286	SLU 56	2	-26	7521	6.27	0.68	0
286	SLU 57	2	-28	7497	6.35	0.67	0
286	SLU 58	2	-26	7464	6.23	0.67	0
286	SLU 59	1	-28	7440	6.31	0.66	0
286	SLU 60	2	-20	7535	6.1	0.7	0
286	SLU 61	2	-22	7510	6.19	0.69	0
286	SLU 62	2	-23	7646	6.28	0.7	0
286	SLU 63	2	-25	7622	6.37	0.69	0
286	SLU 64	1	-22	7238	5.91	0.66	0
286	SLU 65	1	-25	7197	6.06	0.65	0
286	SLU 66	2	-25	7407	6.13	0.67	0
286	SLU 67	1	-27	7383	6.22	0.66	0
286	SLU 68	1	-28	7309	6.23	0.65	0
286	SLU 69	2	-28	7519	6.31	0.67	0
286	SLU 70	2	-30	7494	6.4	0.66	0
286	SLU 71	2	-28	7462	6.27	0.66	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
286	SLU 72	1	-30	7437	6.36	0.66	0
286	SLU 73	2	-25	7883	6.61	0.72	0
286	SLU 74	2	-25	8093	6.68	0.74	0
286	SLU 75	2	-27	8068	6.77	0.73	0
286	SLU 76	2	-29	7995	6.78	0.72	0
286	SLU 77	2	-28	8204	6.86	0.74	0
286	SLU 78	2	-30	8180	6.95	0.74	0
286	SLU 79	2	-29	8147	6.82	0.74	0
286	SLU 80	2	-31	8123	6.91	0.73	0
286	SLU 81	2	-22	8218	6.7	0.76	0
286	SLU 82	2	-24	8193	6.78	0.76	0
286	SLU 83	2	-25	8329	6.88	0.77	0
286	SLU 84	2	-27	8305	6.96	0.76	0
286	SLE RA 1	1	-16	5418	4.42	0.49	0
286	SLE RA 2	1	-18	5391	4.51	0.49	0
286	SLE RA 3	1	-18	5530	4.56	0.5	0
286	SLE RA 4	1	-20	5514	4.62	0.49	0
286	SLE RA 5	1	-21	5465	4.63	0.49	0
286	SLE RA 6	1	-20	5605	4.68	0.5	0
286	SLE RA 7	1	-22	5588	4.74	0.5	0
286	SLE RA 8	1	-21	5567	4.66	0.5	0
286	SLE RA 9	1	-22	5550	4.71	0.49	0
286	SLE RA 10	1	-19	5848	4.88	0.53	0
286	SLE RA 11	1	-18	5987	4.93	0.55	0
286	SLE RA 12	1	-20	5971	4.99	0.54	0
286	SLE RA 13	1	-21	5922	5	0.54	0
286	SLE RA 14	1	-21	6062	5.05	0.55	0
286	SLE RA 15	1	-22	6046	5.11	0.54	0
286	SLE RA 16	1	-21	6024	5.02	0.54	0
286	SLE RA 17	1	-22	6007	5.08	0.54	0
286	SLE RA 18	1	-16	6071	4.94	0.56	0
286	SLE RA 19	1	-18	6054	5	0.56	0
286	SLE RA 20	1	-19	6145	5.06	0.56	0
286	SLE RA 21	1	-20	6129	5.12	0.56	0
286	SLE FR 1	1	-16	5418	4.42	0.49	0
286	SLE FR 2	1	-17	5412	4.44	0.49	0
286	SLE FR 3	1	-17	5448	4.46	0.49	0
286	SLE FR 4	1	-17	5608	4.59	0.51	0
286	SLE FR 5	1	-17	5643	4.62	0.51	0
286	SLE FR 6	1	-16	5744	4.68	0.53	0
286	SLE QP 1	1	-16	5418	4.42	0.49	0
286	SLE QP 2	1	-16	5614	4.57	0.51	0
286	SLD 1	11	36	5034	3.13	8.64	0.04
286	SLD 2	11	36	5034	3.13	8.64	0.04
286	SLD 3	12	-324	5672	14.9	9.77	0.04
286	SLD 4	12	-324	5672	14.9	9.77	0.04
286	SLD 5	2	546	4473	-13.72	1.23	0.01
286	SLD 6	2	546	4473	-13.72	1.23	0.01
286	SLD 7	6	-655	6598	25.53	5.01	0.02
286	SLD 8	6	-655	6598	25.53	5.01	0.02
286	SLD 9	-4	623	4629	-16.38	-3.98	-0.01
286	SLD 10	-4	623	4629	-16.38	-3.98	-0.01
286	SLD 11	0	-578	6754	22.86	-0.21	0
286	SLD 12	0	-578	6754	22.86	-0.21	0
286	SLD 13	-10	292	5555	-5.76	-8.75	-0.03
286	SLD 14	-10	292	5555	-5.76	-8.75	-0.03
286	SLD 15	-9	-68	6193	6.02	-7.61	-0.03
286	SLD 16	-9	-68	6193	6.02	-7.61	-0.03
286	SLV 1	25	110	4247	1.07	19.94	0.08
286	SLV 2	25	110	4247	1.07	19.94	0.08
286	SLV 3	28	-738	5757	28.8	22.77	0.09
286	SLV 4	28	-738	5757	28.8	22.77	0.09
286	SLV 5	4	1307	2914	-38.54	2.05	0.01
286	SLV 6	4	1307	2914	-38.54	2.05	0.01
286	SLV 7	13	-1518	7946	53.91	11.48	0.04
286	SLV 8	13	-1518	7946	53.91	11.48	0.04
286	SLV 9	-11	1486	3281	-44.76	-10.46	-0.04
286	SLV 10	-11	1486	3281	-44.76	-10.46	-0.04
286	SLV 11	-2	-1340	8313	47.69	-1.02	-0.01
286	SLV 12	-2	-1340	8313	47.69	-1.02	-0.01
286	SLV 13	-25	706	5471	-19.66	-21.75	-0.08
286	SLV 14	-25	706	5471	-19.66	-21.75	-0.08
286	SLV 15	-23	-142	6980	8.08	-18.92	-0.07
286	SLV 16	-23	-142	6980	8.08	-18.92	-0.07
287	SLU 1	-3	-860	5895	37.73	-0.42	0.01
287	SLU 2	-3	-775	5583	33.9	-0.64	0.01
287	SLU 3	-3	-890	6121	39.08	-0.45	0.01
287	SLU 4	-3	-839	5935	36.79	-0.58	0.01
287	SLU 5	-3	-795	5759	34.83	-0.66	0.01
287	SLU 6	-3	-910	6297	40.01	-0.48	0.01
287	SLU 7	-3	-859	6110	37.71	-0.61	0.01
287	SLU 8	-3	-899	6246	39.57	-0.47	0.01
287	SLU 9	-3	-848	6060	37.28	-0.6	0.01
287	SLU 10	-3	-867	6243	38.07	-0.68	0.01
287	SLU 11	-4	-982	6781	43.25	-0.49	0.01
287	SLU 12	-3	-931	6594	40.95	-0.62	0.01
287	SLU 13	-3	-887	6418	38.99	-0.7	0.01
287	SLU 14	-4	-1002	6956	44.17	-0.51	0.01
287	SLU 15	-3	-951	6770	41.88	-0.64	0.01
287	SLU 16	-4	-992	6906	43.74	-0.51	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
287	SLU 17	-3	-941	6719	41.44	-0.64	0.01
287	SLU 18	-4	-992	6836	43.67	-0.47	0.01
287	SLU 19	-3	-941	6650	41.38	-0.6	0.01
287	SLU 20	-4	-1011	7012	44.6	-0.5	0.01
287	SLU 21	-3	-960	6825	42.3	-0.63	0.01
287	SLU 22	-4	-957	6569	42.05	-0.46	0.01
287	SLU 23	-3	-872	6257	38.23	-0.68	0.01
287	SLU 24	-4	-986	6795	43.41	-0.49	0.01
287	SLU 25	-3	-935	6608	41.12	-0.62	0.01
287	SLU 26	-3	-891	6433	39.16	-0.7	0.01
287	SLU 27	-4	-1006	6971	44.34	-0.52	0.01
287	SLU 28	-3	-955	6784	42.04	-0.65	0.01
287	SLU 29	-4	-996	6920	43.9	-0.51	0.01
287	SLU 30	-3	-945	6733	41.61	-0.64	0.01
287	SLU 31	-3	-964	6916	42.4	-0.72	0.01
287	SLU 32	-4	-1079	7454	47.58	-0.53	0.01
287	SLU 33	-4	-1028	7268	45.28	-0.66	0.01
287	SLU 34	-3	-983	7092	43.32	-0.74	0.01
287	SLU 35	-4	-1098	7630	48.5	-0.55	0.01
287	SLU 36	-4	-1047	7444	46.21	-0.68	0.01
287	SLU 37	-4	-1088	7579	48.06	-0.55	0.01
287	SLU 38	-4	-1037	7393	45.77	-0.68	0.01
287	SLU 39	-4	-1088	7510	48	-0.51	0.01
287	SLU 40	-4	-1037	7324	45.71	-0.64	0.01
287	SLU 41	-4	-1108	7686	48.92	-0.54	0.01
287	SLU 42	-4	-1057	7499	46.63	-0.67	0.01
287	SLU 43	-4	-1085	7432	47.56	-0.54	0.01
287	SLU 44	-4	-1000	7121	43.74	-0.75	0.01
287	SLU 45	-4	-1115	7659	48.92	-0.56	0.01
287	SLU 46	-4	-1064	7472	46.62	-0.7	0.01
287	SLU 47	-4	-1020	7297	44.66	-0.78	0.01
287	SLU 48	-4	-1135	7835	49.84	-0.59	0.01
287	SLU 49	-4	-1084	7648	47.55	-0.72	0.01
287	SLU 50	-4	-1124	7784	49.41	-0.58	0.01
287	SLU 51	-4	-1073	7597	47.11	-0.72	0.01
287	SLU 52	-4	-1092	7780	47.9	-0.79	0.01
287	SLU 53	-4	-1207	8318	53.08	-0.6	0.01
287	SLU 54	-4	-1156	8131	50.79	-0.73	0.01
287	SLU 55	-4	-1112	7956	48.82	-0.81	0.01
287	SLU 56	-5	-1227	8494	54	-0.62	0.01
287	SLU 57	-4	-1176	8307	51.71	-0.75	0.01
287	SLU 58	-5	-1217	8443	53.57	-0.62	0.01
287	SLU 59	-4	-1166	8256	51.28	-0.75	0.01
287	SLU 60	-4	-1217	8374	53.51	-0.59	0.01
287	SLU 61	-4	-1166	8187	51.21	-0.72	0.01
287	SLU 62	-5	-1237	8550	54.43	-0.61	0.01
287	SLU 63	-4	-1186	8363	52.14	-0.74	0.01
287	SLU 64	-4	-1182	8106	51.89	-0.58	0.01
287	SLU 65	-4	-1097	7795	48.07	-0.79	0.01
287	SLU 66	-4	-1212	8333	53.25	-0.6	0.01
287	SLU 67	-4	-1160	8146	50.95	-0.74	0.01
287	SLU 68	-4	-1116	7970	48.99	-0.82	0.01
287	SLU 69	-5	-1231	8508	54.17	-0.63	0.01
287	SLU 70	-4	-1180	8322	51.88	-0.76	0.01
287	SLU 71	-5	-1221	8458	53.73	-0.62	0.01
287	SLU 72	-4	-1170	8271	51.44	-0.76	0.01
287	SLU 73	-4	-1189	8454	52.23	-0.83	0.01
287	SLU 74	-5	-1304	8992	57.41	-0.64	0.01
287	SLU 75	-5	-1253	8805	55.12	-0.77	0.01
287	SLU 76	-4	-1208	8630	53.15	-0.85	0.01
287	SLU 77	-5	-1323	9168	58.33	-0.66	0.01
287	SLU 78	-5	-1272	8981	56.04	-0.79	0.01
287	SLU 79	-5	-1313	9117	57.9	-0.66	0.01
287	SLU 80	-5	-1262	8930	55.6	-0.79	0.01
287	SLU 81	-5	-1313	9048	57.84	-0.63	0.01
287	SLU 82	-4	-1262	8861	55.54	-0.76	0.01
287	SLU 83	-5	-1333	9223	58.76	-0.65	0.01
287	SLU 84	-5	-1282	9037	56.47	-0.78	0.01
287	SLE RA 1	-3	-888	6087	38.96	-0.43	0.01
287	SLE RA 2	-3	-831	5880	36.41	-0.58	0.01
287	SLE RA 3	-3	-908	6238	39.87	-0.45	0.01
287	SLE RA 4	-3	-874	6114	38.34	-0.54	0.01
287	SLE RA 5	-3	-844	5997	37.03	-0.6	0.01
287	SLE RA 6	-3	-921	6356	40.48	-0.47	0.01
287	SLE RA 7	-3	-887	6231	38.95	-0.56	0.01
287	SLE RA 8	-3	-914	6322	40.19	-0.47	0.01
287	SLE RA 9	-3	-880	6197	38.66	-0.55	0.01
287	SLE RA 10	-3	-893	6319	39.19	-0.6	0.01
287	SLE RA 11	-4	-969	6678	42.64	-0.48	0.01
287	SLE RA 12	-3	-935	6553	41.11	-0.56	0.01
287	SLE RA 13	-3	-906	6436	39.81	-0.62	0.01
287	SLE RA 14	-4	-982	6795	43.26	-0.49	0.01
287	SLE RA 15	-3	-948	6671	41.73	-0.58	0.01
287	SLE RA 16	-4	-975	6761	42.97	-0.49	0.01
287	SLE RA 17	-3	-941	6637	41.44	-0.58	0.01
287	SLE RA 18	-4	-976	6715	42.93	-0.47	0.01
287	SLE RA 19	-3	-942	6591	41.4	-0.55	0.01
287	SLE RA 20	-4	-989	6832	43.54	-0.48	0.01
287	SLE RA 21	-3	-955	6708	42.01	-0.57	0.01
287	SLE FR 1	-3	-888	6087	38.96	-0.43	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
287	SLE FR 2	-3	-877	6046	38.45	-0.46	0.01
287	SLE FR 3	-3	-893	6134	39.21	-0.44	0.01
287	SLE FR 4	-3	-903	6234	39.64	-0.47	0.01
287	SLE FR 5	-3	-919	6322	40.4	-0.45	0.01
287	SLE FR 6	-3	-932	6401	40.95	-0.45	0.01
287	SLE QP 1	-3	-888	6087	38.96	-0.43	0.01
287	SLE QP 2	-3	-914	6276	40.15	-0.44	0.01
287	SLD 1	-4	-449	3995	19.4	5.28	-0.02
287	SLD 2	-4	-449	3995	19.4	5.28	-0.02
287	SLD 3	10	-835	4928	36.24	11.76	0
287	SLD 4	10	-835	4928	36.24	11.76	0
287	SLD 5	-25	-188	4176	8.38	-8.56	-0.03
287	SLD 6	-25	-188	4176	8.38	-8.56	-0.03
287	SLD 7	22	-1477	7287	64.52	13.05	0.04
287	SLD 8	22	-1477	7287	64.52	13.05	0.04
287	SLD 9	-29	-352	5264	15.78	-13.94	-0.02
287	SLD 10	-29	-352	5264	15.78	-13.94	-0.02
287	SLD 11	18	-1640	8375	71.92	7.67	0.05
287	SLD 12	18	-1640	8375	71.92	7.67	0.05
287	SLD 13	-17	-993	7623	44.06	-12.65	0.01
287	SLD 14	-17	-993	7623	44.06	-12.65	0.01
287	SLD 15	-3	-1380	8556	60.91	-6.17	0.03
287	SLD 16	-3	-1380	8556	60.91	-6.17	0.03
287	SLV 1	-5	173	934	-8.31	12.94	-0.05
287	SLV 2	-5	173	934	-8.31	12.94	-0.05
287	SLV 3	30	-729	3127	30.98	29.42	0
287	SLV 4	30	-729	3127	30.98	29.42	0
287	SLV 5	-58	780	1348	-33.97	-21.42	-0.09
287	SLV 6	-58	780	1348	-33.97	-21.42	-0.09
287	SLV 7	61	-2227	8656	96.99	33.51	0.08
287	SLV 8	61	-2227	8656	96.99	33.51	0.08
287	SLV 9	-67	399	3895	-16.68	-34.39	-0.07
287	SLV 10	-67	399	3895	-16.68	-34.39	-0.07
287	SLV 11	51	-2609	11203	114.28	20.53	0.1
287	SLV 12	51	-2609	11203	114.28	20.53	0.1
287	SLV 13	-37	-1099	9424	49.33	-30.31	0.02
287	SLV 14	-37	-1099	9424	49.33	-30.31	0.02
287	SLV 15	-1	-2001	11617	88.61	-13.83	0.07
287	SLV 16	-1	-2001	11617	88.61	-13.83	0.07
288	SLU 1	6	-583	1738	30.03	-0.55	-0.02
288	SLU 2	6	-522	1673	27.22	-0.43	-0.02
288	SLU 3	6	-596	1788	30.82	-0.55	-0.02
288	SLU 4	6	-560	1750	29.14	-0.48	-0.02
288	SLU 5	6	-529	1716	27.71	-0.42	-0.02
288	SLU 6	7	-602	1831	31.31	-0.54	-0.02
288	SLU 7	7	-566	1792	29.62	-0.47	-0.02
288	SLU 8	7	-596	1823	31	-0.53	-0.02
288	SLU 9	6	-560	1785	29.31	-0.46	-0.02
288	SLU 10	7	-570	1839	29.98	-0.53	-0.02
288	SLU 11	7	-643	1954	33.58	-0.65	-0.02
288	SLU 12	7	-607	1915	31.9	-0.58	-0.02
288	SLU 13	7	-576	1881	30.46	-0.52	-0.02
288	SLU 14	7	-650	1996	34.07	-0.64	-0.02
288	SLU 15	7	-613	1958	32.38	-0.57	-0.02
288	SLU 16	7	-643	1989	33.76	-0.62	-0.02
288	SLU 17	7	-607	1950	32.07	-0.56	-0.02
288	SLU 18	7	-650	1974	33.97	-0.69	-0.02
288	SLU 19	7	-614	1935	32.29	-0.62	-0.02
288	SLU 20	7	-657	2017	34.46	-0.68	-0.02
288	SLU 21	7	-621	1978	32.77	-0.61	-0.02
288	SLU 22	7	-631	1902	32.83	-0.64	-0.02
288	SLU 23	7	-571	1837	30.02	-0.52	-0.02
288	SLU 24	7	-644	1952	33.62	-0.64	-0.02
288	SLU 25	7	-608	1913	31.93	-0.57	-0.02
288	SLU 26	7	-577	1880	30.5	-0.51	-0.02
288	SLU 27	7	-651	1995	34.1	-0.63	-0.02
288	SLU 28	7	-614	1956	32.42	-0.56	-0.02
288	SLU 29	7	-644	1987	33.8	-0.61	-0.02
288	SLU 30	7	-608	1948	32.11	-0.54	-0.02
288	SLU 31	7	-618	2002	32.78	-0.62	-0.02
288	SLU 32	8	-691	2117	36.38	-0.74	-0.02
288	SLU 33	8	-655	2079	34.69	-0.67	-0.02
288	SLU 34	8	-625	2045	33.26	-0.61	-0.02
288	SLU 35	8	-698	2160	36.86	-0.72	-0.02
288	SLU 36	8	-662	2121	35.18	-0.66	-0.02
288	SLU 37	8	-691	2153	36.55	-0.71	-0.02
288	SLU 38	8	-655	2114	34.87	-0.64	-0.02
288	SLU 39	8	-699	2138	36.77	-0.78	-0.02
288	SLU 40	8	-662	2099	35.08	-0.71	-0.02
288	SLU 41	8	-705	2181	37.25	-0.76	-0.02
288	SLU 42	8	-669	2142	35.57	-0.7	-0.02
288	SLU 43	8	-741	2203	38.08	-0.68	-0.02
288	SLU 44	8	-681	2139	35.27	-0.57	-0.02
288	SLU 45	8	-754	2254	38.88	-0.69	-0.02
288	SLU 46	8	-718	2215	37.19	-0.62	-0.02
288	SLU 47	8	-687	2181	35.76	-0.56	-0.02
288	SLU 48	8	-761	2296	39.36	-0.67	-0.02
288	SLU 49	8	-724	2258	37.67	-0.61	-0.02
288	SLU 50	8	-754	2289	39.05	-0.66	-0.02
288	SLU 51	8	-718	2250	37.36	-0.59	-0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
288	SLU 52	8	-728	2304	38.03	-0.67	-0.02
288	SLU 53	9	-801	2419	41.63	-0.78	-0.03
288	SLU 54	9	-765	2380	39.95	-0.71	-0.03
288	SLU 55	9	-735	2347	38.52	-0.66	-0.02
288	SLU 56	9	-808	2462	42.12	-0.77	-0.03
288	SLU 57	9	-772	2423	40.43	-0.7	-0.03
288	SLU 58	9	-801	2454	41.81	-0.76	-0.03
288	SLU 59	9	-765	2415	40.12	-0.69	-0.03
288	SLU 60	9	-809	2439	42.02	-0.82	-0.03
288	SLU 61	9	-772	2401	40.34	-0.75	-0.03
288	SLU 62	9	-815	2482	42.51	-0.81	-0.03
288	SLU 63	9	-779	2443	40.82	-0.74	-0.03
288	SLU 64	9	-789	2367	40.88	-0.77	-0.02
288	SLU 65	8	-729	2302	38.07	-0.66	-0.02
288	SLU 66	9	-802	2417	41.67	-0.77	-0.03
288	SLU 67	9	-766	2379	39.99	-0.7	-0.02
288	SLU 68	9	-736	2345	38.55	-0.64	-0.02
288	SLU 69	9	-809	2460	42.16	-0.76	-0.03
288	SLU 70	9	-773	2421	40.47	-0.69	-0.03
288	SLU 71	9	-802	2453	41.85	-0.75	-0.03
288	SLU 72	9	-766	2414	40.16	-0.68	-0.03
288	SLU 73	9	-776	2468	40.83	-0.75	-0.03
288	SLU 74	10	-850	2583	44.43	-0.87	-0.03
288	SLU 75	9	-813	2544	42.74	-0.8	-0.03
288	SLU 76	9	-783	2510	41.31	-0.74	-0.03
288	SLU 77	10	-856	2625	44.91	-0.86	-0.03
288	SLU 78	10	-820	2587	43.23	-0.79	-0.03
288	SLU 79	10	-850	2618	44.61	-0.85	-0.03
288	SLU 80	10	-814	2579	42.92	-0.78	-0.03
288	SLU 81	10	-857	2603	44.82	-0.91	-0.03
288	SLU 82	9	-821	2564	43.13	-0.84	-0.03
288	SLU 83	10	-863	2646	45.3	-0.9	-0.03
288	SLU 84	10	-827	2607	43.62	-0.83	-0.03
288	SLE RA 1	6	-597	1785	30.83	-0.57	-0.02
288	SLE RA 2	6	-556	1742	28.96	-0.5	-0.02
288	SLE RA 3	7	-605	1818	31.36	-0.57	-0.02
288	SLE RA 4	7	-581	1793	30.24	-0.53	-0.02
288	SLE RA 5	6	-561	1770	29.28	-0.49	-0.02
288	SLE RA 6	7	-610	1847	31.68	-0.57	-0.02
288	SLE RA 7	7	-585	1821	30.56	-0.52	-0.02
288	SLE RA 8	7	-605	1842	31.48	-0.56	-0.02
288	SLE RA 9	7	-581	1816	30.35	-0.51	-0.02
288	SLE RA 10	7	-588	1852	30.8	-0.56	-0.02
288	SLE RA 11	7	-637	1929	33.2	-0.64	-0.02
288	SLE RA 12	7	-613	1903	32.07	-0.59	-0.02
288	SLE RA 13	7	-592	1880	31.12	-0.56	-0.02
288	SLE RA 14	7	-641	1957	33.52	-0.63	-0.02
288	SLE RA 15	7	-617	1931	32.4	-0.59	-0.02
288	SLE RA 16	7	-637	1952	33.32	-0.62	-0.02
288	SLE RA 17	7	-613	1926	32.19	-0.58	-0.02
288	SLE RA 18	7	-642	1942	33.46	-0.67	-0.02
288	SLE RA 19	7	-617	1916	32.33	-0.62	-0.02
288	SLE RA 20	7	-646	1971	33.78	-0.66	-0.02
288	SLE RA 21	7	-622	1945	32.66	-0.61	-0.02
288	SLE FR 1	6	-597	1785	30.83	-0.57	-0.02
288	SLE FR 2	6	-589	1776	30.46	-0.56	-0.02
288	SLE FR 3	6	-598	1796	30.96	-0.57	-0.02
288	SLE FR 4	7	-602	1823	31.25	-0.59	-0.02
288	SLE FR 5	7	-612	1843	31.75	-0.6	-0.02
288	SLE FR 6	7	-619	1864	32.15	-0.62	-0.02
288	SLE QP 1	6	-597	1785	30.83	-0.57	-0.02
288	SLE QP 2	7	-610	1832	31.62	-0.6	-0.02
288	SLD 1	16	-195	2227	33.67	6.03	-0.02
288	SLD 2	16	-195	2227	33.67	6.03	-0.02
288	SLD 3	6	-548	2716	50.14	1.55	-0.03
288	SLD 4	6	-548	2716	50.14	1.55	-0.03
288	SLD 5	24	49	1209	7.25	8.18	-0.01
288	SLD 6	24	49	1209	7.25	8.18	-0.01
288	SLD 7	-8	-1126	2839	62.16	-6.75	-0.04
288	SLD 8	-8	-1126	2839	62.16	-6.75	-0.04
288	SLD 9	21	-95	825	1.08	5.54	0
288	SLD 10	21	-95	825	1.08	5.54	0
288	SLD 11	-10	-1269	2455	55.99	-9.38	-0.03
288	SLD 12	-10	-1269	2455	55.99	-9.38	-0.03
288	SLD 13	7	-673	948	13.1	-2.75	-0.01
288	SLD 14	7	-673	948	13.1	-2.75	-0.01
288	SLD 15	-2	-1025	1437	29.57	-7.23	-0.02
288	SLD 16	-2	-1025	1437	29.57	-7.23	-0.02
288	SLV 1	28	349	2748	36.49	15.15	-0.02
288	SLV 2	28	349	2748	36.49	15.15	-0.02
288	SLV 3	6	-465	3881	74.49	4.37	-0.05
288	SLV 4	6	-465	3881	74.49	4.37	-0.05
288	SLV 5	47	913	388	-24.55	20.48	0.01
288	SLV 6	47	913	388	-24.55	20.48	0.01
288	SLV 7	-28	-1801	4166	102.12	-15.46	-0.06
288	SLV 8	-28	-1801	4166	102.12	-15.46	-0.06
288	SLV 9	41	581	-502	-38.87	14.26	0.02
288	SLV 10	41	581	-502	-38.87	14.26	0.02
288	SLV 11	-34	-2133	3276	87.8	-21.68	-0.05
288	SLV 12	-34	-2133	3276	87.8	-21.68	-0.05



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
288	SLV 13	8	-755	-217	-11.25	-5.57	0.01
288	SLV 14	8	-755	-217	-11.25	-5.57	0.01
288	SLV 15	-15	-1570	916	26.76	-16.36	-0.01
288	SLV 16	-15	-1570	916	26.76	-16.36	-0.01
289	SLU 1	0	-552	3464	45.17	0.18	0
289	SLU 2	0	-548	3461	45.02	0.18	0
289	SLU 3	0	-571	3565	46.71	0.19	0
289	SLU 4	0	-569	3564	46.62	0.19	0
289	SLU 5	0	-559	3522	45.92	0.19	0
289	SLU 6	0	-582	3625	47.61	0.19	0
289	SLU 7	0	-580	3624	47.52	0.19	0
289	SLU 8	0	-574	3584	46.97	0.19	0
289	SLU 9	0	-572	3583	46.88	0.19	0
289	SLU 10	0	-632	3952	51.91	0.23	0
289	SLU 11	0	-656	4055	53.6	0.24	0
289	SLU 12	0	-653	4054	53.51	0.24	0
289	SLU 13	0	-643	4012	52.81	0.23	0
289	SLU 14	0	-666	4116	54.5	0.24	0
289	SLU 15	0	-664	4114	54.41	0.24	0
289	SLU 16	0	-658	4074	53.86	0.24	0
289	SLU 17	0	-656	4073	53.77	0.24	0
289	SLU 18	0	-673	4164	55.01	0.25	0
289	SLU 19	0	-670	4163	54.92	0.25	0
289	SLU 20	0	-684	4224	55.91	0.26	0
289	SLU 21	0	-681	4223	55.83	0.26	0
289	SLU 22	0	-634	3932	51.84	0.22	0
289	SLU 23	0	-630	3929	51.7	0.22	0
289	SLU 24	0	-653	4033	53.38	0.23	0
289	SLU 25	0	-651	4032	53.29	0.23	0
289	SLU 26	0	-641	3990	52.6	0.23	0
289	SLU 27	0	-664	4093	54.28	0.24	0
289	SLU 28	0	-661	4092	54.19	0.24	0
289	SLU 29	0	-656	4052	53.65	0.23	0
289	SLU 30	0	-653	4051	53.56	0.23	0
289	SLU 31	0	-714	4420	58.59	0.27	0
289	SLU 32	0	-737	4523	60.27	0.28	0
289	SLU 33	0	-735	4522	60.18	0.28	0
289	SLU 34	0	-725	4480	59.49	0.28	0
289	SLU 35	0	-748	4584	61.17	0.28	0
289	SLU 36	0	-746	4582	61.08	0.28	0
289	SLU 37	0	-740	4543	60.54	0.28	0
289	SLU 38	0	-738	4541	60.45	0.28	0
289	SLU 39	0	-754	4632	61.69	0.29	0
289	SLU 40	0	-752	4631	61.6	0.29	0
289	SLU 41	0	-765	4692	62.59	0.3	0
289	SLU 42	0	-763	4691	62.5	0.3	0
289	SLU 43	0	-690	4342	56.43	0.22	0
289	SLU 44	0	-686	4340	56.28	0.22	0
289	SLU 45	0	-709	4444	57.97	0.23	0
289	SLU 46	0	-706	4442	57.88	0.23	0
289	SLU 47	0	-697	4400	57.18	0.23	0
289	SLU 48	0	-720	4504	58.87	0.24	0
289	SLU 49	0	-717	4503	58.78	0.23	0
289	SLU 50	0	-712	4463	58.23	0.23	0
289	SLU 51	0	-709	4461	58.14	0.23	0
289	SLU 52	0	-770	4831	63.17	0.27	0
289	SLU 53	0	-793	4934	64.86	0.28	0
289	SLU 54	0	-791	4933	64.77	0.28	0
289	SLU 55	0	-781	4891	64.07	0.28	0
289	SLU 56	0	-804	4994	65.76	0.28	0
289	SLU 57	0	-802	4993	65.67	0.28	0
289	SLU 58	0	-796	4953	65.12	0.28	0
289	SLU 59	0	-793	4952	65.03	0.28	0
289	SLU 60	0	-810	5043	66.28	0.29	0
289	SLU 61	0	-808	5042	66.19	0.29	0
289	SLU 62	0	-821	5103	67.18	0.3	0
289	SLU 63	0	-819	5102	67.09	0.3	0
289	SLU 64	0	-772	4810	63.11	0.27	0
289	SLU 65	0	-768	4808	62.96	0.26	0
289	SLU 66	0	-791	4912	64.64	0.27	0
289	SLU 67	0	-788	4910	64.55	0.27	0
289	SLU 68	0	-778	4868	63.86	0.27	0
289	SLU 69	0	-802	4972	65.54	0.28	0
289	SLU 70	0	-799	4971	65.45	0.28	0
289	SLU 71	0	-794	4931	64.91	0.27	0
289	SLU 72	0	-791	4929	64.82	0.27	0
289	SLU 73	0	-852	5299	69.85	0.31	0
289	SLU 74	0	-875	5402	71.53	0.32	0
289	SLU 75	0	-872	5401	71.44	0.32	0
289	SLU 76	0	-863	5359	70.75	0.32	0
289	SLU 77	0	-886	5462	72.43	0.33	0
289	SLU 78	0	-883	5461	72.35	0.32	0
289	SLU 79	0	-878	5421	71.8	0.32	0
289	SLU 80	0	-875	5420	71.71	0.32	0
289	SLU 81	0	-892	5511	72.95	0.33	0
289	SLU 82	0	-890	5510	72.86	0.33	0
289	SLU 83	0	-903	5571	73.85	0.34	0
289	SLU 84	0	-900	5570	73.76	0.34	0
289	SLE RA 1	0	-576	3597	47.08	0.19	0
289	SLE RA 2	0	-573	3596	46.98	0.19	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
289	SLE RA 3	0	-588	3665	48.1	0.2	0
289	SLE RA 4	0	-587	3664	48.04	0.2	0
289	SLE RA 5	0	-580	3636	47.58	0.2	0
289	SLE RA 6	0	-596	3705	48.7	0.2	0
289	SLE RA 7	0	-594	3704	48.64	0.2	0
289	SLE RA 8	0	-590	3678	48.28	0.2	0
289	SLE RA 9	0	-589	3677	48.22	0.2	0
289	SLE RA 10	0	-629	3923	51.57	0.23	0
289	SLE RA 11	0	-645	3992	52.69	0.23	0
289	SLE RA 12	0	-643	3991	52.64	0.23	0
289	SLE RA 13	0	-636	3963	52.17	0.23	0
289	SLE RA 14	0	-652	4032	53.3	0.23	0
289	SLE RA 15	0	-650	4031	53.24	0.23	0
289	SLE RA 16	0	-646	4005	52.87	0.23	0
289	SLE RA 17	0	-645	4004	52.81	0.23	0
289	SLE RA 18	0	-656	4064	53.64	0.24	0
289	SLE RA 19	0	-654	4064	53.58	0.24	0
289	SLE RA 20	0	-663	4105	54.24	0.24	0
289	SLE RA 21	0	-661	4104	54.18	0.24	0
289	SLE FR 1	0	-576	3597	47.08	0.19	0
289	SLE FR 2	0	-575	3597	47.06	0.19	0
289	SLE FR 3	0	-579	3613	47.32	0.2	0
289	SLE FR 4	0	-599	3737	49.03	0.21	0
289	SLE FR 5	0	-603	3753	49.29	0.21	0
289	SLE FR 6	0	-616	3831	50.36	0.22	0
289	SLE QP 1	0	-576	3597	47.08	0.19	0
289	SLE QP 2	0	-600	3737	49.05	0.21	0
289	SLD 1	4	-492	3862	43.25	2.86	0
289	SLD 2	4	-492	3862	43.25	2.86	0
289	SLD 3	5	-936	4142	65.92	4.55	0
289	SLD 4	5	-936	4142	65.92	4.55	0
289	SLD 5	-2	106	3349	12.92	-1.57	0
289	SLD 6	-2	106	3349	12.92	-1.57	0
289	SLD 7	4	-1374	4284	88.5	4.09	0
289	SLD 8	4	-1374	4284	88.5	4.09	0
289	SLD 9	-4	174	3191	9.59	-3.67	0
289	SLD 10	-4	174	3191	9.59	-3.67	0
289	SLD 11	2	-1305	4125	85.17	1.99	0
289	SLD 12	2	-1305	4125	85.17	1.99	0
289	SLD 13	-5	-264	3332	32.17	-4.14	0
289	SLD 14	-5	-264	3332	32.17	-4.14	0
289	SLD 15	-3	-708	3613	54.84	-2.44	0
289	SLD 16	-3	-708	3613	54.84	-2.44	0
289	SLV 1	8	-338	4024	34.98	6.32	0.01
289	SLV 2	8	-338	4024	34.98	6.32	0.01
289	SLV 3	12	-1403	4691	89.44	10.54	0.01
289	SLV 4	12	-1403	4691	89.44	10.54	0.01
289	SLV 5	-4	1093	2812	-37.76	-4.36	0
289	SLV 6	-4	1093	2812	-37.76	-4.36	0
289	SLV 7	10	-2455	5035	143.76	9.71	0.01
289	SLV 8	10	-2455	5035	143.76	9.71	0.01
289	SLV 9	-10	1256	2440	-45.67	-9.29	-0.01
289	SLV 10	-10	1256	2440	-45.67	-9.29	-0.01
289	SLV 11	4	-2293	4663	135.86	4.78	0
289	SLV 12	4	-2293	4663	135.86	4.78	0
289	SLV 13	-12	203	2784	8.65	-10.12	-0.01
289	SLV 14	-12	203	2784	8.65	-10.12	-0.01
289	SLV 15	-8	-862	3451	63.11	-5.9	-0.01
289	SLV 16	-8	-862	3451	63.11	-5.9	-0.01
290	SLU 1	0	-329	3448	19.49	0	0
290	SLU 2	0	-326	3441	19.38	0	0
290	SLU 3	0	-339	3543	20.09	0	0
290	SLU 4	0	-337	3539	20.02	0	0
290	SLU 5	0	-331	3494	19.67	0	0
290	SLU 6	0	-343	3596	20.38	0	0
290	SLU 7	0	-342	3592	20.31	0.01	0
290	SLU 8	0	-338	3553	20.08	0.01	0
290	SLU 9	0	-336	3549	20.01	0.01	0
290	SLU 10	0	-377	3936	22.36	-0.01	0
290	SLU 11	0	-389	4038	23.07	-0.01	0
290	SLU 12	0	-388	4034	23	-0.01	0
290	SLU 13	0	-381	3989	22.65	-0.01	0
290	SLU 14	0	-394	4091	23.36	-0.01	0
290	SLU 15	0	-392	4087	23.29	-0.01	0
290	SLU 16	0	-388	4048	23.06	-0.01	0
290	SLU 17	0	-387	4044	22.99	-0.01	0
290	SLU 18	0	-401	4155	23.75	-0.02	0
290	SLU 19	0	-399	4151	23.69	-0.02	0
290	SLU 20	0	-405	4208	24.04	-0.02	0
290	SLU 21	0	-404	4204	23.98	-0.02	0
290	SLU 22	0	-378	3918	22.37	-0.01	0
290	SLU 23	0	-375	3911	22.26	-0.01	0
290	SLU 24	0	-388	4013	22.97	-0.01	0
290	SLU 25	0	-386	4009	22.9	-0.01	0
290	SLU 26	0	-380	3963	22.55	-0.01	0
290	SLU 27	0	-392	4065	23.26	0	0
290	SLU 28	0	-391	4061	23.19	0	0
290	SLU 29	0	-387	4023	22.96	0	0
290	SLU 30	0	-385	4019	22.89	0	0
290	SLU 31	0	-425	4406	25.24	-0.02	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
290	SLU 32	0	-438	4508	25.95	-0.02	0
290	SLU 33	0	-436	4504	25.88	-0.02	0
290	SLU 34	0	-430	4459	25.54	-0.02	0
290	SLU 35	0	-443	4560	26.24	-0.02	0
290	SLU 36	0	-441	4556	26.18	-0.02	0
290	SLU 37	0	-437	4518	25.94	-0.02	0
290	SLU 38	0	-436	4514	25.87	-0.02	0
290	SLU 39	0	-450	4625	26.63	-0.03	0
290	SLU 40	0	-448	4621	26.57	-0.03	0
290	SLU 41	0	-454	4677	26.92	-0.03	0
290	SLU 42	0	-453	4673	26.86	-0.02	0
290	SLU 43	0	-411	4322	24.35	0	0
290	SLU 44	0	-408	4315	24.24	0	0
290	SLU 45	0	-421	4417	24.95	0	0
290	SLU 46	0	-419	4413	24.88	0.01	0
290	SLU 47	0	-413	4367	24.53	0.01	0
290	SLU 48	0	-425	4469	25.24	0.01	0
290	SLU 49	0	-424	4465	25.17	0.01	0
290	SLU 50	0	-420	4426	24.94	0.01	0
290	SLU 51	0	-418	4422	24.87	0.01	0
290	SLU 52	0	-459	4810	27.22	-0.01	0
290	SLU 53	0	-471	4912	27.93	-0.01	0
290	SLU 54	0	-470	4908	27.86	-0.01	0
290	SLU 55	0	-463	4862	27.51	-0.01	0
290	SLU 56	0	-476	4964	28.22	-0.01	0
290	SLU 57	0	-474	4960	28.15	-0.01	0
290	SLU 58	0	-470	4922	27.92	-0.01	0
290	SLU 59	0	-469	4918	27.85	-0.01	0
290	SLU 60	0	-483	5029	28.61	-0.02	0
290	SLU 61	0	-481	5025	28.54	-0.02	0
290	SLU 62	0	-487	5081	28.9	-0.01	0
290	SLU 63	0	-486	5077	28.84	-0.01	0
290	SLU 64	0	-460	4791	27.23	-0.01	0
290	SLU 65	0	-457	4784	27.12	-0.01	0
290	SLU 66	0	-470	4886	27.83	0	0
290	SLU 67	0	-468	4882	27.76	0	0
290	SLU 68	0	-462	4837	27.41	0	0
290	SLU 69	0	-474	4939	28.12	0	0
290	SLU 70	0	-473	4935	28.05	0	0
290	SLU 71	0	-469	4896	27.82	0	0
290	SLU 72	0	-467	4892	27.75	0	0
290	SLU 73	0	-507	5280	30.1	-0.02	0
290	SLU 74	0	-520	5381	30.81	-0.02	0
290	SLU 75	0	-518	5377	30.74	-0.02	0
290	SLU 76	0	-512	5332	30.4	-0.02	0
290	SLU 77	0	-525	5434	31.1	-0.01	0
290	SLU 78	0	-523	5430	31.04	-0.01	0
290	SLU 79	0	-519	5391	30.8	-0.01	0
290	SLU 80	0	-518	5387	30.73	-0.01	0
290	SLU 81	0	-532	5498	31.49	-0.03	0
290	SLU 82	0	-530	5494	31.43	-0.02	0
290	SLU 83	0	-536	5551	31.78	-0.02	0
290	SLU 84	0	-535	5547	31.72	-0.02	0
290	SLE RA 1	0	-343	3582	20.32	0	0
290	SLE RA 2	0	-341	3578	20.24	0	0
290	SLE RA 3	0	-350	3646	20.71	0	0
290	SLE RA 4	0	-348	3643	20.67	0	0
290	SLE RA 5	0	-344	3613	20.44	0	0
290	SLE RA 6	0	-353	3681	20.91	0	0
290	SLE RA 7	0	-351	3678	20.86	0	0
290	SLE RA 8	0	-349	3652	20.71	0	0
290	SLE RA 9	0	-348	3650	20.66	0	0
290	SLE RA 10	0	-375	3908	22.23	-0.01	0
290	SLE RA 11	0	-383	3976	22.7	-0.01	0
290	SLE RA 12	0	-382	3973	22.66	-0.01	0
290	SLE RA 13	0	-378	3943	22.42	-0.01	0
290	SLE RA 14	0	-386	4011	22.89	-0.01	0
290	SLE RA 15	0	-385	4008	22.85	-0.01	0
290	SLE RA 16	0	-383	3982	22.69	-0.01	0
290	SLE RA 17	0	-381	3980	22.65	-0.01	0
290	SLE RA 18	0	-391	4054	23.16	-0.02	0
290	SLE RA 19	0	-390	4051	23.11	-0.02	0
290	SLE RA 20	0	-394	4089	23.35	-0.01	0
290	SLE RA 21	0	-393	4086	23.31	-0.01	0
290	SLE FR 1	0	-343	3582	20.32	0	0
290	SLE FR 2	0	-343	3581	20.3	0	0
290	SLE FR 3	0	-344	3596	20.39	0	0
290	SLE FR 4	0	-357	3723	21.15	-0.01	0
290	SLE FR 5	0	-359	3738	21.25	-0.01	0
290	SLE FR 6	0	-367	3818	21.74	-0.01	0
290	SLE QP 1	0	-343	3582	20.32	0	0
290	SLE QP 2	0	-357	3724	21.17	-0.01	0
290	SLD 1	5	3	3335	5.17	4.28	0.01
290	SLD 2	5	3	3335	5.17	4.28	0.01
290	SLD 3	4	-415	3615	23.81	2.75	0
290	SLD 4	4	-415	3615	23.81	2.75	0
290	SLD 5	4	384	3182	-11.89	3.6	0
290	SLD 6	4	384	3182	-11.89	3.6	0
290	SLD 7	-2	-1008	4117	50.22	-1.5	0
290	SLD 8	-2	-1008	4117	50.22	-1.5	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
290	SLD 9	2	293	3331	-7.88	1.49	0
290	SLD 10	2	293	3331	-7.88	1.49	0
290	SLD 11	-4	-1099	4266	54.22	-3.62	0
290	SLD 12	-4	-1099	4266	54.22	-3.62	0
290	SLD 13	-4	-300	3832	18.53	-2.77	0
290	SLD 14	-4	-300	3832	18.53	-2.77	0
290	SLD 15	-5	-718	4112	37.16	-4.3	-0.01
290	SLD 16	-5	-718	4112	37.16	-4.3	-0.01
290	SLV 1	12	495	2807	-16.72	10.15	0.01
290	SLV 2	12	495	2807	-16.72	10.15	0.01
290	SLV 3	8	-494	3475	27.46	6.36	0.01
290	SLV 4	8	-494	3475	27.46	6.36	0.01
290	SLV 5	10	1400	2436	-57.21	8.79	0.01
290	SLV 6	10	1400	2436	-57.21	8.79	0.01
290	SLV 7	-4	-1900	4662	90.06	-3.84	0
290	SLV 8	-4	-1900	4662	90.06	-3.84	0
290	SLV 9	4	1185	2785	-47.73	3.83	0
290	SLV 10	4	1185	2785	-47.73	3.83	0
290	SLV 11	-10	-2114	5012	99.54	-8.8	-0.01
290	SLV 12	-10	-2114	5012	99.54	-8.8	-0.01
290	SLV 13	-8	-220	3972	14.87	-6.38	-0.01
290	SLV 14	-8	-220	3972	14.87	-6.38	-0.01
290	SLV 15	-12	-1210	4640	59.05	-10.16	-0.01
290	SLV 16	-12	-1210	4640	59.05	-10.16	-0.01
291	SLU 1	1	-69	5682	0.25	0.48	0.01
291	SLU 2	1	-72	5649	0.35	0.46	0.01
291	SLU 3	1	-74	5867	0.35	0.49	0.01
291	SLU 4	1	-76	5847	0.41	0.48	0.01
291	SLU 5	1	-77	5771	0.47	0.47	0.01
291	SLU 6	1	-79	5990	0.47	0.5	0.01
291	SLU 7	1	-81	5970	0.53	0.49	0.01
291	SLU 8	1	-79	5928	0.5	0.5	0.01
291	SLU 9	1	-80	5907	0.56	0.49	0.01
291	SLU 10	1	-76	6390	0.12	0.53	0.01
291	SLU 11	1	-78	6609	0.12	0.56	0.01
291	SLU 12	1	-80	6589	0.18	0.55	0.01
291	SLU 13	1	-81	6513	0.24	0.54	0.01
291	SLU 14	2	-83	6732	0.24	0.57	0.01
291	SLU 15	1	-84	6711	0.3	0.56	0.01
291	SLU 16	1	-83	6669	0.27	0.57	0.01
291	SLU 17	1	-84	6649	0.33	0.55	0.01
291	SLU 18	2	-75	6742	-0.08	0.58	0.01
291	SLU 19	1	-76	6722	-0.02	0.57	0.01
291	SLU 20	2	-80	6865	0.04	0.59	0.01
291	SLU 21	2	-81	6844	0.1	0.58	0.01
291	SLU 22	1	-77	6422	0.16	0.55	0.01
291	SLU 23	1	-79	6388	0.25	0.53	0.01
291	SLU 24	1	-81	6607	0.26	0.56	0.01
291	SLU 25	1	-83	6587	0.31	0.55	0.01
291	SLU 26	1	-84	6511	0.38	0.54	0.01
291	SLU 27	1	-86	6730	0.38	0.57	0.01
291	SLU 28	1	-88	6709	0.44	0.56	0.01
291	SLU 29	1	-86	6667	0.4	0.56	0.01
291	SLU 30	1	-88	6647	0.46	0.55	0.01
291	SLU 31	2	-83	7130	0.02	0.6	0.01
291	SLU 32	2	-85	7349	0.03	0.63	0.01
291	SLU 33	2	-87	7329	0.08	0.62	0.01
291	SLU 34	2	-88	7253	0.15	0.61	0.01
291	SLU 35	2	-90	7471	0.15	0.64	0.01
291	SLU 36	2	-92	7451	0.21	0.63	0.01
291	SLU 37	2	-90	7409	0.17	0.63	0.01
291	SLU 38	2	-91	7389	0.23	0.62	0.01
291	SLU 39	2	-82	7482	-0.17	0.65	0.01
291	SLU 40	2	-84	7462	-0.12	0.64	0.01
291	SLU 41	2	-87	7604	-0.05	0.65	0.01
291	SLU 42	2	-88	7584	0.01	0.64	0.01
291	SLU 43	2	-88	7133	0.36	0.6	0.01
291	SLU 44	2	-90	7100	0.45	0.59	0.01
291	SLU 45	2	-93	7318	0.46	0.62	0.01
291	SLU 46	2	-94	7298	0.51	0.6	0.01
291	SLU 47	2	-95	7222	0.58	0.59	0.01
291	SLU 48	2	-97	7441	0.58	0.62	0.01
291	SLU 49	2	-99	7421	0.64	0.61	0.01
291	SLU 50	2	-97	7379	0.6	0.62	0.01
291	SLU 51	2	-99	7358	0.66	0.61	0.01
291	SLU 52	2	-94	7841	0.22	0.65	0.01
291	SLU 53	2	-97	8060	0.23	0.68	0.01
291	SLU 54	2	-98	8040	0.28	0.67	0.01
291	SLU 55	2	-99	7964	0.35	0.66	0.01
291	SLU 56	2	-101	8183	0.35	0.69	0.01
291	SLU 57	2	-103	8162	0.41	0.68	0.01
291	SLU 58	2	-101	8120	0.37	0.69	0.01
291	SLU 59	2	-103	8100	0.43	0.68	0.01
291	SLU 60	2	-93	8193	0.03	0.7	0.01
291	SLU 61	2	-95	8173	0.08	0.69	0.01
291	SLU 62	2	-98	8316	0.15	0.71	0.01
291	SLU 63	2	-100	8295	0.21	0.7	0.01
291	SLU 64	2	-95	7873	0.26	0.67	0.01
291	SLU 65	2	-97	7840	0.36	0.65	0.01
291	SLU 66	2	-100	8058	0.36	0.68	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
291	SLU 67	2	-101	8038	0.42	0.67	0.01
291	SLU 68	2	-102	7962	0.48	0.66	0.01
291	SLU 69	2	-105	8181	0.49	0.69	0.01
291	SLU 70	2	-106	8161	0.55	0.68	0.01
291	SLU 71	2	-104	8118	0.51	0.68	0.01
291	SLU 72	2	-106	8098	0.57	0.67	0.01
291	SLU 73	2	-101	8581	0.13	0.72	0.01
291	SLU 74	2	-104	8800	0.13	0.75	0.01
291	SLU 75	2	-105	8780	0.19	0.74	0.01
291	SLU 76	2	-106	8704	0.25	0.73	0.01
291	SLU 77	2	-108	8922	0.26	0.76	0.01
291	SLU 78	2	-110	8902	0.31	0.75	0.01
291	SLU 79	2	-108	8860	0.28	0.75	0.01
291	SLU 80	2	-110	8840	0.34	0.74	0.01
291	SLU 81	2	-100	8933	-0.07	0.77	0.01
291	SLU 82	2	-102	8913	-0.01	0.76	0.01
291	SLU 83	2	-105	9055	0.06	0.78	0.01
291	SLU 84	2	-107	9035	0.12	0.77	0.01
291	SLE RA 1	1	-71	5894	0.22	0.5	0.01
291	SLE RA 2	1	-73	5871	0.29	0.49	0.01
291	SLE RA 3	1	-75	6017	0.29	0.51	0.01
291	SLE RA 4	1	-76	6004	0.33	0.5	0.01
291	SLE RA 5	1	-76	5953	0.37	0.49	0.01
291	SLE RA 6	1	-78	6099	0.37	0.51	0.01
291	SLE RA 7	1	-79	6085	0.41	0.51	0.01
291	SLE RA 8	1	-78	6057	0.39	0.51	0.01
291	SLE RA 9	1	-79	6044	0.43	0.5	0.01
291	SLE RA 10	1	-76	6366	0.13	0.53	0.01
291	SLE RA 11	1	-77	6511	0.14	0.55	0.01
291	SLE RA 12	1	-78	6498	0.17	0.55	0.01
291	SLE RA 13	1	-79	6447	0.22	0.54	0.01
291	SLE RA 14	1	-80	6593	0.22	0.56	0.01
291	SLE RA 15	1	-81	6580	0.26	0.55	0.01
291	SLE RA 16	1	-80	6552	0.23	0.56	0.01
291	SLE RA 17	1	-81	6538	0.27	0.55	0.01
291	SLE RA 18	1	-75	6600	0	0.57	0.01
291	SLE RA 19	1	-76	6587	0.04	0.56	0.01
291	SLE RA 20	1	-78	6682	0.09	0.57	0.01
291	SLE RA 21	1	-79	6668	0.12	0.56	0.01
291	SLE FR 1	1	-71	5894	0.22	0.5	0.01
291	SLE FR 2	1	-72	5889	0.24	0.5	0.01
291	SLE FR 3	1	-73	5926	0.26	0.5	0.01
291	SLE FR 4	1	-73	6101	0.17	0.52	0.01
291	SLE FR 5	1	-74	6138	0.19	0.52	0.01
291	SLE FR 6	1	-73	6247	0.11	0.53	0.01
291	SLE QP 1	1	-71	5894	0.22	0.5	0.01
291	SLE QP 2	1	-73	6106	0.16	0.52	0.01
291	SLD 1	-9	-17	5381	-1.82	8.07	-0.08
291	SLD 2	-9	-17	5381	-1.82	8.07	-0.08
291	SLD 3	-8	-354	6184	9.38	8.72	-0.08
291	SLD 4	-8	-354	6184	9.38	8.72	-0.08
291	SLD 5	-3	456	4670	-17.42	1.78	-0.03
291	SLD 6	-3	456	4670	-17.42	1.78	-0.03
291	SLD 7	0	-669	7348	19.91	3.98	-0.01
291	SLD 8	0	-669	7348	19.91	3.98	-0.01
291	SLD 9	3	524	4864	-19.6	-2.94	0.02
291	SLD 10	3	524	4864	-19.6	-2.94	0.02
291	SLD 11	6	-601	7541	17.74	-0.74	0.05
291	SLD 12	6	-601	7541	17.74	-0.74	0.05
291	SLD 13	11	209	6027	-9.07	-7.68	0.09
291	SLD 14	11	209	6027	-9.07	-7.68	0.09
291	SLD 15	12	-129	6831	2.13	-7.02	0.1
291	SLD 16	12	-129	6831	2.13	-7.02	0.1
291	SLV 1	-24	62	4394	-4.59	18.27	-0.21
291	SLV 2	-24	62	4394	-4.59	18.27	-0.21
291	SLV 3	-21	-732	6297	21.73	19.87	-0.19
291	SLV 4	-21	-732	6297	21.73	19.87	-0.19
291	SLV 5	-10	1172	2706	-41.19	3.42	-0.08
291	SLV 6	-10	1172	2706	-41.19	3.42	-0.08
291	SLV 7	-2	-1474	9049	46.54	8.75	-0.03
291	SLV 8	-2	-1474	9049	46.54	8.75	-0.03
291	SLV 9	4	1329	3162	-46.23	-7.71	0.04
291	SLV 10	4	1329	3162	-46.23	-7.71	0.04
291	SLV 11	12	-1317	9505	41.5	-2.38	0.1
291	SLV 12	12	-1317	9505	41.5	-2.38	0.1
291	SLV 13	24	587	5915	-21.41	-18.83	0.21
291	SLV 14	24	587	5915	-21.41	-18.83	0.21
291	SLV 15	26	-207	7817	4.91	-17.23	0.23
291	SLV 16	26	-207	7817	4.91	-17.23	0.23
292	SLU 1	-600	523	5204	646.55	-10.47	133.61
292	SLU 2	-597	519	5181	644.67	-10.38	132.96
292	SLU 3	-600	536	5296	655.12	-10.2	133.63
292	SLU 4	-598	534	5282	653.99	-10.14	133.24
292	SLU 5	-591	526	5215	645.96	-10	131.53
292	SLU 6	-594	544	5330	656.41	-9.82	132.2
292	SLU 7	-592	541	5316	655.28	-9.77	131.81
292	SLU 8	-587	538	5272	649.13	-9.72	130.76
292	SLU 9	-586	535	5258	648	-9.66	130.37
292	SLU 10	-690	601	5946	738.63	-12.16	153.59
292	SLU 11	-693	618	6062	749.08	-11.99	154.26



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
292	SLU 12	-691	616	6047	747.95	-11.93	153.87
292	SLU 13	-683	608	5980	739.92	-11.79	152.17
292	SLU 14	-686	626	6095	750.37	-11.61	152.83
292	SLU 15	-685	623	6081	749.24	-11.56	152.45
292	SLU 16	-680	620	6037	743.09	-11.51	151.39
292	SLU 17	-678	617	6023	741.97	-11.45	151
292	SLU 18	-732	640	6297	780.78	-13.02	163.08
292	SLU 19	-730	638	6283	779.65	-12.97	162.69
292	SLU 20	-726	648	6331	782.07	-12.65	161.66
292	SLU 21	-724	645	6317	780.94	-12.59	161.27
292	SLU 22	-680	598	5907	732.33	-11.87	151.44
292	SLU 23	-677	594	5883	730.45	-11.78	150.79
292	SLU 24	-680	611	5999	740.9	-11.6	151.46
292	SLU 25	-679	608	5985	739.77	-11.55	151.07
292	SLU 26	-671	601	5917	731.74	-11.4	149.36
292	SLU 27	-674	618	6033	742.19	-11.23	150.03
292	SLU 28	-672	616	6019	741.06	-11.17	149.64
292	SLU 29	-667	613	5974	734.91	-11.12	148.59
292	SLU 30	-666	610	5960	733.78	-11.06	148.2
292	SLU 31	-770	676	6648	824.41	-13.57	171.42
292	SLU 32	-773	693	6764	834.86	-13.39	172.09
292	SLU 33	-771	691	6750	833.73	-13.33	171.7
292	SLU 34	-763	683	6682	825.7	-13.19	170
292	SLU 35	-767	701	6798	836.15	-13.01	170.66
292	SLU 36	-765	698	6784	835.02	-12.96	170.27
292	SLU 37	-760	695	6739	828.87	-12.91	169.22
292	SLU 38	-758	692	6725	827.75	-12.85	168.83
292	SLU 39	-812	715	7000	866.56	-14.43	180.91
292	SLU 40	-810	713	6986	865.43	-14.37	180.52
292	SLU 41	-806	723	7034	867.85	-14.05	179.49
292	SLU 42	-804	720	7019	866.72	-13.99	179.1
292	SLU 43	-753	654	6525	811.1	-13.13	167.58
292	SLU 44	-750	650	6501	809.22	-13.03	166.93
292	SLU 45	-753	667	6617	819.67	-12.86	167.6
292	SLU 46	-751	665	6603	818.54	-12.8	167.21
292	SLU 47	-743	657	6535	810.52	-12.66	165.5
292	SLU 48	-746	675	6651	820.96	-12.48	166.17
292	SLU 49	-745	672	6637	819.84	-12.43	165.78
292	SLU 50	-740	669	6592	813.69	-12.38	164.73
292	SLU 51	-738	667	6578	812.56	-12.32	164.34
292	SLU 52	-842	732	7266	903.18	-14.82	187.56
292	SLU 53	-845	749	7382	913.63	-14.65	188.23
292	SLU 54	-844	747	7368	912.5	-14.59	187.84
292	SLU 55	-836	739	7300	904.48	-14.45	186.14
292	SLU 56	-839	757	7416	914.92	-14.27	186.8
292	SLU 57	-837	754	7402	913.8	-14.22	186.41
292	SLU 58	-833	751	7357	907.65	-14.17	185.36
292	SLU 59	-831	749	7343	906.52	-14.11	184.97
292	SLU 60	-885	771	7618	945.33	-15.68	197.05
292	SLU 61	-883	769	7604	944.21	-15.63	196.66
292	SLU 62	-878	779	7651	946.63	-15.31	195.63
292	SLU 63	-877	776	7637	945.5	-15.25	195.24
292	SLU 64	-833	729	7227	896.88	-14.53	185.41
292	SLU 65	-830	725	7204	895	-14.44	184.76
292	SLU 66	-833	742	7319	905.45	-14.26	185.43
292	SLU 67	-831	740	7305	904.32	-14.21	185.04
292	SLU 68	-823	732	7238	896.29	-14.06	183.33
292	SLU 69	-827	750	7353	906.74	-13.89	184
292	SLU 70	-825	747	7339	905.61	-13.83	183.61
292	SLU 71	-820	744	7295	899.47	-13.78	182.56
292	SLU 72	-818	741	7281	898.34	-13.72	182.17
292	SLU 73	-922	807	7969	988.96	-16.23	205.39
292	SLU 74	-925	824	8085	999.41	-16.05	206.06
292	SLU 75	-924	822	8070	998.28	-15.99	205.67
292	SLU 76	-916	814	8003	990.26	-15.85	203.96
292	SLU 77	-919	832	8118	1000.7	-15.67	204.63
292	SLU 78	-917	829	8104	999.58	-15.62	204.24
292	SLU 79	-913	826	8060	993.43	-15.57	203.19
292	SLU 80	-911	824	8046	992.3	-15.51	202.8
292	SLU 81	-965	846	8320	1031.11	-17.09	214.88
292	SLU 82	-963	844	8306	1029.99	-17.03	214.49
292	SLU 83	-958	854	8354	1032.4	-16.71	213.46
292	SLU 84	-957	851	8340	1031.28	-16.65	213.07
292	SLE RA 1	-623	544	5405	671.06	-10.87	138.7
292	SLE RA 2	-621	542	5389	669.8	-10.81	138.27
292	SLE RA 3	-623	553	5467	676.77	-10.69	138.72
292	SLE RA 4	-622	551	5457	676.02	-10.65	138.46
292	SLE RA 5	-617	547	5412	670.67	-10.56	137.32
292	SLE RA 6	-619	558	5489	677.63	-10.44	137.77
292	SLE RA 7	-618	556	5480	676.88	-10.4	137.51
292	SLE RA 8	-614	554	5450	672.78	-10.37	136.8
292	SLE RA 9	-613	553	5441	672.03	-10.33	136.54
292	SLE RA 10	-683	596	5899	732.44	-12	152.02
292	SLE RA 11	-685	608	5977	739.41	-11.88	152.47
292	SLE RA 12	-684	606	5967	738.66	-11.85	152.21
292	SLE RA 13	-678	601	5922	733.31	-11.75	151.07
292	SLE RA 14	-681	613	5999	740.27	-11.63	151.52
292	SLE RA 15	-679	611	5990	739.52	-11.59	151.26
292	SLE RA 16	-676	609	5960	735.42	-11.56	150.56
292	SLE RA 17	-675	607	5951	734.67	-11.52	150.3



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
292	SLE RA 18	-711	623	6134	760.54	-12.57	158.35
292	SLE RA 19	-710	621	6124	759.79	-12.54	158.09
292	SLE RA 20	-707	627	6156	761.41	-12.32	157.4
292	SLE RA 21	-706	626	6147	760.65	-12.28	157.14
292	SLE FR 1	-623	544	5405	671.06	-10.87	138.7
292	SLE FR 2	-622	544	5402	670.81	-10.86	138.62
292	SLE FR 3	-621	546	5414	671.4	-10.77	138.32
292	SLE FR 4	-649	567	5621	697.65	-11.37	144.51
292	SLE FR 5	-648	570	5633	698.25	-11.28	144.22
292	SLE FR 6	-667	583	5769	715.8	-11.72	148.53
292	SLE QP 1	-623	544	5405	671.06	-10.87	138.7
292	SLE QP 2	-649	568	5624	697.9	-11.38	144.6
292	SLD 1	-303	740	5271	518.25	-1.46	67.25
292	SLD 2	-303	740	5271	518.25	-1.46	67.25
292	SLD 3	-388	570	4604	583.78	1.5	85.46
292	SLD 4	-388	570	4604	583.78	1.5	85.46
292	SLD 5	-416	877	6530	544.61	-12.89	93.76
292	SLD 6	-416	877	6530	544.61	-12.89	93.76
292	SLD 7	-701	310	4306	763.06	-3.03	154.49
292	SLD 8	-701	310	4306	763.06	-3.03	154.49
292	SLD 9	-598	825	6941	632.75	-19.73	134.71
292	SLD 10	-598	825	6941	632.75	-19.73	134.71
292	SLD 11	-883	258	4717	851.19	-9.87	195.43
292	SLD 12	-883	258	4717	851.19	-9.87	195.43
292	SLD 13	-910	566	6643	812.02	-24.26	203.73
292	SLD 14	-910	566	6643	812.02	-24.26	203.73
292	SLD 15	-996	396	5976	877.56	-21.3	221.95
292	SLD 16	-996	396	5976	877.56	-21.3	221.95
292	SLV 1	155	972	4827	280.29	11.39	-34.75
292	SLV 2	155	972	4827	280.29	11.39	-34.75
292	SLV 3	-50	571	3239	437.02	18.48	8.86
292	SLV 4	-50	571	3239	437.02	18.48	8.86
292	SLV 5	-97	1297	7793	334.92	-15.3	24.66
292	SLV 6	-97	1297	7793	334.92	-15.3	24.66
292	SLV 7	-780	-39	2499	857.33	8.33	170.01
292	SLV 8	-780	-39	2499	857.33	8.33	170.01
292	SLV 9	-518	1175	8748	538.47	-31.09	119.18
292	SLV 10	-518	1175	8748	538.47	-31.09	119.18
292	SLV 11	-1201	-161	3454	1060.88	-7.46	264.54
292	SLV 12	-1201	-161	3454	1060.88	-7.46	264.54
292	SLV 13	-1249	565	8008	958.79	-41.23	280.34
292	SLV 14	-1249	565	8008	958.79	-41.23	280.34
292	SLV 15	-1453	164	6420	1115.51	-34.14	323.94
292	SLV 16	-1453	164	6420	1115.51	-34.14	323.94
293	SLU 1	-9	-997	6414	44.27	-1.3	0.05
293	SLU 2	-9	-910	6018	40	-1.32	0.05
293	SLU 3	-10	-1033	6668	45.88	-1.37	0.05
293	SLU 4	-9	-980	6430	43.32	-1.38	0.05
293	SLU 5	-9	-934	6216	41.12	-1.38	0.05
293	SLU 6	-10	-1058	6867	47.01	-1.43	0.05
293	SLU 7	-10	-1005	6629	44.44	-1.45	0.05
293	SLU 8	-10	-1047	6812	46.52	-1.42	0.05
293	SLU 9	-10	-994	6574	43.95	-1.44	0.05
293	SLU 10	-10	-1016	6753	44.71	-1.52	0.05
293	SLU 11	-11	-1139	7403	50.6	-1.57	0.06
293	SLU 12	-11	-1087	7165	48.03	-1.58	0.06
293	SLU 13	-10	-1041	6952	45.84	-1.59	0.05
293	SLU 14	-11	-1164	7602	51.72	-1.63	0.06
293	SLU 15	-11	-1111	7364	49.16	-1.65	0.06
293	SLU 16	-11	-1153	7547	51.24	-1.63	0.06
293	SLU 17	-11	-1101	7309	48.67	-1.64	0.06
293	SLU 18	-11	-1149	7464	51.01	-1.59	0.06
293	SLU 19	-11	-1096	7226	48.45	-1.6	0.06
293	SLU 20	-11	-1174	7663	52.13	-1.65	0.06
293	SLU 21	-11	-1121	7425	49.57	-1.66	0.06
293	SLU 22	-11	-1108	7164	49.22	-1.49	0.05
293	SLU 23	-10	-1021	6767	44.95	-1.51	0.05
293	SLU 24	-11	-1144	7418	50.83	-1.56	0.06
293	SLU 25	-11	-1091	7180	48.27	-1.58	0.06
293	SLU 26	-10	-1046	6966	46.07	-1.58	0.05
293	SLU 27	-11	-1169	7616	51.96	-1.62	0.06
293	SLU 28	-11	-1116	7379	49.39	-1.64	0.06
293	SLU 29	-11	-1158	7561	51.47	-1.62	0.06
293	SLU 30	-11	-1106	7324	48.9	-1.63	0.06
293	SLU 31	-11	-1127	7502	49.66	-1.72	0.06
293	SLU 32	-12	-1250	8153	55.55	-1.76	0.06
293	SLU 33	-12	-1198	7915	52.98	-1.78	0.06
293	SLU 34	-12	-1152	7701	50.79	-1.78	0.06
293	SLU 35	-12	-1275	8352	56.67	-1.83	0.06
293	SLU 36	-12	-1223	8114	54.11	-1.84	0.06
293	SLU 37	-12	-1264	8296	56.19	-1.82	0.06
293	SLU 38	-12	-1212	8059	53.62	-1.83	0.06
293	SLU 39	-12	-1260	8214	55.96	-1.78	0.06
293	SLU 40	-12	-1207	7976	53.39	-1.79	0.06
293	SLU 41	-13	-1285	8413	57.08	-1.84	0.06
293	SLU 42	-12	-1232	8175	54.52	-1.86	0.06
293	SLU 43	-12	-1258	8081	55.86	-1.62	0.06
293	SLU 44	-11	-1171	7685	51.58	-1.64	0.06
293	SLU 45	-12	-1294	8335	57.47	-1.69	0.06
293	SLU 46	-12	-1241	8097	54.9	-1.7	0.06



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
293	SLU 47	-12	-1196	7884	52.71	-1.71	0.06
293	SLU 48	-13	-1319	8534	58.59	-1.75	0.06
293	SLU 49	-12	-1266	8296	56.03	-1.77	0.06
293	SLU 50	-12	-1308	8479	58.11	-1.75	0.06
293	SLU 51	-12	-1255	8241	55.54	-1.76	0.06
293	SLU 52	-12	-1277	8420	56.3	-1.85	0.07
293	SLU 53	-13	-1400	9070	62.19	-1.89	0.07
293	SLU 54	-13	-1348	8832	59.62	-1.91	0.07
293	SLU 55	-13	-1302	8619	57.42	-1.91	0.07
293	SLU 56	-14	-1425	9269	63.31	-1.96	0.07
293	SLU 57	-13	-1372	9031	60.74	-1.97	0.07
293	SLU 58	-14	-1414	9214	62.82	-1.95	0.07
293	SLU 59	-13	-1362	8976	60.26	-1.96	0.07
293	SLU 60	-13	-1410	9131	62.6	-1.91	0.07
293	SLU 61	-13	-1357	8893	60.03	-1.92	0.07
293	SLU 62	-14	-1435	9330	63.72	-1.97	0.07
293	SLU 63	-13	-1382	9092	61.15	-1.99	0.07
293	SLU 64	-13	-1369	8831	60.81	-1.81	0.07
293	SLU 65	-12	-1282	8434	56.53	-1.84	0.07
293	SLU 66	-13	-1405	9085	62.42	-1.88	0.07
293	SLU 67	-13	-1352	8847	59.85	-1.9	0.07
293	SLU 68	-13	-1307	8633	57.66	-1.9	0.07
293	SLU 69	-14	-1430	9284	63.54	-1.95	0.07
293	SLU 70	-13	-1377	9046	60.98	-1.96	0.07
293	SLU 71	-14	-1419	9229	63.06	-1.94	0.07
293	SLU 72	-13	-1367	8991	60.49	-1.95	0.07
293	SLU 73	-14	-1388	9169	61.25	-2.04	0.07
293	SLU 74	-15	-1511	9820	67.14	-2.09	0.07
293	SLU 75	-14	-1459	9582	64.57	-2.1	0.07
293	SLU 76	-14	-1413	9368	62.37	-2.1	0.07
293	SLU 77	-15	-1536	10019	68.26	-2.15	0.07
293	SLU 78	-15	-1484	9781	65.69	-2.16	0.07
293	SLU 79	-15	-1525	9964	67.77	-2.14	0.07
293	SLU 80	-14	-1473	9726	65.21	-2.16	0.07
293	SLU 81	-15	-1521	9881	67.55	-2.1	0.07
293	SLU 82	-14	-1468	9643	64.98	-2.12	0.07
293	SLU 83	-15	-1546	10080	68.67	-2.17	0.08
293	SLU 84	-15	-1493	9842	66.1	-2.18	0.08
293	SLE RA 1	-10	-1029	6628	45.69	-1.35	0.05
293	SLE RA 2	-9	-970	6364	42.84	-1.37	0.05
293	SLE RA 3	-10	-1053	6797	46.76	-1.4	0.05
293	SLE RA 4	-10	-1018	6639	45.05	-1.41	0.05
293	SLE RA 5	-10	-987	6496	43.59	-1.41	0.05
293	SLE RA 6	-10	-1069	6930	47.51	-1.44	0.05
293	SLE RA 7	-10	-1034	6771	45.8	-1.45	0.05
293	SLE RA 8	-10	-1062	6893	47.19	-1.44	0.05
293	SLE RA 9	-10	-1027	6735	45.48	-1.45	0.05
293	SLE RA 10	-10	-1041	6854	45.98	-1.5	0.05
293	SLE RA 11	-11	-1123	7288	49.91	-1.53	0.05
293	SLE RA 12	-11	-1088	7129	48.2	-1.54	0.05
293	SLE RA 13	-10	-1058	6987	46.73	-1.54	0.05
293	SLE RA 14	-11	-1140	7420	50.65	-1.58	0.06
293	SLE RA 15	-11	-1105	7262	48.94	-1.59	0.06
293	SLE RA 16	-11	-1133	7383	50.33	-1.57	0.06
293	SLE RA 17	-11	-1098	7225	48.62	-1.58	0.06
293	SLE RA 18	-11	-1130	7328	50.18	-1.54	0.05
293	SLE RA 19	-11	-1095	7170	48.47	-1.55	0.05
293	SLE RA 20	-11	-1146	7461	50.93	-1.59	0.06
293	SLE RA 21	-11	-1112	7302	49.22	-1.6	0.06
293	SLE FR 1	-10	-1029	6628	45.69	-1.35	0.05
293	SLE FR 2	-10	-1017	6575	45.12	-1.36	0.05
293	SLE FR 3	-10	-1035	6681	45.99	-1.37	0.05
293	SLE FR 4	-10	-1047	6785	46.47	-1.41	0.05
293	SLE FR 5	-10	-1066	6891	47.34	-1.43	0.05
293	SLE FR 6	-10	-1079	6978	47.93	-1.45	0.05
293	SLE QP 1	-10	-1029	6628	45.69	-1.35	0.05
293	SLE QP 2	-10	-1059	6838	47.04	-1.41	0.05
293	SLD 1	1	-595	4113	25.26	2.06	0
293	SLD 2	1	-595	4113	25.26	2.06	0
293	SLD 3	-9	-932	5326	41.74	0.32	0.02
293	SLD 4	-9	-932	5326	41.74	0.32	0.02
293	SLD 5	9	-409	4180	15.5	2.27	0
293	SLD 6	9	-409	4180	15.5	2.27	0
293	SLD 7	-26	-1532	8225	70.45	-3.53	0.08
293	SLD 8	-26	-1532	8225	70.45	-3.53	0.08
293	SLD 9	5	-586	5451	23.63	0.71	0.02
293	SLD 10	5	-586	5451	23.63	0.71	0.02
293	SLD 11	-29	-1709	9496	78.57	-5.09	0.1
293	SLD 12	-29	-1709	9496	78.57	-5.09	0.1
293	SLD 13	-11	-1187	8350	52.33	-3.14	0.08
293	SLD 14	-11	-1187	8350	52.33	-3.14	0.08
293	SLD 15	-21	-1523	9564	68.82	-4.88	0.1
293	SLD 16	-21	-1523	9564	68.82	-4.88	0.1
293	SLV 1	16	26	460	-3.84	6.94	-0.08
293	SLV 2	16	26	460	-3.84	6.94	-0.08
293	SLV 3	-9	-760	3305	34.61	2.55	-0.02
293	SLV 4	-9	-760	3305	34.61	2.55	-0.02
293	SLV 5	37	459	610	-26.53	7.74	-0.08
293	SLV 6	37	459	610	-26.53	7.74	-0.08
293	SLV 7	-49	-2162	10093	101.61	-6.87	0.12



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
293	SLV 8	-49	-2162	10093	101.61	-6.87	0.12
293	SLV 9	28	44	3584	-7.54	4.05	-0.02
293	SLV 10	28	44	3584	-7.54	4.05	-0.02
293	SLV 11	-57	-2577	13066	120.6	-10.56	0.18
293	SLV 12	-57	-2577	13066	120.6	-10.56	0.18
293	SLV 13	-11	-1358	10372	59.47	-5.37	0.12
293	SLV 14	-11	-1358	10372	59.47	-5.37	0.12
293	SLV 15	-37	-2144	13216	97.91	-9.76	0.18
293	SLV 16	-37	-2144	13216	97.91	-9.76	0.18
294	SLU 1	0	-335	3336	-8.76	0.18	0
294	SLU 2	0	-330	3335	-9	0.18	0
294	SLU 3	0	-346	3432	-9.07	0.19	0
294	SLU 4	0	-343	3431	-9.22	0.19	0
294	SLU 5	0	-336	3392	-9.22	0.19	0
294	SLU 6	0	-352	3489	-9.29	0.2	0
294	SLU 7	0	-349	3488	-9.43	0.19	0
294	SLU 8	0	-347	3450	-9.19	0.19	0
294	SLU 9	0	-344	3449	-9.33	0.19	0
294	SLU 10	0	-377	3808	-10.5	0.23	0
294	SLU 11	0	-393	3905	-10.57	0.23	0
294	SLU 12	0	-390	3904	-10.71	0.23	0
294	SLU 13	0	-383	3865	-10.71	0.23	0
294	SLU 14	0	-399	3962	-10.78	0.24	0
294	SLU 15	0	-397	3961	-10.93	0.24	0
294	SLU 16	0	-394	3923	-10.68	0.24	0
294	SLU 17	0	-392	3923	-10.83	0.24	0
294	SLU 18	0	-402	4012	-10.9	0.24	0
294	SLU 19	0	-399	4012	-11.04	0.24	0
294	SLU 20	0	-408	4069	-11.11	0.25	0
294	SLU 21	0	-406	4069	-11.26	0.25	0
294	SLU 22	0	-381	3786	-10.19	0.22	0
294	SLU 23	0	-377	3785	-10.43	0.22	0
294	SLU 24	0	-393	3881	-10.5	0.23	0
294	SLU 25	0	-390	3880	-10.64	0.23	0
294	SLU 26	0	-383	3841	-10.64	0.23	0
294	SLU 27	0	-399	3938	-10.71	0.23	0
294	SLU 28	0	-396	3937	-10.86	0.23	0
294	SLU 29	0	-394	3899	-10.61	0.23	0
294	SLU 30	0	-391	3899	-10.76	0.23	0
294	SLU 31	0	-424	4258	-11.92	0.26	0
294	SLU 32	0	-440	4354	-11.99	0.27	0
294	SLU 33	0	-437	4354	-12.14	0.27	0
294	SLU 34	0	-430	4315	-12.14	0.27	0
294	SLU 35	0	-446	4411	-12.21	0.28	0
294	SLU 36	0	-443	4410	-12.35	0.28	0
294	SLU 37	0	-441	4372	-12.11	0.27	0
294	SLU 38	0	-438	4372	-12.26	0.27	0
294	SLU 39	0	-449	4462	-12.32	0.28	0
294	SLU 40	0	-446	4461	-12.47	0.28	0
294	SLU 41	0	-455	4518	-12.54	0.29	0
294	SLU 42	0	-452	4518	-12.68	0.29	0
294	SLU 43	0	-419	4183	-10.9	0.22	0
294	SLU 44	0	-415	4182	-11.14	0.22	0
294	SLU 45	0	-431	4279	-11.21	0.23	0
294	SLU 46	0	-428	4278	-11.36	0.23	0
294	SLU 47	0	-421	4239	-11.36	0.23	0
294	SLU 48	0	-437	4336	-11.43	0.24	0
294	SLU 49	0	-434	4335	-11.57	0.24	0
294	SLU 50	0	-432	4297	-11.33	0.23	0
294	SLU 51	0	-429	4296	-11.47	0.23	0
294	SLU 52	0	-462	4655	-12.64	0.27	0
294	SLU 53	0	-478	4752	-12.71	0.28	0
294	SLU 54	0	-475	4751	-12.85	0.27	0
294	SLU 55	0	-468	4712	-12.85	0.27	0
294	SLU 56	0	-484	4809	-12.92	0.28	0
294	SLU 57	0	-481	4808	-13.07	0.28	0
294	SLU 58	0	-479	4770	-12.82	0.28	0
294	SLU 59	0	-476	4769	-12.97	0.28	0
294	SLU 60	0	-487	4859	-13.04	0.29	0
294	SLU 61	0	-484	4859	-13.18	0.29	0
294	SLU 62	0	-493	4916	-13.25	0.29	0
294	SLU 63	0	-490	4915	-13.4	0.29	0
294	SLU 64	0	-466	4632	-12.33	0.26	0
294	SLU 65	0	-461	4631	-12.57	0.26	0
294	SLU 66	0	-477	4728	-12.64	0.27	0
294	SLU 67	0	-474	4727	-12.78	0.27	0
294	SLU 68	0	-467	4688	-12.78	0.27	0
294	SLU 69	0	-483	4785	-12.85	0.28	0
294	SLU 70	0	-481	4784	-13	0.27	0
294	SLU 71	0	-478	4746	-12.75	0.27	0
294	SLU 72	0	-475	4745	-12.9	0.27	0
294	SLU 73	0	-508	5105	-14.06	0.31	0
294	SLU 74	0	-524	5201	-14.13	0.31	0
294	SLU 75	0	-521	5201	-14.28	0.31	0
294	SLU 76	0	-515	5161	-14.28	0.31	0
294	SLU 77	0	-531	5258	-14.35	0.32	0
294	SLU 78	0	-528	5257	-14.49	0.32	0
294	SLU 79	0	-525	5219	-14.25	0.32	0
294	SLU 80	0	-523	5219	-14.39	0.32	0
294	SLU 81	0	-533	5308	-14.46	0.33	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
294	SLU 82	0	-530	5308	-14.61	0.32	0
294	SLU 83	0	-539	5365	-14.68	0.33	0
294	SLU 84	0	-537	5365	-14.82	0.33	0
294	SLE RA 1	0	-348	3465	-9.17	0.19	0
294	SLE RA 2	0	-345	3464	-9.33	0.19	0
294	SLE RA 3	0	-356	3528	-9.38	0.2	0
294	SLE RA 4	0	-354	3528	-9.47	0.2	0
294	SLE RA 5	0	-349	3502	-9.47	0.2	0
294	SLE RA 6	0	-360	3566	-9.52	0.2	0
294	SLE RA 7	0	-358	3566	-9.62	0.2	0
294	SLE RA 8	0	-356	3540	-9.45	0.2	0
294	SLE RA 9	0	-355	3540	-9.55	0.2	0
294	SLE RA 10	0	-376	3779	-10.33	0.22	0
294	SLE RA 11	0	-387	3844	-10.37	0.23	0
294	SLE RA 12	0	-385	3843	-10.47	0.23	0
294	SLE RA 13	0	-381	3817	-10.47	0.23	0
294	SLE RA 14	0	-391	3882	-10.52	0.23	0
294	SLE RA 15	0	-389	3881	-10.61	0.23	0
294	SLE RA 16	0	-388	3856	-10.45	0.23	0
294	SLE RA 17	0	-386	3855	-10.55	0.23	0
294	SLE RA 18	0	-393	3915	-10.59	0.24	0
294	SLE RA 19	0	-391	3915	-10.69	0.23	0
294	SLE RA 20	0	-397	3953	-10.74	0.24	0
294	SLE RA 21	0	-395	3953	-10.83	0.24	0
294	SLE FR 1	0	-348	3465	-9.17	0.19	0
294	SLE FR 2	0	-348	3465	-9.2	0.19	0
294	SLE FR 3	0	-350	3480	-9.22	0.2	0
294	SLE FR 4	0	-361	3600	-9.63	0.21	0
294	SLE FR 5	0	-363	3615	-9.65	0.21	0
294	SLE FR 6	0	-371	3690	-9.88	0.21	0
294	SLE QP 1	0	-348	3465	-9.17	0.19	0
294	SLE QP 2	0	-362	3600	-9.6	0.21	0
294	SLD 1	0	-265	3646	-12.9	1.68	0.01
294	SLD 2	0	-265	3646	-12.9	1.68	0.01
294	SLD 3	-1	-679	3993	3.6	2.75	0.01
294	SLD 4	-1	-679	3993	3.6	2.75	0.01
294	SLD 5	2	297	3087	-35.61	-0.97	0
294	SLD 6	2	297	3087	-35.61	-0.97	0
294	SLD 7	-2	-1086	4244	19.39	2.58	0
294	SLD 8	-2	-1086	4244	19.39	2.58	0
294	SLD 9	3	363	2955	-38.58	-2.17	0
294	SLD 10	3	363	2955	-38.58	-2.17	0
294	SLD 11	-2	-1020	4113	16.42	1.38	0
294	SLD 12	-2	-1020	4113	16.42	1.38	0
294	SLD 13	2	-44	3207	-22.79	-2.34	-0.01
294	SLD 14	2	-44	3207	-22.79	-2.34	-0.01
294	SLD 15	1	-459	3554	-6.29	-1.27	-0.01
294	SLD 16	1	-459	3554	-6.29	-1.27	-0.01
294	SLV 1	0	-126	3700	-17.67	3.62	0.01
294	SLV 2	0	-126	3700	-17.67	3.62	0.01
294	SLV 3	-4	-1121	4529	21.83	6.23	0.02
294	SLV 4	-4	-1121	4529	21.83	6.23	0.02
294	SLV 5	5	1218	2372	-71.93	-2.72	0
294	SLV 6	5	1218	2372	-71.93	-2.72	0
294	SLV 7	-6	-2098	5137	59.74	5.96	0.01
294	SLV 8	-6	-2098	5137	59.74	5.96	0.01
294	SLV 9	7	1375	2063	-78.93	-5.55	-0.01
294	SLV 10	7	1375	2063	-78.93	-5.55	-0.01
294	SLV 11	-5	-1942	4828	52.74	3.13	0
294	SLV 12	-5	-1942	4828	52.74	3.13	0
294	SLV 13	4	397	2670	-41.02	-5.81	-0.02
294	SLV 14	4	397	2670	-41.02	-5.81	-0.02
294	SLV 15	1	-598	3500	-1.52	-3.21	-0.01
294	SLV 16	1	-598	3500	-1.52	-3.21	-0.01
295	SLU 1	0	-428	3410	11.36	-0.04	0
295	SLU 2	0	-426	3405	11.25	-0.04	0
295	SLU 3	0	-441	3504	11.67	-0.04	0
295	SLU 4	0	-439	3500	11.6	-0.04	0
295	SLU 5	0	-432	3457	11.38	-0.04	0
295	SLU 6	0	-447	3555	11.8	-0.04	0
295	SLU 7	0	-445	3552	11.73	-0.04	0
295	SLU 8	0	-440	3514	11.61	-0.04	0
295	SLU 9	0	-439	3510	11.55	-0.04	0
295	SLU 10	0	-488	3895	12.85	-0.06	0
295	SLU 11	0	-503	3994	13.27	-0.06	0
295	SLU 12	0	-501	3990	13.2	-0.06	0
295	SLU 13	0	-494	3947	12.98	-0.06	0
295	SLU 14	0	-509	4045	13.4	-0.06	0
295	SLU 15	0	-508	4042	13.33	-0.06	0
295	SLU 16	0	-503	4004	13.21	-0.06	0
295	SLU 17	0	-501	4000	13.15	-0.06	0
295	SLU 18	0	-517	4110	13.64	-0.07	0
295	SLU 19	0	-515	4107	13.58	-0.07	0
295	SLU 20	0	-523	4162	13.77	-0.07	0
295	SLU 21	0	-521	4159	13.71	-0.07	0
295	SLU 22	0	-489	3873	12.93	-0.06	0
295	SLU 23	0	-486	3868	12.82	-0.06	0
295	SLU 24	0	-502	3967	13.24	-0.05	0
295	SLU 25	0	-500	3963	13.17	-0.05	0
295	SLU 26	0	-492	3920	12.95	-0.05	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
295	SLU 27	0	-508	4018	13.37	-0.05	0
295	SLU 28	0	-506	4015	13.3	-0.05	0
295	SLU 29	0	-501	3977	13.18	-0.05	0
295	SLU 30	0	-500	3973	13.12	-0.05	0
295	SLU 31	0	-549	4358	14.42	-0.08	0
295	SLU 32	0	-564	4457	14.84	-0.07	0
295	SLU 33	0	-562	4453	14.78	-0.07	0
295	SLU 34	0	-555	4410	14.55	-0.07	0
295	SLU 35	0	-570	4508	14.97	-0.07	0
295	SLU 36	0	-568	4505	14.9	-0.07	0
295	SLU 37	0	-563	4467	14.78	-0.07	0
295	SLU 38	0	-562	4463	14.72	-0.07	0
295	SLU 39	0	-578	4573	15.22	-0.08	0
295	SLU 40	0	-576	4570	15.15	-0.08	0
295	SLU 41	0	-584	4625	15.34	-0.08	0
295	SLU 42	0	-582	4622	15.28	-0.08	0
295	SLU 43	0	-536	4275	14.23	-0.05	0
295	SLU 44	0	-533	4269	14.12	-0.05	0
295	SLU 45	0	-549	4368	14.54	-0.05	0
295	SLU 46	0	-547	4365	14.47	-0.05	0
295	SLU 47	0	-539	4321	14.25	-0.05	0
295	SLU 48	0	-555	4420	14.66	-0.05	0
295	SLU 49	0	-553	4416	14.6	-0.05	0
295	SLU 50	0	-548	4378	14.48	-0.04	0
295	SLU 51	0	-546	4375	14.42	-0.04	0
295	SLU 52	0	-595	4759	15.72	-0.07	0
295	SLU 53	0	-611	4858	16.14	-0.07	0
295	SLU 54	0	-609	4855	16.07	-0.07	0
295	SLU 55	0	-601	4811	15.85	-0.07	0
295	SLU 56	0	-617	4910	16.27	-0.07	0
295	SLU 57	0	-615	4906	16.2	-0.07	0
295	SLU 58	0	-610	4868	16.08	-0.06	0
295	SLU 59	0	-608	4865	16.02	-0.06	0
295	SLU 60	0	-625	4975	16.51	-0.08	0
295	SLU 61	0	-623	4972	16.45	-0.08	0
295	SLU 62	0	-631	5026	16.64	-0.07	0
295	SLU 63	0	-629	5023	16.58	-0.07	0
295	SLU 64	0	-597	4738	15.8	-0.06	0
295	SLU 65	0	-594	4732	15.69	-0.06	0
295	SLU 66	0	-609	4831	16.11	-0.06	0
295	SLU 67	0	-608	4828	16.04	-0.06	0
295	SLU 68	0	-600	4784	15.82	-0.06	0
295	SLU 69	0	-615	4883	16.24	-0.06	0
295	SLU 70	0	-614	4879	16.17	-0.06	0
295	SLU 71	0	-609	4841	16.05	-0.06	0
295	SLU 72	0	-607	4838	15.99	-0.06	0
295	SLU 73	0	-656	5222	17.29	-0.08	0
295	SLU 74	0	-672	5321	17.71	-0.08	0
295	SLU 75	0	-670	5318	17.64	-0.08	0
295	SLU 76	0	-662	5274	17.42	-0.08	0
295	SLU 77	0	-678	5373	17.84	-0.08	0
295	SLU 78	0	-676	5369	17.77	-0.08	0
295	SLU 79	0	-671	5331	17.65	-0.08	0
295	SLU 80	0	-669	5328	17.59	-0.08	0
295	SLU 81	0	-686	5438	18.08	-0.09	0
295	SLU 82	0	-684	5435	18.02	-0.09	0
295	SLU 83	0	-692	5489	18.21	-0.09	0
295	SLU 84	0	-690	5486	18.15	-0.09	0
295	SLE RA 1	0	-446	3543	11.81	-0.05	0
295	SLE RA 2	0	-444	3539	11.74	-0.05	0
295	SLE RA 3	0	-454	3605	12.01	-0.04	0
295	SLE RA 4	0	-453	3603	11.97	-0.04	0
295	SLE RA 5	0	-448	3574	11.82	-0.04	0
295	SLE RA 6	0	-458	3639	12.1	-0.04	0
295	SLE RA 7	0	-457	3637	12.06	-0.04	0
295	SLE RA 8	0	-454	3612	11.98	-0.04	0
295	SLE RA 9	0	-453	3609	11.93	-0.04	0
295	SLE RA 10	0	-485	3866	12.8	-0.06	0
295	SLE RA 11	0	-496	3931	13.08	-0.06	0
295	SLE RA 12	0	-494	3929	13.04	-0.06	0
295	SLE RA 13	0	-489	3900	12.89	-0.06	0
295	SLE RA 14	0	-500	3966	13.17	-0.06	0
295	SLE RA 15	0	-498	3964	13.12	-0.06	0
295	SLE RA 16	0	-495	3938	13.04	-0.06	0
295	SLE RA 17	0	-494	3936	13	-0.06	0
295	SLE RA 18	0	-505	4009	13.33	-0.06	0
295	SLE RA 19	0	-504	4007	13.29	-0.06	0
295	SLE RA 20	0	-509	4044	13.42	-0.06	0
295	SLE RA 21	0	-508	4042	13.37	-0.06	0
295	SLE FR 1	0	-446	3543	11.81	-0.05	0
295	SLE FR 2	0	-445	3542	11.79	-0.05	0
295	SLE FR 3	0	-447	3556	11.84	-0.05	0
295	SLE FR 4	0	-463	3682	12.25	-0.05	0
295	SLE FR 5	0	-465	3696	12.3	-0.05	0
295	SLE FR 6	0	-475	3776	12.57	-0.05	0
295	SLE QP 1	0	-446	3543	11.81	-0.05	0
295	SLE QP 2	0	-463	3683	12.26	-0.05	0
295	SLD 1	-2	-105	3282	-2.96	2.42	0.01
295	SLD 2	-2	-105	3282	-2.96	2.42	0.01
295	SLD 3	-1	-520	3618	14.77	1.45	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
295	SLD 4	-1	-520	3618	14.77	1.45	0.01
295	SLD 5	-2	275	3054	-19.19	2.17	0
295	SLD 6	-2	275	3054	-19.19	2.17	0
295	SLD 7	2	-1111	4172	39.9	-1.08	0
295	SLD 8	2	-1111	4172	39.9	-1.08	0
295	SLD 9	-2	184	3193	-15.38	0.97	0
295	SLD 10	-2	184	3193	-15.38	0.97	0
295	SLD 11	2	-1202	4311	43.72	-2.27	0
295	SLD 12	2	-1202	4311	43.72	-2.27	0
295	SLD 13	0	-406	3748	9.76	-1.55	-0.01
295	SLD 14	0	-406	3748	9.76	-1.55	-0.01
295	SLD 15	2	-822	4083	27.49	-2.53	-0.01
295	SLD 16	2	-822	4083	27.49	-2.53	-0.01
295	SLV 1	-4	386	2736	-23.78	5.79	0.02
295	SLV 2	-4	386	2736	-23.78	5.79	0.02
295	SLV 3	-1	-600	3536	18.22	3.42	0.02
295	SLV 4	-1	-600	3536	18.22	3.42	0.02
295	SLV 5	-6	1287	2186	-62.24	5.31	0.01
295	SLV 6	-6	1287	2186	-62.24	5.31	0.01
295	SLV 7	4	-2000	4852	77.75	-2.62	0
295	SLV 8	4	-2000	4852	77.75	-2.62	0
295	SLV 9	-4	1073	2513	-53.22	2.51	0
295	SLV 10	-4	1073	2513	-53.22	2.51	0
295	SLV 11	6	-2214	5180	86.77	-5.41	-0.01
295	SLV 12	6	-2214	5180	86.77	-5.41	-0.01
295	SLV 13	1	-327	3829	6.31	-3.52	-0.02
295	SLV 14	1	-327	3829	6.31	-3.52	-0.02
295	SLV 15	4	-1313	4629	48.3	-5.9	-0.02
295	SLV 16	4	-1313	4629	48.3	-5.9	-0.02
296	SLU 1	284	-442	2387	13.51	6.19	-0.06
296	SLU 2	285	-404	2277	12.03	6.5	-0.04
296	SLU 3	298	-453	2466	13.83	6.66	-0.05
296	SLU 4	299	-431	2400	12.94	6.84	-0.05
296	SLU 5	300	-412	2345	12.22	7.01	-0.04
296	SLU 6	313	-461	2534	14.01	7.18	-0.05
296	SLU 7	314	-438	2468	13.13	7.36	-0.04
296	SLU 8	313	-457	2523	13.88	7.22	-0.05
296	SLU 9	314	-434	2457	12.99	7.4	-0.04
296	SLU 10	331	-443	2544	13.19	7.73	-0.04
296	SLU 11	344	-493	2733	14.99	7.89	-0.05
296	SLU 12	345	-470	2667	14.1	8.07	-0.04
296	SLU 13	346	-451	2612	13.37	8.24	-0.03
296	SLU 14	359	-500	2801	15.17	8.41	-0.05
296	SLU 15	360	-477	2735	14.28	8.59	-0.04
296	SLU 16	359	-496	2790	15.03	8.45	-0.05
296	SLU 17	360	-474	2724	14.15	8.63	-0.04
296	SLU 18	350	-498	2769	15.16	7.95	-0.05
296	SLU 19	350	-475	2702	14.28	8.13	-0.04
296	SLU 20	364	-506	2837	15.35	8.46	-0.05
296	SLU 21	365	-483	2770	14.46	8.64	-0.04
296	SLU 22	328	-482	2651	14.68	7.39	-0.05
296	SLU 23	330	-444	2541	13.2	7.7	-0.04
296	SLU 24	343	-493	2730	15	7.86	-0.05
296	SLU 25	344	-470	2664	14.11	8.05	-0.04
296	SLU 26	344	-451	2609	13.39	8.21	-0.04
296	SLU 27	357	-501	2798	15.18	8.38	-0.05
296	SLU 28	358	-478	2732	14.3	8.56	-0.04
296	SLU 29	358	-497	2787	15.05	8.42	-0.05
296	SLU 30	358	-474	2721	14.16	8.6	-0.04
296	SLU 31	376	-483	2808	14.36	8.93	-0.04
296	SLU 32	389	-532	2997	16.16	9.09	-0.05
296	SLU 33	390	-510	2931	15.27	9.28	-0.04
296	SLU 34	390	-490	2876	14.54	9.44	-0.03
296	SLU 35	403	-540	3065	16.34	9.61	-0.05
296	SLU 36	404	-517	2999	15.45	9.79	-0.04
296	SLU 37	404	-536	3054	16.2	9.65	-0.05
296	SLU 38	404	-513	2988	15.32	9.83	-0.04
296	SLU 39	394	-538	3033	16.33	9.15	-0.05
296	SLU 40	395	-515	2966	15.45	9.33	-0.04
296	SLU 41	409	-545	3101	16.52	9.66	-0.05
296	SLU 42	410	-523	3034	15.63	9.85	-0.04
296	SLU 43	354	-561	3013	17.16	7.64	-0.07
296	SLU 44	355	-523	2902	15.69	7.94	-0.06
296	SLU 45	368	-573	3092	17.48	8.11	-0.07
296	SLU 46	369	-550	3026	16.6	8.29	-0.06
296	SLU 47	370	-531	2971	15.87	8.46	-0.05
296	SLU 48	383	-580	3160	17.67	8.62	-0.07
296	SLU 49	383	-557	3094	16.78	8.8	-0.06
296	SLU 50	383	-576	3149	17.53	8.66	-0.07
296	SLU 51	384	-553	3083	16.64	8.85	-0.06
296	SLU 52	401	-562	3169	16.84	9.17	-0.06
296	SLU 53	414	-612	3359	18.64	9.34	-0.07
296	SLU 54	415	-589	3293	17.75	9.52	-0.06
296	SLU 55	416	-570	3238	17.02	9.69	-0.05
296	SLU 56	429	-619	3427	18.82	9.85	-0.07
296	SLU 57	430	-596	3361	17.94	10.03	-0.06
296	SLU 58	429	-615	3416	18.69	9.89	-0.06
296	SLU 59	430	-593	3350	17.8	10.08	-0.06
296	SLU 60	419	-617	3394	18.82	9.39	-0.07
296	SLU 61	420	-594	3328	17.93	9.58	-0.06



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
296	SLU 62	434	-625	3462	19	9.91	-0.07
296	SLU 63	435	-602	3396	18.11	10.09	-0.06
296	SLU 64	398	-601	3277	18.33	8.84	-0.07
296	SLU 65	399	-563	3166	16.86	9.14	-0.06
296	SLU 66	413	-612	3356	18.65	9.31	-0.07
296	SLU 67	413	-589	3290	17.77	9.49	-0.06
296	SLU 68	414	-570	3235	17.04	9.66	-0.05
296	SLU 69	427	-620	3424	18.84	9.82	-0.07
296	SLU 70	428	-597	3358	17.95	10.01	-0.06
296	SLU 71	427	-616	3413	18.7	9.87	-0.07
296	SLU 72	428	-593	3347	17.81	10.05	-0.06
296	SLU 73	446	-602	3433	18.01	10.37	-0.05
296	SLU 74	459	-651	3623	19.81	10.54	-0.07
296	SLU 75	459	-629	3557	18.92	10.72	-0.06
296	SLU 76	460	-610	3502	18.2	10.89	-0.05
296	SLU 77	473	-659	3691	19.99	11.05	-0.06
296	SLU 78	474	-636	3625	19.11	11.24	-0.05
296	SLU 79	474	-655	3680	19.86	11.1	-0.06
296	SLU 80	474	-632	3614	18.97	11.28	-0.05
296	SLU 81	464	-657	3658	19.99	10.59	-0.07
296	SLU 82	465	-634	3592	19.1	10.78	-0.06
296	SLU 83	479	-664	3726	20.17	11.11	-0.06
296	SLU 84	479	-642	3660	19.28	11.29	-0.06
296	SLE RA 1	297	-453	2463	13.85	6.53	-0.06
296	SLE RA 2	297	-428	2389	12.86	6.74	-0.05
296	SLE RA 3	306	-461	2515	14.06	6.85	-0.05
296	SLE RA 4	307	-446	2471	13.47	6.97	-0.05
296	SLE RA 5	307	-433	2434	12.98	7.08	-0.04
296	SLE RA 6	316	-466	2561	14.18	7.19	-0.05
296	SLE RA 7	316	-451	2517	13.59	7.31	-0.05
296	SLE RA 8	316	-463	2553	14.09	7.22	-0.05
296	SLE RA 9	317	-448	2509	13.5	7.34	-0.05
296	SLE RA 10	328	-454	2567	13.63	7.56	-0.04
296	SLE RA 11	337	-487	2693	14.83	7.67	-0.05
296	SLE RA 12	337	-472	2649	14.24	7.79	-0.05
296	SLE RA 13	338	-459	2612	13.75	7.9	-0.04
296	SLE RA 14	347	-492	2739	14.95	8.01	-0.05
296	SLE RA 15	347	-477	2695	14.36	8.13	-0.04
296	SLE RA 16	347	-490	2731	14.86	8.04	-0.05
296	SLE RA 17	347	-474	2687	14.27	8.16	-0.04
296	SLE RA 18	340	-491	2717	14.95	7.71	-0.05
296	SLE RA 19	341	-476	2673	14.36	7.83	-0.05
296	SLE RA 20	350	-496	2762	15.07	8.05	-0.05
296	SLE RA 21	351	-481	2718	14.48	8.17	-0.04
296	SLE FR 1	297	-453	2463	13.85	6.53	-0.06
296	SLE FR 2	297	-448	2448	13.65	6.58	-0.05
296	SLE FR 3	300	-455	2481	13.89	6.67	-0.05
296	SLE FR 4	310	-460	2524	13.98	6.93	-0.05
296	SLE FR 5	314	-467	2557	14.23	7.02	-0.05
296	SLE FR 6	318	-472	2590	14.4	7.12	-0.05
296	SLE QP 1	297	-453	2463	13.85	6.53	-0.06
296	SLE QP 2	310	-465	2539	14.18	6.89	-0.05
296	SLD 1	591	-482	3179	14.8	18.73	0.13
296	SLD 2	591	-482	3179	14.8	18.73	0.13
296	SLD 3	657	-711	3979	23.84	20.99	0.05
296	SLD 4	657	-711	3979	23.84	20.99	0.05
296	SLD 5	295	-123	1518	0.66	7	0.12
296	SLD 6	295	-123	1518	0.66	7	0.12
296	SLD 7	513	-885	4184	30.78	14.55	-0.15
296	SLD 8	513	-885	4184	30.78	14.55	-0.15
296	SLD 9	107	-44	894	-2.43	-0.78	0.04
296	SLD 10	107	-44	894	-2.43	-0.78	0.04
296	SLD 11	324	-806	3560	27.69	6.77	-0.23
296	SLD 12	324	-806	3560	27.69	6.77	-0.23
296	SLD 13	-37	-219	1099	4.51	-7.22	-0.16
296	SLD 14	-37	-219	1099	4.51	-7.22	-0.16
296	SLD 15	28	-447	1899	13.55	-4.95	-0.24
296	SLD 16	28	-447	1899	13.55	-4.95	-0.24
296	SLV 1	960	-507	4025	15.66	34.18	0.36
296	SLV 2	960	-507	4025	15.66	34.18	0.36
296	SLV 3	1112	-1035	5868	36.6	39.57	0.18
296	SLV 4	1112	-1035	5868	36.6	39.57	0.18
296	SLV 5	274	322	189	-17.15	6.91	0.36
296	SLV 6	274	322	189	-17.15	6.91	0.36
296	SLV 7	781	-1435	6334	52.67	24.85	-0.27
296	SLV 8	781	-1435	6334	52.67	24.85	-0.27
296	SLV 9	-162	506	-1256	-24.32	-11.08	0.16
296	SLV 10	-162	506	-1256	-24.32	-11.08	0.16
296	SLV 11	345	-1251	4889	45.5	6.86	-0.47
296	SLV 12	345	-1251	4889	45.5	6.86	-0.47
296	SLV 13	-492	105	-790	-8.25	-25.79	-0.29
296	SLV 14	-492	105	-790	-8.25	-25.79	-0.29
296	SLV 15	-340	-422	1053	12.69	-20.41	-0.47
296	SLV 16	-340	-422	1053	12.69	-20.41	-0.47
297	SLU 1	266	-7	1728	0.27	17.05	0.02
297	SLU 2	282	-7	1663	0.08	17.43	0.02
297	SLU 3	284	-8	1773	0.27	18.08	0.02
297	SLU 4	294	-7	1734	0.16	18.31	0.02
297	SLU 5	302	-7	1701	0.09	18.48	0.02
297	SLU 6	304	-8	1810	0.28	19.13	0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
297	SLU 7	314	-8	1771	0.17	19.35	0.02
297	SLU 8	306	-8	1803	0.29	19.15	0.02
297	SLU 9	316	-7	1764	0.18	19.37	0.02
297	SLU 10	342	-8	1863	0.17	20.69	0.02
297	SLU 11	344	-9	1972	0.36	21.34	0.02
297	SLU 12	354	-8	1933	0.25	21.57	0.02
297	SLU 13	362	-8	1900	0.18	21.74	0.02
297	SLU 14	364	-9	2009	0.37	22.39	0.02
297	SLU 15	374	-8	1971	0.26	22.62	0.02
297	SLU 16	365	-9	2002	0.37	22.41	0.02
297	SLU 17	375	-8	1963	0.26	22.64	0.02
297	SLU 18	351	-9	2012	0.39	21.72	0.02
297	SLU 19	361	-8	1974	0.28	21.94	0.02
297	SLU 20	371	-9	2050	0.4	22.76	0.02
297	SLU 21	381	-9	2011	0.29	22.99	0.02
297	SLU 22	322	-8	1921	0.33	20.17	0.02
297	SLU 23	339	-8	1857	0.14	20.55	0.02
297	SLU 24	341	-9	1966	0.34	21.2	0.02
297	SLU 25	351	-8	1927	0.23	21.42	0.02
297	SLU 26	359	-8	1894	0.16	21.59	0.02
297	SLU 27	361	-9	2003	0.35	22.24	0.02
297	SLU 28	371	-8	1965	0.24	22.47	0.02
297	SLU 29	362	-9	1996	0.35	22.26	0.02
297	SLU 30	372	-8	1957	0.24	22.49	0.02
297	SLU 31	398	-9	2056	0.23	23.81	0.02
297	SLU 32	400	-9	2165	0.42	24.46	0.02
297	SLU 33	410	-9	2126	0.31	24.69	0.02
297	SLU 34	418	-9	2093	0.24	24.86	0.02
297	SLU 35	420	-10	2202	0.43	25.51	0.02
297	SLU 36	430	-9	2164	0.32	25.73	0.02
297	SLU 37	421	-10	2195	0.44	25.53	0.02
297	SLU 38	431	-9	2156	0.32	25.75	0.02
297	SLU 39	407	-10	2205	0.45	24.83	0.02
297	SLU 40	417	-9	2167	0.34	25.06	0.02
297	SLU 41	427	-10	2243	0.46	25.88	0.02
297	SLU 42	437	-9	2204	0.35	26.11	0.02
297	SLU 43	326	-9	2180	0.32	21.1	0.02
297	SLU 44	343	-9	2116	0.14	21.48	0.02
297	SLU 45	345	-10	2225	0.33	22.13	0.02
297	SLU 46	355	-9	2186	0.22	22.35	0.02
297	SLU 47	363	-9	2153	0.15	22.53	0.02
297	SLU 48	365	-10	2262	0.34	23.18	0.02
297	SLU 49	375	-9	2224	0.23	23.4	0.02
297	SLU 50	366	-10	2255	0.35	23.2	0.02
297	SLU 51	376	-9	2216	0.24	23.42	0.02
297	SLU 52	402	-10	2315	0.22	24.74	0.02
297	SLU 53	404	-10	2424	0.42	25.39	0.03
297	SLU 54	414	-10	2385	0.31	25.62	0.03
297	SLU 55	422	-10	2352	0.24	25.79	0.03
297	SLU 56	424	-11	2461	0.43	26.44	0.03
297	SLU 57	434	-10	2423	0.32	26.66	0.03
297	SLU 58	426	-11	2454	0.43	26.46	0.03
297	SLU 59	436	-10	2415	0.32	26.68	0.03
297	SLU 60	411	-11	2464	0.44	25.76	0.03
297	SLU 61	421	-10	2426	0.33	25.99	0.03
297	SLU 62	431	-11	2502	0.46	26.81	0.03
297	SLU 63	441	-10	2463	0.35	27.04	0.03
297	SLU 64	383	-10	2373	0.39	24.22	0.03
297	SLU 65	399	-10	2309	0.2	24.6	0.02
297	SLU 66	401	-10	2418	0.39	25.25	0.03
297	SLU 67	411	-10	2379	0.28	25.47	0.03
297	SLU 68	419	-10	2346	0.21	25.64	0.03
297	SLU 69	421	-11	2455	0.41	26.29	0.03
297	SLU 70	431	-10	2417	0.29	26.52	0.03
297	SLU 71	423	-11	2448	0.41	26.31	0.03
297	SLU 72	433	-10	2409	0.3	26.54	0.03
297	SLU 73	458	-11	2508	0.29	27.86	0.03
297	SLU 74	460	-11	2617	0.48	28.51	0.03
297	SLU 75	470	-11	2578	0.37	28.74	0.03
297	SLU 76	478	-11	2545	0.3	28.91	0.03
297	SLU 77	480	-11	2654	0.49	29.56	0.03
297	SLU 78	490	-11	2616	0.38	29.78	0.03
297	SLU 79	482	-11	2647	0.49	29.58	0.03
297	SLU 80	492	-11	2609	0.38	29.8	0.03
297	SLU 81	467	-11	2658	0.51	28.88	0.03
297	SLU 82	477	-11	2619	0.4	29.11	0.03
297	SLU 83	487	-12	2695	0.52	29.93	0.03
297	SLU 84	497	-11	2656	0.41	30.15	0.03
297	SLE RA 1	282	-8	1783	0.28	17.95	0.02
297	SLE RA 2	293	-7	1740	0.16	18.2	0.02
297	SLE RA 3	294	-8	1813	0.29	18.63	0.02
297	SLE RA 4	301	-8	1787	0.21	18.78	0.02
297	SLE RA 5	306	-7	1765	0.17	18.89	0.02
297	SLE RA 6	308	-8	1838	0.3	19.33	0.02
297	SLE RA 7	314	-8	1812	0.22	19.48	0.02
297	SLE RA 8	309	-8	1833	0.3	19.34	0.02
297	SLE RA 9	315	-8	1807	0.23	19.49	0.02
297	SLE RA 10	333	-8	1873	0.22	20.37	0.02
297	SLE RA 11	334	-8	1946	0.34	20.81	0.02
297	SLE RA 12	340	-8	1920	0.27	20.96	0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
297	SLE RA 13	346	-8	1898	0.22	21.07	0.02
297	SLE RA 14	347	-9	1971	0.35	21.5	0.02
297	SLE RA 15	354	-8	1945	0.28	21.65	0.02
297	SLE RA 16	348	-8	1966	0.35	21.52	0.02
297	SLE RA 17	355	-8	1940	0.28	21.67	0.02
297	SLE RA 18	338	-8	1973	0.36	21.05	0.02
297	SLE RA 19	345	-8	1947	0.29	21.2	0.02
297	SLE RA 20	352	-9	1998	0.37	21.75	0.02
297	SLE RA 21	358	-8	1972	0.3	21.9	0.02
297	SLE FR 1	282	-8	1783	0.28	17.95	0.02
297	SLE FR 2	284	-8	1774	0.26	18	0.02
297	SLE FR 3	287	-8	1793	0.29	18.22	0.02
297	SLE FR 4	301	-8	1831	0.28	18.93	0.02
297	SLE FR 5	304	-8	1850	0.31	19.16	0.02
297	SLE FR 6	310	-8	1878	0.32	19.5	0.02
297	SLE QP 1	282	-8	1783	0.28	17.95	0.02
297	SLE QP 2	299	-8	1840	0.31	18.88	0.02
297	SLD 1	835	-13	2147	-4.93	39.89	0.03
297	SLD 2	835	-13	2147	-4.93	39.89	0.03
297	SLD 3	748	-16	2578	-0.18	44.05	0.03
297	SLD 4	748	-16	2578	-0.18	44.05	0.03
297	SLD 5	591	-6	1278	-8.47	18.87	0.02
297	SLD 6	591	-6	1278	-8.47	18.87	0.02
297	SLD 7	302	-14	2715	7.37	32.75	0.03
297	SLD 8	302	-14	2715	7.37	32.75	0.03
297	SLD 9	295	-2	965	-6.75	5.01	0.01
297	SLD 10	295	-2	965	-6.75	5.01	0.01
297	SLD 11	7	-10	2401	9.08	18.89	0.02
297	SLD 12	7	-10	2401	9.08	18.89	0.02
297	SLD 13	-150	0	1102	0.8	-6.3	0.01
297	SLD 14	-150	0	1102	0.8	-6.3	0.01
297	SLD 15	-237	-2	1533	5.55	-2.13	0.01
297	SLD 16	-237	-2	1533	5.55	-2.13	0.01
297	SLV 1	1538	-21	2553	-12.25	67.28	0.04
297	SLV 2	1538	-21	2553	-12.25	67.28	0.04
297	SLV 3	1334	-26	3545	-0.81	77.09	0.04
297	SLV 4	1334	-26	3545	-0.81	77.09	0.04
297	SLV 5	979	-4	549	-20.8	18.53	0.01
297	SLV 6	979	-4	549	-20.8	18.53	0.01
297	SLV 7	301	-22	3857	17.32	51.21	0.04
297	SLV 8	301	-22	3857	17.32	51.21	0.04
297	SLV 9	297	6	-177	-16.7	-13.45	0
297	SLV 10	297	6	-177	-16.7	-13.45	0
297	SLV 11	-381	-12	3131	21.42	19.22	0.03
297	SLV 12	-381	-12	3131	21.42	19.22	0.03
297	SLV 13	-736	11	134	1.43	-39.33	-0.01
297	SLV 14	-736	11	134	1.43	-39.33	-0.01
297	SLV 15	-940	5	1127	12.86	-29.53	0
297	SLV 16	-940	5	1127	12.86	-29.53	0
298	SLU 1	205	1	1511	-2.94	6.08	0.01
298	SLU 2	221	2	1473	-3.08	6.77	0.01
298	SLU 3	225	2	1536	-3.04	6.93	0.01
298	SLU 4	235	2	1513	-3.12	7.35	0.01
298	SLU 5	243	2	1492	-3.13	7.73	0.01
298	SLU 6	247	2	1556	-3.09	7.89	0.01
298	SLU 7	257	2	1533	-3.17	8.3	0.01
298	SLU 8	249	1	1550	-3.05	8	0.01
298	SLU 9	259	2	1527	-3.13	8.41	0.01
298	SLU 10	270	2	1656	-3.29	8.39	0.01
298	SLU 11	274	2	1720	-3.25	8.55	0.01
298	SLU 12	283	2	1697	-3.33	8.96	0.01
298	SLU 13	292	2	1676	-3.34	9.35	0.01
298	SLU 14	296	2	1740	-3.3	9.51	0.01
298	SLU 15	305	2	1717	-3.38	9.92	0.01
298	SLU 16	298	2	1734	-3.26	9.62	0.01
298	SLU 17	307	2	1711	-3.34	10.03	0.01
298	SLU 18	275	2	1773	-3.24	8.4	0.01
298	SLU 19	284	2	1751	-3.32	8.81	0.01
298	SLU 20	297	2	1793	-3.29	9.35	0.01
298	SLU 21	306	2	1770	-3.38	9.76	0.01
298	SLU 22	253	2	1683	-3.2	7.72	0.01
298	SLU 23	269	2	1645	-3.34	8.41	0.01
298	SLU 24	273	2	1708	-3.3	8.57	0.01
298	SLU 25	282	2	1686	-3.38	8.98	0.01
298	SLU 26	290	2	1664	-3.39	9.37	0.01
298	SLU 27	295	2	1728	-3.35	9.53	0.01
298	SLU 28	304	2	1705	-3.43	9.94	0.01
298	SLU 29	297	2	1722	-3.31	9.64	0.01
298	SLU 30	306	2	1699	-3.39	10.05	0.01
298	SLU 31	317	2	1828	-3.55	10.03	0.01
298	SLU 32	322	2	1892	-3.51	10.19	0.01
298	SLU 33	331	2	1869	-3.59	10.6	0.01
298	SLU 34	339	2	1848	-3.6	10.98	0.01
298	SLU 35	344	2	1912	-3.56	11.15	0.01
298	SLU 36	353	2	1889	-3.64	11.56	0.01
298	SLU 37	346	2	1906	-3.51	11.25	0.01
298	SLU 38	355	2	1883	-3.6	11.67	0.01
298	SLU 39	323	2	1945	-3.5	10.03	0.01
298	SLU 40	332	2	1923	-3.58	10.45	0.01
298	SLU 41	345	2	1965	-3.55	10.99	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
298	SLU 42	354	2	1942	-3.64	11.4	0.01
298	SLU 43	251	2	1905	-3.73	7.35	0.01
298	SLU 44	266	2	1867	-3.87	8.03	0.01
298	SLU 45	271	2	1931	-3.83	8.2	0.01
298	SLU 46	280	2	1908	-3.91	8.61	0.01
298	SLU 47	288	2	1886	-3.92	8.99	0.01
298	SLU 48	293	2	1950	-3.88	9.15	0.01
298	SLU 49	302	2	1927	-3.97	9.57	0.01
298	SLU 50	295	2	1944	-3.84	9.26	0.01
298	SLU 51	304	2	1921	-3.92	9.67	0.01
298	SLU 52	315	2	2051	-4.08	9.65	0.01
298	SLU 53	319	2	2115	-4.04	9.82	0.01
298	SLU 54	329	2	2092	-4.12	10.23	0.01
298	SLU 55	337	2	2070	-4.13	10.61	0.01
298	SLU 56	341	2	2134	-4.09	10.77	0.01
298	SLU 57	351	2	2111	-4.18	11.18	0.01
298	SLU 58	343	2	2128	-4.05	10.88	0.01
298	SLU 59	353	2	2105	-4.13	11.29	0.01
298	SLU 60	320	2	2168	-4.03	9.66	0.01
298	SLU 61	330	2	2145	-4.11	10.07	0.01
298	SLU 62	342	2	2187	-4.08	10.62	0.01
298	SLU 63	352	2	2164	-4.17	11.03	0.01
298	SLU 64	298	2	2077	-3.99	8.99	0.01
298	SLU 65	314	2	2039	-4.13	9.67	0.01
298	SLU 66	318	2	2103	-4.09	9.84	0.01
298	SLU 67	328	2	2080	-4.17	10.25	0.01
298	SLU 68	336	2	2058	-4.18	10.63	0.01
298	SLU 69	340	2	2122	-4.14	10.79	0.01
298	SLU 70	350	2	2099	-4.23	11.2	0.01
298	SLU 71	342	2	2116	-4.1	10.9	0.01
298	SLU 72	352	2	2093	-4.18	11.31	0.01
298	SLU 73	363	2	2223	-4.34	11.29	0.01
298	SLU 74	367	2	2287	-4.3	11.45	0.01
298	SLU 75	376	2	2264	-4.38	11.87	0.01
298	SLU 76	384	2	2242	-4.39	12.25	0.01
298	SLU 77	389	2	2306	-4.35	12.41	0.01
298	SLU 78	398	2	2283	-4.44	12.82	0.01
298	SLU 79	391	2	2300	-4.31	12.52	0.01
298	SLU 80	400	2	2277	-4.39	12.93	0.01
298	SLU 81	368	2	2340	-4.29	11.3	0.01
298	SLU 82	377	2	2317	-4.37	11.71	0.01
298	SLU 83	390	2	2359	-4.34	12.25	0.01
298	SLU 84	399	2	2336	-4.43	12.67	0.01
298	SLE RA 1	219	2	1560	-3.01	6.55	0.01
298	SLE RA 2	229	2	1534	-3.11	7.01	0.01
298	SLE RA 3	232	2	1577	-3.08	7.12	0.01
298	SLE RA 4	239	2	1562	-3.13	7.39	0.01
298	SLE RA 5	244	2	1547	-3.14	7.65	0.01
298	SLE RA 6	247	2	1590	-3.11	7.76	0.01
298	SLE RA 7	253	2	1575	-3.17	8.03	0.01
298	SLE RA 8	248	2	1586	-3.08	7.83	0.01
298	SLE RA 9	254	2	1571	-3.14	8.1	0.01
298	SLE RA 10	262	2	1657	-3.25	8.09	0.01
298	SLE RA 11	265	2	1700	-3.22	8.2	0.01
298	SLE RA 12	271	2	1684	-3.27	8.47	0.01
298	SLE RA 13	276	2	1670	-3.28	8.73	0.01
298	SLE RA 14	279	2	1713	-3.25	8.84	0.01
298	SLE RA 15	286	2	1697	-3.31	9.11	0.01
298	SLE RA 16	281	2	1709	-3.22	8.91	0.01
298	SLE RA 17	287	2	1693	-3.28	9.18	0.01
298	SLE RA 18	265	2	1735	-3.21	8.09	0.01
298	SLE RA 19	272	2	1720	-3.27	8.37	0.01
298	SLE RA 20	280	2	1748	-3.25	8.73	0.01
298	SLE RA 21	286	2	1733	-3.3	9.01	0.01
298	SLE FR 1	219	2	1560	-3.01	6.55	0.01
298	SLE FR 2	221	2	1555	-3.03	6.64	0.01
298	SLE FR 3	225	2	1565	-3.03	6.81	0.01
298	SLE FR 4	235	2	1607	-3.09	7.11	0.01
298	SLE FR 5	239	2	1618	-3.09	7.27	0.01
298	SLE FR 6	242	2	1647	-3.11	7.32	0.01
298	SLE QP 1	219	2	1560	-3.01	6.55	0.01
298	SLE QP 2	233	2	1612	-3.07	7.02	0.01
298	SLD 1	744	13	1731	-12.96	30.26	0.02
298	SLD 2	744	13	1731	-12.96	30.26	0.02
298	SLD 3	834	7	1952	-2.71	34.13	0.01
298	SLD 4	834	7	1952	-2.71	34.13	0.01
298	SLD 5	250	15	1314	-21.58	8.12	0.03
298	SLD 6	250	15	1314	-21.58	8.12	0.03
298	SLD 7	549	-7	2049	12.58	21.01	-0.01
298	SLD 8	549	-7	2049	12.58	21.01	-0.01
298	SLD 9	-84	10	1176	-18.73	-6.98	0.02
298	SLD 10	-84	10	1176	-18.73	-6.98	0.02
298	SLD 11	216	-12	1911	15.44	5.91	-0.02
298	SLD 12	216	-12	1911	15.44	5.91	-0.02
298	SLD 13	-368	-4	1273	-3.44	-20.1	0
298	SLD 14	-368	-4	1273	-3.44	-20.1	0
298	SLD 15	-278	-10	1493	6.81	-16.23	-0.01
298	SLD 16	-278	-10	1493	6.81	-16.23	-0.01
298	SLV 1	1413	29	1890	-26.82	60.71	0.04
298	SLV 2	1413	29	1890	-26.82	60.71	0.04



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
298	SLV 3	1622	14	2397	-2.16	69.71	0.02
298	SLV 4	1622	14	2397	-2.16	69.71	0.02
298	SLV 5	270	33	927	-47.6	9.46	0.06
298	SLV 6	270	33	927	-47.6	9.46	0.06
298	SLV 7	967	-18	2617	34.61	39.48	-0.03
298	SLV 8	967	-18	2617	34.61	39.48	-0.03
298	SLV 9	-501	21	608	-40.75	-25.45	0.05
298	SLV 10	-501	21	608	-40.75	-25.45	0.05
298	SLV 11	196	-30	2298	41.46	4.57	-0.05
298	SLV 12	196	-30	2298	41.46	4.57	-0.05
298	SLV 13	-1157	-10	828	-3.99	-55.68	0
298	SLV 14	-1157	-10	828	-3.99	-55.68	0
298	SLV 15	-948	-26	1334	20.68	-46.68	-0.03
298	SLV 16	-948	-26	1334	20.68	-46.68	-0.03
299	SLU 1	255	8	1487	-6.23	13.96	0
299	SLU 2	266	8	1462	-6.32	14.3	0
299	SLU 3	279	9	1504	-6.44	15.12	0
299	SLU 4	286	9	1489	-6.5	15.32	0
299	SLU 5	291	9	1473	-6.45	15.47	0
299	SLU 6	305	9	1515	-6.57	16.29	0
299	SLU 7	311	9	1500	-6.63	16.49	0
299	SLU 8	306	9	1509	-6.48	16.31	0
299	SLU 9	312	9	1494	-6.54	16.51	0
299	SLU 10	318	9	1653	-6.86	16.92	-0.01
299	SLU 11	331	9	1696	-6.98	17.74	0
299	SLU 12	338	9	1680	-7.04	17.94	-0.01
299	SLU 13	343	9	1664	-6.99	18.09	0
299	SLU 14	357	9	1707	-7.11	18.91	0
299	SLU 15	363	10	1691	-7.16	19.11	0
299	SLU 16	358	9	1701	-7.02	18.93	0
299	SLU 17	364	9	1685	-7.08	19.13	0
299	SLU 18	329	9	1760	-7	17.71	-0.01
299	SLU 19	336	9	1745	-7.06	17.91	-0.01
299	SLU 20	354	10	1772	-7.13	18.88	-0.01
299	SLU 21	361	10	1756	-7.18	19.08	-0.01
299	SLU 22	307	9	1662	-6.85	16.61	0
299	SLU 23	319	9	1636	-6.94	16.94	-0.01
299	SLU 24	332	9	1679	-7.06	17.76	0
299	SLU 25	339	9	1663	-7.12	17.96	-0.01
299	SLU 26	344	9	1647	-7.07	18.12	0
299	SLU 27	357	10	1690	-7.19	18.94	0
299	SLU 28	364	10	1675	-7.24	19.14	0
299	SLU 29	358	9	1684	-7.1	18.96	0
299	SLU 30	365	10	1669	-7.16	19.16	0
299	SLU 31	371	10	1827	-7.48	19.56	-0.01
299	SLU 32	384	10	1870	-7.6	20.39	-0.01
299	SLU 33	390	10	1855	-7.66	20.59	-0.01
299	SLU 34	396	10	1839	-7.61	20.74	-0.01
299	SLU 35	409	10	1881	-7.73	21.56	-0.01
299	SLU 36	416	10	1866	-7.78	21.76	-0.01
299	SLU 37	410	10	1875	-7.64	21.58	-0.01
299	SLU 38	417	10	1860	-7.7	21.78	-0.01
299	SLU 39	382	10	1935	-7.62	20.35	-0.01
299	SLU 40	388	10	1920	-7.67	20.56	-0.01
299	SLU 41	407	10	1946	-7.74	21.53	-0.01
299	SLU 42	414	10	1931	-7.8	21.73	-0.01
299	SLU 43	313	11	1873	-7.89	17.24	-0.01
299	SLU 44	324	11	1848	-7.98	17.58	-0.01
299	SLU 45	337	11	1891	-8.1	18.4	-0.01
299	SLU 46	344	11	1875	-8.16	18.6	-0.01
299	SLU 47	350	11	1859	-8.11	18.75	-0.01
299	SLU 48	363	11	1902	-8.23	19.57	-0.01
299	SLU 49	370	11	1886	-8.28	19.77	-0.01
299	SLU 50	364	11	1896	-8.14	19.59	-0.01
299	SLU 51	371	11	1880	-8.2	19.79	-0.01
299	SLU 52	376	11	2039	-8.52	20.2	-0.01
299	SLU 53	389	12	2082	-8.64	21.02	-0.01
299	SLU 54	396	12	2067	-8.7	21.22	-0.01
299	SLU 55	402	12	2050	-8.65	21.37	-0.01
299	SLU 56	415	12	2093	-8.77	22.19	-0.01
299	SLU 57	422	12	2078	-8.82	22.4	-0.01
299	SLU 58	416	12	2087	-8.68	22.21	-0.01
299	SLU 59	423	12	2072	-8.74	22.42	-0.01
299	SLU 60	387	12	2147	-8.66	20.99	-0.01
299	SLU 61	394	12	2131	-8.71	21.19	-0.01
299	SLU 62	413	12	2158	-8.78	22.16	-0.01
299	SLU 63	419	12	2143	-8.84	22.36	-0.01
299	SLU 64	366	11	2048	-8.51	19.89	-0.01
299	SLU 65	377	11	2022	-8.6	20.22	-0.01
299	SLU 66	390	12	2065	-8.72	21.04	-0.01
299	SLU 67	397	12	2050	-8.77	21.24	-0.01
299	SLU 68	402	12	2033	-8.73	21.4	-0.01
299	SLU 69	416	12	2076	-8.85	22.22	-0.01
299	SLU 70	422	12	2061	-8.9	22.42	-0.01
299	SLU 71	417	12	2070	-8.76	22.24	-0.01
299	SLU 72	424	12	2055	-8.81	22.44	-0.01
299	SLU 73	429	12	2214	-9.14	22.85	-0.01
299	SLU 74	442	12	2256	-9.26	23.67	-0.01
299	SLU 75	449	12	2241	-9.31	23.87	-0.01
299	SLU 76	454	12	2225	-9.26	24.02	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
299	SLU 77	468	13	2268	-9.38	24.84	-0.01
299	SLU 78	474	13	2252	-9.44	25.04	-0.01
299	SLU 79	469	12	2262	-9.3	24.86	-0.01
299	SLU 80	475	12	2246	-9.35	25.06	-0.01
299	SLU 81	440	12	2321	-9.28	23.64	-0.01
299	SLU 82	447	12	2306	-9.33	23.84	-0.01
299	SLU 83	465	13	2332	-9.4	24.81	-0.01
299	SLU 84	472	13	2317	-9.46	25.01	-0.01
299	SLE RA 1	270	9	1537	-6.41	14.72	0
299	SLE RA 2	277	9	1520	-6.47	14.94	0
299	SLE RA 3	286	9	1548	-6.55	15.49	0
299	SLE RA 4	290	9	1538	-6.59	15.62	0
299	SLE RA 5	294	9	1527	-6.55	15.72	0
299	SLE RA 6	303	9	1556	-6.63	16.27	0
299	SLE RA 7	308	9	1546	-6.67	16.4	0
299	SLE RA 8	304	9	1552	-6.58	16.28	0
299	SLE RA 9	308	9	1542	-6.61	16.42	0
299	SLE RA 10	312	9	1647	-6.83	16.69	-0.01
299	SLE RA 11	321	9	1676	-6.91	17.24	0
299	SLE RA 12	325	9	1666	-6.95	17.37	0
299	SLE RA 13	329	9	1655	-6.91	17.47	0
299	SLE RA 14	338	9	1683	-6.99	18.02	0
299	SLE RA 15	342	9	1673	-7.03	18.15	0
299	SLE RA 16	338	9	1679	-6.94	18.03	0
299	SLE RA 17	343	9	1669	-6.97	18.17	0
299	SLE RA 18	319	9	1719	-6.92	17.22	-0.01
299	SLE RA 19	324	9	1709	-6.96	17.35	-0.01
299	SLE RA 20	336	9	1727	-7	18	-0.01
299	SLE RA 21	341	9	1716	-7.04	18.13	-0.01
299	SLE FR 1	270	9	1537	-6.41	14.72	0
299	SLE FR 2	271	9	1534	-6.42	14.76	0
299	SLE FR 3	276	9	1540	-6.44	15.03	0
299	SLE FR 4	286	9	1588	-6.57	15.51	0
299	SLE FR 5	291	9	1595	-6.6	15.78	0
299	SLE FR 6	294	9	1628	-6.66	15.97	0
299	SLE QP 1	270	9	1537	-6.41	14.72	0
299	SLE QP 2	284	9	1592	-6.56	15.47	0
299	SLD 1	836	24	1625	-20.66	39.38	0.01
299	SLD 2	836	24	1625	-20.66	39.38	0.01
299	SLD 3	938	10	1813	-4.45	43.84	0
299	SLD 4	938	10	1813	-4.45	43.84	0
299	SLD 5	296	35	1317	-35.38	15.87	0.01
299	SLD 6	296	35	1317	-35.38	15.87	0.01
299	SLD 7	634	-12	1942	18.67	30.75	-0.01
299	SLD 8	634	-12	1942	18.67	30.75	-0.01
299	SLD 9	-65	30	1241	-31.79	0.18	0
299	SLD 10	-65	30	1241	-31.79	0.18	0
299	SLD 11	273	-17	1866	22.26	15.06	-0.02
299	SLD 12	273	-17	1866	22.26	15.06	-0.02
299	SLD 13	-369	8	1370	-8.68	-12.91	-0.01
299	SLD 14	-369	8	1370	-8.68	-12.91	-0.01
299	SLD 15	-267	-7	1558	7.54	-8.44	-0.02
299	SLD 16	-267	-7	1558	7.54	-8.44	-0.02
299	SLV 1	1558	45	1671	-40.51	70.67	0.02
299	SLV 2	1558	45	1671	-40.51	70.67	0.02
299	SLV 3	1794	12	2111	-1.52	81.03	0.01
299	SLV 4	1794	12	2111	-1.52	81.03	0.01
299	SLV 5	309	71	947	-75.88	16.3	0.03
299	SLV 6	309	71	947	-75.88	16.3	0.03
299	SLV 7	1095	-42	2416	54.08	50.86	-0.02
299	SLV 8	1095	-42	2416	54.08	50.86	-0.02
299	SLV 9	-526	59	767	-67.2	-19.93	0.01
299	SLV 10	-526	59	767	-67.2	-19.93	0.01
299	SLV 11	260	-53	2236	62.75	14.63	-0.03
299	SLV 12	260	-53	2236	62.75	14.63	-0.03
299	SLV 13	-1225	6	1072	-11.6	-50.1	-0.02
299	SLV 14	-1225	6	1072	-11.6	-50.1	-0.02
299	SLV 15	-989	-28	1513	27.39	-39.73	-0.03
299	SLV 16	-989	-28	1513	27.39	-39.73	-0.03
300	SLU 1	200	12	1525	-8.86	5.68	-0.01
300	SLU 2	212	12	1507	-8.91	6.24	-0.01
300	SLU 3	227	13	1539	-9.16	6.79	-0.01
300	SLU 4	234	13	1528	-9.2	7.12	-0.01
300	SLU 5	240	13	1515	-9.1	7.43	-0.01
300	SLU 6	255	13	1546	-9.35	7.98	-0.01
300	SLU 7	262	13	1536	-9.38	8.32	-0.01
300	SLU 8	256	13	1540	-9.23	8.07	-0.01
300	SLU 9	263	13	1530	-9.26	8.41	-0.01
300	SLU 10	251	13	1711	-9.73	7.5	-0.01
300	SLU 11	266	14	1743	-9.98	8.05	-0.01
300	SLU 12	273	14	1732	-10.01	8.38	-0.01
300	SLU 13	279	14	1719	-9.91	8.69	-0.01
300	SLU 14	294	14	1750	-10.16	9.24	-0.01
300	SLU 15	301	14	1740	-10.19	9.57	-0.01
300	SLU 16	296	14	1744	-10.04	9.33	-0.01
300	SLU 17	303	14	1734	-10.07	9.66	-0.01
300	SLU 18	257	14	1816	-10.02	7.48	-0.01
300	SLU 19	264	14	1806	-10.05	7.81	-0.01
300	SLU 20	285	14	1824	-10.21	8.67	-0.01
300	SLU 21	292	14	1813	-10.24	9.01	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
300	SLU 22	244	14	1709	-9.77	7.16	-0.01
300	SLU 23	255	14	1691	-9.83	7.72	-0.01
300	SLU 24	270	14	1723	-10.08	8.27	-0.01
300	SLU 25	277	14	1712	-10.11	8.6	-0.01
300	SLU 26	283	14	1699	-10.01	8.91	-0.01
300	SLU 27	298	14	1730	-10.26	9.46	-0.01
300	SLU 28	305	14	1720	-10.3	9.8	-0.01
300	SLU 29	300	14	1724	-10.14	9.55	-0.01
300	SLU 30	307	14	1713	-10.17	9.89	-0.01
300	SLU 31	295	15	1895	-10.64	8.97	-0.01
300	SLU 32	310	15	1927	-10.9	9.52	-0.01
300	SLU 33	317	15	1916	-10.93	9.86	-0.01
300	SLU 34	323	15	1903	-10.83	10.17	-0.01
300	SLU 35	338	15	1934	-11.08	10.72	-0.01
300	SLU 36	345	15	1924	-11.11	11.05	-0.01
300	SLU 37	339	15	1928	-10.96	10.81	-0.01
300	SLU 38	346	15	1917	-10.99	11.14	-0.01
300	SLU 39	300	15	2000	-10.94	8.96	-0.01
300	SLU 40	307	15	1990	-10.97	9.29	-0.01
300	SLU 41	328	15	2008	-11.12	10.15	-0.01
300	SLU 42	335	15	1997	-11.15	10.49	-0.01
300	SLU 43	245	16	1919	-11.2	6.88	-0.01
300	SLU 44	257	16	1902	-11.25	7.44	-0.01
300	SLU 45	272	16	1933	-11.51	7.99	-0.01
300	SLU 46	279	16	1923	-11.54	8.32	-0.01
300	SLU 47	285	16	1909	-11.44	8.63	-0.01
300	SLU 48	300	16	1941	-11.69	9.18	-0.01
300	SLU 49	307	16	1930	-11.72	9.52	-0.01
300	SLU 50	301	16	1934	-11.57	9.27	-0.01
300	SLU 51	308	16	1924	-11.6	9.61	-0.01
300	SLU 52	296	17	2106	-12.07	8.69	-0.01
300	SLU 53	311	17	2137	-12.32	9.24	-0.01
300	SLU 54	318	17	2127	-12.35	9.58	-0.01
300	SLU 55	324	17	2113	-12.25	9.89	-0.01
300	SLU 56	339	17	2145	-12.51	10.44	-0.01
300	SLU 57	346	17	2134	-12.54	10.77	-0.01
300	SLU 58	341	17	2138	-12.39	10.53	-0.01
300	SLU 59	348	17	2128	-12.42	10.86	-0.01
300	SLU 60	302	17	2210	-12.37	8.68	-0.01
300	SLU 61	309	17	2200	-12.4	9.01	-0.01
300	SLU 62	330	17	2218	-12.55	9.87	-0.01
300	SLU 63	337	17	2208	-12.58	10.21	-0.01
300	SLU 64	289	17	2103	-12.12	8.36	-0.01
300	SLU 65	300	17	2085	-12.17	8.92	-0.01
300	SLU 66	316	17	2117	-12.42	9.47	-0.01
300	SLU 67	323	17	2107	-12.45	9.8	-0.01
300	SLU 68	329	17	2093	-12.35	10.11	-0.01
300	SLU 69	344	17	2125	-12.61	10.66	-0.01
300	SLU 70	351	17	2114	-12.64	10.99	-0.01
300	SLU 71	345	17	2118	-12.49	10.75	-0.01
300	SLU 72	352	17	2108	-12.52	11.09	-0.01
300	SLU 73	340	18	2290	-12.99	10.17	-0.01
300	SLU 74	355	18	2321	-13.24	10.72	-0.01
300	SLU 75	362	18	2311	-13.27	11.06	-0.01
300	SLU 76	368	18	2297	-13.17	11.37	-0.01
300	SLU 77	383	19	2329	-13.42	11.92	-0.01
300	SLU 78	390	19	2318	-13.45	12.25	-0.01
300	SLU 79	384	18	2322	-13.3	12.01	-0.01
300	SLU 80	391	18	2312	-13.33	12.34	-0.01
300	SLU 81	345	18	2394	-13.28	10.16	-0.01
300	SLU 82	352	18	2384	-13.31	10.49	-0.01
300	SLU 83	373	19	2402	-13.47	11.35	-0.01
300	SLU 84	380	19	2392	-13.5	11.68	-0.01
300	SLE RA 1	213	13	1577	-9.12	6.11	-0.01
300	SLE RA 2	220	13	1566	-9.16	6.48	-0.01
300	SLE RA 3	230	13	1587	-9.32	6.84	-0.01
300	SLE RA 4	235	13	1580	-9.34	7.07	-0.01
300	SLE RA 5	239	13	1571	-9.28	7.27	-0.01
300	SLE RA 6	249	13	1592	-9.45	7.64	-0.01
300	SLE RA 7	254	13	1585	-9.47	7.86	-0.01
300	SLE RA 8	250	13	1587	-9.37	7.7	-0.01
300	SLE RA 9	255	13	1580	-9.39	7.92	-0.01
300	SLE RA 10	247	13	1702	-9.7	7.31	-0.01
300	SLE RA 11	257	14	1723	-9.87	7.68	-0.01
300	SLE RA 12	261	14	1716	-9.89	7.9	-0.01
300	SLE RA 13	265	14	1707	-9.82	8.11	-0.01
300	SLE RA 14	275	14	1728	-9.99	8.48	-0.01
300	SLE RA 15	280	14	1721	-10.01	8.7	-0.01
300	SLE RA 16	276	14	1723	-9.91	8.54	-0.01
300	SLE RA 17	281	14	1716	-9.93	8.76	-0.01
300	SLE RA 18	250	14	1772	-9.9	7.3	-0.01
300	SLE RA 19	255	14	1765	-9.92	7.53	-0.01
300	SLE RA 20	269	14	1777	-10.02	8.1	-0.01
300	SLE RA 21	274	14	1770	-10.04	8.32	-0.01
300	SLE FR 1	213	13	1577	-9.12	6.11	-0.01
300	SLE FR 2	214	13	1575	-9.13	6.18	-0.01
300	SLE FR 3	220	13	1579	-9.17	6.43	-0.01
300	SLE FR 4	225	13	1633	-9.36	6.54	-0.01
300	SLE FR 5	231	13	1638	-9.4	6.78	-0.01
300	SLE FR 6	231	13	1674	-9.51	6.7	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
300	SLE QP 1	213	13	1577	-9.12	6.11	-0.01
300	SLE QP 2	224	13	1635	-9.35	6.47	-0.01
300	SLD 1	833	32	1392	-27.01	33.61	0
300	SLD 2	833	32	1392	-27.01	33.61	0
300	SLD 3	947	11	1640	-5.41	38.49	0
300	SLD 4	947	11	1640	-5.41	38.49	0
300	SLD 5	233	50	1187	-47.4	7.22	0
300	SLD 6	233	50	1187	-47.4	7.22	0
300	SLD 7	614	-19	2013	24.59	23.46	-0.01
300	SLD 8	614	-19	2013	24.59	23.46	-0.01
300	SLD 9	-167	45	1258	-43.29	-10.53	0
300	SLD 10	-167	45	1258	-43.29	-10.53	0
300	SLD 11	215	-24	2084	28.7	5.71	-0.02
300	SLD 12	215	-24	2084	28.7	5.71	-0.02
300	SLD 13	-499	15	1631	-13.3	-25.56	-0.01
300	SLD 14	-499	15	1631	-13.3	-25.56	-0.01
300	SLD 15	-385	-6	1879	8.3	-20.68	-0.02
300	SLD 16	-385	-6	1879	8.3	-20.68	-0.02
300	SLV 1	1630	58	1057	-51.89	69.19	0.01
300	SLV 2	1630	58	1057	-51.89	69.19	0.01
300	SLV 3	1897	7	1647	0.01	80.52	0
300	SLV 4	1897	7	1647	0.01	80.52	0
300	SLV 5	242	103	566	-100.83	8.09	0.02
300	SLV 6	242	103	566	-100.83	8.09	0.02
300	SLV 7	1130	-65	2535	72.17	45.87	-0.02
300	SLV 8	1130	-65	2535	72.17	45.87	-0.02
300	SLV 9	-682	91	736	-90.88	-32.94	0.01
300	SLV 10	-682	91	736	-90.88	-32.94	0.01
300	SLV 11	206	-77	2705	82.13	4.84	-0.03
300	SLV 12	206	-77	2705	82.13	4.84	-0.03
300	SLV 13	-1449	19	1624	-18.72	-67.59	-0.01
300	SLV 14	-1449	19	1624	-18.72	-67.59	-0.01
300	SLV 15	-1183	-32	2214	33.19	-56.26	-0.03
300	SLV 16	-1183	-32	2214	33.19	-56.26	-0.03
301	SLU 1	279	14	1616	-10.84	14	0.01
301	SLU 2	288	14	1605	-10.86	14.28	0.01
301	SLU 3	310	15	1632	-11.21	15.39	0.01
301	SLU 4	315	15	1625	-11.23	15.56	0.01
301	SLU 5	319	15	1613	-11.09	15.67	0.01
301	SLU 6	341	15	1640	-11.44	16.78	0.01
301	SLU 7	347	15	1633	-11.45	16.95	0.01
301	SLU 8	342	15	1633	-11.29	16.77	0.01
301	SLU 9	347	15	1626	-11.3	16.94	0.01
301	SLU 10	334	16	1826	-11.91	16.56	0.01
301	SLU 11	357	16	1853	-12.26	17.67	0.01
301	SLU 12	362	16	1847	-12.27	17.84	0.01
301	SLU 13	366	16	1834	-12.13	17.94	0.01
301	SLU 14	388	17	1862	-12.48	19.06	0.01
301	SLU 15	393	17	1855	-12.5	19.22	0.01
301	SLU 16	388	16	1854	-12.34	19.04	0.01
301	SLU 17	394	16	1847	-12.35	19.21	0.01
301	SLU 18	345	16	1933	-12.33	17.25	0.01
301	SLU 19	351	16	1926	-12.35	17.42	0.01
301	SLU 20	377	17	1941	-12.56	18.64	0.01
301	SLU 21	382	17	1934	-12.57	18.81	0.01
301	SLU 22	331	16	1816	-12	16.51	0.01
301	SLU 23	340	16	1805	-12.02	16.8	0.01
301	SLU 24	363	16	1832	-12.37	17.91	0.01
301	SLU 25	368	16	1825	-12.39	18.08	0.01
301	SLU 26	372	16	1813	-12.25	18.18	0.01
301	SLU 27	394	17	1840	-12.6	19.29	0.01
301	SLU 28	399	17	1833	-12.61	19.46	0.01
301	SLU 29	394	17	1832	-12.45	19.28	0.01
301	SLU 30	399	17	1825	-12.46	19.45	0.01
301	SLU 31	387	17	2026	-13.07	19.07	0.01
301	SLU 32	409	18	2053	-13.42	20.18	0.01
301	SLU 33	415	18	2046	-13.43	20.35	0.01
301	SLU 34	418	18	2034	-13.29	20.46	0.01
301	SLU 35	441	18	2061	-13.64	21.57	0.01
301	SLU 36	446	18	2054	-13.66	21.74	0.01
301	SLU 37	441	18	2054	-13.49	21.56	0.01
301	SLU 38	446	18	2047	-13.51	21.73	0.01
301	SLU 39	398	18	2132	-13.49	19.77	0.01
301	SLU 40	403	18	2125	-13.51	19.94	0.01
301	SLU 41	429	18	2140	-13.72	21.15	0.01
301	SLU 42	435	18	2134	-13.73	21.32	0.01
301	SLU 43	344	18	2033	-13.69	17.34	0.01
301	SLU 44	353	18	2021	-13.72	17.62	0.01
301	SLU 45	376	19	2048	-14.07	18.73	0.01
301	SLU 46	381	19	2042	-14.08	18.9	0.01
301	SLU 47	385	18	2029	-13.94	19	0.01
301	SLU 48	407	19	2057	-14.29	20.12	0.01
301	SLU 49	412	19	2050	-14.3	20.29	0.01
301	SLU 50	407	19	2049	-14.14	20.11	0.01
301	SLU 51	413	19	2042	-14.16	20.27	0.01
301	SLU 52	400	20	2243	-14.76	19.9	0.01
301	SLU 53	422	20	2270	-15.11	21.01	0.01
301	SLU 54	428	20	2263	-15.13	21.18	0.01
301	SLU 55	431	20	2251	-14.99	21.28	0.01
301	SLU 56	454	20	2278	-15.34	22.39	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
301	SLU 57	459	20	2271	-15.35	22.56	0.01
301	SLU 58	454	20	2270	-15.19	22.38	0.01
301	SLU 59	459	20	2264	-15.2	22.55	0.01
301	SLU 60	411	20	2349	-15.19	20.59	0.01
301	SLU 61	416	20	2342	-15.2	20.76	0.01
301	SLU 62	442	21	2357	-15.41	21.97	0.01
301	SLU 63	448	21	2350	-15.43	22.14	0.01
301	SLU 64	397	20	2232	-14.85	19.85	0.01
301	SLU 65	406	20	2221	-14.88	20.13	0.01
301	SLU 66	428	20	2248	-15.22	21.25	0.01
301	SLU 67	433	20	2241	-15.24	21.42	0.01
301	SLU 68	437	20	2229	-15.1	21.52	0.01
301	SLU 69	460	21	2256	-15.45	22.63	0.01
301	SLU 70	465	21	2249	-15.46	22.8	0.01
301	SLU 71	460	20	2249	-15.3	22.62	0.01
301	SLU 72	465	20	2242	-15.32	22.79	0.01
301	SLU 73	452	21	2442	-15.92	22.41	0.01
301	SLU 74	475	22	2469	-16.27	23.52	0.01
301	SLU 75	480	22	2463	-16.29	23.69	0.01
301	SLU 76	484	21	2451	-16.15	23.79	0.01
301	SLU 77	506	22	2478	-16.5	24.91	0.01
301	SLU 78	512	22	2471	-16.51	25.08	0.01
301	SLU 79	506	22	2470	-16.35	24.9	0.01
301	SLU 80	512	22	2463	-16.36	25.07	0.01
301	SLU 81	464	22	2549	-16.35	23.1	0.01
301	SLU 82	469	22	2542	-16.36	23.27	0.01
301	SLU 83	495	22	2557	-16.57	24.49	0.01
301	SLU 84	500	22	2550	-16.59	24.66	0.01
301	SLE RA 1	294	15	1673	-11.17	14.72	0.01
301	SLE RA 2	300	15	1666	-11.19	14.91	0.01
301	SLE RA 3	315	15	1684	-11.42	15.65	0.01
301	SLE RA 4	318	15	1679	-11.43	15.76	0.01
301	SLE RA 5	321	15	1671	-11.34	15.83	0.01
301	SLE RA 6	336	15	1689	-11.57	16.57	0.01
301	SLE RA 7	339	15	1685	-11.58	16.68	0.01
301	SLE RA 8	336	15	1684	-11.47	16.56	0.01
301	SLE RA 9	339	15	1680	-11.48	16.68	0.01
301	SLE RA 10	331	16	1813	-11.88	16.42	0.01
301	SLE RA 11	346	16	1831	-12.12	17.17	0.01
301	SLE RA 12	349	16	1827	-12.13	17.28	0.01
301	SLE RA 13	352	16	1819	-12.03	17.35	0.01
301	SLE RA 14	367	16	1837	-12.27	18.09	0.01
301	SLE RA 15	370	16	1832	-12.28	18.2	0.01
301	SLE RA 16	367	16	1832	-12.17	18.08	0.01
301	SLE RA 17	370	16	1827	-12.18	18.19	0.01
301	SLE RA 18	338	16	1884	-12.17	16.89	0.01
301	SLE RA 19	342	16	1880	-12.18	17	0.01
301	SLE RA 20	359	16	1890	-12.32	17.81	0.01
301	SLE RA 21	363	16	1885	-12.33	17.92	0.01
301	SLE FR 1	294	15	1673	-11.17	14.72	0.01
301	SLE FR 2	295	15	1672	-11.17	14.76	0.01
301	SLE FR 3	302	15	1676	-11.23	15.09	0.01
301	SLE FR 4	308	15	1735	-11.47	15.41	0.01
301	SLE FR 5	316	15	1739	-11.53	15.74	0.01
301	SLE FR 6	316	16	1779	-11.67	15.8	0.01
301	SLE QP 1	294	15	1673	-11.17	14.72	0.01
301	SLE QP 2	307	15	1737	-11.47	15.37	0.01
301	SLD 1	943	36	1468	-31.76	42.51	0.02
301	SLD 2	943	36	1468	-31.76	42.51	0.02
301	SLD 3	1068	11	1783	-6.13	47.95	0
301	SLD 4	1068	11	1783	-6.13	47.95	0
301	SLD 5	307	61	1179	-56.42	15.26	0.04
301	SLD 6	307	61	1179	-56.42	15.26	0.04
301	SLD 7	726	-25	2228	29	33.39	-0.02
301	SLD 8	726	-25	2228	29	33.39	-0.02
301	SLD 9	-112	56	1245	-51.94	-2.66	0.04
301	SLD 10	-112	56	1245	-51.94	-2.66	0.04
301	SLD 11	307	-30	2295	33.49	15.48	-0.02
301	SLD 12	307	-30	2295	33.49	15.48	-0.02
301	SLD 13	-454	20	1691	-16.8	-17.21	0.01
301	SLD 14	-454	20	1691	-16.8	-17.21	0.01
301	SLD 15	-328	-6	2005	8.82	-11.77	-0.01
301	SLD 16	-328	-6	2005	8.82	-11.77	-0.01
301	SLV 1	1775	66	1094	-60.37	78.04	0.04
301	SLV 2	1775	66	1094	-60.37	78.04	0.04
301	SLV 3	2068	4	1846	1.2	90.72	0
301	SLV 4	2068	4	1846	1.2	90.72	0
301	SLV 5	304	125	403	-119.51	14.95	0.08
301	SLV 6	304	125	403	-119.51	14.95	0.08
301	SLV 7	1279	-82	2910	85.71	57.19	-0.06
301	SLV 8	1279	-82	2910	85.71	57.19	-0.06
301	SLV 9	-665	113	563	-108.64	-26.45	0.08
301	SLV 10	-665	113	563	-108.64	-26.45	0.08
301	SLV 11	311	-94	3070	96.58	15.78	-0.07
301	SLV 12	311	-94	3070	96.58	15.78	-0.07
301	SLV 13	-1454	27	1627	-24.13	-59.98	0.02
301	SLV 14	-1454	27	1627	-24.13	-59.98	0.02
301	SLV 15	-1161	-36	2379	37.43	-47.31	-0.03
301	SLV 16	-1161	-36	2379	37.43	-47.31	-0.03
302	SLU 1	291	17	1804	-12.52	9.64	0.04



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
302	SLU 2	300	16	1797	-12.52	10.07	0.04
302	SLU 3	325	17	1826	-12.94	11.03	0.04
302	SLU 4	330	17	1822	-12.95	11.29	0.04
302	SLU 5	334	17	1809	-12.78	11.48	0.04
302	SLU 6	358	17	1838	-13.2	12.44	0.04
302	SLU 7	364	17	1834	-13.2	12.7	0.04
302	SLU 8	358	17	1829	-13.03	12.46	0.04
302	SLU 9	363	17	1824	-13.03	12.72	0.04
302	SLU 10	346	18	2048	-13.8	11.61	0.05
302	SLU 11	371	19	2077	-14.22	12.57	0.05
302	SLU 12	376	19	2073	-14.23	12.83	0.05
302	SLU 13	379	19	2060	-14.06	13.02	0.05
302	SLU 14	404	19	2090	-14.48	13.98	0.05
302	SLU 15	409	19	2085	-14.48	14.24	0.05
302	SLU 16	403	19	2080	-14.31	14	0.05
302	SLU 17	409	19	2076	-14.31	14.26	0.05
302	SLU 18	357	19	2163	-14.34	11.83	0.05
302	SLU 19	362	19	2159	-14.35	12.09	0.05
302	SLU 20	390	19	2176	-14.6	13.25	0.05
302	SLU 21	395	19	2171	-14.6	13.5	0.05
302	SLU 22	345	18	2033	-13.91	11.54	0.05
302	SLU 23	354	18	2025	-13.91	11.97	0.05
302	SLU 24	378	19	2054	-14.33	12.93	0.05
302	SLU 25	384	19	2050	-14.34	13.19	0.05
302	SLU 26	387	19	2038	-14.17	13.38	0.05
302	SLU 27	412	19	2067	-14.59	14.34	0.05
302	SLU 28	417	19	2062	-14.6	14.6	0.05
302	SLU 29	411	19	2057	-14.42	14.36	0.05
302	SLU 30	417	19	2053	-14.42	14.62	0.05
302	SLU 31	399	20	2277	-15.19	13.51	0.05
302	SLU 32	424	21	2306	-15.61	14.47	0.05
302	SLU 33	429	21	2301	-15.62	14.73	0.05
302	SLU 34	433	20	2289	-15.45	14.92	0.05
302	SLU 35	457	21	2318	-15.87	15.88	0.05
302	SLU 36	463	21	2314	-15.87	16.14	0.05
302	SLU 37	457	21	2309	-15.7	15.9	0.05
302	SLU 38	462	21	2304	-15.7	16.16	0.05
302	SLU 39	410	21	2392	-15.73	13.74	0.05
302	SLU 40	415	21	2387	-15.74	14	0.05
302	SLU 41	443	21	2404	-15.99	15.15	0.05
302	SLU 42	449	21	2400	-15.99	15.41	0.05
302	SLU 43	361	21	2267	-15.79	11.87	0.05
302	SLU 44	370	21	2260	-15.8	12.31	0.05
302	SLU 45	394	21	2289	-16.22	13.27	0.05
302	SLU 46	400	21	2284	-16.23	13.53	0.05
302	SLU 47	403	21	2272	-16.06	13.72	0.05
302	SLU 48	427	22	2301	-16.48	14.68	0.05
302	SLU 49	433	22	2297	-16.48	14.94	0.05
302	SLU 50	427	21	2292	-16.3	14.7	0.05
302	SLU 51	432	21	2287	-16.31	14.96	0.05
302	SLU 52	415	22	2511	-17.08	13.84	0.06
302	SLU 53	440	23	2540	-17.5	14.81	0.06
302	SLU 54	445	23	2536	-17.51	15.07	0.06
302	SLU 55	448	23	2523	-17.34	15.26	0.06
302	SLU 56	473	23	2553	-17.76	16.22	0.06
302	SLU 57	478	23	2548	-17.76	16.48	0.06
302	SLU 58	473	23	2543	-17.58	16.24	0.06
302	SLU 59	478	23	2538	-17.59	16.49	0.06
302	SLU 60	426	23	2626	-17.62	14.07	0.06
302	SLU 61	431	23	2622	-17.63	14.33	0.06
302	SLU 62	459	24	2638	-17.88	15.48	0.06
302	SLU 63	464	24	2634	-17.88	15.74	0.06
302	SLU 64	414	23	2496	-17.18	13.78	0.06
302	SLU 65	423	23	2488	-17.19	14.21	0.06
302	SLU 66	447	23	2517	-17.61	15.17	0.06
302	SLU 67	453	23	2513	-17.62	15.43	0.06
302	SLU 68	456	23	2500	-17.45	15.62	0.06
302	SLU 69	481	24	2530	-17.87	16.58	0.06
302	SLU 70	486	24	2525	-17.87	16.84	0.06
302	SLU 71	480	23	2520	-17.7	16.6	0.06
302	SLU 72	486	23	2516	-17.7	16.86	0.06
302	SLU 73	469	24	2740	-18.47	15.75	0.06
302	SLU 74	493	25	2769	-18.89	16.71	0.06
302	SLU 75	499	25	2764	-18.9	16.97	0.06
302	SLU 76	502	25	2752	-18.73	17.16	0.06
302	SLU 77	526	25	2781	-19.15	18.12	0.06
302	SLU 78	532	25	2777	-19.15	18.38	0.06
302	SLU 79	526	25	2771	-18.97	18.14	0.06
302	SLU 80	531	25	2767	-18.98	18.4	0.06
302	SLU 81	479	25	2855	-19.01	15.98	0.06
302	SLU 82	484	25	2850	-19.02	16.23	0.06
302	SLU 83	512	25	2867	-19.27	17.39	0.06
302	SLU 84	518	25	2863	-19.27	17.65	0.06
302	SLE RA 1	307	17	1869	-12.91	10.18	0.04
302	SLE RA 2	313	17	1865	-12.92	10.47	0.04
302	SLE RA 3	329	17	1884	-13.2	11.11	0.04
302	SLE RA 4	333	17	1881	-13.2	11.28	0.04
302	SLE RA 5	335	17	1873	-13.09	11.41	0.04
302	SLE RA 6	351	18	1892	-13.37	12.05	0.04
302	SLE RA 7	355	18	1889	-13.37	12.22	0.04



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
302	SLE RA 8	351	17	1886	-13.25	12.06	0.04
302	SLE RA 9	355	17	1883	-13.26	12.23	0.04
302	SLE RA 10	343	18	2032	-13.77	11.49	0.05
302	SLE RA 11	359	19	2052	-14.05	12.13	0.05
302	SLE RA 12	363	19	2049	-14.05	12.31	0.05
302	SLE RA 13	365	18	2040	-13.94	12.43	0.05
302	SLE RA 14	382	19	2060	-14.22	13.08	0.05
302	SLE RA 15	385	19	2057	-14.22	13.25	0.05
302	SLE RA 16	381	19	2053	-14.11	13.09	0.05
302	SLE RA 17	385	19	2050	-14.11	13.26	0.05
302	SLE RA 18	350	19	2109	-14.13	11.65	0.05
302	SLE RA 19	354	19	2106	-14.13	11.82	0.05
302	SLE RA 20	372	19	2117	-14.3	12.59	0.05
302	SLE RA 21	376	19	2114	-14.3	12.76	0.05
302	SLE FR 1	307	17	1869	-12.91	10.18	0.04
302	SLE FR 2	308	17	1868	-12.91	10.24	0.04
302	SLE FR 3	316	17	1873	-12.98	10.56	0.04
302	SLE FR 4	321	18	1940	-13.28	10.68	0.04
302	SLE FR 5	329	18	1945	-13.35	11	0.04
302	SLE FR 6	328	18	1989	-13.52	10.91	0.04
302	SLE QP 1	307	17	1869	-12.91	10.18	0.04
302	SLE QP 2	320	18	1941	-13.28	10.62	0.04
302	SLD 1	982	40	1870	-35.12	39.85	0.1
302	SLD 2	982	40	1870	-35.12	39.85	0.1
302	SLD 3	1113	12	2222	-7.25	45.46	0.03
302	SLD 4	1113	12	2222	-7.25	45.46	0.03
302	SLD 5	319	68	1386	-62.1	10.87	0.16
302	SLD 6	319	68	1386	-62.1	10.87	0.16
302	SLD 7	757	-27	2559	30.8	29.59	-0.06
302	SLD 8	757	-27	2559	30.8	29.59	-0.06
302	SLD 9	-117	63	1323	-57.36	-8.35	0.15
302	SLD 10	-117	63	1323	-57.36	-8.35	0.15
302	SLD 11	320	-33	2497	35.54	10.37	-0.07
302	SLD 12	320	-33	2497	35.54	10.37	-0.07
302	SLD 13	-473	23	1661	-19.31	-24.22	0.06
302	SLD 14	-473	23	1661	-19.31	-24.22	0.06
302	SLD 15	-342	-5	2013	8.56	-18.61	-0.01
302	SLD 16	-342	-5	2013	8.56	-18.61	-0.01
302	SLV 1	1848	72	1772	-65.87	78.13	0.17
302	SLV 2	1848	72	1772	-65.87	78.13	0.17
302	SLV 3	2155	4	2613	1.07	91.23	0.01
302	SLV 4	2155	4	2613	1.07	91.23	0.01
302	SLV 5	314	138	615	-130.59	11	0.32
302	SLV 6	314	138	615	-130.59	11	0.32
302	SLV 7	1335	-91	3418	92.56	54.67	-0.21
302	SLV 8	1335	-91	3418	92.56	54.67	-0.21
302	SLV 9	-695	126	465	-119.11	-33.43	0.29
302	SLV 10	-695	126	465	-119.11	-33.43	0.29
302	SLV 11	326	-103	3267	104.03	10.24	-0.24
302	SLV 12	326	-103	3267	104.03	10.24	-0.24
302	SLV 13	-1515	31	1270	-27.63	-69.99	0.08
302	SLV 14	-1515	31	1270	-27.63	-69.99	0.08
302	SLV 15	-1209	-37	2111	39.32	-56.89	-0.08
302	SLV 16	-1209	-37	2111	39.32	-56.89	-0.08
303	SLU 1	390	19	2087	-14.05	16.75	0.08
303	SLU 2	398	19	2083	-14.05	17	0.08
303	SLU 3	427	20	2118	-14.52	18.29	0.09
303	SLU 4	431	20	2116	-14.52	18.45	0.09
303	SLU 5	432	20	2101	-14.33	18.46	0.09
303	SLU 6	461	20	2136	-14.81	19.75	0.09
303	SLU 7	465	20	2134	-14.81	19.91	0.09
303	SLU 8	459	20	2123	-14.61	19.67	0.09
303	SLU 9	463	20	2121	-14.61	19.82	0.09
303	SLU 10	454	21	2378	-15.57	19.43	0.09
303	SLU 11	484	22	2413	-16.05	20.72	0.1
303	SLU 12	488	22	2411	-16.05	20.87	0.1
303	SLU 13	489	22	2396	-15.85	20.89	0.1
303	SLU 14	518	23	2431	-16.33	22.18	0.1
303	SLU 15	522	23	2429	-16.33	22.33	0.1
303	SLU 16	515	22	2418	-16.14	22.09	0.1
303	SLU 17	520	22	2416	-16.14	22.24	0.1
303	SLU 18	472	22	2509	-16.23	20.21	0.1
303	SLU 19	476	22	2506	-16.23	20.36	0.1
303	SLU 20	506	23	2527	-16.51	21.67	0.1
303	SLU 21	510	23	2524	-16.51	21.82	0.1
303	SLU 22	455	22	2358	-15.68	19.51	0.09
303	SLU 23	462	22	2354	-15.68	19.77	0.09
303	SLU 24	492	22	2389	-16.15	21.06	0.1
303	SLU 25	496	22	2386	-16.15	21.21	0.1
303	SLU 26	496	22	2372	-15.96	21.23	0.1
303	SLU 27	526	23	2407	-16.43	22.52	0.1
303	SLU 28	530	23	2404	-16.43	22.67	0.1
303	SLU 29	523	22	2394	-16.24	22.43	0.1
303	SLU 30	528	22	2391	-16.24	22.59	0.1
303	SLU 31	519	24	2648	-17.2	22.19	0.1
303	SLU 32	549	24	2684	-17.67	23.48	0.11
303	SLU 33	553	24	2681	-17.67	23.64	0.11
303	SLU 34	553	24	2666	-17.48	23.65	0.11
303	SLU 35	583	25	2702	-17.95	24.94	0.11
303	SLU 36	587	25	2699	-17.95	25.1	0.11



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
		x	y	z		x	y	z	
303	SLU 37	580	25	2689		-17.76	24.85		0.11
303	SLU 38	585	25	2686		-17.76	25.01		0.11
303	SLU 39	537	25	2779		-17.85	22.98		0.11
303	SLU 40	541	25	2777		-17.85	23.13		0.11
303	SLU 41	571	25	2797		-18.13	24.43		0.11
303	SLU 42	575	25	2795		-18.13	24.59		0.11
303	SLU 43	485	24	2621		-17.71	20.82		0.11
303	SLU 44	492	24	2617		-17.71	21.08		0.11
303	SLU 45	521	25	2652		-18.18	22.37		0.11
303	SLU 46	526	25	2649		-18.18	22.52		0.11
303	SLU 47	526	25	2635		-17.99	22.54		0.11
303	SLU 48	556	25	2670		-18.46	23.83		0.11
303	SLU 49	560	25	2667		-18.46	23.98		0.11
303	SLU 50	553	25	2657		-18.27	23.74		0.11
303	SLU 51	558	25	2654		-18.27	23.9		0.11
303	SLU 52	549	27	2911		-19.23	23.5		0.12
303	SLU 53	578	27	2947		-19.71	24.79		0.12
303	SLU 54	583	27	2944		-19.71	24.95		0.12
303	SLU 55	583	27	2929		-19.51	24.96		0.12
303	SLU 56	612	28	2965		-19.99	26.25		0.12
303	SLU 57	617	28	2962		-19.99	26.41		0.12
303	SLU 58	610	27	2952		-19.79	26.17		0.12
303	SLU 59	615	27	2949		-19.79	26.32		0.12
303	SLU 60	567	27	3042		-19.88	24.29		0.12
303	SLU 61	571	27	3040		-19.88	24.44		0.12
303	SLU 62	601	28	3060		-20.17	25.75		0.12
303	SLU 63	605	28	3058		-20.17	25.9		0.12
303	SLU 64	550	27	2891		-19.33	23.59		0.12
303	SLU 65	557	27	2887		-19.33	23.85		0.12
303	SLU 66	586	27	2922		-19.81	25.14		0.12
303	SLU 67	591	27	2920		-19.81	25.29		0.12
303	SLU 68	591	27	2905		-19.61	25.31		0.12
303	SLU 69	620	28	2940		-20.09	26.59		0.12
303	SLU 70	625	28	2938		-20.09	26.75		0.12
303	SLU 71	618	27	2927		-19.9	26.51		0.12
303	SLU 72	623	27	2925		-19.9	26.66		0.12
303	SLU 73	614	29	3182		-20.86	26.27		0.13
303	SLU 74	643	30	3217		-21.33	27.56		0.13
303	SLU 75	648	29	3215		-21.33	27.71		0.13
303	SLU 76	648	29	3200		-21.14	27.73		0.13
303	SLU 77	677	30	3235		-21.61	29.02		0.13
303	SLU 78	682	30	3233		-21.61	29.17		0.13
303	SLU 79	675	30	3222		-21.42	28.93		0.13
303	SLU 80	680	30	3220		-21.42	29.08		0.13
303	SLU 81	632	30	3313		-21.51	27.05		0.13
303	SLU 82	636	30	3310		-21.51	27.21		0.13
303	SLU 83	666	30	3331		-21.79	28.51		0.13
303	SLU 84	670	30	3328		-21.79	28.66		0.13
303	SLE RA 1	409	20	2165		-14.51	17.54		0.09
303	SLE RA 2	414	20	2162		-14.51	17.71		0.09
303	SLE RA 3	433	20	2185		-14.83	18.57		0.09
303	SLE RA 4	436	20	2184		-14.83	18.67		0.09
303	SLE RA 5	436	20	2174		-14.7	18.68		0.09
303	SLE RA 6	456	21	2197		-15.02	19.54		0.09
303	SLE RA 7	459	21	2196		-15.02	19.64		0.09
303	SLE RA 8	454	21	2189		-14.89	19.48		0.09
303	SLE RA 9	457	21	2187		-14.89	19.59		0.09
303	SLE RA 10	452	21	2358		-15.53	19.32		0.09
303	SLE RA 11	471	22	2382		-15.85	20.18		0.1
303	SLE RA 12	474	22	2380		-15.85	20.29		0.1
303	SLE RA 13	474	22	2370		-15.72	20.3		0.1
303	SLE RA 14	494	22	2394		-16.03	21.16		0.1
303	SLE RA 15	497	22	2392		-16.03	21.26		0.1
303	SLE RA 16	492	22	2385		-15.9	21.1		0.1
303	SLE RA 17	495	22	2383		-15.9	21.2		0.1
303	SLE RA 18	463	22	2445		-15.97	19.85		0.1
303	SLE RA 19	466	22	2444		-15.97	19.95		0.1
303	SLE RA 20	486	22	2457		-16.15	20.82		0.1
303	SLE RA 21	489	22	2456		-16.15	20.92		0.1
303	SLE FR 1	409	20	2165		-14.51	17.54		0.09
303	SLE FR 2	410	20	2164		-14.51	17.57		0.09
303	SLE FR 3	418	20	2169		-14.59	17.93		0.09
303	SLE FR 4	426	21	2248		-14.95	18.27		0.09
303	SLE FR 5	434	21	2254		-15.02	18.62		0.09
303	SLE FR 6	436	21	2305		-15.24	18.69		0.09
303	SLE QP 1	409	20	2165		-14.51	17.54		0.09
303	SLE QP 2	425	21	2249		-14.95	18.23		0.09
303	SLD 1	1062	44	2191		-37.12	45.34		0.07
303	SLD 2	1062	44	2191		-37.12	45.34		0.07
303	SLD 3	1195	15	2547		-8.98	51.2		0.18
303	SLD 4	1195	15	2547		-8.98	51.2		0.18
303	SLD 5	413	72	1692		-64.29	17.48		-0.09
303	SLD 6	413	72	1692		-64.29	17.48		-0.09
303	SLD 7	859	-25	2878		29.53	37.01		0.29
303	SLD 8	859	-25	2878		29.53	37.01		0.29
303	SLD 9	-9	66	1620		-59.43	-0.55		-0.11
303	SLD 10	-9	66	1620		-59.43	-0.55		-0.11
303	SLD 11	437	-30	2806		34.39	18.99		0.27
303	SLD 12	437	-30	2806		34.39	18.99		0.27
303	SLD 13	-345	26	1951		-20.92	-14.74		0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
303	SLD 14	-345	26	1951	-20.92	-14.74	0
303	SLD 15	-211	-3	2307	7.22	-8.88	0.11
303	SLD 16	-211	-3	2307	7.22	-8.88	0.11
303	SLV 1	1895	77	2109	-68.28	80.81	0.04
303	SLV 2	1895	77	2109	-68.28	80.81	0.04
303	SLV 3	2207	8	2958	-0.68	94.52	0.32
303	SLV 4	2207	8	2958	-0.68	94.52	0.32
303	SLV 5	392	143	920	-133.47	16.21	-0.34
303	SLV 6	392	143	920	-133.47	16.21	-0.34
303	SLV 7	1434	-89	3748	91.85	61.92	0.57
303	SLV 8	1434	-89	3748	91.85	61.92	0.57
303	SLV 9	-584	130	749	-121.75	-25.46	-0.39
303	SLV 10	-584	130	749	-121.75	-25.46	-0.39
303	SLV 11	459	-102	3578	103.57	20.26	0.52
303	SLV 12	459	-102	3578	103.57	20.26	0.52
303	SLV 13	-1357	34	1540	-29.22	-58.06	-0.14
303	SLV 14	-1357	34	1540	-29.22	-58.06	-0.14
303	SLV 15	-1044	-36	2388	38.38	-44.35	0.14
303	SLV 16	-1044	-36	2388	38.38	-44.35	0.14
304	SLU 1	428	22	2502	-15.15	15.14	0.11
304	SLU 2	435	22	2499	-15.14	15.45	0.11
304	SLU 3	465	23	2545	-15.66	16.7	0.12
304	SLU 4	469	23	2543	-15.65	16.88	0.12
304	SLU 5	469	23	2524	-15.44	16.91	0.12
304	SLU 6	499	24	2570	-15.95	18.16	0.12
304	SLU 7	503	24	2568	-15.95	18.35	0.12
304	SLU 8	496	23	2551	-15.75	18.07	0.12
304	SLU 9	500	23	2550	-15.74	18.25	0.12
304	SLU 10	494	25	2856	-16.88	17.51	0.13
304	SLU 11	524	26	2902	-17.39	18.76	0.13
304	SLU 12	528	26	2900	-17.38	18.94	0.13
304	SLU 13	528	25	2881	-17.17	18.97	0.13
304	SLU 14	558	26	2926	-17.69	20.22	0.14
304	SLU 15	562	26	2925	-17.68	20.41	0.13
304	SLU 16	555	26	2908	-17.48	20.13	0.13
304	SLU 17	559	26	2906	-17.47	20.31	0.13
304	SLU 18	513	26	3012	-17.63	18.09	0.13
304	SLU 19	516	26	3010	-17.62	18.27	0.13
304	SLU 20	546	27	3036	-17.92	19.55	0.14
304	SLU 21	550	27	3035	-17.92	19.73	0.14
304	SLU 22	496	25	2832	-16.97	17.63	0.13
304	SLU 23	503	25	2829	-16.96	17.94	0.13
304	SLU 24	533	26	2875	-17.47	19.19	0.13
304	SLU 25	537	26	2873	-17.47	19.37	0.13
304	SLU 26	537	26	2854	-17.26	19.4	0.13
304	SLU 27	567	26	2899	-17.77	20.65	0.14
304	SLU 28	571	26	2898	-17.77	20.83	0.14
304	SLU 29	564	26	2881	-17.56	20.56	0.13
304	SLU 30	568	26	2879	-17.56	20.74	0.13
304	SLU 31	562	28	3186	-18.69	20	0.14
304	SLU 32	592	29	3232	-19.21	21.25	0.15
304	SLU 33	596	29	3230	-19.2	21.43	0.15
304	SLU 34	596	28	3210	-18.99	21.46	0.15
304	SLU 35	626	29	3256	-19.5	22.71	0.15
304	SLU 36	630	29	3254	-19.5	22.89	0.15
304	SLU 37	623	29	3238	-19.3	22.62	0.15
304	SLU 38	627	29	3236	-19.29	22.8	0.15
304	SLU 39	581	29	3342	-19.44	20.57	0.15
304	SLU 40	584	29	3340	-19.44	20.76	0.15
304	SLU 41	614	29	3366	-19.74	22.04	0.15
304	SLU 42	618	29	3365	-19.74	22.22	0.15
304	SLU 43	533	28	3140	-19.07	18.83	0.14
304	SLU 44	540	28	3137	-19.07	19.14	0.14
304	SLU 45	571	29	3183	-19.58	20.39	0.15
304	SLU 46	574	29	3181	-19.57	20.57	0.15
304	SLU 47	574	29	3162	-19.36	20.6	0.15
304	SLU 48	604	29	3207	-19.88	21.85	0.15
304	SLU 49	608	29	3206	-19.87	22.04	0.15
304	SLU 50	601	29	3189	-19.67	21.76	0.15
304	SLU 51	605	29	3187	-19.66	21.94	0.15
304	SLU 52	599	31	3494	-20.8	21.2	0.16
304	SLU 53	630	32	3539	-21.31	22.45	0.16
304	SLU 54	633	32	3538	-21.31	22.63	0.16
304	SLU 55	633	31	3518	-21.1	22.66	0.16
304	SLU 56	663	32	3564	-21.61	23.91	0.16
304	SLU 57	667	32	3562	-21.6	24.1	0.16
304	SLU 58	660	32	3546	-21.4	23.82	0.16
304	SLU 59	664	32	3544	-21.4	24	0.16
304	SLU 60	618	32	3649	-21.55	21.78	0.16
304	SLU 61	622	32	3648	-21.54	21.96	0.16
304	SLU 62	652	32	3674	-21.85	23.24	0.17
304	SLU 63	655	32	3672	-21.84	23.42	0.17
304	SLU 64	601	31	3470	-20.89	21.32	0.16
304	SLU 65	608	31	3467	-20.88	21.63	0.16
304	SLU 66	638	32	3512	-21.39	22.88	0.16
304	SLU 67	642	32	3511	-21.39	23.06	0.16
304	SLU 68	642	31	3491	-21.18	23.09	0.16
304	SLU 69	672	32	3537	-21.69	24.34	0.17
304	SLU 70	676	32	3535	-21.69	24.52	0.16
304	SLU 71	669	32	3519	-21.48	24.25	0.16



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
		Ind.	N.br.	x	y	z	x	y	z
304	SLU 72		673		32	3517	-21.48	24.43	0.16
304	SLU 73		667		34	3823	-22.62	23.69	0.17
304	SLU 74		697		34	3869	-23.13	24.94	0.18
304	SLU 75		701		34	3867	-23.12	25.12	0.18
304	SLU 76		701		34	3848	-22.91	25.15	0.17
304	SLU 77		731		35	3894	-23.43	26.4	0.18
304	SLU 78		735		35	3892	-23.42	26.58	0.18
304	SLU 79		728		34	3876	-23.22	26.31	0.18
304	SLU 80		732		34	3874	-23.21	26.49	0.18
304	SLU 81		686		35	3979	-23.37	24.26	0.18
304	SLU 82		690		35	3977	-23.36	24.45	0.18
304	SLU 83		720		35	4004	-23.66	25.73	0.18
304	SLU 84		723		35	4002	-23.66	25.91	0.18
304	SLE RA 1		448		23	2596	-15.67	15.85	0.12
304	SLE RA 2		452		23	2594	-15.66	16.06	0.12
304	SLE RA 3		472		24	2625	-16.01	16.89	0.12
304	SLE RA 4		475		24	2624	-16	17.01	0.12
304	SLE RA 5		475		23	2611	-15.86	17.03	0.12
304	SLE RA 6		495		24	2641	-16.2	17.87	0.12
304	SLE RA 7		498		24	2640	-16.2	17.99	0.12
304	SLE RA 8		493		24	2629	-16.07	17.8	0.12
304	SLE RA 9		495		24	2628	-16.06	17.93	0.12
304	SLE RA 10		491		25	2832	-16.82	17.43	0.13
304	SLE RA 11		512		25	2863	-17.16	18.26	0.13
304	SLE RA 12		514		25	2862	-17.16	18.39	0.13
304	SLE RA 13		514		25	2849	-17.02	18.41	0.13
304	SLE RA 14		534		26	2879	-17.36	19.24	0.13
304	SLE RA 15		537		26	2878	-17.36	19.36	0.13
304	SLE RA 16		532		26	2867	-17.22	19.18	0.13
304	SLE RA 17		535		26	2866	-17.22	19.3	0.13
304	SLE RA 18		504		26	2936	-17.32	17.82	0.13
304	SLE RA 19		506		26	2935	-17.32	17.94	0.13
304	SLE RA 20		526		26	2953	-17.52	18.79	0.13
304	SLE RA 21		529		26	2951	-17.52	18.91	0.13
304	SLE FR 1		448		23	2596	-15.67	15.85	0.12
304	SLE FR 2		449		23	2596	-15.67	15.89	0.12
304	SLE FR 3		457		23	2603	-15.75	16.24	0.12
304	SLE FR 4		465		24	2698	-16.16	16.48	0.12
304	SLE FR 5		474		24	2705	-16.24	16.83	0.12
304	SLE FR 6		476		24	2766	-16.49	16.83	0.13
304	SLE QP 1		448		23	2596	-15.67	15.85	0.12
304	SLE QP 2		465		24	2698	-16.16	16.44	0.12
304	SLD 1		1078		20	2673	-37.35	44.1	0.11
304	SLD 2		1078		20	2673	-37.35	44.1	0.11
304	SLD 3		1210		47	2998	-10.92	49.84	0.23
304	SLD 4		1210		47	2998	-10.92	49.84	0.23
304	SLD 5		449		-18	2197	-62.61	16.03	-0.07
304	SLD 6		449		-18	2197	-62.61	16.03	-0.07
304	SLD 7		888		72	3282	25.5	35.17	0.34
304	SLD 8		888		72	3282	25.5	35.17	0.34
304	SLD 9		41		-24	2115	-57.83	-2.28	-0.09
304	SLD 10		41		-24	2115	-57.83	-2.28	-0.09
304	SLD 11		480		66	3200	30.28	16.85	0.31
304	SLD 12		480		66	3200	30.28	16.85	0.31
304	SLD 13		-280		1	2399	-21.41	-16.95	0.02
304	SLD 14		-280		1	2399	-21.41	-16.95	0.02
304	SLD 15		-149		28	2724	5.02	-11.21	0.14
304	SLD 16		-149		28	2724	5.02	-11.21	0.14
304	SLV 1		1881		14	2635	-67.03	80.29	0.09
304	SLV 2		1881		14	2635	-67.03	80.29	0.09
304	SLV 3		2189		79	3408	-3.56	93.73	0.38
304	SLV 4		2189		79	3408	-3.56	93.73	0.38
304	SLV 5		422		-77	1506	-127.7	15.21	-0.33
304	SLV 6		422		-77	1506	-127.7	15.21	-0.33
304	SLV 7		1449		139	4085	83.89	60.02	0.64
304	SLV 8		1449		139	4085	83.89	60.02	0.64
304	SLV 9		-520		-91	1312	-116.22	-27.13	-0.4
304	SLV 10		-520		-91	1312	-116.22	-27.13	-0.4
304	SLV 11		507		125	3891	95.37	17.68	0.58
304	SLV 12		507		125	3891	95.37	17.68	0.58
304	SLV 13		-1260		-31	1988	-28.77	-60.85	-0.13
304	SLV 14		-1260		-31	1988	-28.77	-60.85	-0.13
304	SLV 15		-952		34	2762	34.71	-47.4	0.16
304	SLV 16		-952		34	2762	34.71	-47.4	0.16
305	SLU 1		471		24	3020	-15.18	18.6	0.12
305	SLU 2		476		24	3018	-15.17	18.81	0.12
305	SLU 3		507		25	3076	-15.68	20.14	0.12
305	SLU 4		510		25	3075	-15.67	20.26	0.12
305	SLU 5		508		24	3048	-15.46	20.17	0.12
305	SLU 6		539		25	3107	-15.98	21.5	0.13
305	SLU 7		542		25	3105	-15.97	21.62	0.13
305	SLU 8		535		25	3081	-15.77	21.33	0.12
305	SLU 9		538		25	3080	-15.76	21.45	0.12
305	SLU 10		537		27	3450	-16.98	21.18	0.13
305	SLU 11		568		28	3508	-17.49	22.51	0.14
305	SLU 12		571		28	3507	-17.48	22.64	0.14
305	SLU 13		569		27	3480	-17.27	22.55	0.14
305	SLU 14		600		28	3539	-17.79	23.88	0.14
305	SLU 15		603		28	3537	-17.78	24	0.14
305	SLU 16		596		28	3513	-17.58	23.71	0.14



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
305	SLU 17	599	28	3512	-17.57	23.83	0.14
305	SLU 18	558	28	3637	-17.77	22	0.14
305	SLU 19	561	28	3636	-17.76	22.12	0.14
305	SLU 20	590	29	3668	-18.06	23.36	0.14
305	SLU 21	593	29	3666	-18.05	23.48	0.14
305	SLU 22	541	27	3422	-17.05	21.4	0.14
305	SLU 23	546	27	3419	-17.04	21.6	0.14
305	SLU 24	578	28	3478	-17.55	22.93	0.14
305	SLU 25	581	28	3476	-17.55	23.06	0.14
305	SLU 26	578	27	3450	-17.33	22.97	0.14
305	SLU 27	610	28	3508	-17.85	24.3	0.14
305	SLU 28	613	28	3507	-17.84	24.42	0.14
305	SLU 29	605	28	3483	-17.64	24.12	0.14
305	SLU 30	608	28	3481	-17.63	24.25	0.14
305	SLU 31	607	30	3851	-18.85	23.98	0.15
305	SLU 32	639	31	3910	-19.37	25.31	0.15
305	SLU 33	642	31	3908	-19.36	25.43	0.15
305	SLU 34	639	30	3882	-19.15	25.34	0.15
305	SLU 35	671	31	3940	-19.66	26.67	0.16
305	SLU 36	674	31	3939	-19.65	26.8	0.16
305	SLU 37	666	31	3915	-19.45	26.5	0.16
305	SLU 38	669	31	3913	-19.45	26.63	0.16
305	SLU 39	628	31	4039	-19.64	24.79	0.16
305	SLU 40	631	31	4037	-19.63	24.92	0.16
305	SLU 41	660	32	4069	-19.94	26.16	0.16
305	SLU 42	663	32	4068	-19.93	26.28	0.16
305	SLU 43	588	30	3789	-19.09	23.22	0.15
305	SLU 44	593	30	3786	-19.08	23.43	0.15
305	SLU 45	625	31	3845	-19.59	24.76	0.15
305	SLU 46	628	31	3843	-19.58	24.88	0.15
305	SLU 47	625	30	3817	-19.37	24.79	0.15
305	SLU 48	657	31	3875	-19.89	26.12	0.16
305	SLU 49	660	31	3874	-19.88	26.24	0.16
305	SLU 50	652	31	3850	-19.68	25.95	0.16
305	SLU 51	655	31	3848	-19.67	26.07	0.16
305	SLU 52	654	33	4218	-20.89	25.8	0.17
305	SLU 53	685	34	4277	-21.4	27.14	0.17
305	SLU 54	688	34	4275	-21.4	27.26	0.17
305	SLU 55	686	33	4249	-21.18	27.17	0.17
305	SLU 56	717	34	4307	-21.7	28.5	0.17
305	SLU 57	720	34	4306	-21.69	28.62	0.17
305	SLU 58	713	34	4282	-21.49	28.33	0.17
305	SLU 59	716	34	4280	-21.48	28.45	0.17
305	SLU 60	675	34	4406	-21.68	26.62	0.17
305	SLU 61	678	34	4404	-21.67	26.74	0.17
305	SLU 62	707	35	4436	-21.97	27.98	0.17
305	SLU 63	710	35	4435	-21.96	28.11	0.17
305	SLU 64	658	33	4190	-20.96	26.02	0.17
305	SLU 65	663	33	4188	-20.95	26.22	0.17
305	SLU 66	695	34	4246	-21.47	27.56	0.17
305	SLU 67	698	34	4245	-21.46	27.68	0.17
305	SLU 68	695	33	4218	-21.25	27.59	0.17
305	SLU 69	727	34	4277	-21.76	28.92	0.17
305	SLU 70	730	34	4275	-21.75	29.04	0.17
305	SLU 71	722	34	4251	-21.55	28.75	0.17
305	SLU 72	725	34	4250	-21.55	28.87	0.17
305	SLU 73	724	36	4620	-22.76	28.6	0.18
305	SLU 74	756	37	4678	-23.28	29.93	0.19
305	SLU 75	759	37	4676	-23.27	30.06	0.19
305	SLU 76	756	36	4650	-23.06	29.96	0.18
305	SLU 77	788	37	4709	-23.57	31.3	0.19
305	SLU 78	791	37	4707	-23.56	31.42	0.19
305	SLU 79	783	37	4683	-23.36	31.12	0.19
305	SLU 80	786	37	4682	-23.36	31.25	0.19
305	SLU 81	745	37	4807	-23.55	29.42	0.19
305	SLU 82	748	37	4806	-23.54	29.54	0.19
305	SLU 83	777	38	4838	-23.85	30.78	0.19
305	SLU 84	780	38	4836	-23.84	30.9	0.19
305	SLE RA 1	491	25	3135	-15.71	19.4	0.12
305	SLE RA 2	494	25	3133	-15.71	19.54	0.12
305	SLE RA 3	515	25	3172	-16.05	20.42	0.13
305	SLE RA 4	517	25	3171	-16.04	20.51	0.13
305	SLE RA 5	516	25	3154	-15.9	20.45	0.13
305	SLE RA 6	537	26	3193	-16.25	21.33	0.13
305	SLE RA 7	539	26	3192	-16.24	21.41	0.13
305	SLE RA 8	534	25	3176	-16.11	21.22	0.13
305	SLE RA 9	536	25	3175	-16.1	21.3	0.13
305	SLE RA 10	535	27	3421	-16.91	21.12	0.13
305	SLE RA 11	556	27	3460	-17.26	22.01	0.14
305	SLE RA 12	558	27	3459	-17.25	22.09	0.14
305	SLE RA 13	556	27	3442	-17.11	22.03	0.14
305	SLE RA 14	577	28	3481	-17.45	22.92	0.14
305	SLE RA 15	579	27	3480	-17.45	23	0.14
305	SLE RA 16	574	27	3464	-17.31	22.8	0.14
305	SLE RA 17	576	27	3463	-17.31	22.89	0.14
305	SLE RA 18	549	28	3546	-17.44	21.66	0.14
305	SLE RA 19	551	28	3545	-17.43	21.75	0.14
305	SLE RA 20	570	28	3567	-17.64	22.57	0.14
305	SLE RA 21	572	28	3566	-17.63	22.66	0.14
305	SLE FR 1	491	25	3135	-15.71	19.4	0.12



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
305	SLE FR 2	492	25	3135	-15.71	19.43	0.12
305	SLE FR 3	499	25	3143	-15.79	19.76	0.13
305	SLE FR 4	509	26	3258	-16.23	20.11	0.13
305	SLE FR 5	517	26	3267	-16.31	20.44	0.13
305	SLE FR 6	520	26	3341	-16.58	20.53	0.13
305	SLE QP 1	491	25	3135	-15.71	19.4	0.12
305	SLE QP 2	508	26	3258	-16.23	20.08	0.13
305	SLD 1	1060	23	3252	-35.04	43.95	0.12
305	SLD 2	1060	23	3252	-35.04	43.95	0.12
305	SLD 3	1185	46	3528	-12.16	49.54	0.23
305	SLD 4	1185	46	3528	-12.16	49.54	0.23
305	SLD 5	484	-10	2838	-56.58	18.77	-0.03
305	SLD 6	484	-10	2838	-56.58	18.77	-0.03
305	SLD 7	901	67	3758	19.7	37.39	0.31
305	SLD 8	901	67	3758	19.7	37.39	0.31
305	SLD 9	115	-15	2759	-52.16	2.77	-0.05
305	SLD 10	115	-15	2759	-52.16	2.77	-0.05
305	SLD 11	533	61	3679	24.12	21.39	0.28
305	SLD 12	533	61	3679	24.12	21.39	0.28
305	SLD 13	-169	5	2988	-20.31	-9.38	0.03
305	SLD 14	-169	5	2988	-20.31	-9.38	0.03
305	SLD 15	-43	28	3265	2.58	-3.8	0.13
305	SLD 16	-43	28	3265	2.58	-3.8	0.13
305	SLV 1	1781	20	3243	-61.33	75.12	0.12
305	SLV 2	1781	20	3243	-61.33	75.12	0.12
305	SLV 3	2075	75	3897	-6.38	88.27	0.36
305	SLV 4	2075	75	3897	-6.38	88.27	0.36
305	SLV 5	443	-60	2263	-113.1	16.65	-0.24
305	SLV 6	443	-60	2263	-113.1	16.65	-0.24
305	SLV 7	1425	124	4441	70.06	60.48	0.57
305	SLV 8	1425	124	4441	70.06	60.48	0.57
305	SLV 9	-408	-73	2076	-102.52	-20.32	-0.31
305	SLV 10	-408	-73	2076	-102.52	-20.32	-0.31
305	SLV 11	573	111	4254	80.63	23.51	0.5
305	SLV 12	573	111	4254	80.63	23.51	0.5
305	SLV 13	-1059	-24	2620	-26.09	-48.11	-0.1
305	SLV 14	-1059	-24	2620	-26.09	-48.11	-0.1
305	SLV 15	-764	31	3274	28.86	-34.96	0.14
305	SLV 16	-764	31	3274	28.86	-34.96	0.14
306	SLU 1	417	22	3632	-13.55	14.02	0.09
306	SLU 2	422	22	3628	-13.53	14.22	0.09
306	SLU 3	452	23	3701	-14	15.46	0.1
306	SLU 4	454	23	3698	-13.98	15.59	0.1
306	SLU 5	452	22	3663	-13.79	15.53	0.09
306	SLU 6	482	23	3736	-14.26	16.77	0.1
306	SLU 7	484	23	3733	-14.25	16.89	0.1
306	SLU 8	477	23	3702	-14.07	16.63	0.1
306	SLU 9	480	23	3699	-14.06	16.75	0.1
306	SLU 10	471	25	4146	-15.2	15.8	0.1
306	SLU 11	501	25	4219	-15.67	17.04	0.11
306	SLU 12	504	25	4217	-15.66	17.17	0.11
306	SLU 13	501	25	4181	-15.47	17.11	0.11
306	SLU 14	531	26	4254	-15.93	18.35	0.11
306	SLU 15	534	26	4252	-15.92	18.47	0.11
306	SLU 16	527	26	4220	-15.75	18.2	0.11
306	SLU 17	529	25	4218	-15.73	18.33	0.11
306	SLU 18	488	26	4372	-15.94	16.27	0.11
306	SLU 19	491	26	4370	-15.93	16.4	0.11
306	SLU 20	518	26	4407	-16.2	17.58	0.11
306	SLU 21	520	26	4405	-16.19	17.7	0.11
306	SLU 22	478	25	4115	-15.26	16.1	0.1
306	SLU 23	482	25	4111	-15.24	16.31	0.1
306	SLU 24	512	25	4184	-15.71	17.55	0.11
306	SLU 25	515	25	4182	-15.7	17.68	0.11
306	SLU 26	512	25	4146	-15.51	17.62	0.11
306	SLU 27	542	26	4219	-15.97	18.86	0.11
306	SLU 28	545	26	4217	-15.96	18.98	0.11
306	SLU 29	537	26	4185	-15.79	18.71	0.11
306	SLU 30	540	26	4183	-15.77	18.84	0.11
306	SLU 31	531	27	4630	-16.92	17.89	0.12
306	SLU 32	562	28	4703	-17.38	19.13	0.12
306	SLU 33	564	28	4700	-17.37	19.25	0.12
306	SLU 34	561	28	4665	-17.18	19.19	0.12
306	SLU 35	592	29	4738	-17.64	20.43	0.12
306	SLU 36	594	29	4735	-17.63	20.56	0.12
306	SLU 37	587	28	4704	-17.46	20.29	0.12
306	SLU 38	590	28	4701	-17.45	20.42	0.12
306	SLU 39	548	29	4856	-17.65	18.36	0.12
306	SLU 40	551	29	4853	-17.64	18.48	0.12
306	SLU 41	578	29	4891	-17.91	19.66	0.12
306	SLU 42	581	29	4888	-17.9	19.79	0.12
306	SLU 43	522	27	4555	-17.03	17.5	0.12
306	SLU 44	526	27	4552	-17.01	17.71	0.12
306	SLU 45	556	28	4624	-17.47	18.95	0.12
306	SLU 46	559	28	4622	-17.46	19.08	0.12
306	SLU 47	556	28	4586	-17.27	19.02	0.12
306	SLU 48	586	29	4659	-17.74	20.26	0.12
306	SLU 49	589	29	4657	-17.72	20.38	0.12
306	SLU 50	582	28	4625	-17.55	20.11	0.12
306	SLU 51	584	28	4623	-17.54	20.24	0.12



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
306	SLU 52	576	30	5070	-18.68	19.29	0.13
306	SLU 53	606	31	5143	-19.15	20.53	0.13
306	SLU 54	608	31	5140	-19.14	20.66	0.13
306	SLU 55	606	31	5105	-18.94	20.6	0.13
306	SLU 56	636	31	5178	-19.41	21.84	0.13
306	SLU 57	638	31	5175	-19.4	21.96	0.13
306	SLU 58	631	31	5144	-19.22	21.69	0.13
306	SLU 59	634	31	5141	-19.21	21.82	0.13
306	SLU 60	592	31	5296	-19.42	19.76	0.13
306	SLU 61	595	31	5294	-19.41	19.88	0.13
306	SLU 62	622	32	5331	-19.68	21.06	0.14
306	SLU 63	625	32	5328	-19.67	21.19	0.14
306	SLU 64	582	30	5039	-18.74	19.59	0.13
306	SLU 65	586	30	5035	-18.72	19.8	0.13
306	SLU 66	617	31	5108	-19.19	21.04	0.13
306	SLU 67	619	31	5106	-19.17	21.16	0.13
306	SLU 68	616	31	5070	-18.98	21.11	0.13
306	SLU 69	647	31	5143	-19.45	22.34	0.13
306	SLU 70	649	31	5141	-19.44	22.47	0.13
306	SLU 71	642	31	5109	-19.26	22.2	0.13
306	SLU 72	645	31	5107	-19.25	22.33	0.13
306	SLU 73	636	33	5553	-20.39	21.38	0.14
306	SLU 74	666	34	5626	-20.86	22.62	0.14
306	SLU 75	669	34	5624	-20.85	22.74	0.14
306	SLU 76	666	33	5588	-20.66	22.68	0.14
306	SLU 77	696	34	5661	-21.12	23.92	0.15
306	SLU 78	699	34	5659	-21.11	24.05	0.15
306	SLU 79	691	34	5627	-20.94	23.78	0.14
306	SLU 80	694	34	5625	-20.92	23.91	0.14
306	SLU 81	653	34	5779	-21.13	21.85	0.15
306	SLU 82	655	34	5777	-21.12	21.97	0.15
306	SLU 83	683	35	5814	-21.39	23.15	0.15
306	SLU 84	685	35	5812	-21.38	23.28	0.15
306	SLE RA 1	435	23	3770	-14.04	14.61	0.1
306	SLE RA 2	437	23	3767	-14.03	14.75	0.1
306	SLE RA 3	458	23	3816	-14.34	15.58	0.1
306	SLE RA 4	459	23	3814	-14.33	15.66	0.1
306	SLE RA 5	457	23	3791	-14.2	15.62	0.1
306	SLE RA 6	478	23	3839	-14.51	16.45	0.1
306	SLE RA 7	479	23	3838	-14.5	16.53	0.1
306	SLE RA 8	474	23	3816	-14.39	16.35	0.1
306	SLE RA 9	476	23	3815	-14.38	16.44	0.1
306	SLE RA 10	470	25	4113	-15.14	15.8	0.1
306	SLE RA 11	491	25	4161	-15.45	16.63	0.11
306	SLE RA 12	492	25	4160	-15.44	16.71	0.11
306	SLE RA 13	490	25	4136	-15.32	16.67	0.11
306	SLE RA 14	511	25	4185	-15.63	17.5	0.11
306	SLE RA 15	512	25	4183	-15.62	17.58	0.11
306	SLE RA 16	507	25	4162	-15.5	17.4	0.11
306	SLE RA 17	509	25	4160	-15.5	17.49	0.11
306	SLE RA 18	482	25	4263	-15.63	16.11	0.11
306	SLE RA 19	483	25	4262	-15.62	16.2	0.11
306	SLE RA 20	502	26	4287	-15.81	16.98	0.11
306	SLE RA 21	503	26	4285	-15.8	17.07	0.11
306	SLE FR 1	435	23	3770	-14.04	14.61	0.1
306	SLE FR 2	435	23	3769	-14.04	14.64	0.1
306	SLE FR 3	442	23	3779	-14.11	14.96	0.1
306	SLE FR 4	449	23	3917	-14.52	15.09	0.1
306	SLE FR 5	457	24	3927	-14.59	15.41	0.1
306	SLE FR 6	458	24	4017	-14.84	15.36	0.1
306	SLE QP 1	435	23	3770	-14.04	14.61	0.1
306	SLE QP 2	449	23	3918	-14.52	15.06	0.1
306	SLD 1	965	23	3650	-29.65	38.91	0.1
306	SLD 2	965	23	3650	-29.65	38.91	0.1
306	SLD 3	1079	40	3890	-11.76	43.98	0.17
306	SLD 4	1079	40	3890	-11.76	43.98	0.17
306	SLD 5	431	-2	3474	-46.19	14.53	0.01
306	SLD 6	431	-2	3474	-46.19	14.53	0.01
306	SLD 7	811	54	4273	13.44	31.42	0.21
306	SLD 8	811	54	4273	13.44	31.42	0.21
306	SLD 9	87	-7	3563	-42.48	-1.3	-0.01
306	SLD 10	87	-7	3563	-42.48	-1.3	-0.01
306	SLD 11	467	49	4361	17.16	15.59	0.19
306	SLD 12	467	49	4361	17.16	15.59	0.19
306	SLD 13	-181	7	3946	-17.27	-13.85	0.03
306	SLD 14	-181	7	3946	-17.27	-13.85	0.03
306	SLD 15	-67	24	4185	0.62	-8.78	0.1
306	SLD 16	-67	24	4185	0.62	-8.78	0.1
306	SLV 1	1639	22	3289	-50.76	70.06	0.11
306	SLV 2	1639	22	3289	-50.76	70.06	0.11
306	SLV 3	1907	63	3853	-7.81	81.99	0.26
306	SLV 4	1907	63	3853	-7.81	81.99	0.26
306	SLV 5	398	-39	2874	-90.53	13.46	-0.12
306	SLV 6	398	-39	2874	-90.53	13.46	-0.12
306	SLV 7	1294	97	4753	52.64	53.24	0.37
306	SLV 8	1294	97	4753	52.64	53.24	0.37
306	SLV 9	-396	-50	3082	-81.68	-23.11	-0.17
306	SLV 10	-396	-50	3082	-81.68	-23.11	-0.17
306	SLV 11	499	86	4962	61.5	16.66	0.32
306	SLV 12	499	86	4962	61.5	16.66	0.32



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
306	SLV 13	-1010	-16	3983	-21.23	-51.87	-0.06
306	SLV 14	-1010	-16	3983	-21.23	-51.87	-0.06
306	SLV 15	-741	25	4547	21.72	-39.94	0.09
306	SLV 16	-741	25	4547	21.72	-39.94	0.09
307	SLU 1	278	16	4280	-10.25	9.73	0.04
307	SLU 2	282	16	4274	-10.23	9.9	0.04
307	SLU 3	308	16	4361	-10.59	11	0.04
307	SLU 4	310	16	4357	-10.57	11.1	0.04
307	SLU 5	308	16	4311	-10.43	11.04	0.04
307	SLU 6	334	17	4398	-10.79	12.14	0.04
307	SLU 7	336	17	4394	-10.77	12.24	0.04
307	SLU 8	331	17	4354	-10.65	12.02	0.04
307	SLU 9	333	17	4350	-10.64	12.11	0.04
307	SLU 10	309	18	4883	-11.53	10.72	0.04
307	SLU 11	335	19	4970	-11.89	11.82	0.05
307	SLU 12	338	19	4966	-11.88	11.92	0.05
307	SLU 13	335	18	4920	-11.73	11.86	0.05
307	SLU 14	362	19	5007	-12.09	12.96	0.05
307	SLU 15	364	19	5003	-12.08	13.06	0.05
307	SLU 16	358	19	4963	-11.95	12.84	0.05
307	SLU 17	360	19	4959	-11.94	12.93	0.05
307	SLU 18	317	19	5150	-12.12	10.9	0.05
307	SLU 19	319	19	5146	-12.1	11	0.05
307	SLU 20	343	19	5187	-12.32	12.04	0.05
307	SLU 21	345	19	5183	-12.3	12.14	0.05
307	SLU 22	318	18	4849	-11.57	11.11	0.04
307	SLU 23	321	18	4843	-11.55	11.27	0.04
307	SLU 24	347	19	4930	-11.91	12.37	0.05
307	SLU 25	349	19	4926	-11.9	12.47	0.05
307	SLU 26	347	18	4880	-11.75	12.41	0.05
307	SLU 27	374	19	4967	-12.11	13.52	0.05
307	SLU 28	376	19	4963	-12.1	13.62	0.05
307	SLU 29	370	19	4923	-11.97	13.39	0.05
307	SLU 30	372	19	4919	-11.96	13.49	0.05
307	SLU 31	348	20	5452	-12.86	12.09	0.05
307	SLU 32	375	21	5539	-13.22	13.19	0.05
307	SLU 33	377	21	5535	-13.2	13.29	0.05
307	SLU 34	374	20	5489	-13.06	13.23	0.05
307	SLU 35	401	21	5576	-13.42	14.34	0.05
307	SLU 36	403	21	5572	-13.4	14.44	0.05
307	SLU 37	397	21	5532	-13.28	14.21	0.05
307	SLU 38	399	21	5529	-13.26	14.31	0.05
307	SLU 39	356	21	5719	-13.44	12.28	0.05
307	SLU 40	358	21	5716	-13.42	12.38	0.05
307	SLU 41	382	21	5756	-13.64	13.42	0.05
307	SLU 42	385	21	5753	-13.62	13.52	0.05
307	SLU 43	349	20	5368	-12.87	12.18	0.05
307	SLU 44	352	20	5362	-12.85	12.34	0.05
307	SLU 45	378	21	5449	-13.21	13.45	0.05
307	SLU 46	380	21	5446	-13.2	13.55	0.05
307	SLU 47	378	20	5399	-13.05	13.49	0.05
307	SLU 48	404	21	5486	-13.41	14.59	0.05
307	SLU 49	407	21	5483	-13.4	14.69	0.05
307	SLU 50	401	21	5443	-13.27	14.46	0.05
307	SLU 51	403	21	5439	-13.26	14.56	0.05
307	SLU 52	379	22	5972	-14.16	13.16	0.05
307	SLU 53	406	23	6059	-14.51	14.27	0.06
307	SLU 54	408	23	6055	-14.5	14.37	0.06
307	SLU 55	405	22	6009	-14.35	14.31	0.06
307	SLU 56	432	23	6096	-14.71	15.41	0.06
307	SLU 57	434	23	6092	-14.7	15.51	0.06
307	SLU 58	428	23	6052	-14.58	15.28	0.06
307	SLU 59	430	23	6048	-14.56	15.38	0.06
307	SLU 60	387	23	6239	-14.74	13.35	0.06
307	SLU 61	389	23	6235	-14.72	13.45	0.06
307	SLU 62	413	23	6276	-14.94	14.49	0.06
307	SLU 63	416	23	6272	-14.92	14.59	0.06
307	SLU 64	388	22	5938	-14.2	13.55	0.05
307	SLU 65	391	22	5932	-14.17	13.72	0.05
307	SLU 66	417	23	6018	-14.53	14.82	0.06
307	SLU 67	420	23	6015	-14.52	14.92	0.06
307	SLU 68	417	22	5969	-14.37	14.86	0.06
307	SLU 69	444	23	6056	-14.73	15.96	0.06
307	SLU 70	446	23	6052	-14.72	16.06	0.06
307	SLU 71	440	23	6012	-14.59	15.84	0.06
307	SLU 72	442	23	6008	-14.58	15.94	0.06
307	SLU 73	418	24	6541	-15.48	14.54	0.06
307	SLU 74	445	25	6628	-15.84	15.64	0.06
307	SLU 75	447	25	6624	-15.82	15.74	0.06
307	SLU 76	444	25	6578	-15.68	15.68	0.06
307	SLU 77	471	25	6665	-16.04	16.78	0.06
307	SLU 78	473	25	6661	-16.02	16.88	0.06
307	SLU 79	467	25	6621	-15.9	16.66	0.06
307	SLU 80	469	25	6617	-15.89	16.76	0.06
307	SLU 81	426	25	6808	-16.06	14.72	0.06
307	SLU 82	428	25	6804	-16.05	14.82	0.06
307	SLU 83	453	25	6845	-16.26	15.87	0.06
307	SLU 84	455	25	6841	-16.25	15.97	0.06
307	SLE RA 1	290	17	4442	-10.63	10.12	0.04
307	SLE RA 2	292	17	4438	-10.61	10.23	0.04



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
307	SLE RA 3	309	17	4496	-10.85	10.97	0.04
307	SLE RA 4	311	17	4494	-10.84	11.04	0.04
307	SLE RA 5	309	17	4463	-10.75	11	0.04
307	SLE RA 6	327	17	4521	-10.99	11.73	0.04
307	SLE RA 7	328	17	4518	-10.98	11.8	0.04
307	SLE RA 8	324	17	4492	-10.89	11.65	0.04
307	SLE RA 9	326	17	4489	-10.89	11.71	0.04
307	SLE RA 10	310	18	4844	-11.48	10.78	0.04
307	SLE RA 11	328	18	4902	-11.72	11.52	0.05
307	SLE RA 12	329	18	4900	-11.71	11.58	0.05
307	SLE RA 13	327	18	4869	-11.62	11.54	0.05
307	SLE RA 14	345	19	4927	-11.86	12.28	0.05
307	SLE RA 15	346	19	4925	-11.85	12.34	0.05
307	SLE RA 16	343	18	4898	-11.76	12.19	0.05
307	SLE RA 17	344	18	4895	-11.76	12.26	0.05
307	SLE RA 18	315	19	5023	-11.87	10.9	0.05
307	SLE RA 19	317	19	5020	-11.86	10.97	0.05
307	SLE RA 20	333	19	5047	-12	11.67	0.05
307	SLE RA 21	334	19	5045	-12	11.73	0.05
307	SLE FR 1	290	17	4442	-10.63	10.12	0.04
307	SLE FR 2	290	17	4442	-10.63	10.15	0.04
307	SLE FR 3	297	17	4452	-10.68	10.43	0.04
307	SLE FR 4	298	17	4616	-11	10.38	0.04
307	SLE FR 5	304	17	4626	-11.06	10.66	0.04
307	SLE FR 6	302	18	4732	-11.25	10.51	0.04
307	SLE QP 1	290	17	4442	-10.63	10.12	0.04
307	SLE QP 2	297	17	4616	-11	10.36	0.04
307	SLD 1	765	18	4207	-21.56	31.39	0.05
307	SLD 2	765	18	4207	-21.56	31.39	0.05
307	SLD 3	863	28	4475	-9.42	36.22	0.07
307	SLD 4	863	28	4475	-9.42	36.22	0.07
307	SLD 5	290	1	4088	-32.57	9.35	0.01
307	SLD 6	290	1	4088	-32.57	9.35	0.01
307	SLD 7	615	36	4980	7.88	25.43	0.08
307	SLD 8	615	36	4980	7.88	25.43	0.08
307	SLD 9	-20	-2	4253	-29.88	-4.72	0
307	SLD 10	-20	-2	4253	-29.88	-4.72	0
307	SLD 11	305	33	5145	10.57	11.36	0.07
307	SLD 12	305	33	5145	10.57	11.36	0.07
307	SLD 13	-268	6	4758	-12.58	-15.5	0.02
307	SLD 14	-268	6	4758	-12.58	-15.5	0.02
307	SLD 15	-170	17	5025	-0.45	-10.68	0.04
307	SLD 16	-170	17	5025	-0.45	-10.68	0.04
307	SLV 1	1375	18	3661	-36.25	58.77	0.05
307	SLV 2	1375	18	3661	-36.25	58.77	0.05
307	SLV 3	1606	43	4295	-7.13	70.22	0.1
307	SLV 4	1606	43	4295	-7.13	70.22	0.1
307	SLV 5	270	-21	3369	-62.74	7.52	-0.03
307	SLV 6	270	-21	3369	-62.74	7.52	-0.03
307	SLV 7	1040	63	5481	34.32	45.68	0.14
307	SLV 8	1040	63	5481	34.32	45.68	0.14
307	SLV 9	-446	-29	3752	-56.33	-24.97	-0.05
307	SLV 10	-446	-29	3752	-56.33	-24.97	-0.05
307	SLV 11	325	55	5864	40.74	13.2	0.12
307	SLV 12	325	55	5864	40.74	13.2	0.12
307	SLV 13	-1011	-9	4938	-14.87	-49.51	-0.02
307	SLV 14	-1011	-9	4938	-14.87	-49.51	-0.02
307	SLV 15	-780	16	5572	14.25	-38.06	0.03
307	SLV 16	-780	16	5572	14.25	-38.06	0.03
308	SLU 1	-62	12	4963	-6.27	-8.58	0.03
308	SLU 2	-59	12	4952	-6.24	-8.41	0.03
308	SLU 3	-43	12	5049	-6.48	-7.74	0.03
308	SLU 4	-41	12	5042	-6.46	-7.63	0.03
308	SLU 5	-40	12	4984	-6.37	-7.48	0.03
308	SLU 6	-23	12	5080	-6.6	-6.81	0.04
308	SLU 7	-22	12	5073	-6.58	-6.71	0.04
308	SLU 8	-23	12	5026	-6.52	-6.72	0.03
308	SLU 9	-22	12	5019	-6.5	-6.62	0.03
308	SLU 10	-79	13	5663	-7.09	-10.16	0.04
308	SLU 11	-62	14	5760	-7.33	-9.48	0.04
308	SLU 12	-61	14	5753	-7.31	-9.38	0.04
308	SLU 13	-59	14	5695	-7.22	-9.23	0.04
308	SLU 14	-43	14	5791	-7.45	-8.56	0.04
308	SLU 15	-41	14	5784	-7.43	-8.45	0.04
308	SLU 16	-43	14	5737	-7.37	-8.47	0.04
308	SLU 17	-41	14	5730	-7.35	-8.37	0.04
308	SLU 18	-90	14	5979	-7.49	-11.07	0.04
308	SLU 19	-88	14	5973	-7.47	-10.97	0.04
308	SLU 20	-71	14	6010	-7.61	-10.15	0.04
308	SLU 21	-69	14	6004	-7.59	-10.04	0.04
308	SLU 22	-69	13	5623	-7.11	-9.66	0.04
308	SLU 23	-66	13	5612	-7.08	-9.49	0.04
308	SLU 24	-50	14	5708	-7.32	-8.82	0.04
308	SLU 25	-48	14	5702	-7.3	-8.72	0.04
308	SLU 26	-47	14	5643	-7.21	-8.56	0.04
308	SLU 27	-31	14	5739	-7.44	-7.89	0.04
308	SLU 28	-29	14	5733	-7.42	-7.79	0.04
308	SLU 29	-31	14	5685	-7.36	-7.8	0.04
308	SLU 30	-29	14	5679	-7.34	-7.7	0.04
308	SLU 31	-86	15	6323	-7.93	-11.24	0.04



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
308	SLU 32	-70	15	6419	-8.17	-10.57	0.04
308	SLU 33	-68	15	6413	-8.15	-10.46	0.04
308	SLU 34	-67	15	6354	-8.06	-10.31	0.04
308	SLU 35	-50	16	6451	-8.29	-9.64	0.04
308	SLU 36	-49	16	6444	-8.27	-9.54	0.04
308	SLU 37	-50	15	6396	-8.21	-9.55	0.04
308	SLU 38	-49	15	6390	-8.19	-9.45	0.04
308	SLU 39	-97	16	6639	-8.33	-12.16	0.04
308	SLU 40	-96	16	6632	-8.31	-12.06	0.04
308	SLU 41	-78	16	6670	-8.45	-11.23	0.04
308	SLU 42	-76	16	6663	-8.43	-11.13	0.04
308	SLU 43	-78	15	6226	-7.87	-10.78	0.04
308	SLU 44	-75	15	6215	-7.84	-10.61	0.04
308	SLU 45	-59	15	6312	-8.07	-9.94	0.04
308	SLU 46	-57	15	6305	-8.05	-9.84	0.04
308	SLU 47	-56	15	6246	-7.96	-9.68	0.04
308	SLU 48	-39	15	6343	-8.19	-9.01	0.04
308	SLU 49	-38	15	6336	-8.18	-8.91	0.04
308	SLU 50	-39	15	6289	-8.11	-8.92	0.04
308	SLU 51	-38	15	6282	-8.1	-8.82	0.04
308	SLU 52	-95	16	6926	-8.69	-12.36	0.05
308	SLU 53	-78	17	7023	-8.92	-11.69	0.05
308	SLU 54	-77	17	7016	-8.9	-11.58	0.05
308	SLU 55	-76	17	6957	-8.81	-11.43	0.05
308	SLU 56	-59	17	7054	-9.04	-10.76	0.05
308	SLU 57	-58	17	7047	-9.03	-10.66	0.05
308	SLU 58	-59	17	7000	-8.96	-10.67	0.05
308	SLU 59	-57	17	6993	-8.94	-10.57	0.05
308	SLU 60	-106	17	7242	-9.08	-13.28	0.05
308	SLU 61	-104	17	7236	-9.06	-13.18	0.05
308	SLU 62	-87	17	7273	-9.2	-12.35	0.05
308	SLU 63	-85	17	7267	-9.19	-12.25	0.05
308	SLU 64	-85	16	6886	-8.71	-11.86	0.05
308	SLU 65	-82	16	6875	-8.68	-11.69	0.05
308	SLU 66	-66	17	6971	-8.91	-11.02	0.05
308	SLU 67	-64	17	6965	-8.89	-10.92	0.05
308	SLU 68	-63	17	6906	-8.8	-10.76	0.05
308	SLU 69	-47	17	7002	-9.03	-10.09	0.05
308	SLU 70	-45	17	6996	-9.02	-9.99	0.05
308	SLU 71	-47	17	6948	-8.95	-10.01	0.05
308	SLU 72	-45	17	6942	-8.94	-9.9	0.05
308	SLU 73	-102	18	7586	-9.53	-13.44	0.05
308	SLU 74	-86	18	7682	-9.76	-12.77	0.05
308	SLU 75	-84	18	7676	-9.74	-12.67	0.05
308	SLU 76	-83	18	7617	-9.65	-12.51	0.05
308	SLU 77	-66	19	7713	-9.88	-11.84	0.05
308	SLU 78	-65	19	7707	-9.87	-11.74	0.05
308	SLU 79	-66	18	7659	-9.8	-11.75	0.05
308	SLU 80	-65	18	7653	-9.78	-11.65	0.05
308	SLU 81	-113	19	7902	-9.92	-14.36	0.05
308	SLU 82	-112	19	7895	-9.9	-14.26	0.05
308	SLU 83	-94	19	7933	-10.04	-13.43	0.05
308	SLU 84	-92	19	7926	-10.03	-13.33	0.05
308	SLE RA 1	-64	12	5152	-6.51	-8.89	0.03
308	SLE RA 2	-62	12	5145	-6.49	-8.77	0.03
308	SLE RA 3	-51	12	5209	-6.65	-8.33	0.04
308	SLE RA 4	-50	12	5204	-6.64	-8.26	0.04
308	SLE RA 5	-49	12	5165	-6.58	-8.15	0.03
308	SLE RA 6	-38	13	5229	-6.73	-7.71	0.04
308	SLE RA 7	-37	13	5225	-6.72	-7.64	0.04
308	SLE RA 8	-38	13	5193	-6.68	-7.65	0.04
308	SLE RA 9	-37	13	5189	-6.67	-7.58	0.04
308	SLE RA 10	-75	13	5619	-7.06	-9.94	0.04
308	SLE RA 11	-64	14	5683	-7.22	-9.49	0.04
308	SLE RA 12	-63	14	5678	-7.2	-9.42	0.04
308	SLE RA 13	-62	13	5639	-7.14	-9.32	0.04
308	SLE RA 14	-51	14	5704	-7.3	-8.87	0.04
308	SLE RA 15	-50	14	5699	-7.29	-8.8	0.04
308	SLE RA 16	-51	14	5667	-7.24	-8.81	0.04
308	SLE RA 17	-50	14	5663	-7.23	-8.75	0.04
308	SLE RA 18	-83	14	5829	-7.32	-10.55	0.04
308	SLE RA 19	-82	14	5825	-7.31	-10.48	0.04
308	SLE RA 20	-70	14	5850	-7.4	-9.93	0.04
308	SLE RA 21	-69	14	5845	-7.39	-9.86	0.04
308	SLE FR 1	-64	12	5152	-6.51	-8.89	0.03
308	SLE FR 2	-63	12	5150	-6.51	-8.86	0.03
308	SLE FR 3	-59	12	5160	-6.55	-8.64	0.03
308	SLE FR 4	-69	13	5354	-6.75	-9.36	0.04
308	SLE FR 5	-64	13	5363	-6.79	-9.14	0.04
308	SLE FR 6	-73	13	5491	-6.92	-9.72	0.04
308	SLE QP 1	-64	12	5152	-6.51	-8.89	0.03
308	SLE QP 2	-70	13	5355	-6.76	-9.39	0.04
308	SLD 1	343	20	4538	-12.5	12.11	0.07
308	SLD 2	343	20	4538	-12.5	12.11	0.07
308	SLD 3	418	13	4931	-6.07	16.32	0.04
308	SLD 4	418	13	4931	-6.07	16.32	0.04
308	SLD 5	-61	26	4513	-18.23	-9.31	0.09
308	SLD 6	-61	26	4513	-18.23	-9.31	0.09
308	SLD 7	192	2	5824	3.2	4.7	-0.01
308	SLD 8	192	2	5824	3.2	4.7	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
308	SLD 9	-331	23	4886	-16.71	-23.47	0.08
308	SLD 10	-331	23	4886	-16.71	-23.47	0.08
308	SLD 11	-78	0	6197	4.72	-9.46	-0.02
308	SLD 12	-78	0	6197	4.72	-9.46	-0.02
308	SLD 13	-557	12	5779	-7.44	-35.09	0.04
308	SLD 14	-557	12	5779	-7.44	-35.09	0.04
308	SLD 15	-482	5	6172	-1.01	-30.89	0.01
308	SLD 16	-482	5	6172	-1.01	-30.89	0.01
308	SLV 1	880	31	3451	-20.49	40.14	0.11
308	SLV 2	880	31	3451	-20.49	40.14	0.11
308	SLV 3	1060	14	4390	-5.08	50.13	0.04
308	SLV 4	1060	14	4390	-5.08	50.13	0.04
308	SLV 5	-57	44	3359	-34.24	-9.67	0.16
308	SLV 6	-57	44	3359	-34.24	-9.67	0.16
308	SLV 7	542	-13	6490	17.11	23.61	-0.07
308	SLV 8	542	-13	6490	17.11	23.61	-0.07
308	SLV 9	-681	38	4220	-30.62	-42.39	0.14
308	SLV 10	-681	38	4220	-30.62	-42.39	0.14
308	SLV 11	-82	-18	7351	20.73	-9.1	-0.09
308	SLV 12	-82	-18	7351	20.73	-9.1	-0.09
308	SLV 13	-1199	12	6321	-8.43	-68.9	0.04
308	SLV 14	-1199	12	6321	-8.43	-68.9	0.04
308	SLV 15	-1019	-5	7260	6.98	-58.92	-0.03
308	SLV 16	-1019	-5	7260	6.98	-58.92	-0.03
310	SLU 1	241	37	991	-21.37	5.1	3.46
310	SLU 2	237	36	979	-21.05	4.96	3.41
310	SLU 3	232	38	964	-22.24	4.78	3.6
310	SLU 4	229	38	957	-22.05	4.69	3.57
310	SLU 5	226	38	947	-21.68	4.61	3.51
310	SLU 6	222	40	933	-22.86	4.43	3.7
310	SLU 7	219	39	926	-22.67	4.35	3.67
310	SLU 8	220	39	928	-22.62	4.41	3.66
310	SLU 9	218	39	920	-22.43	4.32	3.63
310	SLU 10	280	41	1142	-23.89	5.96	3.87
310	SLU 11	275	44	1128	-25.07	5.77	4.06
310	SLU 12	272	43	1121	-24.88	5.69	4.03
310	SLU 13	269	43	1111	-24.51	5.61	3.97
310	SLU 14	265	45	1096	-25.69	5.43	4.16
310	SLU 15	262	44	1089	-25.51	5.34	4.13
310	SLU 16	263	44	1091	-25.45	5.41	4.12
310	SLU 17	261	44	1084	-25.27	5.32	4.09
310	SLU 18	303	44	1224	-25.42	6.53	4.12
310	SLU 19	300	44	1217	-25.23	6.44	4.09
310	SLU 20	292	45	1193	-26.04	6.18	4.22
310	SLU 21	290	45	1186	-25.85	6.09	4.19
310	SLU 22	271	42	1108	-24.29	5.72	3.93
310	SLU 23	266	42	1096	-23.98	5.58	3.88
310	SLU 24	262	44	1082	-25.16	5.4	4.07
310	SLU 25	259	43	1075	-24.97	5.31	4.04
310	SLU 26	256	43	1065	-24.6	5.23	3.98
310	SLU 27	251	45	1051	-25.78	5.05	4.18
310	SLU 28	248	44	1043	-25.6	4.97	4.14
310	SLU 29	250	44	1045	-25.54	5.03	4.14
310	SLU 30	247	44	1038	-25.35	4.94	4.11
310	SLU 31	309	47	1260	-26.81	6.58	4.34
310	SLU 32	304	49	1246	-27.99	6.4	4.53
310	SLU 33	302	48	1238	-27.8	6.31	4.5
310	SLU 34	299	48	1228	-27.44	6.23	4.44
310	SLU 35	294	50	1214	-28.62	6.05	4.64
310	SLU 36	291	50	1207	-28.43	5.96	4.6
310	SLU 37	293	50	1209	-28.38	6.03	4.6
310	SLU 38	290	49	1201	-28.19	5.94	4.57
310	SLU 39	332	49	1342	-28.34	7.15	4.59
310	SLU 40	329	49	1335	-28.15	7.06	4.56
310	SLU 41	322	51	1310	-28.96	6.8	4.69
310	SLU 42	319	50	1303	-28.78	6.72	4.66
310	SLU 43	304	46	1247	-26.78	6.42	4.33
310	SLU 44	299	46	1235	-26.46	6.27	4.28
310	SLU 45	294	48	1221	-27.64	6.09	4.47
310	SLU 46	292	47	1214	-27.46	6.01	4.44
310	SLU 47	289	47	1204	-27.09	5.93	4.38
310	SLU 48	284	49	1190	-28.27	5.75	4.58
310	SLU 49	281	49	1183	-28.08	5.66	4.55
310	SLU 50	283	49	1184	-28.03	5.73	4.54
310	SLU 51	280	48	1177	-27.84	5.64	4.51
310	SLU 52	342	51	1399	-29.3	7.27	4.74
310	SLU 53	337	53	1385	-30.48	7.09	4.93
310	SLU 54	335	53	1378	-30.29	7.01	4.9
310	SLU 55	332	52	1368	-29.92	6.93	4.84
310	SLU 56	327	54	1353	-31.1	6.75	5.04
310	SLU 57	324	54	1346	-30.91	6.66	5.01
310	SLU 58	326	54	1348	-30.86	6.72	5
310	SLU 59	323	53	1341	-30.67	6.64	4.97
310	SLU 60	365	54	1481	-30.82	7.84	4.99
310	SLU 61	362	53	1474	-30.64	7.76	4.96
310	SLU 62	355	55	1450	-31.45	7.5	5.09
310	SLU 63	352	54	1442	-31.26	7.41	5.06
310	SLU 64	333	51	1365	-29.7	7.04	4.81
310	SLU 65	329	51	1353	-29.39	6.9	4.76
310	SLU 66	324	53	1339	-30.57	6.71	4.95



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
310	SLU 67	321	53	1332	-30.38	6.63	4.92
310	SLU 68	318	52	1322	-30.01	6.55	4.86
310	SLU 69	313	54	1307	-31.19	6.37	5.05
310	SLU 70	311	54	1300	-31	6.28	5.02
310	SLU 71	312	54	1302	-30.95	6.35	5.01
310	SLU 72	310	53	1295	-30.76	6.26	4.98
310	SLU 73	372	56	1517	-32.22	7.89	5.22
310	SLU 74	367	58	1502	-33.4	7.71	5.41
310	SLU 75	364	58	1495	-33.21	7.63	5.38
310	SLU 76	361	57	1485	-32.84	7.55	5.32
310	SLU 77	356	59	1471	-34.03	7.37	5.51
310	SLU 78	354	59	1464	-33.84	7.28	5.48
310	SLU 79	355	59	1466	-33.78	7.34	5.47
310	SLU 80	352	58	1458	-33.6	7.26	5.44
310	SLU 81	394	59	1599	-33.75	8.46	5.47
310	SLU 82	392	58	1591	-33.56	8.38	5.43
310	SLU 83	384	60	1567	-34.37	8.12	5.57
310	SLU 84	381	60	1560	-34.18	8.03	5.54
310	SLE RA 1	250	38	1024	-22.2	5.28	3.59
310	SLE RA 2	247	38	1016	-21.99	5.18	3.56
310	SLE RA 3	244	39	1007	-22.78	5.06	3.69
310	SLE RA 4	242	39	1002	-22.66	5	3.67
310	SLE RA 5	240	39	995	-22.41	4.95	3.63
310	SLE RA 6	237	40	986	-23.2	4.83	3.76
310	SLE RA 7	235	40	981	-23.07	4.77	3.74
310	SLE RA 8	236	40	982	-23.04	4.82	3.73
310	SLE RA 9	234	40	977	-22.91	4.76	3.71
310	SLE RA 10	275	41	1125	-23.88	5.85	3.87
310	SLE RA 11	272	43	1116	-24.67	5.73	3.99
310	SLE RA 12	270	43	1111	-24.54	5.67	3.97
310	SLE RA 13	268	42	1104	-24.3	5.62	3.93
310	SLE RA 14	265	44	1095	-25.09	5.5	4.06
310	SLE RA 15	263	43	1090	-24.96	5.44	4.04
310	SLE RA 16	264	43	1091	-24.93	5.48	4.04
310	SLE RA 17	263	43	1086	-24.8	5.42	4.02
310	SLE RA 18	291	43	1180	-24.9	6.23	4.03
310	SLE RA 19	289	43	1175	-24.78	6.17	4.01
310	SLE RA 20	284	44	1159	-25.32	6	4.1
310	SLE RA 21	282	44	1154	-25.19	5.94	4.08
310	SLE FR 1	250	38	1024	-22.2	5.28	3.59
310	SLE FR 2	249	38	1023	-22.16	5.26	3.59
310	SLE FR 3	247	39	1016	-22.37	5.19	3.62
310	SLE FR 4	261	40	1069	-22.97	5.54	3.72
310	SLE FR 5	259	40	1062	-23.18	5.47	3.75
310	SLE FR 6	270	41	1102	-23.55	5.75	3.81
310	SLE QP 1	250	38	1024	-22.2	5.28	3.59
310	SLE QP 2	262	40	1071	-23.01	5.56	3.73
310	SLD 1	671	8	2477	-14.58	17.52	2.31
310	SLD 2	671	8	2477	-14.58	17.52	2.31
310	SLD 3	549	47	1951	-19.81	14.43	3.3
310	SLD 4	549	47	1951	-19.81	14.43	3.3
310	SLD 5	569	-29	2291	-12.55	13.84	1.81
310	SLD 6	569	-29	2291	-12.55	13.84	1.81
310	SLD 7	164	101	536	-29.98	3.54	5.09
310	SLD 8	164	101	536	-29.98	3.54	5.09
310	SLD 9	360	-21	1605	-16.04	7.59	2.36
310	SLD 10	360	-21	1605	-16.04	7.59	2.36
310	SLD 11	-45	108	-149	-33.47	-2.71	5.64
310	SLD 12	-45	108	-149	-33.47	-2.71	5.64
310	SLD 13	-26	33	191	-26.22	-3.31	4.15
310	SLD 14	-26	33	191	-26.22	-3.31	4.15
310	SLD 15	-147	71	-335	-31.45	-6.4	5.14
310	SLD 16	-147	71	-335	-31.45	-6.4	5.14
310	SLV 1	1220	-38	4385	-3.17	33.45	0.38
310	SLV 2	1220	-38	4385	-3.17	33.45	0.38
310	SLV 3	923	59	3080	-15.67	26.01	2.77
310	SLV 4	923	59	3080	-15.67	26.01	2.77
310	SLV 5	999	-131	4044	1.89	25.22	-0.9
310	SLV 6	999	-131	4044	1.89	25.22	-0.9
310	SLV 7	10	193	-306	-39.76	0.41	7.06
310	SLV 8	10	193	-306	-39.76	0.41	7.06
310	SLV 9	513	-113	2448	-6.26	10.71	0.39
310	SLV 10	513	-113	2448	-6.26	10.71	0.39
310	SLV 11	-475	210	-1903	-47.92	-14.09	8.35
310	SLV 12	-475	210	-1903	-47.92	-14.09	8.35
310	SLV 13	-399	21	-938	-30.36	-14.89	4.69
310	SLV 14	-399	21	-938	-30.36	-14.89	4.69
310	SLV 15	-696	118	-2243	-42.85	-22.33	7.07
310	SLV 16	-696	118	-2243	-42.85	-22.33	7.07
311	SLU 1	127	59	1883	-38.43	4.98	-0.13
311	SLU 2	121	58	1866	-37.87	4.71	-0.13
311	SLU 3	115	61	1865	-39.98	4.29	-0.13
311	SLU 4	112	60	1855	-39.64	4.13	-0.13
311	SLU 5	109	59	1837	-38.98	4.01	-0.13
311	SLU 6	104	63	1836	-41.09	3.59	-0.14
311	SLU 7	100	62	1826	-40.75	3.43	-0.14
311	SLU 8	104	62	1826	-40.65	3.58	-0.14
311	SLU 9	100	62	1815	-40.31	3.42	-0.14
311	SLU 10	149	65	2157	-42.9	5.99	-0.14
311	SLU 11	143	69	2156	-45.01	5.56	-0.15



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
311	SLU 12	140	68	2145	-44.68	5.4	-0.15
311	SLU 13	137	67	2128	-44.01	5.29	-0.15
311	SLU 14	132	70	2127	-46.12	4.86	-0.16
311	SLU 15	128	70	2117	-45.79	4.7	-0.15
311	SLU 16	132	70	2116	-45.68	4.86	-0.15
311	SLU 17	128	69	2106	-45.35	4.7	-0.15
311	SLU 18	167	70	2298	-45.62	6.8	-0.15
311	SLU 19	163	69	2288	-45.28	6.64	-0.15
311	SLU 20	155	71	2269	-46.73	6.1	-0.16
311	SLU 21	152	71	2259	-46.39	5.94	-0.16
311	SLU 22	142	67	2107	-43.64	5.6	-0.15
311	SLU 23	137	66	2090	-43.08	5.33	-0.15
311	SLU 24	131	69	2089	-45.19	4.91	-0.15
311	SLU 25	128	68	2079	-44.85	4.75	-0.15
311	SLU 26	125	67	2061	-44.19	4.63	-0.15
311	SLU 27	120	71	2061	-46.3	4.21	-0.16
311	SLU 28	116	70	2050	-45.96	4.05	-0.16
311	SLU 29	119	70	2050	-45.86	4.2	-0.15
311	SLU 30	116	69	2039	-45.52	4.04	-0.15
311	SLU 31	165	73	2381	-48.11	6.61	-0.16
311	SLU 32	159	77	2380	-50.22	6.18	-0.17
311	SLU 33	156	76	2370	-49.89	6.02	-0.17
311	SLU 34	153	75	2352	-49.22	5.91	-0.17
311	SLU 35	148	78	2351	-51.33	5.48	-0.17
311	SLU 36	144	78	2341	-50.99	5.32	-0.17
311	SLU 37	147	78	2340	-50.89	5.48	-0.17
311	SLU 38	144	77	2330	-50.56	5.32	-0.17
311	SLU 39	182	78	2523	-50.83	7.42	-0.17
311	SLU 40	179	77	2512	-50.49	7.26	-0.17
311	SLU 41	171	79	2494	-51.94	6.72	-0.18
311	SLU 42	167	79	2483	-51.6	6.56	-0.17
311	SLU 43	159	73	2371	-48.17	6.26	-0.16
311	SLU 44	153	73	2354	-47.61	5.99	-0.16
311	SLU 45	148	76	2353	-49.72	5.57	-0.17
311	SLU 46	144	75	2343	-49.38	5.41	-0.17
311	SLU 47	142	74	2325	-48.72	5.3	-0.16
311	SLU 48	136	78	2324	-50.83	4.87	-0.17
311	SLU 49	133	77	2314	-50.49	4.71	-0.17
311	SLU 50	136	77	2314	-50.39	4.87	-0.17
311	SLU 51	133	76	2303	-50.05	4.7	-0.17
311	SLU 52	181	80	2645	-52.64	7.27	-0.18
311	SLU 53	176	84	2644	-54.75	6.85	-0.18
311	SLU 54	172	83	2634	-54.42	6.68	-0.18
311	SLU 55	170	82	2616	-53.75	6.57	-0.18
311	SLU 56	164	85	2615	-55.86	6.15	-0.19
311	SLU 57	161	85	2605	-55.53	5.98	-0.19
311	SLU 58	164	85	2604	-55.42	6.14	-0.19
311	SLU 59	161	84	2594	-55.09	5.98	-0.19
311	SLU 60	199	84	2786	-55.36	8.08	-0.19
311	SLU 61	196	84	2776	-55.03	7.92	-0.19
311	SLU 62	188	86	2758	-56.47	7.39	-0.19
311	SLU 63	184	86	2747	-56.14	7.22	-0.19
311	SLU 64	175	81	2596	-53.38	6.88	-0.18
311	SLU 65	169	81	2578	-52.82	6.61	-0.18
311	SLU 66	164	84	2577	-54.93	6.19	-0.19
311	SLU 67	160	83	2567	-54.59	6.03	-0.18
311	SLU 68	158	82	2550	-53.93	5.91	-0.18
311	SLU 69	152	86	2549	-56.04	5.49	-0.19
311	SLU 70	149	85	2538	-55.7	5.33	-0.19
311	SLU 71	152	85	2538	-55.6	5.49	-0.19
311	SLU 72	148	84	2528	-55.26	5.32	-0.19
311	SLU 73	197	88	2869	-57.85	7.89	-0.2
311	SLU 74	192	92	2868	-59.96	7.46	-0.2
311	SLU 75	188	91	2858	-59.63	7.3	-0.2
311	SLU 76	186	90	2840	-58.96	7.19	-0.2
311	SLU 77	180	93	2839	-61.07	6.77	-0.21
311	SLU 78	177	93	2829	-60.74	6.6	-0.21
311	SLU 79	180	93	2828	-60.63	6.76	-0.2
311	SLU 80	176	92	2818	-60.3	6.6	-0.2
311	SLU 81	215	92	3011	-60.57	8.7	-0.2
311	SLU 82	211	92	3000	-60.24	8.54	-0.2
311	SLU 83	203	94	2982	-61.68	8	-0.21
311	SLU 84	200	94	2971	-61.35	7.84	-0.21
311	SLE RA 1	131	61	1947	-39.92	5.16	-0.13
311	SLE RA 2	127	60	1936	-39.54	4.98	-0.13
311	SLE RA 3	124	62	1935	-40.95	4.7	-0.14
311	SLE RA 4	121	62	1928	-40.73	4.59	-0.14
311	SLE RA 5	120	61	1917	-40.28	4.51	-0.14
311	SLE RA 6	116	64	1916	-41.69	4.23	-0.14
311	SLE RA 7	114	63	1909	-41.47	4.12	-0.14
311	SLE RA 8	116	63	1909	-41.4	4.23	-0.14
311	SLE RA 9	113	63	1902	-41.17	4.12	-0.14
311	SLE RA 10	146	65	2130	-42.9	5.83	-0.14
311	SLE RA 11	142	68	2129	-44.31	5.55	-0.15
311	SLE RA 12	140	67	2122	-44.08	5.44	-0.15
311	SLE RA 13	138	67	2110	-43.64	5.36	-0.15
311	SLE RA 14	135	69	2110	-45.05	5.08	-0.15
311	SLE RA 15	132	68	2103	-44.82	4.97	-0.15
311	SLE RA 16	134	68	2103	-44.75	5.08	-0.15
311	SLE RA 17	132	68	2096	-44.53	4.97	-0.15



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
311	SLE RA 18	158	68	2224	-44.71	6.37	-0.15
311	SLE RA 19	155	68	2217	-44.49	6.26	-0.15
311	SLE RA 20	150	69	2205	-45.45	5.91	-0.15
311	SLE RA 21	148	69	2198	-45.23	5.8	-0.15
311	SLE FR 1	131	61	1947	-39.92	5.16	-0.13
311	SLE FR 2	130	61	1945	-39.84	5.12	-0.13
311	SLE FR 3	128	61	1940	-40.21	4.97	-0.14
311	SLE FR 4	138	63	2028	-41.28	5.49	-0.14
311	SLE FR 5	136	64	2023	-41.65	5.34	-0.14
311	SLE FR 6	144	65	2086	-42.31	5.77	-0.14
311	SLE QP 1	131	61	1947	-39.92	5.16	-0.13
311	SLE QP 2	139	63	2030	-41.35	5.52	-0.14
311	SLD 1	528	39	3765	-24.95	28.4	-0.09
311	SLD 2	528	39	3765	-24.95	28.4	-0.09
311	SLD 3	440	52	3047	-34.47	23.23	-0.12
311	SLD 4	440	52	3047	-34.47	23.23	-0.12
311	SLD 5	389	36	3641	-21.99	20.24	-0.08
311	SLD 6	389	36	3641	-21.99	20.24	-0.08
311	SLD 7	96	79	1245	-53.73	2.98	-0.18
311	SLD 8	96	79	1245	-53.73	2.98	-0.18
311	SLD 9	182	47	2815	-28.98	8.06	-0.1
311	SLD 10	182	47	2815	-28.98	8.06	-0.1
311	SLD 11	-111	90	420	-60.72	-9.19	-0.2
311	SLD 12	-111	90	420	-60.72	-9.19	-0.2
311	SLD 13	-162	74	1014	-48.24	-12.18	-0.16
311	SLD 14	-162	74	1014	-48.24	-12.18	-0.16
311	SLD 15	-250	87	295	-57.76	-17.35	-0.19
311	SLD 16	-250	87	295	-57.76	-17.35	-0.19
311	SLV 1	1043	7	6129	-2.96	58.85	-0.02
311	SLV 2	1043	7	6129	-2.96	58.85	-0.02
311	SLV 3	837	37	4344	-25.37	46.55	-0.09
311	SLV 4	837	37	4344	-25.37	46.55	-0.09
311	SLV 5	723	1	5968	4.15	40.17	0
311	SLV 6	723	1	5968	4.15	40.17	0
311	SLV 7	36	101	16	-70.55	-0.82	-0.23
311	SLV 8	36	101	16	-70.55	-0.82	-0.23
311	SLV 9	242	26	4044	-12.16	11.86	-0.05
311	SLV 10	242	26	4044	-12.16	11.86	-0.05
311	SLV 11	-445	125	-1907	-86.86	-29.12	-0.28
311	SLV 12	-445	125	-1907	-86.86	-29.12	-0.28
311	SLV 13	-559	89	-283	-57.34	-35.51	-0.19
311	SLV 14	-559	89	-283	-57.34	-35.51	-0.19
311	SLV 15	-765	119	-2068	-79.75	-47.8	-0.26
311	SLV 16	-765	119	-2068	-79.75	-47.8	-0.26
312	SLU 1	-11	36	2030	-31	-1.21	0.06
312	SLU 2	-18	35	2014	-30.54	-1.5	0.06
312	SLU 3	-27	37	2040	-32.24	-2	0.06
312	SLU 4	-31	37	2030	-31.96	-2.18	0.06
312	SLU 5	-33	36	2011	-31.42	-2.26	0.06
312	SLU 6	-43	38	2037	-33.12	-2.76	0.07
312	SLU 7	-47	38	2027	-32.84	-2.94	0.07
312	SLU 8	-42	38	2025	-32.76	-2.73	0.07
312	SLU 9	-46	37	2015	-32.48	-2.9	0.07
312	SLU 10	-10	40	2313	-34.52	-1.24	0.07
312	SLU 11	-19	42	2339	-36.22	-1.74	0.07
312	SLU 12	-23	41	2329	-35.94	-1.91	0.07
312	SLU 13	-25	41	2311	-35.4	-2	0.07
312	SLU 14	-34	43	2337	-37.1	-2.5	0.07
312	SLU 15	-39	42	2327	-36.82	-2.67	0.07
312	SLU 16	-34	42	2325	-36.73	-2.46	0.07
312	SLU 17	-38	42	2315	-36.46	-2.64	0.07
312	SLU 18	1	42	2458	-36.68	-0.84	0.07
312	SLU 19	-4	42	2448	-36.41	-1.01	0.07
312	SLU 20	-15	43	2456	-37.56	-1.59	0.08
312	SLU 21	-19	43	2446	-37.29	-1.77	0.07
312	SLU 22	-14	40	2276	-35.14	-1.45	0.07
312	SLU 23	-21	40	2259	-34.68	-1.74	0.07
312	SLU 24	-30	42	2285	-36.38	-2.24	0.07
312	SLU 25	-34	41	2275	-36.11	-2.42	0.07
312	SLU 26	-36	41	2257	-35.56	-2.5	0.07
312	SLU 27	-45	43	2283	-37.26	-3	0.07
312	SLU 28	-50	42	2273	-36.98	-3.17	0.07
312	SLU 29	-45	42	2271	-36.9	-2.97	0.07
312	SLU 30	-49	42	2261	-36.62	-3.14	0.07
312	SLU 31	-13	44	2559	-38.66	-1.48	0.08
312	SLU 32	-22	46	2585	-40.36	-1.98	0.08
312	SLU 33	-26	46	2575	-40.08	-2.15	0.08
312	SLU 34	-28	45	2556	-39.54	-2.23	0.08
312	SLU 35	-37	47	2582	-41.24	-2.74	0.08
312	SLU 36	-41	47	2572	-40.96	-2.91	0.08
312	SLU 37	-37	47	2570	-40.88	-2.7	0.08
312	SLU 38	-41	47	2560	-40.6	-2.88	0.08
312	SLU 39	-2	47	2704	-40.82	-1.07	0.08
312	SLU 40	-6	46	2694	-40.55	-1.25	0.08
312	SLU 41	-18	48	2701	-41.7	-1.83	0.08
312	SLU 42	-22	47	2691	-41.43	-2.01	0.08
312	SLU 43	-14	45	2555	-38.88	-1.49	0.08
312	SLU 44	-20	44	2539	-38.42	-1.78	0.08
312	SLU 45	-30	46	2564	-40.12	-2.29	0.08
312	SLU 46	-34	46	2554	-39.84	-2.46	0.08



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
312	SLU 47	-36	45	2536	-39.3	-2.54	0.08
312	SLU 48	-45	47	2562	-41	-3.04	0.08
312	SLU 49	-49	47	2552	-40.72	-3.22	0.08
312	SLU 50	-44	47	2550	-40.63	-3.01	0.08
312	SLU 51	-48	46	2540	-40.36	-3.18	0.08
312	SLU 52	-12	49	2838	-42.4	-1.52	0.09
312	SLU 53	-21	51	2864	-44.1	-2.02	0.09
312	SLU 54	-26	50	2854	-43.82	-2.2	0.09
312	SLU 55	-28	50	2836	-43.28	-2.28	0.09
312	SLU 56	-37	52	2862	-44.97	-2.78	0.09
312	SLU 57	-41	51	2852	-44.7	-2.95	0.09
312	SLU 58	-36	51	2850	-44.61	-2.75	0.09
312	SLU 59	-40	51	2840	-44.34	-2.92	0.09
312	SLU 60	-2	51	2983	-44.56	-1.12	0.09
312	SLU 61	-6	51	2973	-44.29	-1.29	0.09
312	SLU 62	-17	52	2981	-45.44	-1.87	0.09
312	SLU 63	-21	52	2971	-45.17	-2.05	0.09
312	SLU 64	-16	49	2801	-43.02	-1.73	0.09
312	SLU 65	-23	49	2784	-42.56	-2.02	0.09
312	SLU 66	-32	51	2810	-44.26	-2.52	0.09
312	SLU 67	-37	50	2800	-43.98	-2.7	0.09
312	SLU 68	-39	50	2782	-43.44	-2.78	0.09
312	SLU 69	-48	52	2808	-45.14	-3.28	0.09
312	SLU 70	-52	51	2798	-44.86	-3.46	0.09
312	SLU 71	-47	51	2796	-44.78	-3.25	0.09
312	SLU 72	-51	51	2786	-44.5	-3.42	0.09
312	SLU 73	-15	53	3084	-46.54	-1.76	0.09
312	SLU 74	-24	55	3110	-48.24	-2.26	0.1
312	SLU 75	-28	55	3100	-47.96	-2.43	0.1
312	SLU 76	-30	54	3081	-47.42	-2.52	0.1
312	SLU 77	-40	56	3107	-49.12	-3.02	0.1
312	SLU 78	-44	56	3097	-48.84	-3.19	0.1
312	SLU 79	-39	56	3095	-48.75	-2.98	0.1
312	SLU 80	-43	56	3085	-48.48	-3.16	0.1
312	SLU 81	-5	56	3229	-48.7	-1.36	0.1
312	SLU 82	-9	55	3219	-48.43	-1.53	0.1
312	SLU 83	-20	57	3226	-49.58	-2.11	0.1
312	SLU 84	-24	57	3216	-49.31	-2.29	0.1
312	SLE RA 1	-12	37	2100	-32.18	-1.28	0.06
312	SLE RA 2	-17	37	2089	-31.88	-1.47	0.06
312	SLE RA 3	-23	38	2107	-33.01	-1.81	0.07
312	SLE RA 4	-25	38	2100	-32.83	-1.92	0.07
312	SLE RA 5	-27	37	2088	-32.46	-1.98	0.07
312	SLE RA 6	-33	39	2105	-33.59	-2.31	0.07
312	SLE RA 7	-36	38	2098	-33.41	-2.43	0.07
312	SLE RA 8	-32	38	2097	-33.35	-2.29	0.07
312	SLE RA 9	-35	38	2090	-33.17	-2.41	0.07
312	SLE RA 10	-11	40	2289	-34.53	-1.3	0.07
312	SLE RA 11	-17	41	2306	-35.66	-1.63	0.07
312	SLE RA 12	-20	41	2300	-35.48	-1.75	0.07
312	SLE RA 13	-21	40	2287	-35.12	-1.8	0.07
312	SLE RA 14	-27	42	2305	-36.25	-2.14	0.07
312	SLE RA 15	-30	41	2298	-36.06	-2.25	0.07
312	SLE RA 16	-27	41	2297	-36.01	-2.11	0.07
312	SLE RA 17	-30	41	2290	-35.82	-2.23	0.07
312	SLE RA 18	-4	41	2386	-35.97	-1.03	0.07
312	SLE RA 19	-7	41	2379	-35.79	-1.14	0.07
312	SLE RA 20	-14	42	2384	-36.56	-1.53	0.07
312	SLE RA 21	-17	42	2377	-36.37	-1.65	0.07
312	SLE FR 1	-12	37	2100	-32.18	-1.28	0.06
312	SLE FR 2	-13	37	2098	-32.12	-1.32	0.06
312	SLE FR 3	-16	37	2100	-32.41	-1.48	0.07
312	SLE FR 4	-11	38	2184	-33.26	-1.24	0.07
312	SLE FR 5	-14	38	2185	-33.55	-1.41	0.07
312	SLE FR 6	-8	39	2243	-34.08	-1.15	0.07
312	SLE QP 1	-12	37	2100	-32.18	-1.28	0.06
312	SLE QP 2	-10	38	2186	-33.32	-1.2	0.07
312	SLD 1	437	15	2731	-13.73	19.87	0.04
312	SLD 2	437	15	2731	-13.73	19.87	0.04
312	SLD 3	324	34	3145	-29.99	14.97	0.06
312	SLD 4	324	34	3145	-29.99	14.97	0.06
312	SLD 5	295	3	1722	-2.77	12.54	0.03
312	SLD 6	295	3	1722	-2.77	12.54	0.03
312	SLD 7	-80	65	3102	-56.99	-3.77	0.09
312	SLD 8	-80	65	3102	-56.99	-3.77	0.09
312	SLD 9	61	11	1270	-9.65	1.37	0.04
312	SLD 10	61	11	1270	-9.65	1.37	0.04
312	SLD 11	-314	73	2650	-63.86	-14.95	0.1
312	SLD 12	-314	73	2650	-63.86	-14.95	0.1
312	SLD 13	-344	43	1227	-36.64	-17.38	0.08
312	SLD 14	-344	43	1227	-36.64	-17.38	0.08
312	SLD 15	-456	61	1641	-52.91	-22.27	0.09
312	SLD 16	-456	61	1641	-52.91	-22.27	0.09
312	SLV 1	1029	-17	3429	13.56	47.69	0
312	SLV 2	1029	-17	3429	13.56	47.69	0
312	SLV 3	763	28	4453	-26.25	36.23	0.05
312	SLV 4	763	28	4453	-26.25	36.23	0.05
312	SLV 5	705	-47	1006	41.13	30.85	-0.02
312	SLV 6	705	-47	1006	41.13	30.85	-0.02
312	SLV 7	-180	104	4419	-91.58	-7.35	0.12



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
312	SLV 8	-180	104	4419	-91.58	-7.35	0.12
312	SLV 9	161	-28	-47	24.95	4.95	0.01
312	SLV 10	161	-28	-47	24.95	4.95	0.01
312	SLV 11	-724	124	3366	-107.76	-33.25	0.15
312	SLV 12	-724	124	3366	-107.76	-33.25	0.15
312	SLV 13	-782	48	-81	-40.38	-38.64	0.09
312	SLV 14	-782	48	-81	-40.38	-38.64	0.09
312	SLV 15	-1048	93	943	-80.2	-50.1	0.13
312	SLV 16	-1048	93	943	-80.2	-50.1	0.13
313	SLU 1	-147	29	2149	-25.11	-6.84	0.07
313	SLU 2	-155	28	2130	-24.72	-7.17	0.07
313	SLU 3	-169	30	2175	-26.11	-7.85	0.07
313	SLU 4	-174	29	2163	-25.88	-8.05	0.07
313	SLU 5	-175	29	2143	-25.42	-8.11	0.07
313	SLU 6	-189	31	2188	-26.81	-8.78	0.07
313	SLU 7	-194	30	2177	-26.58	-8.98	0.07
313	SLU 8	-187	30	2176	-26.51	-8.71	0.07
313	SLU 9	-192	30	2164	-26.28	-8.91	0.07
313	SLU 10	-169	32	2441	-27.86	-7.76	0.08
313	SLU 11	-182	33	2486	-29.24	-8.44	0.08
313	SLU 12	-187	33	2475	-29.01	-8.64	0.08
313	SLU 13	-188	32	2455	-28.56	-8.7	0.08
313	SLU 14	-202	34	2500	-29.95	-9.37	0.08
313	SLU 15	-207	34	2488	-29.71	-9.57	0.08
313	SLU 16	-200	34	2487	-29.65	-9.3	0.08
313	SLU 17	-205	33	2476	-29.42	-9.5	0.08
313	SLU 18	-166	34	2594	-29.59	-7.68	0.08
313	SLU 19	-171	33	2582	-29.35	-7.88	0.08
313	SLU 20	-186	34	2607	-30.29	-8.62	0.08
313	SLU 21	-191	34	2596	-30.06	-8.82	0.08
313	SLU 22	-170	32	2412	-28.4	-7.88	0.08
313	SLU 23	-178	32	2393	-28.01	-8.21	0.08
313	SLU 24	-192	33	2438	-29.4	-8.89	0.08
313	SLU 25	-196	33	2426	-29.17	-9.09	0.08
313	SLU 26	-198	33	2406	-28.72	-9.15	0.08
313	SLU 27	-211	34	2451	-30.1	-9.82	0.08
313	SLU 28	-216	34	2440	-29.87	-10.02	0.08
313	SLU 29	-210	34	2439	-29.8	-9.75	0.08
313	SLU 30	-215	34	2427	-29.57	-9.95	0.08
313	SLU 31	-191	35	2704	-31.15	-8.8	0.08
313	SLU 32	-205	37	2749	-32.53	-9.48	0.09
313	SLU 33	-209	37	2738	-32.3	-9.68	0.09
313	SLU 34	-211	36	2718	-31.85	-9.74	0.09
313	SLU 35	-225	38	2763	-33.24	-10.41	0.09
313	SLU 36	-229	38	2751	-33	-10.61	0.09
313	SLU 37	-223	38	2750	-32.94	-10.34	0.09
313	SLU 38	-228	37	2739	-32.71	-10.54	0.09
313	SLU 39	-189	37	2857	-32.88	-8.72	0.09
313	SLU 40	-194	37	2845	-32.65	-8.92	0.09
313	SLU 41	-209	38	2870	-33.58	-9.66	0.09
313	SLU 42	-213	38	2859	-33.35	-9.86	0.09
313	SLU 43	-184	36	2703	-31.51	-8.53	0.09
313	SLU 44	-192	35	2684	-31.13	-8.86	0.08
313	SLU 45	-205	37	2729	-32.51	-9.54	0.09
313	SLU 46	-210	37	2718	-32.28	-9.74	0.09
313	SLU 47	-212	36	2698	-31.83	-9.8	0.09
313	SLU 48	-225	38	2743	-33.21	-10.47	0.09
313	SLU 49	-230	38	2731	-32.98	-10.67	0.09
313	SLU 50	-224	37	2730	-32.92	-10.4	0.09
313	SLU 51	-228	37	2719	-32.69	-10.6	0.09
313	SLU 52	-205	39	2996	-34.26	-9.45	0.09
313	SLU 53	-218	41	3041	-35.65	-10.13	0.1
313	SLU 54	-223	40	3029	-35.42	-10.33	0.1
313	SLU 55	-225	40	3009	-34.96	-10.39	0.09
313	SLU 56	-238	41	3054	-36.35	-11.06	0.1
313	SLU 57	-243	41	3043	-36.12	-11.26	0.1
313	SLU 58	-237	41	3042	-36.05	-10.99	0.1
313	SLU 59	-241	41	3030	-35.82	-11.19	0.1
313	SLU 60	-202	41	3148	-35.99	-9.37	0.1
313	SLU 61	-207	41	3137	-35.76	-9.57	0.1
313	SLU 62	-222	42	3162	-36.69	-10.31	0.1
313	SLU 63	-227	42	3150	-36.46	-10.51	0.1
313	SLU 64	-207	40	2966	-34.8	-9.57	0.09
313	SLU 65	-215	39	2947	-34.42	-9.91	0.09
313	SLU 66	-228	41	2992	-35.8	-10.58	0.1
313	SLU 67	-233	40	2981	-35.57	-10.78	0.1
313	SLU 68	-234	40	2961	-35.12	-10.84	0.09
313	SLU 69	-248	42	3006	-36.51	-11.52	0.1
313	SLU 70	-253	41	2994	-36.27	-11.72	0.1
313	SLU 71	-246	41	2993	-36.21	-11.44	0.1
313	SLU 72	-251	41	2982	-35.98	-11.64	0.1
313	SLU 73	-228	43	3259	-37.55	-10.5	0.1
313	SLU 74	-241	44	3304	-38.94	-11.17	0.11
313	SLU 75	-246	44	3292	-38.71	-11.37	0.1
313	SLU 76	-248	44	3272	-38.25	-11.43	0.1
313	SLU 77	-261	45	3317	-39.64	-12.11	0.11
313	SLU 78	-266	45	3306	-39.41	-12.31	0.11
313	SLU 79	-259	45	3305	-39.34	-12.03	0.11
313	SLU 80	-264	45	3293	-39.11	-12.23	0.11
313	SLU 81	-225	45	3411	-39.28	-10.42	0.11



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
313	SLU 82	-230	44	3400	-39.05	-10.62	0.11
313	SLU 83	-245	46	3425	-39.98	-11.35	0.11
313	SLU 84	-250	45	3413	-39.75	-11.55	0.11
313	SLE RA 1	-154	30	2224	-26.05	-7.14	0.07
313	SLE RA 2	-159	29	2211	-25.79	-7.36	0.07
313	SLE RA 3	-168	30	2241	-26.71	-7.81	0.07
313	SLE RA 4	-171	30	2234	-26.56	-7.94	0.07
313	SLE RA 5	-173	30	2220	-26.26	-7.98	0.07
313	SLE RA 6	-181	31	2250	-27.18	-8.43	0.07
313	SLE RA 7	-185	31	2243	-27.03	-8.56	0.07
313	SLE RA 8	-180	31	2242	-26.98	-8.38	0.07
313	SLE RA 9	-184	31	2234	-26.83	-8.52	0.07
313	SLE RA 10	-168	32	2419	-27.88	-7.75	0.08
313	SLE RA 11	-177	33	2449	-28.8	-8.2	0.08
313	SLE RA 12	-180	33	2441	-28.65	-8.33	0.08
313	SLE RA 13	-181	32	2428	-28.35	-8.37	0.08
313	SLE RA 14	-190	33	2458	-29.27	-8.82	0.08
313	SLE RA 15	-193	33	2450	-29.12	-8.96	0.08
313	SLE RA 16	-189	33	2450	-29.07	-8.78	0.08
313	SLE RA 17	-192	33	2442	-28.92	-8.91	0.08
313	SLE RA 18	-166	33	2521	-29.03	-7.7	0.08
313	SLE RA 19	-170	33	2513	-28.88	-7.83	0.08
313	SLE RA 20	-180	34	2530	-29.5	-8.32	0.08
313	SLE RA 21	-183	33	2522	-29.35	-8.45	0.08
313	SLE FR 1	-154	30	2224	-26.05	-7.14	0.07
313	SLE FR 2	-155	30	2221	-26	-7.18	0.07
313	SLE FR 3	-159	30	2228	-26.24	-7.38	0.07
313	SLE FR 4	-159	31	2310	-26.89	-7.35	0.07
313	SLE FR 5	-163	31	2317	-27.13	-7.55	0.07
313	SLE FR 6	-160	31	2372	-27.54	-7.42	0.07
313	SLE QP 1	-154	30	2224	-26.05	-7.14	0.07
313	SLE QP 2	-158	31	2313	-26.94	-7.3	0.07
313	SLD 1	367	6	2592	-4.28	17.47	0.02
313	SLD 2	367	6	2592	-4.28	17.47	0.02
313	SLD 3	242	29	2805	-26.58	12.08	0.07
313	SLD 4	242	29	2805	-26.58	12.08	0.07
313	SLD 5	190	-13	2074	13.68	8.31	-0.03
313	SLD 6	190	-13	2074	13.68	8.31	-0.03
313	SLD 7	-228	66	2783	-60.66	-9.67	0.16
313	SLD 8	-228	66	2783	-60.66	-9.67	0.16
313	SLD 9	-88	-5	1842	6.77	-4.94	-0.01
313	SLD 10	-88	-5	1842	6.77	-4.94	-0.01
313	SLD 11	-505	74	2552	-67.57	-22.92	0.17
313	SLD 12	-505	74	2552	-67.57	-22.92	0.17
313	SLD 13	-557	32	1821	-27.3	-26.68	0.07
313	SLD 14	-557	32	1821	-27.3	-26.68	0.07
313	SLD 15	-683	56	2034	-49.61	-32.08	0.13
313	SLD 16	-683	56	2034	-49.61	-32.08	0.13
313	SLV 1	1063	-30	2961	28	50.3	-0.06
313	SLV 2	1063	-30	2961	28	50.3	-0.06
313	SLV 3	768	29	3468	-27.11	37.66	0.07
313	SLV 4	768	29	3468	-27.11	37.66	0.07
313	SLV 5	656	-76	1738	73.13	29.15	-0.17
313	SLV 6	656	-76	1738	73.13	29.15	-0.17
313	SLV 7	-327	119	3429	-110.58	-12.99	0.28
313	SLV 8	-327	119	3429	-110.58	-12.99	0.28
313	SLV 9	12	-58	1197	56.69	-1.62	-0.13
313	SLV 10	12	-58	1197	56.69	-1.62	-0.13
313	SLV 11	-971	138	2888	-127.01	-43.75	0.32
313	SLV 12	-971	138	2888	-127.01	-43.75	0.32
313	SLV 13	-1083	33	1158	-26.77	-52.27	0.07
313	SLV 14	-1083	33	1158	-26.77	-52.27	0.07
313	SLV 15	-1378	91	1665	-81.89	-64.9	0.21
313	SLV 16	-1378	91	1665	-81.89	-64.9	0.21
314	SLU 1	-255	24	2193	-20.63	-11.25	0.06
314	SLU 2	-265	24	2170	-20.28	-11.67	0.06
314	SLU 3	-282	25	2229	-21.45	-12.45	0.07
314	SLU 4	-288	25	2215	-21.24	-12.7	0.07
314	SLU 5	-290	25	2193	-20.85	-12.77	0.06
314	SLU 6	-306	26	2253	-22.02	-13.55	0.07
314	SLU 7	-312	26	2239	-21.81	-13.81	0.07
314	SLU 8	-304	26	2240	-21.77	-13.45	0.07
314	SLU 9	-310	25	2226	-21.57	-13.71	0.07
314	SLU 10	-298	27	2483	-22.76	-13.07	0.07
314	SLU 11	-314	28	2542	-23.93	-13.85	0.07
314	SLU 12	-320	28	2528	-23.72	-14.1	0.07
314	SLU 13	-322	27	2506	-23.33	-14.17	0.07
314	SLU 14	-338	29	2566	-24.5	-14.96	0.08
314	SLU 15	-344	29	2552	-24.29	-15.21	0.07
314	SLU 16	-336	29	2553	-24.25	-14.86	0.07
314	SLU 17	-342	28	2539	-24.05	-15.11	0.07
314	SLU 18	-301	28	2640	-24.17	-13.25	0.07
314	SLU 19	-307	28	2626	-23.96	-13.5	0.07
314	SLU 20	-325	29	2664	-24.74	-14.35	0.08
314	SLU 21	-332	29	2650	-24.53	-14.61	0.08
314	SLU 22	-295	27	2462	-23.26	-13.02	0.07
314	SLU 23	-306	27	2439	-22.91	-13.44	0.07
314	SLU 24	-322	28	2498	-24.09	-14.23	0.07
314	SLU 25	-328	28	2484	-23.88	-14.48	0.07
314	SLU 26	-330	28	2462	-23.49	-14.55	0.07



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
		x	y	z		x	y	z	
314	SLU 27	-346	29	2522		-24.66	-15.33	0.08	
314	SLU 28	-353	29	2508		-24.45	-15.58	0.08	
314	SLU 29	-344	29	2509		-24.41	-15.23	0.08	
314	SLU 30	-350	28	2495		-24.2	-15.48	0.07	
314	SLU 31	-338	30	2752		-25.39	-14.85	0.08	
314	SLU 32	-354	31	2811		-26.56	-15.63	0.08	
314	SLU 33	-360	31	2797		-26.36	-15.88	0.08	
314	SLU 34	-362	31	2775		-25.97	-15.95	0.08	
314	SLU 35	-379	32	2835		-27.14	-16.73	0.08	
314	SLU 36	-385	32	2821		-26.93	-16.99	0.08	
314	SLU 37	-376	32	2822		-26.89	-16.63	0.08	
314	SLU 38	-382	31	2808		-26.68	-16.89	0.08	
314	SLU 39	-341	32	2909		-26.81	-15.03	0.08	
314	SLU 40	-347	31	2895		-26.6	-15.28	0.08	
314	SLU 41	-366	32	2933		-27.38	-16.13	0.08	
314	SLU 42	-372	32	2919		-27.17	-16.38	0.08	
314	SLU 43	-318	31	2758		-25.91	-14.01	0.08	
314	SLU 44	-328	30	2735		-25.57	-14.43	0.08	
314	SLU 45	-344	31	2795		-26.74	-15.21	0.08	
314	SLU 46	-351	31	2781		-26.53	-15.47	0.08	
314	SLU 47	-352	31	2759		-26.14	-15.54	0.08	
314	SLU 48	-369	32	2818		-27.31	-16.32	0.08	
314	SLU 49	-375	32	2804		-27.1	-16.57	0.08	
314	SLU 50	-367	32	2806		-27.06	-16.22	0.08	
314	SLU 51	-373	32	2792		-26.85	-16.47	0.08	
314	SLU 52	-360	33	3048		-28.04	-15.84	0.09	
314	SLU 53	-377	34	3108		-29.21	-16.62	0.09	
314	SLU 54	-383	34	3094		-29.01	-16.87	0.09	
314	SLU 55	-385	34	3072		-28.62	-16.94	0.09	
314	SLU 56	-401	35	3131		-29.79	-17.72	0.09	
314	SLU 57	-407	35	3117		-29.58	-17.97	0.09	
314	SLU 58	-399	35	3119		-29.54	-17.62	0.09	
314	SLU 59	-405	35	3105		-29.33	-17.87	0.09	
314	SLU 60	-364	35	3206		-29.46	-16.02	0.09	
314	SLU 61	-370	34	3192		-29.25	-16.27	0.09	
314	SLU 62	-388	35	3229		-30.03	-17.12	0.09	
314	SLU 63	-394	35	3216		-29.82	-17.37	0.09	
314	SLU 64	-358	34	3028		-28.55	-15.79	0.09	
314	SLU 65	-368	33	3004		-28.2	-16.21	0.09	
314	SLU 66	-385	35	3064		-29.37	-16.99	0.09	
314	SLU 67	-391	34	3050		-29.16	-17.24	0.09	
314	SLU 68	-393	34	3028		-28.77	-17.31	0.09	
314	SLU 69	-409	35	3087		-29.94	-18.09	0.09	
314	SLU 70	-415	35	3073		-29.73	-18.35	0.09	
314	SLU 71	-407	35	3075		-29.69	-17.99	0.09	
314	SLU 72	-413	35	3061		-29.49	-18.25	0.09	
314	SLU 73	-401	36	3317		-30.68	-17.61	0.09	
314	SLU 74	-417	38	3377		-31.85	-18.39	0.1	
314	SLU 75	-423	37	3363		-31.64	-18.65	0.1	
314	SLU 76	-425	37	3341		-31.25	-18.72	0.1	
314	SLU 77	-441	38	3400		-32.42	-19.5	0.1	
314	SLU 78	-447	38	3386		-32.21	-19.75	0.1	
314	SLU 79	-439	38	3388		-32.17	-19.4	0.1	
314	SLU 80	-445	38	3374		-31.97	-19.65	0.1	
314	SLU 81	-404	38	3475		-32.09	-17.79	0.1	
314	SLU 82	-410	38	3461		-31.88	-18.04	0.1	
314	SLU 83	-428	38	3499		-32.66	-18.9	0.1	
314	SLU 84	-435	38	3485		-32.45	-19.15	0.1	
314	SLE RA 1	-267	25	2270		-21.38	-11.75	0.07	
314	SLE RA 2	-273	25	2254		-21.15	-12.03	0.07	
314	SLE RA 3	-284	26	2294		-21.93	-12.56	0.07	
314	SLE RA 4	-289	26	2284		-21.79	-12.72	0.07	
314	SLE RA 5	-290	25	2270		-21.53	-12.77	0.07	
314	SLE RA 6	-301	26	2310		-22.31	-13.29	0.07	
314	SLE RA 7	-305	26	2300		-22.17	-13.46	0.07	
314	SLE RA 8	-299	26	2301		-22.15	-13.23	0.07	
314	SLE RA 9	-303	26	2292		-22.01	-13.39	0.07	
314	SLE RA 10	-295	27	2463		-22.8	-12.97	0.07	
314	SLE RA 11	-306	28	2503		-23.58	-13.49	0.07	
314	SLE RA 12	-310	28	2493		-23.44	-13.66	0.07	
314	SLE RA 13	-311	27	2479		-23.18	-13.71	0.07	
314	SLE RA 14	-322	28	2518		-23.96	-14.23	0.07	
314	SLE RA 15	-326	28	2509		-23.82	-14.4	0.07	
314	SLE RA 16	-321	28	2510		-23.8	-14.16	0.07	
314	SLE RA 17	-325	28	2501		-23.66	-14.33	0.07	
314	SLE RA 18	-297	28	2568		-23.74	-13.09	0.07	
314	SLE RA 19	-301	28	2559		-23.6	-13.26	0.07	
314	SLE RA 20	-313	28	2584		-24.12	-13.83	0.07	
314	SLE RA 21	-318	28	2574		-23.99	-13.99	0.07	
314	SLE FR 1	-267	25	2270		-21.38	-11.75	0.07	
314	SLE FR 2	-268	25	2267		-21.33	-11.81	0.07	
314	SLE FR 3	-273	25	2276		-21.53	-12.05	0.07	
314	SLE FR 4	-277	26	2356		-22.04	-12.21	0.07	
314	SLE FR 5	-282	26	2366		-22.24	-12.45	0.07	
314	SLE FR 6	-282	27	2419		-22.56	-12.42	0.07	
314	SLE QP 1	-267	25	2270		-21.38	-11.75	0.07	
314	SLE QP 2	-276	26	2359		-22.09	-12.15	0.07	
314	SLD 1	325	-1	2411		3.01	14.78	0	
314	SLD 2	325	-1	2411		3.01	14.78	0	
314	SLD 3	189	27	2620		-23.8	8.78	0.07	



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
314	SLD 4	189	27	2620	-23.8	8.78	0.07
314	SLD 5	111	-24	2058	26.11	5.03	-0.07
314	SLD 6	111	-24	2058	26.11	5.03	-0.07
314	SLD 7	-343	68	2755	-63.27	-14.98	0.18
314	SLD 8	-343	68	2755	-63.27	-14.98	0.18
314	SLD 9	-209	-16	1964	19.09	-9.33	-0.05
314	SLD 10	-209	-16	1964	19.09	-9.33	-0.05
314	SLD 11	-663	76	2661	-70.29	-29.34	0.2
314	SLD 12	-663	76	2661	-70.29	-29.34	0.2
314	SLD 13	-741	25	2098	-20.38	-33.09	0.06
314	SLD 14	-741	25	2098	-20.38	-33.09	0.06
314	SLD 15	-877	53	2307	-47.19	-39.09	0.14
314	SLD 16	-877	53	2307	-47.19	-39.09	0.14
314	SLV 1	1119	-40	2481	39.25	50.36	-0.1
314	SLV 2	1119	-40	2481	39.25	50.36	-0.1
314	SLV 3	800	29	2975	-27.25	36.32	0.08
314	SLV 4	800	29	2975	-27.25	36.32	0.08
314	SLV 5	627	-98	1647	97.16	27.9	-0.27
314	SLV 6	627	-98	1647	97.16	27.9	-0.27
314	SLV 7	-437	131	3293	-124.49	-18.91	0.35
314	SLV 8	-437	131	3293	-124.49	-18.91	0.35
314	SLV 9	-115	-79	1426	80.31	-5.4	-0.22
314	SLV 10	-115	-79	1426	80.31	-5.4	-0.22
314	SLV 11	-1178	150	3071	-141.34	-52.21	0.4
314	SLV 12	-1178	150	3071	-141.34	-52.21	0.4
314	SLV 13	-1352	23	1744	-16.93	-60.62	0.05
314	SLV 14	-1352	23	1744	-16.93	-60.62	0.05
314	SLV 15	-1671	92	2237	-83.43	-74.67	0.24
314	SLV 16	-1671	92	2237	-83.43	-74.67	0.24
315	SLU 1	-317	20	2192	-17	-13.79	0.05
315	SLU 2	-331	20	2162	-16.67	-14.36	0.05
315	SLU 3	-347	21	2234	-17.68	-15.14	0.06
315	SLU 4	-355	21	2216	-17.48	-15.48	0.06
315	SLU 5	-358	20	2191	-17.14	-15.6	0.05
315	SLU 6	-375	22	2263	-18.16	-16.38	0.06
315	SLU 7	-383	21	2245	-17.96	-16.72	0.06
315	SLU 8	-372	21	2251	-17.95	-16.27	0.06
315	SLU 9	-381	21	2233	-17.75	-16.61	0.06
315	SLU 10	-375	22	2470	-18.61	-16.26	0.06
315	SLU 11	-391	23	2541	-19.63	-17.04	0.06
315	SLU 12	-400	23	2523	-19.43	-17.38	0.06
315	SLU 13	-403	23	2499	-19.09	-17.5	0.06
315	SLU 14	-419	24	2570	-20.1	-18.28	0.06
315	SLU 15	-428	24	2552	-19.9	-18.62	0.06
315	SLU 16	-417	24	2558	-19.89	-18.17	0.06
315	SLU 17	-425	24	2540	-19.69	-18.51	0.06
315	SLU 18	-380	24	2631	-19.78	-16.5	0.06
315	SLU 19	-389	23	2613	-19.58	-16.84	0.06
315	SLU 20	-408	24	2661	-20.25	-17.74	0.06
315	SLU 21	-416	24	2643	-20.05	-18.08	0.06
315	SLU 22	-368	23	2459	-19.1	-16.03	0.06
315	SLU 23	-382	22	2429	-18.77	-16.59	0.06
315	SLU 24	-399	24	2501	-19.79	-17.37	0.06
315	SLU 25	-407	23	2483	-19.59	-17.71	0.06
315	SLU 26	-410	23	2458	-19.24	-17.83	0.06
315	SLU 27	-426	24	2530	-20.26	-18.61	0.06
315	SLU 28	-435	24	2512	-20.06	-18.95	0.06
315	SLU 29	-424	24	2518	-20.05	-18.5	0.06
315	SLU 30	-432	24	2500	-19.85	-18.84	0.06
315	SLU 31	-427	25	2737	-20.71	-18.49	0.07
315	SLU 32	-443	26	2808	-21.73	-19.27	0.07
315	SLU 33	-451	26	2790	-21.53	-19.61	0.07
315	SLU 34	-454	25	2766	-21.19	-19.73	0.07
315	SLU 35	-471	27	2837	-22.2	-20.51	0.07
315	SLU 36	-479	26	2819	-22	-20.85	0.07
315	SLU 37	-468	26	2825	-21.99	-20.4	0.07
315	SLU 38	-477	26	2807	-21.79	-20.74	0.07
315	SLU 39	-432	26	2898	-21.88	-18.74	0.07
315	SLU 40	-440	26	2880	-21.68	-19.08	0.07
315	SLU 41	-460	27	2928	-22.35	-19.98	0.07
315	SLU 42	-468	26	2910	-22.15	-20.32	0.07
315	SLU 43	-394	26	2758	-21.38	-17.16	0.07
315	SLU 44	-408	25	2728	-21.05	-17.73	0.07
315	SLU 45	-424	26	2800	-22.07	-18.51	0.07
315	SLU 46	-433	26	2782	-21.86	-18.85	0.07
315	SLU 47	-436	26	2757	-21.52	-18.97	0.07
315	SLU 48	-452	27	2829	-22.54	-19.75	0.07
315	SLU 49	-460	27	2811	-22.34	-20.09	0.07
315	SLU 50	-450	27	2817	-22.33	-19.64	0.07
315	SLU 51	-458	26	2799	-22.13	-19.98	0.07
315	SLU 52	-452	27	3036	-22.99	-19.63	0.07
315	SLU 53	-469	29	3107	-24.01	-20.41	0.08
315	SLU 54	-477	28	3089	-23.81	-20.75	0.08
315	SLU 55	-480	28	3065	-23.47	-20.87	0.07
315	SLU 56	-497	29	3136	-24.48	-21.65	0.08
315	SLU 57	-505	29	3118	-24.28	-21.99	0.08
315	SLU 58	-494	29	3124	-24.27	-21.54	0.08
315	SLU 59	-502	29	3106	-24.07	-21.88	0.08
315	SLU 60	-458	29	3197	-24.16	-19.88	0.08
315	SLU 61	-466	29	3179	-23.96	-20.22	0.08



Nodo Ind.	Cont. N.br.	Reazione a traslazione				Reazione a rotazione			
		x	y	z		x	y	z	
315	SLU 62	-485	29	3227		-24.63	-21.12	0.08	
315	SLU 63	-494	29	3209		-24.43	-21.45	0.08	
315	SLU 64	-446	28	3025		-23.48	-19.4	0.07	
315	SLU 65	-460	28	2995		-23.15	-19.96	0.07	
315	SLU 66	-476	29	3067		-24.17	-20.75	0.08	
315	SLU 67	-484	29	3049		-23.97	-21.09	0.08	
315	SLU 68	-487	28	3024		-23.62	-21.2	0.07	
315	SLU 69	-504	29	3096		-24.64	-21.98	0.08	
315	SLU 70	-512	29	3078		-24.44	-22.32	0.08	
315	SLU 71	-501	29	3084		-24.43	-21.88	0.08	
315	SLU 72	-510	29	3066		-24.23	-22.22	0.08	
315	SLU 73	-504	30	3303		-25.09	-21.86	0.08	
315	SLU 74	-520	31	3374		-26.11	-22.64	0.08	
315	SLU 75	-529	31	3356		-25.91	-22.98	0.08	
315	SLU 76	-532	30	3332		-25.57	-23.1	0.08	
315	SLU 77	-548	32	3403		-26.58	-23.88	0.08	
315	SLU 78	-556	31	3385		-26.38	-24.22	0.08	
315	SLU 79	-546	32	3391		-26.37	-23.77	0.08	
315	SLU 80	-554	31	3373		-26.17	-24.11	0.08	
315	SLU 81	-509	31	3464		-26.26	-22.11	0.08	
315	SLU 82	-518	31	3446		-26.06	-22.45	0.08	
315	SLU 83	-537	32	3494		-26.73	-23.35	0.08	
315	SLU 84	-545	32	3476		-26.53	-23.69	0.08	
315	SLE RA 1	-332	21	2268		-17.6	-14.43	0.06	
315	SLE RA 2	-341	21	2248		-17.38	-14.81	0.05	
315	SLE RA 3	-352	22	2296		-18.06	-15.33	0.06	
315	SLE RA 4	-357	21	2284		-17.92	-15.56	0.06	
315	SLE RA 5	-359	21	2268		-17.7	-15.63	0.06	
315	SLE RA 6	-370	22	2316		-18.37	-16.15	0.06	
315	SLE RA 7	-376	22	2304		-18.24	-16.38	0.06	
315	SLE RA 8	-369	22	2307		-18.23	-16.08	0.06	
315	SLE RA 9	-374	22	2295		-18.1	-16.31	0.06	
315	SLE RA 10	-370	22	2453		-18.68	-16.07	0.06	
315	SLE RA 11	-381	23	2501		-19.35	-16.59	0.06	
315	SLE RA 12	-387	23	2489		-19.22	-16.82	0.06	
315	SLE RA 13	-389	23	2473		-18.99	-16.9	0.06	
315	SLE RA 14	-400	24	2521		-19.67	-17.42	0.06	
315	SLE RA 15	-405	23	2509		-19.54	-17.65	0.06	
315	SLE RA 16	-398	23	2512		-19.53	-17.35	0.06	
315	SLE RA 17	-404	23	2500		-19.4	-17.57	0.06	
315	SLE RA 18	-374	23	2561		-19.45	-16.24	0.06	
315	SLE RA 19	-379	23	2549		-19.32	-16.46	0.06	
315	SLE RA 20	-392	24	2581		-19.77	-17.06	0.06	
315	SLE RA 21	-398	23	2569		-19.64	-17.29	0.06	
315	SLE FR 1	-332	21	2268		-17.6	-14.43	0.06	
315	SLE FR 2	-333	21	2264		-17.56	-14.51	0.06	
315	SLE FR 3	-339	21	2276		-17.73	-14.76	0.06	
315	SLE FR 4	-346	22	2352		-18.11	-15.05	0.06	
315	SLE FR 5	-352	22	2364		-18.28	-15.3	0.06	
315	SLE FR 6	-353	22	2415		-18.53	-15.33	0.06	
315	SLE QP 1	-332	21	2268		-17.6	-14.43	0.06	
315	SLE QP 2	-344	22	2356		-18.16	-14.97	0.06	
315	SLD 1	339	-6	2096		8.47	15.92	-0.01	
315	SLD 2	339	-6	2096		8.47	15.92	-0.01	
315	SLD 3	193	24	2406		-21.22	9.36	0.06	
315	SLD 4	193	24	2406		-21.22	9.36	0.06	
315	SLD 5	83	-33	1807		34.87	4.24	-0.08	
315	SLD 6	83	-33	1807		34.87	4.24	-0.08	
315	SLD 7	-406	68	2842		-64.11	-17.62	0.18	
315	SLD 8	-406	68	2842		-64.11	-17.62	0.18	
315	SLD 9	-283	-25	1871		27.8	-12.32	-0.06	
315	SLD 10	-283	-25	1871		27.8	-12.32	-0.06	
315	SLD 11	-772	76	2905		-71.18	-34.19	0.2	
315	SLD 12	-772	76	2905		-71.18	-34.19	0.2	
315	SLD 13	-881	19	2306		-15.1	-39.3	0.05	
315	SLD 14	-881	19	2306		-15.1	-39.3	0.05	
315	SLD 15	-1028	50	2617		-44.79	-45.87	0.13	
315	SLD 16	-1028	50	2617		-44.79	-45.87	0.13	
315	SLV 1	1243	-47	1725		47.25	56.82	-0.12	
315	SLV 2	1243	-47	1725		47.25	56.82	-0.12	
315	SLV 3	900	28	2480		-26.53	41.46	0.07	
315	SLV 4	900	28	2480		-26.53	41.46	0.07	
315	SLV 5	652	-113	1022		113.36	29.86	-0.29	
315	SLV 6	652	-113	1022		113.36	29.86	-0.29	
315	SLV 7	-490	137	3538		-132.57	-21.34	0.35	
315	SLV 8	-490	137	3538		-132.57	-21.34	0.35	
315	SLV 9	-198	-94	1175		96.25	-8.61	-0.24	
315	SLV 10	-198	-94	1175		96.25	-8.61	-0.24	
315	SLV 11	-1340	156	3690		-149.68	-59.81	0.4	
315	SLV 12	-1340	156	3690		-149.68	-59.81	0.4	
315	SLV 13	-1589	15	2233		-9.78	-71.41	0.04	
315	SLV 14	-1589	15	2233		-9.78	-71.41	0.04	
315	SLV 15	-1932	90	2987		-83.56	-86.77	0.23	
315	SLV 16	-1932	90	2987		-83.56	-86.77	0.23	
316	SLU 1	-321	17	2195		-14.22	-14.16	0.05	
316	SLU 2	-340	17	2154		-13.88	-14.92	0.05	
316	SLU 3	-352	18	2240		-14.8	-15.55	0.05	
316	SLU 4	-363	18	2215		-14.6	-16	0.05	
316	SLU 5	-369	17	2187		-14.28	-16.2	0.05	
316	SLU 6	-381	18	2272		-15.2	-16.83	0.05	



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
316	SLU 7	-392	18	2248	-15	-17.29	0.05
316	SLU 8	-379	18	2260	-15.02	-16.73	0.05
316	SLU 9	-390	18	2236	-14.82	-17.19	0.05
316	SLU 10	-388	19	2456	-15.41	-17.01	0.05
316	SLU 11	-400	20	2541	-16.33	-17.64	0.05
316	SLU 12	-412	19	2517	-16.13	-18.1	0.05
316	SLU 13	-417	19	2489	-15.82	-18.3	0.05
316	SLU 14	-429	20	2574	-16.73	-18.93	0.06
316	SLU 15	-441	20	2550	-16.53	-19.38	0.05
316	SLU 16	-427	20	2562	-16.56	-18.83	0.06
316	SLU 17	-438	20	2538	-16.35	-19.28	0.05
316	SLU 18	-390	20	2626	-16.41	-17.15	0.05
316	SLU 19	-401	20	2602	-16.21	-17.61	0.05
316	SLU 20	-419	20	2659	-16.81	-18.44	0.06
316	SLU 21	-430	20	2634	-16.61	-18.9	0.06
316	SLU 22	-375	19	2459	-15.91	-16.54	0.05
316	SLU 23	-394	19	2418	-15.57	-17.3	0.05
316	SLU 24	-407	20	2504	-16.49	-17.93	0.05
316	SLU 25	-418	20	2479	-16.29	-18.39	0.05
316	SLU 26	-423	19	2451	-15.97	-18.59	0.05
316	SLU 27	-436	20	2536	-16.89	-19.22	0.06
316	SLU 28	-447	20	2512	-16.69	-19.67	0.06
316	SLU 29	-433	20	2524	-16.72	-19.12	0.06
316	SLU 30	-445	20	2500	-16.51	-19.57	0.05
316	SLU 31	-443	21	2720	-17.11	-19.4	0.06
316	SLU 32	-455	22	2806	-18.02	-20.03	0.06
316	SLU 33	-466	22	2781	-17.82	-20.48	0.06
316	SLU 34	-472	21	2753	-17.51	-20.69	0.06
316	SLU 35	-484	22	2838	-18.42	-21.32	0.06
316	SLU 36	-495	22	2814	-18.22	-21.77	0.06
316	SLU 37	-482	22	2826	-18.25	-21.22	0.06
316	SLU 38	-493	22	2802	-18.04	-21.67	0.06
316	SLU 39	-445	22	2890	-18.1	-19.54	0.06
316	SLU 40	-456	22	2866	-17.9	-20	0.06
316	SLU 41	-473	22	2923	-18.5	-20.83	0.06
316	SLU 42	-485	22	2898	-18.3	-21.28	0.06
316	SLU 43	-398	22	2763	-17.91	-17.59	0.06
316	SLU 44	-417	21	2722	-17.57	-18.35	0.06
316	SLU 45	-429	22	2807	-18.49	-18.98	0.06
316	SLU 46	-441	22	2783	-18.28	-19.43	0.06
316	SLU 47	-446	22	2755	-17.97	-19.63	0.06
316	SLU 48	-458	23	2840	-18.89	-20.26	0.06
316	SLU 49	-470	23	2816	-18.68	-20.72	0.06
316	SLU 50	-456	23	2828	-18.71	-20.16	0.06
316	SLU 51	-467	22	2804	-18.51	-20.62	0.06
316	SLU 52	-465	23	3024	-19.1	-20.44	0.06
316	SLU 53	-478	24	3109	-20.02	-21.07	0.07
316	SLU 54	-489	24	3085	-19.81	-21.53	0.07
316	SLU 55	-494	24	3057	-19.5	-21.73	0.06
316	SLU 56	-507	25	3142	-20.42	-22.36	0.07
316	SLU 57	-518	24	3118	-20.22	-22.81	0.07
316	SLU 58	-505	25	3130	-20.24	-22.26	0.07
316	SLU 59	-516	24	3105	-20.04	-22.71	0.07
316	SLU 60	-467	24	3194	-20.1	-20.58	0.07
316	SLU 61	-479	24	3170	-19.89	-21.04	0.07
316	SLU 62	-496	25	3226	-20.5	-21.87	0.07
316	SLU 63	-508	25	3202	-20.29	-22.33	0.07
316	SLU 64	-453	24	3027	-19.6	-19.97	0.07
316	SLU 65	-472	23	2986	-19.26	-20.73	0.06
316	SLU 66	-484	24	3072	-20.18	-21.36	0.07
316	SLU 67	-495	24	3047	-19.97	-21.82	0.07
316	SLU 68	-501	24	3019	-19.66	-22.02	0.07
316	SLU 69	-513	25	3104	-20.58	-22.65	0.07
316	SLU 70	-524	25	3080	-20.38	-23.1	0.07
316	SLU 71	-511	25	3092	-20.4	-22.55	0.07
316	SLU 72	-522	24	3068	-20.2	-23	0.07
316	SLU 73	-520	25	3288	-20.79	-22.83	0.07
316	SLU 74	-532	26	3373	-21.71	-23.46	0.07
316	SLU 75	-544	26	3349	-21.51	-23.91	0.07
316	SLU 76	-549	26	3321	-21.19	-24.12	0.07
316	SLU 77	-561	27	3406	-22.11	-24.75	0.07
316	SLU 78	-573	26	3382	-21.91	-25.2	0.07
316	SLU 79	-559	27	3394	-21.93	-24.64	0.07
316	SLU 80	-570	26	3370	-21.73	-25.1	0.07
316	SLU 81	-522	26	3458	-21.79	-22.97	0.07
316	SLU 82	-533	26	3434	-21.58	-23.43	0.07
316	SLU 83	-551	27	3491	-22.19	-24.26	0.07
316	SLU 84	-562	27	3466	-21.99	-24.71	0.07
316	SLE RA 1	-336	18	2270	-14.71	-14.84	0.05
316	SLE RA 2	-349	17	2243	-14.48	-15.35	0.05
316	SLE RA 3	-357	18	2300	-15.09	-15.77	0.05
316	SLE RA 4	-365	18	2284	-14.95	-16.07	0.05
316	SLE RA 5	-368	18	2265	-14.75	-16.2	0.05
316	SLE RA 6	-376	19	2322	-15.36	-16.62	0.05
316	SLE RA 7	-384	18	2306	-15.22	-16.93	0.05
316	SLE RA 8	-375	18	2314	-15.24	-16.56	0.05
316	SLE RA 9	-382	18	2298	-15.1	-16.86	0.05
316	SLE RA 10	-381	19	2445	-15.5	-16.74	0.05
316	SLE RA 11	-389	20	2501	-16.11	-17.16	0.05
316	SLE RA 12	-397	19	2485	-15.98	-17.47	0.05



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
316	SLE RA 13	-400	19	2466	-15.77	-17.6	0.05
316	SLE RA 14	-409	20	2523	-16.38	-18.02	0.05
316	SLE RA 15	-416	20	2507	-16.24	-18.32	0.05
316	SLE RA 16	-407	20	2515	-16.26	-17.95	0.05
316	SLE RA 17	-415	20	2499	-16.13	-18.26	0.05
316	SLE RA 18	-382	20	2558	-16.16	-16.84	0.05
316	SLE RA 19	-390	19	2542	-16.03	-17.14	0.05
316	SLE RA 20	-402	20	2579	-16.43	-17.7	0.05
316	SLE RA 21	-409	20	2563	-16.3	-18	0.05
316	SLE FR 1	-336	18	2270	-14.71	-14.84	0.05
316	SLE FR 2	-339	18	2265	-14.66	-14.94	0.05
316	SLE FR 3	-344	18	2279	-14.81	-15.18	0.05
316	SLE FR 4	-353	18	2351	-15.1	-15.54	0.05
316	SLE FR 5	-358	18	2365	-15.25	-15.78	0.05
316	SLE FR 6	-359	19	2414	-15.43	-15.84	0.05
316	SLE QP 1	-336	18	2270	-14.71	-14.84	0.05
316	SLE QP 2	-350	18	2357	-15.14	-15.44	0.05
316	SLD 1	380	-10	2008	-18.88	16.68	-0.02
316	SLD 2	380	-10	2008	-18.88	16.68	-0.02
316	SLD 3	224	21	2392	11.92	9.71	0.06
316	SLD 4	224	21	2392	11.92	9.71	0.06
316	SLD 5	107	-37	1670	-62.99	4.77	-0.09
316	SLD 6	107	-37	1670	-62.99	4.77	-0.09
316	SLD 7	-416	66	2949	39.7	-18.47	0.17
316	SLD 8	-416	66	2949	39.7	-18.47	0.17
316	SLD 9	-285	-30	1764	-69.98	-12.41	-0.07
316	SLD 10	-285	-30	1764	-69.98	-12.41	-0.07
316	SLD 11	-807	74	3043	32.7	-35.65	0.19
316	SLD 12	-807	74	3043	32.7	-35.65	0.19
316	SLD 13	-924	15	2321	-42.21	-40.59	0.04
316	SLD 14	-924	15	2321	-42.21	-40.59	0.04
316	SLD 15	-1081	46	2705	-11.4	-47.56	0.12
316	SLD 16	-1081	46	2705	-11.4	-47.56	0.12
316	SLV 1	1346	-51	1511	-25.08	59.12	-0.12
316	SLV 2	1346	-51	1511	-25.08	59.12	-0.12
316	SLV 3	979	27	2453	51.55	42.81	0.07
316	SLV 4	979	27	2453	51.55	42.81	0.07
316	SLV 5	714	-120	674	-134.36	31.67	-0.29
316	SLV 6	714	-120	674	-134.36	31.67	-0.29
316	SLV 7	-507	138	3814	121.1	-22.71	0.34
316	SLV 8	-507	138	3814	121.1	-22.71	0.34
316	SLV 9	-193	-101	899	-151.38	-8.17	-0.24
316	SLV 10	-193	-101	899	-151.38	-8.17	-0.24
316	SLV 11	-1414	156	4039	104.07	-62.55	0.39
316	SLV 12	-1414	156	4039	104.07	-62.55	0.39
316	SLV 13	-1680	10	2260	-81.84	-73.69	0.03
316	SLV 14	-1680	10	2260	-81.84	-73.69	0.03
316	SLV 15	-2046	87	3202	-5.2	-90	0.22
316	SLV 16	-2046	87	3202	-5.2	-90	0.22
317	SLU 1	-268	16	2264	-12.32	-12.37	0.04
317	SLU 2	-293	15	2207	-11.97	-13.36	0.04
317	SLU 3	-297	17	2313	-12.83	-13.67	0.04
317	SLU 4	-312	16	2279	-12.62	-14.27	0.04
317	SLU 5	-320	16	2244	-12.32	-14.59	0.04
317	SLU 6	-324	17	2349	-13.19	-14.9	0.04
317	SLU 7	-339	17	2315	-12.97	-15.5	0.04
317	SLU 8	-323	17	2336	-13.04	-14.83	0.04
317	SLU 9	-337	16	2302	-12.82	-15.42	0.04
317	SLU 10	-337	17	2512	-13.22	-15.37	0.04
317	SLU 11	-341	18	2618	-14.09	-15.67	0.04
317	SLU 12	-356	18	2584	-13.87	-16.27	0.04
317	SLU 13	-364	17	2549	-13.58	-16.6	0.04
317	SLU 14	-368	19	2654	-14.44	-16.9	0.05
317	SLU 15	-383	18	2620	-14.23	-17.5	0.04
317	SLU 16	-367	18	2641	-14.29	-16.83	0.05
317	SLU 17	-382	18	2608	-14.08	-17.43	0.04
317	SLU 18	-331	18	2699	-14.12	-15.23	0.04
317	SLU 19	-346	18	2666	-13.9	-15.83	0.04
317	SLU 20	-359	19	2736	-14.47	-16.46	0.05
317	SLU 21	-373	18	2702	-14.26	-17.06	0.04
317	SLU 22	-317	18	2533	-13.74	-14.6	0.04
317	SLU 23	-342	17	2477	-13.38	-15.6	0.04
317	SLU 24	-346	18	2582	-14.25	-15.9	0.04
317	SLU 25	-361	18	2548	-14.03	-16.5	0.04
317	SLU 26	-369	18	2513	-13.74	-16.83	0.04
317	SLU 27	-373	19	2619	-14.6	-17.13	0.05
317	SLU 28	-388	18	2585	-14.39	-17.73	0.05
317	SLU 29	-372	19	2606	-14.45	-17.06	0.05
317	SLU 30	-387	18	2572	-14.24	-17.66	0.04
317	SLU 31	-386	19	2782	-14.64	-17.6	0.05
317	SLU 32	-390	20	2887	-15.5	-17.91	0.05
317	SLU 33	-405	20	2854	-15.29	-18.51	0.05
317	SLU 34	-414	19	2818	-14.99	-18.83	0.05
317	SLU 35	-418	20	2924	-15.86	-19.14	0.05
317	SLU 36	-433	20	2890	-15.65	-19.74	0.05
317	SLU 37	-416	20	2911	-15.71	-19.07	0.05
317	SLU 38	-431	20	2877	-15.49	-19.66	0.05
317	SLU 39	-381	20	2969	-15.53	-17.47	0.05
317	SLU 40	-396	20	2935	-15.32	-18.06	0.05
317	SLU 41	-408	20	3005	-15.89	-18.69	0.05



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
317	SLU 42	-423	20	2971	-15.67	-19.29	0.05
317	SLU 43	-331	20	2850	-15.53	-15.31	0.05
317	SLU 44	-356	19	2794	-15.18	-16.31	0.05
317	SLU 45	-360	21	2899	-16.04	-16.61	0.05
317	SLU 46	-375	20	2866	-15.83	-17.21	0.05
317	SLU 47	-383	20	2830	-15.53	-17.54	0.05
317	SLU 48	-387	21	2936	-16.4	-17.84	0.05
317	SLU 49	-402	21	2902	-16.19	-18.44	0.05
317	SLU 50	-386	21	2923	-16.25	-17.77	0.05
317	SLU 51	-401	21	2889	-16.03	-18.37	0.05
317	SLU 52	-400	21	3099	-16.43	-18.31	0.05
317	SLU 53	-404	22	3205	-17.3	-18.62	0.05
317	SLU 54	-419	22	3171	-17.09	-19.21	0.05
317	SLU 55	-428	21	3135	-16.79	-19.54	0.05
317	SLU 56	-432	23	3241	-17.66	-19.85	0.06
317	SLU 57	-447	22	3207	-17.44	-20.44	0.05
317	SLU 58	-430	23	3228	-17.5	-19.77	0.06
317	SLU 59	-445	22	3194	-17.29	-20.37	0.05
317	SLU 60	-395	22	3286	-17.33	-18.17	0.05
317	SLU 61	-409	22	3252	-17.12	-18.77	0.05
317	SLU 62	-422	23	3322	-17.69	-19.4	0.06
317	SLU 63	-437	22	3289	-17.47	-20	0.05
317	SLU 64	-381	22	3120	-16.95	-17.55	0.05
317	SLU 65	-405	21	3063	-16.59	-18.54	0.05
317	SLU 66	-409	22	3169	-17.46	-18.85	0.06
317	SLU 67	-424	22	3135	-17.24	-19.45	0.05
317	SLU 68	-433	22	3100	-16.95	-19.77	0.05
317	SLU 69	-437	23	3205	-17.81	-20.08	0.06
317	SLU 70	-452	23	3171	-17.6	-20.67	0.06
317	SLU 71	-435	23	3192	-17.66	-20	0.06
317	SLU 72	-450	22	3159	-17.45	-20.6	0.05
317	SLU 73	-450	23	3369	-17.85	-20.55	0.06
317	SLU 74	-454	24	3474	-18.71	-20.85	0.06
317	SLU 75	-469	24	3440	-18.5	-21.45	0.06
317	SLU 76	-477	23	3405	-18.21	-21.78	0.06
317	SLU 77	-481	25	3510	-19.07	-22.08	0.06
317	SLU 78	-496	24	3477	-18.86	-22.68	0.06
317	SLU 79	-480	24	3498	-18.92	-22.01	0.06
317	SLU 80	-495	24	3464	-18.7	-22.61	0.06
317	SLU 81	-444	24	3556	-18.74	-20.41	0.06
317	SLU 82	-459	24	3522	-18.53	-21.01	0.06
317	SLU 83	-471	25	3592	-19.1	-21.64	0.06
317	SLU 84	-486	24	3558	-18.89	-22.24	0.06
317	SLE RA 1	-282	16	2341	-12.73	-13.01	0.04
317	SLE RA 2	-298	16	2303	-12.49	-13.67	0.04
317	SLE RA 3	-301	17	2373	-13.07	-13.87	0.04
317	SLE RA 4	-311	17	2351	-12.92	-14.27	0.04
317	SLE RA 5	-317	16	2327	-12.73	-14.49	0.04
317	SLE RA 6	-319	17	2398	-13.3	-14.69	0.04
317	SLE RA 7	-329	17	2375	-13.16	-15.09	0.04
317	SLE RA 8	-318	17	2389	-13.2	-14.64	0.04
317	SLE RA 9	-328	17	2367	-13.06	-15.04	0.04
317	SLE RA 10	-328	17	2506	-13.33	-15.01	0.04
317	SLE RA 11	-331	18	2577	-13.9	-15.21	0.04
317	SLE RA 12	-341	18	2554	-13.76	-15.61	0.04
317	SLE RA 13	-346	17	2531	-13.56	-15.83	0.04
317	SLE RA 14	-349	18	2601	-14.14	-16.03	0.04
317	SLE RA 15	-359	18	2578	-14	-16.43	0.04
317	SLE RA 16	-348	18	2592	-14.04	-15.98	0.04
317	SLE RA 17	-358	18	2570	-13.9	-16.38	0.04
317	SLE RA 18	-324	18	2631	-13.92	-14.91	0.04
317	SLE RA 19	-334	18	2609	-13.78	-15.31	0.04
317	SLE RA 20	-342	18	2655	-14.16	-15.73	0.04
317	SLE RA 21	-352	18	2633	-14.02	-16.13	0.04
317	SLE FR 1	-282	16	2341	-12.73	-13.01	0.04
317	SLE FR 2	-285	16	2333	-12.68	-13.14	0.04
317	SLE FR 3	-289	17	2350	-12.82	-13.33	0.04
317	SLE FR 4	-298	17	2420	-13.04	-13.71	0.04
317	SLE FR 5	-302	17	2437	-13.18	-13.91	0.04
317	SLE FR 6	-303	17	2486	-13.33	-13.96	0.04
317	SLE QP 1	-282	16	2341	-12.73	-13.01	0.04
317	SLE QP 2	-295	17	2428	-13.09	-13.58	0.04
317	SLD 1	449	-10	2012	-16.86	19.54	-0.02
317	SLD 2	449	-10	2012	-16.86	19.54	-0.02
317	SLD 3	288	20	2427	13.22	12.43	0.05
317	SLD 4	288	20	2427	13.22	12.43	0.05
317	SLD 5	173	-37	1674	-59.84	7.16	-0.07
317	SLD 6	173	-37	1674	-59.84	7.16	-0.07
317	SLD 7	-364	64	3056	40.43	-16.57	0.14
317	SLD 8	-364	64	3056	40.43	-16.57	0.14
317	SLD 9	-225	-30	1799	-66.6	-10.58	-0.05
317	SLD 10	-225	-30	1799	-66.6	-10.58	-0.05
317	SLD 11	-762	71	3181	33.67	-34.31	0.15
317	SLD 12	-762	71	3181	33.67	-34.31	0.15
317	SLD 13	-877	14	2429	-39.39	-39.58	0.04
317	SLD 14	-877	14	2429	-39.39	-39.58	0.04
317	SLD 15	-1038	44	2843	-9.31	-46.7	0.1
317	SLD 16	-1038	44	2843	-9.31	-46.7	0.1
317	SLV 1	1433	-50	1424	-23.01	63.37	-0.1
317	SLV 2	1433	-50	1424	-23.01	63.37	-0.1



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
317	SLV 3	1055	25	2443	51.88	46.68	0.05
317	SLV 4	1055	25	2443	51.88	46.68	0.05
317	SLV 5	797	-117	583	-129.66	34.82	-0.23
317	SLV 6	797	-117	583	-129.66	34.82	-0.23
317	SLV 7	-463	133	3976	119.99	-20.81	0.28
317	SLV 8	-463	133	3976	119.99	-20.81	0.28
317	SLV 9	-126	-100	879	-146.17	-6.34	-0.19
317	SLV 10	-126	-100	879	-146.17	-6.34	-0.19
317	SLV 11	-1386	151	4273	103.48	-61.97	0.32
317	SLV 12	-1386	151	4273	103.48	-61.97	0.32
317	SLV 13	-1644	9	2413	-78.05	-73.84	0.03
317	SLV 14	-1644	9	2413	-78.05	-73.84	0.03
317	SLV 15	-2022	84	3431	-3.16	-90.52	0.18
317	SLV 16	-2022	84	3431	-3.16	-90.52	0.18
318	SLU 1	-191	16	2447	-11.01	-9.85	0.03
318	SLU 2	-222	15	2368	-10.65	-11.05	0.03
318	SLU 3	-215	17	2505	-11.48	-10.98	0.04
318	SLU 4	-233	16	2458	-11.26	-11.7	0.03
318	SLU 5	-245	16	2412	-10.98	-12.14	0.03
318	SLU 6	-238	17	2549	-11.8	-12.06	0.04
318	SLU 7	-257	17	2502	-11.58	-12.78	0.04
318	SLU 8	-238	17	2534	-11.67	-12.02	0.04
318	SLU 9	-256	16	2487	-11.45	-12.74	0.04
318	SLU 10	-259	17	2692	-11.74	-12.87	0.04
318	SLU 11	-253	18	2828	-12.56	-12.79	0.04
318	SLU 12	-271	18	2781	-12.34	-13.52	0.04
318	SLU 13	-283	17	2735	-12.06	-13.96	0.04
318	SLU 14	-276	19	2872	-12.89	-13.88	0.04
318	SLU 15	-295	18	2825	-12.67	-14.6	0.04
318	SLU 16	-276	18	2858	-12.75	-13.84	0.04
318	SLU 17	-294	18	2811	-12.54	-14.56	0.04
318	SLU 18	-245	18	2909	-12.57	-12.45	0.04
318	SLU 19	-263	18	2862	-12.35	-13.17	0.04
318	SLU 20	-268	19	2952	-12.89	-13.53	0.04
318	SLU 21	-287	18	2905	-12.68	-14.25	0.04
318	SLU 22	-231	18	2737	-12.25	-11.81	0.04
318	SLU 23	-262	17	2658	-11.89	-13.01	0.04
318	SLU 24	-256	18	2795	-12.71	-12.94	0.04
318	SLU 25	-274	18	2748	-12.5	-13.66	0.04
318	SLU 26	-286	17	2702	-12.21	-14.1	0.04
318	SLU 27	-279	19	2839	-13.04	-14.02	0.04
318	SLU 28	-298	18	2792	-12.82	-14.74	0.04
318	SLU 29	-279	19	2824	-12.9	-13.98	0.04
318	SLU 30	-297	18	2777	-12.69	-14.7	0.04
318	SLU 31	-300	19	2982	-12.97	-14.83	0.04
318	SLU 32	-293	20	3118	-13.8	-14.75	0.04
318	SLU 33	-312	20	3071	-13.58	-15.47	0.04
318	SLU 34	-323	19	3025	-13.3	-15.91	0.04
318	SLU 35	-317	20	3162	-14.13	-15.84	0.04
318	SLU 36	-335	20	3115	-13.91	-16.56	0.04
318	SLU 37	-316	20	3148	-13.99	-15.8	0.04
318	SLU 38	-335	20	3101	-13.77	-16.52	0.04
318	SLU 39	-285	20	3199	-13.8	-14.4	0.04
318	SLU 40	-304	20	3152	-13.59	-15.13	0.04
318	SLU 41	-309	20	3243	-14.13	-15.49	0.04
318	SLU 42	-327	20	3195	-13.91	-16.21	0.04
318	SLU 43	-234	20	3081	-13.89	-12.13	0.04
318	SLU 44	-265	19	3003	-13.53	-13.33	0.04
318	SLU 45	-258	21	3139	-14.35	-13.26	0.04
318	SLU 46	-277	20	3092	-14.14	-13.98	0.04
318	SLU 47	-288	20	3046	-13.86	-14.42	0.04
318	SLU 48	-282	21	3183	-14.68	-14.35	0.05
318	SLU 49	-300	21	3136	-14.46	-15.07	0.04
318	SLU 50	-281	21	3169	-14.55	-14.31	0.05
318	SLU 51	-300	21	3121	-14.33	-15.03	0.04
318	SLU 52	-303	21	3326	-14.62	-15.15	0.04
318	SLU 53	-296	22	3463	-15.44	-15.08	0.05
318	SLU 54	-314	22	3416	-15.22	-15.8	0.05
318	SLU 55	-326	21	3370	-14.94	-16.24	0.05
318	SLU 56	-319	23	3507	-15.77	-16.16	0.05
318	SLU 57	-338	22	3460	-15.55	-16.89	0.05
318	SLU 58	-319	23	3492	-15.63	-16.12	0.05
318	SLU 59	-337	22	3445	-15.42	-16.84	0.05
318	SLU 60	-288	22	3543	-15.45	-14.73	0.05
318	SLU 61	-306	22	3496	-15.23	-15.45	0.05
318	SLU 62	-311	23	3587	-15.77	-15.82	0.05
318	SLU 63	-330	22	3540	-15.55	-16.54	0.05
318	SLU 64	-275	22	3371	-15.13	-14.09	0.05
318	SLU 65	-305	21	3293	-14.77	-15.29	0.05
318	SLU 66	-299	23	3429	-15.59	-15.22	0.05
318	SLU 67	-317	22	3382	-15.37	-15.94	0.05
318	SLU 68	-329	22	3336	-15.09	-16.38	0.05
318	SLU 69	-322	23	3473	-15.92	-16.31	0.05
318	SLU 70	-341	23	3426	-15.7	-17.03	0.05
318	SLU 71	-322	23	3459	-15.78	-16.26	0.05
318	SLU 72	-340	22	3412	-15.57	-16.99	0.05
318	SLU 73	-343	23	3616	-15.85	-17.11	0.05
318	SLU 74	-337	24	3753	-16.68	-17.04	0.05
318	SLU 75	-355	24	3706	-16.46	-17.76	0.05
318	SLU 76	-367	23	3660	-16.18	-18.2	0.05



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
318	SLU 77	-360	25	3797	-17.01	-18.12	0.05
318	SLU 78	-379	24	3750	-16.79	-18.84	0.05
318	SLU 79	-360	24	3782	-16.87	-18.08	0.05
318	SLU 80	-378	24	3735	-16.65	-18.8	0.05
318	SLU 81	-329	24	3833	-16.68	-16.69	0.05
318	SLU 82	-347	24	3786	-16.47	-17.41	0.05
318	SLU 83	-352	25	3877	-17.01	-17.77	0.05
318	SLU 84	-371	24	3830	-16.79	-18.5	0.05
318	SLE RA 1	-202	16	2529	-11.37	-10.41	0.04
318	SLE RA 2	-223	16	2477	-11.12	-11.21	0.03
318	SLE RA 3	-218	17	2568	-11.67	-11.16	0.04
318	SLE RA 4	-231	17	2537	-11.53	-11.64	0.04
318	SLE RA 5	-239	16	2506	-11.34	-11.94	0.03
318	SLE RA 6	-234	17	2597	-11.89	-11.88	0.04
318	SLE RA 7	-246	17	2566	-11.75	-12.37	0.04
318	SLE RA 8	-234	17	2588	-11.8	-11.86	0.04
318	SLE RA 9	-246	17	2556	-11.66	-12.34	0.04
318	SLE RA 10	-248	17	2693	-11.85	-12.42	0.04
318	SLE RA 11	-244	18	2784	-12.4	-12.37	0.04
318	SLE RA 12	-256	18	2753	-12.25	-12.85	0.04
318	SLE RA 13	-264	17	2722	-12.07	-13.15	0.04
318	SLE RA 14	-259	18	2813	-12.62	-13.1	0.04
318	SLE RA 15	-272	18	2782	-12.47	-13.58	0.04
318	SLE RA 16	-259	18	2803	-12.53	-13.07	0.04
318	SLE RA 17	-271	18	2772	-12.38	-13.55	0.04
318	SLE RA 18	-238	18	2838	-12.4	-12.14	0.04
318	SLE RA 19	-251	18	2806	-12.26	-12.62	0.04
318	SLE RA 20	-254	18	2867	-12.62	-12.86	0.04
318	SLE RA 21	-266	18	2835	-12.47	-13.35	0.04
318	SLE FR 1	-202	16	2529	-11.37	-10.41	0.04
318	SLE FR 2	-206	16	2519	-11.32	-10.57	0.04
318	SLE FR 3	-209	17	2541	-11.45	-10.7	0.04
318	SLE FR 4	-217	17	2611	-11.63	-11.09	0.04
318	SLE FR 5	-219	17	2634	-11.76	-11.22	0.04
318	SLE FR 6	-220	17	2683	-11.88	-11.27	0.04
318	SLE QP 1	-202	16	2529	-11.37	-10.41	0.04
318	SLE QP 2	-213	17	2622	-11.68	-10.93	0.04
318	SLD 1	495	-9	2127	-14.9	20.27	0
318	SLD 2	495	-9	2127	-14.9	20.27	0
318	SLD 3	335	19	2539	12.65	13.33	0.04
318	SLD 4	335	19	2539	12.65	13.33	0.04
318	SLD 5	242	-32	1847	-54.43	8.96	-0.04
318	SLD 6	242	-32	1847	-54.43	8.96	-0.04
318	SLD 7	-292	59	3223	37.41	-14.18	0.1
318	SLD 8	-292	59	3223	37.41	-14.18	0.1
318	SLD 9	-135	-25	2020	-60.76	-7.67	-0.03
318	SLD 10	-135	-25	2020	-60.76	-7.67	-0.03
318	SLD 11	-668	66	3397	31.08	-30.82	0.11
318	SLD 12	-668	66	3397	31.08	-30.82	0.11
318	SLD 13	-761	15	2704	-36	-35.18	0.03
318	SLD 14	-761	15	2704	-36	-35.18	0.03
318	SLD 15	-921	42	3117	-8.45	-42.13	0.08
318	SLD 16	-921	42	3117	-8.45	-42.13	0.08
318	SLV 1	1430	-46	1438	-20.17	61.47	-0.06
318	SLV 2	1430	-46	1438	-20.17	61.47	-0.06
318	SLV 3	1054	23	2446	48.48	45.19	0.04
318	SLV 4	1054	23	2446	48.48	45.19	0.04
318	SLV 5	850	-105	738	-118.34	35.49	-0.16
318	SLV 6	850	-105	738	-118.34	35.49	-0.16
318	SLV 7	-403	122	4098	110.48	-18.79	0.2
318	SLV 8	-403	122	4098	110.48	-18.79	0.2
318	SLV 9	-23	-88	1145	-133.84	-3.07	-0.13
318	SLV 10	-23	-88	1145	-133.84	-3.07	-0.13
318	SLV 11	-1276	139	4506	94.99	-57.34	0.23
318	SLV 12	-1276	139	4506	94.99	-57.34	0.23
318	SLV 13	-1480	11	2797	-71.83	-67.04	0.03
318	SLV 14	-1480	11	2797	-71.83	-67.04	0.03
318	SLV 15	-1856	79	3806	-3.18	-83.33	0.14
318	SLV 16	-1856	79	3806	-3.18	-83.33	0.14
319	SLU 1	-121	16	2765	-9.62	-7.2	0.02
319	SLU 2	-157	15	2657	-9.3	-8.6	0.02
319	SLU 3	-139	16	2839	-10.03	-8.12	0.02
319	SLU 4	-161	16	2775	-9.84	-8.96	0.02
319	SLU 5	-176	15	2714	-9.59	-9.52	0.02
319	SLU 6	-158	17	2896	-10.32	-9.04	0.02
319	SLU 7	-180	16	2832	-10.13	-9.88	0.02
319	SLU 8	-159	17	2878	-10.21	-9.03	0.02
319	SLU 9	-180	16	2814	-10.01	-9.87	0.02
319	SLU 10	-189	17	3016	-10.24	-10.24	0.02
319	SLU 11	-172	18	3198	-10.97	-9.76	0.02
319	SLU 12	-194	17	3134	-10.78	-10.6	0.02
319	SLU 13	-208	17	3073	-10.53	-11.15	0.02
319	SLU 14	-191	18	3255	-11.26	-10.67	0.02
319	SLU 15	-213	18	3191	-11.07	-11.51	0.02
319	SLU 16	-192	18	3237	-11.15	-10.67	0.02
319	SLU 17	-213	18	3173	-10.95	-11.51	0.02
319	SLU 18	-168	18	3277	-10.97	-9.54	0.02
319	SLU 19	-189	17	3213	-10.77	-10.38	0.02
319	SLU 20	-187	18	3334	-11.26	-10.45	0.02
319	SLU 21	-208	18	3270	-11.07	-11.29	0.02



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
319	SLU 22	-154	17	3093	-10.7	-8.87	0.02
319	SLU 23	-190	17	2986	-10.37	-10.27	0.02
319	SLU 24	-172	18	3168	-11.11	-9.79	0.02
319	SLU 25	-194	18	3103	-10.91	-10.63	0.02
319	SLU 26	-209	17	3043	-10.67	-11.19	0.02
319	SLU 27	-191	19	3225	-11.4	-10.71	0.02
319	SLU 28	-213	18	3160	-11.2	-11.55	0.02
319	SLU 29	-192	18	3207	-11.28	-10.7	0.02
319	SLU 30	-213	18	3143	-11.09	-11.54	0.02
319	SLU 31	-222	18	3345	-11.31	-11.91	0.02
319	SLU 32	-205	20	3526	-12.05	-11.43	0.03
319	SLU 33	-227	19	3462	-11.85	-12.27	0.03
319	SLU 34	-241	19	3402	-11.61	-12.82	0.03
319	SLU 35	-224	20	3583	-12.34	-12.34	0.03
319	SLU 36	-246	20	3519	-12.14	-13.18	0.03
319	SLU 37	-225	20	3566	-12.22	-12.34	0.03
319	SLU 38	-246	20	3501	-12.03	-13.18	0.03
319	SLU 39	-201	20	3606	-12.04	-11.21	0.03
319	SLU 40	-222	19	3541	-11.85	-12.05	0.03
319	SLU 41	-220	20	3663	-12.33	-12.12	0.03
319	SLU 42	-241	20	3598	-12.14	-12.96	0.03
319	SLU 43	-146	20	3481	-12.14	-8.79	0.03
319	SLU 44	-182	19	3374	-11.82	-10.19	0.03
319	SLU 45	-164	20	3556	-12.55	-9.71	0.03
319	SLU 46	-186	20	3491	-12.36	-10.55	0.03
319	SLU 47	-201	19	3431	-12.11	-11.11	0.03
319	SLU 48	-183	21	3613	-12.84	-10.62	0.03
319	SLU 49	-205	20	3548	-12.65	-11.46	0.03
319	SLU 50	-184	21	3595	-12.73	-10.62	0.03
319	SLU 51	-205	20	3531	-12.53	-11.46	0.03
319	SLU 52	-214	21	3733	-12.76	-11.82	0.03
319	SLU 53	-197	22	3915	-13.49	-11.34	0.03
319	SLU 54	-219	22	3850	-13.3	-12.18	0.03
319	SLU 55	-233	21	3790	-13.05	-12.74	0.03
319	SLU 56	-216	22	3972	-13.78	-12.26	0.03
319	SLU 57	-238	22	3907	-13.59	-13.1	0.03
319	SLU 58	-217	22	3954	-13.67	-12.26	0.03
319	SLU 59	-238	22	3890	-13.47	-13.1	0.03
319	SLU 60	-193	22	3994	-13.49	-11.12	0.03
319	SLU 61	-214	22	3930	-13.29	-11.96	0.03
319	SLU 62	-212	22	4051	-13.78	-12.04	0.03
319	SLU 63	-233	22	3987	-13.58	-12.88	0.03
319	SLU 64	-179	21	3810	-13.22	-10.46	0.03
319	SLU 65	-214	21	3703	-12.89	-11.86	0.03
319	SLU 66	-197	22	3884	-13.62	-11.38	0.03
319	SLU 67	-219	22	3820	-13.43	-12.22	0.03
319	SLU 68	-233	21	3760	-13.18	-12.77	0.03
319	SLU 69	-216	23	3941	-13.92	-12.29	0.03
319	SLU 70	-238	22	3877	-13.72	-13.13	0.03
319	SLU 71	-217	22	3924	-13.8	-12.29	0.03
319	SLU 72	-238	22	3859	-13.61	-13.13	0.03
319	SLU 73	-247	22	4061	-13.83	-13.49	0.03
319	SLU 74	-230	24	4243	-14.57	-13.01	0.03
319	SLU 75	-252	23	4179	-14.37	-13.85	0.03
319	SLU 76	-266	23	4118	-14.13	-14.41	0.03
319	SLU 77	-249	24	4300	-14.86	-13.93	0.03
319	SLU 78	-271	24	4236	-14.66	-14.77	0.03
319	SLU 79	-250	24	4282	-14.74	-13.93	0.03
319	SLU 80	-271	24	4218	-14.55	-14.77	0.03
319	SLU 81	-226	24	4322	-14.56	-12.79	0.03
319	SLU 82	-247	23	4258	-14.37	-13.63	0.03
319	SLU 83	-245	24	4379	-14.85	-13.71	0.03
319	SLU 84	-266	24	4315	-14.66	-14.55	0.03
319	SLE RA 1	-130	16	2858	-9.93	-7.68	0.02
319	SLE RA 2	-154	16	2787	-9.71	-8.61	0.02
319	SLE RA 3	-143	17	2908	-10.2	-8.29	0.02
319	SLE RA 4	-157	16	2865	-10.07	-8.85	0.02
319	SLE RA 5	-167	16	2825	-9.91	-9.22	0.02
319	SLE RA 6	-155	17	2946	-10.4	-8.9	0.02
319	SLE RA 7	-170	17	2903	-10.27	-9.46	0.02
319	SLE RA 8	-156	17	2934	-10.32	-8.9	0.02
319	SLE RA 9	-170	16	2891	-10.19	-9.46	0.02
319	SLE RA 10	-176	17	3026	-10.34	-9.7	0.02
319	SLE RA 11	-165	18	3147	-10.83	-9.38	0.02
319	SLE RA 12	-179	17	3104	-10.7	-9.94	0.02
319	SLE RA 13	-189	17	3064	-10.54	-10.31	0.02
319	SLE RA 14	-177	18	3185	-11.02	-9.99	0.02
319	SLE RA 15	-192	18	3142	-10.89	-10.55	0.02
319	SLE RA 16	-177	18	3174	-10.95	-9.99	0.02
319	SLE RA 17	-192	18	3131	-10.82	-10.55	0.02
319	SLE RA 18	-162	18	3200	-10.83	-9.23	0.02
319	SLE RA 19	-176	17	3157	-10.7	-9.8	0.02
319	SLE RA 20	-174	18	3238	-11.02	-9.85	0.02
319	SLE RA 21	-188	18	3195	-10.89	-10.41	0.02
319	SLE FR 1	-130	16	2858	-9.93	-7.68	0.02
319	SLE FR 2	-135	16	2844	-9.89	-7.86	0.02
319	SLE FR 3	-135	16	2874	-10.01	-7.92	0.02
319	SLE FR 4	-144	16	2947	-10.16	-8.33	0.02
319	SLE FR 5	-145	17	2976	-10.28	-8.39	0.02
319	SLE FR 6	-146	17	3029	-10.38	-8.45	0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
319	SLE QP 1	-130	16	2858	-9.93	-7.68	0.02
319	SLE QP 2	-140	17	2961	-10.2	-8.14	0.02
319	SLD 1	515	-6	2315	-12.42	21.35	0
319	SLD 2	515	-6	2315	-12.42	21.35	0
319	SLD 3	361	17	2727	10.98	14.78	0.02
319	SLD 4	361	17	2727	10.98	14.78	0.02
319	SLD 5	289	-25	2142	-46.35	10.67	-0.01
319	SLD 6	289	-25	2142	-46.35	10.67	-0.01
319	SLD 7	-222	51	3516	31.64	-11.23	0.05
319	SLD 8	-222	51	3516	31.64	-11.23	0.05
319	SLD 9	-57	-18	2406	-52.04	-5.05	0
319	SLD 10	-57	-18	2406	-52.04	-5.05	0
319	SLD 11	-568	58	3780	25.95	-26.96	0.05
319	SLD 12	-568	58	3780	25.95	-26.96	0.05
319	SLD 13	-641	16	3195	-31.38	-31.06	0.03
319	SLD 14	-641	16	3195	-31.38	-31.06	0.03
319	SLD 15	-794	39	3607	-7.98	-37.63	0.04
319	SLD 16	-794	39	3607	-7.98	-37.63	0.04
319	SLV 1	1378	-39	1435	-16.13	60.28	-0.02
319	SLV 2	1378	-39	1435	-16.13	60.28	-0.02
319	SLV 3	1019	18	2427	42.22	44.91	0.02
319	SLV 4	1019	18	2427	42.22	44.91	0.02
319	SLV 5	861	-86	999	-100.47	35.69	-0.05
319	SLV 6	861	-86	999	-100.47	35.69	-0.05
319	SLV 7	-338	103	4305	94.02	-15.53	0.08
319	SLV 8	-338	103	4305	94.02	-15.53	0.08
319	SLV 9	58	-70	1617	-114.42	-0.76	-0.04
319	SLV 10	58	-70	1617	-114.42	-0.76	-0.04
319	SLV 11	-1140	119	4923	80.08	-51.97	0.1
319	SLV 12	-1140	119	4923	80.08	-51.97	0.1
319	SLV 13	-1298	15	3495	-62.61	-61.2	0.03
319	SLV 14	-1298	15	3495	-62.61	-61.2	0.03
319	SLV 15	-1658	72	4487	-4.27	-76.56	0.07
319	SLV 16	-1658	72	4487	-4.27	-76.56	0.07
320	SLU 1	-108	13	3207	-7.45	-7.59	0.01
320	SLU 2	-145	12	3065	-7.23	-8.99	0.01
320	SLU 3	-123	13	3305	-7.76	-8.38	0.01
320	SLU 4	-145	13	3220	-7.64	-9.22	0.01
320	SLU 5	-161	13	3141	-7.46	-9.78	0.01
320	SLU 6	-138	14	3382	-7.99	-9.18	0.01
320	SLU 7	-161	13	3297	-7.86	-10.02	0.01
320	SLU 8	-139	14	3360	-7.9	-9.18	0.01
320	SLU 9	-161	13	3275	-7.77	-10.02	0.01
320	SLU 10	-181	14	3472	-7.96	-10.89	0.01
320	SLU 11	-159	15	3713	-8.49	-10.28	0.01
320	SLU 12	-181	14	3628	-8.36	-11.12	0.01
320	SLU 13	-197	14	3549	-8.19	-11.68	0.01
320	SLU 14	-174	15	3790	-8.71	-11.08	0.01
320	SLU 15	-197	15	3704	-8.59	-11.92	0.01
320	SLU 16	-175	15	3768	-8.63	-11.08	0.01
320	SLU 17	-197	15	3683	-8.5	-11.92	0.01
320	SLU 18	-160	15	3789	-8.48	-10.3	0.01
320	SLU 19	-182	14	3704	-8.35	-11.14	0.01
320	SLU 20	-175	15	3866	-8.71	-11.1	0.01
320	SLU 21	-197	15	3781	-8.58	-11.94	0.01
320	SLU 22	-141	14	3589	-8.27	-9.37	0.01
320	SLU 23	-178	14	3447	-8.06	-10.77	0.01
320	SLU 24	-155	15	3688	-8.59	-10.17	0.01
320	SLU 25	-178	15	3603	-8.46	-11	0.01
320	SLU 26	-194	14	3524	-8.29	-11.57	0.01
320	SLU 27	-171	15	3765	-8.82	-10.96	0.01
320	SLU 28	-193	15	3679	-8.69	-11.8	0.01
320	SLU 29	-172	15	3743	-8.73	-10.97	0.01
320	SLU 30	-194	15	3658	-8.6	-11.81	0.01
320	SLU 31	-214	15	3855	-8.78	-12.67	0.01
320	SLU 32	-192	16	4096	-9.31	-12.07	0.01
320	SLU 33	-214	16	4011	-9.19	-12.91	0.01
320	SLU 34	-230	16	3932	-9.01	-13.47	0.01
320	SLU 35	-207	17	4172	-9.54	-12.86	0.01
320	SLU 36	-229	16	4087	-9.42	-13.7	0.01
320	SLU 37	-208	16	4151	-9.45	-12.87	0.01
320	SLU 38	-230	16	4065	-9.33	-13.71	0.01
320	SLU 39	-192	16	4172	-9.31	-12.09	0.01
320	SLU 40	-215	16	4087	-9.18	-12.93	0.01
320	SLU 41	-208	17	4249	-9.54	-12.89	0.01
320	SLU 42	-230	16	4164	-9.41	-13.73	0.01
320	SLU 43	-129	16	4037	-9.39	-9.25	0.01
320	SLU 44	-166	16	3895	-9.18	-10.65	0.01
320	SLU 45	-144	17	4136	-9.71	-10.04	0.01
320	SLU 46	-166	16	4051	-9.59	-10.88	0.01
320	SLU 47	-182	16	3972	-9.41	-11.45	0.01
320	SLU 48	-159	17	4212	-9.94	-10.84	0.01
320	SLU 49	-182	17	4127	-9.81	-11.68	0.01
320	SLU 50	-160	17	4191	-9.85	-10.85	0.01
320	SLU 51	-182	17	4106	-9.72	-11.69	0.01
320	SLU 52	-203	17	4303	-9.91	-12.55	0.01
320	SLU 53	-180	18	4544	-10.44	-11.94	0.01
320	SLU 54	-202	18	4458	-10.31	-12.78	0.01
320	SLU 55	-218	17	4380	-10.14	-13.35	0.01
320	SLU 56	-195	18	4620	-10.66	-12.74	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
320	SLU 57	-218	18	4535	-10.54	-13.58	0.01
320	SLU 58	-196	18	4598	-10.58	-12.75	0.01
320	SLU 59	-219	18	4513	-10.45	-13.59	0.01
320	SLU 60	-181	18	4620	-10.43	-11.97	0.01
320	SLU 61	-203	18	4535	-10.3	-12.81	0.01
320	SLU 62	-196	18	4697	-10.66	-12.76	0.01
320	SLU 63	-219	18	4611	-10.53	-13.6	0.01
320	SLU 64	-162	18	4420	-10.22	-11.04	0.01
320	SLU 65	-199	17	4278	-10.01	-12.44	0.01
320	SLU 66	-177	18	4519	-10.54	-11.83	0.01
320	SLU 67	-199	18	4433	-10.41	-12.67	0.01
320	SLU 68	-215	18	4355	-10.24	-13.23	0.01
320	SLU 69	-192	19	4595	-10.77	-12.63	0.01
320	SLU 70	-214	18	4510	-10.64	-13.47	0.01
320	SLU 71	-193	18	4574	-10.68	-12.63	0.01
320	SLU 72	-215	18	4488	-10.55	-13.47	0.01
320	SLU 73	-235	18	4686	-10.73	-14.34	0.01
320	SLU 74	-213	20	4926	-11.26	-13.73	0.01
320	SLU 75	-235	19	4841	-11.14	-14.57	0.01
320	SLU 76	-251	19	4763	-10.96	-15.13	0.01
320	SLU 77	-228	20	5003	-11.49	-14.53	0.01
320	SLU 78	-251	20	4918	-11.36	-15.37	0.01
320	SLU 79	-229	20	4981	-11.4	-14.53	0.01
320	SLU 80	-251	20	4896	-11.28	-15.37	0.01
320	SLU 81	-213	20	5003	-11.26	-13.75	0.01
320	SLU 82	-236	19	4918	-11.13	-14.59	0.01
320	SLU 83	-229	20	5079	-11.48	-14.55	0.01
320	SLU 84	-251	20	4994	-11.36	-15.39	0.01
320	SLE RA 1	-117	13	3316	-7.68	-8.1	0.01
320	SLE RA 2	-142	13	3221	-7.54	-9.03	0.01
320	SLE RA 3	-127	14	3382	-7.89	-8.63	0.01
320	SLE RA 4	-142	13	3325	-7.81	-9.19	0.01
320	SLE RA 5	-153	13	3272	-7.69	-9.56	0.01
320	SLE RA 6	-137	14	3433	-8.05	-9.16	0.01
320	SLE RA 7	-152	14	3376	-7.96	-9.72	0.01
320	SLE RA 8	-138	14	3418	-7.99	-9.16	0.01
320	SLE RA 9	-153	14	3361	-7.9	-9.72	0.01
320	SLE RA 10	-166	14	3493	-8.02	-10.3	0.01
320	SLE RA 11	-151	14	3653	-8.38	-9.89	0.01
320	SLE RA 12	-166	14	3597	-8.29	-10.45	0.01
320	SLE RA 13	-177	14	3544	-8.17	-10.83	0.01
320	SLE RA 14	-162	15	3705	-8.53	-10.43	0.01
320	SLE RA 15	-176	15	3648	-8.44	-10.98	0.01
320	SLE RA 16	-162	15	3690	-8.47	-10.43	0.01
320	SLE RA 17	-177	14	3633	-8.38	-10.99	0.01
320	SLE RA 18	-152	15	3704	-8.37	-9.91	0.01
320	SLE RA 19	-167	14	3648	-8.29	-10.47	0.01
320	SLE RA 20	-162	15	3755	-8.52	-10.44	0.01
320	SLE RA 21	-177	15	3699	-8.44	-11	0.01
320	SLE FR 1	-117	13	3316	-7.68	-8.1	0.01
320	SLE FR 2	-122	13	3297	-7.65	-8.28	0.01
320	SLE FR 3	-121	13	3336	-7.74	-8.31	0.01
320	SLE FR 4	-133	14	3414	-7.86	-8.83	0.01
320	SLE FR 5	-132	14	3453	-7.95	-8.85	0.01
320	SLE FR 6	-135	14	3510	-8.03	-9	0.01
320	SLE QP 1	-117	13	3316	-7.68	-8.1	0.01
320	SLE QP 2	-128	14	3432	-7.89	-8.64	0.01
320	SLD 1	320	-5	2521	-8.84	17.97	0.01
320	SLD 2	320	-5	2521	-8.84	17.97	0.01
320	SLD 3	464	11	2976	9.19	11.9	0.02
320	SLD 4	464	11	2976	9.19	11.9	0.02
320	SLD 5	-211	-17	2468	-35.51	8.54	0
320	SLD 6	-211	-17	2468	-35.51	8.54	0
320	SLD 7	268	38	3986	24.57	-11.68	0.02
320	SLD 8	268	38	3986	24.57	-11.68	0.02
320	SLD 9	-523	-11	2879	-40.35	-5.61	-0.01
320	SLD 10	-523	-11	2879	-40.35	-5.61	-0.01
320	SLD 11	-44	44	4397	19.73	-25.82	0.02
320	SLD 12	-44	44	4397	19.73	-25.82	0.02
320	SLD 13	-719	16	3889	-24.97	-29.18	0
320	SLD 14	-719	16	3889	-24.97	-29.18	0
320	SLD 15	-575	32	4344	-6.94	-35.25	0
320	SLD 16	-575	32	4344	-6.94	-35.25	0
320	SLV 1	906	-33	1294	-10.59	53.01	0.02
320	SLV 2	906	-33	1294	-10.59	53.01	0.02
320	SLV 3	1243	9	2371	34.42	38.85	0.04
320	SLV 4	1243	9	2371	34.42	38.85	0.04
320	SLV 5	-327	-63	1157	-76.96	31.33	-0.01
320	SLV 6	-327	-63	1157	-76.96	31.33	-0.01
320	SLV 7	793	75	4748	73.07	-15.87	0.04
320	SLV 8	793	75	4748	73.07	-15.87	0.04
320	SLV 9	-1049	-48	2117	-88.85	-1.41	-0.02
320	SLV 10	-1049	-48	2117	-88.85	-1.41	-0.02
320	SLV 11	72	90	5708	61.19	-48.61	0.03
320	SLV 12	72	90	5708	61.19	-48.61	0.03
320	SLV 13	-1498	18	4494	-50.2	-56.13	-0.02
320	SLV 14	-1498	18	4494	-50.2	-56.13	-0.02
320	SLV 15	-1162	60	5571	-5.19	-70.29	0
320	SLV 16	-1162	60	5571	-5.19	-70.29	0
321	SLU 1	-175	7	3748	-4.2	-10.36	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
321	SLU 2	-210	7	3567	-4.17	-11.65	0
321	SLU 3	-190	7	3878	-4.38	-11.16	0
321	SLU 4	-210	7	3769	-4.36	-11.93	0
321	SLU 5	-225	7	3669	-4.3	-12.44	0
321	SLU 6	-205	7	3981	-4.51	-11.96	0
321	SLU 7	-225	7	3872	-4.49	-12.73	0
321	SLU 8	-205	7	3954	-4.46	-11.95	0
321	SLU 9	-226	7	3845	-4.44	-12.72	0
321	SLU 10	-257	7	4034	-4.56	-14.01	0
321	SLU 11	-238	8	4346	-4.77	-13.52	0
321	SLU 12	-258	8	4236	-4.76	-14.29	0
321	SLU 13	-273	8	4137	-4.69	-14.8	0
321	SLU 14	-253	8	4448	-4.9	-14.32	0
321	SLU 15	-273	8	4339	-4.89	-15.09	0
321	SLU 16	-253	8	4421	-4.85	-14.31	0
321	SLU 17	-274	8	4312	-4.84	-15.08	0
321	SLU 18	-244	8	4416	-4.76	-13.73	0
321	SLU 19	-264	8	4307	-4.74	-14.5	0
321	SLU 20	-259	8	4519	-4.89	-14.53	0
321	SLU 21	-279	8	4410	-4.87	-15.3	0
321	SLU 22	-217	8	4199	-4.66	-12.51	0
321	SLU 23	-251	7	4017	-4.63	-13.8	0
321	SLU 24	-232	8	4328	-4.84	-13.31	0
321	SLU 25	-252	8	4219	-4.82	-14.08	0
321	SLU 26	-266	8	4119	-4.76	-14.59	0
321	SLU 27	-247	8	4431	-4.97	-14.1	0
321	SLU 28	-267	8	4322	-4.95	-14.88	0
321	SLU 29	-247	8	4404	-4.92	-14.1	0
321	SLU 30	-268	8	4295	-4.9	-14.87	0
321	SLU 31	-299	8	4484	-5.02	-16.15	0
321	SLU 32	-280	8	4796	-5.23	-15.67	0
321	SLU 33	-300	8	4687	-5.21	-16.44	0
321	SLU 34	-314	8	4587	-5.15	-16.95	0
321	SLU 35	-295	9	4898	-5.36	-16.46	0
321	SLU 36	-315	9	4789	-5.34	-17.23	0
321	SLU 37	-295	9	4871	-5.31	-16.46	0
321	SLU 38	-316	9	4762	-5.29	-17.23	0
321	SLU 39	-286	9	4866	-5.22	-15.88	0
321	SLU 40	-306	8	4757	-5.2	-16.65	0
321	SLU 41	-301	9	4969	-5.35	-16.67	0
321	SLU 42	-321	9	4860	-5.33	-17.44	0
321	SLU 43	-213	8	4719	-5.3	-12.73	0
321	SLU 44	-248	8	4537	-5.27	-14.02	0
321	SLU 45	-228	9	4848	-5.48	-13.53	0
321	SLU 46	-249	9	4739	-5.47	-14.31	0
321	SLU 47	-263	9	4640	-5.4	-14.82	0
321	SLU 48	-243	9	4951	-5.61	-14.33	0
321	SLU 49	-264	9	4842	-5.6	-15.1	0
321	SLU 50	-244	9	4924	-5.56	-14.32	0
321	SLU 51	-264	9	4815	-5.54	-15.1	0
321	SLU 52	-296	9	5004	-5.67	-16.38	0
321	SLU 53	-276	9	5316	-5.88	-15.89	0
321	SLU 54	-296	9	5207	-5.86	-16.67	0
321	SLU 55	-311	9	5107	-5.8	-17.17	0
321	SLU 56	-291	10	5418	-6.01	-16.69	0
321	SLU 57	-312	10	5309	-5.99	-17.46	0
321	SLU 58	-291	10	5391	-5.95	-16.68	0
321	SLU 59	-312	10	5282	-5.94	-17.45	0
321	SLU 60	-282	9	5386	-5.86	-16.1	0.01
321	SLU 61	-303	9	5277	-5.85	-16.88	0
321	SLU 62	-297	10	5489	-5.99	-16.9	0
321	SLU 63	-318	10	5380	-5.98	-17.67	0
321	SLU 64	-255	9	5169	-5.76	-14.88	0
321	SLU 65	-290	9	4987	-5.73	-16.17	0
321	SLU 66	-270	10	5299	-5.94	-15.68	0
321	SLU 67	-290	10	5189	-5.92	-16.45	0
321	SLU 68	-305	9	5090	-5.86	-16.96	0
321	SLU 69	-285	10	5401	-6.07	-16.48	0
321	SLU 70	-305	10	5292	-6.05	-17.25	0
321	SLU 71	-285	10	5374	-6.02	-16.47	0
321	SLU 72	-306	10	5265	-6	-17.24	0
321	SLU 73	-338	10	5454	-6.12	-18.53	0
321	SLU 74	-318	10	5766	-6.33	-18.04	0.01
321	SLU 75	-338	10	5657	-6.32	-18.81	0.01
321	SLU 76	-353	10	5557	-6.25	-19.32	0
321	SLU 77	-333	10	5868	-6.46	-18.83	0.01
321	SLU 78	-353	10	5759	-6.45	-19.61	0
321	SLU 79	-333	10	5841	-6.41	-18.83	0.01
321	SLU 80	-354	10	5732	-6.4	-19.6	0
321	SLU 81	-324	10	5836	-6.32	-18.25	0.01
321	SLU 82	-344	10	5727	-6.3	-19.02	0.01
321	SLU 83	-339	10	5939	-6.45	-19.05	0.01
321	SLU 84	-359	10	5830	-6.43	-19.82	0.01
321	SLE RA 1	-187	7	3877	-4.33	-10.98	0
321	SLE RA 2	-210	7	3756	-4.31	-11.83	0
321	SLE RA 3	-197	7	3964	-4.45	-11.51	0
321	SLE RA 4	-211	7	3891	-4.44	-12.02	0
321	SLE RA 5	-220	7	3824	-4.4	-12.36	0
321	SLE RA 6	-207	7	4032	-4.54	-12.04	0
321	SLE RA 7	-221	7	3959	-4.53	-12.55	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
321	SLE RA 8	-207	7	4014	-4.5	-12.04	0
321	SLE RA 9	-221	7	3941	-4.49	-12.55	0
321	SLE RA 10	-242	7	4067	-4.57	-13.41	0
321	SLE RA 11	-229	8	4275	-4.71	-13.08	0
321	SLE RA 12	-243	8	4202	-4.7	-13.6	0
321	SLE RA 13	-252	8	4136	-4.66	-13.94	0
321	SLE RA 14	-239	8	4344	-4.8	-13.61	0
321	SLE RA 15	-253	8	4271	-4.79	-14.13	0
321	SLE RA 16	-239	8	4325	-4.77	-13.61	0
321	SLE RA 17	-253	8	4253	-4.75	-14.12	0
321	SLE RA 18	-233	8	4322	-4.7	-13.22	0
321	SLE RA 19	-247	8	4249	-4.69	-13.74	0
321	SLE RA 20	-243	8	4391	-4.79	-13.75	0
321	SLE RA 21	-257	8	4318	-4.78	-14.27	0
321	SLE FR 1	-187	7	3877	-4.33	-10.98	0
321	SLE FR 2	-192	7	3853	-4.33	-11.15	0
321	SLE FR 3	-191	7	3904	-4.36	-11.19	0
321	SLE FR 4	-205	7	3986	-4.44	-11.82	0
321	SLE FR 5	-205	7	4038	-4.48	-11.86	0
321	SLE FR 6	-210	7	4100	-4.52	-12.1	0
321	SLE QP 1	-187	7	3877	-4.33	-10.98	0
321	SLE QP 2	-201	7	4011	-4.44	-11.65	0
321	SLD 1	217	-9	2700	-4.17	13.84	-0.01
321	SLD 2	217	-9	2700	-4.17	13.84	-0.01
321	SLD 3	348	2	3266	8.03	8.24	0
321	SLD 4	348	2	3266	8.03	8.24	0
321	SLD 5	-275	-14	2759	-22.86	4.48	-0.02
321	SLD 6	-275	-14	2759	-22.86	4.48	-0.02
321	SLD 7	163	22	4645	17.8	-14.17	0.02
321	SLD 8	163	22	4645	17.8	-14.17	0.02
321	SLD 9	-565	-7	3376	-26.69	-9.13	-0.01
321	SLD 10	-565	-7	3376	-26.69	-9.13	-0.01
321	SLD 11	-127	28	5262	13.98	-27.78	0.03
321	SLD 12	-127	28	5262	13.98	-27.78	0.03
321	SLD 13	-750	13	4755	-16.92	-31.54	0.01
321	SLD 14	-750	13	4755	-16.92	-31.54	0.01
321	SLD 15	-619	23	5321	-4.72	-37.14	0.02
321	SLD 16	-619	23	5321	-4.72	-37.14	0.02
321	SLV 1	765	-33	945	-4.02	47.39	-0.04
321	SLV 2	765	-33	945	-4.02	47.39	-0.04
321	SLV 3	1071	-6	2273	26.52	34.42	-0.01
321	SLV 4	1071	-6	2273	26.52	34.42	-0.01
321	SLV 5	-376	-45	1077	-50.63	25.73	-0.05
321	SLV 6	-376	-45	1077	-50.63	25.73	-0.05
321	SLV 7	645	43	5503	51.16	-17.5	0.04
321	SLV 8	645	43	5503	51.16	-17.5	0.04
321	SLV 9	-1047	-29	2518	-60.05	-5.8	-0.04
321	SLV 10	-1047	-29	2518	-60.05	-5.8	-0.04
321	SLV 11	-26	59	6944	41.75	-49.03	0.06
321	SLV 12	-26	59	6944	41.75	-49.03	0.06
321	SLV 13	-1473	20	5749	-35.4	-57.72	0.02
321	SLV 14	-1473	20	5749	-35.4	-57.72	0.02
321	SLV 15	-1167	47	7076	-4.86	-70.69	0.04
321	SLV 16	-1167	47	7076	-4.86	-70.69	0.04
322	SLU 1	-381	-4	4473	0.12	-21.87	0
322	SLU 2	-399	-3	4250	-0.08	-22.42	0
322	SLU 3	-401	-4	4645	0.12	-23.04	0
322	SLU 4	-412	-4	4512	0	-23.37	0
322	SLU 5	-418	-4	4389	-0.08	-23.5	0
322	SLU 6	-420	-5	4784	0.12	-24.12	0
322	SLU 7	-431	-4	4650	0	-24.45	0
322	SLU 8	-419	-4	4751	0.12	-24.03	0
322	SLU 9	-430	-4	4617	0	-24.36	0
322	SLU 10	-472	-4	4805	-0.02	-26.28	0
322	SLU 11	-473	-5	5200	0.18	-26.9	0
322	SLU 12	-484	-4	5066	0.06	-27.23	0
322	SLU 13	-491	-4	4943	-0.02	-27.36	0
322	SLU 14	-492	-5	5339	0.18	-27.98	0
322	SLU 15	-503	-5	5205	0.06	-28.31	0
322	SLU 16	-491	-5	5305	0.18	-27.88	0
322	SLU 17	-502	-5	5172	0.06	-28.21	0
322	SLU 18	-484	-5	5266	0.21	-27.38	0
322	SLU 19	-495	-5	5132	0.09	-27.71	0
322	SLU 20	-503	-5	5404	0.21	-28.46	0
322	SLU 21	-514	-5	5271	0.09	-28.79	0
322	SLU 22	-446	-5	5019	0.16	-25.44	0
322	SLU 23	-465	-4	4795	-0.04	-25.99	0
322	SLU 24	-466	-5	5191	0.15	-26.61	0
322	SLU 25	-477	-4	5057	0.03	-26.94	0
322	SLU 26	-484	-4	4934	-0.04	-27.07	0
322	SLU 27	-485	-5	5330	0.16	-27.69	0
322	SLU 28	-496	-5	5196	0.03	-28.02	0
322	SLU 29	-484	-5	5296	0.16	-27.6	0
322	SLU 30	-495	-5	5162	0.04	-27.93	0
322	SLU 31	-537	-5	5350	0.02	-29.85	0
322	SLU 32	-538	-5	5746	0.22	-30.47	0
322	SLU 33	-550	-5	5612	0.09	-30.8	0
322	SLU 34	-556	-5	5489	0.02	-30.93	0
322	SLU 35	-557	-6	5885	0.22	-31.55	0
322	SLU 36	-569	-5	5751	0.1	-31.88	0



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
		x	y	z		x	y	z	
322	SLU 37	-556	-6	5851	0.22	-31.46	0		
322	SLU 38	-567	-5	5717	0.1	-31.79	0		
322	SLU 39	-549	-6	5811	0.24	-30.95	0		
322	SLU 40	-561	-5	5677	0.12	-31.28	0		
322	SLU 41	-568	-6	5950	0.25	-32.03	0		
322	SLU 42	-580	-5	5816	0.12	-32.36	0		
322	SLU 43	-472	-5	5628	0.14	-27.2	0		
322	SLU 44	-491	-5	5405	-0.06	-27.75	0		
322	SLU 45	-493	-5	5800	0.14	-28.38	0		
322	SLU 46	-504	-5	5666	0.02	-28.71	0		
322	SLU 47	-510	-5	5543	-0.06	-28.83	0		
322	SLU 48	-512	-6	5939	0.14	-29.46	0		
322	SLU 49	-523	-5	5805	0.02	-29.79	0		
322	SLU 50	-510	-6	5905	0.14	-29.36	0		
322	SLU 51	-522	-5	5772	0.02	-29.69	0		
322	SLU 52	-564	-5	5959	0	-31.61	0		
322	SLU 53	-565	-6	6355	0.2	-32.23	0		
322	SLU 54	-576	-6	6221	0.08	-32.56	0		
322	SLU 55	-583	-5	6098	0	-32.69	0		
322	SLU 56	-584	-6	6494	0.2	-33.31	0		
322	SLU 57	-595	-6	6360	0.08	-33.64	0		
322	SLU 58	-583	-6	6460	0.21	-33.22	0		
322	SLU 59	-594	-6	6326	0.08	-33.55	0		
322	SLU 60	-576	-6	6420	0.23	-32.71	0		
322	SLU 61	-587	-6	6287	0.11	-33.04	0		
322	SLU 62	-595	-6	6559	0.23	-33.79	0		
322	SLU 63	-606	-6	6425	0.11	-34.12	0		
322	SLU 64	-538	-6	6173	0.18	-30.78	0		
322	SLU 65	-556	-5	5950	-0.02	-31.33	0		
322	SLU 66	-558	-6	6346	0.18	-31.95	0		
322	SLU 67	-569	-6	6212	0.06	-32.28	0		
322	SLU 68	-575	-5	6089	-0.02	-32.41	0		
322	SLU 69	-577	-6	6485	0.18	-33.03	0		
322	SLU 70	-588	-6	6351	0.06	-33.36	0		
322	SLU 71	-576	-6	6451	0.18	-32.93	0		
322	SLU 72	-587	-6	6317	0.06	-33.26	0		
322	SLU 73	-629	-6	6505	0.04	-35.18	0		
322	SLU 74	-630	-7	6901	0.24	-35.81	0		
322	SLU 75	-641	-6	6767	0.12	-36.14	0		
322	SLU 76	-648	-6	6644	0.04	-36.26	0		
322	SLU 77	-649	-7	7040	0.24	-36.89	0		
322	SLU 78	-660	-6	6906	0.12	-37.22	0		
322	SLU 79	-648	-7	7006	0.24	-36.79	0		
322	SLU 80	-659	-6	6872	0.12	-37.12	0		
322	SLU 81	-641	-7	6966	0.27	-36.29	0		
322	SLU 82	-652	-6	6832	0.15	-36.62	0		
322	SLU 83	-660	-7	7105	0.27	-37.36	0		
322	SLU 84	-671	-6	6971	0.15	-37.7	0		
322	SLE RA 1	-399	-4	4629	0.13	-22.89	0		
322	SLE RA 2	-412	-4	4480	0	-23.26	0		
322	SLE RA 3	-413	-4	4744	0.13	-23.67	0		
322	SLE RA 4	-420	-4	4655	0.05	-23.89	0		
322	SLE RA 5	-424	-4	4573	0	-23.97	0		
322	SLE RA 6	-425	-5	4836	0.13	-24.39	0		
322	SLE RA 7	-433	-4	4747	0.05	-24.61	0		
322	SLE RA 8	-425	-5	4814	0.13	-24.33	0		
322	SLE RA 9	-432	-4	4725	0.05	-24.55	0		
322	SLE RA 10	-460	-4	4850	0.04	-25.83	0		
322	SLE RA 11	-461	-5	5114	0.17	-26.24	0		
322	SLE RA 12	-468	-5	5024	0.09	-26.46	0		
322	SLE RA 13	-473	-4	4942	0.04	-26.55	0		
322	SLE RA 14	-474	-5	5206	0.17	-26.96	0		
322	SLE RA 15	-481	-5	5117	0.09	-27.18	0		
322	SLE RA 16	-473	-5	5184	0.17	-26.9	0		
322	SLE RA 17	-480	-5	5095	0.09	-27.12	0		
322	SLE RA 18	-468	-5	5157	0.19	-26.56	0		
322	SLE RA 19	-476	-5	5068	0.11	-26.78	0		
322	SLE RA 20	-481	-5	5250	0.19	-27.28	0		
322	SLE RA 21	-488	-5	5161	0.11	-27.5	0		
322	SLE FR 1	-399	-4	4629	0.13	-22.89	0		
322	SLE FR 2	-402	-4	4599	0.1	-22.96	0		
322	SLE FR 3	-404	-4	4666	0.13	-23.18	0		
322	SLE FR 4	-422	-4	4758	0.12	-24.06	0		
322	SLE FR 5	-425	-5	4824	0.15	-24.28	0		
322	SLE FR 6	-434	-5	4893	0.16	-24.72	0		
322	SLE QP 1	-399	-4	4629	0.13	-22.89	0		
322	SLE QP 2	-420	-5	4787	0.15	-23.99	0		
322	SLD 1	87	-13	2863	0.91	1.92	-0.02		
322	SLD 2	87	-13	2863	0.91	1.92	-0.02		
322	SLD 3	-25	-24	3606	7.5	-3.59	-0.08		
322	SLD 4	-25	-24	3606	7.5	-3.59	-0.08		
322	SLD 5	-98	10	3083	-9.61	-7.86	0.08		
322	SLD 6	-98	10	3083	-9.61	-7.86	0.08		
322	SLD 7	-471	-27	5560	12.34	-26.23	-0.11		
322	SLD 8	-471	-27	5560	12.34	-26.23	-0.11		
322	SLD 9	-369	18	4015	-12.04	-21.75	0.1		
322	SLD 10	-369	18	4015	-12.04	-21.75	0.1		
322	SLD 11	-742	-19	6492	9.9	-40.12	-0.08		
322	SLD 12	-742	-19	6492	9.9	-40.12	-0.08		
322	SLD 13	-815	15	5969	-7.2	-44.39	0.07		



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
322	SLD 14	-815	15	5969	-7.2	-44.39	0.07
322	SLD 15	-927	4	6712	-0.62	-49.91	0.01
322	SLD 16	-927	4	6712	-0.62	-49.91	0.01
322	SLV 1	754	-24	288	1.88	36.08	-0.04
322	SLV 2	754	-24	288	1.88	36.08	-0.04
322	SLV 3	495	-52	2032	18.42	23.24	-0.18
322	SLV 4	495	-52	2032	18.42	23.24	-0.18
322	SLV 5	326	32	792	-24.41	13.5	0.2
322	SLV 6	326	32	792	-24.41	13.5	0.2
322	SLV 7	-539	-61	6606	30.71	-29.3	-0.27
322	SLV 8	-539	-61	6606	30.71	-29.3	-0.27
322	SLV 9	-301	52	2968	-30.41	-18.69	0.26
322	SLV 10	-301	52	2968	-30.41	-18.69	0.26
322	SLV 11	-1166	-41	8783	24.7	-61.48	-0.2
322	SLV 12	-1166	-41	8783	24.7	-61.48	-0.2
322	SLV 13	-1335	43	7542	-18.12	-71.22	0.18
322	SLV 14	-1335	43	7542	-18.12	-71.22	0.18
322	SLV 15	-1594	15	9287	-1.59	-84.06	0.04
322	SLV 16	-1594	15	9287	-1.59	-84.06	0.04
324	SLU 1	1	-415	6123	19.87	0.26	0.01
324	SLU 2	1	-416	6097	19.95	0.24	0.01
324	SLU 3	1	-431	6324	20.62	0.27	0.01
324	SLU 4	1	-431	6309	20.67	0.25	0.01
324	SLU 5	1	-428	6231	20.48	0.24	0.01
324	SLU 6	1	-442	6458	21.15	0.28	0.01
324	SLU 7	1	-443	6443	21.2	0.26	0.01
324	SLU 8	1	-438	6391	20.93	0.27	0.01
324	SLU 9	1	-439	6375	20.98	0.26	0.01
324	SLU 10	1	-467	6891	22.53	0.26	0.01
324	SLU 11	1	-482	7117	23.19	0.3	0.01
324	SLU 12	1	-483	7102	23.24	0.28	0.01
324	SLU 13	1	-479	7025	23.06	0.27	0.01
324	SLU 14	1	-494	7251	23.72	0.3	0.01
324	SLU 15	1	-494	7236	23.77	0.29	0.01
324	SLU 16	1	-489	7184	23.5	0.3	0.01
324	SLU 17	1	-490	7169	23.55	0.29	0.01
324	SLU 18	1	-488	7256	23.55	0.3	0.01
324	SLU 19	1	-489	7241	23.6	0.29	0.01
324	SLU 20	1	-500	7390	24.08	0.31	0.01
324	SLU 21	1	-501	7375	24.13	0.29	0.01
324	SLU 22	1	-468	6916	22.51	0.29	0.01
324	SLU 23	1	-470	6890	22.59	0.27	0.01
324	SLU 24	1	-484	7117	23.26	0.3	0.01
324	SLU 25	1	-485	7102	23.3	0.28	0.01
324	SLU 26	1	-481	7024	23.12	0.28	0.01
324	SLU 27	1	-496	7251	23.78	0.31	0.01
324	SLU 28	1	-497	7236	23.83	0.29	0.01
324	SLU 29	1	-492	7184	23.57	0.31	0.01
324	SLU 30	1	-492	7169	23.61	0.29	0.01
324	SLU 31	1	-521	7684	25.17	0.3	0.01
324	SLU 32	1	-536	7911	25.83	0.33	0.01
324	SLU 33	1	-536	7895	25.88	0.31	0.01
324	SLU 34	1	-533	7818	25.69	0.3	0.01
324	SLU 35	1	-547	8045	26.36	0.33	0.01
324	SLU 36	1	-548	8029	26.41	0.32	0.01
324	SLU 37	1	-543	7977	26.14	0.33	0.01
324	SLU 38	1	-544	7962	26.19	0.32	0.01
324	SLU 39	1	-542	8050	26.19	0.33	0.01
324	SLU 40	1	-542	8034	26.24	0.32	0.01
324	SLU 41	1	-553	8184	26.72	0.34	0.01
324	SLU 42	1	-554	8168	26.77	0.32	0.01
324	SLU 43	1	-521	7688	24.93	0.32	0.01
324	SLU 44	1	-522	7662	25.01	0.3	0.01
324	SLU 45	1	-537	7889	25.67	0.33	0.01
324	SLU 46	1	-538	7874	25.72	0.32	0.01
324	SLU 47	1	-534	7796	25.54	0.31	0.01
324	SLU 48	1	-548	8023	26.2	0.34	0.01
324	SLU 49	1	-549	8008	26.25	0.33	0.01
324	SLU 50	1	-544	7956	25.98	0.34	0.01
324	SLU 51	1	-545	7940	26.03	0.33	0.01
324	SLU 52	1	-573	8456	27.58	0.33	0.01
324	SLU 53	1	-588	8682	28.25	0.36	0.02
324	SLU 54	1	-589	8667	28.3	0.35	0.01
324	SLU 55	1	-585	8590	28.11	0.34	0.01
324	SLU 56	1	-600	8816	28.78	0.37	0.02
324	SLU 57	1	-601	8801	28.83	0.36	0.02
324	SLU 58	1	-595	8749	28.56	0.37	0.02
324	SLU 59	1	-596	8734	28.61	0.36	0.01
324	SLU 60	1	-594	8821	28.61	0.37	0.02
324	SLU 61	1	-595	8806	28.66	0.35	0.01
324	SLU 62	2	-606	8955	29.14	0.37	0.02
324	SLU 63	1	-607	8940	29.18	0.36	0.02
324	SLU 64	1	-574	8481	27.56	0.36	0.01
324	SLU 65	1	-576	8455	27.65	0.33	0.01
324	SLU 66	1	-590	8682	28.31	0.36	0.02
324	SLU 67	1	-591	8667	28.36	0.35	0.01
324	SLU 68	1	-587	8589	28.17	0.34	0.01
324	SLU 69	1	-602	8816	28.84	0.37	0.02
324	SLU 70	1	-603	8801	28.89	0.36	0.02
324	SLU 71	1	-598	8749	28.62	0.37	0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
324	SLU 72	1	-599	8734	28.67	0.36	0.01
324	SLU 73	2	-627	9249	30.22	0.36	0.02
324	SLU 74	2	-642	9476	30.89	0.39	0.02
324	SLU 75	2	-642	9460	30.94	0.38	0.02
324	SLU 76	2	-639	9383	30.75	0.37	0.02
324	SLU 77	2	-653	9610	31.42	0.4	0.02
324	SLU 78	2	-654	9594	31.47	0.39	0.02
324	SLU 79	2	-649	9542	31.2	0.4	0.02
324	SLU 80	2	-650	9527	31.25	0.39	0.02
324	SLU 81	2	-648	9614	31.25	0.4	0.02
324	SLU 82	2	-649	9599	31.29	0.38	0.02
324	SLU 83	2	-659	9748	31.77	0.4	0.02
324	SLU 84	2	-660	9733	31.82	0.39	0.02
324	SLE RA 1	1	-430	6350	20.62	0.27	0.01
324	SLE RA 2	1	-431	6332	20.68	0.25	0.01
324	SLE RA 3	1	-441	6484	21.12	0.27	0.01
324	SLE RA 4	1	-441	6473	21.15	0.26	0.01
324	SLE RA 5	1	-439	6422	21.03	0.26	0.01
324	SLE RA 6	1	-448	6573	21.47	0.28	0.01
324	SLE RA 7	1	-449	6563	21.51	0.27	0.01
324	SLE RA 8	1	-446	6528	21.33	0.28	0.01
324	SLE RA 9	1	-446	6518	21.36	0.27	0.01
324	SLE RA 10	1	-465	6861	22.4	0.27	0.01
324	SLE RA 11	1	-475	7013	22.84	0.29	0.01
324	SLE RA 12	1	-475	7002	22.87	0.28	0.01
324	SLE RA 13	1	-473	6951	22.75	0.28	0.01
324	SLE RA 14	1	-483	7102	23.19	0.3	0.01
324	SLE RA 15	1	-483	7092	23.22	0.29	0.01
324	SLE RA 16	1	-480	7057	23.05	0.3	0.01
324	SLE RA 17	1	-480	7047	23.08	0.29	0.01
324	SLE RA 18	1	-479	7105	23.08	0.29	0.01
324	SLE RA 19	1	-479	7095	23.11	0.29	0.01
324	SLE RA 20	1	-487	7194	23.43	0.3	0.01
324	SLE RA 21	1	-487	7184	23.46	0.29	0.01
324	SLE FR 1	1	-430	6350	20.62	0.27	0.01
324	SLE FR 2	1	-430	6346	20.63	0.26	0.01
324	SLE FR 3	1	-433	6385	20.76	0.27	0.01
324	SLE FR 4	1	-445	6573	21.37	0.27	0.01
324	SLE FR 5	1	-448	6612	21.5	0.28	0.01
324	SLE FR 6	1	-454	6727	21.85	0.28	0.01
324	SLE QP 1	1	-430	6350	20.62	0.27	0.01
324	SLE QP 2	1	-445	6576	21.36	0.28	0.01
324	SLD 1	-11	-395	5681	9.65	7.84	-0.2
324	SLD 2	-11	-395	5681	9.65	7.84	-0.2
324	SLD 3	-9	-730	6696	22.93	8.29	-0.18
324	SLD 4	-9	-730	6696	22.93	8.29	-0.18
324	SLD 5	-4	78	4767	-2.28	1.87	-0.08
324	SLD 6	-4	78	4767	-2.28	1.87	-0.08
324	SLD 7	0	-1038	8153	41.96	3.36	-0.02
324	SLD 8	0	-1038	8153	41.96	3.36	-0.02
324	SLD 9	3	149	5000	0.76	-2.81	0.04
324	SLD 10	3	149	5000	0.76	-2.81	0.04
324	SLD 11	6	-967	8386	45	-1.32	0.1
324	SLD 12	6	-967	8386	45	-1.32	0.1
324	SLD 13	12	-159	6456	19.79	-7.74	0.2
324	SLD 14	12	-159	6456	19.79	-7.74	0.2
324	SLD 15	13	-494	7472	33.07	-7.29	0.22
324	SLD 16	13	-494	7472	33.07	-7.29	0.22
324	SLV 1	-26	-325	4461	-6.15	17.97	-0.48
324	SLV 2	-26	-325	4461	-6.15	17.97	-0.48
324	SLV 3	-24	-1115	6867	25.17	19.04	-0.43
324	SLV 4	-24	-1115	6867	25.17	19.04	-0.43
324	SLV 5	-11	788	2291	-34.4	3.96	-0.2
324	SLV 6	-11	788	2291	-34.4	3.96	-0.2
324	SLV 7	-2	-1843	10314	70.01	7.53	-0.06
324	SLV 8	-2	-1843	10314	70.01	7.53	-0.06
324	SLV 9	4	953	2839	-27.29	-6.98	0.08
324	SLV 10	4	953	2839	-27.29	-6.98	0.08
324	SLV 11	13	-1677	10861	77.12	-3.41	0.22
324	SLV 12	13	-1677	10861	77.12	-3.41	0.22
324	SLV 13	26	225	6285	17.55	-18.49	0.46
324	SLV 14	26	225	6285	17.55	-18.49	0.46
324	SLV 15	28	-564	8692	48.87	-17.42	0.5
324	SLV 16	28	-564	8692	48.87	-17.42	0.5
325	SLU 1	2	138	4323	-3.75	0.09	-0.02
325	SLU 2	3	135	4316	-3.49	0.1	-0.02
325	SLU 3	3	146	4420	-4.13	0.11	-0.02
325	SLU 4	3	145	4416	-3.97	0.11	-0.02
325	SLU 5	3	142	4364	-3.86	0.11	-0.02
325	SLU 6	3	154	4468	-4.5	0.13	-0.02
325	SLU 7	3	152	4464	-4.34	0.13	-0.02
325	SLU 8	3	153	4418	-4.49	0.12	-0.02
325	SLU 9	3	151	4414	-4.33	0.13	-0.02
325	SLU 10	3	164	4935	-4.53	0.11	-0.02
325	SLU 11	3	176	5039	-5.17	0.12	-0.02
325	SLU 12	3	174	5035	-5.02	0.12	-0.02
325	SLU 13	3	172	4982	-4.9	0.12	-0.02
325	SLU 14	3	183	5087	-5.54	0.14	-0.02
325	SLU 15	3	182	5083	-5.39	0.14	-0.02
325	SLU 16	3	182	5037	-5.54	0.13	-0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
325	SLU 17	3	181	5033	-5.38	0.14	-0.02
325	SLU 18	3	180	5207	-5.24	0.11	-0.02
325	SLU 19	3	178	5203	-5.09	0.11	-0.02
325	SLU 20	3	187	5254	-5.61	0.12	-0.02
325	SLU 21	3	186	5250	-5.46	0.13	-0.02
325	SLU 22	3	163	4902	-4.65	0.11	-0.02
325	SLU 23	3	161	4895	-4.38	0.11	-0.02
325	SLU 24	3	172	4999	-5.02	0.13	-0.02
325	SLU 25	3	170	4995	-4.87	0.13	-0.02
325	SLU 26	3	168	4943	-4.75	0.13	-0.02
325	SLU 27	3	180	5047	-5.39	0.14	-0.02
325	SLU 28	3	178	5043	-5.24	0.14	-0.02
325	SLU 29	3	179	4997	-5.39	0.14	-0.02
325	SLU 30	3	177	4993	-5.23	0.14	-0.02
325	SLU 31	3	190	5514	-5.43	0.12	-0.02
325	SLU 32	3	201	5618	-6.07	0.14	-0.02
325	SLU 33	3	200	5614	-5.91	0.14	-0.02
325	SLU 34	3	198	5562	-5.8	0.14	-0.02
325	SLU 35	3	209	5666	-6.44	0.15	-0.02
325	SLU 36	3	207	5662	-6.28	0.15	-0.02
325	SLU 37	3	208	5616	-6.43	0.15	-0.02
325	SLU 38	3	207	5612	-6.27	0.15	-0.02
325	SLU 39	3	205	5786	-6.14	0.12	-0.02
325	SLU 40	3	204	5782	-5.98	0.13	-0.02
325	SLU 41	3	213	5833	-6.51	0.14	-0.02
325	SLU 42	3	211	5829	-6.35	0.14	-0.02
325	SLU 43	3	170	5421	-4.57	0.12	-0.02
325	SLU 44	3	167	5414	-4.3	0.12	-0.02
325	SLU 45	3	179	5519	-4.95	0.13	-0.02
325	SLU 46	3	177	5515	-4.79	0.14	-0.02
325	SLU 47	3	175	5462	-4.67	0.14	-0.02
325	SLU 48	3	186	5566	-5.32	0.15	-0.02
325	SLU 49	3	185	5562	-5.16	0.15	-0.02
325	SLU 50	3	185	5516	-5.31	0.15	-0.02
325	SLU 51	3	184	5512	-5.15	0.15	-0.02
325	SLU 52	3	197	6033	-5.35	0.13	-0.02
325	SLU 53	4	208	6137	-5.99	0.14	-0.02
325	SLU 54	4	206	6133	-5.83	0.15	-0.02
325	SLU 55	4	204	6081	-5.72	0.15	-0.02
325	SLU 56	4	216	6185	-6.36	0.16	-0.02
325	SLU 57	4	214	6181	-6.2	0.16	-0.02
325	SLU 58	4	215	6135	-6.35	0.16	-0.02
325	SLU 59	4	213	6131	-6.2	0.16	-0.02
325	SLU 60	4	212	6305	-6.06	0.13	-0.02
325	SLU 61	4	210	6301	-5.9	0.13	-0.02
325	SLU 62	4	220	6353	-6.43	0.15	-0.02
325	SLU 63	4	218	6349	-6.27	0.15	-0.02
325	SLU 64	3	196	6000	-5.46	0.13	-0.02
325	SLU 65	3	193	5993	-5.2	0.14	-0.02
325	SLU 66	4	204	6098	-5.84	0.15	-0.02
325	SLU 67	4	203	6094	-5.68	0.15	-0.02
325	SLU 68	4	201	6041	-5.57	0.15	-0.02
325	SLU 69	4	212	6145	-6.21	0.16	-0.02
325	SLU 70	4	210	6141	-6.05	0.17	-0.02
325	SLU 71	4	211	6095	-6.2	0.16	-0.02
325	SLU 72	4	209	6091	-6.04	0.17	-0.02
325	SLU 73	4	222	6612	-6.24	0.15	-0.02
325	SLU 74	4	234	6716	-6.89	0.16	-0.02
325	SLU 75	4	232	6712	-6.73	0.16	-0.03
325	SLU 76	4	230	6660	-6.61	0.16	-0.02
325	SLU 77	4	242	6764	-7.26	0.17	-0.03
325	SLU 78	4	240	6760	-7.1	0.18	-0.03
325	SLU 79	4	241	6714	-7.25	0.17	-0.02
325	SLU 80	4	239	6710	-7.09	0.17	-0.02
325	SLU 81	4	238	6884	-6.96	0.15	-0.03
325	SLU 82	4	236	6880	-6.8	0.15	-0.03
325	SLU 83	4	245	6932	-7.33	0.16	-0.03
325	SLU 84	4	244	6928	-7.17	0.16	-0.03
325	SLE RA 1	3	145	4488	-4.01	0.1	-0.02
325	SLE RA 2	3	143	4484	-3.83	0.1	-0.02
325	SLE RA 3	3	151	4553	-4.26	0.11	-0.02
325	SLE RA 4	3	150	4551	-4.15	0.11	-0.02
325	SLE RA 5	3	148	4515	-4.08	0.11	-0.02
325	SLE RA 6	3	156	4585	-4.51	0.12	-0.02
325	SLE RA 7	3	155	4582	-4.4	0.12	-0.02
325	SLE RA 8	3	155	4552	-4.5	0.12	-0.02
325	SLE RA 9	3	154	4549	-4.39	0.12	-0.02
325	SLE RA 10	3	163	4896	-4.53	0.11	-0.02
325	SLE RA 11	3	170	4966	-4.96	0.12	-0.02
325	SLE RA 12	3	169	4963	-4.85	0.12	-0.02
325	SLE RA 13	3	168	4928	-4.77	0.12	-0.02
325	SLE RA 14	3	175	4998	-5.2	0.13	-0.02
325	SLE RA 15	3	174	4995	-5.1	0.13	-0.02
325	SLE RA 16	3	175	4964	-5.2	0.13	-0.02
325	SLE RA 17	3	174	4961	-5.09	0.13	-0.02
325	SLE RA 18	3	173	5077	-5	0.11	-0.02
325	SLE RA 19	3	172	5075	-4.9	0.11	-0.02
325	SLE RA 20	3	178	5109	-5.25	0.12	-0.02
325	SLE RA 21	3	177	5107	-5.14	0.12	-0.02
325	SLE FR 1	3	145	4488	-4.01	0.1	-0.02



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
325	SLE FR 2	3	145	4487	-3.97	0.1	-0.02
325	SLE FR 3	3	147	4501	-4.1	0.1	-0.02
325	SLE FR 4	3	153	4664	-4.27	0.1	-0.02
325	SLE FR 5	3	155	4678	-4.4	0.11	-0.02
325	SLE FR 6	3	159	4783	-4.5	0.1	-0.02
325	SLE QP 1	3	145	4488	-4.01	0.1	-0.02
325	SLE QP 2	3	153	4665	-4.3	0.1	-0.02
325	SLD 1	2	467	4741	-21.56	0.35	-0.01
325	SLD 2	2	467	4741	-21.56	0.35	-0.01
325	SLD 3	6	264	5114	-7.8	0.58	-0.02
325	SLD 4	6	264	5114	-7.8	0.58	-0.02
325	SLD 5	-4	555	4122	-30.36	-0.17	0
325	SLD 6	-4	555	4122	-30.36	-0.17	0
325	SLD 7	10	-121	5366	15.53	0.59	-0.03
325	SLD 8	10	-121	5366	15.53	0.59	-0.03
325	SLD 9	-5	427	3964	-24.13	-0.39	0
325	SLD 10	-5	427	3964	-24.13	-0.39	0
325	SLD 11	9	-248	5208	21.75	0.37	-0.04
325	SLD 12	9	-248	5208	21.75	0.37	-0.04
325	SLD 13	-1	42	4216	-0.81	-0.38	-0.02
325	SLD 14	-1	42	4216	-0.81	-0.38	-0.02
325	SLD 15	3	-160	4589	12.96	-0.15	-0.03
325	SLD 16	3	-160	4589	12.96	-0.15	-0.03
325	SLV 1	2	883	4841	-44.55	0.68	0.01
325	SLV 2	2	883	4841	-44.55	0.68	0.01
325	SLV 3	11	406	5727	-12.18	1.21	-0.02
325	SLV 4	11	406	5727	-12.18	1.21	-0.02
325	SLV 5	-12	1094	3375	-65.48	-0.54	0.03
325	SLV 6	-12	1094	3375	-65.48	-0.54	0.03
325	SLV 7	20	-493	6326	42.43	1.25	-0.06
325	SLV 8	20	-493	6326	42.43	1.25	-0.06
325	SLV 9	-14	800	3004	-51.04	-1.05	0.02
325	SLV 10	-14	800	3004	-51.04	-1.05	0.02
325	SLV 11	17	-788	5955	56.87	0.74	-0.06
325	SLV 12	17	-788	5955	56.87	0.74	-0.06
325	SLV 13	-6	-100	3603	3.57	-1.01	-0.02
325	SLV 14	-6	-100	3603	3.57	-1.01	-0.02
325	SLV 15	4	-576	4489	35.94	-0.47	-0.04
325	SLV 16	4	-576	4489	35.94	-0.47	-0.04
326	SLU 1	-697	-1200	6881	-591.03	-17.18	-157.48
326	SLU 2	-680	-1112	6468	-564.93	-17.09	-153.62
326	SLU 3	-728	-1247	7161	-615.62	-18.02	-164.48
326	SLU 4	-718	-1194	6913	-599.96	-17.97	-162.16
326	SLU 5	-707	-1148	6690	-585.18	-17.84	-159.59
326	SLU 6	-755	-1283	7383	-635.88	-18.77	-170.44
326	SLU 7	-745	-1230	7135	-620.21	-18.72	-168.13
326	SLU 8	-750	-1271	7326	-631.53	-18.67	-169.41
326	SLU 9	-740	-1219	7078	-615.87	-18.62	-167.1
326	SLU 10	-780	-1250	7297	-640.51	-19.79	-175.99
326	SLU 11	-828	-1385	7990	-691.21	-20.72	-186.84
326	SLU 12	-818	-1332	7742	-675.55	-20.67	-184.52
326	SLU 13	-806	-1286	7520	-660.76	-20.54	-181.95
326	SLU 14	-855	-1421	8212	-711.46	-21.46	-192.8
326	SLU 15	-844	-1368	7964	-695.8	-21.41	-190.49
326	SLU 16	-850	-1409	8156	-707.12	-21.37	-191.77
326	SLU 17	-840	-1357	7907	-691.46	-21.32	-189.46
326	SLU 18	-840	-1397	8066	-699.01	-21.03	-189.43
326	SLU 19	-829	-1345	7818	-683.35	-20.98	-187.11
326	SLU 20	-866	-1433	8288	-719.26	-21.78	-195.39
326	SLU 21	-856	-1380	8040	-703.6	-21.73	-193.08
326	SLU 22	-793	-1341	7716	-665.55	-19.73	-179
326	SLU 23	-776	-1254	7302	-639.44	-19.65	-175.14
326	SLU 24	-824	-1388	7995	-690.14	-20.57	-186
326	SLU 25	-814	-1336	7747	-674.48	-20.52	-183.68
326	SLU 26	-802	-1290	7525	-659.69	-20.39	-181.11
326	SLU 27	-851	-1424	8218	-710.39	-21.32	-191.96
326	SLU 28	-840	-1372	7970	-694.73	-21.27	-189.65
326	SLU 29	-846	-1413	8161	-706.05	-21.22	-190.93
326	SLU 30	-836	-1360	7913	-690.39	-21.17	-188.62
326	SLU 31	-875	-1392	8132	-715.03	-22.34	-197.51
326	SLU 32	-924	-1526	8825	-765.73	-23.27	-208.36
326	SLU 33	-913	-1474	8576	-750.06	-23.22	-206.04
326	SLU 34	-902	-1428	8354	-735.28	-23.09	-203.47
326	SLU 35	-950	-1562	9047	-785.98	-24.02	-214.32
326	SLU 36	-940	-1510	8799	-770.31	-23.96	-212.01
326	SLU 37	-946	-1551	8990	-781.63	-23.92	-213.29
326	SLU 38	-935	-1499	8742	-765.97	-23.87	-210.98
326	SLU 39	-935	-1538	8901	-773.53	-23.59	-210.95
326	SLU 40	-925	-1486	8652	-757.86	-23.53	-208.63
326	SLU 41	-962	-1574	9123	-793.78	-24.33	-216.91
326	SLU 42	-951	-1522	8875	-778.11	-24.28	-214.6
326	SLU 43	-874	-1511	8659	-742.79	-21.46	-197.35
326	SLU 44	-857	-1424	8246	-716.69	-21.37	-193.49
326	SLU 45	-905	-1558	8939	-767.39	-22.3	-204.34
326	SLU 46	-895	-1506	8691	-751.72	-22.25	-202.03
326	SLU 47	-883	-1460	8469	-736.94	-22.12	-199.46
326	SLU 48	-931	-1594	9161	-787.64	-23.05	-210.31
326	SLU 49	-921	-1542	8913	-771.97	-22.99	-207.99
326	SLU 50	-927	-1583	9104	-783.29	-22.95	-209.28
326	SLU 51	-917	-1530	8856	-767.63	-22.9	-206.96



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
326	SLU 52	-956	-1562	9075	-792.27	-24.07	-215.85
326	SLU 53	-1004	-1696	9768	-842.97	-25	-226.71
326	SLU 54	-994	-1644	9520	-827.31	-24.95	-224.39
326	SLU 55	-983	-1598	9298	-812.52	-24.82	-221.82
326	SLU 56	-1031	-1732	9991	-863.22	-25.74	-232.67
326	SLU 57	-1021	-1680	9743	-847.56	-25.69	-230.35
326	SLU 58	-1026	-1721	9934	-858.88	-25.65	-231.64
326	SLU 59	-1016	-1668	9686	-843.22	-25.6	-229.33
326	SLU 60	-1016	-1708	9844	-850.77	-25.31	-229.3
326	SLU 61	-1006	-1656	9596	-835.11	-25.26	-226.98
326	SLU 62	-1043	-1744	10067	-871.02	-26.06	-235.26
326	SLU 63	-1032	-1692	9819	-855.36	-26.01	-232.94
326	SLU 64	-970	-1652	9494	-817.31	-24.01	-218.87
326	SLU 65	-952	-1565	9081	-791.2	-23.93	-215.01
326	SLU 66	-1001	-1700	9773	-841.9	-24.85	-225.86
326	SLU 67	-990	-1647	9525	-826.24	-24.8	-223.55
326	SLU 68	-979	-1601	9303	-811.45	-24.67	-220.98
326	SLU 69	-1027	-1735	9996	-862.15	-25.6	-231.83
326	SLU 70	-1017	-1683	9748	-846.49	-25.55	-229.51
326	SLU 71	-1023	-1724	9939	-857.81	-25.5	-230.8
326	SLU 72	-1012	-1672	9691	-842.15	-25.45	-228.48
326	SLU 73	-1052	-1703	9910	-866.79	-26.62	-237.37
326	SLU 74	-1100	-1838	10603	-917.49	-27.55	-248.23
326	SLU 75	-1090	-1785	10355	-901.82	-27.5	-245.91
326	SLU 76	-1078	-1739	10132	-887.04	-27.37	-243.34
326	SLU 77	-1127	-1874	10825	-937.74	-28.3	-254.19
326	SLU 78	-1116	-1821	10577	-922.08	-28.24	-251.87
326	SLU 79	-1122	-1862	10768	-933.4	-28.2	-253.16
326	SLU 80	-1112	-1810	10520	-917.73	-28.15	-250.85
326	SLU 81	-1112	-1850	10679	-925.29	-27.86	-250.82
326	SLU 82	-1101	-1797	10431	-909.62	-27.81	-248.5
326	SLU 83	-1138	-1886	10901	-945.54	-28.61	-256.78
326	SLU 84	-1128	-1833	10653	-929.88	-28.56	-254.46
326	SLE RA 1	-725	-1240	7120	-612.32	-17.91	-163.63
326	SLE RA 2	-713	-1182	6844	-594.92	-17.85	-161.06
326	SLE RA 3	-745	-1271	7306	-628.72	-18.47	-168.29
326	SLE RA 4	-739	-1236	7141	-618.28	-18.44	-166.75
326	SLE RA 5	-731	-1206	6992	-608.42	-18.35	-165.04
326	SLE RA 6	-763	-1295	7454	-642.22	-18.97	-172.27
326	SLE RA 7	-756	-1260	7289	-631.78	-18.93	-170.73
326	SLE RA 8	-760	-1288	7416	-639.32	-18.9	-171.59
326	SLE RA 9	-753	-1253	7251	-628.88	-18.87	-170.04
326	SLE RA 10	-780	-1274	7397	-645.31	-19.65	-175.97
326	SLE RA 11	-812	-1363	7859	-679.11	-20.27	-183.2
326	SLE RA 12	-805	-1329	7693	-668.67	-20.23	-181.66
326	SLE RA 13	-797	-1298	7545	-658.81	-20.15	-179.94
326	SLE RA 14	-830	-1387	8007	-692.61	-20.77	-187.18
326	SLE RA 15	-823	-1352	7842	-682.17	-20.73	-185.63
326	SLE RA 16	-827	-1380	7969	-689.71	-20.7	-186.49
326	SLE RA 17	-820	-1345	7804	-679.27	-20.67	-184.95
326	SLE RA 18	-820	-1372	7910	-684.31	-20.48	-184.93
326	SLE RA 19	-813	-1337	7744	-673.86	-20.44	-183.39
326	SLE RA 20	-837	-1395	8058	-697.81	-20.98	-188.91
326	SLE RA 21	-830	-1361	7892	-687.37	-20.94	-187.36
326	SLE FR 1	-725	-1240	7120	-612.32	-17.91	-163.63
326	SLE FR 2	-723	-1228	7065	-608.84	-17.9	-163.12
326	SLE FR 3	-732	-1250	7179	-617.72	-18.11	-165.22
326	SLE FR 4	-751	-1268	7302	-630.44	-18.67	-169.51
326	SLE FR 5	-760	-1289	7416	-639.32	-18.88	-171.61
326	SLE FR 6	-772	-1306	7515	-648.31	-19.19	-174.28
326	SLE QP 1	-725	-1240	7120	-612.32	-17.91	-163.63
326	SLE QP 2	-753	-1279	7357	-633.92	-18.68	-170.02
326	SLD 1	-293	-736	4144	-330.32	-3.48	-65.12
326	SLD 2	-293	-736	4144	-330.32	-3.48	-65.12
326	SLD 3	-408	-1028	5491	-431.24	-6.86	-92.08
326	SLD 4	-408	-1028	5491	-431.24	-6.86	-92.08
326	SLD 5	-440	-674	4349	-389.78	-8.98	-97.66
326	SLD 6	-440	-674	4349	-389.78	-8.98	-97.66
326	SLD 7	-825	-1647	8841	-726.17	-20.27	-187.53
326	SLD 8	-825	-1647	8841	-726.17	-20.27	-187.53
326	SLD 9	-681	-912	5872	-541.66	-17.09	-152.52
326	SLD 10	-681	-912	5872	-541.66	-17.09	-152.52
326	SLD 11	-1067	-1885	10365	-878.05	-28.38	-242.38
326	SLD 12	-1067	-1885	10365	-878.05	-28.38	-242.38
326	SLD 13	-1098	-1531	9222	-836.6	-30.5	-247.96
326	SLD 14	-1098	-1531	9222	-836.6	-30.5	-247.96
326	SLD 15	-1214	-1823	10570	-937.52	-33.88	-274.92
326	SLD 16	-1214	-1823	10570	-937.52	-33.88	-274.92
326	SLV 1	319	-10	-154	74.96	16.66	74.25
326	SLV 2	319	-10	-154	74.96	16.66	74.25
326	SLV 3	46	-691	3005	-162.26	8.64	10.95
326	SLV 4	46	-691	3005	-162.26	8.64	10.95
326	SLV 5	-18	135	313	-61.46	4.08	-0.74
326	SLV 6	-18	135	313	-61.46	4.08	-0.74
326	SLV 7	-927	-2137	10842	-852.21	-22.65	-211.73
326	SLV 8	-927	-2137	10842	-852.21	-22.65	-211.73
326	SLV 9	-580	-422	3872	-415.62	-14.71	-128.31
326	SLV 10	-580	-422	3872	-415.62	-14.71	-128.31
326	SLV 11	-1488	-2694	14400	-1206.38	-41.44	-339.3
326	SLV 12	-1488	-2694	14400	-1206.38	-41.44	-339.3



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
326	SLV 13	-1553	-1868	11708	-1105.57	-46	-351
326	SLV 14	-1553	-1868	11708	-1105.57	-46	-351
326	SLV 15	-1825	-2549	14867	-1342.8	-54.02	-414.29
326	SLV 16	-1825	-2549	14867	-1342.8	-54.02	-414.29
327	SLU 1	1	-1024	3145	66.05	0.21	0
327	SLU 2	1	-1021	3144	65.92	0.21	0
327	SLU 3	1	-1058	3232	68.23	0.22	0
327	SLU 4	1	-1056	3232	68.16	0.22	0
327	SLU 5	1	-1040	3196	67.21	0.22	0
327	SLU 6	1	-1078	3284	69.52	0.22	0
327	SLU 7	1	-1076	3283	69.45	0.22	0
327	SLU 8	1	-1064	3248	68.63	0.22	0
327	SLU 9	1	-1062	3248	68.55	0.22	0
327	SLU 10	1	-1170	3593	75.73	0.25	0
327	SLU 11	1	-1207	3681	78.04	0.26	0
327	SLU 12	1	-1205	3681	77.96	0.26	0
327	SLU 13	1	-1190	3645	77.02	0.26	0
327	SLU 14	1	-1227	3733	79.33	0.26	0
327	SLU 15	1	-1225	3732	79.25	0.26	0
327	SLU 16	1	-1213	3697	78.44	0.26	0
327	SLU 17	1	-1211	3697	78.36	0.26	0
327	SLU 18	1	-1237	3786	80.05	0.27	0
327	SLU 19	1	-1235	3786	79.98	0.27	0
327	SLU 20	1	-1257	3838	81.35	0.27	0
327	SLU 21	1	-1255	3838	81.27	0.27	0
327	SLU 22	1	-1170	3567	75.56	0.25	0
327	SLU 23	1	-1166	3567	75.43	0.25	0
327	SLU 24	1	-1203	3655	77.75	0.26	0
327	SLU 25	1	-1201	3654	77.67	0.26	0
327	SLU 26	1	-1186	3619	76.73	0.25	0
327	SLU 27	1	-1223	3706	79.04	0.26	0
327	SLU 28	1	-1221	3706	78.96	0.26	0
327	SLU 29	1	-1209	3671	78.14	0.26	0
327	SLU 30	1	-1207	3671	78.07	0.26	0
327	SLU 31	1	-1315	4016	85.24	0.29	0
327	SLU 32	1	-1353	4104	87.55	0.3	0
327	SLU 33	1	-1350	4103	87.48	0.3	0
327	SLU 34	1	-1335	4068	86.53	0.29	0
327	SLU 35	1	-1372	4155	88.84	0.3	0
327	SLU 36	1	-1370	4155	88.77	0.3	0
327	SLU 37	1	-1358	4120	87.95	0.3	0
327	SLU 38	1	-1356	4120	87.88	0.3	0
327	SLU 39	1	-1383	4209	89.57	0.3	0
327	SLU 40	1	-1380	4209	89.49	0.3	0
327	SLU 41	1	-1402	4261	90.86	0.31	0
327	SLU 42	1	-1400	4260	90.79	0.31	0
327	SLU 43	1	-1282	3943	82.6	0.26	0
327	SLU 44	1	-1278	3943	82.47	0.26	0
327	SLU 45	1	-1316	4030	84.78	0.27	0
327	SLU 46	1	-1313	4030	84.71	0.27	0
327	SLU 47	1	-1298	3994	83.76	0.27	0
327	SLU 48	1	-1335	4082	86.08	0.27	0
327	SLU 49	1	-1333	4082	86	0.27	0
327	SLU 50	1	-1321	4047	85.18	0.27	0
327	SLU 51	1	-1319	4046	85.11	0.27	0
327	SLU 52	1	-1427	4392	92.28	0.3	0
327	SLU 53	1	-1465	4479	94.59	0.31	0
327	SLU 54	1	-1462	4479	94.51	0.31	0
327	SLU 55	1	-1447	4444	93.57	0.31	0
327	SLU 56	1	-1484	4531	95.88	0.31	0
327	SLU 57	1	-1482	4531	95.81	0.31	0
327	SLU 58	1	-1470	4496	94.99	0.31	0
327	SLU 59	1	-1468	4496	94.91	0.31	0
327	SLU 60	1	-1495	4585	96.61	0.32	0
327	SLU 61	1	-1493	4584	96.53	0.32	0
327	SLU 62	1	-1515	4637	97.9	0.32	0
327	SLU 63	1	-1512	4636	97.82	0.32	0
327	SLU 64	1	-1427	4366	92.11	0.3	0
327	SLU 65	1	-1423	4365	91.99	0.3	0
327	SLU 66	1	-1461	4453	94.3	0.31	0
327	SLU 67	1	-1459	4453	94.22	0.31	0
327	SLU 68	1	-1443	4417	93.28	0.3	0
327	SLU 69	1	-1481	4505	95.59	0.31	0
327	SLU 70	1	-1478	4504	95.51	0.31	0
327	SLU 71	1	-1467	4469	94.7	0.31	0
327	SLU 72	1	-1464	4469	94.62	0.31	0
327	SLU 73	1	-1573	4814	101.79	0.34	0
327	SLU 74	1	-1610	4902	104.1	0.35	0
327	SLU 75	1	-1608	4902	104.03	0.35	0
327	SLU 76	1	-1592	4866	103.08	0.34	0
327	SLU 77	1	-1630	4954	105.4	0.35	0
327	SLU 78	1	-1628	4954	105.32	0.35	0
327	SLU 79	1	-1616	4919	104.5	0.35	0
327	SLU 80	1	-1614	4918	104.43	0.35	0
327	SLU 81	1	-1640	5007	106.12	0.36	0
327	SLU 82	1	-1638	5007	106.05	0.35	0
327	SLU 83	1	-1660	5059	107.41	0.36	0
327	SLU 84	1	-1658	5059	107.34	0.36	0
327	SLE RA 1	1	-1066	3266	68.76	0.22	0
327	SLE RA 2	1	-1063	3265	68.68	0.22	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
327	SLE RA 3	1	-1088	3324	70.22	0.23	0
327	SLE RA 4	1	-1087	3323	70.17	0.23	0
327	SLE RA 5	1	-1077	3300	69.54	0.22	0
327	SLE RA 6	1	-1102	3358	71.08	0.23	0
327	SLE RA 7	1	-1100	3358	71.03	0.23	0
327	SLE RA 8	1	-1092	3335	70.49	0.23	0
327	SLE RA 9	1	-1091	3334	70.44	0.23	0
327	SLE RA 10	1	-1163	3565	75.22	0.25	0
327	SLE RA 11	1	-1188	3623	76.76	0.25	0
327	SLE RA 12	1	-1186	3623	76.71	0.25	0
327	SLE RA 13	1	-1176	3599	76.08	0.25	0
327	SLE RA 14	1	-1201	3657	77.62	0.26	0
327	SLE RA 15	1	-1199	3657	77.57	0.26	0
327	SLE RA 16	1	-1192	3634	77.02	0.25	0
327	SLE RA 17	1	-1190	3634	76.97	0.25	0
327	SLE RA 18	1	-1208	3693	78.1	0.26	0
327	SLE RA 19	1	-1206	3693	78.05	0.26	0
327	SLE RA 20	1	-1221	3728	78.96	0.26	0
327	SLE RA 21	1	-1220	3727	78.91	0.26	0
327	SLE FR 1	1	-1066	3266	68.76	0.22	0
327	SLE FR 2	1	-1065	3265	68.75	0.22	0
327	SLE FR 3	1	-1071	3279	69.11	0.22	0
327	SLE FR 4	1	-1108	3394	71.55	0.23	0
327	SLE FR 5	1	-1114	3408	71.91	0.23	0
327	SLE FR 6	1	-1137	3479	73.43	0.24	0
327	SLE QP 1	1	-1066	3266	68.76	0.22	0
327	SLE QP 2	1	-1108	3394	71.57	0.23	0
327	SLD 1	3	-993	3354	65.52	0.78	0
327	SLD 2	3	-993	3354	65.52	0.78	0
327	SLD 3	2	-1465	3792	89.68	1.3	0
327	SLD 4	2	-1465	3792	89.68	1.3	0
327	SLD 5	3	-357	2718	33.11	-0.4	0
327	SLD 6	3	-357	2718	33.11	-0.4	0
327	SLD 7	-1	-1932	4177	113.65	1.34	0
327	SLD 8	-1	-1932	4177	113.65	1.34	0
327	SLD 9	2	-284	2610	29.49	-0.88	0
327	SLD 10	2	-284	2610	29.49	-0.88	0
327	SLD 11	-2	-1860	4070	110.02	0.86	0
327	SLD 12	-2	-1860	4070	110.02	0.86	0
327	SLD 13	-1	-752	2996	53.45	-0.83	0
327	SLD 14	-1	-752	2996	53.45	-0.83	0
327	SLD 15	-2	-1224	3434	77.61	-0.31	0
327	SLD 16	-2	-1224	3434	77.61	-0.31	0
327	SLV 1	6	-827	3289	56.88	1.49	0
327	SLV 2	6	-827	3289	56.88	1.49	0
327	SLV 3	4	-1963	4339	114.96	2.74	-0.01
327	SLV 4	4	-1963	4339	114.96	2.74	-0.01
327	SLV 5	7	699	1770	-20.93	-1.3	0
327	SLV 6	7	699	1770	-20.93	-1.3	0
327	SLV 7	-3	-3088	5270	172.67	2.89	-0.01
327	SLV 8	-3	-3088	5270	172.67	2.89	-0.01
327	SLV 9	4	871	1517	-29.54	-2.43	0
327	SLV 10	4	871	1517	-29.54	-2.43	0
327	SLV 11	-5	-2916	5018	164.06	1.76	-0.01
327	SLV 12	-5	-2916	5018	164.06	1.76	-0.01
327	SLV 13	-2	-254	2448	28.18	-2.28	0
327	SLV 14	-2	-254	2448	28.18	-2.28	0
327	SLV 15	-5	-1390	3498	86.25	-1.02	0
327	SLV 16	-5	-1390	3498	86.25	-1.02	0
328	SLU 1	0	-836	3281	42.73	-0.09	0
328	SLU 2	0	-833	3276	42.61	-0.09	0
328	SLU 3	0	-861	3368	44.03	-0.1	0
328	SLU 4	0	-860	3366	43.95	-0.1	0
328	SLU 5	0	-846	3325	43.29	-0.09	0
328	SLU 6	0	-874	3417	44.71	-0.1	0
328	SLU 7	0	-873	3415	44.64	-0.1	0
328	SLU 8	0	-862	3378	44.1	-0.09	0
328	SLU 9	0	-861	3376	44.02	-0.09	0
328	SLU 10	0	-955	3750	48.91	-0.12	0
328	SLU 11	0	-983	3842	50.33	-0.12	0
328	SLU 12	0	-981	3839	50.25	-0.12	0
328	SLU 13	0	-968	3799	49.59	-0.12	0
328	SLU 14	0	-996	3891	51.01	-0.12	0
328	SLU 15	0	-994	3888	50.93	-0.12	0
328	SLU 16	0	-984	3852	50.4	-0.12	0
328	SLU 17	0	-982	3849	50.32	-0.12	0
328	SLU 18	0	-1010	3957	51.73	-0.13	0
328	SLU 19	0	-1008	3955	51.65	-0.13	0
328	SLU 20	0	-1023	4006	52.41	-0.13	0
328	SLU 21	0	-1021	4004	52.34	-0.13	0
328	SLU 22	0	-954	3725	48.83	-0.11	0
328	SLU 23	0	-951	3721	48.7	-0.11	0
328	SLU 24	0	-980	3813	50.12	-0.12	0
328	SLU 25	0	-978	3811	50.04	-0.12	0
328	SLU 26	0	-965	3770	49.38	-0.11	0
328	SLU 27	0	-993	3862	50.8	-0.12	0
328	SLU 28	0	-991	3859	50.73	-0.12	0
328	SLU 29	0	-981	3823	50.19	-0.11	0
328	SLU 30	0	-979	3820	50.11	-0.11	0
328	SLU 31	-1	-1073	4195	55	-0.14	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
328	SLU 32	-1	-1101	4287	56.42	-0.14	0
328	SLU 33	-1	-1100	4284	56.34	-0.14	0
328	SLU 34	-1	-1086	4244	55.68	-0.14	0
328	SLU 35	-1	-1114	4335	57.1	-0.14	0
328	SLU 36	-1	-1113	4333	57.02	-0.14	0
328	SLU 37	-1	-1102	4297	56.49	-0.14	0
328	SLU 38	-1	-1100	4294	56.41	-0.14	0
328	SLU 39	-1	-1128	4402	57.82	-0.15	0
328	SLU 40	-1	-1126	4399	57.75	-0.15	0
328	SLU 41	-1	-1141	4451	58.5	-0.15	0
328	SLU 42	-1	-1140	4448	58.43	-0.15	0
328	SLU 43	0	-1047	4112	53.47	-0.12	0
328	SLU 44	0	-1044	4108	53.34	-0.12	0
328	SLU 45	0	-1072	4200	54.76	-0.12	0
328	SLU 46	0	-1070	4198	54.69	-0.12	0
328	SLU 47	0	-1057	4157	54.02	-0.12	0
328	SLU 48	0	-1085	4249	55.44	-0.12	0
328	SLU 49	0	-1083	4247	55.37	-0.12	0
328	SLU 50	0	-1073	4210	54.83	-0.12	0
328	SLU 51	0	-1071	4208	54.76	-0.12	0
328	SLU 52	-1	-1165	4582	59.64	-0.14	0
328	SLU 53	-1	-1193	4674	61.06	-0.14	0
328	SLU 54	-1	-1192	4671	60.98	-0.14	0
328	SLU 55	-1	-1178	4631	60.32	-0.14	0
328	SLU 56	-1	-1206	4723	61.74	-0.14	0
328	SLU 57	-1	-1205	4720	61.67	-0.14	0
328	SLU 58	-1	-1194	4684	61.13	-0.14	0
328	SLU 59	-1	-1193	4681	61.05	-0.14	0
328	SLU 60	-1	-1220	4789	62.46	-0.15	0
328	SLU 61	-1	-1219	4786	62.39	-0.15	0
328	SLU 62	-1	-1233	4838	63.14	-0.15	0
328	SLU 63	-1	-1232	4835	63.07	-0.15	0
328	SLU 64	-1	-1165	4557	59.56	-0.14	0
328	SLU 65	-1	-1162	4553	59.43	-0.14	0
328	SLU 66	-1	-1190	4645	60.85	-0.14	0
328	SLU 67	-1	-1188	4642	60.78	-0.14	0
328	SLU 68	-1	-1175	4602	60.11	-0.13	0
328	SLU 69	-1	-1203	4694	61.53	-0.14	0
328	SLU 70	-1	-1201	4691	61.46	-0.14	0
328	SLU 71	-1	-1191	4655	60.92	-0.14	0
328	SLU 72	-1	-1189	4652	60.85	-0.14	0
328	SLU 73	-1	-1283	5026	65.73	-0.16	0
328	SLU 74	-1	-1312	5118	67.15	-0.16	0
328	SLU 75	-1	-1310	5116	67.07	-0.16	0
328	SLU 76	-1	-1297	5075	66.41	-0.16	0
328	SLU 77	-1	-1325	5167	67.83	-0.16	0
328	SLU 78	-1	-1323	5165	67.76	-0.16	0
328	SLU 79	-1	-1313	5128	67.22	-0.16	0
328	SLU 80	-1	-1311	5126	67.14	-0.16	0
328	SLU 81	-1	-1339	5233	68.55	-0.17	0
328	SLU 82	-1	-1337	5231	68.48	-0.17	0
328	SLU 83	-1	-1352	5282	69.24	-0.17	0
328	SLU 84	-1	-1350	5280	69.16	-0.17	0
328	SLE RA 1	0	-870	3408	44.47	-0.1	0
328	SLE RA 2	0	-868	3405	44.39	-0.1	0
328	SLE RA 3	0	-887	3466	45.34	-0.1	0
328	SLE RA 4	0	-886	3465	45.29	-0.1	0
328	SLE RA 5	0	-877	3437	44.85	-0.1	0
328	SLE RA 6	0	-895	3499	45.79	-0.1	0
328	SLE RA 7	0	-894	3497	45.74	-0.1	0
328	SLE RA 8	0	-887	3473	45.38	-0.1	0
328	SLE RA 9	0	-886	3471	45.33	-0.1	0
328	SLE RA 10	0	-949	3721	48.59	-0.12	0
328	SLE RA 11	0	-968	3782	49.54	-0.12	0
328	SLE RA 12	0	-967	3780	49.49	-0.12	0
328	SLE RA 13	0	-958	3753	49.04	-0.11	0
328	SLE RA 14	0	-977	3814	49.99	-0.12	0
328	SLE RA 15	0	-975	3813	49.94	-0.12	0
328	SLE RA 16	0	-969	3789	49.58	-0.12	0
328	SLE RA 17	0	-967	3787	49.53	-0.12	0
328	SLE RA 18	0	-986	3859	50.47	-0.12	0
328	SLE RA 19	0	-985	3857	50.42	-0.12	0
328	SLE RA 20	0	-995	3891	50.93	-0.12	0
328	SLE RA 21	0	-993	3890	50.88	-0.12	0
328	SLE FR 1	0	-870	3408	44.47	-0.1	0
328	SLE FR 2	0	-870	3407	44.46	-0.1	0
328	SLE FR 3	0	-873	3421	44.66	-0.1	0
328	SLE FR 4	0	-904	3542	46.26	-0.11	0
328	SLE FR 5	0	-908	3556	46.46	-0.11	0
328	SLE FR 6	0	-928	3633	47.47	-0.11	0
328	SLE QP 1	0	-870	3408	44.47	-0.1	0
328	SLE QP 2	0	-905	3543	46.27	-0.11	0
328	SLD 1	1	-532	3117	29.06	0.91	0
328	SLD 2	1	-532	3117	29.06	0.91	0
328	SLD 3	2	-960	3526	48.87	0.44	0
328	SLD 4	2	-960	3526	48.87	0.44	0
328	SLD 5	-1	-145	2795	11.05	0.92	0
328	SLD 6	-1	-145	2795	11.05	0.92	0
328	SLD 7	2	-1569	4158	77.11	-0.66	0
328	SLD 8	2	-1569	4158	77.11	-0.66	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
328	SLD 9	-3	-240	2928	15.44	0.45	0
328	SLD 10	-3	-240	2928	15.44	0.45	0
328	SLD 11	1	-1665	4291	81.49	-1.13	0
328	SLD 12	1	-1665	4291	81.49	-1.13	0
328	SLD 13	-3	-850	3560	43.67	-0.65	0
328	SLD 14	-3	-850	3560	43.67	-0.65	0
328	SLD 15	-2	-1277	3969	63.49	-1.13	0
328	SLD 16	-2	-1277	3969	63.49	-1.13	0
328	SLV 1	3	-21	2534	5.4	2.29	-0.01
328	SLV 2	3	-21	2534	5.4	2.29	-0.01
328	SLV 3	6	-1036	3509	52.51	1.14	0
328	SLV 4	6	-1036	3509	52.51	1.14	0
328	SLV 5	-3	901	1760	-37.44	2.36	-0.01
328	SLV 6	-3	901	1760	-37.44	2.36	-0.01
328	SLV 7	5	-2484	5013	119.6	-1.47	0.01
328	SLV 8	5	-2484	5013	119.6	-1.47	0.01
328	SLV 9	-6	675	2073	-27.05	1.26	0
328	SLV 10	-6	675	2073	-27.05	1.26	0
328	SLV 11	2	-2710	5326	129.99	-2.57	0.01
328	SLV 12	2	-2710	5326	129.99	-2.57	0.01
328	SLV 13	-6	-773	3577	40.04	-1.36	0
328	SLV 14	-6	-773	3577	40.04	-1.36	0
328	SLV 15	-4	-1789	4552	87.15	-2.51	0.01
328	SLV 16	-4	-1789	4552	87.15	-2.51	0.01
329	SLU 1	0	-593	6898	25.87	-0.19	0
329	SLU 2	0	-593	6881	25.94	-0.21	0
329	SLU 3	0	-615	7128	26.83	-0.19	0
329	SLU 4	0	-614	7118	26.87	-0.21	0
329	SLU 5	0	-608	7036	26.66	-0.21	0
329	SLU 6	0	-630	7282	27.55	-0.19	0
329	SLU 7	0	-629	7272	27.59	-0.2	0
329	SLU 8	0	-624	7206	27.31	-0.18	0
329	SLU 9	0	-623	7197	27.35	-0.19	0
329	SLU 10	0	-666	7768	28.79	-0.26	-0.01
329	SLU 11	0	-688	8015	29.68	-0.24	-0.01
329	SLU 12	0	-687	8005	29.72	-0.25	-0.01
329	SLU 13	0	-681	7923	29.51	-0.25	-0.01
329	SLU 14	0	-703	8169	30.4	-0.23	-0.01
329	SLU 15	0	-702	8159	30.44	-0.25	-0.01
329	SLU 16	0	-697	8094	30.17	-0.23	-0.01
329	SLU 17	0	-696	8084	30.21	-0.24	-0.01
329	SLU 18	0	-698	8165	29.94	-0.26	-0.01
329	SLU 19	0	-697	8155	29.98	-0.27	-0.01
329	SLU 20	0	-713	8319	30.67	-0.25	-0.01
329	SLU 21	0	-712	8310	30.71	-0.27	-0.01
329	SLU 22	0	-669	7788	28.93	-0.23	-0.01
329	SLU 23	0	-668	7771	29	-0.25	-0.01
329	SLU 24	0	-690	8018	29.89	-0.23	-0.01
329	SLU 25	0	-689	8008	29.93	-0.24	-0.01
329	SLU 26	0	-683	7926	29.72	-0.25	-0.01
329	SLU 27	0	-705	8172	30.62	-0.23	-0.01
329	SLU 28	0	-704	8162	30.66	-0.24	-0.01
329	SLU 29	0	-699	8097	30.38	-0.22	0
329	SLU 30	0	-698	8087	30.42	-0.23	-0.01
329	SLU 31	0	-741	8658	31.85	-0.3	-0.01
329	SLU 32	0	-763	8905	32.75	-0.28	-0.01
329	SLU 33	0	-762	8895	32.79	-0.29	-0.01
329	SLU 34	0	-756	8813	32.58	-0.29	-0.01
329	SLU 35	0	-778	9059	33.47	-0.27	-0.01
329	SLU 36	0	-777	9049	33.51	-0.28	-0.01
329	SLU 37	0	-772	8984	33.23	-0.27	-0.01
329	SLU 38	0	-771	8974	33.27	-0.28	-0.01
329	SLU 39	0	-773	9055	33.01	-0.3	-0.01
329	SLU 40	0	-773	9045	33.05	-0.31	-0.01
329	SLU 41	0	-788	9209	33.73	-0.29	-0.01
329	SLU 42	0	-788	9200	33.77	-0.3	-0.01
329	SLU 43	0	-746	8662	32.58	-0.24	-0.01
329	SLU 44	0	-745	8645	32.64	-0.26	-0.01
329	SLU 45	0	-767	8892	33.54	-0.24	-0.01
329	SLU 46	0	-766	8882	33.58	-0.25	-0.01
329	SLU 47	0	-760	8800	33.37	-0.25	-0.01
329	SLU 48	0	-782	9046	34.26	-0.23	-0.01
329	SLU 49	0	-781	9036	34.3	-0.25	-0.01
329	SLU 50	0	-776	8971	34.02	-0.23	-0.01
329	SLU 51	0	-775	8961	34.06	-0.24	-0.01
329	SLU 52	0	-818	9532	35.5	-0.3	-0.01
329	SLU 53	0	-840	9779	36.39	-0.28	-0.01
329	SLU 54	0	-839	9769	36.43	-0.3	-0.01
329	SLU 55	0	-833	9687	36.22	-0.3	-0.01
329	SLU 56	0	-855	9933	37.11	-0.28	-0.01
329	SLU 57	0	-854	9923	37.15	-0.29	-0.01
329	SLU 58	0	-849	9858	36.88	-0.27	-0.01
329	SLU 59	0	-848	9848	36.92	-0.29	-0.01
329	SLU 60	0	-850	9929	36.65	-0.3	-0.01
329	SLU 61	0	-850	9919	36.69	-0.32	-0.01
329	SLU 62	0	-865	10083	37.38	-0.3	-0.01
329	SLU 63	0	-865	10074	37.42	-0.31	-0.01
329	SLU 64	0	-821	9552	35.64	-0.28	-0.01
329	SLU 65	0	-820	9535	35.71	-0.3	-0.01
329	SLU 66	0	-842	9782	36.6	-0.28	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
329	SLU 67	0	-842	9772	36.64	-0.29	-0.01
329	SLU 68	0	-835	9690	36.43	-0.29	-0.01
329	SLU 69	0	-857	9936	37.32	-0.27	-0.01
329	SLU 70	0	-857	9926	37.37	-0.28	-0.01
329	SLU 71	0	-851	9861	37.09	-0.27	-0.01
329	SLU 72	0	-850	9851	37.13	-0.28	-0.01
329	SLU 73	0	-893	10423	38.56	-0.34	-0.01
329	SLU 74	0	-915	10669	39.45	-0.32	-0.01
329	SLU 75	0	-915	10659	39.5	-0.33	-0.01
329	SLU 76	0	-908	10577	39.29	-0.34	-0.01
329	SLU 77	0	-930	10823	40.18	-0.32	-0.01
329	SLU 78	0	-930	10814	40.22	-0.33	-0.01
329	SLU 79	0	-924	10748	39.94	-0.31	-0.01
329	SLU 80	0	-924	10738	39.98	-0.32	-0.01
329	SLU 81	0	-925	10819	39.72	-0.34	-0.01
329	SLU 82	0	-925	10809	39.76	-0.35	-0.01
329	SLU 83	0	-940	10973	40.44	-0.34	-0.01
329	SLU 84	0	-940	10964	40.48	-0.35	-0.01
329	SLE RA 1	0	-615	7152	26.74	-0.2	0
329	SLE RA 2	0	-614	7141	26.79	-0.22	0
329	SLE RA 3	0	-629	7305	27.38	-0.2	0
329	SLE RA 4	0	-629	7299	27.41	-0.21	0
329	SLE RA 5	0	-624	7244	27.27	-0.21	0
329	SLE RA 6	0	-639	7408	27.87	-0.2	0
329	SLE RA 7	0	-639	7402	27.89	-0.21	0
329	SLE RA 8	0	-635	7358	27.71	-0.2	0
329	SLE RA 9	0	-635	7351	27.73	-0.2	0
329	SLE RA 10	0	-663	7732	28.69	-0.25	-0.01
329	SLE RA 11	0	-678	7897	29.28	-0.23	-0.01
329	SLE RA 12	0	-677	7890	29.31	-0.24	-0.01
329	SLE RA 13	0	-673	7835	29.17	-0.24	-0.01
329	SLE RA 14	0	-688	8000	29.77	-0.23	-0.01
329	SLE RA 15	0	-687	7993	29.79	-0.24	-0.01
329	SLE RA 16	0	-684	7949	29.61	-0.23	-0.01
329	SLE RA 17	0	-683	7943	29.64	-0.24	-0.01
329	SLE RA 18	0	-685	7997	29.46	-0.25	-0.01
329	SLE RA 19	0	-684	7990	29.49	-0.26	-0.01
329	SLE RA 20	0	-695	8100	29.94	-0.24	-0.01
329	SLE RA 21	0	-694	8093	29.97	-0.25	-0.01
329	SLE FR 1	0	-615	7152	26.74	-0.2	0
329	SLE FR 2	0	-615	7150	26.75	-0.21	0
329	SLE FR 3	0	-619	7193	26.94	-0.2	0
329	SLE FR 4	0	-636	7403	27.57	-0.22	0
329	SLE FR 5	0	-640	7446	27.75	-0.22	0
329	SLE FR 6	0	-650	7574	28.1	-0.23	0
329	SLE QP 1	0	-615	7152	26.74	-0.2	0
329	SLE QP 2	0	-636	7405	27.56	-0.22	0
329	SLD 1	-14	-586	6181	23.98	-8.69	-0.09
329	SLD 2	-14	-586	6181	23.98	-8.69	-0.09
329	SLD 3	-12	-865	7600	41.27	-8.04	-0.08
329	SLD 4	-12	-865	7600	41.27	-8.04	-0.08
329	SLD 5	-6	-197	4886	0.25	-3.75	-0.05
329	SLD 6	-6	-197	4886	0.25	-3.75	-0.05
329	SLD 7	-2	-1128	9616	57.9	-1.57	-0.01
329	SLD 8	-2	-1128	9616	57.9	-1.57	-0.01
329	SLD 9	2	-144	5195	-2.79	1.13	0
329	SLD 10	2	-144	5195	-2.79	1.13	0
329	SLD 11	6	-1074	9924	54.86	3.32	0.04
329	SLD 12	6	-1074	9924	54.86	3.32	0.04
329	SLD 13	12	-407	7210	13.84	7.6	0.07
329	SLD 14	12	-407	7210	13.84	7.6	0.07
329	SLD 15	14	-686	8629	31.14	8.26	0.08
329	SLD 16	14	-686	8629	31.14	8.26	0.08
329	SLV 1	-33	-515	4514	18.98	-20.17	-0.22
329	SLV 2	-33	-515	4514	18.98	-20.17	-0.22
329	SLV 3	-29	-1173	7875	59.73	-18.53	-0.18
329	SLV 4	-29	-1173	7875	59.73	-18.53	-0.18
329	SLV 5	-15	399	1440	-36.82	-8.69	-0.12
329	SLV 6	-15	399	1440	-36.82	-8.69	-0.12
329	SLV 7	-3	-1796	12644	99.02	-3.22	-0.01
329	SLV 8	-3	-1796	12644	99.02	-3.22	-0.01
329	SLV 9	3	524	2166	-43.9	2.79	0
329	SLV 10	3	524	2166	-43.9	2.79	0
329	SLV 11	15	-1671	13370	91.94	8.26	0.11
329	SLV 12	15	-1671	13370	91.94	8.26	0.11
329	SLV 13	29	-98	6935	-4.62	18.1	0.17
329	SLV 14	29	-98	6935	-4.62	18.1	0.17
329	SLV 15	33	-757	10296	36.13	19.74	0.21
329	SLV 16	33	-757	10296	36.13	19.74	0.21
330	SLU 1	6	-215	4721	11.01	0.51	-0.01
330	SLU 2	6	-218	4741	11.31	0.51	-0.01
330	SLU 3	6	-214	4828	11.05	0.53	-0.01
330	SLU 4	6	-217	4840	11.23	0.53	-0.01
330	SLU 5	6	-215	4792	11.18	0.53	-0.01
330	SLU 6	6	-211	4879	10.91	0.54	-0.01
330	SLU 7	6	-213	4891	11.09	0.55	-0.01
330	SLU 8	6	-208	4823	10.74	0.54	-0.01
330	SLU 9	6	-210	4835	10.92	0.54	-0.01
330	SLU 10	7	-237	5397	12.2	0.6	-0.01
330	SLU 11	7	-234	5485	11.94	0.62	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
330	SLU 12	7	-236	5497	12.12	0.62	-0.01
330	SLU 13	7	-234	5448	12.06	0.61	-0.01
330	SLU 14	7	-230	5536	11.8	0.63	-0.01
330	SLU 15	7	-232	5548	11.98	0.63	-0.01
330	SLU 16	7	-227	5480	11.62	0.63	-0.01
330	SLU 17	7	-229	5492	11.8	0.63	-0.01
330	SLU 18	7	-242	5659	12.28	0.64	-0.01
330	SLU 19	7	-244	5671	12.46	0.64	-0.01
330	SLU 20	7	-239	5710	12.14	0.65	-0.01
330	SLU 21	7	-241	5722	12.32	0.65	-0.01
330	SLU 22	7	-235	5342	12.02	0.59	-0.01
330	SLU 23	7	-239	5361	12.32	0.59	-0.01
330	SLU 24	7	-235	5449	12.06	0.61	-0.01
330	SLU 25	7	-237	5461	12.24	0.61	-0.01
330	SLU 26	7	-235	5412	12.18	0.61	-0.01
330	SLU 27	7	-232	5500	11.92	0.62	-0.01
330	SLU 28	7	-234	5512	12.1	0.63	-0.01
330	SLU 29	7	-228	5444	11.74	0.62	-0.01
330	SLU 30	7	-231	5456	11.92	0.62	-0.01
330	SLU 31	8	-258	6018	13.2	0.68	-0.01
330	SLU 32	8	-254	6106	12.94	0.7	-0.01
330	SLU 33	8	-256	6118	13.12	0.7	-0.01
330	SLU 34	8	-254	6069	13.06	0.69	-0.01
330	SLU 35	8	-251	6157	12.8	0.71	-0.01
330	SLU 36	8	-253	6169	12.98	0.71	-0.01
330	SLU 37	8	-248	6100	12.63	0.7	-0.01
330	SLU 38	8	-250	6112	12.81	0.71	-0.01
330	SLU 39	8	-263	6280	13.28	0.72	-0.01
330	SLU 40	8	-265	6292	13.46	0.72	-0.01
330	SLU 41	8	-259	6331	13.14	0.73	-0.01
330	SLU 42	8	-261	6343	13.32	0.73	-0.01
330	SLU 43	7	-272	5924	13.97	0.64	-0.01
330	SLU 44	8	-275	5944	14.27	0.64	-0.01
330	SLU 45	8	-272	6032	14.01	0.66	-0.01
330	SLU 46	8	-274	6044	14.19	0.66	-0.01
330	SLU 47	8	-272	5995	14.14	0.65	-0.01
330	SLU 48	8	-268	6083	13.87	0.67	-0.01
330	SLU 49	8	-271	6095	14.05	0.67	-0.01
330	SLU 50	8	-265	6026	13.7	0.67	-0.01
330	SLU 51	8	-267	6038	13.88	0.67	-0.01
330	SLU 52	8	-295	6601	15.16	0.73	-0.01
330	SLU 53	9	-291	6688	14.9	0.74	-0.01
330	SLU 54	9	-293	6700	15.08	0.75	-0.01
330	SLU 55	8	-291	6652	15.02	0.74	-0.01
330	SLU 56	9	-288	6739	14.76	0.76	-0.01
330	SLU 57	9	-290	6751	14.94	0.76	-0.01
330	SLU 58	9	-284	6683	14.58	0.75	-0.01
330	SLU 59	9	-287	6695	14.76	0.75	-0.01
330	SLU 60	9	-299	6863	15.24	0.76	-0.02
330	SLU 61	9	-301	6875	15.42	0.76	-0.02
330	SLU 62	9	-296	6914	15.1	0.78	-0.02
330	SLU 63	9	-298	6926	15.28	0.78	-0.02
330	SLU 64	8	-292	6545	14.98	0.72	-0.01
330	SLU 65	8	-296	6565	15.28	0.72	-0.01
330	SLU 66	8	-292	6652	15.02	0.74	-0.01
330	SLU 67	8	-294	6664	15.2	0.74	-0.01
330	SLU 68	8	-293	6616	15.14	0.73	-0.01
330	SLU 69	9	-289	6703	14.88	0.75	-0.01
330	SLU 70	9	-291	6715	15.06	0.75	-0.01
330	SLU 71	8	-286	6647	14.7	0.74	-0.01
330	SLU 72	9	-288	6659	14.88	0.75	-0.01
330	SLU 73	9	-315	7222	16.16	0.81	-0.02
330	SLU 74	9	-312	7309	15.9	0.82	-0.02
330	SLU 75	9	-314	7321	16.08	0.83	-0.02
330	SLU 76	9	-312	7273	16.02	0.82	-0.02
330	SLU 77	9	-308	7360	15.76	0.84	-0.02
330	SLU 78	9	-310	7372	15.94	0.84	-0.02
330	SLU 79	9	-305	7304	15.59	0.83	-0.02
330	SLU 80	9	-307	7316	15.77	0.83	-0.02
330	SLU 81	10	-320	7483	16.24	0.84	-0.02
330	SLU 82	10	-322	7495	16.42	0.84	-0.02
330	SLU 83	10	-317	7534	16.1	0.86	-0.02
330	SLU 84	10	-319	7546	16.28	0.86	-0.02
330	SLE RA 1	6	-220	4898	11.3	0.54	-0.01
330	SLE RA 2	6	-223	4911	11.5	0.54	-0.01
330	SLE RA 3	6	-220	4970	11.33	0.55	-0.01
330	SLE RA 4	6	-222	4978	11.45	0.55	-0.01
330	SLE RA 5	6	-221	4945	11.41	0.55	-0.01
330	SLE RA 6	6	-218	5004	11.23	0.56	-0.01
330	SLE RA 7	6	-220	5012	11.35	0.56	-0.01
330	SLE RA 8	6	-216	4966	11.12	0.55	-0.01
330	SLE RA 9	6	-217	4974	11.24	0.55	-0.01
330	SLE RA 10	7	-236	5349	12.09	0.59	-0.01
330	SLE RA 11	7	-233	5408	11.92	0.61	-0.01
330	SLE RA 12	7	-235	5416	12.04	0.61	-0.01
330	SLE RA 13	7	-233	5383	12	0.6	-0.01
330	SLE RA 14	7	-231	5442	11.82	0.61	-0.01
330	SLE RA 15	7	-232	5450	11.94	0.62	-0.01
330	SLE RA 16	7	-229	5404	11.71	0.61	-0.01
330	SLE RA 17	7	-230	5412	11.83	0.61	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
330	SLE RA 18	7	-239	5524	12.14	0.62	-0.01
330	SLE RA 19	7	-240	5532	12.26	0.62	-0.01
330	SLE RA 20	7	-237	5558	12.05	0.63	-0.01
330	SLE RA 21	7	-238	5566	12.17	0.63	-0.01
330	SLE FR 1	6	-220	4898	11.3	0.54	-0.01
330	SLE FR 2	6	-221	4901	11.34	0.54	-0.01
330	SLE FR 3	6	-220	4912	11.26	0.54	-0.01
330	SLE FR 4	6	-226	5089	11.59	0.56	-0.01
330	SLE FR 5	6	-225	5100	11.52	0.56	-0.01
330	SLE FR 6	7	-230	5211	11.72	0.58	-0.01
330	SLE QP 1	6	-220	4898	11.3	0.54	-0.01
330	SLE QP 2	6	-226	5086	11.55	0.56	-0.01
330	SLD 1	6	96	5038	-5.98	0.8	-0.01
330	SLD 2	6	96	5038	-5.98	0.8	-0.01
330	SLD 3	10	-135	5876	9.08	1.06	-0.02
330	SLD 4	10	-135	5876	9.08	1.06	-0.02
330	SLD 5	0	222	3802	-16.55	0.24	0
330	SLD 6	0	222	3802	-16.55	0.24	0
330	SLD 7	14	-550	6593	33.65	1.1	-0.03
330	SLD 8	14	-550	6593	33.65	1.1	-0.03
330	SLD 9	-1	98	3579	-10.55	0.02	0
330	SLD 10	-1	98	3579	-10.55	0.02	0
330	SLD 11	13	-674	6370	39.66	0.88	-0.02
330	SLD 12	13	-674	6370	39.66	0.88	-0.02
330	SLD 13	3	-317	4296	14.03	0.06	0
330	SLD 14	3	-317	4296	14.03	0.06	0
330	SLD 15	7	-548	5133	29.09	0.32	-0.01
330	SLD 16	7	-548	5133	29.09	0.32	-0.01
330	SLV 1	5	524	4971	-29.39	1.12	-0.02
330	SLV 2	5	524	4971	-29.39	1.12	-0.02
330	SLV 3	15	-20	6944	6.08	1.73	-0.03
330	SLV 4	15	-20	6944	6.08	1.73	-0.03
330	SLV 5	-9	825	2060	-54.51	-0.21	0.02
330	SLV 6	-9	825	2060	-54.51	-0.21	0.02
330	SLV 7	24	-990	8635	63.69	1.85	-0.05
330	SLV 8	24	-990	8635	63.69	1.85	-0.05
330	SLV 9	-11	538	1537	-40.59	-0.73	0.03
330	SLV 10	-11	538	1537	-40.59	-0.73	0.03
330	SLV 11	22	-1277	8112	77.62	1.33	-0.04
330	SLV 12	22	-1277	8112	77.62	1.33	-0.04
330	SLV 13	-2	-431	3228	17.03	-0.61	0.01
330	SLV 14	-2	-431	3228	17.03	-0.61	0.01
330	SLV 15	8	-976	5201	52.49	0	-0.01
330	SLV 16	8	-976	5201	52.49	0	-0.01
331	SLU 1	836	-693	6348	652.59	18.82	0.91
331	SLU 2	839	-699	6384	657.67	18.88	0.91
331	SLU 3	857	-707	6495	666.93	19.28	0.94
331	SLU 4	858	-710	6517	669.98	19.31	0.95
331	SLU 5	851	-704	6458	664.04	19.15	0.93
331	SLU 6	868	-712	6569	673.3	19.56	0.96
331	SLU 7	870	-716	6591	676.35	19.59	0.97
331	SLU 8	860	-703	6496	665.33	19.38	0.95
331	SLU 9	862	-707	6517	668.38	19.41	0.95
331	SLU 10	977	-791	7303	746.6	22.22	1.01
331	SLU 11	994	-799	7414	755.86	22.62	1.04
331	SLU 12	996	-803	7436	758.91	22.66	1.04
331	SLU 13	989	-797	7377	752.97	22.5	1.03
331	SLU 14	1006	-805	7488	762.23	22.9	1.06
331	SLU 15	1008	-808	7510	765.28	22.93	1.06
331	SLU 16	998	-796	7415	754.26	22.72	1.05
331	SLU 17	999	-799	7437	757.31	22.75	1.05
331	SLU 18	1033	-825	7661	779.63	23.6	1.05
331	SLU 19	1035	-829	7683	782.68	23.63	1.05
331	SLU 20	1045	-830	7735	786	23.88	1.07
331	SLU 21	1046	-834	7757	789.05	23.91	1.07
331	SLU 22	959	-781	7204	737.18	21.74	1.02
331	SLU 23	962	-787	7240	742.26	21.79	1.02
331	SLU 24	980	-795	7352	751.52	22.2	1.05
331	SLU 25	981	-799	7373	754.57	22.23	1.06
331	SLU 26	974	-793	7314	748.63	22.07	1.04
331	SLU 27	992	-801	7426	757.89	22.47	1.07
331	SLU 28	993	-804	7447	760.94	22.51	1.08
331	SLU 29	983	-792	7352	749.92	22.29	1.06
331	SLU 30	985	-795	7374	752.97	22.33	1.06
331	SLU 31	1100	-880	8160	831.19	25.14	1.12
331	SLU 32	1117	-888	8271	840.45	25.54	1.15
331	SLU 33	1119	-891	8293	843.5	25.57	1.15
331	SLU 34	1112	-885	8234	837.56	25.42	1.14
331	SLU 35	1129	-893	8345	846.82	25.82	1.17
331	SLU 36	1131	-897	8367	849.87	25.85	1.17
331	SLU 37	1121	-884	8271	838.85	25.64	1.16
331	SLU 38	1122	-888	8293	841.9	25.67	1.16
331	SLU 39	1156	-914	8518	864.22	26.52	1.16
331	SLU 40	1158	-917	8539	867.27	26.55	1.16
331	SLU 41	1168	-919	8591	870.59	26.79	1.18
331	SLU 42	1170	-922	8613	873.64	26.83	1.18
331	SLU 43	1045	-870	7958	819.36	23.47	1.15
331	SLU 44	1047	-876	7995	824.45	23.52	1.15
331	SLU 45	1065	-884	8106	833.71	23.92	1.18
331	SLU 46	1067	-888	8127	836.76	23.96	1.18



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
331	SLU 47	1059	-881	8068	830.82	23.8	1.17
331	SLU 48	1077	-889	8180	840.08	24.2	1.2
331	SLU 49	1079	-893	8201	843.13	24.24	1.2
331	SLU 50	1068	-881	8106	832.1	24.02	1.18
331	SLU 51	1070	-884	8128	835.16	24.05	1.19
331	SLU 52	1185	-969	8914	913.38	26.87	1.25
331	SLU 53	1203	-977	9025	922.64	27.27	1.28
331	SLU 54	1205	-980	9047	925.69	27.3	1.28
331	SLU 55	1197	-974	8988	919.75	27.14	1.27
331	SLU 56	1215	-982	9099	929.01	27.55	1.3
331	SLU 57	1217	-986	9121	932.06	27.58	1.3
331	SLU 58	1206	-973	9026	921.03	27.37	1.28
331	SLU 59	1208	-977	9047	924.08	27.4	1.28
331	SLU 60	1241	-1002	9272	946.4	28.24	1.29
331	SLU 61	1243	-1006	9293	949.46	28.28	1.29
331	SLU 62	1253	-1008	9346	952.78	28.52	1.3
331	SLU 63	1255	-1011	9367	955.83	28.56	1.31
331	SLU 64	1168	-959	8815	903.95	26.38	1.26
331	SLU 65	1171	-965	8851	909.04	26.44	1.26
331	SLU 66	1188	-973	8962	918.3	26.84	1.29
331	SLU 67	1190	-976	8984	921.35	26.88	1.29
331	SLU 68	1182	-970	8925	915.41	26.72	1.28
331	SLU 69	1200	-978	9036	924.67	27.12	1.31
331	SLU 70	1202	-982	9058	927.72	27.15	1.31
331	SLU 71	1192	-969	8963	916.69	26.94	1.29
331	SLU 72	1193	-973	8984	919.75	26.97	1.3
331	SLU 73	1308	-1057	9770	997.97	29.78	1.36
331	SLU 74	1326	-1065	9882	1007.23	30.19	1.39
331	SLU 75	1328	-1069	9903	1010.28	30.22	1.39
331	SLU 76	1320	-1063	9844	1004.34	30.06	1.38
331	SLU 77	1338	-1071	9956	1013.6	30.46	1.41
331	SLU 78	1340	-1074	9977	1016.65	30.5	1.41
331	SLU 79	1329	-1062	9882	1005.62	30.28	1.39
331	SLU 80	1331	-1065	9904	1008.68	30.32	1.39
331	SLU 81	1365	-1091	10128	1031	31.16	1.4
331	SLU 82	1366	-1095	10150	1034.05	31.2	1.4
331	SLU 83	1376	-1096	10202	1037.37	31.44	1.41
331	SLU 84	1378	-1100	10224	1040.42	31.47	1.42
331	SLE RA 1	871	-718	6592	676.76	19.65	0.94
331	SLE RA 2	873	-722	6617	680.15	19.69	0.94
331	SLE RA 3	885	-727	6691	686.32	19.96	0.97
331	SLE RA 4	886	-730	6705	688.35	19.98	0.97
331	SLE RA 5	881	-726	6666	684.39	19.88	0.96
331	SLE RA 6	893	-731	6740	690.57	20.14	0.98
331	SLE RA 7	894	-733	6754	692.6	20.17	0.98
331	SLE RA 8	887	-725	6691	685.25	20.02	0.97
331	SLE RA 9	888	-727	6705	687.29	20.05	0.97
331	SLE RA 10	965	-784	7229	739.43	21.92	1.01
331	SLE RA 11	977	-789	7304	745.61	22.19	1.03
331	SLE RA 12	978	-791	7318	747.64	22.21	1.03
331	SLE RA 13	973	-787	7279	743.68	22.11	1.02
331	SLE RA 14	985	-793	7353	749.85	22.37	1.04
331	SLE RA 15	986	-795	7367	751.89	22.4	1.04
331	SLE RA 16	979	-787	7304	744.54	22.25	1.03
331	SLE RA 17	980	-789	7318	746.57	22.28	1.03
331	SLE RA 18	1002	-806	7468	761.45	22.84	1.04
331	SLE RA 19	1004	-809	7482	763.49	22.86	1.04
331	SLE RA 20	1010	-810	7517	765.7	23.02	1.05
331	SLE RA 21	1011	-812	7532	767.73	23.05	1.05
331	SLE FR 1	871	-718	6592	676.76	19.65	0.94
331	SLE FR 2	872	-719	6597	677.44	19.66	0.94
331	SLE FR 3	874	-719	6612	678.46	19.73	0.95
331	SLE FR 4	911	-745	6860	702.84	20.62	0.97
331	SLE FR 5	914	-746	6875	703.86	20.68	0.98
331	SLE FR 6	937	-762	7030	719.1	21.25	0.99
331	SLE QP 1	871	-718	6592	676.76	19.65	0.94
331	SLE QP 2	911	-744	6855	702.17	20.61	0.97
331	SLD 1	1164	-522	7095	535.3	30.03	-0.1
331	SLD 2	1164	-522	7095	535.3	30.03	-0.1
331	SLD 3	1253	-780	8370	731.06	32.06	1.22
331	SLD 4	1253	-780	8370	731.06	32.06	1.22
331	SLD 5	851	-286	4993	355.21	20.36	-1.35
331	SLD 6	851	-286	4993	355.21	20.36	-1.35
331	SLD 7	1149	-1146	9243	1007.73	27.12	3.05
331	SLD 8	1149	-1146	9243	1007.73	27.12	3.05
331	SLD 9	673	-343	4467	396.6	14.1	-1.1
331	SLD 10	673	-343	4467	396.6	14.1	-1.1
331	SLD 11	970	-1203	8717	1049.12	20.86	3.29
331	SLD 12	970	-1203	8717	1049.12	20.86	3.29
331	SLD 13	568	-709	5340	673.28	9.16	0.72
331	SLD 14	568	-709	5340	673.28	9.16	0.72
331	SLD 15	657	-967	6615	869.03	11.19	2.04
331	SLD 16	657	-967	6615	869.03	11.19	2.04
331	SLV 1	1495	-221	7393	309.32	42.31	-1.53
331	SLV 2	1495	-221	7393	309.32	42.31	-1.53
331	SLV 3	1703	-828	10393	770.36	47.02	1.55
331	SLV 4	1703	-828	10393	770.36	47.02	1.55
331	SLV 5	770	334	2467	-114.93	19.98	-4.46
331	SLV 6	770	334	2467	-114.93	19.98	-4.46
331	SLV 7	1464	-1691	12466	1421.87	35.67	5.83



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
331	SLV 8	1464	-1691	12466	1421.87	35.67	5.83
331	SLV 9	357	202	1244	-17.54	5.55	-3.89
331	SLV 10	357	202	1244	-17.54	5.55	-3.89
331	SLV 11	1051	-1823	11243	1519.26	21.24	6.41
331	SLV 12	1051	-1823	11243	1519.26	21.24	6.41
331	SLV 13	118	-661	3317	633.97	-5.8	0.39
331	SLV 14	118	-661	3317	633.97	-5.8	0.39
331	SLV 15	326	-1268	6317	1095.01	-1.09	3.47
331	SLV 16	326	-1268	6317	1095.01	-1.09	3.47
332	SLU 1	421	6	5631	-4.6	26.59	-0.02
332	SLU 2	422	6	5653	-4.59	26.65	-0.02
332	SLU 3	433	7	5762	-4.77	27.37	-0.02
332	SLU 4	433	7	5775	-4.76	27.4	-0.02
332	SLU 5	430	6	5723	-4.69	27.19	-0.02
332	SLU 6	442	7	5832	-4.87	27.91	-0.02
332	SLU 7	442	7	5845	-4.87	27.94	-0.02
332	SLU 8	438	7	5770	-4.8	27.67	-0.02
332	SLU 9	439	7	5783	-4.8	27.7	-0.02
332	SLU 10	512	7	6486	-5.2	31.92	-0.03
332	SLU 11	523	7	6595	-5.38	32.65	-0.03
332	SLU 12	523	7	6608	-5.37	32.68	-0.03
332	SLU 13	520	7	6555	-5.3	32.46	-0.03
332	SLU 14	532	8	6664	-5.48	33.19	-0.03
332	SLU 15	532	8	6678	-5.47	33.22	-0.03
332	SLU 16	529	7	6603	-5.41	32.95	-0.03
332	SLU 17	529	7	6616	-5.41	32.98	-0.03
332	SLU 18	550	7	6820	-5.47	34.13	-0.03
332	SLU 19	550	7	6833	-5.46	34.16	-0.03
332	SLU 20	559	8	6890	-5.57	34.67	-0.03
332	SLU 21	559	8	6903	-5.57	34.7	-0.03
332	SLU 22	496	7	6396	-5.22	31.11	-0.03
332	SLU 23	496	7	6419	-5.21	31.17	-0.03
332	SLU 24	508	7	6528	-5.39	31.89	-0.03
332	SLU 25	508	7	6541	-5.39	31.93	-0.03
332	SLU 26	505	7	6489	-5.32	31.71	-0.03
332	SLU 27	516	8	6598	-5.49	32.43	-0.03
332	SLU 28	516	8	6611	-5.49	32.47	-0.03
332	SLU 29	513	7	6536	-5.43	32.19	-0.03
332	SLU 30	513	7	6549	-5.42	32.23	-0.03
332	SLU 31	587	8	7252	-5.82	36.45	-0.03
332	SLU 32	598	8	7361	-6	37.17	-0.03
332	SLU 33	598	8	7374	-5.99	37.21	-0.03
332	SLU 34	595	8	7321	-5.92	36.99	-0.03
332	SLU 35	606	8	7430	-6.1	37.71	-0.03
332	SLU 36	607	8	7444	-6.1	37.75	-0.03
332	SLU 37	603	8	7369	-6.04	37.47	-0.03
332	SLU 38	604	8	7382	-6.03	37.51	-0.03
332	SLU 39	625	8	7586	-6.09	38.65	-0.03
332	SLU 40	625	8	7599	-6.09	38.69	-0.03
332	SLU 41	633	9	7656	-6.19	39.19	-0.03
332	SLU 42	634	9	7669	-6.19	39.23	-0.03
332	SLU 43	522	8	7057	-5.76	33.02	-0.03
332	SLU 44	522	8	7079	-5.75	33.07	-0.03
332	SLU 45	534	8	7188	-5.93	33.8	-0.03
332	SLU 46	534	8	7202	-5.93	33.83	-0.03
332	SLU 47	531	8	7149	-5.86	33.61	-0.03
332	SLU 48	542	8	7258	-6.04	34.34	-0.03
332	SLU 49	542	8	7272	-6.03	34.37	-0.03
332	SLU 50	539	8	7197	-5.97	34.1	-0.03
332	SLU 51	539	8	7210	-5.96	34.13	-0.03
332	SLU 52	612	9	7912	-6.36	38.35	-0.03
332	SLU 53	624	9	8021	-6.54	39.08	-0.03
332	SLU 54	624	9	8035	-6.53	39.11	-0.03
332	SLU 55	621	9	7982	-6.47	38.89	-0.03
332	SLU 56	632	9	8091	-6.64	39.62	-0.03
332	SLU 57	633	9	8104	-6.64	39.65	-0.03
332	SLU 58	629	9	8029	-6.58	39.37	-0.03
332	SLU 59	629	9	8043	-6.57	39.41	-0.03
332	SLU 60	651	9	8247	-6.63	40.56	-0.03
332	SLU 61	651	9	8260	-6.63	40.59	-0.03
332	SLU 62	659	9	8316	-6.74	41.1	-0.03
332	SLU 63	660	9	8330	-6.73	41.13	-0.03
332	SLU 64	597	9	7823	-6.39	37.54	-0.03
332	SLU 65	597	9	7845	-6.38	37.59	-0.03
332	SLU 66	608	9	7954	-6.56	38.32	-0.03
332	SLU 67	609	9	7968	-6.55	38.35	-0.03
332	SLU 68	606	9	7915	-6.48	38.13	-0.03
332	SLU 69	617	9	8024	-6.66	38.86	-0.03
332	SLU 70	617	9	8038	-6.65	38.89	-0.03
332	SLU 71	614	9	7963	-6.59	38.62	-0.03
332	SLU 72	614	9	7976	-6.59	38.65	-0.03
332	SLU 73	687	10	8678	-6.99	42.87	-0.03
332	SLU 74	699	10	8787	-7.16	43.6	-0.04
332	SLU 75	699	10	8801	-7.16	43.63	-0.04
332	SLU 76	696	10	8748	-7.09	43.41	-0.03
332	SLU 77	707	10	8857	-7.27	44.14	-0.04
332	SLU 78	707	10	8870	-7.26	44.17	-0.04
332	SLU 79	704	10	8795	-7.2	43.9	-0.04
332	SLU 80	704	10	8809	-7.2	43.93	-0.04
332	SLU 81	726	10	9013	-7.26	45.08	-0.04



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
332	SLU 82	726	10	9026	-7.25	45.11	-0.04
332	SLU 83	734	10	9082	-7.36	45.62	-0.04
332	SLU 84	734	10	9096	-7.35	45.65	-0.04
332	SLE RA 1	443	7	5849	-4.77	27.88	-0.02
332	SLE RA 2	443	7	5864	-4.77	27.92	-0.02
332	SLE RA 3	450	7	5937	-4.89	28.4	-0.02
332	SLE RA 4	451	7	5946	-4.88	28.42	-0.02
332	SLE RA 5	449	7	5911	-4.84	28.28	-0.02
332	SLE RA 6	456	7	5983	-4.96	28.76	-0.02
332	SLE RA 7	456	7	5992	-4.95	28.79	-0.02
332	SLE RA 8	454	7	5942	-4.91	28.6	-0.02
332	SLE RA 9	454	7	5951	-4.91	28.62	-0.02
332	SLE RA 10	503	7	6419	-5.17	31.44	-0.03
332	SLE RA 11	511	7	6492	-5.29	31.92	-0.03
332	SLE RA 12	511	7	6501	-5.29	31.94	-0.03
332	SLE RA 13	509	7	6466	-5.24	31.8	-0.03
332	SLE RA 14	516	7	6539	-5.36	32.28	-0.03
332	SLE RA 15	516	7	6548	-5.36	32.3	-0.03
332	SLE RA 16	514	7	6498	-5.32	32.12	-0.03
332	SLE RA 17	514	7	6506	-5.32	32.14	-0.03
332	SLE RA 18	528	7	6642	-5.35	32.91	-0.03
332	SLE RA 19	529	7	6651	-5.35	32.93	-0.03
332	SLE RA 20	534	7	6689	-5.42	33.27	-0.03
332	SLE RA 21	534	7	6698	-5.42	33.29	-0.03
332	SLE FR 1	443	7	5849	-4.77	27.88	-0.02
332	SLE FR 2	443	7	5852	-4.77	27.89	-0.02
332	SLE FR 3	445	7	5868	-4.8	28.03	-0.02
332	SLE FR 4	468	7	6090	-4.95	29.4	-0.02
332	SLE FR 5	471	7	6106	-4.98	29.53	-0.02
332	SLE FR 6	486	7	6246	-5.06	30.4	-0.03
332	SLE QP 1	443	7	5849	-4.77	27.88	-0.02
332	SLE QP 2	468	7	6087	-4.95	29.39	-0.02
332	SLD 1	910	14	6518	-10.01	51.82	-0.04
332	SLD 2	910	14	6518	-10.01	51.82	-0.04
332	SLD 3	842	6	7255	-3.73	48.56	-0.02
332	SLD 4	842	6	7255	-3.73	48.56	-0.02
332	SLD 5	703	21	5099	-15.99	41.06	-0.07
332	SLD 6	703	21	5099	-15.99	41.06	-0.07
332	SLD 7	478	-6	7555	4.94	30.2	0.01
332	SLD 8	478	-6	7555	4.94	30.2	0.01
332	SLD 9	459	20	4620	-14.83	28.58	-0.06
332	SLD 10	459	20	4620	-14.83	28.58	-0.06
332	SLD 11	233	-8	7076	6.09	17.72	0.02
332	SLD 12	233	-8	7076	6.09	17.72	0.02
332	SLD 13	95	8	4920	-6.17	10.22	-0.03
332	SLD 14	95	8	4920	-6.17	10.22	-0.03
332	SLD 15	27	0	5657	0.11	6.96	-0.01
332	SLD 16	27	0	5657	0.11	6.96	-0.01
332	SLV 1	1488	23	7074	-16.79	81.2	-0.07
332	SLV 2	1488	23	7074	-16.79	81.2	-0.07
332	SLV 3	1328	4	8807	-2.12	73.55	-0.01
332	SLV 4	1328	4	8807	-2.12	73.55	-0.01
332	SLV 5	1017	40	3754	-30.76	56.53	-0.12
332	SLV 6	1017	40	3754	-30.76	56.53	-0.12
332	SLV 7	483	-23	9532	18.16	31.05	0.07
332	SLV 8	483	-23	9532	18.16	31.05	0.07
332	SLV 9	454	37	2642	-28.05	27.73	-0.11
332	SLV 10	454	37	2642	-28.05	27.73	-0.11
332	SLV 11	-81	-27	8420	20.86	2.25	0.08
332	SLV 12	-81	-27	8420	20.86	2.25	0.08
332	SLV 13	-391	10	3368	-7.78	-14.77	-0.04
332	SLV 14	-391	10	3368	-7.78	-14.77	-0.04
332	SLV 15	-551	-9	5101	6.89	-22.42	0.02
332	SLV 16	-551	-9	5101	6.89	-22.42	0.02
333	SLU 1	146	18	4670	-11.48	8.83	-0.03
333	SLU 2	146	18	4686	-11.5	8.84	-0.03
333	SLU 3	151	18	4773	-11.85	9.08	-0.03
333	SLU 4	151	18	4783	-11.86	9.08	-0.03
333	SLU 5	150	18	4741	-11.71	9.04	-0.03
333	SLU 6	156	18	4827	-12.06	9.29	-0.03
333	SLU 7	155	18	4837	-12.07	9.29	-0.03
333	SLU 8	156	18	4779	-11.9	9.25	-0.03
333	SLU 9	155	18	4789	-11.91	9.25	-0.03
333	SLU 10	196	20	5373	-13	11.31	-0.03
333	SLU 11	201	20	5460	-13.35	11.55	-0.03
333	SLU 12	201	20	5469	-13.36	11.56	-0.03
333	SLU 13	201	20	5427	-13.21	11.52	-0.03
333	SLU 14	206	21	5514	-13.56	11.76	-0.03
333	SLU 15	206	21	5524	-13.57	11.77	-0.03
333	SLU 16	206	21	5465	-13.4	11.72	-0.03
333	SLU 17	206	21	5475	-13.41	11.73	-0.03
333	SLU 18	218	21	5651	-13.62	12.37	-0.03
333	SLU 19	218	21	5660	-13.64	12.37	-0.03
333	SLU 20	223	21	5705	-13.83	12.58	-0.03
333	SLU 21	223	21	5715	-13.85	12.58	-0.03
333	SLU 22	184	20	5296	-13	10.76	-0.03
333	SLU 23	183	20	5312	-13.02	10.76	-0.03
333	SLU 24	189	20	5399	-13.37	11.01	-0.03
333	SLU 25	188	20	5409	-13.38	11.01	-0.03
333	SLU 26	188	20	5367	-13.23	10.97	-0.03



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
333	SLU 27	194	21	5454	-13.58	11.22	-0.03
333	SLU 28	193	21	5464	-13.59	11.22	-0.03
333	SLU 29	193	21	5405	-13.42	11.18	-0.03
333	SLU 30	193	21	5415	-13.43	11.18	-0.03
333	SLU 31	234	22	5999	-14.52	13.24	-0.03
333	SLU 32	239	23	6086	-14.87	13.48	-0.04
333	SLU 33	239	23	6096	-14.88	13.49	-0.04
333	SLU 34	239	23	6054	-14.73	13.45	-0.03
333	SLU 35	244	23	6140	-15.08	13.69	-0.04
333	SLU 36	244	23	6150	-15.09	13.69	-0.04
333	SLU 37	244	23	6092	-14.92	13.65	-0.04
333	SLU 38	244	23	6102	-14.93	13.65	-0.04
333	SLU 39	256	23	6277	-15.14	14.3	-0.04
333	SLU 40	256	23	6287	-15.16	14.3	-0.04
333	SLU 41	261	24	6332	-15.35	14.5	-0.04
333	SLU 42	261	24	6341	-15.37	14.51	-0.04
333	SLU 43	177	22	5856	-14.4	10.82	-0.03
333	SLU 44	176	22	5872	-14.42	10.82	-0.03
333	SLU 45	182	23	5959	-14.77	11.07	-0.04
333	SLU 46	181	23	5969	-14.79	11.07	-0.04
333	SLU 47	181	22	5927	-14.63	11.03	-0.03
333	SLU 48	187	23	6014	-14.98	11.28	-0.04
333	SLU 49	186	23	6023	-15	11.28	-0.04
333	SLU 50	187	23	5965	-14.82	11.24	-0.04
333	SLU 51	186	23	5975	-14.83	11.24	-0.04
333	SLU 52	227	24	6559	-15.92	13.3	-0.04
333	SLU 53	232	25	6646	-16.27	13.54	-0.04
333	SLU 54	232	25	6655	-16.29	13.54	-0.04
333	SLU 55	232	25	6613	-16.13	13.51	-0.04
333	SLU 56	237	25	6700	-16.48	13.75	-0.04
333	SLU 57	237	25	6710	-16.5	13.75	-0.04
333	SLU 58	237	25	6652	-16.32	13.71	-0.04
333	SLU 59	237	25	6661	-16.33	13.71	-0.04
333	SLU 60	249	25	6837	-16.54	14.35	-0.04
333	SLU 61	249	25	6847	-16.56	14.36	-0.04
333	SLU 62	254	26	6891	-16.75	14.56	-0.04
333	SLU 63	254	26	6901	-16.77	14.56	-0.04
333	SLU 64	215	24	6482	-15.92	12.75	-0.04
333	SLU 65	214	24	6499	-15.95	12.75	-0.04
333	SLU 66	220	25	6585	-16.29	13	-0.04
333	SLU 67	219	25	6595	-16.31	13	-0.04
333	SLU 68	219	25	6553	-16.15	12.96	-0.04
333	SLU 69	224	25	6640	-16.5	13.21	-0.04
333	SLU 70	224	25	6650	-16.52	13.21	-0.04
333	SLU 71	224	25	6591	-16.34	13.17	-0.04
333	SLU 72	224	25	6601	-16.35	13.17	-0.04
333	SLU 73	265	27	7185	-17.45	15.23	-0.04
333	SLU 74	270	27	7272	-17.79	15.47	-0.04
333	SLU 75	270	27	7282	-17.81	15.47	-0.04
333	SLU 76	270	27	7240	-17.65	15.44	-0.04
333	SLU 77	275	28	7327	-18	15.68	-0.04
333	SLU 78	275	28	7336	-18.02	15.68	-0.04
333	SLU 79	275	27	7278	-17.84	15.64	-0.04
333	SLU 80	275	27	7288	-17.85	15.64	-0.04
333	SLU 81	287	28	7463	-18.06	16.28	-0.04
333	SLU 82	287	28	7473	-18.08	16.29	-0.04
333	SLU 83	292	28	7518	-18.27	16.49	-0.04
333	SLU 84	291	28	7527	-18.29	16.49	-0.04
333	SLE RA 1	157	18	4849	-11.91	9.38	-0.03
333	SLE RA 2	157	18	4860	-11.93	9.39	-0.03
333	SLE RA 3	160	19	4917	-12.16	9.55	-0.03
333	SLE RA 4	160	19	4924	-12.17	9.55	-0.03
333	SLE RA 5	160	18	4896	-12.07	9.53	-0.03
333	SLE RA 6	163	19	4954	-12.3	9.69	-0.03
333	SLE RA 7	163	19	4960	-12.31	9.69	-0.03
333	SLE RA 8	163	19	4921	-12.19	9.66	-0.03
333	SLE RA 9	163	19	4928	-12.2	9.66	-0.03
333	SLE RA 10	190	20	5317	-12.93	11.03	-0.03
333	SLE RA 11	194	20	5375	-13.16	11.2	-0.03
333	SLE RA 12	194	20	5382	-13.17	11.2	-0.03
333	SLE RA 13	193	20	5354	-13.07	11.17	-0.03
333	SLE RA 14	197	20	5412	-13.3	11.34	-0.03
333	SLE RA 15	197	20	5418	-13.31	11.34	-0.03
333	SLE RA 16	197	20	5379	-13.19	11.31	-0.03
333	SLE RA 17	197	20	5386	-13.2	11.31	-0.03
333	SLE RA 18	205	20	5503	-13.34	11.74	-0.03
333	SLE RA 19	205	20	5509	-13.35	11.74	-0.03
333	SLE RA 20	208	21	5539	-13.48	11.88	-0.03
333	SLE RA 21	208	21	5546	-13.49	11.88	-0.03
333	SLE FR 1	157	18	4849	-11.91	9.38	-0.03
333	SLE FR 2	157	18	4851	-11.92	9.38	-0.03
333	SLE FR 3	158	18	4863	-11.97	9.44	-0.03
333	SLE FR 4	171	19	5047	-12.34	10.09	-0.03
333	SLE FR 5	173	19	5059	-12.4	10.15	-0.03
333	SLE FR 6	181	19	5176	-12.63	10.56	-0.03
333	SLE QP 1	157	18	4849	-11.91	9.38	-0.03
333	SLE QP 2	171	19	5045	-12.34	10.09	-0.03
333	SLD 1	673	17	5201	-10.1	32.52	-0.02
333	SLD 2	673	17	5201	-10.1	32.52	-0.02
333	SLD 3	583	29	5765	-21.56	28.81	-0.03



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
333	SLD 4	583	29	5765	-21.56	28.81	-0.03
333	SLD 5	459	0	4236	5.73	22.45	-0.01
333	SLD 6	459	0	4236	5.73	22.45	-0.01
333	SLD 7	158	40	6117	-32.5	10.07	-0.04
333	SLD 8	158	40	6117	-32.5	10.07	-0.04
333	SLD 9	185	-2	3973	7.82	10.11	-0.02
333	SLD 10	185	-2	3973	7.82	10.11	-0.02
333	SLD 11	-116	38	5854	-30.41	-2.27	-0.04
333	SLD 12	-116	38	5854	-30.41	-2.27	-0.04
333	SLD 13	-240	9	4324	-3.12	-8.62	-0.03
333	SLD 14	-240	9	4324	-3.12	-8.62	-0.03
333	SLD 15	-331	21	4889	-14.59	-12.34	-0.04
333	SLD 16	-331	21	4889	-14.59	-12.34	-0.04
333	SLV 1	1331	14	5401	-7.12	61.87	-0.01
333	SLV 2	1331	14	5401	-7.12	61.87	-0.01
333	SLV 3	1118	42	6730	-33.96	53.14	-0.03
333	SLV 4	1118	42	6730	-33.96	53.14	-0.03
333	SLV 5	843	-25	3136	29.93	38.87	0.01
333	SLV 6	843	-25	3136	29.93	38.87	0.01
333	SLV 7	132	68	7566	-59.54	9.76	-0.06
333	SLV 8	132	68	7566	-59.54	9.76	-0.06
333	SLV 9	211	-30	2524	34.85	10.42	0
333	SLV 10	211	-30	2524	34.85	10.42	0
333	SLV 11	-500	62	6954	-54.61	-18.69	-0.06
333	SLV 12	-500	62	6954	-54.61	-18.69	-0.06
333	SLV 13	-775	-4	3360	9.28	-32.96	-0.03
333	SLV 14	-775	-4	3360	9.28	-32.96	-0.03
333	SLV 15	-988	24	4689	-17.56	-41.69	-0.05
333	SLV 16	-988	24	4689	-17.56	-41.69	-0.05
334	SLU 1	111	25	3942	-16.41	9.72	-0.05
334	SLU 2	111	25	3953	-16.46	9.73	-0.05
334	SLU 3	117	25	4023	-16.93	10.17	-0.06
334	SLU 4	117	25	4030	-16.96	10.17	-0.06
334	SLU 5	117	25	3997	-16.75	10.1	-0.06
334	SLU 6	123	26	4067	-17.22	10.53	-0.06
334	SLU 7	123	26	4074	-17.25	10.54	-0.06
334	SLU 8	123	25	4028	-16.99	10.45	-0.06
334	SLU 9	123	25	4035	-17.02	10.46	-0.06
334	SLU 10	155	28	4536	-18.58	12.37	-0.06
334	SLU 11	161	29	4606	-19.06	12.81	-0.06
334	SLU 12	161	29	4613	-19.09	12.81	-0.06
334	SLU 13	160	28	4579	-18.87	12.74	-0.06
334	SLU 14	167	29	4649	-19.35	13.17	-0.06
334	SLU 15	167	29	4656	-19.38	13.18	-0.06
334	SLU 16	167	29	4611	-19.12	13.09	-0.06
334	SLU 17	166	29	4618	-19.15	13.1	-0.06
334	SLU 18	174	29	4774	-19.45	13.49	-0.06
334	SLU 19	173	29	4781	-19.47	13.5	-0.06
334	SLU 20	179	30	4818	-19.74	13.86	-0.07
334	SLU 21	179	30	4825	-19.77	13.87	-0.07
334	SLU 22	145	28	4466	-18.57	11.89	-0.06
334	SLU 23	144	28	4478	-18.62	11.91	-0.06
334	SLU 24	151	29	4548	-19.09	12.34	-0.06
334	SLU 25	151	29	4555	-19.12	12.34	-0.06
334	SLU 26	150	28	4521	-18.91	12.27	-0.06
334	SLU 27	157	29	4591	-19.38	12.7	-0.06
334	SLU 28	156	29	4598	-19.41	12.71	-0.06
334	SLU 29	156	29	4553	-19.15	12.62	-0.06
334	SLU 30	156	29	4560	-19.18	12.63	-0.06
334	SLU 31	188	31	5061	-20.74	14.55	-0.07
334	SLU 32	194	32	5131	-21.22	14.98	-0.07
334	SLU 33	194	32	5138	-21.25	14.98	-0.07
334	SLU 34	194	32	5104	-21.03	14.91	-0.07
334	SLU 35	200	32	5174	-21.51	15.34	-0.07
334	SLU 36	200	32	5181	-21.54	15.35	-0.07
334	SLU 37	200	32	5136	-21.28	15.26	-0.07
334	SLU 38	200	32	5143	-21.31	15.27	-0.07
334	SLU 39	207	32	5299	-21.61	15.66	-0.07
334	SLU 40	207	32	5306	-21.63	15.67	-0.07
334	SLU 41	213	33	5342	-21.9	16.03	-0.07
334	SLU 42	213	33	5349	-21.93	16.04	-0.07
334	SLU 43	133	31	4944	-20.59	11.89	-0.07
334	SLU 44	133	31	4956	-20.64	11.91	-0.07
334	SLU 45	139	32	5026	-21.12	12.34	-0.07
334	SLU 46	139	32	5033	-21.14	12.34	-0.07
334	SLU 47	139	31	4999	-20.93	12.27	-0.07
334	SLU 48	145	32	5069	-21.41	12.7	-0.07
334	SLU 49	145	32	5076	-21.43	12.71	-0.07
334	SLU 50	145	32	5031	-21.18	12.62	-0.07
334	SLU 51	145	32	5038	-21.2	12.63	-0.07
334	SLU 52	177	34	5539	-22.76	14.55	-0.08
334	SLU 53	183	35	5609	-23.24	14.98	-0.08
334	SLU 54	183	35	5616	-23.27	14.98	-0.08
334	SLU 55	182	35	5582	-23.06	14.91	-0.08
334	SLU 56	189	35	5652	-23.53	15.34	-0.08
334	SLU 57	189	35	5659	-23.56	15.35	-0.08
334	SLU 58	189	35	5614	-23.3	15.26	-0.08
334	SLU 59	188	35	5621	-23.33	15.27	-0.08
334	SLU 60	195	35	5777	-23.63	15.67	-0.08
334	SLU 61	195	35	5784	-23.66	15.67	-0.08



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
		x	y	z		x	y	z	
334	SLU 62	201	36	5820		-23.92	16.03		-0.08
334	SLU 63	201	36	5827		-23.95	16.04		-0.08
334	SLU 64	167	34	5469		-22.75	14.07		-0.08
334	SLU 65	166	34	5481		-22.8	14.08		-0.08
334	SLU 66	173	35	5551		-23.28	14.51		-0.08
334	SLU 67	173	35	5558		-23.3	14.52		-0.08
334	SLU 68	172	35	5524		-23.09	14.44		-0.08
334	SLU 69	179	35	5594		-23.57	14.87		-0.08
334	SLU 70	178	35	5601		-23.59	14.88		-0.08
334	SLU 71	178	35	5556		-23.34	14.8		-0.08
334	SLU 72	178	35	5563		-23.36	14.8		-0.08
334	SLU 73	210	37	6063		-24.92	16.72		-0.08
334	SLU 74	216	38	6133		-25.4	17.15		-0.08
334	SLU 75	216	38	6140		-25.43	17.16		-0.08
334	SLU 76	216	38	6107		-25.22	17.08		-0.08
334	SLU 77	222	39	6177		-25.69	17.51		-0.09
334	SLU 78	222	39	6184		-25.72	17.52		-0.09
334	SLU 79	222	38	6138		-25.46	17.44		-0.08
334	SLU 80	222	38	6145		-25.49	17.44		-0.08
334	SLU 81	229	39	6302		-25.79	17.84		-0.09
334	SLU 82	229	39	6309		-25.82	17.84		-0.09
334	SLU 83	235	39	6345		-26.08	18.2		-0.09
334	SLU 84	234	39	6352		-26.11	18.21		-0.09
334	SLE RA 1	121	25	4092		-17.03	10.34		-0.06
334	SLE RA 2	121	26	4099		-17.06	10.35		-0.06
334	SLE RA 3	125	26	4146		-17.38	10.64		-0.06
334	SLE RA 4	125	26	4151		-17.39	10.64		-0.06
334	SLE RA 5	125	26	4128		-17.25	10.59		-0.06
334	SLE RA 6	129	26	4175		-17.57	10.88		-0.06
334	SLE RA 7	129	26	4180		-17.59	10.89		-0.06
334	SLE RA 8	129	26	4149		-17.42	10.83		-0.06
334	SLE RA 9	129	26	4154		-17.43	10.83		-0.06
334	SLE RA 10	150	28	4488		-18.47	12.11		-0.06
334	SLE RA 11	154	28	4535		-18.79	12.4		-0.06
334	SLE RA 12	154	28	4539		-18.81	12.4		-0.06
334	SLE RA 13	154	28	4517		-18.67	12.35		-0.06
334	SLE RA 14	158	28	4563		-18.99	12.64		-0.06
334	SLE RA 15	158	28	4568		-19.01	12.65		-0.06
334	SLE RA 16	158	28	4538		-18.83	12.59		-0.06
334	SLE RA 17	158	28	4543		-18.85	12.59		-0.06
334	SLE RA 18	162	29	4647		-19.05	12.86		-0.06
334	SLE RA 19	162	29	4651		-19.07	12.86		-0.06
334	SLE RA 20	166	29	4676		-19.25	13.1		-0.06
334	SLE RA 21	166	29	4680		-19.26	13.1		-0.06
334	SLE FR 1	121	25	4092		-17.03	10.34		-0.06
334	SLE FR 2	121	25	4093		-17.03	10.34		-0.06
334	SLE FR 3	122	26	4103		-17.11	10.44		-0.06
334	SLE FR 4	133	26	4260		-17.64	11.1		-0.06
334	SLE FR 5	135	27	4270		-17.71	11.19		-0.06
334	SLE FR 6	142	27	4369		-18.04	11.6		-0.06
334	SLE QP 1	121	25	4092		-17.03	10.34		-0.06
334	SLE QP 2	133	26	4258		-17.64	11.1		-0.06
334	SLD 1	684	12	4275		-4.5	35.77		-0.03
334	SLD 2	684	12	4275		-4.5	35.77		-0.03
334	SLD 3	590	29	4732		-20.78	31.86		-0.06
334	SLD 4	590	29	4732		-20.78	31.86		-0.06
334	SLD 5	441	-5	3570		10.99	24.43		0
334	SLD 6	441	-5	3570		10.99	24.43		0
334	SLD 7	128	54	5093		-43.27	11.4		-0.11
334	SLD 8	128	54	5093		-43.27	11.4		-0.11
334	SLD 9	139	-2	3423		8	10.79		-0.01
334	SLD 10	139	-2	3423		8	10.79		-0.01
334	SLD 11	-175	58	4946		-46.26	-2.23		-0.11
334	SLD 12	-175	58	4946		-46.26	-2.23		-0.11
334	SLD 13	-324	23	3784		-14.49	-9.67		-0.05
334	SLD 14	-324	23	3784		-14.49	-9.67		-0.05
334	SLD 15	-418	41	4241		-30.77	-13.58		-0.08
334	SLD 16	-418	41	4241		-30.77	-13.58		-0.08
334	SLV 1	1406	-8	4295		13.17	68.1		0
334	SLV 2	1406	-8	4295		13.17	68.1		0
334	SLV 3	1184	34	5370		-24.95	58.89		-0.07
334	SLV 4	1184	34	5370		-24.95	58.89		-0.07
334	SLV 5	852	-47	2638		49.42	42.16		0.07
334	SLV 6	852	-47	2638		49.42	42.16		0.07
334	SLV 7	111	92	6223		-77.64	11.47		-0.18
334	SLV 8	111	92	6223		-77.64	11.47		-0.18
334	SLV 9	155	-39	2293		42.37	10.72		0.06
334	SLV 10	155	-39	2293		42.37	10.72		0.06
334	SLV 11	-586	100	5878		-84.69	-19.97		-0.19
334	SLV 12	-586	100	5878		-84.69	-19.97		-0.19
334	SLV 13	-918	19	3146		-10.32	-36.7		-0.04
334	SLV 14	-918	19	3146		-10.32	-36.7		-0.04
334	SLV 15	-1140	61	4222		-48.44	-45.9		-0.12
334	SLV 16	-1140	61	4222		-48.44	-45.9		-0.12
335	SLU 1	167	28	3365		-19.47	8.63		-0.09
335	SLU 2	167	28	3373		-19.52	8.66		-0.09
335	SLU 3	176	29	3430		-20.09	9.01		-0.1
335	SLU 4	176	29	3435		-20.12	9.02		-0.1
335	SLU 5	174	29	3408		-19.87	8.94		-0.09
335	SLU 6	182	29	3465		-20.43	9.29		-0.1



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
335	SLU 7	183	29	3470	-20.47	9.31	-0.1
335	SLU 8	181	29	3435	-20.16	9.2	-0.1
335	SLU 9	181	29	3440	-20.19	9.22	-0.1
335	SLU 10	214	32	3874	-22.03	10.83	-0.1
335	SLU 11	222	32	3931	-22.6	11.17	-0.11
335	SLU 12	222	33	3936	-22.63	11.19	-0.11
335	SLU 13	221	32	3909	-22.38	11.11	-0.11
335	SLU 14	229	33	3966	-22.94	11.46	-0.11
335	SLU 15	229	33	3971	-22.97	11.47	-0.11
335	SLU 16	227	33	3936	-22.66	11.37	-0.11
335	SLU 17	228	33	3941	-22.7	11.38	-0.11
335	SLU 18	233	33	4080	-23.05	11.73	-0.11
335	SLU 19	234	33	4085	-23.08	11.74	-0.11
335	SLU 20	240	34	4115	-23.39	12.01	-0.11
335	SLU 21	241	34	4120	-23.43	12.03	-0.11
335	SLU 22	206	32	3810	-22.02	10.46	-0.1
335	SLU 23	206	32	3818	-22.08	10.49	-0.1
335	SLU 24	214	33	3875	-22.64	10.83	-0.11
335	SLU 25	214	33	3880	-22.68	10.85	-0.11
335	SLU 26	213	32	3853	-22.42	10.77	-0.11
335	SLU 27	221	33	3910	-22.99	11.12	-0.11
335	SLU 28	221	33	3915	-23.02	11.13	-0.11
335	SLU 29	220	33	3880	-22.71	11.03	-0.11
335	SLU 30	220	33	3885	-22.74	11.04	-0.11
335	SLU 31	252	35	4318	-24.58	12.65	-0.12
335	SLU 32	261	36	4376	-25.15	13	-0.12
335	SLU 33	261	36	4381	-25.18	13.02	-0.12
335	SLU 34	259	36	4353	-24.93	12.94	-0.12
335	SLU 35	268	37	4411	-25.49	13.28	-0.12
335	SLU 36	268	37	4415	-25.53	13.3	-0.12
335	SLU 37	266	36	4380	-25.22	13.19	-0.12
335	SLU 38	266	36	4385	-25.25	13.21	-0.12
335	SLU 39	272	37	4525	-25.6	13.56	-0.12
335	SLU 40	272	37	4530	-25.63	13.57	-0.12
335	SLU 41	279	37	4560	-25.94	13.84	-0.12
335	SLU 42	279	37	4565	-25.98	13.86	-0.12
335	SLU 43	204	35	4222	-24.43	10.6	-0.12
335	SLU 44	204	35	4230	-24.49	10.62	-0.12
335	SLU 45	212	36	4288	-25.06	10.97	-0.12
335	SLU 46	213	36	4292	-25.09	10.99	-0.12
335	SLU 47	211	36	4265	-24.84	10.91	-0.12
335	SLU 48	219	36	4323	-25.4	11.25	-0.12
335	SLU 49	219	36	4327	-25.43	11.27	-0.12
335	SLU 50	218	36	4292	-25.12	11.16	-0.12
335	SLU 51	218	36	4297	-25.16	11.18	-0.12
335	SLU 52	251	39	4731	-27	12.79	-0.13
335	SLU 53	259	40	4788	-27.56	13.14	-0.13
335	SLU 54	259	40	4793	-27.59	13.15	-0.13
335	SLU 55	258	39	4766	-27.34	13.07	-0.13
335	SLU 56	266	40	4823	-27.91	13.42	-0.13
335	SLU 57	266	40	4828	-27.94	13.44	-0.13
335	SLU 58	264	40	4793	-27.63	13.33	-0.13
335	SLU 59	264	40	4798	-27.66	13.35	-0.13
335	SLU 60	270	40	4938	-28.01	13.69	-0.13
335	SLU 61	270	40	4942	-28.05	13.71	-0.13
335	SLU 62	277	41	4973	-28.36	13.98	-0.13
335	SLU 63	277	41	4977	-28.39	13.99	-0.13
335	SLU 64	243	39	4667	-26.99	12.42	-0.13
335	SLU 65	243	39	4675	-27.04	12.45	-0.13
335	SLU 66	251	40	4732	-27.61	12.8	-0.13
335	SLU 67	251	40	4737	-27.64	12.81	-0.13
335	SLU 68	250	39	4710	-27.39	12.73	-0.13
335	SLU 69	258	40	4767	-27.95	13.08	-0.13
335	SLU 70	258	40	4772	-27.99	13.1	-0.13
335	SLU 71	256	40	4737	-27.68	12.99	-0.13
335	SLU 72	257	40	4742	-27.71	13.01	-0.13
335	SLU 73	289	42	5176	-29.55	14.62	-0.14
335	SLU 74	298	43	5233	-30.11	14.96	-0.14
335	SLU 75	298	43	5238	-30.15	14.98	-0.14
335	SLU 76	296	43	5211	-29.89	14.9	-0.14
335	SLU 77	304	44	5268	-30.46	15.25	-0.14
335	SLU 78	305	44	5273	-30.49	15.26	-0.14
335	SLU 79	303	43	5237	-30.18	15.16	-0.14
335	SLU 80	303	43	5242	-30.22	15.17	-0.14
335	SLU 81	309	44	5382	-30.57	15.52	-0.14
335	SLU 82	309	44	5387	-30.6	15.54	-0.15
335	SLU 83	316	44	5417	-30.91	15.8	-0.15
335	SLU 84	316	45	5422	-30.94	15.82	-0.15
335	SLE RA 1	178	29	3492	-20.2	9.16	-0.1
335	SLE RA 2	178	29	3498	-20.23	9.17	-0.1
335	SLE RA 3	184	30	3536	-20.61	9.4	-0.1
335	SLE RA 4	184	30	3539	-20.63	9.41	-0.1
335	SLE RA 5	183	29	3521	-20.46	9.36	-0.1
335	SLE RA 6	188	30	3559	-20.84	9.59	-0.1
335	SLE RA 7	188	30	3562	-20.86	9.6	-0.1
335	SLE RA 8	187	30	3539	-20.66	9.53	-0.1
335	SLE RA 9	187	30	3542	-20.68	9.54	-0.1
335	SLE RA 10	209	31	3831	-21.91	10.62	-0.1
335	SLE RA 11	215	32	3870	-22.28	10.85	-0.11
335	SLE RA 12	215	32	3873	-22.3	10.86	-0.11



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
335	SLE RA 13	214	32	3855	-22.14	10.81	-0.1
335	SLE RA 14	219	32	3893	-22.51	11.04	-0.11
335	SLE RA 15	219	32	3896	-22.53	11.05	-0.11
335	SLE RA 16	218	32	3873	-22.33	10.98	-0.11
335	SLE RA 17	218	32	3876	-22.35	10.99	-0.11
335	SLE RA 18	222	32	3969	-22.58	11.22	-0.11
335	SLE RA 19	222	33	3972	-22.61	11.23	-0.11
335	SLE RA 20	227	33	3992	-22.81	11.41	-0.11
335	SLE RA 21	227	33	3996	-22.84	11.42	-0.11
335	SLE FR 1	178	29	3492	-20.2	9.16	-0.1
335	SLE FR 2	178	29	3493	-20.2	9.16	-0.1
335	SLE FR 3	180	29	3502	-20.29	9.23	-0.1
335	SLE FR 4	191	30	3636	-20.92	9.78	-0.1
335	SLE FR 5	193	30	3645	-21.01	9.85	-0.1
335	SLE FR 6	200	31	3731	-21.39	10.19	-0.1
335	SLE QP 1	178	29	3492	-20.2	9.16	-0.1
335	SLE QP 2	191	30	3635	-20.91	9.77	-0.1
335	SLD 1	794	11	3575	-4.78	36.25	-0.05
335	SLD 2	794	11	3575	-4.78	36.25	-0.05
335	SLD 3	699	34	3980	-24.7	32.05	-0.11
335	SLD 4	699	34	3980	-24.7	32.05	-0.11
335	SLD 5	517	-10	3004	14.15	24.08	0.02
335	SLD 6	517	-10	3004	14.15	24.08	0.02
335	SLD 7	199	65	4352	-52.27	10.09	-0.2
335	SLD 8	199	65	4352	-52.27	10.09	-0.2
335	SLD 9	184	-5	2919	10.45	9.46	0
335	SLD 10	184	-5	2919	10.45	9.46	0
335	SLD 11	-134	70	4266	-55.98	-4.54	-0.21
335	SLD 12	-134	70	4266	-55.98	-4.54	-0.21
335	SLD 13	-316	26	3291	-17.12	-12.5	-0.09
335	SLD 14	-316	26	3291	-17.12	-12.5	-0.09
335	SLD 15	-412	49	3695	-37.05	-16.7	-0.15
335	SLD 16	-412	49	3695	-37.05	-16.7	-0.15
335	SLV 1	1584	-14	3495	16.95	70.89	0.03
335	SLV 2	1584	-14	3495	16.95	70.89	0.03
335	SLV 3	1359	39	4446	-29.73	61.05	-0.13
335	SLV 4	1359	39	4446	-29.73	61.05	-0.13
335	SLV 5	950	-63	2150	61.24	43.03	0.17
335	SLV 6	950	-63	2150	61.24	43.03	0.17
335	SLV 7	201	112	5322	-94.35	10.24	-0.34
335	SLV 8	201	112	5322	-94.35	10.24	-0.34
335	SLV 9	181	-52	1949	52.52	9.31	0.14
335	SLV 10	181	-52	1949	52.52	9.31	0.14
335	SLV 11	-567	123	5120	-103.07	-23.48	-0.37
335	SLV 12	-567	123	5120	-103.07	-23.48	-0.37
335	SLV 13	-977	21	2824	-12.1	-41.5	-0.07
335	SLV 14	-977	21	2824	-12.1	-41.5	-0.07
335	SLV 15	-1201	74	3776	-58.78	-51.34	-0.23
335	SLV 16	-1201	74	3776	-58.78	-51.34	-0.23
336	SLU 1	356	28	2998	-20.82	17.97	-0.12
336	SLU 2	357	29	3004	-20.88	18.03	-0.12
336	SLU 3	372	29	3054	-21.49	18.75	-0.13
336	SLU 4	373	29	3057	-21.52	18.79	-0.13
336	SLU 5	369	29	3034	-21.25	18.58	-0.13
336	SLU 6	383	30	3085	-21.86	19.3	-0.13
336	SLU 7	384	30	3088	-21.9	19.34	-0.13
336	SLU 8	379	30	3059	-21.56	19.07	-0.13
336	SLU 9	379	30	3063	-21.6	19.11	-0.13
336	SLU 10	429	32	3452	-23.55	21.54	-0.14
336	SLU 11	444	33	3502	-24.16	22.26	-0.14
336	SLU 12	444	33	3506	-24.19	22.3	-0.14
336	SLU 13	440	33	3482	-23.92	22.09	-0.14
336	SLU 14	455	34	3533	-24.53	22.81	-0.15
336	SLU 15	456	34	3536	-24.57	22.84	-0.15
336	SLU 16	450	33	3507	-24.23	22.57	-0.14
336	SLU 17	451	33	3511	-24.27	22.61	-0.14
336	SLU 18	459	34	3638	-24.63	22.98	-0.15
336	SLU 19	459	34	3642	-24.67	23.02	-0.15
336	SLU 20	470	34	3669	-25	23.53	-0.15
336	SLU 21	470	34	3672	-25.04	23.57	-0.15
336	SLU 22	421	32	3392	-23.54	21.16	-0.14
336	SLU 23	422	32	3398	-23.6	21.23	-0.14
336	SLU 24	437	33	3448	-24.21	21.94	-0.14
336	SLU 25	438	33	3451	-24.25	21.98	-0.14
336	SLU 26	433	33	3428	-23.97	21.77	-0.14
336	SLU 27	448	34	3478	-24.58	22.49	-0.15
336	SLU 28	449	34	3482	-24.62	22.53	-0.15
336	SLU 29	443	33	3453	-24.29	22.26	-0.14
336	SLU 30	444	33	3456	-24.32	22.3	-0.14
336	SLU 31	494	36	3846	-26.27	24.73	-0.16
336	SLU 32	508	37	3896	-26.88	25.45	-0.16
336	SLU 33	509	37	3899	-26.92	25.49	-0.16
336	SLU 34	505	37	3876	-26.64	25.28	-0.16
336	SLU 35	520	37	3927	-27.25	26	-0.16
336	SLU 36	520	37	3930	-27.29	26.03	-0.16
336	SLU 37	515	37	3901	-26.96	25.77	-0.16
336	SLU 38	516	37	3905	-26.99	25.8	-0.16
336	SLU 39	523	38	4032	-27.35	26.17	-0.16
336	SLU 40	524	38	4036	-27.39	26.21	-0.16
336	SLU 41	534	38	4063	-27.73	26.72	-0.16



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
336	SLU 42	535	38	4066	-27.76	26.76	-0.16
336	SLU 43	441	36	3763	-26.13	22.27	-0.16
336	SLU 44	442	36	3768	-26.19	22.33	-0.16
336	SLU 45	457	37	3818	-26.8	23.05	-0.16
336	SLU 46	458	37	3822	-26.84	23.09	-0.16
336	SLU 47	453	36	3799	-26.56	22.88	-0.16
336	SLU 48	468	37	3849	-27.17	23.6	-0.16
336	SLU 49	469	37	3852	-27.21	23.64	-0.16
336	SLU 50	463	37	3824	-26.87	23.37	-0.16
336	SLU 51	464	37	3827	-26.91	23.4	-0.16
336	SLU 52	514	40	4216	-28.86	25.84	-0.17
336	SLU 53	528	40	4267	-29.47	26.56	-0.17
336	SLU 54	529	40	4270	-29.5	26.59	-0.18
336	SLU 55	525	40	4247	-29.23	26.39	-0.17
336	SLU 56	540	41	4297	-29.84	27.1	-0.18
336	SLU 57	540	41	4300	-29.88	27.14	-0.18
336	SLU 58	535	40	4272	-29.54	26.87	-0.18
336	SLU 59	536	41	4275	-29.58	26.91	-0.18
336	SLU 60	543	41	4403	-29.94	27.28	-0.18
336	SLU 61	544	41	4406	-29.98	27.32	-0.18
336	SLU 62	554	42	4433	-30.31	27.83	-0.18
336	SLU 63	555	42	4437	-30.35	27.86	-0.18
336	SLU 64	506	40	4156	-28.85	25.46	-0.17
336	SLU 65	507	40	4162	-28.91	25.52	-0.17
336	SLU 66	522	40	4212	-29.52	26.24	-0.18
336	SLU 67	522	40	4216	-29.56	26.28	-0.18
336	SLU 68	518	40	4193	-29.29	26.07	-0.17
336	SLU 69	533	41	4243	-29.9	26.79	-0.18
336	SLU 70	533	41	4246	-29.93	26.83	-0.18
336	SLU 71	528	41	4217	-29.6	26.56	-0.18
336	SLU 72	529	41	4221	-29.63	26.59	-0.18
336	SLU 73	578	43	4610	-31.58	29.03	-0.19
336	SLU 74	593	44	4660	-32.19	29.75	-0.19
336	SLU 75	594	44	4664	-32.23	29.78	-0.19
336	SLU 76	590	44	4641	-31.95	29.58	-0.19
336	SLU 77	604	45	4691	-32.56	30.3	-0.19
336	SLU 78	605	45	4694	-32.6	30.33	-0.19
336	SLU 79	600	44	4666	-32.27	30.06	-0.19
336	SLU 80	600	44	4669	-32.3	30.1	-0.19
336	SLU 81	608	45	4797	-32.66	30.47	-0.19
336	SLU 82	609	45	4800	-32.7	30.51	-0.19
336	SLU 83	619	45	4827	-33.04	31.02	-0.2
336	SLU 84	620	45	4830	-33.07	31.05	-0.2
336	SLE RA 1	375	30	3111	-21.6	18.88	-0.13
336	SLE RA 2	376	30	3114	-21.64	18.93	-0.13
336	SLE RA 3	385	30	3148	-22.04	19.4	-0.13
336	SLE RA 4	386	30	3150	-22.07	19.43	-0.13
336	SLE RA 5	383	30	3135	-21.88	19.29	-0.13
336	SLE RA 6	393	31	3168	-22.29	19.77	-0.13
336	SLE RA 7	393	31	3171	-22.32	19.79	-0.13
336	SLE RA 8	390	30	3151	-22.09	19.61	-0.13
336	SLE RA 9	390	30	3154	-22.12	19.64	-0.13
336	SLE RA 10	423	32	3413	-23.41	21.26	-0.14
336	SLE RA 11	433	33	3447	-23.82	21.74	-0.14
336	SLE RA 12	433	33	3449	-23.85	21.77	-0.14
336	SLE RA 13	431	32	3434	-23.66	21.63	-0.14
336	SLE RA 14	440	33	3467	-24.07	22.11	-0.14
336	SLE RA 15	441	33	3469	-24.09	22.13	-0.14
336	SLE RA 16	437	33	3450	-23.87	21.95	-0.14
336	SLE RA 17	438	33	3452	-23.9	21.98	-0.14
336	SLE RA 18	443	33	3537	-24.14	22.22	-0.14
336	SLE RA 19	443	33	3540	-24.16	22.25	-0.14
336	SLE RA 20	450	33	3558	-24.39	22.59	-0.14
336	SLE RA 21	451	33	3560	-24.41	22.61	-0.15
336	SLE FR 1	375	30	3111	-21.6	18.88	-0.13
336	SLE FR 2	375	30	3111	-21.6	18.89	-0.13
336	SLE FR 3	378	30	3119	-21.69	19.03	-0.13
336	SLE FR 4	395	31	3239	-22.37	19.89	-0.13
336	SLE FR 5	398	31	3247	-22.46	20.03	-0.13
336	SLE FR 6	409	31	3324	-22.87	20.55	-0.14
336	SLE QP 1	375	30	3111	-21.6	18.88	-0.13
336	SLE QP 2	395	31	3239	-22.36	19.89	-0.13
336	SLD 1	953	27	3154	-4.55	44.47	-0.05
336	SLD 2	953	27	3154	-4.55	44.47	-0.05
336	SLD 3	1058	51	3541	-26.39	49.01	-0.15
336	SLD 4	1058	51	3541	-26.39	49.01	-0.15
336	SLD 5	405	-8	2626	16.11	20.37	0.05
336	SLD 6	405	-8	2626	16.11	20.37	0.05
336	SLD 7	752	74	3916	-56.7	35.51	-0.29
336	SLD 8	752	74	3916	-56.7	35.51	-0.29
336	SLD 9	39	-13	2561	11.98	4.26	0.03
336	SLD 10	39	-13	2561	11.98	4.26	0.03
336	SLD 11	386	69	3851	-60.83	19.4	-0.31
336	SLD 12	386	69	3851	-60.83	19.4	-0.31
336	SLD 13	-267	10	2937	-18.32	-9.23	-0.12
336	SLD 14	-267	10	2937	-18.32	-9.23	-0.12
336	SLD 15	-163	35	3324	-40.16	-4.69	-0.22
336	SLD 16	-163	35	3324	-40.16	-4.69	-0.22
336	SLV 1	1681	21	3041	19.43	76.51	0.06
336	SLV 2	1681	21	3041	19.43	76.51	0.06



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
336	SLV 3	1926	79	3952	-31.74	87.18	-0.17
336	SLV 4	1926	79	3952	-31.74	87.18	-0.17
336	SLV 5	409	-60	1798	67.8	20.69	0.29
336	SLV 6	409	-60	1798	67.8	20.69	0.29
336	SLV 7	1226	133	4834	-102.79	56.25	-0.5
336	SLV 8	1226	133	4834	-102.79	56.25	-0.5
336	SLV 9	-436	-72	1643	58.07	-16.48	0.24
336	SLV 10	-436	-72	1643	58.07	-16.48	0.24
336	SLV 11	381	121	4680	-112.51	19.08	-0.55
336	SLV 12	381	121	4680	-112.51	19.08	-0.55
336	SLV 13	-1135	-18	2526	-12.97	-47.41	-0.09
336	SLV 14	-1135	-18	2526	-12.97	-47.41	-0.09
336	SLV 15	-890	40	3437	-64.15	-36.74	-0.33
336	SLV 16	-890	40	3437	-64.15	-36.74	-0.33
337	SLU 1	532	28	2872	-20.88	22.63	-0.13
337	SLU 2	534	28	2876	-20.94	22.72	-0.13
337	SLU 3	553	29	2926	-21.56	23.5	-0.14
337	SLU 4	554	29	2929	-21.59	23.55	-0.14
337	SLU 5	548	29	2907	-21.32	23.27	-0.14
337	SLU 6	567	29	2957	-21.94	24.06	-0.14
337	SLU 7	568	30	2959	-21.97	24.11	-0.14
337	SLU 8	560	29	2933	-21.64	23.75	-0.14
337	SLU 9	561	29	2935	-21.67	23.8	-0.14
337	SLU 10	628	32	3308	-23.61	26.7	-0.15
337	SLU 11	647	33	3358	-24.23	27.48	-0.15
337	SLU 12	648	33	3360	-24.27	27.53	-0.16
337	SLU 13	642	32	3338	-24	27.26	-0.15
337	SLU 14	661	33	3388	-24.61	28.04	-0.16
337	SLU 15	662	33	3390	-24.65	28.09	-0.16
337	SLU 16	654	33	3364	-24.32	27.73	-0.16
337	SLU 17	655	33	3367	-24.35	27.78	-0.16
337	SLU 18	666	33	3488	-24.7	28.32	-0.16
337	SLU 19	668	33	3491	-24.74	28.37	-0.16
337	SLU 20	680	34	3519	-25.08	28.88	-0.16
337	SLU 21	681	34	3521	-25.12	28.93	-0.16
337	SLU 22	620	32	3250	-23.61	26.34	-0.15
337	SLU 23	622	32	3254	-23.67	26.43	-0.15
337	SLU 24	641	33	3304	-24.29	27.21	-0.16
337	SLU 25	642	33	3307	-24.33	27.26	-0.16
337	SLU 26	636	32	3285	-24.05	26.99	-0.15
337	SLU 27	655	33	3335	-24.67	27.77	-0.16
337	SLU 28	656	33	3337	-24.71	27.82	-0.16
337	SLU 29	648	33	3311	-24.37	27.46	-0.16
337	SLU 30	649	33	3313	-24.41	27.51	-0.16
337	SLU 31	716	35	3686	-26.35	30.41	-0.17
337	SLU 32	735	36	3736	-26.97	31.19	-0.17
337	SLU 33	736	36	3738	-27.01	31.24	-0.17
337	SLU 34	730	36	3716	-26.73	30.97	-0.17
337	SLU 35	749	37	3766	-27.35	31.75	-0.17
337	SLU 36	750	37	3768	-27.39	31.8	-0.18
337	SLU 37	742	36	3742	-27.05	31.45	-0.17
337	SLU 38	743	36	3745	-27.09	31.5	-0.17
337	SLU 39	754	37	3866	-27.44	32.03	-0.18
337	SLU 40	755	37	3869	-27.47	32.09	-0.18
337	SLU 41	768	37	3897	-27.82	32.59	-0.18
337	SLU 42	769	38	3899	-27.85	32.64	-0.18
337	SLU 43	662	35	3604	-26.2	28.15	-0.17
337	SLU 44	664	35	3608	-26.26	28.23	-0.17
337	SLU 45	683	36	3658	-26.88	29.01	-0.17
337	SLU 46	684	36	3661	-26.92	29.06	-0.17
337	SLU 47	678	36	3639	-26.64	28.79	-0.17
337	SLU 48	697	37	3689	-27.26	29.57	-0.17
337	SLU 49	698	37	3691	-27.3	29.62	-0.17
337	SLU 50	690	36	3665	-26.96	29.27	-0.17
337	SLU 51	691	36	3667	-27	29.32	-0.17
337	SLU 52	758	39	4040	-28.94	32.22	-0.19
337	SLU 53	777	40	4090	-29.56	33	-0.19
337	SLU 54	778	40	4092	-29.6	33.05	-0.19
337	SLU 55	771	39	4070	-29.32	32.78	-0.19
337	SLU 56	791	40	4120	-29.94	33.56	-0.19
337	SLU 57	792	40	4123	-29.98	33.61	-0.19
337	SLU 58	784	40	4096	-29.64	33.25	-0.19
337	SLU 59	785	40	4099	-29.68	33.3	-0.19
337	SLU 60	796	40	4220	-30.03	33.84	-0.19
337	SLU 61	797	40	4223	-30.06	33.89	-0.19
337	SLU 62	810	41	4251	-30.41	34.4	-0.19
337	SLU 63	811	41	4253	-30.44	34.45	-0.19
337	SLU 64	750	39	3982	-28.94	31.86	-0.18
337	SLU 65	751	39	3986	-29	31.94	-0.19
337	SLU 66	771	40	4036	-29.62	32.73	-0.19
337	SLU 67	772	40	4039	-29.65	32.78	-0.19
337	SLU 68	765	40	4017	-29.38	32.5	-0.19
337	SLU 69	785	40	4067	-30	33.28	-0.19
337	SLU 70	786	40	4069	-30.03	33.34	-0.19
337	SLU 71	777	40	4043	-29.7	32.98	-0.19
337	SLU 72	778	40	4045	-29.73	33.03	-0.19
337	SLU 73	845	43	4418	-31.68	35.93	-0.2
337	SLU 74	865	43	4468	-32.29	36.71	-0.21
337	SLU 75	866	44	4470	-32.33	36.76	-0.21
337	SLU 76	859	43	4448	-32.06	36.49	-0.21



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
337	SLU 77	878	44	4498	-32.68	37.27	-0.21
337	SLU 78	880	44	4501	-32.71	37.32	-0.21
337	SLU 79	871	44	4474	-32.38	36.96	-0.21
337	SLU 80	872	44	4477	-32.41	37.01	-0.21
337	SLU 81	884	44	4598	-32.76	37.55	-0.21
337	SLU 82	885	44	4601	-32.8	37.6	-0.21
337	SLU 83	898	45	4629	-33.14	38.11	-0.21
337	SLU 84	899	45	4631	-33.18	38.16	-0.21
337	SLE RA 1	557	29	2980	-21.66	23.69	-0.14
337	SLE RA 2	559	29	2983	-21.7	23.75	-0.14
337	SLE RA 3	571	30	3016	-22.11	24.27	-0.14
337	SLE RA 4	572	30	3018	-22.14	24.3	-0.14
337	SLE RA 5	568	30	3003	-21.95	24.12	-0.14
337	SLE RA 6	581	30	3037	-22.37	24.64	-0.14
337	SLE RA 7	581	30	3038	-22.39	24.68	-0.14
337	SLE RA 8	576	30	3021	-22.17	24.44	-0.14
337	SLE RA 9	577	30	3022	-22.19	24.47	-0.14
337	SLE RA 10	621	32	3270	-23.48	26.4	-0.15
337	SLE RA 11	634	32	3304	-23.9	26.92	-0.15
337	SLE RA 12	635	32	3305	-23.92	26.96	-0.15
337	SLE RA 13	630	32	3291	-23.74	26.78	-0.15
337	SLE RA 14	643	32	3324	-24.15	27.3	-0.15
337	SLE RA 15	644	33	3326	-24.17	27.33	-0.15
337	SLE RA 16	638	32	3308	-23.95	27.09	-0.15
337	SLE RA 17	639	32	3310	-23.98	27.13	-0.15
337	SLE RA 18	647	33	3391	-24.21	27.49	-0.15
337	SLE RA 19	648	33	3393	-24.23	27.52	-0.15
337	SLE RA 20	656	33	3411	-24.46	27.86	-0.16
337	SLE RA 21	657	33	3413	-24.49	27.89	-0.16
337	SLE FR 1	557	29	2980	-21.66	23.69	-0.14
337	SLE FR 2	558	29	2981	-21.67	23.7	-0.14
337	SLE FR 3	561	29	2988	-21.76	23.84	-0.14
337	SLE FR 4	584	30	3104	-22.43	24.84	-0.14
337	SLE FR 5	588	30	3111	-22.53	24.98	-0.14
337	SLE FR 6	602	31	3186	-22.93	25.59	-0.15
337	SLE QP 1	557	29	2980	-21.66	23.69	-0.14
337	SLE QP 2	584	30	3103	-22.42	24.83	-0.14
337	SLD 1	1163	27	3025	-18.63	49.82	-0.13
337	SLD 2	1163	27	3025	-18.63	49.82	-0.13
337	SLD 3	1288	51	3406	-40.39	55.3	-0.24
337	SLD 4	1288	51	3406	-40.39	55.3	-0.24
337	SLD 5	567	-8	2501	11.71	24.02	0.04
337	SLD 6	567	-8	2501	11.71	24.02	0.04
337	SLD 7	986	73	3773	-60.81	42.28	-0.35
337	SLD 8	986	73	3773	-60.81	42.28	-0.35
337	SLD 9	183	-13	2434	15.97	7.38	0.06
337	SLD 10	183	-13	2434	15.97	7.38	0.06
337	SLD 11	601	68	3706	-56.56	25.64	-0.32
337	SLD 12	601	68	3706	-56.56	25.64	-0.32
337	SLD 13	-120	9	2800	-4.46	-5.64	-0.05
337	SLD 14	-120	9	2800	-4.46	-5.64	-0.05
337	SLD 15	6	34	3182	-26.22	-0.16	-0.16
337	SLD 16	6	34	3182	-26.22	-0.16	-0.16
337	SLV 1	1916	22	2918	-13.61	82.38	-0.1
337	SLV 2	1916	22	2918	-13.61	82.38	-0.1
337	SLV 3	2211	79	3818	-64.59	95.25	-0.37
337	SLV 4	2211	79	3818	-64.59	95.25	-0.37
337	SLV 5	536	-59	1683	57.54	22.58	0.28
337	SLV 6	536	-59	1683	57.54	22.58	0.28
337	SLV 7	1520	132	4683	-112.4	65.47	-0.62
337	SLV 8	1520	132	4683	-112.4	65.47	-0.62
337	SLV 9	-352	-71	1524	67.55	-15.81	0.33
337	SLV 10	-352	-71	1524	67.55	-15.81	0.33
337	SLV 11	632	120	4524	-102.39	27.08	-0.56
337	SLV 12	632	120	4524	-102.39	27.08	-0.56
337	SLV 13	-1043	-19	2388	19.74	-45.59	0.09
337	SLV 14	-1043	-19	2388	19.74	-45.59	0.09
337	SLV 15	-748	38	3288	-31.24	-32.72	-0.18
337	SLV 16	-748	38	3288	-31.24	-32.72	-0.18
338	SLU 1	710	27	2964	-19.75	30.58	-0.13
338	SLU 2	712	27	2967	-19.81	30.69	-0.13
338	SLU 3	737	28	3023	-20.4	31.76	-0.14
338	SLU 4	738	28	3025	-20.44	31.82	-0.14
338	SLU 5	729	28	3001	-20.18	31.44	-0.14
338	SLU 6	754	29	3057	-20.77	32.51	-0.14
338	SLU 7	755	29	3059	-20.8	32.58	-0.14
338	SLU 8	744	28	3031	-20.49	32.09	-0.14
338	SLU 9	746	28	3033	-20.52	32.15	-0.14
338	SLU 10	830	31	3414	-22.35	35.75	-0.15
338	SLU 11	854	32	3469	-22.95	36.82	-0.15
338	SLU 12	856	32	3471	-22.98	36.89	-0.15
338	SLU 13	847	31	3448	-22.72	36.51	-0.15
338	SLU 14	871	32	3503	-23.32	37.58	-0.16
338	SLU 15	873	32	3505	-23.35	37.64	-0.16
338	SLU 16	862	32	3478	-23.03	37.16	-0.16
338	SLU 17	863	32	3480	-23.07	37.22	-0.16
338	SLU 18	878	32	3602	-23.39	37.82	-0.16
338	SLU 19	879	32	3604	-23.42	37.88	-0.16
338	SLU 20	895	33	3636	-23.76	38.57	-0.16
338	SLU 21	896	33	3638	-23.79	38.64	-0.16



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
338	SLU 22	821	31	3357	-22.35	35.4	-0.15
338	SLU 23	824	31	3360	-22.41	35.5	-0.15
338	SLU 24	848	32	3416	-23	36.57	-0.15
338	SLU 25	850	32	3418	-23.04	36.64	-0.16
338	SLU 26	841	31	3394	-22.77	36.26	-0.15
338	SLU 27	866	32	3450	-23.37	37.33	-0.16
338	SLU 28	867	32	3452	-23.4	37.39	-0.16
338	SLU 29	856	32	3425	-23.09	36.91	-0.16
338	SLU 30	857	32	3427	-23.12	36.97	-0.16
338	SLU 31	941	34	3807	-24.95	40.57	-0.17
338	SLU 32	966	35	3862	-25.55	41.64	-0.17
338	SLU 33	967	35	3864	-25.58	41.7	-0.17
338	SLU 34	958	35	3841	-25.32	41.32	-0.17
338	SLU 35	983	36	3896	-25.91	42.4	-0.17
338	SLU 36	984	36	3898	-25.95	42.46	-0.17
338	SLU 37	973	35	3871	-25.63	41.97	-0.17
338	SLU 38	975	35	3873	-25.67	42.04	-0.17
338	SLU 39	989	36	3995	-25.99	42.63	-0.18
338	SLU 40	991	36	3997	-26.02	42.7	-0.18
338	SLU 41	1006	36	4029	-26.36	43.39	-0.18
338	SLU 42	1008	36	4031	-26.39	43.45	-0.18
338	SLU 43	885	34	3718	-24.79	38.1	-0.17
338	SLU 44	887	34	3721	-24.84	38.21	-0.17
338	SLU 45	912	35	3777	-25.44	39.28	-0.17
338	SLU 46	913	35	3779	-25.47	39.34	-0.17
338	SLU 47	904	35	3755	-25.21	38.97	-0.17
338	SLU 48	929	36	3811	-25.8	40.04	-0.17
338	SLU 49	930	36	3813	-25.84	40.1	-0.17
338	SLU 50	919	35	3786	-25.52	39.61	-0.17
338	SLU 51	920	35	3788	-25.55	39.68	-0.17
338	SLU 52	1004	38	4168	-27.39	43.28	-0.18
338	SLU 53	1029	39	4224	-27.98	44.35	-0.19
338	SLU 54	1030	39	4226	-28.02	44.41	-0.19
338	SLU 55	1022	38	4202	-27.76	44.03	-0.19
338	SLU 56	1046	39	4257	-28.35	45.1	-0.19
338	SLU 57	1048	39	4260	-28.38	45.17	-0.19
338	SLU 58	1036	39	4232	-28.07	44.68	-0.19
338	SLU 59	1038	39	4234	-28.1	44.74	-0.19
338	SLU 60	1052	39	4356	-28.43	45.34	-0.19
338	SLU 61	1054	39	4358	-28.46	45.41	-0.19
338	SLU 62	1070	40	4390	-28.79	46.1	-0.19
338	SLU 63	1071	40	4392	-28.83	46.16	-0.19
338	SLU 64	996	38	4111	-27.39	42.92	-0.18
338	SLU 65	999	38	4114	-27.44	43.03	-0.18
338	SLU 66	1023	39	4170	-28.04	44.1	-0.19
338	SLU 67	1025	39	4172	-28.07	44.16	-0.19
338	SLU 68	1016	38	4148	-27.81	43.78	-0.19
338	SLU 69	1040	39	4204	-28.4	44.85	-0.19
338	SLU 70	1042	39	4206	-28.44	44.92	-0.19
338	SLU 71	1031	39	4179	-28.12	44.43	-0.19
338	SLU 72	1032	39	4181	-28.15	44.49	-0.19
338	SLU 73	1116	41	4561	-29.99	48.09	-0.2
338	SLU 74	1141	42	4617	-30.58	49.16	-0.21
338	SLU 75	1142	42	4619	-30.62	49.23	-0.21
338	SLU 76	1133	42	4595	-30.36	48.85	-0.2
338	SLU 77	1158	43	4651	-30.95	49.92	-0.21
338	SLU 78	1159	43	4653	-30.98	49.98	-0.21
338	SLU 79	1148	42	4626	-30.67	49.5	-0.21
338	SLU 80	1149	42	4628	-30.7	49.56	-0.21
338	SLU 81	1164	43	4749	-31.02	50.16	-0.21
338	SLU 82	1165	43	4751	-31.06	50.22	-0.21
338	SLU 83	1181	43	4783	-31.39	50.91	-0.21
338	SLU 84	1183	43	4785	-31.42	50.98	-0.21
338	SLE RA 1	742	28	3076	-20.5	31.96	-0.14
338	SLE RA 2	743	28	3078	-20.53	32.03	-0.14
338	SLE RA 3	760	29	3115	-20.93	32.74	-0.14
338	SLE RA 4	761	29	3117	-20.95	32.78	-0.14
338	SLE RA 5	755	29	3101	-20.78	32.53	-0.14
338	SLE RA 6	771	29	3138	-21.17	33.24	-0.14
338	SLE RA 7	772	29	3139	-21.2	33.29	-0.14
338	SLE RA 8	765	29	3121	-20.98	32.96	-0.14
338	SLE RA 9	766	29	3123	-21.01	33.01	-0.14
338	SLE RA 10	822	31	3376	-22.23	35.41	-0.15
338	SLE RA 11	838	31	3413	-22.63	36.12	-0.15
338	SLE RA 12	839	31	3414	-22.65	36.16	-0.15
338	SLE RA 13	833	31	3399	-22.47	35.91	-0.15
338	SLE RA 14	850	32	3436	-22.87	36.62	-0.15
338	SLE RA 15	850	32	3437	-22.89	36.67	-0.15
338	SLE RA 16	843	31	3419	-22.68	36.34	-0.15
338	SLE RA 17	844	31	3420	-22.7	36.38	-0.15
338	SLE RA 18	854	32	3501	-22.92	36.78	-0.15
338	SLE RA 19	855	32	3503	-22.94	36.82	-0.15
338	SLE RA 20	865	32	3524	-23.17	37.29	-0.16
338	SLE RA 21	866	32	3525	-23.19	37.33	-0.16
338	SLE FR 1	742	28	3076	-20.5	31.96	-0.14
338	SLE FR 2	742	28	3076	-20.5	31.97	-0.14
338	SLE FR 3	746	28	3085	-20.59	32.16	-0.14
338	SLE FR 4	776	29	3204	-21.23	33.42	-0.14
338	SLE FR 5	780	29	3213	-21.32	33.61	-0.14
338	SLE FR 6	798	30	3289	-21.71	34.37	-0.15



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
338	SLE QP 1	742	28	3076	-20.5	31.96	-0.14
338	SLE QP 2	775	29	3203	-21.22	33.4	-0.14
338	SLD 1	1353	27	3157	-18.18	58.72	-0.13
338	SLD 2	1353	27	3157	-18.18	58.72	-0.13
338	SLD 3	1499	48	3537	-37.83	64.84	-0.24
338	SLD 4	1499	48	3537	-37.83	64.84	-0.24
338	SLD 5	726	-4	2613	9.5	31.72	0.03
338	SLD 6	726	-4	2613	9.5	31.72	0.03
338	SLD 7	1215	68	3880	-56.01	52.12	-0.34
338	SLD 8	1215	68	3880	-56.01	52.12	-0.34
338	SLD 9	336	-9	2527	13.57	14.69	0.05
338	SLD 10	336	-9	2527	13.57	14.69	0.05
338	SLD 11	824	62	3794	-51.94	35.09	-0.31
338	SLD 12	824	62	3794	-51.94	35.09	-0.31
338	SLD 13	52	10	2870	-4.61	1.97	-0.05
338	SLD 14	52	10	2870	-4.61	1.97	-0.05
338	SLD 15	198	32	3250	-24.27	8.09	-0.16
338	SLD 16	198	32	3250	-24.27	8.09	-0.16
338	SLV 1	2104	24	3090	-14.14	91.69	-0.11
338	SLV 2	2104	24	3090	-14.14	91.69	-0.11
338	SLV 3	2450	74	3989	-60.2	106.11	-0.37
338	SLV 4	2450	74	3989	-60.2	106.11	-0.37
338	SLV 5	650	-49	1806	50.75	29.02	0.26
338	SLV 6	650	-49	1806	50.75	29.02	0.26
338	SLV 7	1802	119	4803	-102.76	77.09	-0.6
338	SLV 8	1802	119	4803	-102.76	77.09	-0.6
338	SLV 9	-251	-60	1604	60.31	-10.28	0.31
338	SLV 10	-251	-60	1604	60.31	-10.28	0.31
338	SLV 11	901	107	4601	-93.19	37.79	-0.54
338	SLV 12	901	107	4601	-93.19	37.79	-0.54
338	SLV 13	-899	-16	2418	17.75	-39.3	0.09
338	SLV 14	-899	-16	2418	17.75	-39.3	0.09
338	SLV 15	-554	35	3317	-28.3	-24.88	-0.17
338	SLV 16	-554	35	3317	-28.3	-24.88	-0.17
339	SLU 1	792	24	3222	-17.01	32.45	-0.11
339	SLU 2	794	24	3225	-17.06	32.57	-0.11
339	SLU 3	820	25	3290	-17.57	33.63	-0.11
339	SLU 4	822	25	3292	-17.6	33.7	-0.11
339	SLU 5	812	25	3265	-17.38	33.29	-0.11
339	SLU 6	838	25	3331	-17.89	34.35	-0.11
339	SLU 7	840	25	3333	-17.92	34.42	-0.11
339	SLU 8	827	25	3302	-17.65	33.9	-0.11
339	SLU 9	829	25	3304	-17.68	33.96	-0.11
339	SLU 10	919	27	3711	-19.26	37.7	-0.12
339	SLU 11	946	28	3777	-19.78	38.76	-0.13
339	SLU 12	947	28	3778	-19.81	38.83	-0.13
339	SLU 13	937	28	3751	-19.58	38.42	-0.13
339	SLU 14	963	29	3817	-20.1	39.48	-0.13
339	SLU 15	965	29	3819	-20.13	39.55	-0.13
339	SLU 16	952	28	3788	-19.85	39.03	-0.13
339	SLU 17	954	28	3790	-19.88	39.1	-0.13
339	SLU 18	970	29	3916	-20.16	39.79	-0.13
339	SLU 19	972	29	3918	-20.19	39.86	-0.13
339	SLU 20	988	29	3956	-20.48	40.51	-0.13
339	SLU 21	990	29	3958	-20.51	40.58	-0.13
339	SLU 22	912	27	3653	-19.26	37.38	-0.12
339	SLU 23	914	27	3656	-19.3	37.49	-0.12
339	SLU 24	941	28	3722	-19.82	38.56	-0.13
339	SLU 25	942	28	3724	-19.85	38.62	-0.13
339	SLU 26	932	28	3697	-19.63	38.21	-0.13
339	SLU 27	959	29	3762	-20.14	39.28	-0.13
339	SLU 28	960	29	3764	-20.17	39.34	-0.13
339	SLU 29	948	28	3734	-19.9	38.82	-0.13
339	SLU 30	949	28	3736	-19.93	38.89	-0.13
339	SLU 31	1039	31	4142	-21.51	42.63	-0.14
339	SLU 32	1066	31	4208	-22.02	43.69	-0.14
339	SLU 33	1067	31	4210	-22.05	43.76	-0.14
339	SLU 34	1057	31	4183	-21.83	43.35	-0.14
339	SLU 35	1084	32	4248	-22.35	44.41	-0.14
339	SLU 36	1085	32	4250	-22.38	44.48	-0.14
339	SLU 37	1073	31	4220	-22.1	43.96	-0.14
339	SLU 38	1074	32	4222	-22.13	44.02	-0.14
339	SLU 39	1090	32	4348	-22.4	44.72	-0.14
339	SLU 40	1092	32	4349	-22.43	44.78	-0.14
339	SLU 41	1108	32	4388	-22.73	45.44	-0.15
339	SLU 42	1110	32	4390	-22.76	45.5	-0.15
339	SLU 43	988	30	4040	-21.34	40.5	-0.14
339	SLU 44	990	30	4043	-21.39	40.61	-0.14
339	SLU 45	1017	31	4109	-21.9	41.68	-0.14
339	SLU 46	1018	31	4111	-21.93	41.74	-0.14
339	SLU 47	1008	31	4083	-21.71	41.33	-0.14
339	SLU 48	1035	31	4149	-22.22	42.4	-0.14
339	SLU 49	1036	32	4151	-22.25	42.46	-0.14
339	SLU 50	1024	31	4121	-21.98	41.94	-0.14
339	SLU 51	1025	31	4122	-22.01	42.01	-0.14
339	SLU 52	1115	33	4529	-23.59	45.75	-0.15
339	SLU 53	1142	34	4595	-24.11	46.81	-0.15
339	SLU 54	1143	34	4597	-24.14	46.88	-0.15
339	SLU 55	1133	34	4569	-23.91	46.47	-0.15
339	SLU 56	1160	35	4635	-24.43	47.53	-0.16



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
339	SLU 57	1161	35	4637	-24.46	47.6	-0.16
339	SLU 58	1149	34	4607	-24.19	47.08	-0.15
339	SLU 59	1150	34	4608	-24.22	47.14	-0.15
339	SLU 60	1166	35	4734	-24.49	47.84	-0.16
339	SLU 61	1168	35	4736	-24.52	47.9	-0.16
339	SLU 62	1184	35	4775	-24.81	48.56	-0.16
339	SLU 63	1186	35	4776	-24.84	48.62	-0.16
339	SLU 64	1108	33	4472	-23.59	45.43	-0.15
339	SLU 65	1110	33	4475	-23.64	45.54	-0.15
339	SLU 66	1137	34	4541	-24.15	46.6	-0.15
339	SLU 67	1138	34	4542	-24.18	46.67	-0.15
339	SLU 68	1128	34	4515	-23.96	46.26	-0.15
339	SLU 69	1155	35	4581	-24.47	47.32	-0.16
339	SLU 70	1156	35	4583	-24.5	47.39	-0.16
339	SLU 71	1144	34	4552	-24.23	46.87	-0.15
339	SLU 72	1145	34	4554	-24.26	46.94	-0.15
339	SLU 73	1236	37	4961	-25.84	50.67	-0.16
339	SLU 74	1262	37	5027	-26.36	51.74	-0.17
339	SLU 75	1264	37	5028	-26.39	51.8	-0.17
339	SLU 76	1253	37	5001	-26.16	51.4	-0.17
339	SLU 77	1280	38	5067	-26.68	52.46	-0.17
339	SLU 78	1281	38	5069	-26.71	52.52	-0.17
339	SLU 79	1269	38	5038	-26.43	52.01	-0.17
339	SLU 80	1270	38	5040	-26.46	52.07	-0.17
339	SLU 81	1287	38	5166	-26.74	52.76	-0.17
339	SLU 82	1288	38	5168	-26.77	52.83	-0.17
339	SLU 83	1305	38	5206	-27.06	53.48	-0.17
339	SLU 84	1306	39	5208	-27.09	53.55	-0.17
339	SLE RA 1	826	25	3345	-17.65	33.86	-0.11
339	SLE RA 2	828	25	3347	-17.68	33.94	-0.11
339	SLE RA 3	845	26	3391	-18.03	34.65	-0.11
339	SLE RA 4	846	26	3392	-18.05	34.69	-0.12
339	SLE RA 5	839	25	3374	-17.9	34.42	-0.11
339	SLE RA 6	857	26	3418	-18.24	35.13	-0.12
339	SLE RA 7	858	26	3419	-18.26	35.17	-0.12
339	SLE RA 8	850	26	3399	-18.08	34.82	-0.12
339	SLE RA 9	851	26	3400	-18.1	34.87	-0.12
339	SLE RA 10	911	27	3671	-19.15	37.36	-0.12
339	SLE RA 11	929	28	3715	-19.5	38.07	-0.12
339	SLE RA 12	930	28	3716	-19.52	38.11	-0.12
339	SLE RA 13	923	27	3698	-19.37	37.84	-0.12
339	SLE RA 14	941	28	3742	-19.71	38.55	-0.13
339	SLE RA 15	942	28	3743	-19.73	38.59	-0.13
339	SLE RA 16	933	28	3723	-19.55	38.25	-0.12
339	SLE RA 17	934	28	3724	-19.57	38.29	-0.12
339	SLE RA 18	945	28	3808	-19.75	38.75	-0.13
339	SLE RA 19	946	28	3809	-19.77	38.8	-0.13
339	SLE RA 20	957	28	3835	-19.96	39.23	-0.13
339	SLE RA 21	958	28	3836	-19.98	39.28	-0.13
339	SLE FR 1	826	25	3345	-17.65	33.86	-0.11
339	SLE FR 2	826	25	3345	-17.66	33.88	-0.11
339	SLE FR 3	831	25	3356	-17.74	34.06	-0.11
339	SLE FR 4	862	26	3484	-18.29	35.34	-0.12
339	SLE FR 5	866	26	3495	-18.37	35.52	-0.12
339	SLE FR 6	885	27	3576	-18.7	36.31	-0.12
339	SLE QP 1	826	25	3345	-17.65	33.86	-0.11
339	SLE QP 2	862	26	3484	-18.28	35.33	-0.12
339	SLD 1	1410	26	3471	-16.37	59.28	-0.11
339	SLD 2	1410	26	3471	-16.37	59.28	-0.11
339	SLD 3	1574	41	3864	-32.16	66.11	-0.19
339	SLD 4	1574	41	3864	-32.16	66.11	-0.19
339	SLD 5	777	2	2884	6.24	32.16	0.01
339	SLD 6	777	2	2884	6.24	32.16	0.01
339	SLD 7	1325	55	4194	-46.39	54.92	-0.27
339	SLD 8	1325	55	4194	-46.39	54.92	-0.27
339	SLD 9	398	-3	2774	9.83	15.74	0.03
339	SLD 10	398	-3	2774	9.83	15.74	0.03
339	SLD 11	947	50	4083	-42.8	38.5	-0.25
339	SLD 12	947	50	4083	-42.8	38.5	-0.25
339	SLD 13	149	10	3104	-4.4	4.55	-0.04
339	SLD 14	149	10	3104	-4.4	4.55	-0.04
339	SLD 15	314	26	3497	-20.19	11.38	-0.12
339	SLD 16	314	26	3497	-20.19	11.38	-0.12
339	SLV 1	2122	25	3446	-13.84	90.44	-0.1
339	SLV 2	2122	25	3446	-13.84	90.44	-0.1
339	SLV 3	2511	62	4380	-50.85	106.54	-0.3
339	SLV 4	2511	62	4380	-50.85	106.54	-0.3
339	SLV 5	651	-31	2055	39.18	27.44	0.19
339	SLV 6	651	-31	2055	39.18	27.44	0.19
339	SLV 7	1945	93	5170	-84.18	81.11	-0.47
339	SLV 8	1945	93	5170	-84.18	81.11	-0.47
339	SLV 9	-222	-41	1798	47.62	-10.45	0.24
339	SLV 10	-222	-41	1798	47.62	-10.45	0.24
339	SLV 11	1072	82	4912	-75.74	43.22	-0.42
339	SLV 12	1072	82	4912	-75.74	43.22	-0.42
339	SLV 13	-788	-11	2588	14.29	-35.88	0.07
339	SLV 14	-788	-11	2588	14.29	-35.88	0.07
339	SLV 15	-399	27	3522	-22.72	-19.78	-0.13
339	SLV 16	-399	27	3522	-22.72	-19.78	-0.13
340	SLU 1	800	16	3563	-12.16	33.25	-0.07



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
340	SLU 2	802	16	3566	-12.2	33.36	-0.07
340	SLU 3	829	16	3644	-12.56	34.48	-0.07
340	SLU 4	830	16	3646	-12.59	34.55	-0.07
340	SLU 5	820	16	3614	-12.43	34.12	-0.07
340	SLU 6	847	17	3692	-12.8	35.24	-0.07
340	SLU 7	848	17	3694	-12.82	35.31	-0.07
340	SLU 8	836	16	3659	-12.62	34.77	-0.07
340	SLU 9	837	16	3661	-12.65	34.84	-0.07
340	SLU 10	924	18	4101	-13.77	38.47	-0.08
340	SLU 11	951	18	4180	-14.14	39.59	-0.08
340	SLU 12	952	19	4182	-14.16	39.66	-0.08
340	SLU 13	942	18	4149	-14	39.23	-0.08
340	SLU 14	969	19	4228	-14.37	40.35	-0.08
340	SLU 15	970	19	4229	-14.39	40.42	-0.08
340	SLU 16	957	19	4194	-14.19	39.88	-0.08
340	SLU 17	959	19	4196	-14.22	39.95	-0.08
340	SLU 18	974	19	4328	-14.4	40.55	-0.08
340	SLU 19	975	19	4330	-14.43	40.62	-0.08
340	SLU 20	991	19	4376	-14.64	41.31	-0.08
340	SLU 21	993	19	4378	-14.66	41.38	-0.08
340	SLU 22	918	18	4044	-13.76	38.21	-0.08
340	SLU 23	920	18	4047	-13.8	38.32	-0.08
340	SLU 24	947	19	4125	-14.17	39.44	-0.08
340	SLU 25	949	19	4127	-14.19	39.51	-0.08
340	SLU 26	938	18	4094	-14.03	39.08	-0.08
340	SLU 27	965	19	4173	-14.4	40.2	-0.08
340	SLU 28	967	19	4174	-14.42	40.27	-0.08
340	SLU 29	954	19	4139	-14.23	39.73	-0.08
340	SLU 30	955	19	4141	-14.25	39.8	-0.08
340	SLU 31	1042	20	4582	-15.37	43.43	-0.09
340	SLU 32	1069	21	4660	-15.74	44.55	-0.09
340	SLU 33	1071	21	4662	-15.77	44.62	-0.09
340	SLU 34	1060	20	4630	-15.61	44.19	-0.09
340	SLU 35	1087	21	4708	-15.97	45.31	-0.09
340	SLU 36	1088	21	4710	-16	45.38	-0.09
340	SLU 37	1076	21	4675	-15.8	44.84	-0.09
340	SLU 38	1077	21	4676	-15.82	44.91	-0.09
340	SLU 39	1092	21	4809	-16.01	45.51	-0.09
340	SLU 40	1093	21	4810	-16.03	45.58	-0.09
340	SLU 41	1110	21	4857	-16.24	46.27	-0.09
340	SLU 42	1111	21	4858	-16.26	46.34	-0.09
340	SLU 43	999	20	4468	-15.25	41.53	-0.09
340	SLU 44	1001	20	4470	-15.29	41.63	-0.09
340	SLU 45	1028	20	4549	-15.66	42.76	-0.09
340	SLU 46	1030	20	4550	-15.68	42.82	-0.09
340	SLU 47	1019	20	4518	-15.53	42.39	-0.09
340	SLU 48	1046	21	4597	-15.89	43.52	-0.09
340	SLU 49	1048	21	4598	-15.92	43.58	-0.09
340	SLU 50	1035	20	4563	-15.72	43.05	-0.09
340	SLU 51	1036	21	4565	-15.74	43.11	-0.09
340	SLU 52	1123	22	5006	-16.87	46.75	-0.1
340	SLU 53	1150	23	5084	-17.23	47.87	-0.1
340	SLU 54	1151	23	5086	-17.26	47.93	-0.1
340	SLU 55	1141	22	5054	-17.1	47.51	-0.1
340	SLU 56	1168	23	5132	-17.47	48.63	-0.1
340	SLU 57	1169	23	5134	-17.49	48.69	-0.1
340	SLU 58	1157	23	5099	-17.29	48.16	-0.1
340	SLU 59	1158	23	5100	-17.31	48.22	-0.1
340	SLU 60	1173	23	5233	-17.5	48.83	-0.1
340	SLU 61	1174	23	5234	-17.52	48.89	-0.1
340	SLU 62	1191	23	5280	-17.73	49.59	-0.1
340	SLU 63	1192	23	5282	-17.76	49.65	-0.1
340	SLU 64	1117	22	4948	-16.86	46.49	-0.1
340	SLU 65	1120	22	4951	-16.9	46.59	-0.1
340	SLU 66	1147	23	5029	-17.27	47.72	-0.1
340	SLU 67	1148	23	5031	-17.29	47.78	-0.1
340	SLU 68	1138	22	4999	-17.13	47.35	-0.1
340	SLU 69	1165	23	5077	-17.5	48.48	-0.1
340	SLU 70	1166	23	5079	-17.52	48.54	-0.1
340	SLU 71	1153	23	5044	-17.32	48.01	-0.1
340	SLU 72	1155	23	5045	-17.35	48.07	-0.1
340	SLU 73	1242	24	5486	-18.47	51.71	-0.11
340	SLU 74	1268	25	5565	-18.84	52.83	-0.11
340	SLU 75	1270	25	5566	-18.86	52.89	-0.11
340	SLU 76	1259	24	5534	-18.7	52.47	-0.11
340	SLU 77	1286	25	5612	-19.07	53.59	-0.11
340	SLU 78	1288	25	5614	-19.09	53.65	-0.11
340	SLU 79	1275	25	5579	-18.9	53.12	-0.11
340	SLU 80	1276	25	5581	-18.92	53.18	-0.11
340	SLU 81	1291	25	5713	-19.11	53.79	-0.11
340	SLU 82	1293	25	5715	-19.13	53.85	-0.11
340	SLU 83	1309	25	5761	-19.34	54.55	-0.11
340	SLU 84	1311	25	5762	-19.36	54.61	-0.11
340	SLE RA 1	833	16	3701	-12.62	34.67	-0.07
340	SLE RA 2	835	16	3702	-12.64	34.74	-0.07
340	SLE RA 3	853	17	3755	-12.89	35.49	-0.07
340	SLE RA 4	854	17	3756	-12.9	35.53	-0.07
340	SLE RA 5	847	17	3734	-12.8	35.25	-0.07
340	SLE RA 6	865	17	3787	-13.04	36	-0.08
340	SLE RA 7	866	17	3788	-13.06	36.04	-0.08



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
340	SLE RA 8	857	17	3764	-12.93	35.68	-0.07
340	SLE RA 9	858	17	3765	-12.94	35.73	-0.07
340	SLE RA 10	916	18	4059	-13.69	38.15	-0.08
340	SLE RA 11	934	18	4112	-13.94	38.9	-0.08
340	SLE RA 12	935	18	4113	-13.95	38.94	-0.08
340	SLE RA 13	928	18	4091	-13.85	38.65	-0.08
340	SLE RA 14	946	18	4144	-14.09	39.4	-0.08
340	SLE RA 15	947	18	4145	-14.11	39.45	-0.08
340	SLE RA 16	939	18	4121	-13.97	39.09	-0.08
340	SLE RA 17	940	18	4122	-13.99	39.13	-0.08
340	SLE RA 18	949	18	4211	-14.11	39.54	-0.08
340	SLE RA 19	950	18	4212	-14.13	39.58	-0.08
340	SLE RA 20	961	19	4242	-14.27	40.04	-0.08
340	SLE RA 21	962	19	4244	-14.28	40.09	-0.08
340	SLE FR 1	833	16	3701	-12.62	34.67	-0.07
340	SLE FR 2	834	16	3701	-12.62	34.68	-0.07
340	SLE FR 3	838	17	3713	-12.68	34.87	-0.07
340	SLE FR 4	869	17	3854	-13.07	36.14	-0.08
340	SLE FR 5	873	17	3866	-13.13	36.33	-0.08
340	SLE FR 6	891	17	3956	-13.36	37.1	-0.08
340	SLE QP 1	833	16	3701	-12.62	34.67	-0.07
340	SLE QP 2	868	17	3854	-13.07	36.13	-0.08
340	SLD 1	1385	19	3843	-12.4	58.84	-0.02
340	SLD 2	1385	19	3843	-12.4	58.84	-0.02
340	SLD 3	1554	27	4278	-23.21	65.74	-0.08
340	SLD 4	1554	27	4278	-23.21	65.74	-0.08
340	SLD 5	766	5	3189	3.52	32.47	0.02
340	SLD 6	766	5	3189	3.52	32.47	0.02
340	SLD 7	1331	33	4642	-32.49	55.49	-0.16
340	SLD 8	1331	33	4642	-32.49	55.49	-0.16
340	SLD 9	405	1	3065	6.36	16.77	0.01
340	SLD 10	405	1	3065	6.36	16.77	0.01
340	SLD 11	971	29	4518	-29.65	39.79	-0.17
340	SLD 12	971	29	4518	-29.65	39.79	-0.17
340	SLD 13	182	7	3429	-2.92	6.52	-0.07
340	SLD 14	182	7	3429	-2.92	6.52	-0.07
340	SLD 15	352	15	3865	-13.73	13.42	-0.13
340	SLD 16	352	15	3865	-13.73	13.42	-0.13
340	SLV 1	2055	21	3817	-11.53	88.36	0.05
340	SLV 2	2055	21	3817	-11.53	88.36	0.05
340	SLV 3	2457	41	4858	-36.87	104.67	-0.08
340	SLV 4	2457	41	4858	-36.87	104.67	-0.08
340	SLV 5	616	-12	2263	25.83	27.05	0.15
340	SLV 6	616	-12	2263	25.83	27.05	0.15
340	SLV 7	1953	55	5734	-58.64	81.44	-0.27
340	SLV 8	1953	55	5734	-58.64	81.44	-0.27
340	SLV 9	-217	-21	1973	32.51	-9.18	0.12
340	SLV 10	-217	-21	1973	32.51	-9.18	0.12
340	SLV 11	1121	46	5444	-51.96	45.21	-0.3
340	SLV 12	1121	46	5444	-51.96	45.21	-0.3
340	SLV 13	-720	-7	2849	10.74	-32.41	-0.07
340	SLV 14	-720	-7	2849	10.74	-32.41	-0.07
340	SLV 15	-319	13	3891	-14.6	-16.1	-0.2
340	SLV 16	-319	13	3891	-14.6	-16.1	-0.2
341	SLU 1	716	1	3926	-5.49	28.44	-0.01
341	SLU 2	718	1	3929	-5.51	28.54	-0.01
341	SLU 3	742	1	4021	-5.67	29.47	-0.01
341	SLU 4	743	1	4022	-5.69	29.53	-0.01
341	SLU 5	734	1	3984	-5.62	29.16	-0.01
341	SLU 6	758	1	4076	-5.78	30.09	-0.01
341	SLU 7	759	1	4077	-5.79	30.15	-0.01
341	SLU 8	748	1	4038	-5.7	29.68	-0.01
341	SLU 9	749	1	4039	-5.71	29.74	-0.01
341	SLU 10	822	1	4513	-6.19	32.69	-0.01
341	SLU 11	846	1	4605	-6.35	33.62	-0.01
341	SLU 12	848	1	4606	-6.37	33.68	-0.01
341	SLU 13	838	1	4569	-6.3	33.31	-0.01
341	SLU 14	862	1	4660	-6.45	34.24	-0.01
341	SLU 15	863	1	4662	-6.47	34.3	-0.01
341	SLU 16	852	1	4622	-6.37	33.83	-0.01
341	SLU 17	853	1	4623	-6.39	33.89	-0.01
341	SLU 18	865	1	4761	-6.45	34.37	-0.01
341	SLU 19	866	1	4762	-6.47	34.43	-0.01
341	SLU 20	881	1	4817	-6.56	34.99	-0.01
341	SLU 21	882	1	4818	-6.58	35.05	-0.01
341	SLU 22	819	1	4456	-6.19	32.53	-0.01
341	SLU 23	821	1	4459	-6.22	32.63	-0.01
341	SLU 24	845	1	4550	-6.38	33.57	-0.01
341	SLU 25	846	1	4552	-6.39	33.63	-0.01
341	SLU 26	837	1	4514	-6.32	33.25	-0.01
341	SLU 27	861	1	4606	-6.48	34.19	-0.01
341	SLU 28	862	1	4607	-6.5	34.25	-0.01
341	SLU 29	850	1	4568	-6.4	33.77	-0.01
341	SLU 30	852	1	4569	-6.42	33.83	-0.01
341	SLU 31	925	1	5043	-6.9	36.78	-0.01
341	SLU 32	949	1	5135	-7.05	37.72	-0.01
341	SLU 33	951	1	5136	-7.07	37.78	-0.01
341	SLU 34	941	1	5099	-7	37.4	-0.01
341	SLU 35	965	1	5190	-7.16	38.34	-0.02
341	SLU 36	966	1	5192	-7.18	38.39	-0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
341	SLU 37	955	1	5152	-7.08	37.92	-0.01
341	SLU 38	956	1	5153	-7.1	37.98	-0.02
341	SLU 39	968	1	5291	-7.16	38.46	-0.02
341	SLU 40	969	1	5292	-7.18	38.52	-0.02
341	SLU 41	984	1	5347	-7.26	39.08	-0.02
341	SLU 42	985	1	5348	-7.28	39.14	-0.02
341	SLU 43	895	1	4923	-6.89	35.57	-0.01
341	SLU 44	898	1	4925	-6.92	35.67	-0.02
341	SLU 45	922	1	5017	-7.08	36.6	-0.02
341	SLU 46	923	1	5018	-7.09	36.66	-0.02
341	SLU 47	913	1	4981	-7.02	36.29	-0.02
341	SLU 48	937	1	5072	-7.18	37.22	-0.02
341	SLU 49	939	1	5074	-7.2	37.28	-0.02
341	SLU 50	927	1	5034	-7.1	36.81	-0.02
341	SLU 51	928	1	5035	-7.12	36.87	-0.02
341	SLU 52	1002	1	5509	-7.6	39.82	-0.02
341	SLU 53	1026	1	5601	-7.75	40.75	-0.02
341	SLU 54	1027	1	5602	-7.77	40.81	-0.02
341	SLU 55	1018	1	5565	-7.7	40.44	-0.02
341	SLU 56	1042	1	5657	-7.86	41.37	-0.02
341	SLU 57	1043	1	5658	-7.88	41.43	-0.02
341	SLU 58	1031	1	5618	-7.78	40.96	-0.02
341	SLU 59	1033	1	5620	-7.8	41.02	-0.02
341	SLU 60	1044	1	5757	-7.86	41.5	-0.02
341	SLU 61	1046	1	5759	-7.88	41.56	-0.02
341	SLU 62	1060	1	5813	-7.96	42.12	-0.02
341	SLU 63	1061	1	5814	-7.98	42.17	-0.02
341	SLU 64	998	1	5453	-7.6	39.66	-0.02
341	SLU 65	1001	1	5455	-7.62	39.76	-0.02
341	SLU 66	1025	1	5547	-7.78	40.7	-0.02
341	SLU 67	1026	1	5548	-7.8	40.76	-0.02
341	SLU 68	1016	1	5510	-7.73	40.38	-0.02
341	SLU 69	1040	1	5602	-7.89	41.32	-0.02
341	SLU 70	1042	1	5604	-7.9	41.38	-0.02
341	SLU 71	1030	1	5564	-7.81	40.9	-0.02
341	SLU 72	1031	1	5565	-7.82	40.96	-0.02
341	SLU 73	1105	1	6039	-8.3	43.91	-0.02
341	SLU 74	1129	1	6131	-8.46	44.85	-0.02
341	SLU 75	1130	1	6132	-8.48	44.9	-0.02
341	SLU 76	1121	1	6095	-8.41	44.53	-0.02
341	SLU 77	1145	1	6187	-8.56	45.46	-0.02
341	SLU 78	1146	1	6188	-8.58	45.52	-0.02
341	SLU 79	1134	1	6148	-8.48	45.05	-0.02
341	SLU 80	1136	1	6150	-8.5	45.11	-0.02
341	SLU 81	1147	1	6287	-8.56	45.59	-0.02
341	SLU 82	1149	1	6289	-8.58	45.65	-0.02
341	SLU 83	1163	1	6343	-8.67	46.21	-0.02
341	SLU 84	1164	1	6344	-8.69	46.27	-0.02
341	SLE RA 1	745	1	4078	-5.69	29.61	-0.01
341	SLE RA 2	747	1	4079	-5.71	29.68	-0.01
341	SLE RA 3	763	1	4141	-5.81	30.3	-0.01
341	SLE RA 4	764	1	4141	-5.82	30.34	-0.01
341	SLE RA 5	757	1	4116	-5.78	30.09	-0.01
341	SLE RA 6	773	1	4178	-5.88	30.71	-0.01
341	SLE RA 7	774	1	4179	-5.89	30.75	-0.01
341	SLE RA 8	766	1	4152	-5.83	30.44	-0.01
341	SLE RA 9	767	1	4153	-5.84	30.48	-0.01
341	SLE RA 10	816	1	4469	-6.16	32.44	-0.01
341	SLE RA 11	832	1	4530	-6.26	33.07	-0.01
341	SLE RA 12	833	1	4531	-6.27	33.1	-0.01
341	SLE RA 13	827	1	4506	-6.23	32.85	-0.01
341	SLE RA 14	843	1	4567	-6.33	33.48	-0.01
341	SLE RA 15	844	1	4568	-6.34	33.52	-0.01
341	SLE RA 16	836	1	4542	-6.28	33.2	-0.01
341	SLE RA 17	837	1	4542	-6.29	33.24	-0.01
341	SLE RA 18	845	1	4634	-6.33	33.56	-0.01
341	SLE RA 19	846	1	4635	-6.34	33.6	-0.01
341	SLE RA 20	855	1	4671	-6.4	33.97	-0.01
341	SLE RA 21	856	1	4672	-6.41	34.01	-0.01
341	SLE FR 1	745	1	4078	-5.69	29.61	-0.01
341	SLE FR 2	746	1	4078	-5.69	29.62	-0.01
341	SLE FR 3	750	1	4093	-5.72	29.78	-0.01
341	SLE FR 4	775	1	4245	-5.88	30.81	-0.01
341	SLE FR 5	779	1	4260	-5.91	30.96	-0.01
341	SLE FR 6	795	1	4356	-6.01	31.59	-0.01
341	SLE QP 1	745	1	4078	-5.69	29.61	-0.01
341	SLE QP 2	775	1	4245	-5.88	30.8	-0.01
341	SLD 1	1265	8	4199	-11.98	52.46	-0.01
341	SLD 2	1265	8	4199	-11.98	52.46	-0.01
341	SLD 3	1432	3	4718	-6.16	59.04	0.02
341	SLD 4	1432	3	4718	-6.16	59.04	0.02
341	SLD 5	669	10	3444	-16.54	27.31	-0.05
341	SLD 6	669	10	3444	-16.54	27.31	-0.05
341	SLD 7	1225	-5	5174	2.87	49.26	0.04
341	SLD 8	1225	-5	5174	2.87	49.26	0.04
341	SLD 9	325	8	3315	-14.63	12.33	-0.06
341	SLD 10	325	8	3315	-14.63	12.33	-0.06
341	SLD 11	881	-8	5046	4.78	34.29	0.03
341	SLD 12	881	-8	5046	4.78	34.29	0.03
341	SLD 13	119	-1	3772	-5.61	2.55	-0.04



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
341	SLD 14	119	-1	3772	-5.61	2.55	-0.04
341	SLD 15	286	-6	4291	0.21	9.14	-0.01
341	SLD 16	286	-6	4291	0.21	9.14	-0.01
341	SLV 1	1900	17	4124	-20.23	80.6	-0.01
341	SLV 2	1900	17	4124	-20.23	80.6	-0.01
341	SLV 3	2295	6	5368	-6.52	96.15	0.05
341	SLV 4	2295	6	5368	-6.52	96.15	0.05
341	SLV 5	513	23	2322	-30.97	22.14	-0.11
341	SLV 6	513	23	2322	-30.97	22.14	-0.11
341	SLV 7	1830	-15	6468	14.71	74	0.11
341	SLV 8	1830	-15	6468	14.71	74	0.11
341	SLV 9	-280	17	2021	-26.47	-12.4	-0.13
341	SLV 10	-280	17	2021	-26.47	-12.4	-0.13
341	SLV 11	1037	-21	6167	19.21	39.45	0.09
341	SLV 12	1037	-21	6167	19.21	39.45	0.09
341	SLV 13	-745	-4	3122	-5.24	-34.56	-0.08
341	SLV 14	-745	-4	3122	-5.24	-34.56	-0.08
341	SLV 15	-350	-15	4365	8.46	-19.01	-0.01
341	SLV 16	-350	-15	4365	8.46	-19.01	-0.01
342	SLU 1	601	-18	4348	1	23.54	-0.02
342	SLU 2	602	-18	4349	0.98	23.63	-0.02
342	SLU 3	623	-19	4457	1.03	24.43	-0.02
342	SLU 4	624	-19	4458	1.02	24.48	-0.02
342	SLU 5	616	-19	4413	1	24.16	-0.02
342	SLU 6	636	-19	4522	1.05	24.96	-0.02
342	SLU 7	637	-19	4522	1.04	25.01	-0.02
342	SLU 8	627	-19	4477	1.04	24.62	-0.02
342	SLU 9	628	-19	4478	1.03	24.67	-0.02
342	SLU 10	687	-21	4987	1.18	27.01	-0.02
342	SLU 11	708	-22	5095	1.23	27.81	-0.02
342	SLU 12	709	-22	5096	1.21	27.86	-0.02
342	SLU 13	700	-21	5052	1.2	27.55	-0.02
342	SLU 14	721	-22	5160	1.24	28.35	-0.02
342	SLU 15	722	-22	5161	1.23	28.4	-0.02
342	SLU 16	712	-22	5116	1.23	28	-0.02
342	SLU 17	713	-22	5116	1.22	28.05	-0.02
342	SLU 18	722	-22	5260	1.28	28.38	-0.02
342	SLU 19	723	-22	5260	1.27	28.43	-0.02
342	SLU 20	735	-23	5324	1.3	28.92	-0.02
342	SLU 21	736	-23	5325	1.29	28.97	-0.02
342	SLU 22	685	-21	4934	1.17	26.91	-0.02
342	SLU 23	687	-21	4934	1.15	26.99	-0.02
342	SLU 24	707	-22	5043	1.2	27.79	-0.02
342	SLU 25	709	-22	5043	1.19	27.84	-0.02
342	SLU 26	700	-21	4999	1.17	27.53	-0.02
342	SLU 27	721	-22	5107	1.22	28.33	-0.02
342	SLU 28	722	-22	5108	1.21	28.38	-0.02
342	SLU 29	712	-22	5063	1.21	27.98	-0.02
342	SLU 30	713	-22	5063	1.2	28.03	-0.02
342	SLU 31	772	-24	5573	1.35	30.38	-0.02
342	SLU 32	792	-24	5681	1.4	31.18	-0.02
342	SLU 33	793	-24	5682	1.39	31.23	-0.02
342	SLU 34	785	-24	5638	1.37	30.91	-0.02
342	SLU 35	806	-25	5746	1.41	31.71	-0.02
342	SLU 36	807	-25	5746	1.4	31.76	-0.02
342	SLU 37	797	-24	5701	1.4	31.37	-0.02
342	SLU 38	798	-24	5702	1.39	31.42	-0.02
342	SLU 39	806	-25	5846	1.45	31.75	-0.03
342	SLU 40	808	-25	5846	1.44	31.8	-0.03
342	SLU 41	820	-25	5910	1.47	32.28	-0.03
342	SLU 42	821	-25	5911	1.46	32.33	-0.03
342	SLU 43	752	-23	5451	1.24	29.45	-0.02
342	SLU 44	753	-23	5452	1.22	29.54	-0.02
342	SLU 45	774	-24	5561	1.27	30.34	-0.02
342	SLU 46	775	-24	5561	1.26	30.39	-0.02
342	SLU 47	767	-23	5517	1.24	30.07	-0.02
342	SLU 48	787	-24	5625	1.29	30.87	-0.02
342	SLU 49	788	-24	5626	1.28	30.92	-0.02
342	SLU 50	778	-24	5581	1.28	30.53	-0.02
342	SLU 51	779	-24	5581	1.27	30.58	-0.02
342	SLU 52	838	-26	6091	1.42	32.92	-0.03
342	SLU 53	859	-26	6199	1.47	33.72	-0.03
342	SLU 54	860	-26	6199	1.46	33.77	-0.03
342	SLU 55	852	-26	6155	1.44	33.46	-0.03
342	SLU 56	872	-27	6264	1.49	34.26	-0.03
342	SLU 57	873	-27	6264	1.47	34.31	-0.03
342	SLU 58	863	-26	6219	1.48	33.91	-0.03
342	SLU 59	864	-26	6220	1.46	33.96	-0.03
342	SLU 60	873	-27	6363	1.53	34.29	-0.03
342	SLU 61	874	-27	6364	1.51	34.34	-0.03
342	SLU 62	886	-27	6428	1.54	34.83	-0.03
342	SLU 63	887	-27	6429	1.53	34.88	-0.03
342	SLU 64	836	-26	6037	1.41	32.82	-0.03
342	SLU 65	838	-26	6038	1.39	32.9	-0.03
342	SLU 66	859	-26	6146	1.44	33.7	-0.03
342	SLU 67	860	-26	6147	1.43	33.75	-0.03
342	SLU 68	851	-26	6103	1.41	33.44	-0.03
342	SLU 69	872	-27	6211	1.46	34.24	-0.03
342	SLU 70	873	-27	6211	1.45	34.29	-0.03
342	SLU 71	863	-26	6166	1.45	33.89	-0.03



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
342	SLU 72	864	-26	6167	1.44	33.94	-0.03
342	SLU 73	923	-28	6676	1.59	36.29	-0.03
342	SLU 74	943	-29	6785	1.64	37.09	-0.03
342	SLU 75	945	-29	6785	1.63	37.14	-0.03
342	SLU 76	936	-29	6741	1.61	36.82	-0.03
342	SLU 77	957	-29	6849	1.66	37.62	-0.03
342	SLU 78	958	-29	6850	1.65	37.67	-0.03
342	SLU 79	948	-29	6805	1.65	37.28	-0.03
342	SLU 80	949	-29	6805	1.64	37.33	-0.03
342	SLU 81	958	-29	6949	1.7	37.66	-0.03
342	SLU 82	959	-29	6950	1.68	37.71	-0.03
342	SLU 83	971	-30	7014	1.71	38.19	-0.03
342	SLU 84	972	-30	7014	1.7	38.24	-0.03
342	SLE RA 1	625	-19	4515	1.05	24.51	-0.02
342	SLE RA 2	626	-19	4516	1.04	24.56	-0.02
342	SLE RA 3	640	-20	4588	1.07	25.09	-0.02
342	SLE RA 4	640	-19	4588	1.06	25.13	-0.02
342	SLE RA 5	635	-19	4559	1.05	24.92	-0.02
342	SLE RA 6	648	-20	4631	1.08	25.45	-0.02
342	SLE RA 7	649	-20	4631	1.07	25.48	-0.02
342	SLE RA 8	643	-20	4601	1.07	25.22	-0.02
342	SLE RA 9	643	-20	4602	1.07	25.25	-0.02
342	SLE RA 10	682	-21	4941	1.17	26.82	-0.02
342	SLE RA 11	696	-21	5014	1.2	27.35	-0.02
342	SLE RA 12	697	-21	5014	1.19	27.38	-0.02
342	SLE RA 13	691	-21	4985	1.18	27.18	-0.02
342	SLE RA 14	705	-22	5057	1.21	27.71	-0.02
342	SLE RA 15	706	-22	5057	1.2	27.74	-0.02
342	SLE RA 16	699	-21	5027	1.21	27.48	-0.02
342	SLE RA 17	700	-21	5027	1.2	27.51	-0.02
342	SLE RA 18	706	-22	5123	1.24	27.73	-0.02
342	SLE RA 19	706	-22	5124	1.23	27.76	-0.02
342	SLE RA 20	714	-22	5166	1.25	28.09	-0.02
342	SLE RA 21	715	-22	5167	1.24	28.12	-0.02
342	SLE FR 1	625	-19	4515	1.05	24.51	-0.02
342	SLE FR 2	625	-19	4515	1.05	24.52	-0.02
342	SLE FR 3	628	-19	4532	1.06	24.65	-0.02
342	SLE FR 4	649	-20	4698	1.1	25.48	-0.02
342	SLE FR 5	653	-20	4715	1.11	25.62	-0.02
342	SLE FR 6	665	-20	4819	1.14	26.12	-0.02
342	SLE QP 1	625	-19	4515	1.05	24.51	-0.02
342	SLE QP 2	649	-20	4698	1.11	25.47	-0.02
342	SLD 1	1118	-20	4579	1.44	46.07	0
342	SLD 2	1118	-20	4579	1.44	46.07	0
342	SLD 3	1281	-26	5259	3.95	52.16	-0.02
342	SLD 4	1281	-26	5259	3.95	52.16	-0.02
342	SLD 5	542	-9	3630	-2.59	22.41	0.01
342	SLD 6	542	-9	3630	-2.59	22.41	0.01
342	SLD 7	1086	-32	5898	5.75	42.72	-0.04
342	SLD 8	1086	-32	5898	5.75	42.72	-0.04
342	SLD 9	212	-7	3497	-3.54	8.22	0
342	SLD 10	212	-7	3497	-3.54	8.22	0
342	SLD 11	756	-30	5765	4.8	28.54	-0.05
342	SLD 12	756	-30	5765	4.8	28.54	-0.05
342	SLD 13	17	-13	4136	-1.73	-1.21	-0.02
342	SLD 14	17	-13	4136	-1.73	-1.21	-0.02
342	SLD 15	180	-20	4816	0.77	4.88	-0.04
342	SLD 16	180	-20	4816	0.77	4.88	-0.04
342	SLV 1	1725	-19	4403	1.86	72.82	0.02
342	SLV 2	1725	-19	4403	1.86	72.82	0.02
342	SLV 3	2112	-35	6036	7.85	87.2	-0.02
342	SLV 4	2112	-35	6036	7.85	87.2	-0.02
342	SLV 5	386	5	2133	-7.75	17.87	0.05
342	SLV 6	386	5	2133	-7.75	17.87	0.05
342	SLV 7	1674	-49	7575	12.21	65.8	-0.08
342	SLV 8	1674	-49	7575	12.21	65.8	-0.08
342	SLV 9	-376	10	1820	-10	-14.85	0.04
342	SLV 10	-376	10	1820	-10	-14.85	0.04
342	SLV 11	912	-45	7262	9.96	33.07	-0.09
342	SLV 12	912	-45	7262	9.96	33.07	-0.09
342	SLV 13	-814	-4	3359	-5.64	-36.25	-0.02
342	SLV 14	-814	-4	3359	-5.64	-36.25	-0.02
342	SLV 15	-427	-21	4992	0.35	-21.88	-0.06
342	SLV 16	-427	-21	4992	0.35	-21.88	-0.06
343	SLU 1	263	-634	6432	11.98	10.78	0.01
343	SLU 2	265	-632	6430	11.86	10.87	0.01
343	SLU 3	274	-653	6601	12.32	11.2	0.01
343	SLU 4	275	-652	6599	12.25	11.25	0.01
343	SLU 5	272	-643	6530	12.05	11.11	0.01
343	SLU 6	280	-664	6701	12.51	11.44	0.01
343	SLU 7	281	-663	6699	12.44	11.5	0.01
343	SLU 8	276	-656	6632	12.36	11.27	0.01
343	SLU 9	277	-655	6631	12.29	11.32	0.01
343	SLU 10	301	-722	7361	13.48	12.32	0.01
343	SLU 11	309	-743	7531	13.93	12.64	0.01
343	SLU 12	310	-742	7530	13.86	12.7	0.01
343	SLU 13	307	-733	7461	13.67	12.56	0.01
343	SLU 14	315	-754	7631	14.12	12.88	0.01
343	SLU 15	316	-753	7630	14.05	12.94	0.01
343	SLU 16	311	-747	7562	13.97	12.71	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
343	SLU 17	312	-745	7561	13.9	12.76	0.01
343	SLU 18	313	-763	7761	14.29	12.84	0.01
343	SLU 19	315	-762	7760	14.22	12.9	0.01
343	SLU 20	320	-774	7861	14.48	13.08	0.01
343	SLU 21	321	-773	7860	14.41	13.14	0.01
343	SLU 22	299	-721	7296	13.53	12.25	0.01
343	SLU 23	301	-718	7294	13.41	12.34	0.01
343	SLU 24	310	-740	7465	13.87	12.67	0.01
343	SLU 25	311	-738	7464	13.8	12.73	0.01
343	SLU 26	307	-729	7394	13.6	12.59	0.01
343	SLU 27	316	-750	7565	14.06	12.91	0.01
343	SLU 28	317	-749	7564	13.99	12.97	0.01
343	SLU 29	311	-743	7496	13.91	12.74	0.01
343	SLU 30	313	-741	7495	13.84	12.79	0.01
343	SLU 31	336	-809	8225	15.03	13.79	0.01
343	SLU 32	345	-830	8396	15.49	14.11	0.01
343	SLU 33	346	-828	8395	15.42	14.17	0.01
343	SLU 34	343	-820	8325	15.22	14.03	0.01
343	SLU 35	351	-841	8496	15.67	14.36	0.01
343	SLU 36	352	-839	8495	15.6	14.41	0.01
343	SLU 37	347	-833	8427	15.52	14.18	0.01
343	SLU 38	348	-832	8426	15.45	14.24	0.01
343	SLU 39	349	-850	8626	15.84	14.31	0.01
343	SLU 40	351	-848	8625	15.77	14.37	0.01
343	SLU 41	355	-861	8726	16.03	14.56	0.01
343	SLU 42	357	-859	8725	15.96	14.61	0.01
343	SLU 43	330	-795	8065	15.04	13.51	0.01
343	SLU 44	332	-793	8063	14.92	13.6	0.01
343	SLU 45	340	-814	8234	15.38	13.93	0.01
343	SLU 46	342	-812	8233	15.31	13.98	0.01
343	SLU 47	338	-804	8163	15.11	13.84	0.01
343	SLU 48	346	-825	8334	15.57	14.17	0.01
343	SLU 49	348	-823	8333	15.5	14.22	0.01
343	SLU 50	342	-817	8265	15.42	13.99	0.01
343	SLU 51	344	-816	8264	15.35	14.05	0.01
343	SLU 52	367	-883	8994	16.54	15.04	0.01
343	SLU 53	375	-904	9164	17	15.37	0.01
343	SLU 54	377	-903	9163	16.93	15.43	0.01
343	SLU 55	373	-894	9094	16.73	15.29	0.01
343	SLU 56	382	-915	9265	17.19	15.61	0.01
343	SLU 57	383	-914	9263	17.12	15.67	0.01
343	SLU 58	377	-907	9196	17.03	15.44	0.01
343	SLU 59	379	-906	9194	16.96	15.49	0.01
343	SLU 60	380	-924	9394	17.35	15.57	0.01
343	SLU 61	381	-923	9393	17.28	15.63	0.01
343	SLU 62	386	-935	9494	17.54	15.81	0.01
343	SLU 63	388	-934	9493	17.47	15.87	0.01
343	SLU 64	366	-881	8929	16.59	14.98	0.01
343	SLU 65	368	-879	8927	16.48	15.07	0.01
343	SLU 66	376	-900	9098	16.93	15.4	0.01
343	SLU 67	378	-899	9097	16.86	15.45	0.01
343	SLU 68	374	-890	9027	16.67	15.32	0.01
343	SLU 69	382	-911	9198	17.12	15.64	0.01
343	SLU 70	384	-910	9197	17.05	15.7	0.01
343	SLU 71	378	-903	9129	16.97	15.47	0.01
343	SLU 72	379	-902	9128	16.9	15.52	0.01
343	SLU 73	403	-969	9858	18.09	16.52	0.02
343	SLU 74	411	-990	10029	18.55	16.84	0.02
343	SLU 75	413	-989	10028	18.48	16.9	0.02
343	SLU 76	409	-980	9958	18.28	16.76	0.02
343	SLU 77	417	-1001	10129	18.74	17.08	0.02
343	SLU 78	419	-1000	10128	18.67	17.14	0.02
343	SLU 79	413	-994	10060	18.59	16.91	0.02
343	SLU 80	415	-992	10059	18.52	16.97	0.02
343	SLU 81	416	-1010	10259	18.9	17.04	0.02
343	SLU 82	417	-1009	10258	18.83	17.1	0.02
343	SLU 83	422	-1021	10359	19.09	17.29	0.02
343	SLU 84	423	-1020	10358	19.02	17.34	0.02
343	SLE RA 1	274	-659	6679	12.42	11.2	0.01
343	SLE RA 2	275	-657	6677	12.34	11.26	0.01
343	SLE RA 3	280	-672	6791	12.65	11.48	0.01
343	SLE RA 4	281	-671	6790	12.6	11.52	0.01
343	SLE RA 5	279	-665	6744	12.47	11.42	0.01
343	SLE RA 6	285	-679	6858	12.78	11.64	0.01
343	SLE RA 7	285	-678	6857	12.73	11.68	0.01
343	SLE RA 8	282	-674	6812	12.68	11.52	0.01
343	SLE RA 9	283	-673	6811	12.63	11.56	0.01
343	SLE RA 10	298	-718	7298	13.42	12.22	0.01
343	SLE RA 11	304	-732	7412	13.73	12.44	0.01
343	SLE RA 12	305	-731	7411	13.68	12.48	0.01
343	SLE RA 13	302	-725	7365	13.55	12.39	0.01
343	SLE RA 14	308	-739	7478	13.85	12.6	0.01
343	SLE RA 15	309	-738	7478	13.81	12.64	0.01
343	SLE RA 16	305	-734	7432	13.75	12.49	0.01
343	SLE RA 17	306	-733	7432	13.71	12.52	0.01
343	SLE RA 18	307	-745	7565	13.96	12.57	0.01
343	SLE RA 19	308	-744	7564	13.91	12.61	0.01
343	SLE RA 20	311	-752	7632	14.09	12.74	0.01
343	SLE RA 21	312	-751	7631	14.04	12.77	0.01
343	SLE FR 1	274	-659	6679	12.42	11.2	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
343	SLE FR 2	274	-659	6678	12.41	11.21	0.01
343	SLE FR 3	275	-662	6705	12.47	11.26	0.01
343	SLE FR 4	284	-684	6944	12.87	11.62	0.01
343	SLE FR 5	285	-688	6971	12.93	11.68	0.01
343	SLE FR 6	290	-702	7122	13.19	11.89	0.01
343	SLE QP 1	274	-659	6679	12.42	11.2	0.01
343	SLE QP 2	284	-685	6944	12.88	11.61	0.01
343	SLD 1	781	-620	6681	10.33	33.27	0.05
343	SLD 2	781	-620	6681	10.33	33.27	0.05
343	SLD 3	876	-891	7896	21.31	37.37	0.05
343	SLD 4	876	-891	7896	21.31	37.37	0.05
343	SLD 5	288	-254	5023	-4.53	11.89	0.01
343	SLD 6	288	-254	5023	-4.53	11.89	0.01
343	SLD 7	606	-1158	9073	32.06	25.56	0.04
343	SLD 8	606	-1158	9073	32.06	25.56	0.04
343	SLD 9	-38	-212	4816	-6.29	-2.34	-0.01
343	SLD 10	-38	-212	4816	-6.29	-2.34	-0.01
343	SLD 11	279	-1116	8866	30.3	11.34	0.01
343	SLD 12	279	-1116	8866	30.3	11.34	0.01
343	SLD 13	-309	-479	5993	4.46	-14.14	-0.03
343	SLD 14	-309	-479	5993	4.46	-14.14	-0.03
343	SLD 15	-213	-750	7208	15.44	-10.04	-0.02
343	SLD 16	-213	-750	7208	15.44	-10.04	-0.02
343	SLV 1	1429	-526	6300	6.66	61.49	0.09
343	SLV 2	1429	-526	6300	6.66	61.49	0.09
343	SLV 3	1650	-1178	9219	33.03	71.04	0.11
343	SLV 4	1650	-1178	9219	33.03	71.04	0.11
343	SLV 5	291	352	2324	-28.98	12.1	0
343	SLV 6	291	352	2324	-28.98	12.1	0
343	SLV 7	1030	-1822	12054	58.92	43.92	0.07
343	SLV 8	1030	-1822	12054	58.92	43.92	0.07
343	SLV 9	-462	453	1835	-33.15	-20.69	-0.05
343	SLV 10	-462	453	1835	-33.15	-20.69	-0.05
343	SLV 11	276	-1722	11565	54.74	11.12	0.02
343	SLV 12	276	-1722	11565	54.74	11.12	0.02
343	SLV 13	-1083	-191	4670	-7.26	-47.81	-0.09
343	SLV 14	-1083	-191	4670	-7.26	-47.81	-0.09
343	SLV 15	-861	-844	7589	19.11	-38.27	-0.07
343	SLV 16	-861	-844	7589	19.11	-38.27	-0.07
344	SLU 1	-55	-17	4351	0.05	0.64	0.05
344	SLU 2	-52	-17	4352	0.04	0.74	0.05
344	SLU 3	-55	-18	4462	0.04	0.72	0.06
344	SLU 4	-54	-18	4462	0.03	0.78	0.06
344	SLU 5	-53	-17	4417	0.03	0.79	0.06
344	SLU 6	-56	-18	4527	0.03	0.76	0.06
344	SLU 7	-54	-18	4527	0.02	0.82	0.06
344	SLU 8	-56	-18	4482	0.03	0.74	0.06
344	SLU 9	-54	-18	4482	0.02	0.8	0.06
344	SLU 10	-62	-20	4978	0	0.81	0.06
344	SLU 11	-65	-20	5088	0	0.78	0.06
344	SLU 12	-63	-20	5088	0	0.85	0.06
344	SLU 13	-62	-20	5044	0	0.86	0.06
344	SLU 14	-65	-20	5154	-0.01	0.83	0.07
344	SLU 15	-64	-20	5154	-0.01	0.89	0.07
344	SLU 16	-65	-20	5109	-0.01	0.8	0.06
344	SLU 17	-63	-20	5109	-0.01	0.87	0.06
344	SLU 18	-68	-21	5247	0	0.74	0.07
344	SLU 19	-67	-21	5247	-0.01	0.8	0.07
344	SLU 20	-69	-21	5312	-0.01	0.79	0.07
344	SLU 21	-67	-21	5312	-0.02	0.85	0.07
344	SLU 22	-63	-19	4930	0.02	0.73	0.06
344	SLU 23	-61	-19	4930	0.01	0.83	0.06
344	SLU 24	-64	-20	5040	0.01	0.8	0.06
344	SLU 25	-62	-20	5040	0	0.86	0.06
344	SLU 26	-61	-20	4995	0	0.88	0.06
344	SLU 27	-64	-20	5105	0	0.85	0.07
344	SLU 28	-63	-20	5105	-0.01	0.91	0.07
344	SLU 29	-64	-20	5060	0	0.82	0.06
344	SLU 30	-63	-20	5061	-0.01	0.88	0.06
344	SLU 31	-70	-22	5557	-0.03	0.9	0.07
344	SLU 32	-73	-22	5667	-0.03	0.87	0.07
344	SLU 33	-72	-22	5667	-0.03	0.93	0.07
344	SLU 34	-71	-22	5622	-0.04	0.95	0.07
344	SLU 35	-74	-23	5732	-0.04	0.92	0.07
344	SLU 36	-72	-23	5732	-0.04	0.98	0.07
344	SLU 37	-74	-23	5687	-0.04	0.89	0.07
344	SLU 38	-72	-23	5687	-0.04	0.95	0.07
344	SLU 39	-77	-23	5825	-0.03	0.83	0.07
344	SLU 40	-75	-23	5825	-0.04	0.89	0.07
344	SLU 41	-77	-23	5891	-0.04	0.87	0.07
344	SLU 42	-76	-23	5891	-0.05	0.93	0.07
344	SLU 43	-68	-21	5459	0.07	0.8	0.07
344	SLU 44	-66	-21	5459	0.06	0.91	0.07
344	SLU 45	-69	-22	5569	0.06	0.88	0.07
344	SLU 46	-67	-22	5569	0.06	0.94	0.07
344	SLU 47	-66	-22	5524	0.06	0.95	0.07
344	SLU 48	-69	-22	5634	0.05	0.93	0.07
344	SLU 49	-68	-22	5634	0.05	0.99	0.07
344	SLU 50	-69	-22	5589	0.05	0.9	0.07
344	SLU 51	-68	-22	5589	0.05	0.96	0.07



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
344	SLU 52	-75	-24	6086	0.03	0.97	0.08
344	SLU 53	-78	-24	6196	0.03	0.95	0.08
344	SLU 54	-77	-24	6196	0.02	1.01	0.08
344	SLU 55	-75	-24	6151	0.02	1.02	0.08
344	SLU 56	-79	-25	6261	0.02	0.99	0.08
344	SLU 57	-77	-25	6261	0.01	1.06	0.08
344	SLU 58	-78	-24	6216	0.02	0.97	0.08
344	SLU 59	-77	-24	6216	0.02	1.03	0.08
344	SLU 60	-82	-25	6354	0.02	0.9	0.08
344	SLU 61	-80	-25	6354	0.02	0.96	0.08
344	SLU 62	-82	-25	6419	0.01	0.95	0.08
344	SLU 63	-81	-25	6420	0.01	1.01	0.08
344	SLU 64	-77	-24	6037	0.04	0.89	0.08
344	SLU 65	-74	-24	6037	0.03	0.99	0.08
344	SLU 66	-77	-24	6147	0.03	0.97	0.08
344	SLU 67	-76	-24	6147	0.03	1.03	0.08
344	SLU 68	-75	-24	6102	0.02	1.04	0.08
344	SLU 69	-78	-25	6212	0.02	1.01	0.08
344	SLU 70	-76	-25	6213	0.02	1.07	0.08
344	SLU 71	-78	-24	6168	0.02	0.98	0.08
344	SLU 72	-76	-24	6168	0.02	1.05	0.08
344	SLU 73	-84	-26	6664	0	1.06	0.08
344	SLU 74	-87	-27	6774	0	1.03	0.09
344	SLU 75	-85	-27	6774	-0.01	1.09	0.09
344	SLU 76	-84	-27	6729	-0.01	1.11	0.09
344	SLU 77	-87	-27	6839	-0.01	1.08	0.09
344	SLU 78	-86	-27	6839	-0.02	1.14	0.09
344	SLU 79	-87	-27	6794	-0.01	1.05	0.09
344	SLU 80	-85	-27	6795	-0.02	1.11	0.09
344	SLU 81	-90	-27	6932	-0.01	0.99	0.09
344	SLU 82	-89	-27	6932	-0.01	1.05	0.09
344	SLU 83	-91	-28	6998	-0.02	1.04	0.09
344	SLU 84	-89	-28	6998	-0.02	1.1	0.09
344	SLE RA 1	-57	-18	4517	0.04	0.67	0.06
344	SLE RA 2	-55	-18	4517	0.03	0.73	0.06
344	SLE RA 3	-58	-18	4590	0.03	0.72	0.06
344	SLE RA 4	-57	-18	4590	0.03	0.76	0.06
344	SLE RA 5	-56	-18	4560	0.03	0.77	0.06
344	SLE RA 6	-58	-18	4634	0.03	0.75	0.06
344	SLE RA 7	-57	-18	4634	0.02	0.79	0.06
344	SLE RA 8	-58	-18	4604	0.03	0.73	0.06
344	SLE RA 9	-57	-18	4604	0.02	0.77	0.06
344	SLE RA 10	-62	-19	4935	0.01	0.78	0.06
344	SLE RA 11	-64	-20	5008	0.01	0.76	0.06
344	SLE RA 12	-63	-20	5008	0.01	0.8	0.06
344	SLE RA 13	-62	-20	4978	0	0.81	0.06
344	SLE RA 14	-64	-20	5052	0	0.79	0.06
344	SLE RA 15	-63	-20	5052	0	0.83	0.06
344	SLE RA 16	-64	-20	5022	0	0.77	0.06
344	SLE RA 17	-63	-20	5022	0	0.82	0.06
344	SLE RA 18	-66	-20	5114	0.01	0.73	0.06
344	SLE RA 19	-65	-20	5114	0	0.77	0.06
344	SLE RA 20	-66	-20	5157	0	0.76	0.07
344	SLE RA 21	-65	-20	5157	0	0.8	0.07
344	SLE FR 1	-57	-18	4517	0.04	0.67	0.06
344	SLE FR 2	-57	-18	4517	0.04	0.68	0.06
344	SLE FR 3	-57	-18	4534	0.04	0.68	0.06
344	SLE FR 4	-59	-18	4696	0.03	0.7	0.06
344	SLE FR 5	-60	-19	4713	0.03	0.7	0.06
344	SLE FR 6	-62	-19	4815	0.02	0.7	0.06
344	SLE QP 1	-57	-18	4517	0.04	0.67	0.06
344	SLE QP 2	-60	-18	4696	0.03	0.69	0.06
344	SLD 1	538	-18	4540	0.14	25.87	0.06
344	SLD 2	538	-18	4540	0.14	25.87	0.06
344	SLD 3	418	-26	5230	2.92	21.39	0.07
344	SLD 4	418	-26	5230	2.92	21.39	0.07
344	SLD 5	301	-6	3604	-4.16	15.05	0.03
344	SLD 6	301	-6	3604	-4.16	15.05	0.03
344	SLD 7	-98	-33	5902	5.12	0.09	0.09
344	SLD 8	-98	-33	5902	5.12	0.09	0.09
344	SLD 9	-22	-4	3490	-5.06	1.28	0.03
344	SLD 10	-22	-4	3490	-5.06	1.28	0.03
344	SLD 11	-421	-31	5788	4.22	-13.68	0.08
344	SLD 12	-421	-31	5788	4.22	-13.68	0.08
344	SLD 13	-538	-11	4162	-2.86	-20.02	0.04
344	SLD 14	-538	-11	4162	-2.86	-20.02	0.04
344	SLD 15	-657	-19	4851	-0.08	-24.5	0.06
344	SLD 16	-657	-19	4851	-0.08	-24.5	0.06
344	SLV 1	1322	-18	4317	0.26	58.9	0.06
344	SLV 2	1322	-18	4317	0.26	58.9	0.06
344	SLV 3	1036	-37	5969	6.83	48.23	0.1
344	SLV 4	1036	-37	5969	6.83	48.23	0.1
344	SLV 5	790	10	2076	-9.87	34.33	0
344	SLV 6	790	10	2076	-9.87	34.33	0
344	SLV 7	-166	-53	7583	12.04	-1.23	0.13
344	SLV 8	-166	-53	7583	12.04	-1.23	0.13
344	SLV 9	47	16	1808	-11.98	2.61	-0.01
344	SLV 10	47	16	1808	-11.98	2.61	-0.01
344	SLV 11	-909	-47	7315	9.92	-32.96	0.12
344	SLV 12	-909	-47	7315	9.92	-32.96	0.12



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
344	SLV 13	-1155	0	3423	-6.78	-46.86	0.02
344	SLV 14	-1155	0	3423	-6.78	-46.86	0.02
344	SLV 15	-1442	-19	5075	-0.21	-57.53	0.06
344	SLV 16	-1442	-19	5075	-0.21	-57.53	0.06
345	SLU 1	-175	4	3935	-7.55	-6.06	0.01
345	SLU 2	-173	4	3936	-7.55	-5.98	0.01
345	SLU 3	-181	5	4031	-7.81	-6.24	0.01
345	SLU 4	-179	5	4032	-7.81	-6.19	0.01
345	SLU 5	-177	4	3993	-7.71	-6.1	0.01
345	SLU 6	-184	5	4088	-7.97	-6.37	0.01
345	SLU 7	-183	5	4089	-7.98	-6.31	0.01
345	SLU 8	-182	5	4049	-7.87	-6.31	0.01
345	SLU 9	-181	5	4050	-7.87	-6.25	0.01
345	SLU 10	-200	5	4499	-8.71	-6.92	0.01
345	SLU 11	-207	5	4595	-8.97	-7.19	0.01
345	SLU 12	-206	5	4595	-8.98	-7.14	0.01
345	SLU 13	-203	5	4556	-8.87	-7.04	0.01
345	SLU 14	-211	5	4652	-9.14	-7.31	0.01
345	SLU 15	-210	5	4652	-9.14	-7.26	0.01
345	SLU 16	-209	5	4613	-9.03	-7.25	0.01
345	SLU 17	-208	5	4613	-9.03	-7.2	0.01
345	SLU 18	-214	5	4740	-9.21	-7.42	0.01
345	SLU 19	-212	5	4740	-9.21	-7.37	0.01
345	SLU 20	-217	6	4797	-9.37	-7.54	0.01
345	SLU 21	-216	6	4797	-9.37	-7.49	0.01
345	SLU 22	-201	5	4452	-8.68	-6.97	0.01
345	SLU 23	-199	5	4452	-8.68	-6.88	0.01
345	SLU 24	-206	5	4548	-8.94	-7.15	0.01
345	SLU 25	-205	5	4548	-8.94	-7.1	0.01
345	SLU 26	-202	5	4510	-8.84	-7	0.01
345	SLU 27	-210	5	4605	-9.1	-7.27	0.01
345	SLU 28	-209	5	4605	-9.11	-7.22	0.01
345	SLU 29	-208	5	4566	-9	-7.21	0.01
345	SLU 30	-207	5	4566	-9	-7.16	0.01
345	SLU 31	-226	6	5016	-9.84	-7.83	0.01
345	SLU 32	-233	6	5111	-10.1	-8.1	0.01
345	SLU 33	-232	6	5112	-10.11	-8.05	0.01
345	SLU 34	-229	6	5073	-10	-7.95	0.01
345	SLU 35	-237	6	5169	-10.27	-8.22	0.01
345	SLU 36	-235	6	5169	-10.27	-8.17	0.01
345	SLU 37	-235	6	5130	-10.16	-8.16	0.01
345	SLU 38	-233	6	5130	-10.16	-8.11	0.01
345	SLU 39	-240	6	5257	-10.34	-8.32	0.01
345	SLU 40	-238	6	5257	-10.34	-8.27	0.01
345	SLU 41	-243	6	5314	-10.5	-8.45	0.01
345	SLU 42	-242	6	5314	-10.5	-8.39	0.01
345	SLU 43	-219	5	4938	-9.42	-7.57	0.01
345	SLU 44	-217	5	4939	-9.43	-7.48	0.01
345	SLU 45	-224	6	5034	-9.69	-7.75	0.01
345	SLU 46	-223	6	5035	-9.69	-7.7	0.01
345	SLU 47	-220	6	4996	-9.59	-7.6	0.01
345	SLU 48	-228	6	5092	-9.85	-7.87	0.01
345	SLU 49	-226	6	5092	-9.85	-7.82	0.01
345	SLU 50	-226	6	5053	-9.75	-7.81	0.01
345	SLU 51	-225	6	5053	-9.75	-7.76	0.01
345	SLU 52	-244	6	5502	-10.59	-8.43	0.01
345	SLU 53	-251	6	5598	-10.85	-8.7	0.01
345	SLU 54	-250	6	5598	-10.85	-8.65	0.01
345	SLU 55	-247	6	5560	-10.75	-8.55	0.01
345	SLU 56	-255	6	5655	-11.01	-8.82	0.01
345	SLU 57	-253	6	5655	-11.01	-8.77	0.01
345	SLU 58	-253	6	5616	-10.91	-8.76	0.01
345	SLU 59	-251	6	5616	-10.91	-8.71	0.01
345	SLU 60	-257	7	5743	-11.08	-8.93	0.01
345	SLU 61	-256	7	5744	-11.08	-8.87	0.01
345	SLU 62	-261	7	5800	-11.24	-9.05	0.01
345	SLU 63	-260	7	5801	-11.25	-8.99	0.01
345	SLU 64	-245	6	5455	-10.55	-8.48	0.01
345	SLU 65	-243	6	5456	-10.56	-8.39	0.01
345	SLU 66	-250	6	5551	-10.82	-8.66	0.01
345	SLU 67	-249	6	5552	-10.82	-8.61	0.01
345	SLU 68	-246	6	5513	-10.72	-8.51	0.01
345	SLU 69	-254	6	5608	-10.98	-8.78	0.01
345	SLU 70	-252	6	5609	-10.98	-8.73	0.01
345	SLU 71	-252	6	5569	-10.88	-8.72	0.01
345	SLU 72	-250	6	5570	-10.88	-8.67	0.01
345	SLU 73	-270	7	6019	-11.72	-9.34	0.01
345	SLU 74	-277	7	6115	-11.98	-9.61	0.01
345	SLU 75	-276	7	6115	-11.98	-9.55	0.01
345	SLU 76	-273	7	6076	-11.88	-9.46	0.01
345	SLU 77	-280	7	6172	-12.14	-9.73	0.01
345	SLU 78	-279	7	6172	-12.14	-9.68	0.01
345	SLU 79	-278	7	6133	-12.04	-9.67	0.01
345	SLU 80	-277	7	6133	-12.04	-9.62	0.01
345	SLU 81	-283	7	6260	-12.21	-9.83	0.01
345	SLU 82	-282	7	6260	-12.21	-9.78	0.01
345	SLU 83	-287	7	6317	-12.37	-9.95	0.01
345	SLU 84	-285	7	6318	-12.38	-9.9	0.01
345	SLE RA 1	-183	5	4083	-7.87	-6.32	0.01
345	SLE RA 2	-181	5	4083	-7.87	-6.26	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
345	SLE RA 3	-186	5	4147	-8.05	-6.44	0.01
345	SLE RA 4	-185	5	4147	-8.05	-6.41	0.01
345	SLE RA 5	-184	5	4121	-7.98	-6.34	0.01
345	SLE RA 6	-189	5	4185	-8.15	-6.52	0.01
345	SLE RA 7	-188	5	4185	-8.16	-6.49	0.01
345	SLE RA 8	-187	5	4159	-8.09	-6.48	0.01
345	SLE RA 9	-186	5	4159	-8.09	-6.45	0.01
345	SLE RA 10	-199	5	4459	-8.65	-6.9	0.01
345	SLE RA 11	-204	5	4522	-8.82	-7.08	0.01
345	SLE RA 12	-203	5	4523	-8.82	-7.04	0.01
345	SLE RA 13	-201	5	4497	-8.75	-6.98	0.01
345	SLE RA 14	-206	5	4560	-8.93	-7.16	0.01
345	SLE RA 15	-206	5	4561	-8.93	-7.12	0.01
345	SLE RA 16	-205	5	4534	-8.86	-7.12	0.01
345	SLE RA 17	-204	5	4535	-8.86	-7.08	0.01
345	SLE RA 18	-208	5	4619	-8.98	-7.23	0.01
345	SLE RA 19	-207	5	4620	-8.98	-7.19	0.01
345	SLE RA 20	-211	5	4657	-9.08	-7.31	0.01
345	SLE RA 21	-210	5	4658	-9.08	-7.27	0.01
345	SLE FR 1	-183	5	4083	-7.87	-6.32	0.01
345	SLE FR 2	-183	5	4083	-7.87	-6.31	0.01
345	SLE FR 3	-184	5	4098	-7.91	-6.35	0.01
345	SLE FR 4	-190	5	4244	-8.2	-6.58	0.01
345	SLE FR 5	-191	5	4259	-8.24	-6.63	0.01
345	SLE FR 6	-196	5	4351	-8.42	-6.77	0.01
345	SLE QP 1	-183	5	4083	-7.87	-6.32	0.01
345	SLE QP 2	-190	5	4244	-8.2	-6.59	0.01
345	SLD 1	413	-3	4128	-3.14	19.45	0.03
345	SLD 2	413	-3	4128	-3.14	19.45	0.03
345	SLD 3	291	4	4663	-8.62	14.54	0
345	SLD 4	291	4	4663	-8.62	14.54	0
345	SLD 5	176	-8	3397	1.62	8.66	0.06
345	SLD 6	176	-8	3397	1.62	8.66	0.06
345	SLD 7	-231	15	5182	-16.63	-7.69	-0.04
345	SLD 8	-231	15	5182	-16.63	-7.69	-0.04
345	SLD 9	-150	-5	3305	0.22	-5.5	0.05
345	SLD 10	-150	-5	3305	0.22	-5.5	0.05
345	SLD 11	-557	18	5090	-18.02	-21.84	-0.04
345	SLD 12	-557	18	5090	-18.02	-21.84	-0.04
345	SLD 13	-672	6	3824	-7.79	-27.73	0.01
345	SLD 14	-672	6	3824	-7.79	-27.73	0.01
345	SLD 15	-794	13	4359	-13.26	-32.63	-0.02
345	SLD 16	-794	13	4359	-13.26	-32.63	-0.02
345	SLV 1	1205	-14	3961	3.71	53.57	0.06
345	SLV 2	1205	-14	3961	3.71	53.57	0.06
345	SLV 3	913	2	5240	-9.2	41.94	0
345	SLV 4	913	2	5240	-9.2	41.94	0
345	SLV 5	670	-25	2219	14.94	29.08	0.12
345	SLV 6	670	-25	2219	14.94	29.08	0.12
345	SLV 7	-301	28	6482	-28.07	-9.66	-0.1
345	SLV 8	-301	28	6482	-28.07	-9.66	-0.1
345	SLV 9	-80	-19	2005	11.67	-3.53	0.11
345	SLV 10	-80	-19	2005	11.67	-3.53	0.11
345	SLV 11	-1051	35	6268	-31.34	-42.27	-0.11
345	SLV 12	-1051	35	6268	-31.34	-42.27	-0.11
345	SLV 13	-1294	8	3247	-7.2	-55.13	0.01
345	SLV 14	-1294	8	3247	-7.2	-55.13	0.01
345	SLV 15	-1586	24	4526	-20.11	-66.75	-0.05
345	SLV 16	-1586	24	4526	-20.11	-66.75	-0.05
346	SLU 1	-233	21	3586	-15.23	-7.59	-0.03
346	SLU 2	-231	21	3586	-15.23	-7.51	-0.03
346	SLU 3	-240	22	3670	-15.76	-7.82	-0.03
346	SLU 4	-239	22	3670	-15.76	-7.77	-0.03
346	SLU 5	-235	22	3636	-15.55	-7.65	-0.03
346	SLU 6	-244	22	3720	-16.07	-7.96	-0.03
346	SLU 7	-243	22	3721	-16.08	-7.91	-0.03
346	SLU 8	-242	22	3686	-15.86	-7.88	-0.03
346	SLU 9	-241	22	3686	-15.87	-7.83	-0.03
346	SLU 10	-265	25	4096	-17.52	-8.61	-0.04
346	SLU 11	-275	25	4180	-18.04	-8.92	-0.04
346	SLU 12	-273	25	4181	-18.04	-8.87	-0.04
346	SLU 13	-270	25	4147	-17.84	-8.75	-0.04
346	SLU 14	-279	26	4230	-18.36	-9.06	-0.04
346	SLU 15	-278	26	4231	-18.36	-9.01	-0.04
346	SLU 16	-276	25	4196	-18.15	-8.98	-0.04
346	SLU 17	-275	25	4197	-18.15	-8.93	-0.04
346	SLU 18	-282	26	4314	-18.49	-9.16	-0.04
346	SLU 19	-281	26	4315	-18.5	-9.12	-0.04
346	SLU 20	-287	26	4365	-18.81	-9.31	-0.04
346	SLU 21	-286	26	4365	-18.81	-9.26	-0.04
346	SLU 22	-266	24	4051	-17.46	-8.67	-0.04
346	SLU 23	-264	24	4051	-17.47	-8.58	-0.04
346	SLU 24	-273	25	4135	-17.99	-8.89	-0.04
346	SLU 25	-272	25	4135	-17.99	-8.84	-0.04
346	SLU 26	-269	25	4102	-17.79	-8.73	-0.04
346	SLU 27	-278	26	4185	-18.31	-9.04	-0.04
346	SLU 28	-277	26	4186	-18.31	-8.99	-0.04
346	SLU 29	-275	25	4151	-18.1	-8.95	-0.04
346	SLU 30	-274	25	4152	-18.1	-8.9	-0.04
346	SLU 31	-299	28	4562	-19.75	-9.69	-0.04



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
		x	y	z		x	y	z	
346	SLU 32	-308	28	4645		-20.28	-9.99	-0.04	
346	SLU 33	-307	28	4646		-20.28	-9.95	-0.04	
346	SLU 34	-304	28	4612		-20.07	-9.83	-0.04	
346	SLU 35	-313	29	4696		-20.59	-10.14	-0.04	
346	SLU 36	-312	29	4696		-20.6	-10.09	-0.04	
346	SLU 37	-310	29	4661		-20.38	-10.05	-0.04	
346	SLU 38	-309	29	4662		-20.38	-10	-0.04	
346	SLU 39	-316	29	4780		-20.73	-10.24	-0.04	
346	SLU 40	-315	29	4780		-20.73	-10.19	-0.04	
346	SLU 41	-320	29	4830		-21.04	-10.38	-0.05	
346	SLU 42	-319	29	4830		-21.05	-10.33	-0.05	
346	SLU 43	-291	27	4502		-19.03	-9.5	-0.04	
346	SLU 44	-289	27	4502		-19.04	-9.42	-0.04	
346	SLU 45	-298	27	4586		-19.56	-9.73	-0.04	
346	SLU 46	-297	27	4586		-19.56	-9.68	-0.04	
346	SLU 47	-294	27	4552		-19.35	-9.56	-0.04	
346	SLU 48	-303	28	4636		-19.88	-9.87	-0.04	
346	SLU 49	-302	28	4637		-19.88	-9.82	-0.04	
346	SLU 50	-300	28	4602		-19.67	-9.78	-0.04	
346	SLU 51	-299	28	4603		-19.67	-9.73	-0.04	
346	SLU 52	-324	30	5012		-21.32	-10.52	-0.05	
346	SLU 53	-333	31	5096		-21.84	-10.83	-0.05	
346	SLU 54	-332	31	5097		-21.85	-10.78	-0.05	
346	SLU 55	-328	30	5063		-21.64	-10.66	-0.05	
346	SLU 56	-337	31	5147		-22.16	-10.97	-0.05	
346	SLU 57	-336	31	5147		-22.16	-10.92	-0.05	
346	SLU 58	-335	31	5112		-21.95	-10.89	-0.05	
346	SLU 59	-334	31	5113		-21.95	-10.84	-0.05	
346	SLU 60	-340	31	5231		-22.3	-11.07	-0.05	
346	SLU 61	-339	31	5231		-22.3	-11.02	-0.05	
346	SLU 62	-345	32	5281		-22.61	-11.22	-0.05	
346	SLU 63	-344	32	5281		-22.62	-11.17	-0.05	
346	SLU 64	-325	30	4967		-21.27	-10.57	-0.05	
346	SLU 65	-323	30	4967		-21.27	-10.49	-0.05	
346	SLU 66	-332	30	5051		-21.79	-10.8	-0.05	
346	SLU 67	-331	30	5052		-21.8	-10.75	-0.05	
346	SLU 68	-327	30	5018		-21.59	-10.63	-0.05	
346	SLU 69	-336	31	5102		-22.11	-10.94	-0.05	
346	SLU 70	-335	31	5102		-22.11	-10.89	-0.05	
346	SLU 71	-334	31	5067		-21.9	-10.86	-0.05	
346	SLU 72	-333	31	5068		-21.9	-10.81	-0.05	
346	SLU 73	-357	33	5478		-23.56	-11.59	-0.05	
346	SLU 74	-366	34	5562		-24.08	-11.9	-0.05	
346	SLU 75	-365	34	5562		-24.08	-11.85	-0.05	
346	SLU 76	-362	33	5528		-23.87	-11.74	-0.05	
346	SLU 77	-371	34	5612		-24.4	-12.05	-0.05	
346	SLU 78	-370	34	5612		-24.4	-12	-0.05	
346	SLU 79	-368	34	5578		-24.18	-11.96	-0.05	
346	SLU 80	-367	34	5578		-24.19	-11.91	-0.05	
346	SLU 81	-374	34	5696		-24.53	-12.15	-0.05	
346	SLU 82	-373	34	5696		-24.53	-12.1	-0.05	
346	SLU 83	-379	35	5746		-24.85	-12.29	-0.05	
346	SLU 84	-377	35	5746		-24.85	-12.24	-0.05	
346	SLE RA 1	-242	22	3718		-15.87	-7.9	-0.03	
346	SLE RA 2	-241	22	3719		-15.87	-7.84	-0.03	
346	SLE RA 3	-247	23	3775		-16.22	-8.05	-0.03	
346	SLE RA 4	-246	23	3775		-16.22	-8.02	-0.03	
346	SLE RA 5	-244	22	3752		-16.08	-7.94	-0.03	
346	SLE RA 6	-250	23	3808		-16.43	-8.14	-0.04	
346	SLE RA 7	-249	23	3808		-16.43	-8.11	-0.04	
346	SLE RA 8	-248	23	3785		-16.29	-8.09	-0.04	
346	SLE RA 9	-248	23	3786		-16.29	-8.05	-0.04	
346	SLE RA 10	-264	24	4059		-17.39	-8.58	-0.04	
346	SLE RA 11	-270	25	4115		-17.74	-8.78	-0.04	
346	SLE RA 12	-269	25	4115		-17.74	-8.75	-0.04	
346	SLE RA 13	-267	25	4092		-17.61	-8.67	-0.04	
346	SLE RA 14	-273	25	4148		-17.95	-8.88	-0.04	
346	SLE RA 15	-272	25	4149		-17.96	-8.85	-0.04	
346	SLE RA 16	-271	25	4126		-17.81	-8.82	-0.04	
346	SLE RA 17	-271	25	4126		-17.82	-8.79	-0.04	
346	SLE RA 18	-275	25	4204		-18.04	-8.95	-0.04	
346	SLE RA 19	-274	25	4205		-18.05	-8.91	-0.04	
346	SLE RA 20	-278	26	4238		-18.25	-9.04	-0.04	
346	SLE RA 21	-278	26	4238		-18.26	-9.01	-0.04	
346	SLE FR 1	-242	22	3718		-15.87	-7.9	-0.03	
346	SLE FR 2	-242	22	3718		-15.87	-7.89	-0.03	
346	SLE FR 3	-243	22	3732		-15.95	-7.94	-0.03	
346	SLE FR 4	-252	23	3864		-16.52	-8.2	-0.04	
346	SLE FR 5	-253	23	3878		-16.6	-8.25	-0.04	
346	SLE FR 6	-259	24	3961		-16.96	-8.42	-0.04	
346	SLE QP 1	-242	22	3718		-15.87	-7.9	-0.03	
346	SLE QP 2	-252	23	3864		-16.52	-8.21	-0.04	
346	SLD 1	360	14	3495		-8.81	17.98	-0.02	
346	SLD 2	360	14	3495		-8.81	17.98	-0.02	
346	SLD 3	233	23	3943		-18.59	12.83	-0.03	
346	SLD 4	233	23	3943		-18.59	12.83	-0.03	
346	SLD 5	124	7	3073		0.63	7.45	0	
346	SLD 6	124	7	3073		0.63	7.45	0	
346	SLD 7	-299	36	4568		-31.98	-9.71	-0.06	
346	SLD 8	-299	36	4568		-31.98	-9.71	-0.06	



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
346	SLD 9	-206	10	3160	-1.06	-6.72	-0.01
346	SLD 10	-206	10	3160	-1.06	-6.72	-0.01
346	SLD 11	-628	39	4656	-33.67	-23.88	-0.07
346	SLD 12	-628	39	4656	-33.67	-23.88	-0.07
346	SLD 13	-738	23	3785	-14.45	-29.26	-0.04
346	SLD 14	-738	23	3785	-14.45	-29.26	-0.04
346	SLD 15	-864	32	4234	-24.23	-34.4	-0.06
346	SLD 16	-864	32	4234	-24.23	-34.4	-0.06
346	SLV 1	1163	2	2992	1.62	52.29	0.01
346	SLV 2	1163	2	2992	1.62	52.29	0.01
346	SLV 3	862	23	4060	-21.42	40.11	-0.03
346	SLV 4	862	23	4060	-21.42	40.11	-0.03
346	SLV 5	628	-14	1983	23.87	28.41	0.05
346	SLV 6	628	-14	1983	23.87	28.41	0.05
346	SLV 7	-374	54	5542	-52.94	-12.19	-0.1
346	SLV 8	-374	54	5542	-52.94	-12.19	-0.1
346	SLV 9	-130	-8	2186	19.9	-4.24	0.03
346	SLV 10	-130	-8	2186	19.9	-4.24	0.03
346	SLV 11	-1133	61	5745	-56.91	-44.83	-0.12
346	SLV 12	-1133	61	5745	-56.91	-44.83	-0.12
346	SLV 13	-1366	23	3668	-11.62	-56.54	-0.04
346	SLV 14	-1366	23	3668	-11.62	-56.54	-0.04
346	SLV 15	-1667	44	4736	-34.67	-68.72	-0.08
346	SLV 16	-1667	44	4736	-34.67	-68.72	-0.08
347	SLU 1	-252	31	3251	-20.73	-9.8	-0.07
347	SLU 2	-250	31	3251	-20.73	-9.72	-0.07
347	SLU 3	-260	32	3324	-21.44	-10.12	-0.07
347	SLU 4	-259	32	3324	-21.44	-10.07	-0.07
347	SLU 5	-256	31	3294	-21.16	-9.93	-0.07
347	SLU 6	-266	32	3368	-21.86	-10.33	-0.07
347	SLU 7	-265	32	3368	-21.87	-10.28	-0.07
347	SLU 8	-263	32	3338	-21.58	-10.22	-0.07
347	SLU 9	-262	32	3338	-21.58	-10.18	-0.07
347	SLU 10	-289	35	3710	-23.81	-11.23	-0.08
347	SLU 11	-299	36	3783	-24.51	-11.62	-0.08
347	SLU 12	-298	36	3783	-24.52	-11.58	-0.08
347	SLU 13	-294	36	3753	-24.23	-11.44	-0.08
347	SLU 14	-304	37	3826	-24.94	-11.84	-0.08
347	SLU 15	-303	37	3827	-24.94	-11.79	-0.08
347	SLU 16	-301	36	3797	-24.65	-11.73	-0.08
347	SLU 17	-300	36	3797	-24.65	-11.68	-0.08
347	SLU 18	-307	37	3906	-25.12	-11.95	-0.08
347	SLU 19	-306	37	3906	-25.12	-11.9	-0.08
347	SLU 20	-312	38	3950	-25.54	-12.16	-0.08
347	SLU 21	-311	38	3950	-25.55	-12.12	-0.08
347	SLU 22	-289	35	3666	-23.74	-11.24	-0.08
347	SLU 23	-287	35	3666	-23.75	-11.16	-0.08
347	SLU 24	-297	36	3740	-24.45	-11.56	-0.08
347	SLU 25	-296	36	3740	-24.46	-11.51	-0.08
347	SLU 26	-293	36	3710	-24.17	-11.38	-0.08
347	SLU 27	-302	37	3783	-24.88	-11.77	-0.08
347	SLU 28	-301	37	3783	-24.88	-11.73	-0.08
347	SLU 29	-300	36	3754	-24.59	-11.67	-0.08
347	SLU 30	-299	36	3754	-24.6	-11.62	-0.08
347	SLU 31	-326	40	4125	-26.82	-12.67	-0.09
347	SLU 32	-335	41	4199	-27.53	-13.07	-0.09
347	SLU 33	-334	41	4199	-27.53	-13.02	-0.09
347	SLU 34	-331	40	4169	-27.25	-12.88	-0.09
347	SLU 35	-341	41	4242	-27.96	-13.28	-0.09
347	SLU 36	-340	41	4242	-27.96	-13.23	-0.09
347	SLU 37	-338	41	4212	-27.67	-13.17	-0.09
347	SLU 38	-337	41	4213	-27.67	-13.13	-0.09
347	SLU 39	-344	42	4322	-28.13	-13.4	-0.09
347	SLU 40	-343	42	4322	-28.14	-13.35	-0.09
347	SLU 41	-349	42	4365	-28.56	-13.61	-0.09
347	SLU 42	-348	42	4366	-28.56	-13.56	-0.09
347	SLU 43	-315	38	4083	-25.91	-12.24	-0.08
347	SLU 44	-313	38	4083	-25.92	-12.16	-0.08
347	SLU 45	-323	39	4157	-26.62	-12.56	-0.09
347	SLU 46	-322	39	4157	-26.63	-12.51	-0.09
347	SLU 47	-319	39	4127	-26.34	-12.38	-0.09
347	SLU 48	-329	40	4200	-27.05	-12.77	-0.09
347	SLU 49	-328	40	4200	-27.05	-12.73	-0.09
347	SLU 50	-326	40	4171	-26.76	-12.67	-0.09
347	SLU 51	-325	40	4171	-26.76	-12.62	-0.09
347	SLU 52	-352	43	4542	-28.99	-13.67	-0.09
347	SLU 53	-362	44	4615	-29.7	-14.07	-0.1
347	SLU 54	-361	44	4616	-29.7	-14.02	-0.1
347	SLU 55	-357	44	4586	-29.42	-13.88	-0.1
347	SLU 56	-367	45	4659	-30.12	-14.28	-0.1
347	SLU 57	-366	45	4659	-30.13	-14.23	-0.1
347	SLU 58	-364	44	4629	-29.83	-14.17	-0.1
347	SLU 59	-363	44	4630	-29.84	-14.13	-0.1
347	SLU 60	-370	45	4739	-30.3	-14.39	-0.1
347	SLU 61	-369	45	4739	-30.31	-14.35	-0.1
347	SLU 62	-375	45	4782	-30.73	-14.61	-0.1
347	SLU 63	-374	45	4783	-30.73	-14.56	-0.1
347	SLU 64	-352	43	4499	-28.93	-13.69	-0.09
347	SLU 65	-350	43	4499	-28.93	-13.61	-0.09
347	SLU 66	-360	44	4572	-29.64	-14	-0.1



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
347	SLU 67	-359	44	4572	-29.64	-13.96	-0.1
347	SLU 68	-356	43	4543	-29.36	-13.82	-0.1
347	SLU 69	-365	44	4616	-30.06	-14.22	-0.1
347	SLU 70	-364	44	4616	-30.07	-14.17	-0.1
347	SLU 71	-363	44	4586	-29.78	-14.11	-0.1
347	SLU 72	-362	44	4586	-29.78	-14.06	-0.1
347	SLU 73	-389	47	4958	-32.01	-15.12	-0.1
347	SLU 74	-398	48	5031	-32.71	-15.51	-0.11
347	SLU 75	-397	48	5031	-32.72	-15.47	-0.11
347	SLU 76	-394	48	5002	-32.43	-15.33	-0.11
347	SLU 77	-404	49	5075	-33.14	-15.72	-0.11
347	SLU 78	-403	49	5075	-33.14	-15.68	-0.11
347	SLU 79	-401	49	5045	-32.85	-15.62	-0.11
347	SLU 80	-400	49	5045	-32.85	-15.57	-0.11
347	SLU 81	-407	49	5154	-33.32	-15.84	-0.11
347	SLU 82	-406	49	5155	-33.32	-15.79	-0.11
347	SLU 83	-412	50	5198	-33.74	-16.05	-0.11
347	SLU 84	-411	50	5198	-33.75	-16.01	-0.11
347	SLE RA 1	-263	32	3369	-21.59	-10.21	-0.07
347	SLE RA 2	-262	32	3369	-21.59	-10.16	-0.07
347	SLE RA 3	-268	33	3418	-22.06	-10.42	-0.07
347	SLE RA 4	-267	33	3418	-22.07	-10.39	-0.07
347	SLE RA 5	-265	32	3399	-21.88	-10.3	-0.07
347	SLE RA 6	-272	33	3447	-22.35	-10.56	-0.07
347	SLE RA 7	-271	33	3447	-22.35	-10.53	-0.07
347	SLE RA 8	-270	33	3428	-22.15	-10.49	-0.07
347	SLE RA 9	-269	33	3428	-22.16	-10.46	-0.07
347	SLE RA 10	-287	35	3675	-23.64	-11.16	-0.08
347	SLE RA 11	-294	36	3724	-24.11	-11.43	-0.08
347	SLE RA 12	-293	36	3724	-24.12	-11.4	-0.08
347	SLE RA 13	-291	35	3705	-23.92	-11.3	-0.08
347	SLE RA 14	-297	36	3753	-24.4	-11.57	-0.08
347	SLE RA 15	-296	36	3753	-24.4	-11.54	-0.08
347	SLE RA 16	-295	36	3733	-24.2	-11.5	-0.08
347	SLE RA 17	-295	36	3734	-24.21	-11.47	-0.08
347	SLE RA 18	-299	36	3806	-24.52	-11.65	-0.08
347	SLE RA 19	-298	36	3806	-24.52	-11.61	-0.08
347	SLE RA 20	-303	37	3835	-24.8	-11.79	-0.08
347	SLE RA 21	-302	37	3836	-24.8	-11.76	-0.08
347	SLE FR 1	-263	32	3369	-21.59	-10.21	-0.07
347	SLE FR 2	-262	32	3369	-21.59	-10.2	-0.07
347	SLE FR 3	-264	32	3381	-21.7	-10.27	-0.07
347	SLE FR 4	-273	33	3500	-22.47	-10.63	-0.07
347	SLE FR 5	-275	33	3512	-22.58	-10.7	-0.07
347	SLE FR 6	-281	34	3588	-23.05	-10.93	-0.07
347	SLE QP 1	-263	32	3369	-21.59	-10.21	-0.07
347	SLE QP 2	-274	33	3500	-22.47	-10.64	-0.07
347	SLD 1	364	22	3159	-12.18	16.94	-0.05
347	SLD 2	364	22	3159	-12.18	16.94	-0.05
347	SLD 3	236	36	3548	-26.46	11.63	-0.07
347	SLD 4	236	36	3548	-26.46	11.63	-0.07
347	SLD 5	112	8	2808	2.28	5.69	-0.03
347	SLD 6	112	8	2808	2.28	5.69	-0.03
347	SLD 7	-315	56	4104	-45.32	-12.02	-0.11
347	SLD 8	-315	56	4104	-45.32	-12.02	-0.11
347	SLD 9	-232	11	2896	0.39	-9.26	-0.04
347	SLD 10	-232	11	2896	0.39	-9.26	-0.04
347	SLD 11	-659	58	4193	-47.21	-26.97	-0.12
347	SLD 12	-659	58	4193	-47.21	-26.97	-0.12
347	SLD 13	-783	31	3453	-18.47	-32.91	-0.07
347	SLD 14	-783	31	3453	-18.47	-32.91	-0.07
347	SLD 15	-911	45	3842	-32.75	-38.22	-0.1
347	SLD 16	-911	45	3842	-32.75	-38.22	-0.1
347	SLV 1	1199	6	2699	1.75	53.03	-0.02
347	SLV 2	1199	6	2699	1.75	53.03	-0.02
347	SLV 3	897	40	3621	-31.87	40.54	-0.07
347	SLV 4	897	40	3621	-31.87	40.54	-0.07
347	SLV 5	626	-26	1861	35.79	27.39	0.03
347	SLV 6	626	-26	1861	35.79	27.39	0.03
347	SLV 7	-381	86	4935	-76.27	-14.22	-0.16
347	SLV 8	-381	86	4935	-76.27	-14.22	-0.16
347	SLV 9	-167	-19	2066	31.34	-7.06	0.01
347	SLV 10	-167	-19	2066	31.34	-7.06	0.01
347	SLV 11	-1174	92	5140	-80.72	-48.67	-0.18
347	SLV 12	-1174	92	5140	-80.72	-48.67	-0.18
347	SLV 13	-1444	27	3380	-13.07	-61.82	-0.07
347	SLV 14	-1444	27	3380	-13.07	-61.82	-0.07
347	SLV 15	-1746	60	4302	-46.68	-74.31	-0.13
347	SLV 16	-1746	60	4302	-46.68	-74.31	-0.13
348	SLU 1	-179	33	2968	-23.64	-5.95	-0.08
348	SLU 2	-177	33	2968	-23.65	-5.88	-0.08
348	SLU 3	-185	34	3032	-24.45	-6.15	-0.08
348	SLU 4	-184	34	3032	-24.45	-6.1	-0.08
348	SLU 5	-181	34	3006	-24.13	-6.01	-0.08
348	SLU 6	-189	35	3070	-24.93	-6.28	-0.08
348	SLU 7	-188	35	3070	-24.93	-6.24	-0.08
348	SLU 8	-187	35	3044	-24.6	-6.23	-0.08
348	SLU 9	-186	35	3044	-24.6	-6.18	-0.08
348	SLU 10	-204	38	3383	-27.13	-6.76	-0.09
348	SLU 11	-212	39	3447	-27.93	-7.03	-0.09



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione		
		x	y	z		x	y	z
348	SLU 12	-211	39	3447		-27.94	-6.98	-0.09
348	SLU 13	-208	39	3421		-27.61	-6.9	-0.09
348	SLU 14	-216	40	3485		-28.41	-7.17	-0.09
348	SLU 15	-215	40	3485		-28.42	-7.12	-0.09
348	SLU 16	-214	40	3459		-28.08	-7.11	-0.09
348	SLU 17	-213	40	3459		-28.09	-7.06	-0.09
348	SLU 18	-218	40	3561		-28.62	-7.22	-0.09
348	SLU 19	-217	40	3561		-28.62	-7.17	-0.09
348	SLU 20	-222	41	3599		-29.1	-7.35	-0.09
348	SLU 21	-221	41	3599		-29.1	-7.31	-0.09
348	SLU 22	-205	38	3342		-27.06	-6.81	-0.09
348	SLU 23	-203	38	3342		-27.07	-6.73	-0.09
348	SLU 24	-211	39	3406		-27.87	-7	-0.09
348	SLU 25	-210	39	3406		-27.88	-6.95	-0.09
348	SLU 26	-207	39	3380		-27.55	-6.86	-0.09
348	SLU 27	-215	40	3444		-28.35	-7.13	-0.09
348	SLU 28	-214	40	3444		-28.36	-7.09	-0.09
348	SLU 29	-213	40	3418		-28.02	-7.08	-0.09
348	SLU 30	-212	40	3418		-28.03	-7.03	-0.09
348	SLU 31	-230	43	3757		-30.55	-7.61	-0.1
348	SLU 32	-238	44	3821		-31.36	-7.88	-0.1
348	SLU 33	-237	44	3821		-31.36	-7.84	-0.1
348	SLU 34	-234	44	3795		-31.03	-7.75	-0.1
348	SLU 35	-242	45	3859		-31.84	-8.02	-0.1
348	SLU 36	-241	45	3859		-31.84	-7.97	-0.1
348	SLU 37	-240	44	3833		-31.51	-7.96	-0.1
348	SLU 38	-239	44	3833		-31.51	-7.92	-0.1
348	SLU 39	-244	45	3935		-32.04	-8.07	-0.1
348	SLU 40	-243	45	3935		-32.04	-8.02	-0.1
348	SLU 41	-248	46	3973		-32.52	-8.2	-0.1
348	SLU 42	-247	46	3973		-32.52	-8.16	-0.1
348	SLU 43	-223	42	3730		-29.56	-7.45	-0.09
348	SLU 44	-222	42	3730		-29.57	-7.37	-0.09
348	SLU 45	-229	43	3794		-30.37	-7.64	-0.1
348	SLU 46	-228	43	3794		-30.37	-7.59	-0.1
348	SLU 47	-226	42	3768		-30.04	-7.51	-0.1
348	SLU 48	-233	44	3832		-30.85	-7.78	-0.1
348	SLU 49	-232	44	3833		-30.85	-7.73	-0.1
348	SLU 50	-231	43	3806		-30.52	-7.72	-0.1
348	SLU 51	-230	43	3806		-30.52	-7.67	-0.1
348	SLU 52	-249	47	4145		-33.05	-8.25	-0.11
348	SLU 53	-256	48	4209		-33.85	-8.52	-0.11
348	SLU 54	-255	48	4209		-33.86	-8.48	-0.11
348	SLU 55	-253	47	4183		-33.53	-8.39	-0.11
348	SLU 56	-261	48	4247		-34.33	-8.66	-0.11
348	SLU 57	-259	48	4248		-34.34	-8.61	-0.11
348	SLU 58	-259	48	4221		-34	-8.6	-0.11
348	SLU 59	-258	48	4221		-34	-8.56	-0.11
348	SLU 60	-262	49	4323		-34.54	-8.71	-0.11
348	SLU 61	-261	49	4323		-34.54	-8.66	-0.11
348	SLU 62	-266	49	4361		-35.01	-8.85	-0.11
348	SLU 63	-265	49	4361		-35.02	-8.8	-0.11
348	SLU 64	-249	46	4104		-32.98	-8.3	-0.11
348	SLU 65	-248	47	4104		-32.99	-8.22	-0.11
348	SLU 66	-255	48	4168		-33.79	-8.49	-0.11
348	SLU 67	-254	48	4168		-33.8	-8.45	-0.11
348	SLU 68	-252	47	4142		-33.47	-8.36	-0.11
348	SLU 69	-259	48	4206		-34.27	-8.63	-0.11
348	SLU 70	-258	48	4206		-34.28	-8.58	-0.11
348	SLU 71	-258	48	4180		-33.94	-8.57	-0.11
348	SLU 72	-257	48	4180		-33.94	-8.53	-0.11
348	SLU 73	-275	51	4519		-36.47	-9.11	-0.12
348	SLU 74	-283	53	4583		-37.28	-9.38	-0.12
348	SLU 75	-282	53	4583		-37.28	-9.33	-0.12
348	SLU 76	-279	52	4557		-36.95	-9.24	-0.12
348	SLU 77	-287	53	4621		-37.75	-9.51	-0.12
348	SLU 78	-286	53	4621		-37.76	-9.47	-0.12
348	SLU 79	-285	53	4595		-37.42	-9.46	-0.12
348	SLU 80	-284	53	4595		-37.43	-9.41	-0.12
348	SLU 81	-288	53	4697		-37.96	-9.56	-0.12
348	SLU 82	-287	54	4697		-37.96	-9.52	-0.12
348	SLU 83	-292	54	4735		-38.44	-9.7	-0.12
348	SLU 84	-291	54	4735		-38.44	-9.65	-0.12
348	SLE RA 1	-186	35	3075		-24.62	-6.2	-0.08
348	SLE RA 2	-185	35	3075		-24.62	-6.15	-0.08
348	SLE RA 3	-190	35	3118		-25.16	-6.33	-0.08
348	SLE RA 4	-189	35	3118		-25.16	-6.29	-0.08
348	SLE RA 5	-188	35	3100		-24.94	-6.24	-0.08
348	SLE RA 6	-193	36	3143		-25.48	-6.42	-0.08
348	SLE RA 7	-192	36	3143		-25.48	-6.39	-0.08
348	SLE RA 8	-192	36	3126		-25.26	-6.38	-0.08
348	SLE RA 9	-191	36	3126		-25.26	-6.35	-0.08
348	SLE RA 10	-203	38	3351		-26.94	-6.73	-0.09
348	SLE RA 11	-208	39	3394		-27.48	-6.91	-0.09
348	SLE RA 12	-208	39	3394		-27.48	-6.88	-0.09
348	SLE RA 13	-206	38	3377		-27.26	-6.83	-0.09
348	SLE RA 14	-211	39	3420		-27.8	-7.01	-0.09
348	SLE RA 15	-210	39	3420		-27.8	-6.97	-0.09
348	SLE RA 16	-210	39	3402		-27.58	-6.97	-0.09
348	SLE RA 17	-209	39	3402		-27.58	-6.94	-0.09



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
348	SLE RA 18	-212	39	3470	-27.94	-7.04	-0.09
348	SLE RA 19	-211	39	3470	-27.94	-7.01	-0.09
348	SLE RA 20	-215	40	3495	-28.26	-7.13	-0.09
348	SLE RA 21	-214	40	3495	-28.26	-7.1	-0.09
348	SLE FR 1	-186	35	3075	-24.62	-6.2	-0.08
348	SLE FR 2	-186	35	3075	-24.62	-6.19	-0.08
348	SLE FR 3	-187	35	3085	-24.75	-6.23	-0.08
348	SLE FR 4	-194	36	3193	-25.61	-6.44	-0.08
348	SLE FR 5	-195	36	3204	-25.74	-6.49	-0.08
348	SLE FR 6	-199	37	3272	-26.28	-6.62	-0.08
348	SLE QP 1	-186	35	3075	-24.62	-6.2	-0.08
348	SLE QP 2	-194	36	3193	-25.61	-6.45	-0.08
348	SLD 1	472	22	2885	-13.28	22.22	-0.06
348	SLD 2	472	22	2885	-13.28	22.22	-0.06
348	SLD 3	349	41	3240	-31.25	17.09	-0.09
348	SLD 4	349	41	3240	-31.25	17.09	-0.09
348	SLD 5	192	3	2561	5.35	9.94	-0.03
348	SLD 6	192	3	2561	5.35	9.94	-0.03
348	SLD 7	-218	66	3747	-54.57	-7.18	-0.13
348	SLD 8	-218	66	3747	-54.57	-7.18	-0.13
348	SLD 9	-170	6	2639	3.34	-5.72	-0.03
348	SLD 10	-170	6	2639	3.34	-5.72	-0.03
348	SLD 11	-580	69	3826	-56.58	-22.84	-0.14
348	SLD 12	-580	69	3826	-56.58	-22.84	-0.14
348	SLD 13	-737	31	3146	-19.97	-29.99	-0.08
348	SLD 14	-737	31	3146	-19.97	-29.99	-0.08
348	SLD 15	-860	50	3502	-37.95	-35.12	-0.11
348	SLD 16	-860	50	3502	-37.95	-35.12	-0.11
348	SLV 1	1343	4	2470	3.46	59.7	-0.02
348	SLV 2	1343	4	2470	3.46	59.7	-0.02
348	SLV 3	1055	48	3311	-38.86	47.7	-0.09
348	SLV 4	1055	48	3311	-38.86	47.7	-0.09
348	SLV 5	704	-41	1700	47.29	31.59	0.05
348	SLV 6	704	-41	1700	47.29	31.59	0.05
348	SLV 7	-256	107	4505	-93.77	-8.4	-0.19
348	SLV 8	-256	107	4505	-93.77	-8.4	-0.19
348	SLV 9	-132	-35	1882	42.54	-4.5	0.03
348	SLV 10	-132	-35	1882	42.54	-4.5	0.03
348	SLV 11	-1092	113	4686	-98.52	-44.49	-0.21
348	SLV 12	-1092	113	4686	-98.52	-44.49	-0.21
348	SLV 13	-1442	24	3076	-12.37	-60.6	-0.07
348	SLV 14	-1442	24	3076	-12.37	-60.6	-0.07
348	SLV 15	-1730	68	3917	-54.69	-72.6	-0.14
348	SLV 16	-1730	68	3917	-54.69	-72.6	-0.14
349	SLU 1	-70	33	2786	-24.69	-2.76	-0.05
349	SLU 2	-68	33	2786	-24.69	-2.68	-0.05
349	SLU 3	-72	34	2844	-25.53	-2.87	-0.05
349	SLU 4	-71	34	2844	-25.53	-2.82	-0.05
349	SLU 5	-70	33	2820	-25.18	-2.78	-0.05
349	SLU 6	-75	34	2878	-26.02	-2.97	-0.05
349	SLU 7	-74	34	2878	-26.02	-2.92	-0.05
349	SLU 8	-74	34	2854	-25.67	-2.96	-0.05
349	SLU 9	-73	34	2854	-25.67	-2.91	-0.05
349	SLU 10	-79	37	3172	-28.31	-3.14	-0.06
349	SLU 11	-84	38	3230	-29.15	-3.33	-0.06
349	SLU 12	-82	38	3230	-29.15	-3.28	-0.06
349	SLU 13	-81	38	3206	-28.8	-3.24	-0.06
349	SLU 14	-86	39	3265	-29.64	-3.43	-0.06
349	SLU 15	-85	39	3265	-29.64	-3.38	-0.06
349	SLU 16	-86	39	3241	-29.29	-3.42	-0.06
349	SLU 17	-85	39	3241	-29.3	-3.37	-0.06
349	SLU 18	-86	39	3338	-29.86	-3.41	-0.06
349	SLU 19	-85	39	3338	-29.86	-3.37	-0.06
349	SLU 20	-88	40	3372	-30.35	-3.51	-0.06
349	SLU 21	-87	40	3372	-30.35	-3.47	-0.06
349	SLU 22	-80	37	3132	-28.25	-3.19	-0.06
349	SLU 23	-78	37	3132	-28.25	-3.11	-0.06
349	SLU 24	-83	38	3191	-29.09	-3.3	-0.06
349	SLU 25	-82	38	3190	-29.09	-3.25	-0.06
349	SLU 26	-81	38	3167	-28.75	-3.21	-0.06
349	SLU 27	-85	39	3225	-29.58	-3.4	-0.06
349	SLU 28	-84	39	3225	-29.59	-3.35	-0.06
349	SLU 29	-85	39	3201	-29.24	-3.39	-0.06
349	SLU 30	-84	39	3201	-29.24	-3.34	-0.06
349	SLU 31	-90	42	3519	-31.87	-3.57	-0.06
349	SLU 32	-94	43	3577	-32.71	-3.76	-0.07
349	SLU 33	-93	43	3577	-32.71	-3.71	-0.07
349	SLU 34	-92	43	3553	-32.37	-3.67	-0.07
349	SLU 35	-96	44	3611	-33.2	-3.85	-0.07
349	SLU 36	-95	44	3611	-33.21	-3.81	-0.07
349	SLU 37	-96	43	3587	-32.86	-3.84	-0.07
349	SLU 38	-95	43	3587	-32.86	-3.8	-0.07
349	SLU 39	-96	44	3684	-33.42	-3.84	-0.07
349	SLU 40	-95	44	3684	-33.42	-3.8	-0.07
349	SLU 41	-99	45	3719	-33.91	-3.94	-0.07
349	SLU 42	-98	45	3719	-33.92	-3.9	-0.07
349	SLU 43	-87	41	3503	-30.87	-3.44	-0.06
349	SLU 44	-85	41	3503	-30.87	-3.37	-0.06
349	SLU 45	-90	42	3561	-31.71	-3.55	-0.06
349	SLU 46	-89	42	3561	-31.71	-3.51	-0.06



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
349	SLU 47	-88	41	3537	-31.37	-3.46	-0.06
349	SLU 48	-92	43	3595	-32.2	-3.65	-0.07
349	SLU 49	-91	43	3595	-32.21	-3.61	-0.07
349	SLU 50	-92	42	3571	-31.86	-3.64	-0.07
349	SLU 51	-91	42	3571	-31.86	-3.59	-0.07
349	SLU 52	-96	46	3889	-34.49	-3.82	-0.07
349	SLU 53	-101	47	3947	-35.33	-4.01	-0.07
349	SLU 54	-100	47	3947	-35.33	-3.96	-0.07
349	SLU 55	-99	46	3924	-34.99	-3.92	-0.07
349	SLU 56	-103	47	3982	-35.83	-4.11	-0.07
349	SLU 57	-102	47	3982	-35.83	-4.06	-0.07
349	SLU 58	-103	47	3958	-35.48	-4.1	-0.07
349	SLU 59	-102	47	3958	-35.48	-4.05	-0.07
349	SLU 60	-103	48	4055	-36.04	-4.1	-0.07
349	SLU 61	-102	48	4055	-36.04	-4.05	-0.07
349	SLU 62	-105	48	4089	-36.54	-4.19	-0.07
349	SLU 63	-104	48	4089	-36.54	-4.15	-0.07
349	SLU 64	-97	45	3849	-34.43	-3.87	-0.07
349	SLU 65	-96	45	3849	-34.44	-3.79	-0.07
349	SLU 66	-100	47	3908	-35.27	-3.98	-0.07
349	SLU 67	-99	47	3907	-35.28	-3.93	-0.07
349	SLU 68	-98	46	3884	-34.93	-3.89	-0.07
349	SLU 69	-102	47	3942	-35.77	-4.08	-0.07
349	SLU 70	-101	47	3942	-35.77	-4.03	-0.07
349	SLU 71	-102	47	3918	-35.42	-4.07	-0.07
349	SLU 72	-101	47	3918	-35.42	-4.02	-0.07
349	SLU 73	-107	50	4236	-38.06	-4.25	-0.08
349	SLU 74	-111	51	4294	-38.89	-4.44	-0.08
349	SLU 75	-110	51	4294	-38.9	-4.39	-0.08
349	SLU 76	-109	51	4270	-38.55	-4.35	-0.08
349	SLU 77	-114	52	4328	-39.39	-4.54	-0.08
349	SLU 78	-113	52	4328	-39.39	-4.49	-0.08
349	SLU 79	-113	51	4304	-39.04	-4.53	-0.08
349	SLU 80	-112	52	4304	-39.04	-4.48	-0.08
349	SLU 81	-114	52	4401	-39.61	-4.52	-0.08
349	SLU 82	-112	52	4401	-39.61	-4.48	-0.08
349	SLU 83	-116	53	4436	-40.1	-4.62	-0.08
349	SLU 84	-115	53	4436	-40.1	-4.58	-0.08
349	SLE RA 1	-73	34	2885	-25.7	-2.88	-0.05
349	SLE RA 2	-71	34	2885	-25.71	-2.83	-0.05
349	SLE RA 3	-74	35	2924	-26.26	-2.96	-0.05
349	SLE RA 4	-74	35	2924	-26.27	-2.93	-0.05
349	SLE RA 5	-73	34	2908	-26.03	-2.9	-0.05
349	SLE RA 6	-76	35	2947	-26.59	-3.02	-0.05
349	SLE RA 7	-75	35	2946	-26.59	-2.99	-0.05
349	SLE RA 8	-76	35	2931	-26.36	-3.02	-0.05
349	SLE RA 9	-75	35	2931	-26.36	-2.98	-0.05
349	SLE RA 10	-79	37	3142	-28.12	-3.14	-0.06
349	SLE RA 11	-82	38	3181	-28.68	-3.26	-0.06
349	SLE RA 12	-81	38	3181	-28.68	-3.23	-0.06
349	SLE RA 13	-81	38	3165	-28.45	-3.2	-0.06
349	SLE RA 14	-83	38	3204	-29.01	-3.33	-0.06
349	SLE RA 15	-83	38	3204	-29.01	-3.3	-0.06
349	SLE RA 16	-83	38	3188	-28.78	-3.32	-0.06
349	SLE RA 17	-83	38	3188	-28.78	-3.29	-0.06
349	SLE RA 18	-83	38	3253	-29.15	-3.32	-0.06
349	SLE RA 19	-83	38	3253	-29.15	-3.29	-0.06
349	SLE RA 20	-85	39	3276	-29.48	-3.38	-0.06
349	SLE RA 21	-84	39	3276	-29.48	-3.35	-0.06
349	SLE FR 1	-73	34	2885	-25.7	-2.88	-0.05
349	SLE FR 2	-72	34	2885	-25.7	-2.87	-0.05
349	SLE FR 3	-73	34	2894	-25.84	-2.91	-0.05
349	SLE FR 4	-76	35	2995	-26.74	-3	-0.05
349	SLE FR 5	-76	35	3004	-26.87	-3.04	-0.05
349	SLE FR 6	-78	36	3069	-27.43	-3.1	-0.06
349	SLE QP 1	-73	34	2885	-25.7	-2.88	-0.05
349	SLE QP 2	-76	35	2995	-26.74	-3.01	-0.05
349	SLD 1	613	20	2734	-13.11	26.69	-0.03
349	SLD 2	613	20	2734	-13.11	26.69	-0.03
349	SLD 3	497	42	3078	-33.45	21.75	-0.06
349	SLD 4	497	42	3078	-33.45	21.75	-0.06
349	SLD 5	307	-2	2396	8.2	13.4	-0.01
349	SLD 6	307	-2	2396	8.2	13.4	-0.01
349	SLD 7	-80	70	3542	-59.6	-3.08	-0.09
349	SLD 8	-80	70	3542	-59.6	-3.08	-0.09
349	SLD 9	-72	0	2449	6.13	-2.95	-0.01
349	SLD 10	-72	0	2449	6.13	-2.95	-0.01
349	SLD 11	-459	73	3595	-61.68	-19.42	-0.1
349	SLD 12	-459	73	3595	-61.68	-19.42	-0.1
349	SLD 13	-649	28	2913	-20.02	-27.78	-0.05
349	SLD 14	-649	28	2913	-20.02	-27.78	-0.05
349	SLD 15	-765	50	3257	-40.36	-32.72	-0.08
349	SLD 16	-765	50	3257	-40.36	-32.72	-0.08
349	SLV 1	1513	0	2382	5.41	65.48	-0.01
349	SLV 2	1513	0	2382	5.41	65.48	-0.01
349	SLV 3	1244	51	3193	-42.48	54.01	-0.07
349	SLV 4	1244	51	3193	-42.48	54.01	-0.07
349	SLV 5	810	-53	1582	55.55	34.94	0.05
349	SLV 6	810	-53	1582	55.55	34.94	0.05
349	SLV 7	-89	118	4284	-104.1	-3.31	-0.15



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
349	SLV 8	-89	118	4284	-104.1	-3.31	-0.15
349	SLV 9	-63	-47	1707	50.63	-2.72	0.04
349	SLV 10	-63	-47	1707	50.63	-2.72	0.04
349	SLV 11	-961	124	4409	-109.03	-40.96	-0.16
349	SLV 12	-961	124	4409	-109.03	-40.96	-0.16
349	SLV 13	-1396	19	2798	-10.99	-60.04	-0.04
349	SLV 14	-1396	19	2798	-10.99	-60.04	-0.04
349	SLV 15	-1665	71	3608	-58.89	-71.51	-0.1
349	SLV 16	-1665	71	3608	-58.89	-71.51	-0.1
350	SLU 1	91	32	2736	-24.85	4.17	0.01
350	SLU 2	92	32	2736	-24.85	4.24	0.01
350	SLU 3	93	33	2792	-25.69	4.28	0.01
350	SLU 4	94	33	2792	-25.69	4.33	0.01
350	SLU 5	93	32	2769	-25.34	4.28	0.01
350	SLU 6	94	34	2825	-26.18	4.32	0.01
350	SLU 7	95	34	2825	-26.18	4.36	0.01
350	SLU 8	92	33	2802	-25.82	4.24	0.01
350	SLU 9	93	33	2801	-25.82	4.29	0.01
350	SLU 10	106	36	3114	-28.49	4.87	0.01
350	SLU 11	107	38	3171	-29.33	4.91	0.01
350	SLU 12	108	38	3171	-29.33	4.96	0.01
350	SLU 13	107	37	3147	-28.98	4.91	0.01
350	SLU 14	107	38	3203	-29.82	4.95	0.01
350	SLU 15	108	38	3203	-29.82	4.99	0.01
350	SLU 16	105	38	3180	-29.46	4.87	0.01
350	SLU 17	106	38	3180	-29.46	4.92	0.01
350	SLU 18	110	38	3277	-30.05	5.07	0.01
350	SLU 19	111	38	3277	-30.05	5.11	0.01
350	SLU 20	111	39	3309	-30.53	5.1	0.01
350	SLU 21	112	39	3309	-30.54	5.15	0.01
350	SLU 22	104	36	3075	-28.43	4.78	0.01
350	SLU 23	106	36	3075	-28.43	4.85	0.01
350	SLU 24	106	37	3131	-29.27	4.89	0.01
350	SLU 25	107	37	3131	-29.27	4.94	0.01
350	SLU 26	106	37	3108	-28.92	4.89	0.01
350	SLU 27	107	38	3164	-29.76	4.93	0.01
350	SLU 28	108	38	3164	-29.76	4.97	0.01
350	SLU 29	105	38	3140	-29.4	4.85	0.01
350	SLU 30	106	38	3140	-29.41	4.89	0.01
350	SLU 31	119	41	3453	-32.07	5.48	0.01
350	SLU 32	120	42	3510	-32.91	5.52	0.01
350	SLU 33	121	42	3509	-32.91	5.57	0.01
350	SLU 34	120	42	3486	-32.56	5.52	0.01
350	SLU 35	120	43	3542	-33.4	5.56	0.01
350	SLU 36	121	43	3542	-33.4	5.6	0.01
350	SLU 37	119	42	3519	-33.04	5.48	0.01
350	SLU 38	120	42	3519	-33.05	5.52	0.01
350	SLU 39	123	43	3616	-33.63	5.68	0.01
350	SLU 40	124	43	3615	-33.63	5.72	0.01
350	SLU 41	124	44	3648	-34.12	5.71	0.01
350	SLU 42	125	44	3648	-34.12	5.76	0.01
350	SLU 43	114	40	3441	-31.07	5.21	0.01
350	SLU 44	115	40	3441	-31.07	5.28	0.01
350	SLU 45	116	41	3497	-31.91	5.32	0.01
350	SLU 46	117	41	3497	-31.92	5.37	0.01
350	SLU 47	116	40	3473	-31.56	5.32	0.01
350	SLU 48	116	41	3530	-32.4	5.36	0.01
350	SLU 49	117	41	3530	-32.4	5.4	0.01
350	SLU 50	115	41	3506	-32.05	5.28	0.01
350	SLU 51	116	41	3506	-32.05	5.33	0.01
350	SLU 52	129	44	3819	-34.71	5.91	0.01
350	SLU 53	129	46	3875	-35.55	5.95	0.01
350	SLU 54	130	46	3875	-35.56	6	0.01
350	SLU 55	129	45	3852	-35.2	5.95	0.01
350	SLU 56	130	46	3908	-36.04	5.99	0.01
350	SLU 57	131	46	3908	-36.04	6.03	0.01
350	SLU 58	128	46	3885	-35.69	5.91	0.01
350	SLU 59	129	46	3885	-35.69	5.96	0.01
350	SLU 60	133	46	3981	-36.27	6.11	0.01
350	SLU 61	134	46	3981	-36.27	6.15	0.01
350	SLU 62	133	47	4014	-36.76	6.14	0.01
350	SLU 63	134	47	4014	-36.76	6.19	0.01
350	SLU 64	127	44	3780	-34.66	5.82	0.01
350	SLU 65	128	44	3780	-34.66	5.89	0.01
350	SLU 66	129	45	3836	-35.5	5.93	0.01
350	SLU 67	130	45	3836	-35.5	5.98	0.01
350	SLU 68	129	45	3812	-35.14	5.93	0.01
350	SLU 69	130	46	3869	-35.98	5.97	0.01
350	SLU 70	131	46	3868	-35.98	6.01	0.01
350	SLU 71	128	46	3845	-35.63	5.89	0.01
350	SLU 72	129	46	3845	-35.63	5.94	0.01
350	SLU 73	142	49	4158	-38.3	6.52	0.01
350	SLU 74	143	50	4214	-39.14	6.56	0.01
350	SLU 75	144	50	4214	-39.14	6.61	0.01
350	SLU 76	142	50	4191	-38.78	6.56	0.01
350	SLU 77	143	51	4247	-39.62	6.6	0.01
350	SLU 78	144	51	4247	-39.62	6.64	0.01
350	SLU 79	141	50	4223	-39.27	6.52	0.01
350	SLU 80	142	50	4223	-39.27	6.57	0.01
350	SLU 81	146	51	4320	-39.85	6.72	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
350	SLU 82	147	51	4320	-39.86	6.76	0.01
350	SLU 83	147	52	4353	-40.34	6.75	0.01
350	SLU 84	148	52	4353	-40.34	6.8	0.01
350	SLE RA 1	95	33	2833	-25.87	4.34	0.01
350	SLE RA 2	96	33	2833	-25.87	4.39	0.01
350	SLE RA 3	96	34	2870	-26.43	4.42	0.01
350	SLE RA 4	97	34	2870	-26.43	4.45	0.01
350	SLE RA 5	96	34	2855	-26.2	4.41	0.01
350	SLE RA 6	96	34	2892	-26.76	4.44	0.01
350	SLE RA 7	97	34	2892	-26.76	4.47	0.01
350	SLE RA 8	95	34	2877	-26.52	4.39	0.01
350	SLE RA 9	96	34	2877	-26.52	4.42	0.01
350	SLE RA 10	105	36	3085	-28.3	4.81	0.01
350	SLE RA 11	105	37	3123	-28.86	4.84	0.01
350	SLE RA 12	106	37	3123	-28.86	4.87	0.01
350	SLE RA 13	105	37	3107	-28.62	4.83	0.01
350	SLE RA 14	106	37	3144	-29.18	4.86	0.01
350	SLE RA 15	106	37	3144	-29.18	4.89	0.01
350	SLE RA 16	104	37	3129	-28.95	4.81	0.01
350	SLE RA 17	105	37	3129	-28.95	4.84	0.01
350	SLE RA 18	107	38	3193	-29.34	4.94	0.01
350	SLE RA 19	108	38	3193	-29.34	4.97	0.01
350	SLE RA 20	108	38	3215	-29.66	4.97	0.01
350	SLE RA 21	109	38	3215	-29.66	4.99	0.01
350	SLE FR 1	95	33	2833	-25.87	4.34	0.01
350	SLE FR 2	95	33	2833	-25.87	4.35	0.01
350	SLE FR 3	95	33	2842	-26	4.35	0.01
350	SLE FR 4	99	34	2941	-26.91	4.53	0.01
350	SLE FR 5	99	35	2950	-27.04	4.53	0.01
350	SLE FR 6	101	35	3013	-27.6	4.64	0.01
350	SLE QP 1	95	33	2833	-25.87	4.34	0.01
350	SLE QP 2	98	34	2941	-26.91	4.52	0.01
350	SLD 1	685	19	2721	-12.82	29.68	0.01
350	SLD 2	685	19	2721	-12.82	29.68	0.01
350	SLD 3	797	42	3063	-33.95	34.44	0.01
350	SLD 4	797	42	3063	-33.95	34.44	0.01
350	SLD 5	105	-5	2358	9.36	4.84	0
350	SLD 6	105	-5	2358	9.36	4.84	0
350	SLD 7	477	71	3495	-61.07	20.72	0.02
350	SLD 8	477	71	3495	-61.07	20.72	0.02
350	SLD 9	-280	-2	2387	7.25	-11.68	0
350	SLD 10	-280	-2	2387	7.25	-11.68	0
350	SLD 11	92	74	3525	-63.18	4.2	0.01
350	SLD 12	92	74	3525	-63.18	4.2	0.01
350	SLD 13	-600	27	2819	-19.87	-25.4	0
350	SLD 14	-600	27	2819	-19.87	-25.4	0
350	SLD 15	-488	50	3161	-41	-20.64	0.01
350	SLD 16	-488	50	3161	-41	-20.64	0.01
350	SLV 1	1450	-2	2422	6.35	62.48	0.01
350	SLV 2	1450	-2	2422	6.35	62.48	0.01
350	SLV 3	1708	52	3226	-43.41	73.48	0.02
350	SLV 4	1708	52	3226	-43.41	73.48	0.02
350	SLV 5	113	-58	1567	58.54	5.22	-0.01
350	SLV 6	113	-58	1567	58.54	5.22	-0.01
350	SLV 7	972	121	4245	-107.33	41.9	0.03
350	SLV 8	972	121	4245	-107.33	41.9	0.03
350	SLV 9	-776	-52	1637	53.51	-32.86	-0.01
350	SLV 10	-776	-52	1637	53.51	-32.86	-0.01
350	SLV 11	84	127	4315	-112.36	3.83	0.02
350	SLV 12	84	127	4315	-112.36	3.83	0.02
350	SLV 13	-1511	17	2657	-10.41	-64.44	-0.01
350	SLV 14	-1511	17	2657	-10.41	-64.44	-0.01
350	SLV 15	-1253	71	3460	-60.17	-53.44	0
350	SLV 16	-1253	71	3460	-60.17	-53.44	0
351	SLU 1	240	32	2838	-24.56	9.21	0.06
351	SLU 2	241	32	2838	-24.56	9.28	0.06
351	SLU 3	247	33	2897	-25.38	9.47	0.07
351	SLU 4	248	33	2897	-25.38	9.51	0.07
351	SLU 5	245	33	2872	-25.03	9.4	0.06
351	SLU 6	250	34	2931	-25.86	9.59	0.07
351	SLU 7	251	34	2931	-25.86	9.63	0.07
351	SLU 8	246	34	2906	-25.51	9.44	0.07
351	SLU 9	247	34	2906	-25.51	9.49	0.07
351	SLU 10	278	37	3233	-28.16	10.67	0.07
351	SLU 11	283	38	3292	-28.99	10.86	0.07
351	SLU 12	284	38	3292	-28.99	10.9	0.07
351	SLU 13	281	38	3267	-28.64	10.78	0.07
351	SLU 14	286	39	3326	-29.46	10.97	0.08
351	SLU 15	287	39	3326	-29.46	11.02	0.08
351	SLU 16	283	38	3301	-29.11	10.83	0.08
351	SLU 17	283	38	3301	-29.11	10.87	0.08
351	SLU 18	292	39	3402	-29.71	11.19	0.08
351	SLU 19	293	39	3402	-29.71	11.24	0.08
351	SLU 20	295	40	3436	-30.18	11.31	0.08
351	SLU 21	296	40	3436	-30.18	11.35	0.08
351	SLU 22	275	37	3192	-28.1	10.55	0.07
351	SLU 23	276	37	3192	-28.1	10.62	0.07
351	SLU 24	282	38	3251	-28.93	10.81	0.07
351	SLU 25	283	38	3251	-28.93	10.85	0.07
351	SLU 26	280	38	3226	-28.57	10.73	0.07



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
351	SLU 27	285	39	3285	-29.4	10.92	0.08
351	SLU 28	286	39	3285	-29.4	10.96	0.08
351	SLU 29	281	38	3260	-29.05	10.78	0.07
351	SLU 30	282	38	3260	-29.05	10.82	0.07
351	SLU 31	313	42	3587	-31.7	12	0.08
351	SLU 32	318	43	3646	-32.53	12.19	0.08
351	SLU 33	319	43	3646	-32.53	12.24	0.08
351	SLU 34	316	42	3621	-32.18	12.12	0.08
351	SLU 35	321	43	3680	-33	12.31	0.09
351	SLU 36	322	43	3680	-33	12.35	0.09
351	SLU 37	317	43	3655	-32.65	12.17	0.08
351	SLU 38	318	43	3655	-32.65	12.21	0.08
351	SLU 39	327	44	3756	-33.25	12.53	0.09
351	SLU 40	328	44	3756	-33.25	12.57	0.09
351	SLU 41	330	44	3790	-33.72	12.64	0.09
351	SLU 42	331	44	3790	-33.72	12.69	0.09
351	SLU 43	300	40	3568	-30.71	11.52	0.08
351	SLU 44	301	40	3568	-30.71	11.59	0.08
351	SLU 45	307	42	3627	-31.54	11.78	0.08
351	SLU 46	308	42	3627	-31.54	11.82	0.08
351	SLU 47	305	41	3602	-31.18	11.7	0.08
351	SLU 48	310	42	3661	-32.01	11.9	0.08
351	SLU 49	311	42	3661	-32.01	11.94	0.08
351	SLU 50	306	42	3636	-31.66	11.75	0.08
351	SLU 51	307	42	3636	-31.66	11.79	0.08
351	SLU 52	338	45	3963	-34.32	12.98	0.09
351	SLU 53	343	46	4022	-35.14	13.17	0.09
351	SLU 54	344	46	4022	-35.14	13.21	0.09
351	SLU 55	341	46	3997	-34.79	13.09	0.09
351	SLU 56	346	47	4056	-35.61	13.28	0.09
351	SLU 57	347	47	4056	-35.61	13.32	0.09
351	SLU 58	343	46	4031	-35.26	13.14	0.09
351	SLU 59	343	46	4031	-35.26	13.18	0.09
351	SLU 60	352	47	4132	-35.86	13.5	0.09
351	SLU 61	353	47	4132	-35.86	13.54	0.09
351	SLU 62	355	48	4166	-36.33	13.62	0.09
351	SLU 63	356	48	4166	-36.33	13.66	0.09
351	SLU 64	335	45	3923	-34.25	12.86	0.09
351	SLU 65	336	45	3922	-34.25	12.92	0.09
351	SLU 66	342	46	3982	-35.08	13.11	0.09
351	SLU 67	343	46	3981	-35.08	13.16	0.09
351	SLU 68	339	46	3956	-34.73	13.04	0.09
351	SLU 69	345	47	4015	-35.55	13.23	0.09
351	SLU 70	346	47	4015	-35.55	13.27	0.09
351	SLU 71	341	46	3990	-35.2	13.09	0.09
351	SLU 72	342	46	3990	-35.2	13.13	0.09
351	SLU 73	373	50	4317	-37.86	14.31	0.1
351	SLU 74	378	51	4376	-38.68	14.5	0.1
351	SLU 75	379	51	4376	-38.68	14.54	0.1
351	SLU 76	376	50	4351	-38.33	14.43	0.1
351	SLU 77	381	52	4410	-39.16	14.62	0.1
351	SLU 78	382	52	4410	-39.16	14.66	0.1
351	SLU 79	377	51	4385	-38.81	14.47	0.1
351	SLU 80	378	51	4385	-38.81	14.51	0.1
351	SLU 81	387	52	4486	-39.4	14.84	0.1
351	SLU 82	388	52	4486	-39.4	14.88	0.1
351	SLU 83	390	52	4520	-39.88	14.95	0.1
351	SLU 84	391	52	4520	-39.88	14.99	0.1
351	SLE RA 1	250	34	2939	-25.57	9.6	0.07
351	SLE RA 2	251	34	2939	-25.57	9.64	0.07
351	SLE RA 3	254	34	2979	-26.12	9.77	0.07
351	SLE RA 4	255	34	2979	-26.12	9.8	0.07
351	SLE RA 5	253	34	2962	-25.89	9.72	0.07
351	SLE RA 6	257	35	3001	-26.44	9.85	0.07
351	SLE RA 7	257	35	3001	-26.44	9.87	0.07
351	SLE RA 8	254	35	2985	-26.2	9.75	0.07
351	SLE RA 9	255	35	2985	-26.2	9.78	0.07
351	SLE RA 10	275	37	3202	-27.97	10.57	0.07
351	SLE RA 11	279	38	3242	-28.52	10.69	0.07
351	SLE RA 12	279	38	3242	-28.52	10.72	0.07
351	SLE RA 13	277	37	3225	-28.29	10.64	0.07
351	SLE RA 14	281	38	3265	-28.84	10.77	0.07
351	SLE RA 15	281	38	3264	-28.84	10.8	0.07
351	SLE RA 16	278	38	3248	-28.61	10.67	0.07
351	SLE RA 17	279	38	3248	-28.6	10.7	0.07
351	SLE RA 18	284	38	3315	-29	10.92	0.07
351	SLE RA 19	285	38	3315	-29	10.94	0.07
351	SLE RA 20	287	39	3338	-29.32	10.99	0.08
351	SLE RA 21	287	39	3338	-29.32	11.02	0.08
351	SLE FR 1	250	34	2939	-25.57	9.6	0.07
351	SLE FR 2	250	34	2939	-25.57	9.6	0.07
351	SLE FR 3	251	34	2949	-25.7	9.63	0.07
351	SLE FR 4	260	35	3052	-26.6	10	0.07
351	SLE FR 5	261	35	3061	-26.73	10.02	0.07
351	SLE FR 6	267	36	3127	-27.29	10.26	0.07
351	SLE QP 1	250	34	2939	-25.57	9.6	0.07
351	SLE QP 2	260	35	3052	-26.6	9.99	0.07
351	SLD 1	835	20	2960	-12.9	34.82	0.06
351	SLD 2	835	20	2960	-12.9	34.82	0.06
351	SLD 3	948	42	3303	-33.18	39.67	0.09



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
351	SLD 4	948	42	3303	-33.18	39.67	0.09
351	SLD 5	261	-2	2504	8.27	10.09	0.02
351	SLD 6	261	-2	2504	8.27	10.09	0.02
351	SLD 7	639	70	3647	-59.33	26.24	0.13
351	SLD 8	639	70	3647	-59.33	26.24	0.13
351	SLD 9	-118	0	2457	6.13	-6.26	0.01
351	SLD 10	-118	0	2457	6.13	-6.26	0.01
351	SLD 11	260	72	3600	-61.47	9.89	0.12
351	SLD 12	260	72	3600	-61.47	9.89	0.12
351	SLD 13	-428	28	2802	-20.02	-19.68	0.04
351	SLD 14	-428	28	2802	-20.02	-19.68	0.04
351	SLD 15	-314	50	3145	-40.3	-14.84	0.08
351	SLD 16	-314	50	3145	-40.3	-14.84	0.08
351	SLV 1	1584	-1	2833	5.74	67.19	0.05
351	SLV 2	1584	-1	2833	5.74	67.19	0.05
351	SLV 3	1846	50	3640	-42.02	78.39	0.13
351	SLV 4	1846	50	3640	-42.02	78.39	0.13
351	SLV 5	259	-53	1763	55.54	10.16	-0.05
351	SLV 6	259	-53	1763	55.54	10.16	-0.05
351	SLV 7	1134	117	4452	-103.67	47.5	0.2
351	SLV 8	1134	117	4452	-103.67	47.5	0.2
351	SLV 9	-613	-47	1652	50.47	-27.51	-0.07
351	SLV 10	-613	-47	1652	50.47	-27.51	-0.07
351	SLV 11	261	123	4342	-108.75	9.82	0.19
351	SLV 12	261	123	4342	-108.75	9.82	0.19
351	SLV 13	-1326	20	2464	-11.18	-58.41	0.01
351	SLV 14	-1326	20	2464	-11.18	-58.41	0.01
351	SLV 15	-1063	71	3271	-58.94	-47.21	0.08
351	SLV 16	-1063	71	3271	-58.94	-47.21	0.08
352	SLU 1	366	33	3075	-23.4	14.48	0.09
352	SLU 2	367	33	3075	-23.39	14.54	0.09
352	SLU 3	377	34	3142	-24.18	14.92	0.09
352	SLU 4	378	34	3141	-24.18	14.96	0.09
352	SLU 5	373	34	3113	-23.84	14.77	0.09
352	SLU 6	383	35	3179	-24.62	15.15	0.09
352	SLU 7	383	35	3179	-24.62	15.19	0.09
352	SLU 8	377	34	3151	-24.28	14.94	0.09
352	SLU 9	378	34	3151	-24.28	14.98	0.09
352	SLU 10	422	38	3507	-26.85	16.71	0.1
352	SLU 11	432	39	3574	-27.63	17.09	0.1
352	SLU 12	433	39	3573	-27.63	17.13	0.1
352	SLU 13	428	38	3545	-27.29	16.94	0.1
352	SLU 14	438	39	3611	-28.07	17.32	0.1
352	SLU 15	439	39	3611	-28.07	17.36	0.1
352	SLU 16	432	39	3583	-27.73	17.11	0.1
352	SLU 17	433	39	3583	-27.73	17.15	0.1
352	SLU 18	445	40	3693	-28.33	17.58	0.11
352	SLU 19	445	40	3692	-28.32	17.61	0.11
352	SLU 20	450	40	3730	-28.77	17.81	0.11
352	SLU 21	451	40	3730	-28.77	17.84	0.11
352	SLU 22	419	38	3465	-26.78	16.58	0.1
352	SLU 23	420	38	3465	-26.78	16.64	0.1
352	SLU 24	430	39	3531	-27.56	17.02	0.1
352	SLU 25	431	39	3531	-27.56	17.06	0.1
352	SLU 26	426	38	3502	-27.22	16.87	0.1
352	SLU 27	436	39	3569	-28	17.25	0.1
352	SLU 28	437	39	3569	-28	17.29	0.1
352	SLU 29	431	39	3540	-27.67	17.04	0.1
352	SLU 30	431	39	3540	-27.67	17.08	0.1
352	SLU 31	475	42	3897	-30.23	18.81	0.11
352	SLU 32	485	44	3963	-31.01	19.19	0.11
352	SLU 33	486	44	3963	-31.01	19.23	0.12
352	SLU 34	481	43	3934	-30.67	19.04	0.11
352	SLU 35	491	44	4001	-31.45	19.42	0.12
352	SLU 36	492	44	4001	-31.45	19.46	0.12
352	SLU 37	486	44	3972	-31.12	19.21	0.12
352	SLU 38	486	44	3972	-31.12	19.25	0.12
352	SLU 39	498	45	4082	-31.71	19.68	0.12
352	SLU 40	499	45	4082	-31.71	19.71	0.12
352	SLU 41	504	45	4120	-32.15	19.91	0.12
352	SLU 42	504	45	4120	-32.15	19.95	0.12
352	SLU 43	457	41	3864	-29.25	18.1	0.11
352	SLU 44	459	41	3864	-29.25	18.16	0.11
352	SLU 45	468	42	3931	-30.04	18.54	0.11
352	SLU 46	469	42	3930	-30.03	18.58	0.11
352	SLU 47	464	42	3902	-29.7	18.39	0.11
352	SLU 48	474	43	3968	-30.48	18.78	0.11
352	SLU 49	475	43	3968	-30.48	18.81	0.11
352	SLU 50	469	42	3940	-30.14	18.56	0.11
352	SLU 51	470	42	3940	-30.14	18.6	0.11
352	SLU 52	514	46	4296	-32.7	20.33	0.12
352	SLU 53	523	47	4363	-33.49	20.71	0.12
352	SLU 54	524	47	4362	-33.49	20.75	0.12
352	SLU 55	520	47	4334	-33.15	20.56	0.12
352	SLU 56	529	48	4400	-33.93	20.95	0.13
352	SLU 57	530	48	4400	-33.93	20.98	0.13
352	SLU 58	524	47	4372	-33.59	20.73	0.12
352	SLU 59	525	47	4372	-33.59	20.77	0.12
352	SLU 60	536	48	4482	-34.18	21.2	0.13
352	SLU 61	537	48	4481	-34.18	21.23	0.13



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
352	SLU 62	542	49	4519	-34.63	21.43	0.13
352	SLU 63	543	49	4519	-34.63	21.47	0.13
352	SLU 64	510	46	4254	-32.64	20.2	0.12
352	SLU 65	512	46	4254	-32.64	20.26	0.12
352	SLU 66	522	47	4320	-33.42	20.64	0.12
352	SLU 67	522	47	4320	-33.42	20.68	0.12
352	SLU 68	518	47	4291	-33.08	20.49	0.12
352	SLU 69	527	48	4358	-33.86	20.88	0.13
352	SLU 70	528	48	4358	-33.86	20.91	0.13
352	SLU 71	522	47	4329	-33.53	20.67	0.12
352	SLU 72	523	47	4329	-33.53	20.7	0.12
352	SLU 73	567	51	4686	-36.09	22.43	0.13
352	SLU 74	577	52	4752	-36.87	22.81	0.14
352	SLU 75	577	52	4752	-36.87	22.85	0.14
352	SLU 76	573	51	4723	-36.53	22.66	0.14
352	SLU 77	582	52	4790	-37.31	23.05	0.14
352	SLU 78	583	52	4790	-37.31	23.08	0.14
352	SLU 79	577	52	4762	-36.98	22.84	0.14
352	SLU 80	578	52	4761	-36.98	22.87	0.14
352	SLU 81	589	53	4871	-37.57	23.3	0.14
352	SLU 82	590	53	4871	-37.57	23.34	0.14
352	SLU 83	595	53	4909	-38.01	23.53	0.14
352	SLU 84	596	53	4909	-38.01	23.57	0.14
352	SLE RA 1	381	34	3187	-24.36	15.08	0.09
352	SLE RA 2	382	34	3186	-24.36	15.12	0.09
352	SLE RA 3	388	35	3231	-24.88	15.37	0.09
352	SLE RA 4	389	35	3231	-24.88	15.4	0.09
352	SLE RA 5	386	35	3212	-24.66	15.27	0.09
352	SLE RA 6	392	35	3256	-25.18	15.53	0.09
352	SLE RA 7	393	35	3256	-25.18	15.55	0.09
352	SLE RA 8	389	35	3237	-24.95	15.39	0.09
352	SLE RA 9	389	35	3237	-24.95	15.41	0.09
352	SLE RA 10	419	37	3474	-26.66	16.56	0.1
352	SLE RA 11	425	38	3519	-27.18	16.82	0.1
352	SLE RA 12	426	38	3519	-27.18	16.84	0.1
352	SLE RA 13	422	38	3500	-26.96	16.72	0.1
352	SLE RA 14	429	39	3544	-27.48	16.97	0.1
352	SLE RA 15	430	39	3544	-27.48	17	0.1
352	SLE RA 16	425	38	3525	-27.26	16.83	0.1
352	SLE RA 17	426	38	3525	-27.25	16.86	0.1
352	SLE RA 18	433	39	3598	-27.65	17.14	0.1
352	SLE RA 19	434	39	3598	-27.65	17.17	0.1
352	SLE RA 20	437	39	3623	-27.95	17.3	0.1
352	SLE RA 21	438	39	3623	-27.94	17.32	0.1
352	SLE FR 1	381	34	3187	-24.36	15.08	0.09
352	SLE FR 2	381	34	3187	-24.36	15.09	0.09
352	SLE FR 3	383	34	3197	-24.48	15.14	0.09
352	SLE FR 4	397	36	3310	-25.35	15.7	0.09
352	SLE FR 5	398	36	3320	-25.47	15.76	0.09
352	SLE FR 6	407	37	3392	-26.01	16.11	0.1
352	SLE QP 1	381	34	3187	-24.36	15.08	0.09
352	SLE QP 2	397	36	3310	-25.35	15.7	0.09
352	SLD 1	941	31	3254	-12.92	39.31	0.09
352	SLD 2	941	31	3254	-12.92	39.31	0.09
352	SLD 3	1062	50	3606	-30.79	44.38	0.13
352	SLD 4	1062	50	3606	-30.79	44.38	0.13
352	SLD 5	378	6	2759	5.49	15.09	0.04
352	SLD 6	378	6	2759	5.49	15.09	0.04
352	SLD 7	779	68	3933	-54.09	31.99	0.16
352	SLD 8	779	68	3933	-54.09	31.99	0.16
352	SLD 9	15	3	2687	3.39	-0.59	0.03
352	SLD 10	15	3	2687	3.39	-0.59	0.03
352	SLD 11	416	65	3861	-56.18	16.3	0.15
352	SLD 12	416	65	3861	-56.18	16.3	0.15
352	SLD 13	-268	22	3014	-19.91	-12.98	0.06
352	SLD 14	-268	22	3014	-19.91	-12.98	0.06
352	SLD 15	-148	40	3367	-37.78	-7.92	0.1
352	SLD 16	-148	40	3367	-37.78	-7.92	0.1
352	SLV 1	1650	24	3174	3.99	70.06	0.08
352	SLV 2	1650	24	3174	3.99	70.06	0.08
352	SLV 3	1930	68	4003	-38.11	81.82	0.17
352	SLV 4	1930	68	4003	-38.11	81.82	0.17
352	SLV 5	349	-34	2011	47.31	14.17	-0.04
352	SLV 6	349	-34	2011	47.31	14.17	-0.04
352	SLV 7	1280	112	4776	-93.03	53.37	0.24
352	SLV 8	1280	112	4776	-93.03	53.37	0.24
352	SLV 9	-487	-41	1844	42.33	-21.98	-0.06
352	SLV 10	-487	-41	1844	42.33	-21.98	-0.06
352	SLV 11	444	106	4609	-98	17.22	0.22
352	SLV 12	444	106	4609	-98	17.22	0.22
352	SLV 13	-1136	3	2617	-12.59	-50.43	0.02
352	SLV 14	-1136	3	2617	-12.59	-50.43	0.02
352	SLV 15	-857	47	3447	-54.69	-38.67	0.11
352	SLV 16	-857	47	3447	-54.69	-38.67	0.11
353	SLU 1	429	30	3417	-20.39	16.42	0.08
353	SLU 2	430	30	3417	-20.39	16.47	0.08
353	SLU 3	442	31	3494	-21.06	16.91	0.08
353	SLU 4	443	31	3494	-21.06	16.94	0.08
353	SLU 5	437	31	3460	-20.77	16.73	0.08
353	SLU 6	449	32	3538	-21.44	17.18	0.08



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
353	SLU 7	450	32	3537	-21.44	17.21	0.08
353	SLU 8	443	31	3505	-21.15	16.94	0.08
353	SLU 9	444	31	3504	-21.15	16.98	0.08
353	SLU 10	494	35	3902	-23.42	18.92	0.09
353	SLU 11	506	36	3980	-24.09	19.36	0.09
353	SLU 12	507	36	3979	-24.09	19.39	0.09
353	SLU 13	501	35	3946	-23.8	19.18	0.09
353	SLU 14	513	36	4023	-24.47	19.62	0.09
353	SLU 15	514	36	4023	-24.47	19.65	0.09
353	SLU 16	507	36	3990	-24.18	19.39	0.09
353	SLU 17	508	36	3989	-24.18	19.42	0.09
353	SLU 18	520	36	4111	-24.72	19.91	0.09
353	SLU 19	521	36	4110	-24.72	19.94	0.09
353	SLU 20	527	37	4154	-25.1	20.17	0.09
353	SLU 21	528	37	4154	-25.1	20.21	0.09
353	SLU 22	491	34	3858	-23.35	18.79	0.09
353	SLU 23	492	34	3857	-23.35	18.84	0.09
353	SLU 24	504	35	3935	-24.02	19.29	0.09
353	SLU 25	505	35	3934	-24.02	19.32	0.09
353	SLU 26	499	35	3901	-23.73	19.11	0.09
353	SLU 27	511	36	3978	-24.41	19.55	0.09
353	SLU 28	512	36	3978	-24.41	19.58	0.09
353	SLU 29	505	36	3945	-24.11	19.32	0.09
353	SLU 30	506	36	3945	-24.11	19.35	0.09
353	SLU 31	556	39	4342	-26.38	21.29	0.1
353	SLU 32	568	40	4420	-27.05	21.73	0.1
353	SLU 33	569	40	4420	-27.05	21.76	0.1
353	SLU 34	563	39	4386	-26.76	21.55	0.1
353	SLU 35	575	40	4464	-27.43	22	0.1
353	SLU 36	576	40	4463	-27.43	22.03	0.1
353	SLU 37	569	40	4430	-27.14	21.76	0.1
353	SLU 38	570	40	4430	-27.14	21.79	0.1
353	SLU 39	583	41	4551	-27.68	22.28	0.1
353	SLU 40	583	41	4551	-27.68	22.32	0.1
353	SLU 41	590	41	4595	-28.06	22.55	0.1
353	SLU 42	590	41	4594	-28.06	22.58	0.1
353	SLU 43	536	38	4292	-25.49	20.53	0.09
353	SLU 44	537	38	4291	-25.49	20.58	0.09
353	SLU 45	549	39	4369	-26.16	21.02	0.1
353	SLU 46	550	39	4368	-26.16	21.06	0.1
353	SLU 47	544	38	4334	-25.87	20.84	0.1
353	SLU 48	556	39	4412	-26.55	21.29	0.1
353	SLU 49	557	39	4412	-26.55	21.32	0.1
353	SLU 50	550	39	4379	-26.25	21.06	0.1
353	SLU 51	551	39	4378	-26.25	21.09	0.1
353	SLU 52	601	42	4776	-28.52	23.03	0.11
353	SLU 53	613	43	4854	-29.19	23.47	0.11
353	SLU 54	614	43	4853	-29.19	23.5	0.11
353	SLU 55	608	43	4820	-28.9	23.29	0.11
353	SLU 56	620	44	4897	-29.58	23.73	0.11
353	SLU 57	621	44	4897	-29.57	23.77	0.11
353	SLU 58	614	43	4864	-29.28	23.5	0.11
353	SLU 59	615	43	4864	-29.28	23.53	0.11
353	SLU 60	628	44	4985	-29.82	24.02	0.11
353	SLU 61	628	44	4984	-29.82	24.05	0.11
353	SLU 62	635	45	5029	-30.2	24.29	0.11
353	SLU 63	635	45	5028	-30.2	24.32	0.11
353	SLU 64	598	42	4732	-28.45	22.9	0.11
353	SLU 65	599	42	4731	-28.45	22.95	0.11
353	SLU 66	611	43	4809	-29.13	23.4	0.11
353	SLU 67	612	43	4808	-29.13	23.43	0.11
353	SLU 68	606	42	4775	-28.83	23.22	0.11
353	SLU 69	619	43	4853	-29.51	23.66	0.11
353	SLU 70	619	43	4852	-29.51	23.69	0.11
353	SLU 71	612	43	4819	-29.21	23.43	0.11
353	SLU 72	613	43	4819	-29.21	23.46	0.11
353	SLU 73	663	46	5217	-31.48	25.4	0.12
353	SLU 74	676	47	5294	-32.15	25.84	0.12
353	SLU 75	676	47	5294	-32.15	25.87	0.12
353	SLU 76	671	47	5260	-31.86	25.66	0.12
353	SLU 77	683	48	5338	-32.54	26.11	0.12
353	SLU 78	683	48	5337	-32.54	26.14	0.12
353	SLU 79	677	48	5305	-32.24	25.87	0.12
353	SLU 80	677	48	5304	-32.24	25.91	0.12
353	SLU 81	690	48	5425	-32.78	26.4	0.12
353	SLU 82	691	48	5425	-32.78	26.43	0.12
353	SLU 83	697	49	5469	-33.16	26.66	0.12
353	SLU 84	698	49	5469	-33.16	26.69	0.12
353	SLE RA 1	447	31	3543	-21.23	17.09	0.08
353	SLE RA 2	447	31	3543	-21.23	17.13	0.08
353	SLE RA 3	455	32	3595	-21.68	17.43	0.08
353	SLE RA 4	456	32	3594	-21.68	17.45	0.08
353	SLE RA 5	452	32	3572	-21.49	17.31	0.08
353	SLE RA 6	460	32	3624	-21.94	17.6	0.08
353	SLE RA 7	460	32	3623	-21.94	17.62	0.08
353	SLE RA 8	456	32	3601	-21.74	17.45	0.08
353	SLE RA 9	456	32	3601	-21.74	17.47	0.08
353	SLE RA 10	490	34	3866	-23.25	18.76	0.09
353	SLE RA 11	498	35	3918	-23.7	19.06	0.09
353	SLE RA 12	498	35	3918	-23.7	19.08	0.09



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
353	SLE RA 13	495	35	3895	-23.51	18.94	0.09
353	SLE RA 14	503	35	3947	-23.96	19.23	0.09
353	SLE RA 15	503	35	3947	-23.96	19.25	0.09
353	SLE RA 16	499	35	3925	-23.76	19.08	0.09
353	SLE RA 17	499	35	3925	-23.76	19.1	0.09
353	SLE RA 18	508	36	4006	-24.12	19.42	0.09
353	SLE RA 19	508	36	4005	-24.12	19.45	0.09
353	SLE RA 20	512	36	4035	-24.37	19.6	0.09
353	SLE RA 21	513	36	4034	-24.37	19.62	0.09
353	SLE FR 1	447	31	3543	-21.23	17.09	0.08
353	SLE FR 2	447	31	3543	-21.23	17.1	0.08
353	SLE FR 3	448	31	3555	-21.34	17.17	0.08
353	SLE FR 4	465	33	3682	-22.1	17.8	0.08
353	SLE FR 5	467	33	3694	-22.2	17.86	0.08
353	SLE FR 6	477	33	3774	-22.68	18.26	0.08
353	SLE QP 1	447	31	3543	-21.23	17.09	0.08
353	SLE QP 2	465	33	3682	-22.1	17.79	0.08
353	SLD 1	975	30	3631	-18.25	40.1	0.08
353	SLD 2	975	30	3631	-18.25	40.1	0.08
353	SLD 3	1102	44	4012	-32.42	45.39	0.11
353	SLD 4	1102	44	4012	-32.42	45.39	0.11
353	SLD 5	424	11	3090	0.55	16.45	0.04
353	SLD 6	424	11	3090	0.55	16.45	0.04
353	SLD 7	850	57	4358	-46.69	34.11	0.13
353	SLD 8	850	57	4358	-46.69	34.11	0.13
353	SLD 9	80	8	3006	2.49	1.48	0.03
353	SLD 10	80	8	3006	2.49	1.48	0.03
353	SLD 11	505	54	4274	-44.75	19.14	0.12
353	SLD 12	505	54	4274	-44.75	19.14	0.12
353	SLD 13	-173	21	3352	-11.78	-9.8	0.06
353	SLD 14	-173	21	3352	-11.78	-9.8	0.06
353	SLD 15	-45	35	3733	-25.95	-4.51	0.08
353	SLD 16	-45	35	3733	-25.95	-4.51	0.08
353	SLV 1	1638	27	3558	-13.06	69.12	0.08
353	SLV 2	1638	27	3558	-13.06	69.12	0.08
353	SLV 3	1936	60	4457	-46.45	81.46	0.14
353	SLV 4	1936	60	4457	-46.45	81.46	0.14
353	SLV 5	365	-19	2283	31.26	14.48	-0.01
353	SLV 6	365	-19	2283	31.26	14.48	-0.01
353	SLV 7	1358	90	5277	-80.05	55.61	0.19
353	SLV 8	1358	90	5277	-80.05	55.61	0.19
353	SLV 9	-428	-25	2087	35.85	-20.02	-0.03
353	SLV 10	-428	-25	2087	35.85	-20.02	-0.03
353	SLV 11	565	84	5081	-75.46	21.11	0.17
353	SLV 12	565	84	5081	-75.46	21.11	0.17
353	SLV 13	-1006	5	2907	2.25	-45.87	0.02
353	SLV 14	-1006	5	2907	2.25	-45.87	0.02
353	SLV 15	-708	38	3806	-31.14	-33.53	0.08
353	SLV 16	-708	38	3806	-31.14	-33.53	0.08
354	SLU 1	421	20	3814	-14.84	16.07	0.04
354	SLU 2	422	20	3812	-14.84	16.11	0.04
354	SLU 3	434	21	3903	-15.32	16.57	0.04
354	SLU 4	435	21	3903	-15.33	16.6	0.04
354	SLU 5	429	21	3863	-15.11	16.39	0.04
354	SLU 6	441	22	3954	-15.6	16.85	0.04
354	SLU 7	442	22	3953	-15.6	16.88	0.04
354	SLU 8	436	21	3915	-15.38	16.63	0.04
354	SLU 9	436	21	3914	-15.38	16.65	0.04
354	SLU 10	484	24	4359	-17.07	18.48	0.04
354	SLU 11	497	24	4450	-17.55	18.95	0.04
354	SLU 12	497	24	4449	-17.55	18.97	0.04
354	SLU 13	492	24	4410	-17.34	18.76	0.04
354	SLU 14	504	25	4501	-17.83	19.23	0.04
354	SLU 15	504	25	4500	-17.83	19.25	0.04
354	SLU 16	498	24	4462	-17.61	19	0.04
354	SLU 17	498	24	4461	-17.61	19.03	0.04
354	SLU 18	510	25	4594	-18.02	19.46	0.04
354	SLU 19	511	25	4594	-18.02	19.48	0.04
354	SLU 20	517	25	4645	-18.29	19.74	0.04
354	SLU 21	518	25	4644	-18.3	19.76	0.04
354	SLU 22	482	24	4313	-17.01	18.39	0.04
354	SLU 23	483	24	4312	-17.01	18.43	0.04
354	SLU 24	495	24	4403	-17.49	18.89	0.04
354	SLU 25	496	24	4402	-17.5	18.92	0.04
354	SLU 26	490	24	4362	-17.28	18.71	0.04
354	SLU 27	502	25	4453	-17.77	19.18	0.04
354	SLU 28	503	25	4453	-17.77	19.2	0.04
354	SLU 29	496	24	4415	-17.55	18.95	0.04
354	SLU 30	497	24	4414	-17.56	18.98	0.04
354	SLU 31	545	27	4858	-19.24	20.8	0.05
354	SLU 32	557	27	4949	-19.72	21.27	0.05
354	SLU 33	558	27	4948	-19.72	21.29	0.05
354	SLU 34	552	27	4909	-19.51	21.08	0.05
354	SLU 35	565	28	5000	-20	21.55	0.05
354	SLU 36	565	28	4999	-20	21.57	0.05
354	SLU 37	559	27	4961	-19.78	21.32	0.05
354	SLU 38	559	27	4960	-19.78	21.35	0.05
354	SLU 39	571	28	5094	-20.19	21.78	0.05
354	SLU 40	571	28	5093	-20.19	21.8	0.05
354	SLU 41	578	28	5144	-20.46	22.06	0.05



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
354	SLU 42	579	28	5144	-20.47	22.08	0.05
354	SLU 43	526	26	4787	-18.54	20.09	0.04
354	SLU 44	527	26	4785	-18.55	20.13	0.04
354	SLU 45	540	26	4876	-19.03	20.6	0.05
354	SLU 46	540	26	4876	-19.03	20.62	0.05
354	SLU 47	535	26	4836	-18.82	20.41	0.04
354	SLU 48	547	27	4927	-19.31	20.88	0.05
354	SLU 49	547	27	4926	-19.31	20.9	0.05
354	SLU 50	541	26	4888	-19.09	20.65	0.05
354	SLU 51	542	26	4887	-19.09	20.68	0.05
354	SLU 52	590	29	5332	-20.77	22.51	0.05
354	SLU 53	602	29	5423	-21.26	22.97	0.05
354	SLU 54	602	29	5422	-21.26	23	0.05
354	SLU 55	597	29	5383	-21.05	22.79	0.05
354	SLU 56	609	30	5474	-21.53	23.25	0.05
354	SLU 57	610	30	5473	-21.54	23.28	0.05
354	SLU 58	603	29	5435	-21.32	23.03	0.05
354	SLU 59	604	29	5434	-21.32	23.05	0.05
354	SLU 60	615	30	5567	-21.73	23.48	0.05
354	SLU 61	616	30	5567	-21.73	23.51	0.05
354	SLU 62	623	30	5618	-22	23.76	0.05
354	SLU 63	623	30	5617	-22	23.79	0.05
354	SLU 64	587	29	5286	-20.71	22.41	0.05
354	SLU 65	588	29	5285	-20.72	22.45	0.05
354	SLU 66	600	29	5376	-21.2	22.92	0.05
354	SLU 67	601	29	5375	-21.2	22.94	0.05
354	SLU 68	596	29	5335	-20.99	22.74	0.05
354	SLU 69	608	30	5426	-21.48	23.2	0.05
354	SLU 70	608	30	5426	-21.48	23.22	0.05
354	SLU 71	602	29	5388	-21.26	22.97	0.05
354	SLU 72	602	29	5387	-21.26	23	0.05
354	SLU 73	651	32	5831	-22.94	24.83	0.05
354	SLU 74	663	32	5922	-23.43	25.29	0.06
354	SLU 75	663	32	5921	-23.43	25.32	0.06
354	SLU 76	658	32	5882	-23.22	25.11	0.06
354	SLU 77	670	33	5973	-23.7	25.57	0.06
354	SLU 78	671	33	5972	-23.71	25.6	0.06
354	SLU 79	664	32	5934	-23.49	25.35	0.06
354	SLU 80	665	32	5933	-23.49	25.37	0.06
354	SLU 81	676	33	6067	-23.9	25.8	0.06
354	SLU 82	677	33	6066	-23.9	25.83	0.06
354	SLU 83	684	33	6117	-24.17	26.08	0.06
354	SLU 84	684	33	6117	-24.17	26.11	0.06
354	SLE RA 1	438	21	3956	-15.46	16.73	0.04
354	SLE RA 2	439	21	3955	-15.46	16.76	0.04
354	SLE RA 3	447	22	4016	-15.78	17.07	0.04
354	SLE RA 4	448	22	4016	-15.78	17.08	0.04
354	SLE RA 5	444	22	3989	-15.64	16.95	0.04
354	SLE RA 6	452	22	4050	-15.96	17.25	0.04
354	SLE RA 7	452	22	4049	-15.97	17.27	0.04
354	SLE RA 8	448	22	4024	-15.82	17.1	0.04
354	SLE RA 9	448	22	4024	-15.82	17.12	0.04
354	SLE RA 10	481	23	4320	-16.94	18.34	0.04
354	SLE RA 11	489	24	4381	-17.27	18.65	0.04
354	SLE RA 12	489	24	4380	-17.27	18.67	0.04
354	SLE RA 13	485	24	4354	-17.13	18.53	0.04
354	SLE RA 14	494	24	4414	-17.45	18.84	0.04
354	SLE RA 15	494	24	4414	-17.45	18.85	0.04
354	SLE RA 16	490	24	4388	-17.31	18.69	0.04
354	SLE RA 17	490	24	4388	-17.31	18.7	0.04
354	SLE RA 18	498	24	4477	-17.58	18.99	0.04
354	SLE RA 19	498	24	4476	-17.58	19.01	0.04
354	SLE RA 20	503	25	4511	-17.76	19.18	0.04
354	SLE RA 21	503	25	4510	-17.76	19.19	0.04
354	SLE FR 1	438	21	3956	-15.46	16.73	0.04
354	SLE FR 2	438	21	3956	-15.46	16.74	0.04
354	SLE FR 3	440	21	3970	-15.53	16.8	0.04
354	SLE FR 4	456	22	4112	-16.09	17.41	0.04
354	SLE FR 5	458	22	4126	-16.17	17.48	0.04
354	SLE FR 6	468	23	4217	-16.52	17.86	0.04
354	SLE QP 1	438	21	3956	-15.46	16.73	0.04
354	SLE QP 2	456	22	4113	-16.09	17.41	0.04
354	SLD 1	939	22	3743	-13.99	38.34	0.04
354	SLD 2	939	22	3743	-13.99	38.34	0.04
354	SLD 3	1071	31	4177	-23.69	43.79	0.06
354	SLD 4	1071	31	4177	-23.69	43.79	0.06
354	SLD 5	400	10	3344	-0.75	15.43	0.01
354	SLD 6	400	10	3344	-0.75	15.43	0.01
354	SLD 7	842	37	4790	-33.09	33.58	0.07
354	SLD 8	842	37	4790	-33.09	33.58	0.07
354	SLD 9	71	7	3435	0.9	1.24	0.01
354	SLD 10	71	7	3435	0.9	1.24	0.01
354	SLD 11	512	35	4882	-31.44	19.38	0.07
354	SLD 12	512	35	4882	-31.44	19.38	0.07
354	SLD 13	-159	14	4048	-8.49	-8.97	0.02
354	SLD 14	-159	14	4048	-8.49	-8.97	0.02
354	SLD 15	-26	22	4482	-18.2	-3.53	0.04
354	SLD 16	-26	22	4482	-18.2	-3.53	0.04
354	SLV 1	1565	22	3242	-11.15	65.55	0.04
354	SLV 2	1565	22	3242	-11.15	65.55	0.04



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
354	SLV 3	1875	42	4269	-34.03	78.28	0.08
354	SLV 4	1875	42	4269	-34.03	78.28	0.08
354	SLV 5	318	-7	2293	20.09	12.55	-0.03
354	SLV 6	318	-7	2293	20.09	12.55	-0.03
354	SLV 7	1353	58	5717	-56.17	54.97	0.12
354	SLV 8	1353	58	5717	-56.17	54.97	0.12
354	SLV 9	-440	-13	2508	23.98	-20.16	-0.04
354	SLV 10	-440	-13	2508	23.98	-20.16	-0.04
354	SLV 11	594	52	5932	-52.27	22.27	0.1
354	SLV 12	594	52	5932	-52.27	22.27	0.1
354	SLV 13	-963	3	3957	1.84	-43.46	-0.01
354	SLV 14	-963	3	3957	1.84	-43.46	-0.01
354	SLV 15	-653	22	4984	-21.04	-30.73	0.04
354	SLV 16	-653	22	4984	-21.04	-30.73	0.04
355	SLU 1	338	4	4221	-7.23	12.07	-0.01
355	SLU 2	339	4	4218	-7.24	12.11	-0.01
355	SLU 3	349	4	4324	-7.47	12.43	-0.01
355	SLU 4	349	4	4322	-7.47	12.46	-0.01
355	SLU 5	345	4	4276	-7.37	12.31	-0.01
355	SLU 6	355	4	4382	-7.6	12.64	-0.01
355	SLU 7	355	4	4380	-7.61	12.66	-0.01
355	SLU 8	350	4	4337	-7.5	12.47	-0.01
355	SLU 9	351	4	4336	-7.5	12.5	-0.01
355	SLU 10	389	4	4827	-8.35	13.87	-0.01
355	SLU 11	399	5	4932	-8.59	14.19	-0.01
355	SLU 12	399	5	4931	-8.59	14.22	-0.01
355	SLU 13	395	4	4885	-8.49	14.07	-0.01
355	SLU 14	405	5	4990	-8.72	14.39	-0.01
355	SLU 15	405	5	4989	-8.72	14.42	-0.01
355	SLU 16	400	5	4946	-8.61	14.23	-0.01
355	SLU 17	401	5	4944	-8.62	14.25	-0.01
355	SLU 18	410	5	5090	-8.83	14.58	-0.01
355	SLU 19	410	5	5089	-8.83	14.6	-0.01
355	SLU 20	416	5	5148	-8.96	14.78	-0.01
355	SLU 21	416	5	5147	-8.96	14.8	-0.01
355	SLU 22	387	4	4780	-8.31	13.8	-0.01
355	SLU 23	388	4	4778	-8.32	13.84	-0.01
355	SLU 24	398	4	4883	-8.55	14.16	-0.01
355	SLU 25	398	4	4882	-8.55	14.19	-0.01
355	SLU 26	394	4	4836	-8.45	14.04	-0.01
355	SLU 27	404	5	4941	-8.68	14.37	-0.01
355	SLU 28	404	5	4940	-8.68	14.39	-0.01
355	SLU 29	399	4	4896	-8.58	14.2	-0.01
355	SLU 30	400	4	4895	-8.58	14.23	-0.01
355	SLU 31	438	5	5386	-9.43	15.6	-0.01
355	SLU 32	448	5	5492	-9.66	15.92	-0.01
355	SLU 33	448	5	5490	-9.67	15.95	-0.01
355	SLU 34	444	5	5445	-9.56	15.8	-0.01
355	SLU 35	454	5	5550	-9.8	16.12	-0.01
355	SLU 36	454	5	5548	-9.8	16.15	-0.01
355	SLU 37	449	5	5505	-9.69	15.96	-0.01
355	SLU 38	449	5	5504	-9.69	15.98	-0.01
355	SLU 39	459	5	5650	-9.91	16.31	-0.01
355	SLU 40	459	5	5648	-9.91	16.33	-0.01
355	SLU 41	464	5	5708	-10.04	16.51	-0.01
355	SLU 42	465	5	5706	-10.04	16.53	-0.01
355	SLU 43	423	5	5295	-9.03	15.09	-0.01
355	SLU 44	424	5	5293	-9.04	15.14	-0.01
355	SLU 45	434	5	5398	-9.27	15.46	-0.01
355	SLU 46	434	5	5397	-9.27	15.49	-0.01
355	SLU 47	430	5	5351	-9.17	15.34	-0.01
355	SLU 48	440	5	5456	-9.4	15.66	-0.01
355	SLU 49	440	5	5455	-9.41	15.69	-0.01
355	SLU 50	435	5	5411	-9.3	15.5	-0.01
355	SLU 51	435	5	5410	-9.3	15.52	-0.01
355	SLU 52	474	5	5901	-10.15	16.89	-0.01
355	SLU 53	484	5	6007	-10.39	17.22	-0.01
355	SLU 54	484	5	6005	-10.39	17.24	-0.01
355	SLU 55	480	5	5960	-10.29	17.1	-0.01
355	SLU 56	489	6	6065	-10.52	17.42	-0.01
355	SLU 57	490	6	6063	-10.52	17.45	-0.01
355	SLU 58	485	5	6020	-10.41	17.26	-0.01
355	SLU 59	485	5	6019	-10.42	17.28	-0.01
355	SLU 60	494	6	6164	-10.63	17.6	-0.01
355	SLU 61	495	6	6163	-10.63	17.63	-0.01
355	SLU 62	500	6	6223	-10.76	17.81	-0.01
355	SLU 63	501	6	6221	-10.76	17.83	-0.01
355	SLU 64	472	5	5854	-10.11	16.82	-0.01
355	SLU 65	473	5	5852	-10.12	16.87	-0.01
355	SLU 66	483	5	5957	-10.35	17.19	-0.01
355	SLU 67	483	5	5956	-10.35	17.22	-0.01
355	SLU 68	479	5	5910	-10.25	17.07	-0.01
355	SLU 69	488	5	6016	-10.48	17.39	-0.01
355	SLU 70	489	5	6014	-10.48	17.42	-0.01
355	SLU 71	484	5	5971	-10.38	17.23	-0.01
355	SLU 72	484	5	5969	-10.38	17.25	-0.01
355	SLU 73	523	6	6461	-11.23	18.62	-0.01
355	SLU 74	533	6	6566	-11.46	18.95	-0.01
355	SLU 75	533	6	6565	-11.47	18.97	-0.01
355	SLU 76	529	6	6519	-11.36	18.83	-0.01



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
355	SLU 77	538	6	6624	-11.6	19.15	-0.01
355	SLU 78	539	6	6623	-11.6	19.18	-0.01
355	SLU 79	534	6	6579	-11.49	18.99	-0.01
355	SLU 80	534	6	6578	-11.49	19.01	-0.01
355	SLU 81	543	6	6724	-11.71	19.33	-0.01
355	SLU 82	544	6	6723	-11.71	19.36	-0.01
355	SLU 83	549	6	6782	-11.84	19.54	-0.01
355	SLU 84	550	6	6781	-11.84	19.56	-0.01
355	SLE RA 1	352	4	4380	-7.54	12.56	-0.01
355	SLE RA 2	353	4	4379	-7.55	12.59	-0.01
355	SLE RA 3	359	4	4449	-7.7	12.81	-0.01
355	SLE RA 4	360	4	4448	-7.7	12.82	-0.01
355	SLE RA 5	357	4	4418	-7.63	12.72	-0.01
355	SLE RA 6	363	4	4488	-7.79	12.94	-0.01
355	SLE RA 7	364	4	4487	-7.79	12.96	-0.01
355	SLE RA 8	360	4	4458	-7.72	12.83	-0.01
355	SLE RA 9	361	4	4457	-7.72	12.85	-0.01
355	SLE RA 10	386	4	4785	-8.29	13.76	-0.01
355	SLE RA 11	393	4	4855	-8.44	13.98	-0.01
355	SLE RA 12	393	4	4854	-8.45	13.99	-0.01
355	SLE RA 13	390	4	4823	-8.38	13.9	-0.01
355	SLE RA 14	397	4	4894	-8.53	14.11	-0.01
355	SLE RA 15	397	4	4893	-8.53	14.13	-0.01
355	SLE RA 16	393	4	4864	-8.46	14	-0.01
355	SLE RA 17	394	4	4863	-8.46	14.02	-0.01
355	SLE RA 18	400	5	4960	-8.6	14.23	-0.01
355	SLE RA 19	400	5	4959	-8.61	14.25	-0.01
355	SLE RA 20	404	5	4999	-8.69	14.37	-0.01
355	SLE RA 21	404	5	4998	-8.69	14.39	-0.01
355	SLE FR 1	352	4	4380	-7.54	12.56	-0.01
355	SLE FR 2	353	4	4380	-7.54	12.57	-0.01
355	SLE FR 3	354	4	4396	-7.58	12.62	-0.01
355	SLE FR 4	367	4	4554	-7.86	13.07	-0.01
355	SLE FR 5	368	4	4570	-7.9	13.12	-0.01
355	SLE FR 6	376	4	4670	-8.07	13.4	-0.01
355	SLE QP 1	352	4	4380	-7.54	12.56	-0.01
355	SLE QP 2	367	4	4554	-7.86	13.06	-0.01
355	SLD 1	839	5	4113	-7.23	33.93	-0.01
355	SLD 2	839	5	4113	-7.23	33.93	-0.01
355	SLD 3	976	11	4625	-12.64	39.42	0.02
355	SLD 4	976	11	4625	-12.64	39.42	0.02
355	SLD 5	299	-5	3646	0.53	10.99	-0.05
355	SLD 6	299	-5	3646	0.53	10.99	-0.05
355	SLD 7	758	15	5352	-17.5	29.3	0.04
355	SLD 8	758	15	5352	-17.5	29.3	0.04
355	SLD 9	-25	-7	3757	1.78	-3.17	-0.05
355	SLD 10	-25	-7	3757	1.78	-3.17	-0.05
355	SLD 11	434	13	5463	-16.25	15.13	0.04
355	SLD 12	434	13	5463	-16.25	15.13	0.04
355	SLD 13	-243	-3	4484	-3.08	-13.29	-0.03
355	SLD 14	-243	-3	4484	-3.08	-13.29	-0.03
355	SLD 15	-105	3	4995	-8.49	-7.8	0
355	SLD 16	-105	3	4995	-8.49	-7.8	0
355	SLV 1	1451	6	3509	-6.39	61.06	-0.02
355	SLV 2	1451	6	3509	-6.39	61.06	-0.02
355	SLV 3	1774	20	4723	-19.16	73.89	0.04
355	SLV 4	1774	20	4723	-19.16	73.89	0.04
355	SLV 5	203	-17	2398	11.96	8	-0.11
355	SLV 6	203	-17	2398	11.96	8	-0.11
355	SLV 7	1278	30	6447	-30.63	50.77	0.1
355	SLV 8	1278	30	6447	-30.63	50.77	0.1
355	SLV 9	-545	-22	2661	14.91	-24.65	-0.12
355	SLV 10	-545	-22	2661	14.91	-24.65	-0.12
355	SLV 11	531	25	6710	-27.68	18.12	0.09
355	SLV 12	531	25	6710	-27.68	18.12	0.09
355	SLV 13	-1040	-12	4385	3.44	-47.76	-0.06
355	SLV 14	-1040	-12	4385	3.44	-47.76	-0.06
355	SLV 15	-718	2	5600	-9.33	-34.93	0.01
355	SLV 16	-718	2	5600	-9.33	-34.93	0.01
356	SLU 1	210	-17	4680	0.25	6.52	-0.05
356	SLU 2	211	-17	4676	0.24	6.56	-0.05
356	SLU 3	216	-18	4797	0.26	6.71	-0.05
356	SLU 4	217	-18	4795	0.25	6.74	-0.05
356	SLU 5	214	-18	4742	0.25	6.67	-0.05
356	SLU 6	220	-18	4864	0.26	6.83	-0.05
356	SLU 7	220	-18	4862	0.25	6.85	-0.05
356	SLU 8	217	-18	4812	0.26	6.75	-0.05
356	SLU 9	218	-18	4810	0.25	6.77	-0.05
356	SLU 10	243	-20	5355	0.24	7.55	-0.06
356	SLU 11	248	-20	5476	0.26	7.71	-0.06
356	SLU 12	249	-20	5474	0.25	7.73	-0.06
356	SLU 13	246	-20	5421	0.25	7.66	-0.06
356	SLU 14	252	-21	5543	0.26	7.82	-0.06
356	SLU 15	252	-21	5541	0.25	7.84	-0.06
356	SLU 16	249	-20	5491	0.26	7.74	-0.06
356	SLU 17	249	-20	5489	0.25	7.76	-0.06
356	SLU 18	255	-21	5650	0.25	7.94	-0.06
356	SLU 19	256	-21	5648	0.25	7.96	-0.06
356	SLU 20	259	-21	5716	0.26	8.05	-0.06
356	SLU 21	259	-21	5714	0.25	8.07	-0.06



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
356	SLU 22	241	-20	5307	0.26	7.49	-0.06
356	SLU 23	242	-20	5304	0.25	7.53	-0.06
356	SLU 24	247	-20	5425	0.26	7.68	-0.06
356	SLU 25	248	-20	5423	0.25	7.71	-0.06
356	SLU 26	245	-20	5370	0.25	7.64	-0.06
356	SLU 27	251	-21	5491	0.26	7.8	-0.06
356	SLU 28	251	-21	5489	0.26	7.82	-0.06
356	SLU 29	248	-20	5440	0.26	7.71	-0.06
356	SLU 30	249	-20	5438	0.25	7.74	-0.06
356	SLU 31	273	-22	5983	0.25	8.52	-0.06
356	SLU 32	279	-23	6104	0.26	8.67	-0.07
356	SLU 33	279	-23	6102	0.25	8.7	-0.07
356	SLU 34	277	-23	6049	0.25	8.63	-0.07
356	SLU 35	283	-23	6170	0.26	8.79	-0.07
356	SLU 36	283	-23	6168	0.26	8.81	-0.07
356	SLU 37	280	-23	6119	0.26	8.71	-0.07
356	SLU 38	280	-23	6117	0.25	8.73	-0.07
356	SLU 39	286	-23	6277	0.26	8.91	-0.07
356	SLU 40	287	-23	6275	0.25	8.93	-0.07
356	SLU 41	290	-24	6343	0.26	9.02	-0.07
356	SLU 42	290	-24	6341	0.25	9.04	-0.07
356	SLU 43	263	-22	5868	0.33	8.15	-0.06
356	SLU 44	263	-22	5865	0.32	8.18	-0.06
356	SLU 45	269	-22	5986	0.33	8.34	-0.06
356	SLU 46	269	-22	5984	0.33	8.36	-0.06
356	SLU 47	267	-22	5931	0.32	8.29	-0.06
356	SLU 48	272	-23	6052	0.33	8.45	-0.07
356	SLU 49	273	-23	6050	0.33	8.47	-0.07
356	SLU 50	270	-22	6001	0.33	8.37	-0.06
356	SLU 51	270	-22	5999	0.33	8.39	-0.06
356	SLU 52	295	-24	6544	0.32	9.17	-0.07
356	SLU 53	301	-25	6665	0.33	9.33	-0.07
356	SLU 54	301	-25	6663	0.33	9.35	-0.07
356	SLU 55	299	-25	6610	0.32	9.29	-0.07
356	SLU 56	304	-25	6731	0.33	9.44	-0.07
356	SLU 57	305	-25	6729	0.33	9.46	-0.07
356	SLU 58	301	-25	6680	0.33	9.36	-0.07
356	SLU 59	302	-25	6678	0.33	9.38	-0.07
356	SLU 60	308	-25	6838	0.33	9.56	-0.07
356	SLU 61	308	-25	6836	0.32	9.58	-0.07
356	SLU 62	311	-26	6905	0.33	9.67	-0.07
356	SLU 63	312	-26	6903	0.32	9.7	-0.07
356	SLU 64	294	-24	6496	0.33	9.12	-0.07
356	SLU 65	294	-24	6492	0.32	9.15	-0.07
356	SLU 66	300	-25	6614	0.34	9.31	-0.07
356	SLU 67	300	-25	6612	0.33	9.33	-0.07
356	SLU 68	298	-24	6559	0.32	9.26	-0.07
356	SLU 69	303	-25	6680	0.34	9.42	-0.07
356	SLU 70	304	-25	6678	0.33	9.44	-0.07
356	SLU 71	301	-25	6629	0.34	9.34	-0.07
356	SLU 72	301	-25	6626	0.33	9.36	-0.07
356	SLU 73	326	-27	7171	0.32	10.14	-0.08
356	SLU 74	331	-27	7293	0.34	10.3	-0.08
356	SLU 75	332	-27	7291	0.33	10.32	-0.08
356	SLU 76	329	-27	7238	0.32	10.25	-0.08
356	SLU 77	335	-28	7359	0.34	10.41	-0.08
356	SLU 78	335	-28	7357	0.33	10.43	-0.08
356	SLU 79	332	-27	7307	0.34	10.33	-0.08
356	SLU 80	333	-27	7305	0.33	10.35	-0.08
356	SLU 81	339	-28	7466	0.33	10.53	-0.08
356	SLU 82	339	-28	7464	0.33	10.55	-0.08
356	SLU 83	342	-28	7532	0.33	10.64	-0.08
356	SLU 84	343	-28	7530	0.33	10.66	-0.08
356	SLE RA 1	219	-18	4859	0.26	6.8	-0.05
356	SLE RA 2	220	-18	4857	0.25	6.82	-0.05
356	SLE RA 3	223	-18	4937	0.26	6.93	-0.05
356	SLE RA 4	223	-18	4936	0.25	6.94	-0.05
356	SLE RA 5	222	-18	4901	0.25	6.9	-0.05
356	SLE RA 6	226	-19	4982	0.26	7	-0.05
356	SLE RA 7	226	-19	4980	0.25	7.02	-0.05
356	SLE RA 8	224	-19	4947	0.26	6.95	-0.05
356	SLE RA 9	224	-19	4946	0.25	6.96	-0.05
356	SLE RA 10	241	-20	5309	0.25	7.48	-0.06
356	SLE RA 11	244	-20	5390	0.26	7.59	-0.06
356	SLE RA 12	245	-20	5389	0.25	7.6	-0.06
356	SLE RA 13	243	-20	5353	0.25	7.56	-0.06
356	SLE RA 14	247	-20	5434	0.26	7.66	-0.06
356	SLE RA 15	247	-20	5433	0.25	7.68	-0.06
356	SLE RA 16	245	-20	5400	0.26	7.61	-0.06
356	SLE RA 17	245	-20	5399	0.25	7.62	-0.06
356	SLE RA 18	249	-20	5506	0.26	7.74	-0.06
356	SLE RA 19	249	-20	5504	0.25	7.76	-0.06
356	SLE RA 20	252	-21	5550	0.26	7.82	-0.06
356	SLE RA 21	252	-21	5548	0.25	7.83	-0.06
356	SLE FR 1	219	-18	4859	0.26	6.8	-0.05
356	SLE FR 2	219	-18	4859	0.25	6.8	-0.05
356	SLE FR 3	220	-18	4877	0.26	6.83	-0.05
356	SLE FR 4	228	-19	5053	0.25	7.09	-0.05
356	SLE FR 5	229	-19	5071	0.26	7.11	-0.05
356	SLE FR 6	234	-19	5182	0.26	7.27	-0.06



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
356	SLE QP 1	219	-18	4859	0.26	6.8	-0.05
356	SLE QP 2	228	-19	5053	0.26	7.08	-0.05
356	SLD 1	686	-12	4471	-2.37	27.13	-0.04
356	SLD 2	686	-12	4471	-2.37	27.13	-0.04
356	SLD 3	837	-19	5118	0.32	32.85	-0.05
356	SLD 4	837	-19	5118	0.32	32.85	-0.05
356	SLD 5	136	-6	3897	-4.62	4.43	-0.03
356	SLD 6	136	-6	3897	-4.62	4.43	-0.03
356	SLD 7	640	-29	6054	4.36	23.48	-0.08
356	SLD 8	640	-29	6054	4.36	23.48	-0.08
356	SLD 9	-184	-8	4052	-3.85	-9.32	-0.03
356	SLD 10	-184	-8	4052	-3.85	-9.32	-0.03
356	SLD 11	320	-31	6209	5.13	9.74	-0.08
356	SLD 12	320	-31	6209	5.13	9.74	-0.08
356	SLD 13	-381	-18	4988	0.19	-18.68	-0.06
356	SLD 14	-381	-18	4988	0.19	-18.68	-0.06
356	SLD 15	-230	-25	5635	2.88	-12.97	-0.07
356	SLD 16	-230	-25	5635	2.88	-12.97	-0.07
356	SLV 1	1280	-4	3670	-5.93	53.2	-0.02
356	SLV 2	1280	-4	3670	-5.93	53.2	-0.02
356	SLV 3	1634	-20	5210	0.41	66.53	-0.05
356	SLV 4	1634	-20	5210	0.41	66.53	-0.05
356	SLV 5	7	10	2303	-11.22	0.7	0.01
356	SLV 6	7	10	2303	-11.22	0.7	0.01
356	SLV 7	1187	-44	7435	9.92	45.13	-0.1
356	SLV 8	1187	-44	7435	9.92	45.13	-0.1
356	SLV 9	-731	6	2670	-9.41	-30.97	0
356	SLV 10	-731	6	2670	-9.41	-30.97	0
356	SLV 11	450	-48	7803	11.73	13.47	-0.12
356	SLV 12	450	-48	7803	11.73	13.47	-0.12
356	SLV 13	-1178	-17	4896	0.1	-52.36	-0.06
356	SLV 14	-1178	-17	4896	0.1	-52.36	-0.06
356	SLV 15	-824	-34	6436	6.44	-39.03	-0.09
356	SLV 16	-824	-34	6436	6.44	-39.03	-0.09
357	SLU 1	-143	-709	6818	19.65	-6.83	0
357	SLU 2	-142	-708	6810	19.58	-6.77	0
357	SLU 3	-149	-729	6994	20.2	-7.08	0
357	SLU 4	-148	-728	6990	20.16	-7.05	0
357	SLU 5	-145	-718	6909	19.86	-6.9	0
357	SLU 6	-151	-740	7093	20.48	-7.21	0
357	SLU 7	-151	-739	7088	20.44	-7.17	0
357	SLU 8	-149	-731	7015	20.21	-7.09	0
357	SLU 9	-148	-730	7010	20.17	-7.05	0
357	SLU 10	-162	-810	7805	22.39	-7.77	0
357	SLU 11	-168	-832	7988	23.01	-8.08	0
357	SLU 12	-168	-831	7984	22.97	-8.05	0
357	SLU 13	-164	-821	7903	22.68	-7.9	0
357	SLU 14	-171	-843	8087	23.3	-8.21	0
357	SLU 15	-170	-842	8082	23.26	-8.17	0
357	SLU 16	-168	-833	8009	23.03	-8.09	0
357	SLU 17	-168	-832	8005	22.99	-8.05	0
357	SLU 18	-172	-856	8238	23.67	-8.26	0
357	SLU 19	-171	-855	8234	23.63	-8.22	0
357	SLU 20	-174	-867	8336	23.95	-8.39	0
357	SLU 21	-173	-866	8332	23.91	-8.35	0
357	SLU 22	-163	-807	7742	22.35	-7.8	0
357	SLU 23	-162	-806	7734	22.28	-7.74	0
357	SLU 24	-168	-827	7918	22.9	-8.05	0
357	SLU 25	-167	-826	7914	22.86	-8.02	0
357	SLU 26	-164	-816	7833	22.57	-7.87	0
357	SLU 27	-171	-838	8017	23.19	-8.18	0
357	SLU 28	-170	-837	8012	23.15	-8.15	0
357	SLU 29	-168	-829	7939	22.92	-8.06	0
357	SLU 30	-167	-828	7934	22.88	-8.02	0
357	SLU 31	-181	-908	8729	25.1	-8.74	0
357	SLU 32	-188	-930	8912	25.72	-9.05	0
357	SLU 33	-187	-929	8908	25.68	-9.02	0
357	SLU 34	-184	-919	8827	25.38	-8.87	0
357	SLU 35	-191	-941	9011	26	-9.18	0
357	SLU 36	-190	-940	9006	25.96	-9.15	0
357	SLU 37	-188	-931	8933	25.74	-9.06	0
357	SLU 38	-187	-930	8929	25.69	-9.02	0
357	SLU 39	-191	-954	9162	26.38	-9.23	0
357	SLU 40	-190	-953	9158	26.34	-9.2	0
357	SLU 41	-194	-965	9260	26.66	-9.36	0
357	SLU 42	-193	-964	9256	26.62	-9.32	0
357	SLU 43	-180	-889	8546	24.61	-8.54	0
357	SLU 44	-178	-887	8539	24.54	-8.49	0
357	SLU 45	-185	-909	8722	25.16	-8.79	0
357	SLU 46	-184	-907	8718	25.12	-8.76	0
357	SLU 47	-181	-897	8637	24.82	-8.62	0
357	SLU 48	-188	-919	8821	25.45	-8.92	0
357	SLU 49	-187	-918	8817	25.4	-8.89	0
357	SLU 50	-185	-910	8743	25.18	-8.8	0
357	SLU 51	-184	-909	8739	25.14	-8.77	0
357	SLU 52	-198	-989	9533	27.36	-9.49	0
357	SLU 53	-205	-1011	9717	27.98	-9.79	0
357	SLU 54	-204	-1010	9712	27.94	-9.76	0
357	SLU 55	-201	-1000	9632	27.64	-9.62	0
357	SLU 56	-207	-1022	9815	28.26	-9.92	-0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
357	SLU 57	-207	-1021	9811	28.22	-9.89	-0.01
357	SLU 58	-205	-1013	9737	27.99	-9.8	0
357	SLU 59	-204	-1011	9733	27.95	-9.77	0
357	SLU 60	-208	-1035	9966	28.64	-9.97	-0.01
357	SLU 61	-207	-1034	9962	28.59	-9.94	0
357	SLU 62	-210	-1046	10065	28.92	-10.1	-0.01
357	SLU 63	-210	-1045	10061	28.88	-10.07	-0.01
357	SLU 64	-199	-987	9470	27.32	-9.52	0
357	SLU 65	-198	-985	9463	27.25	-9.46	0
357	SLU 66	-204	-1007	9646	27.87	-9.77	0
357	SLU 67	-204	-1006	9642	27.83	-9.73	0
357	SLU 68	-201	-995	9561	27.53	-9.59	0
357	SLU 69	-207	-1017	9745	28.15	-9.9	-0.01
357	SLU 70	-206	-1016	9741	28.11	-9.86	-0.01
357	SLU 71	-204	-1008	9667	27.88	-9.77	0
357	SLU 72	-204	-1007	9663	27.84	-9.74	0
357	SLU 73	-218	-1088	10457	30.07	-10.46	-0.01
357	SLU 74	-224	-1109	10641	30.69	-10.77	-0.01
357	SLU 75	-223	-1108	10636	30.65	-10.73	-0.01
357	SLU 76	-220	-1098	10556	30.35	-10.59	-0.01
357	SLU 77	-227	-1120	10739	30.97	-10.9	-0.01
357	SLU 78	-226	-1119	10735	30.93	-10.86	-0.01
357	SLU 79	-224	-1111	10661	30.7	-10.77	-0.01
357	SLU 80	-223	-1110	10657	30.66	-10.74	-0.01
357	SLU 81	-227	-1133	10890	31.34	-10.95	-0.01
357	SLU 82	-227	-1132	10886	31.3	-10.91	-0.01
357	SLU 83	-230	-1144	10989	31.63	-11.07	-0.01
357	SLU 84	-229	-1143	10985	31.58	-11.04	-0.01
357	SLE RA 1	-149	-737	7082	20.42	-7.11	0
357	SLE RA 2	-148	-736	7077	20.37	-7.07	0
357	SLE RA 3	-152	-751	7199	20.79	-7.27	0
357	SLE RA 4	-152	-750	7196	20.76	-7.25	0
357	SLE RA 5	-150	-743	7143	20.56	-7.15	0
357	SLE RA 6	-154	-758	7265	20.98	-7.36	0
357	SLE RA 7	-154	-757	7262	20.95	-7.34	0
357	SLE RA 8	-152	-752	7213	20.8	-7.28	0
357	SLE RA 9	-152	-751	7210	20.77	-7.25	0
357	SLE RA 10	-161	-805	7740	22.25	-7.74	0
357	SLE RA 11	-166	-819	7862	22.66	-7.94	0
357	SLE RA 12	-165	-818	7859	22.64	-7.92	0
357	SLE RA 13	-163	-812	7805	22.44	-7.82	0
357	SLE RA 14	-167	-826	7928	22.85	-8.03	0
357	SLE RA 15	-167	-826	7925	22.83	-8	0
357	SLE RA 16	-166	-820	7876	22.67	-7.94	0
357	SLE RA 17	-165	-819	7873	22.65	-7.92	0
357	SLE RA 18	-168	-835	8028	23.1	-8.06	0
357	SLE RA 19	-167	-834	8026	23.07	-8.04	0
357	SLE RA 20	-169	-842	8094	23.29	-8.14	0
357	SLE RA 21	-169	-842	8091	23.26	-8.12	0
357	SLE FR 1	-149	-737	7082	20.42	-7.11	0
357	SLE FR 2	-149	-737	7081	20.41	-7.1	0
357	SLE FR 3	-150	-740	7108	20.49	-7.14	0
357	SLE FR 4	-154	-766	7365	21.21	-7.38	0
357	SLE FR 5	-155	-770	7392	21.3	-7.43	0
357	SLE FR 6	-158	-786	7555	21.76	-7.58	0
357	SLE QP 1	-149	-737	7082	20.42	-7.11	0
357	SLE QP 2	-155	-767	7366	21.22	-7.39	0
357	SLD 1	440	-538	6320	11.59	18.65	0.03
357	SLD 2	440	-538	6320	11.59	18.65	0.03
357	SLD 3	335	-797	7437	22.68	14.13	0.04
357	SLD 4	335	-797	7437	22.68	14.13	0.04
357	SLD 5	184	-305	5359	1.5	7.27	-0.01
357	SLD 6	184	-305	5359	1.5	7.27	-0.01
357	SLD 7	-168	-1168	9080	38.49	-7.79	0.02
357	SLD 8	-168	-1168	9080	38.49	-7.79	0.02
357	SLD 9	-141	-365	5651	3.95	-7	-0.03
357	SLD 10	-141	-365	5651	3.95	-7	-0.03
357	SLD 11	-493	-1228	9373	40.95	-22.06	0
357	SLD 12	-493	-1228	9373	40.95	-22.06	0
357	SLD 13	-644	-737	7294	19.76	-28.91	-0.05
357	SLD 14	-644	-737	7294	19.76	-28.91	-0.05
357	SLD 15	-750	-996	8411	30.86	-33.43	-0.04
357	SLD 16	-750	-996	8411	30.86	-33.43	-0.04
357	SLV 1	1218	-222	4882	-1.64	52.69	0.08
357	SLV 2	1218	-222	4882	-1.64	52.69	0.08
357	SLV 3	973	-839	7544	24.71	42.19	0.1
357	SLV 4	973	-839	7544	24.71	42.19	0.1
357	SLV 5	629	331	2583	-25.61	26.56	-0.01
357	SLV 6	629	331	2583	-25.61	26.56	-0.01
357	SLV 7	-188	-1723	11457	62.24	-8.44	0.05
357	SLV 8	-188	-1723	11457	62.24	-8.44	0.05
357	SLV 9	-121	190	3274	-19.79	-6.35	-0.06
357	SLV 10	-121	190	3274	-19.79	-6.35	-0.06
357	SLV 11	-938	-1865	12148	68.05	-41.34	0
357	SLV 12	-938	-1865	12148	68.05	-41.34	0
357	SLV 13	-1282	-695	7187	17.73	-56.98	-0.1
357	SLV 14	-1282	-695	7187	17.73	-56.98	-0.1
357	SLV 15	-1527	-1311	9849	44.09	-67.48	-0.09
357	SLV 16	-1527	-1311	9849	44.09	-67.48	-0.09
358	SLU 1	-485	-18	4566	0.94	-17.89	0.05



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
358	SLU 2	-483	-18	4562	0.94	-17.82	0.05
358	SLU 3	-501	-19	4681	0.95	-18.48	0.06
358	SLU 4	-500	-19	4679	0.95	-18.44	0.06
358	SLU 5	-492	-18	4627	0.94	-18.13	0.05
358	SLU 6	-510	-19	4746	0.95	-18.79	0.06
358	SLU 7	-509	-19	4743	0.95	-18.75	0.06
358	SLU 8	-502	-19	4696	0.94	-18.51	0.06
358	SLU 9	-501	-19	4694	0.94	-18.47	0.06
358	SLU 10	-553	-21	5236	1.12	-20.41	0.06
358	SLU 11	-571	-21	5355	1.14	-21.07	0.06
358	SLU 12	-570	-21	5353	1.13	-21.03	0.06
358	SLU 13	-562	-21	5301	1.12	-20.72	0.06
358	SLU 14	-580	-22	5420	1.13	-21.38	0.06
358	SLU 15	-579	-22	5418	1.13	-21.34	0.06
358	SLU 16	-572	-21	5370	1.12	-21.1	0.06
358	SLU 17	-571	-21	5368	1.12	-21.06	0.06
358	SLU 18	-585	-22	5529	1.2	-21.58	0.07
358	SLU 19	-584	-22	5527	1.2	-21.54	0.07
358	SLU 20	-593	-22	5594	1.2	-21.89	0.07
358	SLU 21	-592	-22	5592	1.2	-21.85	0.07
358	SLU 22	-554	-21	5187	1.1	-20.42	0.06
358	SLU 23	-552	-21	5183	1.09	-20.35	0.06
358	SLU 24	-570	-21	5301	1.11	-21.02	0.06
358	SLU 25	-569	-21	5299	1.11	-20.98	0.06
358	SLU 26	-560	-21	5247	1.09	-20.67	0.06
358	SLU 27	-578	-22	5366	1.11	-21.33	0.06
358	SLU 28	-577	-22	5364	1.1	-21.29	0.06
358	SLU 29	-571	-21	5316	1.09	-21.05	0.06
358	SLU 30	-570	-21	5314	1.09	-21	0.06
358	SLU 31	-622	-23	5857	1.28	-22.94	0.07
358	SLU 32	-640	-24	5975	1.29	-23.61	0.07
358	SLU 33	-639	-24	5973	1.29	-23.56	0.07
358	SLU 34	-630	-24	5921	1.28	-23.25	0.07
358	SLU 35	-648	-24	6040	1.29	-23.92	0.07
358	SLU 36	-647	-24	6038	1.29	-23.88	0.07
358	SLU 37	-641	-24	5990	1.28	-23.63	0.07
358	SLU 38	-639	-24	5988	1.28	-23.59	0.07
358	SLU 39	-653	-25	6150	1.36	-24.12	0.07
358	SLU 40	-652	-25	6147	1.36	-24.08	0.07
358	SLU 41	-662	-25	6214	1.36	-24.43	0.07
358	SLU 42	-661	-25	6212	1.36	-24.39	0.07
358	SLU 43	-607	-23	5724	1.17	-22.38	0.07
358	SLU 44	-605	-23	5719	1.17	-22.31	0.07
358	SLU 45	-623	-23	5838	1.18	-22.98	0.07
358	SLU 46	-622	-23	5836	1.18	-22.94	0.07
358	SLU 47	-614	-23	5784	1.17	-22.63	0.07
358	SLU 48	-632	-24	5903	1.18	-23.29	0.07
358	SLU 49	-631	-24	5901	1.18	-23.25	0.07
358	SLU 50	-624	-23	5853	1.17	-23.01	0.07
358	SLU 51	-623	-23	5851	1.17	-22.97	0.07
358	SLU 52	-675	-25	6394	1.35	-24.9	0.08
358	SLU 53	-693	-26	6512	1.36	-25.57	0.08
358	SLU 54	-692	-26	6510	1.36	-25.53	0.08
358	SLU 55	-684	-26	6458	1.35	-25.21	0.08
358	SLU 56	-702	-26	6577	1.36	-25.88	0.08
358	SLU 57	-701	-26	6575	1.36	-25.84	0.08
358	SLU 58	-694	-26	6527	1.35	-25.59	0.08
358	SLU 59	-693	-26	6525	1.35	-25.55	0.08
358	SLU 60	-707	-27	6687	1.43	-26.08	0.08
358	SLU 61	-706	-27	6684	1.43	-26.04	0.08
358	SLU 62	-715	-27	6751	1.43	-26.39	0.08
358	SLU 63	-714	-27	6749	1.43	-26.35	0.08
358	SLU 64	-676	-25	6344	1.33	-24.92	0.08
358	SLU 65	-674	-25	6340	1.32	-24.85	0.08
358	SLU 66	-692	-26	6459	1.34	-25.51	0.08
358	SLU 67	-691	-26	6456	1.33	-25.47	0.08
358	SLU 68	-682	-26	6405	1.32	-25.16	0.08
358	SLU 69	-700	-26	6523	1.34	-25.83	0.08
358	SLU 70	-699	-26	6521	1.33	-25.79	0.08
358	SLU 71	-693	-26	6474	1.32	-25.54	0.08
358	SLU 72	-692	-26	6471	1.32	-25.5	0.08
358	SLU 73	-744	-28	7014	1.51	-27.44	0.08
358	SLU 74	-762	-29	7133	1.52	-28.1	0.08
358	SLU 75	-761	-29	7130	1.52	-28.06	0.08
358	SLU 76	-752	-28	7079	1.51	-27.75	0.08
358	SLU 77	-770	-29	7198	1.52	-28.41	0.09
358	SLU 78	-769	-29	7195	1.52	-28.37	0.09
358	SLU 79	-762	-29	7148	1.51	-28.13	0.09
358	SLU 80	-761	-29	7145	1.51	-28.09	0.08
358	SLU 81	-775	-29	7307	1.59	-28.61	0.09
358	SLU 82	-774	-29	7304	1.59	-28.57	0.09
358	SLU 83	-784	-29	7372	1.59	-28.93	0.09
358	SLU 84	-783	-29	7369	1.59	-28.89	0.09
358	SLE RA 1	-505	-19	4744	0.99	-18.61	0.06
358	SLE RA 2	-503	-19	4741	0.98	-18.56	0.06
358	SLE RA 3	-515	-19	4820	0.99	-19.01	0.06
358	SLE RA 4	-515	-19	4818	0.99	-18.98	0.06
358	SLE RA 5	-509	-19	4784	0.98	-18.77	0.06
358	SLE RA 6	-521	-19	4863	0.99	-19.22	0.06
358	SLE RA 7	-520	-19	4862	0.99	-19.19	0.06



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
358	SLE RA 8	-516	-19	4830	0.98	-19.03	0.06
358	SLE RA 9	-515	-19	4828	0.98	-19	0.06
358	SLE RA 10	-550	-21	5190	1.11	-20.29	0.06
358	SLE RA 11	-562	-21	5269	1.12	-20.73	0.06
358	SLE RA 12	-561	-21	5268	1.11	-20.71	0.06
358	SLE RA 13	-556	-21	5233	1.11	-20.5	0.06
358	SLE RA 14	-568	-21	5313	1.11	-20.94	0.06
358	SLE RA 15	-567	-21	5311	1.11	-20.91	0.06
358	SLE RA 16	-563	-21	5279	1.11	-20.75	0.06
358	SLE RA 17	-562	-21	5278	1.11	-20.72	0.06
358	SLE RA 18	-571	-21	5386	1.16	-21.07	0.06
358	SLE RA 19	-570	-21	5384	1.16	-21.05	0.06
358	SLE RA 20	-577	-22	5429	1.16	-21.28	0.06
358	SLE RA 21	-576	-22	5427	1.16	-21.26	0.06
358	SLE FR 1	-505	-19	4744	0.99	-18.61	0.06
358	SLE FR 2	-504	-19	4743	0.98	-18.6	0.06
358	SLE FR 3	-507	-19	4761	0.98	-18.69	0.06
358	SLE FR 4	-524	-20	4936	1.04	-19.34	0.06
358	SLE FR 5	-527	-20	4953	1.04	-19.43	0.06
358	SLE FR 6	-538	-20	5065	1.07	-19.84	0.06
358	SLE QP 1	-505	-19	4744	0.99	-18.61	0.06
358	SLE QP 2	-525	-20	4936	1.04	-19.35	0.06
358	SLD 1	89	-13	4306	1.24	6.76	0.06
358	SLD 2	89	-13	4306	1.24	6.76	0.06
358	SLD 3	-40	-19	4932	3.42	1.65	0.07
358	SLD 4	-40	-19	4932	3.42	1.65	0.07
358	SLD 5	-145	-8	3797	-2.21	-3.76	0.04
358	SLD 6	-145	-8	3797	-2.21	-3.76	0.04
358	SLD 7	-574	-29	5885	5.06	-20.8	0.08
358	SLD 8	-574	-29	5885	5.06	-20.8	0.08
358	SLD 9	-475	-10	3987	-2.98	-17.9	0.03
358	SLD 10	-475	-10	3987	-2.98	-17.9	0.03
358	SLD 11	-904	-31	6076	4.29	-34.94	0.08
358	SLD 12	-904	-31	6076	4.29	-34.94	0.08
358	SLD 13	-1009	-20	4940	-1.34	-40.35	0.05
358	SLD 14	-1009	-20	4940	-1.34	-40.35	0.05
358	SLD 15	-1138	-27	5567	0.84	-45.46	0.06
358	SLD 16	-1138	-27	5567	0.84	-45.46	0.06
358	SLV 1	895	-3	3442	1.47	41.02	0.05
358	SLV 2	895	-3	3442	1.47	41.02	0.05
358	SLV 3	589	-18	4936	6.7	28.94	0.09
358	SLV 4	589	-18	4936	6.7	28.94	0.09
358	SLV 5	365	8	2222	-6.77	17.09	0
358	SLV 6	365	8	2222	-6.77	17.09	0
358	SLV 7	-654	-42	7202	10.68	-23.19	0.12
358	SLV 8	-654	-42	7202	10.68	-23.19	0.12
358	SLV 9	-395	2	2670	-8.6	-15.51	0
358	SLV 10	-395	2	2670	-8.6	-15.51	0
358	SLV 11	-1414	-47	7651	8.85	-55.78	0.11
358	SLV 12	-1414	-47	7651	8.85	-55.78	0.11
358	SLV 13	-1638	-21	4936	-4.63	-67.64	0.03
358	SLV 14	-1638	-21	4936	-4.63	-67.64	0.03
358	SLV 15	-1944	-36	6431	0.61	-79.72	0.06
358	SLV 16	-1944	-36	6431	0.61	-79.72	0.06
359	SLU 1	-646	0	4142	-5.43	-26.46	0.01
359	SLU 2	-645	0	4139	-5.42	-26.38	0.01
359	SLU 3	-668	0	4243	-5.63	-27.33	0.01
359	SLU 4	-667	0	4241	-5.63	-27.29	0.01
359	SLU 5	-656	0	4196	-5.55	-26.85	0.01
359	SLU 6	-679	0	4301	-5.76	-27.8	0.01
359	SLU 7	-678	0	4298	-5.76	-27.75	0.01
359	SLU 8	-669	0	4257	-5.68	-27.38	0.01
359	SLU 9	-668	0	4255	-5.68	-27.34	0.01
359	SLU 10	-742	0	4757	-6.11	-30.43	0.01
359	SLU 11	-765	0	4861	-6.32	-31.38	0.01
359	SLU 12	-764	0	4859	-6.31	-31.33	0.01
359	SLU 13	-753	0	4814	-6.23	-30.89	0.01
359	SLU 14	-776	0	4919	-6.45	-31.84	0.01
359	SLU 15	-775	0	4917	-6.44	-31.8	0.01
359	SLU 16	-766	0	4876	-6.37	-31.43	0.01
359	SLU 17	-765	0	4873	-6.36	-31.38	0.01
359	SLU 18	-785	0	5026	-6.41	-32.24	0.01
359	SLU 19	-784	0	5023	-6.4	-32.19	0.01
359	SLU 20	-797	0	5083	-6.53	-32.7	0.01
359	SLU 21	-796	0	5081	-6.53	-32.66	0.01
359	SLU 22	-741	0	4706	-6.14	-30.35	0.01
359	SLU 23	-739	0	4702	-6.13	-30.28	0.01
359	SLU 24	-762	0	4807	-6.35	-31.23	0.01
359	SLU 25	-761	0	4804	-6.34	-31.18	0.01
359	SLU 26	-750	0	4760	-6.26	-30.74	0.01
359	SLU 27	-773	0	4864	-6.47	-31.69	0.01
359	SLU 28	-772	0	4862	-6.47	-31.65	0.01
359	SLU 29	-763	0	4821	-6.4	-31.28	0.01
359	SLU 30	-762	0	4819	-6.39	-31.23	0.01
359	SLU 31	-836	0	5321	-6.82	-34.32	0.01
359	SLU 32	-859	0	5425	-7.03	-35.27	0.01
359	SLU 33	-858	0	5423	-7.03	-35.23	0.01
359	SLU 34	-847	0	5378	-6.95	-34.79	0.01
359	SLU 35	-870	0	5482	-7.16	-35.74	0.01
359	SLU 36	-869	0	5480	-7.15	-35.69	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
359	SLU 37	-860	0	5439	-7.08	-35.32	0.01
359	SLU 38	-859	0	5437	-7.08	-35.28	0.01
359	SLU 39	-880	0	5589	-7.12	-36.13	0.01
359	SLU 40	-878	0	5587	-7.11	-36.09	0.01
359	SLU 41	-891	0	5647	-7.25	-36.59	0.01
359	SLU 42	-890	0	5644	-7.24	-36.55	0.01
359	SLU 43	-808	0	5192	-6.81	-33.06	0.01
359	SLU 44	-806	0	5188	-6.8	-32.99	0.01
359	SLU 45	-829	0	5293	-7.02	-33.94	0.01
359	SLU 46	-828	0	5290	-7.01	-33.89	0.01
359	SLU 47	-818	0	5246	-6.93	-33.45	0.01
359	SLU 48	-841	0	5350	-7.15	-34.4	0.01
359	SLU 49	-840	0	5348	-7.14	-34.35	0.01
359	SLU 50	-831	0	5307	-7.07	-33.99	0.01
359	SLU 51	-830	0	5304	-7.06	-33.94	0.01
359	SLU 52	-904	0	5806	-7.49	-37.03	0.01
359	SLU 53	-927	0	5911	-7.7	-37.98	0.01
359	SLU 54	-926	0	5909	-7.7	-37.94	0.01
359	SLU 55	-915	0	5864	-7.62	-37.5	0.01
359	SLU 56	-938	0	5968	-7.83	-38.44	0.01
359	SLU 57	-937	0	5966	-7.83	-38.4	0.01
359	SLU 58	-928	0	5925	-7.75	-38.03	0.01
359	SLU 59	-927	0	5923	-7.75	-37.99	0.01
359	SLU 60	-947	0	6075	-7.79	-38.84	0.01
359	SLU 61	-946	0	6073	-7.79	-38.8	0.01
359	SLU 62	-958	0	6132	-7.92	-39.3	0.01
359	SLU 63	-957	0	6130	-7.91	-39.26	0.01
359	SLU 64	-902	0	5755	-7.53	-36.96	0.01
359	SLU 65	-900	0	5752	-7.52	-36.88	0.01
359	SLU 66	-923	0	5856	-7.73	-37.83	0.01
359	SLU 67	-922	0	5854	-7.73	-37.79	0.01
359	SLU 68	-912	0	5809	-7.65	-37.34	0.01
359	SLU 69	-935	0	5914	-7.86	-38.29	0.01
359	SLU 70	-934	0	5911	-7.85	-38.25	0.01
359	SLU 71	-925	0	5870	-7.78	-37.88	0.01
359	SLU 72	-924	0	5868	-7.78	-37.84	0.01
359	SLU 73	-998	0	6370	-8.2	-40.93	0.01
359	SLU 74	-1021	0	6474	-8.42	-41.88	0.01
359	SLU 75	-1020	0	6472	-8.41	-41.83	0.01
359	SLU 76	-1009	0	6427	-8.33	-41.39	0.01
359	SLU 77	-1032	0	6532	-8.54	-42.34	0.01
359	SLU 78	-1031	0	6530	-8.54	-42.29	0.01
359	SLU 79	-1022	0	6489	-8.47	-41.93	0.01
359	SLU 80	-1021	0	6486	-8.46	-41.88	0.01
359	SLU 81	-1041	0	6639	-8.5	-42.73	0.01
359	SLU 82	-1040	0	6636	-8.5	-42.69	0.01
359	SLU 83	-1052	0	6696	-8.63	-43.2	0.01
359	SLU 84	-1051	0	6694	-8.63	-43.15	0.01
359	SLE RA 1	-673	0	4303	-5.63	-27.57	0.01
359	SLE RA 2	-672	0	4301	-5.63	-27.52	0.01
359	SLE RA 3	-687	0	4370	-5.77	-28.15	0.01
359	SLE RA 4	-687	0	4369	-5.77	-28.13	0.01
359	SLE RA 5	-680	0	4339	-5.71	-27.83	0.01
359	SLE RA 6	-695	0	4409	-5.85	-28.46	0.01
359	SLE RA 7	-694	0	4407	-5.85	-28.43	0.01
359	SLE RA 8	-688	0	4380	-5.8	-28.19	0.01
359	SLE RA 9	-688	0	4378	-5.8	-28.16	0.01
359	SLE RA 10	-737	0	4713	-6.08	-30.22	0.01
359	SLE RA 11	-752	0	4783	-6.23	-30.85	0.01
359	SLE RA 12	-752	0	4781	-6.22	-30.82	0.01
359	SLE RA 13	-745	0	4751	-6.17	-30.53	0.01
359	SLE RA 14	-760	0	4821	-6.31	-31.16	0.01
359	SLE RA 15	-759	0	4820	-6.31	-31.13	0.01
359	SLE RA 16	-753	0	4792	-6.26	-30.88	0.01
359	SLE RA 17	-753	0	4791	-6.26	-30.86	0.01
359	SLE RA 18	-766	0	4892	-6.28	-31.42	0.01
359	SLE RA 19	-765	0	4891	-6.28	-31.39	0.01
359	SLE RA 20	-773	0	4930	-6.37	-31.73	0.01
359	SLE RA 21	-773	0	4929	-6.37	-31.7	0.01
359	SLE FR 1	-673	0	4303	-5.63	-27.57	0.01
359	SLE FR 2	-673	0	4303	-5.63	-27.56	0.01
359	SLE FR 3	-676	0	4319	-5.67	-27.69	0.01
359	SLE FR 4	-701	0	4479	-5.83	-28.72	0.01
359	SLE FR 5	-704	0	4495	-5.86	-28.85	0.01
359	SLE FR 6	-720	0	4598	-5.96	-29.5	0.01
359	SLE QP 1	-673	0	4303	-5.63	-27.57	0.01
359	SLE QP 2	-701	0	4480	-5.83	-28.73	0.01
359	SLD 1	-61	-1	3931	-5.82	-0.86	0.03
359	SLD 2	-61	-1	3931	-5.82	-0.86	0.03
359	SLD 3	-206	-6	4425	-0.99	-6.76	0.01
359	SLD 4	-206	-6	4425	-0.99	-6.76	0.01
359	SLD 5	-289	7	3565	-13.15	-11.42	0.06
359	SLD 6	-289	7	3565	-13.15	-11.42	0.06
359	SLD 7	-773	-9	5214	2.95	-31.09	-0.04
359	SLD 8	-773	-9	5214	2.95	-31.09	-0.04
359	SLD 9	-630	10	3746	-14.6	-26.37	0.05
359	SLD 10	-630	10	3746	-14.6	-26.37	0.05
359	SLD 11	-1113	-7	5395	1.49	-46.04	-0.05
359	SLD 12	-1113	-7	5395	1.49	-46.04	-0.05
359	SLD 13	-1196	7	4534	-10.66	-50.69	0.01



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
359	SLD 14	-1196	7	4534	-10.66	-50.69	0.01
359	SLD 15	-1342	2	5029	-5.83	-56.59	-0.02
359	SLD 16	-1342	2	5029	-5.83	-56.59	-0.02
359	SLV 1	781	-3	3182	-5.82	35.75	0.07
359	SLV 2	781	-3	3182	-5.82	35.75	0.07
359	SLV 3	438	-15	4361	5.59	21.82	0
359	SLV 4	438	-15	4361	5.59	21.82	0
359	SLV 5	264	17	2301	-23.12	11.74	0.13
359	SLV 6	264	17	2301	-23.12	11.74	0.13
359	SLV 7	-880	-22	6234	14.89	-34.69	-0.1
359	SLV 8	-880	-22	6234	14.89	-34.69	-0.1
359	SLV 9	-522	23	2726	-26.55	-22.77	0.11
359	SLV 10	-522	23	2726	-26.55	-22.77	0.11
359	SLV 11	-1667	-17	6659	11.47	-69.19	-0.11
359	SLV 12	-1667	-17	6659	11.47	-69.19	-0.11
359	SLV 13	-1840	15	4598	-17.24	-79.27	0.01
359	SLV 14	-1840	15	4598	-17.24	-79.27	0.01
359	SLV 15	-2184	4	5778	-5.84	-93.2	-0.06
359	SLV 16	-2184	4	5778	-5.84	-93.2	-0.06
360	SLU 1	-743	14	3749	-12.02	-29.52	-0.05
360	SLU 2	-741	14	3746	-12	-29.45	-0.05
360	SLU 3	-767	15	3837	-12.45	-30.47	-0.06
360	SLU 4	-766	15	3835	-12.44	-30.43	-0.06
360	SLU 5	-754	15	3797	-12.27	-29.96	-0.06
360	SLU 6	-780	15	3888	-12.72	-30.98	-0.06
360	SLU 7	-779	15	3886	-12.71	-30.94	-0.06
360	SLU 8	-769	15	3851	-12.55	-30.53	-0.06
360	SLU 9	-768	15	3849	-12.54	-30.49	-0.06
360	SLU 10	-857	16	4310	-13.58	-34.05	-0.06
360	SLU 11	-883	17	4402	-14.03	-35.07	-0.06
360	SLU 12	-882	17	4400	-14.02	-35.03	-0.06
360	SLU 13	-870	17	4361	-13.84	-34.56	-0.06
360	SLU 14	-895	17	4452	-14.29	-35.58	-0.06
360	SLU 15	-894	17	4450	-14.28	-35.54	-0.06
360	SLU 16	-884	17	4415	-14.12	-35.13	-0.06
360	SLU 17	-883	17	4413	-14.11	-35.09	-0.06
360	SLU 18	-908	17	4556	-14.27	-36.09	-0.06
360	SLU 19	-907	17	4554	-14.26	-36.05	-0.06
360	SLU 20	-921	17	4606	-14.53	-36.6	-0.07
360	SLU 21	-920	17	4604	-14.52	-36.56	-0.07
360	SLU 22	-854	16	4259	-13.63	-33.91	-0.06
360	SLU 23	-852	16	4256	-13.61	-33.84	-0.06
360	SLU 24	-878	17	4347	-14.06	-34.86	-0.06
360	SLU 25	-877	17	4345	-14.05	-34.82	-0.06
360	SLU 26	-865	17	4306	-13.88	-34.35	-0.06
360	SLU 27	-890	17	4398	-14.33	-35.37	-0.06
360	SLU 28	-889	17	4396	-14.32	-35.33	-0.06
360	SLU 29	-879	17	4360	-14.16	-34.92	-0.06
360	SLU 30	-878	17	4358	-14.15	-34.88	-0.06
360	SLU 31	-967	18	4820	-15.19	-38.44	-0.07
360	SLU 32	-993	19	4911	-15.64	-39.46	-0.07
360	SLU 33	-992	19	4909	-15.63	-39.42	-0.07
360	SLU 34	-980	19	4870	-15.45	-38.95	-0.07
360	SLU 35	-1006	19	4962	-15.9	-39.97	-0.07
360	SLU 36	-1005	19	4960	-15.89	-39.93	-0.07
360	SLU 37	-995	19	4924	-15.73	-39.52	-0.07
360	SLU 38	-994	19	4922	-15.72	-39.48	-0.07
360	SLU 39	-1019	19	5065	-15.88	-40.49	-0.07
360	SLU 40	-1018	19	5063	-15.87	-40.44	-0.07
360	SLU 41	-1031	19	5116	-16.14	-40.99	-0.07
360	SLU 42	-1030	19	5114	-16.13	-40.95	-0.07
360	SLU 43	-928	18	4700	-15.07	-36.87	-0.07
360	SLU 44	-927	18	4696	-15.05	-36.8	-0.07
360	SLU 45	-952	18	4788	-15.51	-37.82	-0.07
360	SLU 46	-951	18	4786	-15.5	-37.78	-0.07
360	SLU 47	-939	18	4747	-15.32	-37.31	-0.07
360	SLU 48	-965	19	4838	-15.77	-38.33	-0.07
360	SLU 49	-964	19	4836	-15.76	-38.29	-0.07
360	SLU 50	-954	19	4801	-15.6	-37.88	-0.07
360	SLU 51	-953	19	4799	-15.59	-37.84	-0.07
360	SLU 52	-1042	20	5261	-16.63	-41.4	-0.08
360	SLU 53	-1068	20	5352	-17.08	-42.42	-0.08
360	SLU 54	-1067	20	5350	-17.07	-42.38	-0.08
360	SLU 55	-1055	20	5311	-16.89	-41.91	-0.08
360	SLU 56	-1080	21	5403	-17.35	-42.93	-0.08
360	SLU 57	-1079	21	5400	-17.34	-42.89	-0.08
360	SLU 58	-1069	21	5365	-17.17	-42.48	-0.08
360	SLU 59	-1068	20	5363	-17.16	-42.44	-0.08
360	SLU 60	-1093	21	5506	-17.32	-43.45	-0.08
360	SLU 61	-1092	21	5504	-17.31	-43.4	-0.08
360	SLU 62	-1106	21	5556	-17.59	-43.95	-0.08
360	SLU 63	-1105	21	5554	-17.58	-43.91	-0.08
360	SLU 64	-1039	20	5209	-16.68	-41.27	-0.08
360	SLU 65	-1037	20	5206	-16.67	-41.2	-0.08
360	SLU 66	-1063	20	5297	-17.12	-42.22	-0.08
360	SLU 67	-1062	20	5295	-17.11	-42.17	-0.08
360	SLU 68	-1050	20	5256	-16.93	-41.7	-0.08
360	SLU 69	-1075	21	5348	-17.38	-42.72	-0.08
360	SLU 70	-1074	21	5346	-17.37	-42.68	-0.08
360	SLU 71	-1064	21	5310	-17.21	-42.28	-0.08



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
360	SLU 72	-1063	21	5308	-17.2	-42.23	-0.08
360	SLU 73	-1152	22	5770	-18.24	-45.8	-0.08
360	SLU 74	-1178	22	5861	-18.69	-46.81	-0.08
360	SLU 75	-1177	22	5859	-18.68	-46.77	-0.08
360	SLU 76	-1165	22	5821	-18.5	-46.3	-0.08
360	SLU 77	-1191	23	5912	-18.96	-47.32	-0.09
360	SLU 78	-1190	23	5910	-18.95	-47.28	-0.09
360	SLU 79	-1180	22	5875	-18.79	-46.88	-0.08
360	SLU 80	-1179	22	5873	-18.78	-46.83	-0.08
360	SLU 81	-1204	23	6015	-18.93	-47.84	-0.09
360	SLU 82	-1203	23	6013	-18.92	-47.79	-0.09
360	SLU 83	-1216	23	6066	-19.2	-48.34	-0.09
360	SLU 84	-1215	23	6064	-19.19	-48.3	-0.09
360	SLE RA 1	-775	15	3895	-12.48	-30.78	-0.06
360	SLE RA 2	-774	15	3893	-12.47	-30.73	-0.06
360	SLE RA 3	-791	15	3954	-12.77	-31.41	-0.06
360	SLE RA 4	-790	15	3952	-12.76	-31.38	-0.06
360	SLE RA 5	-782	15	3926	-12.64	-31.07	-0.06
360	SLE RA 6	-799	15	3987	-12.94	-31.75	-0.06
360	SLE RA 7	-798	15	3986	-12.94	-31.72	-0.06
360	SLE RA 8	-792	15	3962	-12.83	-31.45	-0.06
360	SLE RA 9	-791	15	3961	-12.82	-31.42	-0.06
360	SLE RA 10	-851	16	4269	-13.52	-33.8	-0.06
360	SLE RA 11	-868	17	4330	-13.82	-34.48	-0.06
360	SLE RA 12	-867	17	4329	-13.81	-34.45	-0.06
360	SLE RA 13	-859	16	4303	-13.69	-34.13	-0.06
360	SLE RA 14	-876	17	4364	-13.99	-34.81	-0.06
360	SLE RA 15	-875	17	4362	-13.99	-34.79	-0.06
360	SLE RA 16	-869	17	4339	-13.88	-34.52	-0.06
360	SLE RA 17	-868	17	4337	-13.87	-34.49	-0.06
360	SLE RA 18	-885	17	4432	-13.98	-35.16	-0.06
360	SLE RA 19	-884	17	4431	-13.97	-35.13	-0.06
360	SLE RA 20	-893	17	4466	-14.15	-35.5	-0.06
360	SLE RA 21	-893	17	4465	-14.15	-35.47	-0.06
360	SLE FR 1	-775	15	3895	-12.48	-30.78	-0.06
360	SLE FR 2	-774	15	3895	-12.48	-30.77	-0.06
360	SLE FR 3	-778	15	3909	-12.55	-30.91	-0.06
360	SLE FR 4	-807	15	4056	-12.93	-32.08	-0.06
360	SLE FR 5	-811	16	4070	-13	-32.23	-0.06
360	SLE FR 6	-830	16	4164	-13.23	-32.97	-0.06
360	SLE QP 1	-775	15	3895	-12.48	-30.78	-0.06
360	SLE QP 2	-808	15	4056	-12.93	-32.09	-0.06
360	SLD 1	-142	7	3547	-4.65	-3.41	-0.02
360	SLD 2	-142	7	3547	-4.65	-3.41	-0.02
360	SLD 3	-300	14	3973	-13.7	-9.99	-0.05
360	SLD 4	-300	14	3973	-13.7	-9.99	-0.05
360	SLD 5	-368	3	3257	3.28	-13.5	-0.01
360	SLD 6	-368	3	3257	3.28	-13.5	-0.01
360	SLD 7	-895	25	4678	-26.88	-35.44	-0.09
360	SLD 8	-895	25	4678	-26.88	-35.44	-0.09
360	SLD 9	-720	6	3435	1.03	-28.74	-0.03
360	SLD 10	-720	6	3435	1.03	-28.74	-0.03
360	SLD 11	-1247	28	4855	-29.14	-50.68	-0.1
360	SLD 12	-1247	28	4855	-29.14	-50.68	-0.1
360	SLD 13	-1316	17	4139	-12.16	-54.2	-0.07
360	SLD 14	-1316	17	4139	-12.16	-54.2	-0.07
360	SLD 15	-1474	24	4565	-21.21	-60.78	-0.09
360	SLD 16	-1474	24	4565	-21.21	-60.78	-0.09
360	SLV 1	733	-4	2857	6.54	34.26	0.02
360	SLV 2	733	-4	2857	6.54	34.26	0.02
360	SLV 3	361	11	3872	-14.71	18.76	-0.03
360	SLV 4	361	11	3872	-14.71	18.76	-0.03
360	SLV 5	220	-15	2158	25.15	11.32	0.05
360	SLV 6	220	-15	2158	25.15	11.32	0.05
360	SLV 7	-1022	38	5540	-45.7	-40.34	-0.14
360	SLV 8	-1022	38	5540	-45.7	-40.34	-0.14
360	SLV 9	-593	-7	2573	19.85	-23.84	0.02
360	SLV 10	-593	-7	2573	19.85	-23.84	0.02
360	SLV 11	-1835	46	5955	-51.01	-75.51	-0.17
360	SLV 12	-1835	46	5955	-51.01	-75.51	-0.17
360	SLV 13	-1976	19	4241	-11.14	-82.94	-0.08
360	SLV 14	-1976	19	4241	-11.14	-82.94	-0.08
360	SLV 15	-2349	35	5255	-32.4	-98.44	-0.14
360	SLV 16	-2349	35	5255	-32.4	-98.44	-0.14
361	SLU 1	-799	22	3348	-17.11	-33.7	-0.13
361	SLU 2	-797	22	3345	-17.09	-33.62	-0.13
361	SLU 3	-824	23	3423	-17.73	-34.77	-0.13
361	SLU 4	-823	23	3421	-17.71	-34.72	-0.13
361	SLU 5	-810	23	3388	-17.46	-34.18	-0.13
361	SLU 6	-837	24	3467	-18.1	-35.33	-0.13
361	SLU 7	-836	24	3465	-18.09	-35.28	-0.13
361	SLU 8	-825	23	3435	-17.86	-34.81	-0.13
361	SLU 9	-824	23	3433	-17.84	-34.77	-0.13
361	SLU 10	-926	25	3850	-19.33	-39.1	-0.14
361	SLU 11	-953	26	3929	-19.98	-40.25	-0.15
361	SLU 12	-952	26	3927	-19.96	-40.2	-0.15
361	SLU 13	-939	26	3894	-19.71	-39.66	-0.15
361	SLU 14	-966	27	3972	-20.35	-40.81	-0.15
361	SLU 15	-965	27	3971	-20.33	-40.76	-0.15
361	SLU 16	-954	26	3941	-20.11	-40.29	-0.15



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
361	SLU 17	-953	26	3939	-20.09	-40.25	-0.15
361	SLU 18	-983	27	4070	-20.32	-41.53	-0.15
361	SLU 19	-982	27	4068	-20.31	-41.48	-0.15
361	SLU 20	-996	27	4114	-20.7	-42.08	-0.15
361	SLU 21	-995	27	4112	-20.68	-42.04	-0.15
361	SLU 22	-920	25	3800	-19.41	-38.85	-0.14
361	SLU 23	-918	25	3797	-19.38	-38.78	-0.14
361	SLU 24	-946	26	3875	-20.02	-39.93	-0.15
361	SLU 25	-945	26	3873	-20.01	-39.88	-0.15
361	SLU 26	-932	26	3841	-19.76	-39.34	-0.15
361	SLU 27	-959	27	3919	-20.4	-40.49	-0.15
361	SLU 28	-958	27	3917	-20.38	-40.44	-0.15
361	SLU 29	-947	26	3887	-20.16	-39.97	-0.15
361	SLU 30	-946	26	3885	-20.14	-39.93	-0.15
361	SLU 31	-1047	28	4303	-21.63	-44.26	-0.16
361	SLU 32	-1074	29	4381	-22.27	-45.41	-0.17
361	SLU 33	-1073	29	4379	-22.26	-45.36	-0.17
361	SLU 34	-1061	29	4346	-22	-44.82	-0.16
361	SLU 35	-1088	30	4425	-22.65	-45.97	-0.17
361	SLU 36	-1087	30	4423	-22.63	-45.92	-0.17
361	SLU 37	-1076	29	4393	-22.4	-45.45	-0.17
361	SLU 38	-1075	29	4391	-22.39	-45.41	-0.17
361	SLU 39	-1104	30	4523	-22.62	-46.68	-0.17
361	SLU 40	-1103	30	4521	-22.6	-46.64	-0.17
361	SLU 41	-1117	30	4566	-22.99	-47.24	-0.17
361	SLU 42	-1116	30	4564	-22.98	-47.2	-0.17
361	SLU 43	-997	28	4197	-21.46	-42.04	-0.16
361	SLU 44	-995	28	4194	-21.43	-41.96	-0.16
361	SLU 45	-1022	29	4272	-22.07	-43.11	-0.16
361	SLU 46	-1021	29	4270	-22.06	-43.06	-0.16
361	SLU 47	-1008	28	4238	-21.81	-42.52	-0.16
361	SLU 48	-1035	29	4316	-22.45	-43.67	-0.17
361	SLU 49	-1034	29	4314	-22.43	-43.62	-0.17
361	SLU 50	-1023	29	4284	-22.2	-43.15	-0.16
361	SLU 51	-1022	29	4282	-22.19	-43.11	-0.16
361	SLU 52	-1124	31	4700	-23.68	-47.44	-0.18
361	SLU 53	-1151	32	4778	-24.32	-48.59	-0.18
361	SLU 54	-1150	32	4776	-24.31	-48.55	-0.18
361	SLU 55	-1137	31	4743	-24.05	-48	-0.18
361	SLU 56	-1164	32	4822	-24.69	-49.15	-0.18
361	SLU 57	-1163	32	4820	-24.68	-49.1	-0.18
361	SLU 58	-1152	32	4790	-24.45	-48.63	-0.18
361	SLU 59	-1151	32	4788	-24.44	-48.59	-0.18
361	SLU 60	-1181	32	4920	-24.67	-49.87	-0.18
361	SLU 61	-1180	32	4918	-24.65	-49.82	-0.18
361	SLU 62	-1194	33	4963	-25.04	-50.42	-0.19
361	SLU 63	-1193	33	4961	-25.03	-50.38	-0.19
361	SLU 64	-1118	31	4649	-23.75	-47.19	-0.18
361	SLU 65	-1116	31	4646	-23.73	-47.12	-0.18
361	SLU 66	-1143	32	4725	-24.37	-48.27	-0.18
361	SLU 67	-1142	32	4723	-24.36	-48.22	-0.18
361	SLU 68	-1130	31	4690	-24.1	-47.68	-0.18
361	SLU 69	-1157	32	4768	-24.74	-48.83	-0.18
361	SLU 70	-1156	32	4766	-24.73	-48.78	-0.18
361	SLU 71	-1145	32	4737	-24.5	-48.31	-0.18
361	SLU 72	-1144	32	4735	-24.49	-48.27	-0.18
361	SLU 73	-1245	34	5152	-25.98	-52.6	-0.19
361	SLU 74	-1272	35	5230	-26.62	-53.75	-0.2
361	SLU 75	-1271	35	5228	-26.6	-53.7	-0.2
361	SLU 76	-1258	34	5196	-26.35	-53.16	-0.2
361	SLU 77	-1286	35	5274	-26.99	-54.31	-0.2
361	SLU 78	-1285	35	5272	-26.98	-54.26	-0.2
361	SLU 79	-1274	35	5242	-26.75	-53.79	-0.2
361	SLU 80	-1273	35	5240	-26.73	-53.75	-0.2
361	SLU 81	-1302	35	5372	-26.96	-55.02	-0.2
361	SLU 82	-1301	35	5370	-26.95	-54.98	-0.2
361	SLU 83	-1315	36	5416	-27.34	-55.58	-0.2
361	SLU 84	-1314	36	5414	-27.32	-55.54	-0.2
361	SLE RA 1	-833	23	3477	-17.77	-35.17	-0.13
361	SLE RA 2	-832	23	3475	-17.75	-35.12	-0.13
361	SLE RA 3	-850	24	3527	-18.18	-35.89	-0.13
361	SLE RA 4	-850	24	3526	-18.17	-35.85	-0.13
361	SLE RA 5	-841	24	3504	-18	-35.49	-0.13
361	SLE RA 6	-859	24	3556	-18.43	-36.26	-0.14
361	SLE RA 7	-859	24	3555	-18.42	-36.23	-0.14
361	SLE RA 8	-851	24	3535	-18.27	-35.91	-0.13
361	SLE RA 9	-850	24	3534	-18.26	-35.88	-0.13
361	SLE RA 10	-918	25	3812	-19.25	-38.77	-0.14
361	SLE RA 11	-936	26	3864	-19.68	-39.54	-0.15
361	SLE RA 12	-935	26	3863	-19.67	-39.51	-0.15
361	SLE RA 13	-927	26	3841	-19.5	-39.14	-0.14
361	SLE RA 14	-945	26	3893	-19.93	-39.91	-0.15
361	SLE RA 15	-944	26	3892	-19.92	-39.88	-0.15
361	SLE RA 16	-937	26	3872	-19.76	-39.57	-0.15
361	SLE RA 17	-936	26	3871	-19.75	-39.54	-0.15
361	SLE RA 18	-956	26	3959	-19.91	-40.39	-0.15
361	SLE RA 19	-955	26	3957	-19.9	-40.36	-0.15
361	SLE RA 20	-965	26	3988	-20.16	-40.76	-0.15
361	SLE RA 21	-964	26	3987	-20.15	-40.73	-0.15
361	SLE FR 1	-833	23	3477	-17.77	-35.17	-0.13



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
361	SLE FR 2	-833	23	3477	-17.76	-35.16	-0.13
361	SLE FR 3	-837	23	3489	-17.87	-35.32	-0.13
361	SLE FR 4	-870	24	3621	-18.41	-36.73	-0.14
361	SLE FR 5	-874	24	3633	-18.51	-36.88	-0.14
361	SLE FR 6	-895	25	3718	-18.84	-37.78	-0.14
361	SLE QP 1	-833	23	3477	-17.77	-35.17	-0.13
361	SLE QP 2	-870	24	3622	-18.41	-36.74	-0.14
361	SLD 1	-177	11	3154	-6.66	-6.38	-0.07
361	SLD 2	-177	11	3154	-6.66	-6.38	-0.07
361	SLD 3	-335	24	3539	-20.17	-12.88	-0.13
361	SLD 4	-335	24	3539	-20.17	-12.88	-0.13
361	SLD 5	-424	1	2897	5.59	-17.77	-0.03
361	SLD 6	-424	1	2897	5.59	-17.77	-0.03
361	SLD 7	-948	43	4182	-39.42	-39.43	-0.22
361	SLD 8	-948	43	4182	-39.42	-39.43	-0.22
361	SLD 9	-792	5	3061	2.6	-34.04	-0.05
361	SLD 10	-792	5	3061	2.6	-34.04	-0.05
361	SLD 11	-1316	47	4347	-42.41	-55.7	-0.25
361	SLD 12	-1316	47	4347	-42.41	-55.7	-0.25
361	SLD 13	-1406	24	3704	-16.65	-60.6	-0.14
361	SLD 14	-1406	24	3704	-16.65	-60.6	-0.14
361	SLD 15	-1563	37	4089	-30.15	-67.09	-0.2
361	SLD 16	-1563	37	4089	-30.15	-67.09	-0.2
361	SLV 1	733	-6	2523	9.18	33.51	0.02
361	SLV 2	733	-6	2523	9.18	33.51	0.02
361	SLV 3	363	24	3438	-22.5	18.21	-0.12
361	SLV 4	363	24	3438	-22.5	18.21	-0.12
361	SLV 5	172	-30	1904	37.91	7.54	0.12
361	SLV 6	172	-30	1904	37.91	7.54	0.12
361	SLV 7	-1062	69	4954	-67.68	-43.45	-0.34
361	SLV 8	-1062	69	4954	-67.68	-43.45	-0.34
361	SLV 9	-678	-21	2289	30.86	-30.02	0.07
361	SLV 10	-678	-21	2289	30.86	-30.02	0.07
361	SLV 11	-1913	79	5339	-74.73	-81.01	-0.39
361	SLV 12	-1913	79	5339	-74.73	-81.01	-0.39
361	SLV 13	-2103	24	3805	-14.32	-91.68	-0.15
361	SLV 14	-2103	24	3805	-14.32	-91.68	-0.15
361	SLV 15	-2473	54	4720	-45.99	-106.98	-0.29
361	SLV 16	-2473	54	4720	-45.99	-106.98	-0.29
362	SLU 1	-754	25	2994	-20.49	-30.8	-0.18
362	SLU 2	-752	25	2991	-20.46	-30.73	-0.18
362	SLU 3	-777	26	3058	-21.23	-31.76	-0.19
362	SLU 4	-776	26	3056	-21.21	-31.72	-0.19
362	SLU 5	-764	26	3028	-20.91	-31.24	-0.18
362	SLU 6	-790	27	3095	-21.68	-32.26	-0.19
362	SLU 7	-789	27	3093	-21.66	-32.22	-0.19
362	SLU 8	-778	26	3069	-21.39	-31.81	-0.19
362	SLU 9	-777	26	3067	-21.37	-31.77	-0.19
362	SLU 10	-877	29	3443	-23.14	-35.84	-0.2
362	SLU 11	-902	30	3510	-23.91	-36.86	-0.21
362	SLU 12	-901	30	3508	-23.89	-36.82	-0.21
362	SLU 13	-889	29	3481	-23.59	-36.34	-0.21
362	SLU 14	-914	30	3548	-24.36	-37.37	-0.21
362	SLU 15	-913	30	3546	-24.34	-37.33	-0.21
362	SLU 16	-903	30	3521	-24.07	-36.92	-0.21
362	SLU 17	-902	30	3520	-24.05	-36.88	-0.21
362	SLU 18	-932	30	3640	-24.32	-38.09	-0.22
362	SLU 19	-931	30	3638	-24.3	-38.05	-0.21
362	SLU 20	-944	31	3678	-24.77	-38.6	-0.22
362	SLU 21	-943	31	3676	-24.75	-38.56	-0.22
362	SLU 22	-870	29	3394	-23.23	-35.57	-0.21
362	SLU 23	-869	29	3391	-23.2	-35.5	-0.2
362	SLU 24	-894	30	3458	-23.97	-36.53	-0.21
362	SLU 25	-893	30	3456	-23.95	-36.49	-0.21
362	SLU 26	-881	29	3429	-23.65	-36.01	-0.21
362	SLU 27	-906	30	3496	-24.42	-37.03	-0.22
362	SLU 28	-905	30	3494	-24.4	-36.99	-0.22
362	SLU 29	-895	30	3469	-24.14	-36.58	-0.21
362	SLU 30	-894	30	3468	-24.12	-36.54	-0.21
362	SLU 31	-993	32	3844	-25.88	-40.61	-0.23
362	SLU 32	-1018	33	3911	-26.65	-41.63	-0.24
362	SLU 33	-1017	33	3909	-26.63	-41.59	-0.24
362	SLU 34	-1006	33	3881	-26.33	-41.11	-0.23
362	SLU 35	-1031	34	3948	-27.1	-42.14	-0.24
362	SLU 36	-1030	34	3947	-27.08	-42.1	-0.24
362	SLU 37	-1019	33	3922	-26.81	-41.68	-0.24
362	SLU 38	-1018	33	3920	-26.79	-41.64	-0.24
362	SLU 39	-1048	34	4041	-27.06	-42.86	-0.24
362	SLU 40	-1047	34	4039	-27.04	-42.82	-0.24
362	SLU 41	-1060	34	4079	-27.51	-43.37	-0.24
362	SLU 42	-1060	34	4077	-27.49	-43.33	-0.24
362	SLU 43	-940	32	3754	-25.7	-38.4	-0.23
362	SLU 44	-938	32	3751	-25.66	-38.34	-0.23
362	SLU 45	-963	33	3818	-26.44	-39.36	-0.23
362	SLU 46	-962	33	3816	-26.42	-39.32	-0.23
362	SLU 47	-951	32	3789	-26.12	-38.84	-0.23
362	SLU 48	-976	33	3856	-26.89	-39.87	-0.24
362	SLU 49	-975	33	3854	-26.87	-39.83	-0.24
362	SLU 50	-964	33	3829	-26.6	-39.41	-0.23
362	SLU 51	-963	33	3828	-26.58	-39.37	-0.23



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
362	SLU 52	-1063	35	4204	-28.34	-43.44	-0.25
362	SLU 53	-1088	36	4271	-29.11	-44.47	-0.26
362	SLU 54	-1087	36	4269	-29.1	-44.43	-0.26
362	SLU 55	-1075	36	4241	-28.79	-43.95	-0.25
362	SLU 56	-1100	37	4308	-29.57	-44.97	-0.26
362	SLU 57	-1099	37	4307	-29.55	-44.94	-0.26
362	SLU 58	-1089	36	4282	-29.28	-44.52	-0.26
362	SLU 59	-1088	36	4280	-29.26	-44.48	-0.26
362	SLU 60	-1118	37	4401	-29.52	-45.7	-0.26
362	SLU 61	-1117	37	4399	-29.5	-45.66	-0.26
362	SLU 62	-1130	37	4438	-29.97	-46.2	-0.26
362	SLU 63	-1129	37	4437	-29.95	-46.16	-0.26
362	SLU 64	-1056	35	4155	-28.44	-43.17	-0.25
362	SLU 65	-1055	35	4152	-28.41	-43.11	-0.25
362	SLU 66	-1080	36	4219	-29.18	-44.13	-0.26
362	SLU 67	-1079	36	4217	-29.16	-44.09	-0.26
362	SLU 68	-1067	36	4190	-28.86	-43.61	-0.25
362	SLU 69	-1092	37	4257	-29.63	-44.64	-0.26
362	SLU 70	-1091	37	4255	-29.61	-44.6	-0.26
362	SLU 71	-1081	36	4230	-29.34	-44.18	-0.26
362	SLU 72	-1080	36	4228	-29.32	-44.14	-0.26
362	SLU 73	-1179	39	4605	-31.09	-48.21	-0.27
362	SLU 74	-1205	39	4672	-31.86	-49.24	-0.28
362	SLU 75	-1204	39	4670	-31.84	-49.2	-0.28
362	SLU 76	-1192	39	4642	-31.54	-48.72	-0.28
362	SLU 77	-1217	40	4709	-32.31	-49.74	-0.29
362	SLU 78	-1216	40	4707	-32.29	-49.7	-0.29
362	SLU 79	-1206	40	4683	-32.02	-49.29	-0.28
362	SLU 80	-1205	40	4681	-32	-49.25	-0.28
362	SLU 81	-1234	40	4802	-32.27	-50.47	-0.29
362	SLU 82	-1233	40	4800	-32.25	-50.43	-0.29
362	SLU 83	-1247	41	4839	-32.72	-50.97	-0.29
362	SLU 84	-1246	41	4837	-32.7	-50.93	-0.29
362	SLE RA 1	-787	26	3108	-21.27	-32.16	-0.19
362	SLE RA 2	-786	26	3106	-21.25	-32.12	-0.19
362	SLE RA 3	-803	27	3151	-21.77	-32.8	-0.19
362	SLE RA 4	-802	27	3150	-21.75	-32.77	-0.19
362	SLE RA 5	-794	27	3131	-21.55	-32.45	-0.19
362	SLE RA 6	-811	27	3176	-22.07	-33.14	-0.19
362	SLE RA 7	-810	27	3175	-22.05	-33.11	-0.19
362	SLE RA 8	-803	27	3158	-21.88	-32.83	-0.19
362	SLE RA 9	-803	27	3157	-21.86	-32.81	-0.19
362	SLE RA 10	-869	29	3408	-23.04	-35.52	-0.2
362	SLE RA 11	-886	29	3453	-23.55	-36.2	-0.21
362	SLE RA 12	-885	29	3451	-23.54	-36.18	-0.21
362	SLE RA 13	-877	29	3433	-23.34	-35.86	-0.21
362	SLE RA 14	-894	30	3478	-23.85	-36.54	-0.21
362	SLE RA 15	-893	30	3476	-23.84	-36.52	-0.21
362	SLE RA 16	-886	29	3460	-23.66	-36.24	-0.21
362	SLE RA 17	-886	29	3459	-23.65	-36.21	-0.21
362	SLE RA 18	-906	30	3539	-23.82	-37.02	-0.21
362	SLE RA 19	-905	30	3538	-23.81	-37	-0.21
362	SLE RA 20	-914	30	3564	-24.13	-37.36	-0.21
362	SLE RA 21	-913	30	3563	-24.11	-37.33	-0.21
362	SLE FR 1	-787	26	3108	-21.27	-32.16	-0.19
362	SLE FR 2	-787	26	3108	-21.27	-32.15	-0.19
362	SLE FR 3	-790	26	3118	-21.39	-32.3	-0.19
362	SLE FR 4	-822	27	3237	-22.03	-33.61	-0.19
362	SLE FR 5	-826	27	3247	-22.16	-33.75	-0.2
362	SLE FR 6	-846	28	3324	-22.55	-34.59	-0.2
362	SLE QP 1	-787	26	3108	-21.27	-32.16	-0.19
362	SLE QP 2	-823	27	3237	-22.04	-33.62	-0.19
362	SLD 1	-129	11	2814	-7.47	-3.42	-0.09
362	SLD 2	-129	11	2814	-7.47	-3.42	-0.09
362	SLD 3	-278	29	3178	-24.72	-9.87	-0.2
362	SLD 4	-278	29	3178	-24.72	-9.87	-0.2
362	SLD 5	-389	-5	2558	8.5	-14.79	0.01
362	SLD 6	-389	-5	2558	8.5	-14.79	0.01
362	SLD 7	-885	55	3772	-49.01	-36.27	-0.37
362	SLD 8	-885	55	3772	-49.01	-36.27	-0.37
362	SLD 9	-760	-1	2703	4.93	-30.97	-0.02
362	SLD 10	-760	-1	2703	4.93	-30.97	-0.02
362	SLD 11	-1256	60	3917	-52.58	-52.45	-0.4
362	SLD 12	-1256	60	3917	-52.58	-52.45	-0.4
362	SLD 13	-1367	26	3297	-19.35	-57.37	-0.19
362	SLD 14	-1367	26	3297	-19.35	-57.37	-0.19
362	SLD 15	-1516	44	3661	-36.61	-63.82	-0.3
362	SLD 16	-1516	44	3661	-36.61	-63.82	-0.3
362	SLV 1	780	-11	2243	12.16	36.18	0.05
362	SLV 2	780	-11	2243	12.16	36.18	0.05
362	SLV 3	431	31	3104	-28.29	21.07	-0.21
362	SLV 4	431	31	3104	-28.29	21.07	-0.21
362	SLV 5	189	-48	1633	49.57	10.24	0.28
362	SLV 6	189	-48	1633	49.57	10.24	0.28
362	SLV 7	-977	92	4504	-85.26	-40.13	-0.6
362	SLV 8	-977	92	4504	-85.26	-40.13	-0.6
362	SLV 9	-668	-38	1971	41.19	-27.11	0.21
362	SLV 10	-668	-38	1971	41.19	-27.11	0.21
362	SLV 11	-1834	103	4842	-93.65	-77.48	-0.67
362	SLV 12	-1834	103	4842	-93.65	-77.48	-0.67



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione		
		x	y	z		x	y	z
362	SLV 13	-2076	24	3370		-15.78	-88.31	-0.18
362	SLV 14	-2076	24	3370		-15.78	-88.31	-0.18
362	SLV 15	-2426	66	4232		-56.23	-103.42	-0.44
362	SLV 16	-2426	66	4232		-56.23	-103.42	-0.44
363	SLU 1	-689	26	2735		-22.87	-30.17	-0.2
363	SLU 2	-688	26	2732		-22.83	-30.1	-0.2
363	SLU 3	-711	27	2791		-23.7	-31.1	-0.21
363	SLU 4	-710	27	2789		-23.68	-31.06	-0.21
363	SLU 5	-699	27	2765		-23.34	-30.57	-0.21
363	SLU 6	-721	28	2824		-24.21	-31.57	-0.21
363	SLU 7	-721	28	2822		-24.19	-31.53	-0.21
363	SLU 8	-711	27	2802		-23.89	-31.11	-0.21
363	SLU 9	-710	27	2800		-23.87	-31.06	-0.21
363	SLU 10	-805	30	3147		-25.81	-35.26	-0.23
363	SLU 11	-828	31	3205		-26.68	-36.26	-0.23
363	SLU 12	-827	31	3203		-26.66	-36.22	-0.23
363	SLU 13	-816	30	3180		-26.32	-35.73	-0.23
363	SLU 14	-839	31	3238		-27.19	-36.73	-0.24
363	SLU 15	-838	31	3237		-27.17	-36.69	-0.24
363	SLU 16	-828	31	3216		-26.87	-36.26	-0.24
363	SLU 17	-827	31	3214		-26.85	-36.22	-0.24
363	SLU 18	-857	31	3327		-27.13	-37.54	-0.24
363	SLU 19	-856	31	3325		-27.1	-37.5	-0.24
363	SLU 20	-867	32	3360		-27.64	-38.01	-0.24
363	SLU 21	-866	32	3359		-27.61	-37.97	-0.24
363	SLU 22	-798	30	3099		-25.93	-34.93	-0.23
363	SLU 23	-796	30	3096		-25.89	-34.87	-0.23
363	SLU 24	-819	31	3154		-26.76	-35.87	-0.24
363	SLU 25	-818	31	3152		-26.73	-35.83	-0.24
363	SLU 26	-807	30	3129		-26.4	-35.33	-0.23
363	SLU 27	-830	31	3187		-27.27	-36.34	-0.24
363	SLU 28	-829	31	3186		-27.24	-36.3	-0.24
363	SLU 29	-819	31	3165		-26.95	-35.87	-0.24
363	SLU 30	-819	31	3163		-26.92	-35.83	-0.24
363	SLU 31	-913	33	3510		-28.87	-40.02	-0.25
363	SLU 32	-936	34	3569		-29.74	-41.03	-0.26
363	SLU 33	-935	34	3567		-29.71	-40.99	-0.26
363	SLU 34	-924	34	3543		-29.38	-40.49	-0.26
363	SLU 35	-947	35	3602		-30.24	-41.5	-0.27
363	SLU 36	-946	35	3600		-30.22	-41.46	-0.27
363	SLU 37	-936	34	3579		-29.93	-41.03	-0.26
363	SLU 38	-936	34	3577		-29.9	-40.99	-0.26
363	SLU 39	-965	35	3691		-30.18	-42.3	-0.27
363	SLU 40	-964	35	3689		-30.16	-42.26	-0.27
363	SLU 41	-976	35	3724		-30.69	-42.77	-0.27
363	SLU 42	-975	35	3722		-30.67	-42.73	-0.27
363	SLU 43	-859	33	3431		-28.69	-37.58	-0.25
363	SLU 44	-857	33	3428		-28.65	-37.51	-0.25
363	SLU 45	-880	34	3487		-29.52	-38.52	-0.26
363	SLU 46	-879	34	3485		-29.49	-38.48	-0.26
363	SLU 47	-868	34	3462		-29.16	-37.98	-0.26
363	SLU 48	-891	35	3520		-30.02	-38.99	-0.26
363	SLU 49	-890	35	3518		-30	-38.94	-0.26
363	SLU 50	-881	34	3498		-29.71	-38.52	-0.26
363	SLU 51	-880	34	3496		-29.68	-38.48	-0.26
363	SLU 52	-975	36	3843		-31.63	-42.67	-0.28
363	SLU 53	-997	37	3901		-32.49	-43.68	-0.29
363	SLU 54	-996	37	3899		-32.47	-43.63	-0.29
363	SLU 55	-985	37	3876		-32.14	-43.14	-0.28
363	SLU 56	-1008	38	3934		-33	-44.14	-0.29
363	SLU 57	-1007	38	3933		-32.98	-44.1	-0.29
363	SLU 58	-998	38	3912		-32.69	-43.68	-0.29
363	SLU 59	-997	38	3910		-32.66	-43.64	-0.29
363	SLU 60	-1026	38	4023		-32.94	-44.95	-0.29
363	SLU 61	-1025	38	4021		-32.92	-44.91	-0.29
363	SLU 62	-1037	39	4056		-33.45	-45.42	-0.29
363	SLU 63	-1036	39	4055		-33.43	-45.38	-0.29
363	SLU 64	-967	37	3795		-31.74	-42.35	-0.28
363	SLU 65	-966	37	3792		-31.7	-42.28	-0.28
363	SLU 66	-989	38	3850		-32.57	-43.28	-0.29
363	SLU 67	-988	37	3848		-32.55	-43.24	-0.29
363	SLU 68	-977	37	3825		-32.21	-42.75	-0.28
363	SLU 69	-1000	38	3883		-33.08	-43.75	-0.29
363	SLU 70	-999	38	3882		-33.06	-43.71	-0.29
363	SLU 71	-989	38	3861		-32.76	-43.29	-0.29
363	SLU 72	-988	38	3859		-32.74	-43.25	-0.29
363	SLU 73	-1083	40	4206		-34.68	-47.44	-0.31
363	SLU 74	-1106	41	4265		-35.55	-48.44	-0.31
363	SLU 75	-1105	41	4263		-35.53	-48.4	-0.31
363	SLU 76	-1094	41	4239		-35.19	-47.91	-0.31
363	SLU 77	-1117	42	4298		-36.06	-48.91	-0.32
363	SLU 78	-1116	41	4296		-36.04	-48.87	-0.32
363	SLU 79	-1106	41	4275		-35.74	-48.45	-0.31
363	SLU 80	-1105	41	4274		-35.72	-48.41	-0.31
363	SLU 81	-1135	41	4387		-36	-49.72	-0.32
363	SLU 82	-1134	41	4385		-35.97	-49.68	-0.32
363	SLU 83	-1145	42	4420		-36.51	-50.19	-0.32
363	SLU 84	-1145	42	4418		-36.48	-50.15	-0.32
363	SLE RA 1	-720	27	2839		-23.75	-31.53	-0.21
363	SLE RA 2	-719	27	2837		-23.72	-31.48	-0.21



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
363	SLE RA 3	-734	28	2876	-24.3	-32.15	-0.21
363	SLE RA 4	-734	28	2875	-24.28	-32.12	-0.21
363	SLE RA 5	-727	28	2859	-24.06	-31.8	-0.21
363	SLE RA 6	-742	28	2898	-24.64	-32.46	-0.22
363	SLE RA 7	-741	28	2897	-24.62	-32.44	-0.22
363	SLE RA 8	-735	28	2883	-24.42	-32.15	-0.21
363	SLE RA 9	-734	28	2882	-24.41	-32.13	-0.21
363	SLE RA 10	-797	30	3113	-25.71	-34.92	-0.23
363	SLE RA 11	-813	30	3152	-26.28	-35.59	-0.23
363	SLE RA 12	-812	30	3151	-26.27	-35.56	-0.23
363	SLE RA 13	-805	30	3135	-26.04	-35.24	-0.23
363	SLE RA 14	-820	31	3175	-26.62	-35.9	-0.23
363	SLE RA 15	-819	31	3173	-26.61	-35.88	-0.23
363	SLE RA 16	-813	30	3160	-26.41	-35.59	-0.23
363	SLE RA 17	-812	30	3158	-26.4	-35.57	-0.23
363	SLE RA 18	-832	31	3234	-26.58	-36.44	-0.23
363	SLE RA 19	-831	31	3233	-26.57	-36.42	-0.23
363	SLE RA 20	-839	31	3256	-26.92	-36.76	-0.24
363	SLE RA 21	-838	31	3255	-26.91	-36.73	-0.24
363	SLE FR 1	-720	27	2839	-23.75	-31.53	-0.21
363	SLE FR 2	-720	27	2839	-23.74	-31.52	-0.21
363	SLE FR 3	-723	28	2848	-23.88	-31.65	-0.21
363	SLE FR 4	-754	28	2957	-24.59	-32.99	-0.22
363	SLE FR 5	-757	28	2966	-24.73	-33.13	-0.22
363	SLE FR 6	-776	29	3036	-25.16	-33.99	-0.22
363	SLE QP 1	-720	27	2839	-23.75	-31.53	-0.21
363	SLE QP 2	-754	28	2958	-24.6	-33	-0.22
363	SLD 1	-87	10	2571	-8.2	-3.47	-0.08
363	SLD 2	-87	10	2571	-8.2	-3.47	-0.08
363	SLD 3	-217	31	2912	-27.94	-9.08	-0.23
363	SLD 4	-217	31	2912	-27.94	-9.08	-0.23
363	SLD 5	-356	-10	2325	10.26	-15.63	0.05
363	SLD 6	-356	-10	2325	10.26	-15.63	0.05
363	SLD 7	-791	62	3461	-55.54	-34.34	-0.45
363	SLD 8	-791	62	3461	-55.54	-34.34	-0.45
363	SLD 9	-717	-5	2454	6.34	-31.67	0.02
363	SLD 10	-717	-5	2454	6.34	-31.67	0.02
363	SLD 11	-1152	67	3590	-59.45	-50.38	-0.48
363	SLD 12	-1152	67	3590	-59.45	-50.38	-0.48
363	SLD 13	-1290	26	3003	-21.25	-56.93	-0.2
363	SLD 14	-1290	26	3003	-21.25	-56.93	-0.2
363	SLD 15	-1421	47	3344	-40.99	-62.54	-0.35
363	SLD 16	-1421	47	3344	-40.99	-62.54	-0.35
363	SLV 1	789	-16	2053	13.87	35.3	0.09
363	SLV 2	789	-16	2053	13.87	35.3	0.09
363	SLV 3	482	35	2857	-32.4	22.13	-0.26
363	SLV 4	482	35	2857	-32.4	22.13	-0.26
363	SLV 5	173	-62	1467	57.11	7.45	0.41
363	SLV 6	173	-62	1467	57.11	7.45	0.41
363	SLV 7	-847	107	4146	-97.11	-36.43	-0.76
363	SLV 8	-847	107	4146	-97.11	-36.43	-0.76
363	SLV 9	-660	-50	1769	47.91	-29.58	0.33
363	SLV 10	-660	-50	1769	47.91	-29.58	0.33
363	SLV 11	-1681	118	4448	-106.31	-73.46	-0.84
363	SLV 12	-1681	118	4448	-106.31	-73.46	-0.84
363	SLV 13	-1990	22	3058	-16.8	-88.14	-0.17
363	SLV 14	-1990	22	3058	-16.8	-88.14	-0.17
363	SLV 15	-2296	72	3862	-63.06	-101.3	-0.53
363	SLV 16	-2296	72	3862	-63.06	-101.3	-0.53
364	SLU 1	-587	28	2602	-25.1	-24.98	-0.22
364	SLU 2	-586	28	2599	-25.05	-24.92	-0.22
364	SLU 3	-605	29	2653	-26.01	-25.72	-0.22
364	SLU 4	-604	29	2651	-25.98	-25.69	-0.22
364	SLU 5	-595	28	2630	-25.61	-25.31	-0.22
364	SLU 6	-614	29	2684	-26.57	-26.11	-0.23
364	SLU 7	-613	29	2682	-26.54	-26.07	-0.23
364	SLU 8	-605	29	2664	-26.22	-25.76	-0.23
364	SLU 9	-605	29	2662	-26.19	-25.72	-0.23
364	SLU 10	-688	31	2995	-28.32	-29.3	-0.24
364	SLU 11	-707	32	3050	-29.28	-30.09	-0.25
364	SLU 12	-706	32	3048	-29.25	-30.06	-0.25
364	SLU 13	-697	32	3026	-28.89	-29.69	-0.25
364	SLU 14	-716	33	3080	-29.85	-30.48	-0.26
364	SLU 15	-715	33	3078	-29.82	-30.45	-0.26
364	SLU 16	-708	33	3060	-29.5	-30.13	-0.25
364	SLU 17	-707	33	3058	-29.47	-30.1	-0.25
364	SLU 18	-733	33	3169	-29.78	-31.23	-0.26
364	SLU 19	-733	33	3167	-29.75	-31.19	-0.26
364	SLU 20	-742	33	3199	-30.34	-31.62	-0.26
364	SLU 21	-742	33	3197	-30.31	-31.58	-0.26
364	SLU 22	-681	31	2947	-28.45	-28.97	-0.25
364	SLU 23	-680	31	2944	-28.4	-28.92	-0.24
364	SLU 24	-699	32	2998	-29.36	-29.71	-0.25
364	SLU 25	-698	32	2996	-29.33	-29.68	-0.25
364	SLU 26	-689	32	2975	-28.97	-29.31	-0.25
364	SLU 27	-708	33	3029	-29.93	-30.1	-0.26
364	SLU 28	-707	33	3027	-29.9	-30.07	-0.26
364	SLU 29	-699	33	3009	-29.58	-29.75	-0.25
364	SLU 30	-698	33	3007	-29.55	-29.72	-0.25
364	SLU 31	-782	35	3340	-31.68	-33.29	-0.27



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
		Ind.	N.br.	x	y	z	x	y	z
364	SLU 32			-801	36	3395	-32.64	-34.08	-0.28
364	SLU 33			-800	36	3393	-32.61	-34.05	-0.28
364	SLU 34			-791	36	3371	-32.24	-33.68	-0.28
364	SLU 35			-810	37	3425	-33.2	-34.47	-0.29
364	SLU 36			-809	37	3424	-33.17	-34.44	-0.29
364	SLU 37			-801	36	3405	-32.86	-34.12	-0.28
364	SLU 38			-801	36	3403	-32.83	-34.09	-0.28
364	SLU 39			-827	37	3514	-33.13	-35.22	-0.29
364	SLU 40			-826	37	3512	-33.1	-35.19	-0.29
364	SLU 41			-836	37	3544	-33.7	-35.61	-0.29
364	SLU 42			-835	37	3543	-33.67	-35.58	-0.29
364	SLU 43			-731	35	3264	-31.48	-31.1	-0.27
364	SLU 44			-730	35	3261	-31.43	-31.05	-0.27
364	SLU 45			-749	36	3315	-32.38	-31.84	-0.28
364	SLU 46			-748	36	3313	-32.35	-31.81	-0.28
364	SLU 47			-739	35	3292	-31.99	-31.44	-0.28
364	SLU 48			-758	36	3346	-32.95	-32.23	-0.28
364	SLU 49			-757	36	3344	-32.92	-32.2	-0.28
364	SLU 50			-749	36	3326	-32.6	-31.88	-0.28
364	SLU 51			-749	36	3324	-32.57	-31.85	-0.28
364	SLU 52			-832	38	3658	-34.7	-35.42	-0.3
364	SLU 53			-851	39	3712	-35.66	-36.22	-0.31
364	SLU 54			-851	39	3710	-35.63	-36.18	-0.31
364	SLU 55			-841	39	3688	-35.26	-35.81	-0.3
364	SLU 56			-860	40	3743	-36.22	-36.61	-0.31
364	SLU 57			-860	40	3741	-36.19	-36.57	-0.31
364	SLU 58			-852	40	3722	-35.88	-36.25	-0.31
364	SLU 59			-851	40	3720	-35.85	-36.22	-0.31
364	SLU 60			-878	40	3831	-36.15	-37.35	-0.31
364	SLU 61			-877	40	3829	-36.12	-37.32	-0.31
364	SLU 62			-887	41	3862	-36.72	-37.74	-0.32
364	SLU 63			-886	40	3860	-36.69	-37.71	-0.32
364	SLU 64			-825	38	3609	-34.83	-35.1	-0.3
364	SLU 65			-824	38	3606	-34.78	-35.04	-0.3
364	SLU 66			-843	39	3660	-35.74	-35.84	-0.31
364	SLU 67			-842	39	3658	-35.71	-35.8	-0.31
364	SLU 68			-833	39	3637	-35.35	-35.43	-0.3
364	SLU 69			-852	40	3691	-36.3	-36.22	-0.31
364	SLU 70			-851	40	3689	-36.27	-36.19	-0.31
364	SLU 71			-843	40	3671	-35.96	-35.87	-0.31
364	SLU 72			-842	40	3669	-35.93	-35.84	-0.31
364	SLU 73			-926	42	4003	-38.06	-39.42	-0.33
364	SLU 74			-945	43	4057	-39.02	-40.21	-0.34
364	SLU 75			-944	43	4055	-38.99	-40.18	-0.34
364	SLU 76			-935	43	4034	-38.62	-39.8	-0.33
364	SLU 77			-954	44	4088	-39.58	-40.6	-0.34
364	SLU 78			-953	44	4086	-39.55	-40.57	-0.34
364	SLU 79			-945	43	4068	-39.24	-40.25	-0.34
364	SLU 80			-945	43	4066	-39.21	-40.21	-0.34
364	SLU 81			-971	44	4176	-39.51	-41.34	-0.34
364	SLU 82			-970	44	4174	-39.48	-41.31	-0.34
364	SLU 83			-980	44	4207	-40.08	-41.73	-0.35
364	SLU 84			-979	44	4205	-40.05	-41.7	-0.35
364	SLE RA 1			-614	29	2701	-26.06	-26.12	-0.22
364	SLE RA 2			-613	29	2698	-26.02	-26.08	-0.22
364	SLE RA 3			-626	29	2735	-26.66	-26.61	-0.23
364	SLE RA 4			-625	29	2733	-26.64	-26.59	-0.23
364	SLE RA 5			-619	29	2719	-26.4	-26.34	-0.23
364	SLE RA 6			-632	30	2755	-27.04	-26.87	-0.23
364	SLE RA 7			-631	30	2754	-27.02	-26.85	-0.23
364	SLE RA 8			-626	30	2742	-26.81	-26.64	-0.23
364	SLE RA 9			-626	30	2740	-26.79	-26.62	-0.23
364	SLE RA 10			-681	31	2963	-28.21	-29	-0.24
364	SLE RA 11			-694	32	2999	-28.85	-29.53	-0.25
364	SLE RA 12			-694	32	2998	-28.83	-29.51	-0.25
364	SLE RA 13			-687	32	2983	-28.58	-29.26	-0.25
364	SLE RA 14			-700	32	3020	-29.22	-29.79	-0.25
364	SLE RA 15			-700	32	3018	-29.2	-29.77	-0.25
364	SLE RA 16			-694	32	3006	-28.99	-29.55	-0.25
364	SLE RA 17			-694	32	3005	-28.97	-29.53	-0.25
364	SLE RA 18			-712	32	3078	-29.18	-30.28	-0.25
364	SLE RA 19			-711	32	3077	-29.16	-30.26	-0.25
364	SLE RA 20			-718	33	3099	-29.55	-30.54	-0.25
364	SLE RA 21			-717	33	3098	-29.53	-30.52	-0.25
364	SLE FR 1			-614	29	2701	-26.06	-26.12	-0.22
364	SLE FR 2			-614	29	2700	-26.05	-26.11	-0.22
364	SLE FR 3			-617	29	2709	-26.21	-26.22	-0.23
364	SLE FR 4			-643	30	2813	-26.99	-27.36	-0.23
364	SLE FR 5			-646	30	2822	-27.14	-27.47	-0.23
364	SLE FR 6			-663	30	2889	-27.62	-28.2	-0.24
364	SLE QP 1			-614	29	2701	-26.06	-26.12	-0.22
364	SLE QP 2			-643	30	2814	-26.99	-27.37	-0.23
364	SLD 1			-35	10	2436	-9.93	-0.25	-0.09
364	SLD 2			-35	10	2436	-9.93	-0.25	-0.09
364	SLD 3			-150	33	2736	-30.6	-5.34	-0.26
364	SLD 4			-150	33	2736	-30.6	-5.34	-0.26
364	SLD 5			-286	-11	2244	9.48	-11.51	0.06
364	SLD 6			-286	-11	2244	9.48	-11.51	0.06
364	SLD 7			-670	66	3247	-59.42	-28.48	-0.49
364	SLD 8			-670	66	3247	-59.42	-28.48	-0.49



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
364	SLD 9	-617	-6	2381	5.44	-26.26	0.02
364	SLD 10	-617	-6	2381	5.44	-26.26	0.02
364	SLD 11	-1001	71	3384	-63.46	-43.22	-0.53
364	SLD 12	-1001	71	3384	-63.46	-43.22	-0.53
364	SLD 13	-1137	26	2891	-23.38	-49.4	-0.21
364	SLD 14	-1137	26	2891	-23.38	-49.4	-0.21
364	SLD 15	-1252	50	3192	-44.06	-54.49	-0.37
364	SLD 16	-1252	50	3192	-44.06	-54.49	-0.37
364	SLV 1	763	-16	1931	13.02	35.28	0.1
364	SLV 2	763	-16	1931	13.02	35.28	0.1
364	SLV 3	493	38	2639	-35.42	23.38	-0.29
364	SLV 4	493	38	2639	-35.42	23.38	-0.29
364	SLV 5	188	-66	1475	58.47	9.46	0.45
364	SLV 6	188	-66	1475	58.47	9.46	0.45
364	SLV 7	-712	115	3836	-102.99	-30.18	-0.84
364	SLV 8	-712	115	3836	-102.99	-30.18	-0.84
364	SLV 9	-575	-55	1792	49	-24.56	0.37
364	SLV 10	-575	-55	1792	49	-24.56	0.37
364	SLV 11	-1475	126	4153	-112.46	-64.2	-0.92
364	SLV 12	-1475	126	4153	-112.46	-64.2	-0.92
364	SLV 13	-1780	22	2989	-18.56	-78.12	-0.18
364	SLV 14	-1780	22	2989	-18.56	-78.12	-0.18
364	SLV 15	-2050	76	3697	-67	-90.01	-0.57
364	SLV 16	-2050	76	3697	-67	-90.01	-0.57
365	SLU 1	-536	30	2583	-27.66	-24.96	-0.22
365	SLU 2	-535	30	2580	-27.6	-24.9	-0.22
365	SLU 3	-552	31	2633	-28.66	-25.68	-0.22
365	SLU 4	-551	31	2631	-28.62	-25.65	-0.22
365	SLU 5	-543	31	2610	-28.22	-25.26	-0.22
365	SLU 6	-559	32	2664	-29.28	-26.03	-0.23
365	SLU 7	-559	32	2662	-29.25	-26	-0.23
365	SLU 8	-552	31	2644	-28.91	-25.67	-0.23
365	SLU 9	-551	31	2642	-28.87	-25.63	-0.23
365	SLU 10	-631	34	2978	-31.24	-29.42	-0.25
365	SLU 11	-648	35	3032	-32.3	-30.2	-0.25
365	SLU 12	-647	35	3030	-32.26	-30.16	-0.25
365	SLU 13	-639	35	3008	-31.86	-29.77	-0.25
365	SLU 14	-655	36	3062	-32.92	-30.55	-0.26
365	SLU 15	-655	36	3060	-32.88	-30.52	-0.26
365	SLU 16	-648	35	3042	-32.55	-30.19	-0.26
365	SLU 17	-647	35	3040	-32.51	-30.15	-0.25
365	SLU 18	-674	36	3152	-32.86	-31.42	-0.26
365	SLU 19	-673	36	3150	-32.82	-31.38	-0.26
365	SLU 20	-681	36	3183	-33.48	-31.77	-0.26
365	SLU 21	-681	36	3180	-33.45	-31.73	-0.26
365	SLU 22	-623	34	2928	-31.38	-29.03	-0.25
365	SLU 23	-622	34	2925	-31.32	-28.97	-0.25
365	SLU 24	-638	35	2978	-32.38	-29.75	-0.25
365	SLU 25	-638	35	2976	-32.34	-29.71	-0.25
365	SLU 26	-629	35	2955	-31.94	-29.32	-0.25
365	SLU 27	-646	36	3009	-33	-30.1	-0.26
365	SLU 28	-645	36	3006	-32.96	-30.07	-0.26
365	SLU 29	-638	36	2989	-32.63	-29.73	-0.26
365	SLU 30	-638	35	2987	-32.59	-29.7	-0.26
365	SLU 31	-718	38	3323	-34.95	-33.49	-0.27
365	SLU 32	-734	39	3377	-36.01	-34.27	-0.28
365	SLU 33	-734	39	3374	-35.98	-34.23	-0.28
365	SLU 34	-726	39	3353	-35.58	-33.84	-0.28
365	SLU 35	-742	40	3407	-36.64	-34.62	-0.29
365	SLU 36	-741	40	3405	-36.6	-34.58	-0.29
365	SLU 37	-735	39	3387	-36.26	-34.25	-0.28
365	SLU 38	-734	39	3385	-36.23	-34.22	-0.28
365	SLU 39	-760	40	3497	-36.58	-35.48	-0.29
365	SLU 40	-760	40	3495	-36.54	-35.45	-0.29
365	SLU 41	-768	40	3527	-37.2	-35.84	-0.29
365	SLU 42	-767	40	3525	-37.16	-35.8	-0.29
365	SLU 43	-667	38	3240	-34.68	-31.06	-0.27
365	SLU 44	-666	38	3237	-34.62	-31	-0.27
365	SLU 45	-683	39	3290	-35.68	-31.78	-0.28
365	SLU 46	-682	39	3288	-35.65	-31.74	-0.28
365	SLU 47	-674	38	3267	-35.25	-31.35	-0.28
365	SLU 48	-690	40	3320	-36.31	-32.13	-0.28
365	SLU 49	-690	39	3318	-36.27	-32.09	-0.28
365	SLU 50	-683	39	3301	-35.93	-31.76	-0.28
365	SLU 51	-682	39	3299	-35.9	-31.73	-0.28
365	SLU 52	-762	42	3635	-38.26	-35.52	-0.3
365	SLU 53	-779	43	3688	-39.32	-36.3	-0.31
365	SLU 54	-778	43	3686	-39.28	-36.26	-0.31
365	SLU 55	-770	42	3665	-38.89	-35.87	-0.3
365	SLU 56	-787	43	3719	-39.95	-36.65	-0.31
365	SLU 57	-786	43	3717	-39.91	-36.61	-0.31
365	SLU 58	-779	43	3699	-39.57	-36.28	-0.31
365	SLU 59	-778	43	3697	-39.53	-36.24	-0.31
365	SLU 60	-805	43	3809	-39.88	-37.51	-0.31
365	SLU 61	-804	43	3807	-39.85	-37.48	-0.31
365	SLU 62	-812	44	3839	-40.51	-37.86	-0.32
365	SLU 63	-812	44	3837	-40.47	-37.83	-0.32
365	SLU 64	-754	42	3585	-38.4	-35.12	-0.3
365	SLU 65	-753	42	3581	-38.34	-35.06	-0.3
365	SLU 66	-769	43	3635	-39.4	-35.84	-0.31



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
365	SLU 67	-769	43	3633	-39.36	-35.81	-0.31
365	SLU 68	-761	42	3612	-38.96	-35.42	-0.31
365	SLU 69	-777	44	3665	-40.02	-36.2	-0.31
365	SLU 70	-776	44	3663	-39.99	-36.16	-0.31
365	SLU 71	-769	43	3646	-39.65	-35.83	-0.31
365	SLU 72	-769	43	3643	-39.61	-35.79	-0.31
365	SLU 73	-849	46	3980	-41.98	-39.58	-0.33
365	SLU 74	-866	47	4033	-43.04	-40.36	-0.34
365	SLU 75	-865	47	4031	-43	-40.33	-0.34
365	SLU 76	-857	46	4010	-42.6	-39.94	-0.33
365	SLU 77	-873	48	4064	-43.66	-40.71	-0.34
365	SLU 78	-873	47	4061	-43.63	-40.68	-0.34
365	SLU 79	-866	47	4044	-43.29	-40.35	-0.34
365	SLU 80	-865	47	4042	-43.25	-40.31	-0.34
365	SLU 81	-891	47	4154	-43.6	-41.58	-0.34
365	SLU 82	-891	47	4152	-43.56	-41.54	-0.34
365	SLU 83	-899	48	4184	-44.22	-41.93	-0.35
365	SLU 84	-898	48	4182	-44.19	-41.9	-0.35
365	SLE RA 1	-561	31	2682	-28.72	-26.12	-0.23
365	SLE RA 2	-560	31	2680	-28.68	-26.09	-0.22
365	SLE RA 3	-571	32	2715	-29.39	-26.6	-0.23
365	SLE RA 4	-571	32	2714	-29.36	-26.58	-0.23
365	SLE RA 5	-565	32	2700	-29.1	-26.32	-0.23
365	SLE RA 6	-576	32	2735	-29.8	-26.84	-0.23
365	SLE RA 7	-576	32	2734	-29.78	-26.82	-0.23
365	SLE RA 8	-571	32	2722	-29.55	-26.59	-0.23
365	SLE RA 9	-571	32	2721	-29.53	-26.57	-0.23
365	SLE RA 10	-624	34	2945	-31.11	-29.1	-0.24
365	SLE RA 11	-635	35	2981	-31.81	-29.62	-0.25
365	SLE RA 12	-635	35	2979	-31.79	-29.59	-0.25
365	SLE RA 13	-629	34	2965	-31.52	-29.33	-0.25
365	SLE RA 14	-640	35	3001	-32.23	-29.85	-0.25
365	SLE RA 15	-640	35	3000	-32.21	-29.83	-0.25
365	SLE RA 16	-635	35	2988	-31.98	-29.61	-0.25
365	SLE RA 17	-635	35	2986	-31.96	-29.58	-0.25
365	SLE RA 18	-653	35	3061	-32.19	-30.43	-0.25
365	SLE RA 19	-652	35	3060	-32.16	-30.4	-0.25
365	SLE RA 20	-658	35	3081	-32.6	-30.66	-0.26
365	SLE RA 21	-657	35	3080	-32.58	-30.64	-0.26
365	SLE FR 1	-561	31	2682	-28.72	-26.12	-0.23
365	SLE FR 2	-561	31	2681	-28.71	-26.12	-0.23
365	SLE FR 3	-563	31	2690	-28.89	-26.22	-0.23
365	SLE FR 4	-588	32	2795	-29.75	-27.41	-0.23
365	SLE FR 5	-590	33	2804	-29.93	-27.51	-0.23
365	SLE FR 6	-607	33	2872	-30.46	-28.28	-0.24
365	SLE QP 1	-561	31	2682	-28.72	-26.12	-0.23
365	SLE QP 2	-588	32	2796	-29.76	-27.42	-0.23
365	SLD 1	-52	13	2365	-13.21	-2.75	-0.1
365	SLD 2	-52	13	2365	-13.21	-2.75	-0.1
365	SLD 3	-159	36	2607	-33.19	-7.45	-0.26
365	SLD 4	-159	36	2607	-33.19	-7.45	-0.26
365	SLD 5	-264	-8	2300	5.51	-12.88	0.03
365	SLD 6	-264	-8	2300	5.51	-12.88	0.03
365	SLD 7	-623	68	3106	-61.09	-28.57	-0.47
365	SLD 8	-623	68	3106	-61.09	-28.57	-0.47
365	SLD 9	-554	-3	2485	1.57	-26.26	0
365	SLD 10	-554	-3	2485	1.57	-26.26	0
365	SLD 11	-912	73	3292	-65.03	-41.96	-0.5
365	SLD 12	-912	73	3292	-65.03	-41.96	-0.5
365	SLD 13	-1018	29	2984	-26.34	-47.38	-0.21
365	SLD 14	-1018	29	2984	-26.34	-47.38	-0.21
365	SLD 15	-1125	52	3226	-46.32	-52.08	-0.36
365	SLD 16	-1125	52	3226	-46.32	-52.08	-0.36
365	SLV 1	652	-13	1795	9.02	29.61	0.07
365	SLV 2	652	-13	1795	9.02	29.61	0.07
365	SLV 3	400	41	2364	-37.79	18.58	-0.28
365	SLV 4	400	41	2364	-37.79	18.58	-0.28
365	SLV 5	166	-62	1632	52.86	6.42	0.39
365	SLV 6	166	-62	1632	52.86	6.42	0.39
365	SLV 7	-674	116	3529	-103.16	-30.34	-0.78
365	SLV 8	-674	116	3529	-103.16	-30.34	-0.78
365	SLV 9	-503	-51	2062	43.63	-24.49	0.32
365	SLV 10	-503	-51	2062	43.63	-24.49	0.32
365	SLV 11	-1343	127	3959	-112.39	-61.25	-0.86
365	SLV 12	-1343	127	3959	-112.39	-61.25	-0.86
365	SLV 13	-1577	24	3228	-21.74	-73.41	-0.18
365	SLV 14	-1577	24	3228	-21.74	-73.41	-0.18
365	SLV 15	-1829	77	3797	-68.54	-84.44	-0.54
365	SLV 16	-1829	77	3797	-68.54	-84.44	-0.54
366	SLU 1	-494	33	2672	-30.83	-21.35	-0.21
366	SLU 2	-493	33	2667	-30.75	-21.31	-0.21
366	SLU 3	-507	35	2724	-31.94	-21.91	-0.22
366	SLU 4	-506	35	2722	-31.89	-21.89	-0.21
366	SLU 5	-500	34	2699	-31.45	-21.62	-0.21
366	SLU 6	-514	35	2755	-32.63	-22.22	-0.22
366	SLU 7	-513	35	2753	-32.59	-22.19	-0.22
366	SLU 8	-508	35	2734	-32.22	-21.97	-0.22
366	SLU 9	-507	35	2732	-32.17	-21.94	-0.22
366	SLU 10	-583	38	3086	-34.86	-25.21	-0.23
366	SLU 11	-597	39	3143	-36.04	-25.82	-0.24



Nodo Ind.	Cont. N.br.	Reazione a traslazione				Reazione a rotazione		
		x	y	z		x	y	z
366	SLU 12	-597	39	3140		-35.99	-25.79	-0.24
366	SLU 13	-590	38	3118		-35.55	-25.52	-0.24
366	SLU 14	-604	40	3174		-36.73	-26.13	-0.25
366	SLU 15	-604	40	3172		-36.69	-26.1	-0.25
366	SLU 16	-598	39	3153		-36.32	-25.87	-0.24
366	SLU 17	-597	39	3151		-36.28	-25.85	-0.24
366	SLU 18	-623	40	3270		-36.69	-26.93	-0.25
366	SLU 19	-622	40	3267		-36.64	-26.91	-0.25
366	SLU 20	-630	40	3301		-37.39	-27.24	-0.25
366	SLU 21	-629	40	3299		-37.34	-27.21	-0.25
366	SLU 22	-574	38	3034		-35	-24.81	-0.24
366	SLU 23	-573	38	3029		-34.92	-24.77	-0.24
366	SLU 24	-587	39	3086		-36.11	-25.37	-0.24
366	SLU 25	-586	39	3084		-36.06	-25.34	-0.24
366	SLU 26	-580	39	3061		-35.62	-25.07	-0.24
366	SLU 27	-594	40	3117		-36.8	-25.68	-0.25
366	SLU 28	-593	40	3115		-36.76	-25.65	-0.25
366	SLU 29	-588	39	3096		-36.39	-25.42	-0.25
366	SLU 30	-587	39	3094		-36.35	-25.4	-0.24
366	SLU 31	-663	42	3448		-39.03	-28.67	-0.26
366	SLU 32	-677	44	3505		-40.21	-29.28	-0.27
366	SLU 33	-677	43	3502		-40.16	-29.25	-0.27
366	SLU 34	-670	43	3480		-39.72	-28.98	-0.27
366	SLU 35	-684	44	3536		-40.91	-29.58	-0.28
366	SLU 36	-684	44	3534		-40.86	-29.56	-0.28
366	SLU 37	-678	44	3515		-40.49	-29.33	-0.27
366	SLU 38	-677	44	3513		-40.45	-29.3	-0.27
366	SLU 39	-703	44	3632		-40.86	-30.39	-0.28
366	SLU 40	-702	44	3629		-40.82	-30.36	-0.28
366	SLU 41	-710	45	3663		-41.56	-30.7	-0.28
366	SLU 42	-709	45	3661		-41.51	-30.67	-0.28
366	SLU 43	-615	42	3349		-38.65	-26.57	-0.26
366	SLU 44	-614	42	3345		-38.57	-26.53	-0.26
366	SLU 45	-628	43	3401		-39.76	-27.14	-0.27
366	SLU 46	-627	43	3399		-39.71	-27.11	-0.27
366	SLU 47	-621	43	3376		-39.27	-26.84	-0.26
366	SLU 48	-635	44	3433		-40.45	-27.44	-0.27
366	SLU 49	-634	44	3430		-40.41	-27.42	-0.27
366	SLU 50	-629	43	3412		-40.04	-27.19	-0.27
366	SLU 51	-628	43	3409		-39.99	-27.16	-0.27
366	SLU 52	-704	46	3764		-42.67	-30.44	-0.29
366	SLU 53	-718	47	3820		-43.86	-31.04	-0.3
366	SLU 54	-717	47	3818		-43.81	-31.01	-0.3
366	SLU 55	-711	47	3795		-43.37	-30.74	-0.29
366	SLU 56	-725	48	3851		-44.55	-31.35	-0.3
366	SLU 57	-724	48	3849		-44.51	-31.32	-0.3
366	SLU 58	-719	48	3830		-44.14	-31.09	-0.3
366	SLU 59	-718	48	3828		-44.1	-31.07	-0.3
366	SLU 60	-744	48	3947		-44.51	-32.15	-0.3
366	SLU 61	-743	48	3945		-44.46	-32.13	-0.3
366	SLU 62	-751	49	3978		-45.2	-32.46	-0.3
366	SLU 63	-750	49	3976		-45.16	-32.43	-0.3
366	SLU 64	-695	46	3711		-42.82	-30.03	-0.29
366	SLU 65	-694	46	3707		-42.74	-29.99	-0.29
366	SLU 66	-708	48	3763		-43.93	-30.59	-0.3
366	SLU 67	-707	48	3761		-43.88	-30.57	-0.3
366	SLU 68	-701	47	3738		-43.44	-30.29	-0.29
366	SLU 69	-715	48	3795		-44.62	-30.9	-0.3
366	SLU 70	-714	48	3792		-44.58	-30.87	-0.3
366	SLU 71	-709	48	3774		-44.21	-30.64	-0.3
366	SLU 72	-708	48	3771		-44.16	-30.62	-0.3
366	SLU 73	-784	51	4126		-46.85	-33.89	-0.32
366	SLU 74	-798	52	4182		-48.03	-34.5	-0.32
366	SLU 75	-797	52	4180		-47.98	-34.47	-0.32
366	SLU 76	-791	51	4157		-47.54	-34.2	-0.32
366	SLU 77	-805	53	4213		-48.72	-34.8	-0.33
366	SLU 78	-804	53	4211		-48.68	-34.78	-0.33
366	SLU 79	-799	52	4192		-48.31	-34.55	-0.33
366	SLU 80	-798	52	4190		-48.27	-34.52	-0.33
366	SLU 81	-824	53	4309		-48.68	-35.61	-0.33
366	SLU 82	-823	53	4307		-48.63	-35.58	-0.33
366	SLU 83	-831	53	4340		-49.38	-35.92	-0.33
366	SLU 84	-830	53	4338		-49.33	-35.89	-0.33
366	SLE RA 1	-517	35	2775		-32.02	-22.34	-0.22
366	SLE RA 2	-516	35	2772		-31.97	-22.31	-0.22
366	SLE RA 3	-526	35	2810		-32.76	-22.72	-0.22
366	SLE RA 4	-525	35	2808		-32.73	-22.7	-0.22
366	SLE RA 5	-521	35	2793		-32.43	-22.52	-0.22
366	SLE RA 6	-530	36	2831		-33.22	-22.92	-0.22
366	SLE RA 7	-530	36	2829		-33.19	-22.9	-0.22
366	SLE RA 8	-526	36	2817		-32.95	-22.75	-0.22
366	SLE RA 9	-526	36	2815		-32.92	-22.73	-0.22
366	SLE RA 10	-576	38	3051		-34.71	-24.92	-0.23
366	SLE RA 11	-586	38	3089		-35.49	-25.32	-0.24
366	SLE RA 12	-585	38	3087		-35.46	-25.3	-0.24
366	SLE RA 13	-581	38	3072		-35.17	-25.12	-0.24
366	SLE RA 14	-590	39	3110		-35.96	-25.52	-0.24
366	SLE RA 15	-590	39	3108		-35.93	-25.51	-0.24
366	SLE RA 16	-586	39	3096		-35.68	-25.35	-0.24
366	SLE RA 17	-586	39	3094		-35.65	-25.34	-0.24



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
366	SLE RA 18	-603	39	3174	-35.93	-26.06	-0.24
366	SLE RA 19	-602	39	3172	-35.9	-26.04	-0.24
366	SLE RA 20	-607	39	3195	-36.39	-26.27	-0.25
366	SLE RA 21	-607	39	3193	-36.36	-26.25	-0.25
366	SLE FR 1	-517	35	2775	-32.02	-22.34	-0.22
366	SLE FR 2	-517	35	2774	-32.01	-22.34	-0.22
366	SLE FR 3	-519	35	2783	-32.21	-22.42	-0.22
366	SLE FR 4	-542	36	2894	-33.18	-23.45	-0.22
366	SLE FR 5	-544	36	2903	-33.38	-23.54	-0.22
366	SLE FR 6	-560	37	2974	-33.97	-24.2	-0.23
366	SLE QP 1	-517	35	2775	-32.02	-22.34	-0.22
366	SLE QP 2	-543	36	2895	-33.19	-23.46	-0.22
366	SLD 1	-84	18	2304	-18.21	-2.32	-0.12
366	SLD 2	-84	18	2304	-18.21	-2.32	-0.12
366	SLD 3	-187	39	2501	-36	-6.48	-0.24
366	SLD 4	-187	39	2501	-36	-6.48	-0.24
366	SLD 5	-249	-1	2419	-1.72	-10.8	-0.01
366	SLD 6	-249	-1	2419	-1.72	-10.8	-0.01
366	SLD 7	-592	68	3075	-61.01	-24.68	-0.41
366	SLD 8	-592	68	3075	-61.01	-24.68	-0.41
366	SLD 9	-494	4	2714	-5.37	-22.23	-0.04
366	SLD 10	-494	4	2714	-5.37	-22.23	-0.04
366	SLD 11	-836	73	3370	-64.67	-36.12	-0.44
366	SLD 12	-836	73	3370	-64.67	-36.12	-0.44
366	SLD 13	-898	33	3288	-30.39	-40.43	-0.21
366	SLD 14	-898	33	3288	-30.39	-40.43	-0.21
366	SLD 15	-1001	54	3485	-48.18	-44.6	-0.33
366	SLD 16	-1001	54	3485	-48.18	-44.6	-0.33
366	SLV 1	517	-5	1525	1.86	25.35	0.02
366	SLV 2	517	-5	1525	1.86	25.35	0.02
366	SLV 3	276	43	1988	-39.78	15.61	-0.26
366	SLV 4	276	43	1988	-39.78	15.61	-0.26
366	SLV 5	140	-50	1782	40.48	5.95	0.27
366	SLV 6	140	-50	1782	40.48	5.95	0.27
366	SLV 7	-662	112	3324	-98.33	-26.5	-0.66
366	SLV 8	-662	112	3324	-98.33	-26.5	-0.66
366	SLV 9	-423	-40	2465	31.94	-20.41	0.21
366	SLV 10	-423	-40	2465	31.94	-20.41	0.21
366	SLV 11	-1226	122	4007	-106.86	-52.86	-0.72
366	SLV 12	-1226	122	4007	-106.86	-52.86	-0.72
366	SLV 13	-1361	29	3802	-26.6	-62.53	-0.19
366	SLV 14	-1361	29	3802	-26.6	-62.53	-0.19
366	SLV 15	-1602	77	4264	-68.24	-72.26	-0.47
366	SLV 16	-1602	77	4264	-68.24	-72.26	-0.47
367	SLU 1	-543	40	2841	-35.06	-26.2	-0.17
367	SLU 2	-542	39	2836	-34.96	-26.14	-0.17
367	SLU 3	-557	41	2899	-36.31	-26.87	-0.18
367	SLU 4	-556	41	2896	-36.25	-26.83	-0.18
367	SLU 5	-549	40	2870	-35.75	-26.48	-0.17
367	SLU 6	-564	42	2932	-37.1	-27.21	-0.18
367	SLU 7	-563	42	2929	-37.04	-27.17	-0.18
367	SLU 8	-558	41	2909	-36.63	-26.88	-0.18
367	SLU 9	-557	41	2906	-36.58	-26.85	-0.18
367	SLU 10	-642	45	3291	-39.69	-31	-0.19
367	SLU 11	-657	46	3353	-41.04	-31.73	-0.2
367	SLU 12	-656	46	3350	-40.98	-31.69	-0.2
367	SLU 13	-649	46	3324	-40.48	-31.34	-0.2
367	SLU 14	-664	47	3387	-41.83	-32.07	-0.2
367	SLU 15	-663	47	3384	-41.77	-32.03	-0.2
367	SLU 16	-657	47	3363	-41.36	-31.74	-0.2
367	SLU 17	-657	47	3360	-41.31	-31.7	-0.2
367	SLU 18	-686	47	3490	-41.81	-33.14	-0.2
367	SLU 19	-685	47	3487	-41.76	-33.1	-0.2
367	SLU 20	-693	48	3524	-42.6	-33.48	-0.21
367	SLU 21	-692	48	3521	-42.54	-33.44	-0.21
367	SLU 22	-631	45	3234	-39.84	-30.46	-0.19
367	SLU 23	-630	45	3229	-39.75	-30.4	-0.19
367	SLU 24	-644	46	3292	-41.09	-31.13	-0.2
367	SLU 25	-644	46	3289	-41.03	-31.09	-0.2
367	SLU 26	-637	46	3263	-40.53	-30.74	-0.2
367	SLU 27	-651	47	3325	-41.88	-31.47	-0.2
367	SLU 28	-651	47	3323	-41.82	-31.43	-0.2
367	SLU 29	-645	47	3302	-41.42	-31.14	-0.2
367	SLU 30	-644	47	3299	-41.36	-31.1	-0.2
367	SLU 31	-729	50	3684	-44.47	-35.26	-0.22
367	SLU 32	-744	52	3746	-45.82	-35.98	-0.22
367	SLU 33	-743	52	3743	-45.76	-35.95	-0.22
367	SLU 34	-736	51	3718	-45.26	-35.6	-0.22
367	SLU 35	-751	53	3780	-46.61	-36.32	-0.23
367	SLU 36	-750	53	3777	-46.55	-36.29	-0.23
367	SLU 37	-745	52	3756	-46.14	-35.99	-0.23
367	SLU 38	-744	52	3753	-46.09	-35.96	-0.23
367	SLU 39	-773	53	3883	-46.59	-37.4	-0.23
367	SLU 40	-772	53	3880	-46.54	-37.36	-0.23
367	SLU 41	-780	53	3917	-47.38	-37.74	-0.23
367	SLU 42	-779	53	3914	-47.33	-37.7	-0.23
367	SLU 43	-677	50	3559	-43.94	-32.6	-0.21
367	SLU 44	-675	49	3554	-43.84	-32.54	-0.21
367	SLU 45	-690	51	3616	-45.19	-33.27	-0.22
367	SLU 46	-689	51	3613	-45.13	-33.23	-0.22



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
		x	y	z		x	y	z	
367	SLU 47	-683	50	3588		-44.63	-32.88	-0.22	
367	SLU 48	-697	52	3650		-45.98	-33.61	-0.22	
367	SLU 49	-697	52	3647		-45.92	-33.57	-0.22	
367	SLU 50	-691	51	3626		-45.51	-33.28	-0.22	
367	SLU 51	-690	51	3623		-45.46	-33.25	-0.22	
367	SLU 52	-775	55	4008		-48.57	-37.4	-0.24	
367	SLU 53	-790	56	4071		-49.92	-38.13	-0.24	
367	SLU 54	-789	56	4068		-49.86	-38.09	-0.24	
367	SLU 55	-782	56	4042		-49.36	-37.74	-0.24	
367	SLU 56	-797	57	4104		-50.7	-38.47	-0.25	
367	SLU 57	-796	57	4101		-50.65	-38.43	-0.25	
367	SLU 58	-791	57	4081		-50.24	-38.14	-0.25	
367	SLU 59	-790	57	4078		-50.18	-38.1	-0.25	
367	SLU 60	-819	57	4208		-50.69	-39.54	-0.25	
367	SLU 61	-818	57	4205		-50.63	-39.5	-0.25	
367	SLU 62	-826	58	4242		-51.48	-39.88	-0.25	
367	SLU 63	-825	58	4239		-51.42	-39.84	-0.25	
367	SLU 64	-764	55	3952		-48.72	-36.86	-0.24	
367	SLU 65	-763	55	3947		-48.62	-36.8	-0.24	
367	SLU 66	-777	56	4009		-49.97	-37.53	-0.24	
367	SLU 67	-777	56	4006		-49.91	-37.49	-0.24	
367	SLU 68	-770	56	3981		-49.41	-37.14	-0.24	
367	SLU 69	-785	57	4043		-50.76	-37.87	-0.25	
367	SLU 70	-784	57	4040		-50.7	-37.83	-0.25	
367	SLU 71	-778	57	4019		-50.29	-37.54	-0.25	
367	SLU 72	-777	57	4016		-50.24	-37.5	-0.25	
367	SLU 73	-862	60	4401		-53.35	-41.66	-0.26	
367	SLU 74	-877	62	4464		-54.7	-42.38	-0.27	
367	SLU 75	-876	62	4461		-54.64	-42.35	-0.27	
367	SLU 76	-869	61	4435		-54.14	-42	-0.26	
367	SLU 77	-884	63	4497		-55.49	-42.72	-0.27	
367	SLU 78	-883	63	4495		-55.43	-42.69	-0.27	
367	SLU 79	-878	62	4474		-55.02	-42.4	-0.27	
367	SLU 80	-877	62	4471		-54.97	-42.36	-0.27	
367	SLU 81	-906	63	4601		-55.47	-43.8	-0.27	
367	SLU 82	-905	63	4598		-55.42	-43.76	-0.27	
367	SLU 83	-913	63	4635		-56.26	-44.14	-0.28	
367	SLU 84	-913	63	4632		-56.2	-44.1	-0.27	
367	SLE RA 1	-568	41	2953		-36.43	-27.42	-0.18	
367	SLE RA 2	-568	41	2950		-36.36	-27.38	-0.18	
367	SLE RA 3	-577	42	2992		-37.26	-27.86	-0.18	
367	SLE RA 4	-577	42	2990		-37.22	-27.84	-0.18	
367	SLE RA 5	-572	42	2973		-36.89	-27.61	-0.18	
367	SLE RA 6	-582	43	3014		-37.78	-28.09	-0.18	
367	SLE RA 7	-582	43	3012		-37.75	-28.07	-0.18	
367	SLE RA 8	-578	42	2998		-37.48	-27.87	-0.18	
367	SLE RA 9	-577	42	2996		-37.44	-27.85	-0.18	
367	SLE RA 10	-634	45	3253		-39.51	-30.62	-0.19	
367	SLE RA 11	-644	46	3295		-40.41	-31.1	-0.2	
367	SLE RA 12	-643	46	3293		-40.37	-31.08	-0.2	
367	SLE RA 13	-639	45	3276		-40.04	-30.84	-0.2	
367	SLE RA 14	-649	46	3317		-40.94	-31.33	-0.2	
367	SLE RA 15	-648	46	3315		-40.9	-31.3	-0.2	
367	SLE RA 16	-644	46	3301		-40.63	-31.11	-0.2	
367	SLE RA 17	-644	46	3299		-40.59	-31.08	-0.2	
367	SLE RA 18	-663	46	3386		-40.93	-32.04	-0.2	
367	SLE RA 19	-663	46	3384		-40.89	-32.02	-0.2	
367	SLE RA 20	-668	47	3409		-41.45	-32.27	-0.2	
367	SLE RA 21	-668	47	3407		-41.41	-32.25	-0.2	
367	SLE FR 1	-568	41	2953		-36.43	-27.42	-0.18	
367	SLE FR 2	-568	41	2953		-36.41	-27.41	-0.18	
367	SLE FR 3	-570	41	2962		-36.64	-27.51	-0.18	
367	SLE FR 4	-597	43	3083		-37.76	-28.8	-0.18	
367	SLE FR 5	-599	43	3092		-37.99	-28.9	-0.19	
367	SLE FR 6	-616	44	3170		-38.68	-29.73	-0.19	
367	SLE QP 1	-568	41	2953		-36.43	-27.42	-0.18	
367	SLE QP 2	-597	43	3083		-37.78	-28.81	-0.18	
367	SLD 1	-193	27	2176		-25.19	-8.99	-0.13	
367	SLD 2	-193	27	2176		-25.19	-8.99	-0.13	
367	SLD 3	-294	45	2416		-39.55	-13.32	-0.19	
367	SLD 4	-294	45	2416		-39.55	-13.32	-0.19	
367	SLD 5	-322	11	2448		-12.22	-16.29	-0.07	
367	SLD 6	-322	11	2448		-12.22	-16.29	-0.07	
367	SLD 7	-659	70	3246		-60.09	-30.73	-0.28	
367	SLD 8	-659	70	3246		-60.09	-30.73	-0.28	
367	SLD 9	-534	15	2920		-15.46	-26.88	-0.09	
367	SLD 10	-534	15	2920		-15.46	-26.88	-0.09	
367	SLD 11	-871	74	3719		-63.33	-41.32	-0.3	
367	SLD 12	-871	74	3719		-63.33	-41.32	-0.3	
367	SLD 13	-900	41	3751		-36	-44.29	-0.18	
367	SLD 14	-900	41	3751		-36	-44.29	-0.18	
367	SLD 15	-1001	58	3990		-50.36	-48.62	-0.24	
367	SLD 16	-1001	58	3990		-50.36	-48.62	-0.24	
367	SLV 1	337	6	982		-8.42	17	-0.05	
367	SLV 2	337	6	982		-8.42	17	-0.05	
367	SLV 3	99	48	1545		-41.99	6.84	-0.2	
367	SLV 4	99	48	1545		-41.99	6.84	-0.2	
367	SLV 5	43	-31	1600		21.94	0.34	0.08	
367	SLV 6	43	-31	1600		21.94	0.34	0.08	
367	SLV 7	-748	107	3474		-89.95	-33.51	-0.42	



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
367	SLV 8	-748	107	3474	-89.95	-33.51	-0.42
367	SLV 9	-446	-21	2692	14.4	-24.1	0.05
367	SLV 10	-446	-21	2692	14.4	-24.1	0.05
367	SLV 11	-1237	116	4566	-97.49	-57.95	-0.45
367	SLV 12	-1237	116	4566	-97.49	-57.95	-0.45
367	SLV 13	-1293	38	4622	-33.56	-64.45	-0.17
367	SLV 14	-1293	38	4622	-33.56	-64.45	-0.17
367	SLV 15	-1530	79	5184	-67.13	-74.61	-0.32
367	SLV 16	-1530	79	5184	-67.13	-74.61	-0.32
368	SLU 1	-558	59	3310	-39.95	-27.92	0.05
368	SLU 2	-557	59	3304	-39.83	-27.87	0.05
368	SLU 3	-571	62	3380	-41.36	-28.57	0.06
368	SLU 4	-570	61	3377	-41.29	-28.54	0.06
368	SLU 5	-564	61	3344	-40.72	-28.24	0.06
368	SLU 6	-578	63	3421	-42.26	-28.94	0.06
368	SLU 7	-577	63	3417	-42.19	-28.91	0.06
368	SLU 8	-572	62	3390	-41.73	-28.67	0.06
368	SLU 9	-572	62	3387	-41.66	-28.64	0.06
368	SLU 10	-656	67	3851	-45.3	-32.88	0.06
368	SLU 11	-670	70	3928	-46.83	-33.58	0.06
368	SLU 12	-669	70	3924	-46.76	-33.54	0.06
368	SLU 13	-663	69	3892	-46.19	-33.25	0.06
368	SLU 14	-677	71	3968	-47.72	-33.95	0.07
368	SLU 15	-677	71	3964	-47.65	-33.92	0.07
368	SLU 16	-672	70	3938	-47.2	-33.68	0.06
368	SLU 17	-671	70	3934	-47.13	-33.64	0.06
368	SLU 18	-700	71	4092	-47.75	-35.08	0.07
368	SLU 19	-699	71	4089	-47.68	-35.04	0.07
368	SLU 20	-707	72	4132	-48.65	-35.45	0.07
368	SLU 21	-706	72	4129	-48.58	-35.42	0.07
368	SLU 22	-644	68	3784	-45.45	-32.27	0.06
368	SLU 23	-643	67	3778	-45.33	-32.22	0.06
368	SLU 24	-657	70	3855	-46.86	-32.92	0.06
368	SLU 25	-656	70	3851	-46.79	-32.89	0.06
368	SLU 26	-650	69	3818	-46.22	-32.59	0.06
368	SLU 27	-664	71	3895	-47.75	-33.29	0.07
368	SLU 28	-664	71	3891	-47.68	-33.26	0.07
368	SLU 29	-659	70	3865	-47.23	-33.02	0.06
368	SLU 30	-658	70	3861	-47.16	-32.99	0.06
368	SLU 31	-742	76	4326	-50.79	-37.23	0.07
368	SLU 32	-756	78	4402	-52.32	-37.93	0.07
368	SLU 33	-756	78	4399	-52.25	-37.89	0.07
368	SLU 34	-750	77	4366	-51.68	-37.6	0.07
368	SLU 35	-764	79	4442	-53.21	-38.3	0.07
368	SLU 36	-763	79	4439	-53.14	-38.27	0.07
368	SLU 37	-758	78	4412	-52.69	-38.02	0.07
368	SLU 38	-757	78	4409	-52.62	-37.99	0.07
368	SLU 39	-786	79	4567	-53.25	-39.43	0.07
368	SLU 40	-785	79	4563	-53.18	-39.39	0.07
368	SLU 41	-793	81	4607	-54.14	-39.8	0.07
368	SLU 42	-793	81	4603	-54.07	-39.77	0.07
368	SLU 43	-696	74	4140	-50.05	-34.81	0.07
368	SLU 44	-694	74	4134	-49.93	-34.75	0.07
368	SLU 45	-708	77	4211	-51.47	-35.46	0.07
368	SLU 46	-708	76	4207	-51.4	-35.42	0.07
368	SLU 47	-702	76	4174	-50.83	-35.13	0.07
368	SLU 48	-716	78	4251	-52.36	-35.83	0.07
368	SLU 49	-715	78	4247	-52.29	-35.8	0.07
368	SLU 50	-710	77	4221	-51.83	-35.55	0.07
368	SLU 51	-709	77	4217	-51.76	-35.52	0.07
368	SLU 52	-794	82	4682	-55.4	-39.76	0.08
368	SLU 53	-808	85	4758	-56.93	-40.46	0.08
368	SLU 54	-807	85	4755	-56.86	-40.43	0.08
368	SLU 55	-801	84	4722	-56.29	-40.13	0.08
368	SLU 56	-815	86	4798	-57.82	-40.84	0.08
368	SLU 57	-814	86	4795	-57.75	-40.8	0.08
368	SLU 58	-809	85	4768	-57.3	-40.56	0.08
368	SLU 59	-809	85	4765	-57.23	-40.53	0.08
368	SLU 60	-837	86	4923	-57.86	-41.96	0.08
368	SLU 61	-837	86	4919	-57.79	-41.93	0.08
368	SLU 62	-845	87	4963	-58.75	-42.33	0.08
368	SLU 63	-844	87	4959	-58.68	-42.3	0.08
368	SLU 64	-782	83	4615	-55.55	-39.16	0.08
368	SLU 65	-781	82	4609	-55.43	-39.1	0.08
368	SLU 66	-795	85	4685	-56.96	-39.81	0.08
368	SLU 67	-794	85	4681	-56.89	-39.77	0.08
368	SLU 68	-788	84	4649	-56.32	-39.48	0.08
368	SLU 69	-802	86	4725	-57.85	-40.18	0.08
368	SLU 70	-801	86	4722	-57.78	-40.15	0.08
368	SLU 71	-796	85	4695	-57.33	-39.9	0.08
368	SLU 72	-796	85	4691	-57.26	-39.87	0.08
368	SLU 73	-880	91	5156	-60.89	-44.11	0.08
368	SLU 74	-894	93	5233	-62.42	-44.81	0.09
368	SLU 75	-893	93	5229	-62.35	-44.78	0.09
368	SLU 76	-887	92	5196	-61.78	-44.48	0.08
368	SLU 77	-901	94	5273	-63.32	-45.19	0.09
368	SLU 78	-901	94	5269	-63.25	-45.15	0.09
368	SLU 79	-896	93	5243	-62.79	-44.91	0.09
368	SLU 80	-895	93	5239	-62.72	-44.88	0.09
368	SLU 81	-924	94	5397	-63.35	-46.31	0.09



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
368	SLU 82	-923	94	5393	-63.28	-46.28	0.09
368	SLU 83	-931	96	5437	-64.24	-46.68	0.09
368	SLU 84	-930	96	5433	-64.17	-46.65	0.09
368	SLE RA 1	-582	62	3446	-41.52	-29.17	0.06
368	SLE RA 2	-582	62	3441	-41.44	-29.13	0.06
368	SLE RA 3	-591	63	3493	-42.46	-29.6	0.06
368	SLE RA 4	-591	63	3490	-42.42	-29.58	0.06
368	SLE RA 5	-587	63	3468	-42.04	-29.38	0.06
368	SLE RA 6	-596	64	3519	-43.06	-29.85	0.06
368	SLE RA 7	-595	64	3517	-43.01	-29.82	0.06
368	SLE RA 8	-592	64	3499	-42.71	-29.66	0.06
368	SLE RA 9	-592	63	3497	-42.66	-29.64	0.06
368	SLE RA 10	-648	67	3806	-45.08	-32.47	0.06
368	SLE RA 11	-657	69	3858	-46.11	-32.94	0.06
368	SLE RA 12	-657	69	3855	-46.06	-32.91	0.06
368	SLE RA 13	-653	68	3833	-45.68	-32.72	0.06
368	SLE RA 14	-662	70	3884	-46.7	-33.18	0.06
368	SLE RA 15	-662	69	3882	-46.65	-33.16	0.06
368	SLE RA 16	-658	69	3864	-46.35	-33	0.06
368	SLE RA 17	-658	69	3862	-46.3	-32.98	0.06
368	SLE RA 18	-677	70	3967	-46.72	-33.93	0.06
368	SLE RA 19	-677	69	3965	-46.68	-33.91	0.06
368	SLE RA 20	-682	70	3994	-47.32	-34.18	0.06
368	SLE RA 21	-681	70	3991	-47.27	-34.16	0.06
368	SLE FR 1	-582	62	3446	-41.52	-29.17	0.06
368	SLE FR 2	-582	62	3445	-41.5	-29.16	0.06
368	SLE FR 3	-584	62	3456	-41.76	-29.27	0.06
368	SLE FR 4	-611	64	3601	-43.07	-30.59	0.06
368	SLE FR 5	-613	64	3613	-43.32	-30.7	0.06
368	SLE FR 6	-630	66	3706	-44.12	-31.55	0.06
368	SLE QP 1	-582	62	3446	-41.52	-29.17	0.06
368	SLE QP 2	-611	64	3602	-43.08	-30.6	0.06
368	SLD 1	-271	50	2098	-33.25	-11.65	0.06
368	SLD 2	-271	50	2098	-33.25	-11.65	0.06
368	SLD 3	-346	65	2475	-43.75	-15.19	0.07
368	SLD 4	-346	65	2475	-43.75	-15.19	0.07
368	SLD 5	-395	38	2579	-24.2	-19.54	0.03
368	SLD 6	-395	38	2579	-24.2	-19.54	0.03
368	SLD 7	-645	87	3836	-59.21	-31.35	0.09
368	SLD 8	-645	87	3836	-59.21	-31.35	0.09
368	SLD 9	-576	42	3368	-26.95	-29.85	0.03
368	SLD 10	-576	42	3368	-26.95	-29.85	0.03
368	SLD 11	-827	91	4625	-61.96	-41.65	0.09
368	SLD 12	-827	91	4625	-61.96	-41.65	0.09
368	SLD 13	-876	63	4729	-42.41	-46.01	0.04
368	SLD 14	-876	63	4729	-42.41	-46.01	0.04
368	SLD 15	-951	78	5106	-52.92	-49.55	0.06
368	SLD 16	-951	78	5106	-52.92	-49.55	0.06
368	SLV 1	175	32	121	-20.23	13.14	0.05
368	SLV 2	175	32	121	-20.23	13.14	0.05
368	SLV 3	-2	66	1005	-44.72	4.87	0.09
368	SLV 4	-2	66	1005	-44.72	4.87	0.09
368	SLV 5	-108	2	1217	0.91	-4.95	-0.01
368	SLV 6	-108	2	1217	0.91	-4.95	-0.01
368	SLV 7	-695	117	4164	-80.71	-32.49	0.13
368	SLV 8	-695	117	4164	-80.71	-32.49	0.13
368	SLV 9	-526	12	3040	-5.45	-28.71	-0.01
368	SLV 10	-526	12	3040	-5.45	-28.71	-0.01
368	SLV 11	-1114	126	5987	-87.07	-56.25	0.12
368	SLV 12	-1114	126	5987	-87.07	-56.25	0.12
368	SLV 13	-1220	62	6199	-41.45	-66.07	0.02
368	SLV 14	-1220	62	6199	-41.45	-66.07	0.02
368	SLV 15	-1396	97	7083	-65.93	-74.33	0.06
368	SLV 16	-1396	97	7083	-65.93	-74.33	0.06
369	SLU 1	-654	27	2204	-20.83	-18.82	-3.36
369	SLU 2	-653	27	2200	-20.76	-18.78	-3.35
369	SLU 3	-669	28	2253	-21.56	-19.26	-3.48
369	SLU 4	-669	28	2250	-21.52	-19.24	-3.47
369	SLU 5	-661	28	2227	-21.23	-19.02	-3.43
369	SLU 6	-678	29	2280	-22.02	-19.5	-3.55
369	SLU 7	-677	28	2278	-21.98	-19.48	-3.55
369	SLU 8	-671	28	2259	-21.75	-19.29	-3.51
369	SLU 9	-670	28	2256	-21.71	-19.27	-3.5
369	SLU 10	-767	31	2576	-23.64	-22.15	-3.82
369	SLU 11	-784	32	2629	-24.44	-22.63	-3.95
369	SLU 12	-783	32	2626	-24.4	-22.61	-3.94
369	SLU 13	-776	31	2603	-24.1	-22.38	-3.89
369	SLU 14	-792	32	2656	-24.9	-22.87	-4.02
369	SLU 15	-791	32	2653	-24.86	-22.85	-4.01
369	SLU 16	-785	32	2635	-24.63	-22.66	-3.98
369	SLU 17	-784	32	2632	-24.59	-22.64	-3.97
369	SLU 18	-818	33	2741	-24.94	-23.63	-4.03
369	SLU 19	-817	33	2739	-24.9	-23.61	-4.02
369	SLU 20	-826	33	2769	-25.4	-23.87	-4.1
369	SLU 21	-825	33	2766	-25.36	-23.84	-4.1
369	SLU 22	-754	31	2530	-23.71	-21.75	-3.83
369	SLU 23	-752	31	2526	-23.65	-21.71	-3.82
369	SLU 24	-769	32	2579	-24.45	-22.2	-3.95
369	SLU 25	-768	32	2576	-24.41	-22.17	-3.94
369	SLU 26	-761	31	2553	-24.11	-21.95	-3.89



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
		x	y	z		x	y	z	
369	SLU 27	-777	32	2606		-24.91	-22.43	-4.02	
369	SLU 28	-776	32	2604		-24.87	-22.41	-4.01	
369	SLU 29	-770	32	2585		-24.64	-22.23	-3.98	
369	SLU 30	-769	32	2582		-24.6	-22.2	-3.97	
369	SLU 31	-867	35	2902		-26.53	-25.08	-4.28	
369	SLU 32	-883	36	2955		-27.32	-25.56	-4.41	
369	SLU 33	-882	36	2952		-27.29	-25.54	-4.41	
369	SLU 34	-875	35	2929		-26.99	-25.32	-4.36	
369	SLU 35	-891	36	2982		-27.79	-25.8	-4.49	
369	SLU 36	-890	36	2979		-27.75	-25.78	-4.48	
369	SLU 37	-884	36	2961		-27.52	-25.59	-4.44	
369	SLU 38	-884	36	2958		-27.48	-25.57	-4.44	
369	SLU 39	-917	37	3067		-27.83	-26.56	-4.49	
369	SLU 40	-916	37	3065		-27.79	-26.54	-4.49	
369	SLU 41	-925	37	3095		-28.29	-26.8	-4.57	
369	SLU 42	-924	37	3092		-28.25	-26.78	-4.56	
369	SLU 43	-817	34	2754		-26.09	-23.46	-4.21	
369	SLU 44	-815	34	2750		-26.02	-23.42	-4.2	
369	SLU 45	-832	35	2803		-26.82	-23.9	-4.33	
369	SLU 46	-831	35	2800		-26.78	-23.88	-4.32	
369	SLU 47	-824	34	2777		-26.48	-23.66	-4.27	
369	SLU 48	-840	35	2830		-27.28	-24.14	-4.4	
369	SLU 49	-839	35	2827		-27.24	-24.12	-4.4	
369	SLU 50	-833	35	2808		-27.01	-23.93	-4.36	
369	SLU 51	-832	35	2806		-26.97	-23.91	-4.35	
369	SLU 52	-930	38	3125		-28.9	-26.79	-4.67	
369	SLU 53	-946	39	3178		-29.7	-27.27	-4.79	
369	SLU 54	-945	39	3176		-29.66	-27.25	-4.79	
369	SLU 55	-938	38	3153		-29.36	-27.03	-4.74	
369	SLU 56	-954	39	3206		-30.16	-27.51	-4.87	
369	SLU 57	-953	39	3203		-30.12	-27.49	-4.86	
369	SLU 58	-948	39	3184		-29.89	-27.3	-4.82	
369	SLU 59	-947	39	3182		-29.85	-27.28	-4.82	
369	SLU 60	-980	39	3291		-30.2	-28.27	-4.88	
369	SLU 61	-979	39	3288		-30.16	-28.25	-4.87	
369	SLU 62	-988	40	3318		-30.66	-28.51	-4.95	
369	SLU 63	-987	40	3315		-30.62	-28.49	-4.94	
369	SLU 64	-916	38	3080		-28.97	-26.39	-4.68	
369	SLU 65	-915	38	3075		-28.91	-26.35	-4.67	
369	SLU 66	-931	39	3129		-29.7	-26.84	-4.79	
369	SLU 67	-930	39	3126		-29.67	-26.81	-4.79	
369	SLU 68	-923	38	3103		-29.37	-26.59	-4.74	
369	SLU 69	-939	39	3156		-30.17	-27.07	-4.87	
369	SLU 70	-938	39	3153		-30.13	-27.05	-4.86	
369	SLU 71	-932	39	3134		-29.9	-26.87	-4.83	
369	SLU 72	-932	39	3132		-29.86	-26.84	-4.82	
369	SLU 73	-1029	42	3451		-31.79	-29.72	-5.13	
369	SLU 74	-1045	43	3504		-32.58	-30.21	-5.26	
369	SLU 75	-1044	43	3502		-32.55	-30.18	-5.25	
369	SLU 76	-1037	42	3479		-32.25	-29.96	-5.21	
369	SLU 77	-1053	43	3532		-33.05	-30.44	-5.34	
369	SLU 78	-1053	43	3529		-33.01	-30.42	-5.33	
369	SLU 79	-1047	43	3510		-32.77	-30.23	-5.29	
369	SLU 80	-1046	43	3508		-32.74	-30.21	-5.29	
369	SLU 81	-1079	43	3617		-33.09	-31.2	-5.34	
369	SLU 82	-1078	43	3614		-33.05	-31.18	-5.34	
369	SLU 83	-1087	44	3644		-33.55	-31.44	-5.42	
369	SLU 84	-1087	44	3641		-33.51	-31.42	-5.41	
369	SLE RA 1	-683	28	2298		-21.65	-19.66	-3.49	
369	SLE RA 2	-682	28	2295		-21.61	-19.63	-3.49	
369	SLE RA 3	-693	29	2330		-22.14	-19.95	-3.57	
369	SLE RA 4	-692	29	2328		-22.11	-19.94	-3.57	
369	SLE RA 5	-687	28	2313		-21.92	-19.79	-3.54	
369	SLE RA 6	-698	29	2348		-22.45	-20.11	-3.62	
369	SLE RA 7	-698	29	2346		-22.42	-20.1	-3.62	
369	SLE RA 8	-694	29	2334		-22.27	-19.97	-3.59	
369	SLE RA 9	-693	29	2332		-22.24	-19.96	-3.59	
369	SLE RA 10	-758	31	2545		-23.53	-21.88	-3.8	
369	SLE RA 11	-769	31	2580		-24.06	-22.2	-3.88	
369	SLE RA 12	-768	31	2579		-24.03	-22.18	-3.88	
369	SLE RA 13	-764	31	2563		-23.84	-22.03	-3.85	
369	SLE RA 14	-774	32	2599		-24.37	-22.36	-3.93	
369	SLE RA 15	-774	32	2597		-24.34	-22.34	-3.93	
369	SLE RA 16	-770	32	2584		-24.19	-22.22	-3.9	
369	SLE RA 17	-769	32	2583		-24.16	-22.2	-3.9	
369	SLE RA 18	-792	32	2655		-24.39	-22.87	-3.94	
369	SLE RA 19	-791	32	2654		-24.37	-22.85	-3.93	
369	SLE RA 20	-797	32	2674		-24.7	-23.02	-3.99	
369	SLE RA 21	-797	32	2672		-24.68	-23.01	-3.98	
369	SLE FR 1	-683	28	2298		-21.65	-19.66	-3.49	
369	SLE FR 2	-683	28	2297		-21.64	-19.65	-3.49	
369	SLE FR 3	-685	28	2305		-21.78	-19.72	-3.51	
369	SLE FR 4	-715	29	2404		-22.47	-20.61	-3.63	
369	SLE FR 5	-718	29	2412		-22.6	-20.68	-3.65	
369	SLE FR 6	-737	30	2476		-23.02	-21.26	-3.72	
369	SLE QP 1	-683	28	2298		-21.65	-19.66	-3.49	
369	SLE QP 2	-715	29	2405		-22.47	-20.62	-3.63	
369	SLD 1	-356	22	1215		-17.86	-9.61	-2.85	
369	SLD 2	-356	22	1215		-17.86	-9.61	-2.85	
369	SLD 3	-424	51	1485		-22.99	-11.59	-3.75	



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
369	SLD 4	-424	51	1485	-22.99	-11.59	-3.75
369	SLD 5	-505	-17	1638	-13.31	-14.32	-2.04
369	SLD 6	-505	-17	1638	-13.31	-14.32	-2.04
369	SLD 7	-730	80	2539	-30.41	-20.91	-5.02
369	SLD 8	-730	80	2539	-30.41	-20.91	-5.02
369	SLD 9	-701	-21	2271	-14.54	-20.33	-2.23
369	SLD 10	-701	-21	2271	-14.54	-20.33	-2.23
369	SLD 11	-926	75	3172	-31.64	-26.92	-5.22
369	SLD 12	-926	75	3172	-31.64	-26.92	-5.22
369	SLD 13	-1007	8	3325	-21.96	-29.65	-3.51
369	SLD 14	-1007	8	3325	-21.96	-29.65	-3.51
369	SLD 15	-1075	37	3595	-27.09	-31.63	-4.4
369	SLD 16	-1075	37	3595	-27.09	-31.63	-4.4
369	SLV 1	115	12	-347	-11.74	4.82	-1.82
369	SLV 2	115	12	-347	-11.74	4.82	-1.82
369	SLV 3	-43	80	286	-23.73	0.2	-3.92
369	SLV 4	-43	80	286	-23.73	0.2	-3.92
369	SLV 5	-227	-79	620	-1.07	-5.98	0.09
369	SLV 6	-227	-79	620	-1.07	-5.98	0.09
369	SLV 7	-753	148	2729	-41.04	-21.38	-6.89
369	SLV 8	-753	148	2729	-41.04	-21.38	-6.89
369	SLV 9	-678	-89	2081	-3.91	-19.86	-0.37
369	SLV 10	-678	-89	2081	-3.91	-19.86	-0.37
369	SLV 11	-1203	138	4190	-43.88	-35.26	-7.35
369	SLV 12	-1203	138	4190	-43.88	-35.26	-7.35
369	SLV 13	-1388	-21	4524	-21.22	-41.44	-3.34
369	SLV 14	-1388	-21	4524	-21.22	-41.44	-3.34
369	SLV 15	-1545	47	5157	-33.21	-46.06	-5.43
369	SLV 16	-1545	47	5157	-33.21	-46.06	-5.43
370	SLU 1	-2	-1114	4240	32.81	-0.32	-0.06
370	SLU 2	-2	-1113	4234	32.8	-0.33	-0.06
370	SLU 3	-2	-1152	4383	33.95	-0.32	-0.06
370	SLU 4	-2	-1152	4380	33.94	-0.33	-0.06
370	SLU 5	-2	-1139	4331	33.57	-0.33	-0.06
370	SLU 6	-2	-1179	4480	34.72	-0.32	-0.06
370	SLU 7	-2	-1178	4477	34.72	-0.33	-0.06
370	SLU 8	-2	-1166	4434	34.36	-0.32	-0.06
370	SLU 9	-2	-1166	4431	34.35	-0.32	-0.06
370	SLU 10	-2	-1256	4777	37.06	-0.38	-0.07
370	SLU 11	-2	-1296	4926	38.22	-0.38	-0.07
370	SLU 12	-2	-1295	4922	38.21	-0.39	-0.07
370	SLU 13	-2	-1282	4874	37.84	-0.38	-0.07
370	SLU 14	-2	-1322	5023	38.99	-0.38	-0.07
370	SLU 15	-2	-1321	5020	38.98	-0.39	-0.07
370	SLU 16	-2	-1310	4976	38.63	-0.38	-0.07
370	SLU 17	-2	-1309	4973	38.62	-0.38	-0.07
370	SLU 18	-2	-1319	5015	38.9	-0.4	-0.07
370	SLU 19	-2	-1318	5012	38.9	-0.41	-0.07
370	SLU 20	-2	-1345	5112	39.68	-0.4	-0.07
370	SLU 21	-2	-1344	5109	39.67	-0.41	-0.07
370	SLU 22	-2	-1259	4786	37.11	-0.37	-0.07
370	SLU 23	-2	-1258	4781	37.1	-0.38	-0.07
370	SLU 24	-2	-1297	4929	38.25	-0.37	-0.07
370	SLU 25	-2	-1296	4926	38.24	-0.38	-0.07
370	SLU 26	-2	-1284	4878	37.87	-0.38	-0.07
370	SLU 27	-2	-1323	5026	39.02	-0.37	-0.07
370	SLU 28	-2	-1323	5023	39.02	-0.38	-0.07
370	SLU 29	-2	-1311	4980	38.66	-0.37	-0.07
370	SLU 30	-2	-1310	4977	38.65	-0.37	-0.07
370	SLU 31	-2	-1401	5323	41.36	-0.44	-0.08
370	SLU 32	-2	-1440	5472	42.52	-0.43	-0.08
370	SLU 33	-2	-1440	5469	42.51	-0.44	-0.08
370	SLU 34	-2	-1427	5421	42.14	-0.44	-0.08
370	SLU 35	-2	-1466	5569	43.29	-0.43	-0.08
370	SLU 36	-2	-1466	5566	43.28	-0.44	-0.08
370	SLU 37	-2	-1454	5523	42.93	-0.43	-0.08
370	SLU 38	-2	-1454	5520	42.92	-0.43	-0.08
370	SLU 39	-2	-1463	5561	43.2	-0.45	-0.08
370	SLU 40	-2	-1463	5558	43.2	-0.46	-0.08
370	SLU 41	-2	-1489	5658	43.98	-0.45	-0.08
370	SLU 42	-2	-1489	5655	43.97	-0.46	-0.08
370	SLU 43	-2	-1399	5324	41.18	-0.39	-0.07
370	SLU 44	-2	-1398	5319	41.17	-0.4	-0.07
370	SLU 45	-2	-1437	5467	42.32	-0.4	-0.07
370	SLU 46	-2	-1437	5464	42.31	-0.41	-0.07
370	SLU 47	-2	-1424	5416	41.94	-0.4	-0.07
370	SLU 48	-2	-1463	5565	43.09	-0.4	-0.07
370	SLU 49	-2	-1463	5561	43.09	-0.41	-0.07
370	SLU 50	-2	-1451	5518	42.73	-0.39	-0.07
370	SLU 51	-2	-1450	5515	42.72	-0.4	-0.07
370	SLU 52	-2	-1541	5862	45.43	-0.46	-0.08
370	SLU 53	-2	-1580	6010	46.58	-0.46	-0.08
370	SLU 54	-2	-1580	6007	46.58	-0.46	-0.08
370	SLU 55	-2	-1567	5959	46.21	-0.46	-0.08
370	SLU 56	-2	-1606	6107	47.36	-0.46	-0.08
370	SLU 57	-2	-1606	6104	47.35	-0.46	-0.08
370	SLU 58	-2	-1594	6061	46.99	-0.45	-0.08
370	SLU 59	-2	-1594	6058	46.99	-0.46	-0.08
370	SLU 60	-2	-1604	6099	47.27	-0.48	-0.08
370	SLU 61	-2	-1603	6096	47.27	-0.48	-0.09



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
370	SLU 62	-2	-1630	6196	48.05	-0.48	-0.08
370	SLU 63	-2	-1629	6193	48.04	-0.48	-0.09
370	SLU 64	-2	-1543	5870	45.48	-0.45	-0.08
370	SLU 65	-2	-1542	5865	45.47	-0.45	-0.08
370	SLU 66	-2	-1582	6014	46.62	-0.45	-0.08
370	SLU 67	-2	-1581	6011	46.61	-0.46	-0.08
370	SLU 68	-2	-1569	5962	46.24	-0.45	-0.08
370	SLU 69	-2	-1608	6111	47.39	-0.45	-0.08
370	SLU 70	-2	-1607	6108	47.39	-0.46	-0.08
370	SLU 71	-2	-1596	6065	47.03	-0.45	-0.08
370	SLU 72	-2	-1595	6062	47.02	-0.45	-0.08
370	SLU 73	-3	-1686	6408	49.73	-0.51	-0.09
370	SLU 74	-3	-1725	6556	50.88	-0.51	-0.09
370	SLU 75	-3	-1724	6553	50.88	-0.52	-0.09
370	SLU 76	-3	-1712	6505	50.51	-0.51	-0.09
370	SLU 77	-3	-1751	6654	51.66	-0.51	-0.09
370	SLU 78	-3	-1750	6650	51.65	-0.52	-0.09
370	SLU 79	-3	-1739	6607	51.29	-0.5	-0.09
370	SLU 80	-3	-1738	6604	51.29	-0.51	-0.09
370	SLU 81	-3	-1748	6646	51.57	-0.53	-0.09
370	SLU 82	-3	-1747	6643	51.57	-0.54	-0.09
370	SLU 83	-3	-1774	6743	52.35	-0.53	-0.09
370	SLU 84	-3	-1774	6740	52.34	-0.53	-0.09
370	SLE RA 1	-2	-1155	4396	34.04	-0.33	-0.06
370	SLE RA 2	-2	-1155	4392	34.03	-0.34	-0.06
370	SLE RA 3	-2	-1181	4491	34.8	-0.34	-0.06
370	SLE RA 4	-2	-1181	4489	34.79	-0.34	-0.06
370	SLE RA 5	-2	-1172	4457	34.55	-0.34	-0.06
370	SLE RA 6	-2	-1198	4556	35.32	-0.34	-0.06
370	SLE RA 7	-2	-1198	4554	35.31	-0.34	-0.06
370	SLE RA 8	-2	-1190	4525	35.07	-0.33	-0.06
370	SLE RA 9	-2	-1190	4523	35.07	-0.34	-0.06
370	SLE RA 10	-2	-1250	4754	36.87	-0.38	-0.07
370	SLE RA 11	-2	-1277	4853	37.64	-0.38	-0.07
370	SLE RA 12	-2	-1276	4851	37.64	-0.38	-0.07
370	SLE RA 13	-2	-1268	4819	37.39	-0.38	-0.07
370	SLE RA 14	-2	-1294	4918	38.16	-0.37	-0.07
370	SLE RA 15	-2	-1294	4916	38.15	-0.38	-0.07
370	SLE RA 16	-2	-1286	4887	37.92	-0.37	-0.07
370	SLE RA 17	-2	-1285	4885	37.91	-0.37	-0.07
370	SLE RA 18	-2	-1292	4912	38.1	-0.39	-0.07
370	SLE RA 19	-2	-1292	4910	38.1	-0.39	-0.07
370	SLE RA 20	-2	-1309	4977	38.62	-0.39	-0.07
370	SLE RA 21	-2	-1309	4975	38.61	-0.39	-0.07
370	SLE FR 1	-2	-1155	4396	34.04	-0.33	-0.06
370	SLE FR 2	-2	-1155	4395	34.04	-0.33	-0.06
370	SLE FR 3	-2	-1162	4422	34.25	-0.33	-0.06
370	SLE FR 4	-2	-1196	4550	35.26	-0.35	-0.06
370	SLE FR 5	-2	-1203	4577	35.46	-0.35	-0.06
370	SLE FR 6	-2	-1224	4654	36.07	-0.36	-0.06
370	SLE QP 1	-2	-1155	4396	34.04	-0.33	-0.06
370	SLE QP 2	-2	-1196	4551	35.26	-0.35	-0.06
370	SLD 1	-9	-919	3668	26.06	-4.24	-0.6
370	SLD 2	-9	-919	3668	26.06	-4.24	-0.6
370	SLD 3	-10	-1243	4705	36.49	-4.71	-0.68
370	SLD 4	-10	-1243	4705	36.49	-4.71	-0.68
370	SLD 5	-1	-623	2713	16.68	-0.8	-0.11
370	SLD 6	-1	-623	2713	16.68	-0.8	-0.11
370	SLD 7	-7	-1701	6170	51.45	-2.37	-0.36
370	SLD 8	-7	-1701	6170	51.45	-2.37	-0.36
370	SLD 9	3	-692	2932	19.07	1.67	0.24
370	SLD 10	3	-692	2932	19.07	1.67	0.24
370	SLD 11	-2	-1770	6388	53.84	0.11	-0.01
370	SLD 12	-2	-1770	6388	53.84	0.11	-0.01
370	SLD 13	7	-1150	4396	34.02	4.01	0.56
370	SLD 14	7	-1150	4396	34.02	4.01	0.56
370	SLD 15	5	-1474	5433	44.46	3.54	0.48
370	SLD 16	5	-1474	5433	44.46	3.54	0.48
370	SLV 1	-19	-543	2468	13.58	-9.52	-1.34
370	SLV 2	-19	-543	2468	13.58	-9.52	-1.34
370	SLV 3	-23	-1308	4923	38.26	-10.7	-1.53
370	SLV 4	-23	-1308	4923	38.26	-10.7	-1.53
370	SLV 5	0	160	202	-8.68	-1.32	-0.17
370	SLV 6	0	160	202	-8.68	-1.32	-0.17
370	SLV 7	-15	-2390	8386	73.59	-5.24	-0.78
370	SLV 8	-15	-2390	8386	73.59	-5.24	-0.78
370	SLV 9	11	-3	715	-3.08	4.54	0.66
370	SLV 10	11	-3	715	-3.08	4.54	0.66
370	SLV 11	-3	-2553	8899	79.19	0.62	0.04
370	SLV 12	-3	-2553	8899	79.19	0.62	0.04
370	SLV 13	20	-1085	4179	32.25	10	1.41
370	SLV 14	20	-1085	4179	32.25	10	1.41
370	SLV 15	15	-1850	6634	56.93	8.82	1.22
370	SLV 16	15	-1850	6634	56.93	8.82	1.22
2868	SLU 1	0	0	20704	-1083.53	1062.48	0
2868	SLU 2	0	0	22187	-1207.14	1167.9	0
2868	SLU 3	0	0	21334	-1118.32	1097.09	0
2868	SLU 4	0	0	22224	-1192.49	1160.35	0
2868	SLU 5	0	0	22604	-1229.85	1190.57	0
2868	SLU 6	0	0	21751	-1141.03	1119.76	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
2868	SLU 7	0	0	22641	-1215.19	1183.02	0
2868	SLU 8	0	0	21538	-1128.95	1107.82	0
2868	SLU 9	0	0	22428	-1203.12	1171.07	0
2868	SLU 10	0	0	24897	-1346.72	1302.51	0
2868	SLU 11	0	0	24044	-1257.9	1231.7	0
2868	SLU 12	0	0	24934	-1332.06	1294.96	0
2868	SLU 13	0	0	25314	-1369.43	1325.18	0
2868	SLU 14	0	0	24461	-1280.61	1254.37	0
2868	SLU 15	0	0	25351	-1354.77	1317.63	0
2868	SLU 16	0	0	24248	-1268.53	1242.43	0
2868	SLU 17	0	0	25138	-1342.7	1305.68	0
2868	SLU 18	0	0	24575	-1282.93	1254.78	0
2868	SLU 19	0	0	25466	-1357.1	1318.03	0
2868	SLU 20	0	0	24993	-1305.64	1277.45	0
2868	SLU 21	0	0	25883	-1379.81	1340.7	0
2868	SLU 22	0	0	23303	-1220.22	1195.23	0
2868	SLU 23	0	0	24786	-1343.83	1300.65	0
2868	SLU 24	0	0	23932	-1255.01	1229.84	0
2868	SLU 25	0	0	24822	-1329.18	1293.1	0
2868	SLU 26	0	0	25203	-1366.54	1323.32	0
2868	SLU 27	0	0	24349	-1277.72	1252.51	0
2868	SLU 28	0	0	25239	-1351.88	1315.77	0
2868	SLU 29	0	0	24137	-1265.64	1240.57	0
2868	SLU 30	0	0	25027	-1339.81	1303.82	0
2868	SLU 31	0	0	27496	-1483.41	1435.26	0
2868	SLU 32	0	0	26642	-1394.59	1364.45	0
2868	SLU 33	0	0	27532	-1468.75	1427.71	0
2868	SLU 34	0	0	27913	-1506.12	1457.93	0
2868	SLU 35	0	0	27059	-1417.3	1387.12	0
2868	SLU 36	0	0	27949	-1491.46	1450.38	0
2868	SLU 37	0	0	26847	-1405.22	1375.18	0
2868	SLU 38	0	0	27737	-1479.39	1438.44	0
2868	SLU 39	0	0	27174	-1419.62	1387.53	0
2868	SLU 40	0	0	28064	-1493.79	1450.78	0
2868	SLU 41	0	0	27591	-1442.33	1410.2	0
2868	SLU 42	0	0	28481	-1516.5	1473.45	0
2868	SLU 43	0	0	26024	-1361.73	1335.7	0
2868	SLU 44	0	0	27508	-1485.34	1441.13	0
2868	SLU 45	0	0	26654	-1396.51	1370.32	0
2868	SLU 46	0	0	27544	-1470.68	1433.58	0
2868	SLU 47	0	0	27925	-1508.05	1463.8	0
2868	SLU 48	0	0	27071	-1419.22	1392.99	0
2868	SLU 49	0	0	27961	-1493.39	1456.25	0
2868	SLU 50	0	0	26858	-1407.15	1381.05	0
2868	SLU 51	0	0	27748	-1481.31	1444.3	0
2868	SLU 52	0	0	30218	-1624.92	1575.74	0
2868	SLU 53	0	0	29364	-1536.09	1504.93	0
2868	SLU 54	0	0	30254	-1610.26	1568.19	0
2868	SLU 55	0	0	30635	-1647.63	1598.41	0
2868	SLU 56	0	0	29781	-1558.8	1527.6	0
2868	SLU 57	0	0	30671	-1632.97	1590.86	0
2868	SLU 58	0	0	29568	-1546.73	1515.66	0
2868	SLU 59	0	0	30458	-1620.89	1578.91	0
2868	SLU 60	0	0	29896	-1561.13	1528.01	0
2868	SLU 61	0	0	30786	-1635.29	1591.26	0
2868	SLU 62	0	0	30313	-1583.84	1550.68	0
2868	SLU 63	0	0	31203	-1658	1613.93	0
2868	SLU 64	0	0	28623	-1498.42	1468.45	0
2868	SLU 65	0	0	30106	-1622.03	1573.88	0
2868	SLU 66	0	0	29253	-1533.2	1503.07	0
2868	SLU 67	0	0	30143	-1607.37	1566.33	0
2868	SLU 68	0	0	30524	-1644.74	1596.55	0
2868	SLU 69	0	0	29670	-1555.91	1525.74	0
2868	SLU 70	0	0	30560	-1630.08	1589	0
2868	SLU 71	0	0	29457	-1543.84	1513.8	0
2868	SLU 72	0	0	30347	-1618	1577.05	0
2868	SLU 73	0	0	32816	-1761.61	1708.49	0
2868	SLU 74	0	0	31963	-1672.78	1637.68	0
2868	SLU 75	0	0	32853	-1746.95	1700.94	0
2868	SLU 76	0	0	33234	-1784.32	1731.16	0
2868	SLU 77	0	0	32380	-1695.49	1660.35	0
2868	SLU 78	0	0	33270	-1769.66	1723.61	0
2868	SLU 79	0	0	32167	-1683.41	1648.41	0
2868	SLU 80	0	0	33057	-1757.58	1711.66	0
2868	SLU 81	0	0	32495	-1697.82	1660.76	0
2868	SLU 82	0	0	33385	-1771.98	1724.01	0
2868	SLU 83	0	0	32912	-1720.53	1683.43	0
2868	SLU 84	0	0	33802	-1794.69	1746.68	0
2868	SLE RA 1	0	0	21447	-1122.59	1100.4	0
2868	SLE RA 2	0	0	22436	-1205	1170.69	0
2868	SLE RA 3	0	0	21866	-1145.78	1123.48	0
2868	SLE RA 4	0	0	22460	-1195.22	1165.65	0
2868	SLE RA 5	0	0	22714	-1220.13	1185.8	0
2868	SLE RA 6	0	0	22144	-1160.92	1138.6	0
2868	SLE RA 7	0	0	22738	-1210.36	1180.77	0
2868	SLE RA 8	0	0	22003	-1152.87	1130.63	0
2868	SLE RA 9	0	0	22596	-1202.31	1172.8	0
2868	SLE RA 10	0	0	24242	-1298.05	1260.43	0
2868	SLE RA 11	0	0	23673	-1238.83	1213.22	0
2868	SLE RA 12	0	0	24266	-1288.28	1255.39	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
2868	SLE RA 13	0	0	24520	-1313.19	1275.54	0
2868	SLE RA 14	0	0	23951	-1253.97	1228.34	0
2868	SLE RA 15	0	0	24544	-1303.41	1270.51	0
2868	SLE RA 16	0	0	23809	-1245.92	1220.37	0
2868	SLE RA 17	0	0	24403	-1295.36	1262.54	0
2868	SLE RA 18	0	0	24028	-1255.52	1228.61	0
2868	SLE RA 19	0	0	24621	-1304.96	1270.78	0
2868	SLE RA 20	0	0	24306	-1270.66	1243.72	0
2868	SLE RA 21	0	0	24899	-1320.1	1285.89	0
2868	SLE FR 1	0	0	21447	-1122.59	1100.4	0
2868	SLE FR 2	0	0	21644	-1139.07	1114.46	0
2868	SLE FR 3	0	0	21558	-1128.64	1106.45	0
2868	SLE FR 4	0	0	22419	-1178.95	1152.92	0
2868	SLE FR 5	0	0	22332	-1168.52	1144.91	0
2868	SLE FR 6	0	0	22737	-1189.05	1164.5	0
2868	SLE QP 1	0	0	21447	-1122.59	1100.4	0
2868	SLE QP 2	0	0	22221	-1162.47	1138.86	0
2868	SLD 1	0	0	31767	-1660.07	1649.96	0
2868	SLD 2	0	0	31767	-1660.07	1649.96	0
2868	SLD 3	0	0	29420	-1524.5	1527.13	0
2868	SLD 4	0	0	29420	-1524.5	1527.13	0
2868	SLD 5	0	0	28644	-1517.36	1478.48	0
2868	SLD 6	0	0	28644	-1517.36	1478.48	0
2868	SLD 7	0	0	20821	-1065.46	1069.06	0
2868	SLD 8	0	0	20821	-1065.46	1069.06	0
2868	SLD 9	0	0	23620	-1259.47	1208.67	0
2868	SLD 10	0	0	23620	-1259.47	1208.67	0
2868	SLD 11	0	0	15798	-807.57	799.25	0
2868	SLD 12	0	0	15798	-807.57	799.25	0
2868	SLD 13	0	0	15021	-800.44	750.6	0
2868	SLD 14	0	0	15021	-800.44	750.6	0
2868	SLD 15	0	0	12674	-664.87	627.77	0
2868	SLD 16	0	0	12674	-664.87	627.77	0
2868	SLV 1	0	0	44552	-2331.38	2338.92	0
2868	SLV 2	0	0	44552	-2331.38	2338.92	0
2868	SLV 3	0	0	39088	-2006.95	2045.96	0
2868	SLV 4	0	0	39088	-2006.95	2045.96	0
2868	SLV 5	0	0	37208	-2005.2	1943.22	0
2868	SLV 6	0	0	37208	-2005.2	1943.22	0
2868	SLV 7	0	0	18994	-923.75	966.66	0
2868	SLV 8	0	0	18994	-923.75	966.66	0
2868	SLV 9	0	0	25448	-1401.19	1311.07	0
2868	SLV 10	0	0	25448	-1401.19	1311.07	0
2868	SLV 11	0	0	7234	-319.73	334.51	0
2868	SLV 12	0	0	7234	-319.73	334.51	0
2868	SLV 13	0	0	5354	-317.99	231.77	0
2868	SLV 14	0	0	5354	-317.99	231.77	0
2868	SLV 15	0	0	-111	6.45	-61.19	0
2868	SLV 16	0	0	-111	6.45	-61.19	0
3179	SLU 1	0	0	18163	958.18	937.19	0
3179	SLU 2	0	0	17569	928.96	909.78	0
3179	SLU 3	0	0	18846	995.12	974.13	0
3179	SLU 4	0	0	18490	977.58	957.69	0
3179	SLU 5	0	0	18093	956.48	937.57	0
3179	SLU 6	0	0	19370	1022.64	1001.92	0
3179	SLU 7	0	0	19014	1005.11	985.47	0
3179	SLU 8	0	0	19212	1013.22	992.76	0
3179	SLU 9	0	0	18855	995.69	976.31	0
3179	SLU 10	0	0	19795	1042.94	1018.52	0
3179	SLU 11	0	0	21072	1109.1	1082.87	0
3179	SLU 12	0	0	20715	1091.56	1066.42	0
3179	SLU 13	0	0	20319	1070.46	1046.3	0
3179	SLU 14	0	0	21596	1136.62	1110.65	0
3179	SLU 15	0	0	21240	1119.08	1094.2	0
3179	SLU 16	0	0	21437	1127.2	1101.49	0
3179	SLU 17	0	0	21081	1109.67	1085.05	0
3179	SLU 18	0	0	21343	1121.01	1092.53	0
3179	SLU 19	0	0	20986	1103.47	1076.08	0
3179	SLU 20	0	0	21867	1148.53	1120.31	0
3179	SLU 21	0	0	21511	1130.99	1103.86	0
3179	SLU 22	0	0	20401	1075.03	1049.71	0
3179	SLU 23	0	0	19807	1045.81	1022.3	0
3179	SLU 24	0	0	21084	1111.97	1086.65	0
3179	SLU 25	0	0	20727	1094.43	1070.21	0
3179	SLU 26	0	0	20331	1073.33	1050.09	0
3179	SLU 27	0	0	21608	1139.49	1114.44	0
3179	SLU 28	0	0	21251	1121.95	1097.99	0
3179	SLU 29	0	0	21449	1130.07	1105.28	0
3179	SLU 30	0	0	21093	1112.53	1088.83	0
3179	SLU 31	0	0	22032	1159.78	1131.04	0
3179	SLU 32	0	0	23310	1225.94	1195.39	0
3179	SLU 33	0	0	22953	1208.41	1178.94	0
3179	SLU 34	0	0	22557	1187.3	1158.82	0
3179	SLU 35	0	0	23834	1253.47	1223.17	0
3179	SLU 36	0	0	23477	1235.93	1206.72	0
3179	SLU 37	0	0	23675	1244.05	1214.01	0
3179	SLU 38	0	0	23319	1226.51	1197.57	0
3179	SLU 39	0	0	23580	1237.85	1205.05	0
3179	SLU 40	0	0	23224	1220.32	1188.6	0
3179	SLU 41	0	0	24105	1265.37	1232.83	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
3179	SLU 42	0	0	23748	1247.84	1216.38	0
3179	SLU 43	0	0	22845	1205.57	1179.77	0
3179	SLU 44	0	0	22251	1176.35	1152.36	0
3179	SLU 45	0	0	23528	1242.51	1216.71	0
3179	SLU 46	0	0	23171	1224.98	1200.27	0
3179	SLU 47	0	0	22775	1203.87	1180.15	0
3179	SLU 48	0	0	24052	1270.03	1244.5	0
3179	SLU 49	0	0	23696	1252.5	1228.05	0
3179	SLU 50	0	0	23893	1260.61	1235.34	0
3179	SLU 51	0	0	23537	1243.08	1218.89	0
3179	SLU 52	0	0	24476	1290.33	1261.1	0
3179	SLU 53	0	0	25754	1356.49	1325.45	0
3179	SLU 54	0	0	25397	1338.96	1309	0
3179	SLU 55	0	0	25001	1317.85	1288.88	0
3179	SLU 56	0	0	26278	1384.01	1353.23	0
3179	SLU 57	0	0	25921	1366.48	1336.78	0
3179	SLU 58	0	0	26119	1374.59	1344.07	0
3179	SLU 59	0	0	25763	1357.06	1327.63	0
3179	SLU 60	0	0	26025	1368.4	1335.11	0
3179	SLU 61	0	0	25668	1350.87	1318.66	0
3179	SLU 62	0	0	26549	1395.92	1362.89	0
3179	SLU 63	0	0	26192	1378.39	1346.44	0
3179	SLU 64	0	0	25082	1322.42	1292.3	0
3179	SLU 65	0	0	24488	1293.2	1264.88	0
3179	SLU 66	0	0	25765	1359.36	1329.23	0
3179	SLU 67	0	0	25409	1341.82	1312.79	0
3179	SLU 68	0	0	25012	1320.72	1292.67	0
3179	SLU 69	0	0	26290	1386.88	1357.02	0
3179	SLU 70	0	0	25933	1369.34	1340.57	0
3179	SLU 71	0	0	26131	1377.46	1347.86	0
3179	SLU 72	0	0	25774	1359.93	1331.41	0
3179	SLU 73	0	0	26714	1407.18	1373.62	0
3179	SLU 74	0	0	27991	1473.34	1437.97	0
3179	SLU 75	0	0	27635	1455.8	1421.52	0
3179	SLU 76	0	0	27238	1434.7	1401.4	0
3179	SLU 77	0	0	28516	1500.86	1465.75	0
3179	SLU 78	0	0	28159	1483.32	1449.3	0
3179	SLU 79	0	0	28357	1491.44	1456.59	0
3179	SLU 80	0	0	28000	1473.91	1440.15	0
3179	SLU 81	0	0	28262	1485.25	1447.63	0
3179	SLU 82	0	0	27906	1467.71	1431.18	0
3179	SLU 83	0	0	28786	1512.77	1475.41	0
3179	SLU 84	0	0	28430	1495.23	1458.96	0
3179	SLE RA 1	0	0	18802	991.56	969.34	0
3179	SLE RA 2	0	0	18406	972.08	951.07	0
3179	SLE RA 3	0	0	19258	1016.19	993.97	0
3179	SLE RA 4	0	0	19020	1004.5	983	0
3179	SLE RA 5	0	0	18756	990.43	969.59	0
3179	SLE RA 6	0	0	19607	1034.54	1012.49	0
3179	SLE RA 7	0	0	19370	1022.85	1001.53	0
3179	SLE RA 8	0	0	19501	1028.26	1006.39	0
3179	SLE RA 9	0	0	19264	1016.57	995.42	0
3179	SLE RA 10	0	0	19890	1048.07	1023.56	0
3179	SLE RA 11	0	0	20742	1092.18	1066.46	0
3179	SLE RA 12	0	0	20504	1080.49	1055.49	0
3179	SLE RA 13	0	0	20240	1066.42	1042.08	0
3179	SLE RA 14	0	0	21091	1110.52	1084.98	0
3179	SLE RA 15	0	0	20853	1098.83	1074.01	0
3179	SLE RA 16	0	0	20985	1104.24	1078.87	0
3179	SLE RA 17	0	0	20748	1092.56	1067.91	0
3179	SLE RA 18	0	0	20922	1100.12	1072.9	0
3179	SLE RA 19	0	0	20685	1088.43	1061.93	0
3179	SLE RA 20	0	0	21272	1118.46	1091.42	0
3179	SLE RA 21	0	0	21034	1106.77	1080.46	0
3179	SLE FR 1	0	0	18802	991.56	969.34	0
3179	SLE FR 2	0	0	18723	987.67	965.69	0
3179	SLE FR 3	0	0	18942	998.9	976.75	0
3179	SLE FR 4	0	0	19359	1020.23	996.75	0
3179	SLE FR 5	0	0	19578	1031.47	1007.82	0
3179	SLE FR 6	0	0	19862	1045.84	1021.12	0
3179	SLE QP 1	0	0	18802	991.56	969.34	0
3179	SLE QP 2	0	0	19438	1024.13	1000.41	0
3179	SLD 1	0	0	23982	1258.14	1254.46	0
3179	SLD 2	0	0	23982	1258.14	1254.46	0
3179	SLD 3	0	0	26447	1396.1	1377.07	0
3179	SLD 4	0	0	26447	1396.1	1377.07	0
3179	SLD 5	0	0	17062	885.1	890.67	0
3179	SLD 6	0	0	17062	885.1	890.67	0
3179	SLD 7	0	0	25280	1344.95	1299.37	0
3179	SLD 8	0	0	25280	1344.95	1299.37	0
3179	SLD 9	0	0	13596	703.31	701.45	0
3179	SLD 10	0	0	13596	703.31	701.45	0
3179	SLD 11	0	0	21814	1163.16	1110.15	0
3179	SLD 12	0	0	21814	1163.16	1110.15	0
3179	SLD 13	0	0	12429	652.16	623.75	0
3179	SLD 14	0	0	12429	652.16	623.75	0
3179	SLD 15	0	0	14895	790.12	746.36	0
3179	SLD 16	0	0	14895	790.12	746.36	0
3179	SLV 1	0	0	30092	1572.25	1596.13	0
3179	SLV 2	0	0	30092	1572.25	1596.13	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
3179	SLV 3	0	0	35803	1896.03	1883.05	0
3179	SLV 4	0	0	35803	1896.03	1883.05	0
3179	SLV 5	0	0	13972	697.51	743.97	0
3179	SLV 6	0	0	13972	697.51	743.97	0
3179	SLV 7	0	0	33010	1776.76	1700.36	0
3179	SLV 8	0	0	33010	1776.76	1700.36	0
3179	SLV 9	0	0	5867	271.5	300.46	0
3179	SLV 10	0	0	5867	271.5	300.46	0
3179	SLV 11	0	0	24904	1350.75	1256.85	0
3179	SLV 12	0	0	24904	1350.75	1256.85	0
3179	SLV 13	0	0	3074	152.23	117.77	0
3179	SLV 14	0	0	3074	152.23	117.77	0
3179	SLV 15	0	0	8785	476.01	404.69	0
3179	SLV 16	0	0	8785	476.01	404.69	0
6964	SLU 1	0	0	39376	201.41	-235.7	0
6964	SLU 2	0	0	42390	214.96	-256.78	0
6964	SLU 3	0	0	40705	208.29	-243.28	0
6964	SLU 4	0	0	42513	216.42	-255.93	0
6964	SLU 5	0	0	43244	219.37	-261.59	0
6964	SLU 6	0	0	41559	212.7	-248.08	0
6964	SLU 7	0	0	43367	220.83	-260.74	0
6964	SLU 8	0	0	41084	210.23	-245.31	0
6964	SLU 9	0	0	42892	218.36	-257.96	0
6964	SLU 10	0	0	47598	240.92	-289.11	0
6964	SLU 11	0	0	45913	234.25	-275.61	0
6964	SLU 12	0	0	47721	242.38	-288.26	0
6964	SLU 13	0	0	48452	245.33	-293.91	0
6964	SLU 14	0	0	46767	238.67	-280.41	0
6964	SLU 15	0	0	48575	246.8	-293.06	0
6964	SLU 16	0	0	46292	236.2	-277.63	0
6964	SLU 17	0	0	48101	244.33	-290.28	0
6964	SLU 18	0	0	46816	238.5	-281.88	0
6964	SLU 19	0	0	48625	246.63	-294.53	0
6964	SLU 20	0	0	47670	242.91	-286.68	0
6964	SLU 21	0	0	49479	251.04	-299.33	0
6964	SLU 22	0	0	44473	227.02	-266.92	0
6964	SLU 23	0	0	47487	240.57	-288	0
6964	SLU 24	0	0	45802	233.9	-274.5	0
6964	SLU 25	0	0	47610	242.03	-287.15	0
6964	SLU 26	0	0	48341	244.98	-292.81	0
6964	SLU 27	0	0	46656	238.32	-279.3	0
6964	SLU 28	0	0	48464	246.45	-291.95	0
6964	SLU 29	0	0	46181	235.85	-276.53	0
6964	SLU 30	0	0	47989	243.98	-289.18	0
6964	SLU 31	0	0	52695	266.54	-320.33	0
6964	SLU 32	0	0	51010	259.87	-306.82	0
6964	SLU 33	0	0	52818	268	-319.48	0
6964	SLU 34	0	0	53549	270.95	-325.13	0
6964	SLU 35	0	0	51864	264.28	-311.63	0
6964	SLU 36	0	0	53672	272.41	-324.28	0
6964	SLU 37	0	0	51389	261.81	-308.85	0
6964	SLU 38	0	0	53198	269.94	-321.5	0
6964	SLU 39	0	0	51913	264.11	-313.1	0
6964	SLU 40	0	0	53722	272.24	-325.75	0
6964	SLU 41	0	0	52767	268.53	-317.9	0
6964	SLU 42	0	0	54576	276.66	-330.55	0
6964	SLU 43	0	0	49441	253.05	-295.7	0
6964	SLU 44	0	0	52455	266.6	-316.79	0
6964	SLU 45	0	0	50770	259.93	-303.29	0
6964	SLU 46	0	0	52578	268.06	-315.94	0
6964	SLU 47	0	0	53309	271.01	-321.59	0
6964	SLU 48	0	0	51624	264.34	-308.09	0
6964	SLU 49	0	0	53432	272.47	-320.74	0
6964	SLU 50	0	0	51149	261.87	-305.31	0
6964	SLU 51	0	0	52958	270	-317.96	0
6964	SLU 52	0	0	57664	292.56	-349.11	0
6964	SLU 53	0	0	55978	285.89	-335.61	0
6964	SLU 54	0	0	57787	294.02	-348.26	0
6964	SLU 55	0	0	58518	296.97	-353.92	0
6964	SLU 56	0	0	56832	290.31	-340.42	0
6964	SLU 57	0	0	58641	298.44	-353.07	0
6964	SLU 58	0	0	56357	287.84	-337.64	0
6964	SLU 59	0	0	58166	295.97	-350.29	0
6964	SLU 60	0	0	56882	290.14	-341.88	0
6964	SLU 61	0	0	58690	298.27	-354.53	0
6964	SLU 62	0	0	57736	294.55	-346.69	0
6964	SLU 63	0	0	59544	302.68	-359.34	0
6964	SLU 64	0	0	54538	278.66	-326.92	0
6964	SLU 65	0	0	57552	292.21	-348.01	0
6964	SLU 66	0	0	55867	285.54	-334.5	0
6964	SLU 67	0	0	57675	293.67	-347.16	0
6964	SLU 68	0	0	58406	296.62	-352.81	0
6964	SLU 69	0	0	56721	289.96	-339.31	0
6964	SLU 70	0	0	58529	298.09	-351.96	0
6964	SLU 71	0	0	56246	287.49	-336.53	0
6964	SLU 72	0	0	58055	295.62	-349.18	0
6964	SLU 73	0	0	62760	318.17	-380.33	0
6964	SLU 74	0	0	61075	311.51	-366.83	0
6964	SLU 75	0	0	62884	319.64	-379.48	0
6964	SLU 76	0	0	63614	322.59	-385.14	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
6964	SLU 77	0	0	61929	315.92	-371.63	0
6964	SLU 78	0	0	63738	324.05	-384.29	0
6964	SLU 79	0	0	61454	313.45	-368.86	0
6964	SLU 80	0	0	63263	321.58	-381.51	0
6964	SLU 81	0	0	61979	315.75	-373.1	0
6964	SLU 82	0	0	63787	323.88	-385.75	0
6964	SLU 83	0	0	62833	320.17	-377.91	0
6964	SLU 84	0	0	64641	328.3	-390.56	0
6964	SLE RA 1	0	0	40832	208.73	-244.62	0
6964	SLE RA 2	0	0	42842	217.76	-258.67	0
6964	SLE RA 3	0	0	41718	213.31	-249.67	0
6964	SLE RA 4	0	0	42924	218.73	-258.11	0
6964	SLE RA 5	0	0	43411	220.7	-261.88	0
6964	SLE RA 6	0	0	42287	216.26	-252.87	0
6964	SLE RA 7	0	0	43493	221.68	-261.31	0
6964	SLE RA 8	0	0	41971	214.61	-251.02	0
6964	SLE RA 9	0	0	43177	220.03	-259.46	0
6964	SLE RA 10	0	0	46314	235.07	-280.22	0
6964	SLE RA 11	0	0	45190	230.62	-271.22	0
6964	SLE RA 12	0	0	46396	236.04	-279.66	0
6964	SLE RA 13	0	0	46883	238.01	-283.43	0
6964	SLE RA 14	0	0	45760	233.57	-274.43	0
6964	SLE RA 15	0	0	46965	238.99	-282.86	0
6964	SLE RA 16	0	0	45443	231.92	-272.57	0
6964	SLE RA 17	0	0	46649	237.34	-281.01	0
6964	SLE RA 18	0	0	45792	233.45	-275.4	0
6964	SLE RA 19	0	0	46998	238.87	-283.84	0
6964	SLE RA 20	0	0	46362	236.4	-278.61	0
6964	SLE RA 21	0	0	47567	241.82	-287.04	0
6964	SLE FR 1	0	0	40832	208.73	-244.62	0
6964	SLE FR 2	0	0	41234	210.53	-247.43	0
6964	SLE FR 3	0	0	41060	209.9	-245.9	0
6964	SLE FR 4	0	0	42722	217.95	-256.66	0
6964	SLE FR 5	0	0	42548	217.32	-255.13	0
6964	SLE FR 6	0	0	43312	221.09	-260.01	0
6964	SLE QP 1	0	0	40832	208.73	-244.62	0
6964	SLE QP 2	0	0	42320	216.14	-253.85	0
6964	SLD 1	0	0	57846	293.29	-318.7	0
6964	SLD 2	0	0	57846	293.29	-318.7	0
6964	SLD 3	0	0	53574	275.94	-292.29	0
6964	SLD 4	0	0	53574	275.94	-292.29	0
6964	SLD 5	0	0	53458	265.6	-313.37	0
6964	SLD 6	0	0	53458	265.6	-313.37	0
6964	SLD 7	0	0	39217	207.77	-225.32	0
6964	SLD 8	0	0	39217	207.77	-225.32	0
6964	SLD 9	0	0	45424	224.52	-282.38	0
6964	SLD 10	0	0	45424	224.52	-282.38	0
6964	SLD 11	0	0	31183	166.69	-194.34	0
6964	SLD 12	0	0	31183	166.69	-194.34	0
6964	SLD 13	0	0	31067	156.35	-215.42	0
6964	SLD 14	0	0	31067	156.35	-215.42	0
6964	SLD 15	0	0	26795	139	-189.01	0
6964	SLD 16	0	0	26795	139	-189.01	0
6964	SLV 1	0	0	78716	397.13	-406.27	0
6964	SLV 2	0	0	78716	397.13	-406.27	0
6964	SLV 3	0	0	68638	355.89	-343.35	0
6964	SLV 4	0	0	68638	355.89	-343.35	0
6964	SLV 5	0	0	68524	332.99	-395	0
6964	SLV 6	0	0	68524	332.99	-395	0
6964	SLV 7	0	0	34931	195.52	-185.29	0
6964	SLV 8	0	0	34931	195.52	-185.29	0
6964	SLV 9	0	0	49710	236.77	-322.42	0
6964	SLV 10	0	0	49710	236.77	-322.42	0
6964	SLV 11	0	0	16117	99.3	-112.71	0
6964	SLV 12	0	0	16117	99.3	-112.71	0
6964	SLV 13	0	0	16002	76.39	-164.35	0
6964	SLV 14	0	0	16002	76.39	-164.35	0
6964	SLV 15	0	0	5924	35.15	-101.44	0
6964	SLV 16	0	0	5924	35.15	-101.44	0
7245	SLU 1	0	0	36346	-201.7	-230.43	0
7245	SLU 2	0	0	35200	-197.44	-224.34	0
7245	SLU 3	0	0	37800	-209.75	-238.74	0
7245	SLU 4	0	0	37112	-207.2	-235.09	0
7245	SLU 5	0	0	36264	-203.35	-230.04	0
7245	SLU 6	0	0	38865	-215.66	-244.44	0
7245	SLU 7	0	0	38177	-213.1	-240.79	0
7245	SLU 8	0	0	38475	-213.51	-241.83	0
7245	SLU 9	0	0	37788	-210.96	-238.18	0
7245	SLU 10	0	0	39787	-221.49	-255.07	0
7245	SLU 11	0	0	42388	-233.8	-269.46	0
7245	SLU 12	0	0	41700	-231.24	-265.81	0
7245	SLU 13	0	0	40852	-227.39	-260.77	0
7245	SLU 14	0	0	43452	-239.7	-275.16	0
7245	SLU 15	0	0	42764	-237.15	-271.51	0
7245	SLU 16	0	0	43063	-237.56	-272.55	0
7245	SLU 17	0	0	42375	-235	-268.9	0
7245	SLU 18	0	0	42900	-236.05	-274.32	0
7245	SLU 19	0	0	42212	-233.5	-270.67	0
7245	SLU 20	0	0	43964	-241.96	-280.02	0
7245	SLU 21	0	0	43277	-239.4	-276.37	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
7245	SLU 22	0	0	40981	-226.31	-260.87	0
7245	SLU 23	0	0	39834	-222.05	-254.78	0
7245	SLU 24	0	0	42435	-234.36	-269.18	0
7245	SLU 25	0	0	41747	-231.81	-265.53	0
7245	SLU 26	0	0	40899	-227.96	-260.48	0
7245	SLU 27	0	0	43499	-240.27	-274.88	0
7245	SLU 28	0	0	42812	-237.72	-271.23	0
7245	SLU 29	0	0	43110	-238.13	-272.26	0
7245	SLU 30	0	0	42422	-235.57	-268.61	0
7245	SLU 31	0	0	44422	-246.1	-285.51	0
7245	SLU 32	0	0	47022	-258.41	-299.9	0
7245	SLU 33	0	0	46334	-255.86	-296.25	0
7245	SLU 34	0	0	45487	-252.01	-291.21	0
7245	SLU 35	0	0	48087	-264.32	-305.6	0
7245	SLU 36	0	0	47399	-261.76	-301.95	0
7245	SLU 37	0	0	47697	-262.17	-302.99	0
7245	SLU 38	0	0	47010	-259.62	-299.34	0
7245	SLU 39	0	0	47534	-260.66	-304.76	0
7245	SLU 40	0	0	46846	-258.11	-301.11	0
7245	SLU 41	0	0	48599	-266.57	-310.46	0
7245	SLU 42	0	0	47911	-264.02	-306.81	0
7245	SLU 43	0	0	45661	-253.77	-289.12	0
7245	SLU 44	0	0	44515	-249.51	-283.04	0
7245	SLU 45	0	0	47115	-261.82	-297.43	0
7245	SLU 46	0	0	46427	-259.27	-293.78	0
7245	SLU 47	0	0	45579	-255.42	-288.74	0
7245	SLU 48	0	0	48180	-267.73	-303.13	0
7245	SLU 49	0	0	47492	-265.17	-299.48	0
7245	SLU 50	0	0	47790	-265.58	-300.52	0
7245	SLU 51	0	0	47102	-263.03	-296.87	0
7245	SLU 52	0	0	49102	-273.56	-313.76	0
7245	SLU 53	0	0	51702	-285.87	-328.16	0
7245	SLU 54	0	0	51015	-283.31	-324.5	0
7245	SLU 55	0	0	50167	-279.46	-319.46	0
7245	SLU 56	0	0	52767	-291.77	-333.85	0
7245	SLU 57	0	0	52079	-289.22	-330.2	0
7245	SLU 58	0	0	52378	-289.63	-331.24	0
7245	SLU 59	0	0	51690	-287.07	-327.59	0
7245	SLU 60	0	0	52214	-288.12	-333.01	0
7245	SLU 61	0	0	51527	-285.57	-329.36	0
7245	SLU 62	0	0	53279	-294.03	-338.71	0
7245	SLU 63	0	0	52591	-291.47	-335.06	0
7245	SLU 64	0	0	50296	-278.38	-319.56	0
7245	SLU 65	0	0	49149	-274.12	-313.47	0
7245	SLU 66	0	0	51750	-286.43	-327.87	0
7245	SLU 67	0	0	51062	-283.88	-324.22	0
7245	SLU 68	0	0	50214	-280.03	-319.17	0
7245	SLU 69	0	0	52814	-292.34	-333.57	0
7245	SLU 70	0	0	52126	-289.79	-329.92	0
7245	SLU 71	0	0	52425	-290.2	-330.96	0
7245	SLU 72	0	0	51737	-287.64	-327.31	0
7245	SLU 73	0	0	53737	-298.17	-344.2	0
7245	SLU 74	0	0	56337	-310.48	-358.59	0
7245	SLU 75	0	0	55649	-307.93	-354.94	0
7245	SLU 76	0	0	54801	-304.08	-349.9	0
7245	SLU 77	0	0	57402	-316.39	-364.29	0
7245	SLU 78	0	0	56714	-313.83	-360.64	0
7245	SLU 79	0	0	57012	-314.24	-361.68	0
7245	SLU 80	0	0	56325	-311.69	-358.03	0
7245	SLU 81	0	0	56849	-312.73	-363.45	0
7245	SLU 82	0	0	56161	-310.18	-359.8	0
7245	SLU 83	0	0	57914	-318.64	-369.15	0
7245	SLU 84	0	0	57226	-316.09	-365.5	0
7245	SLE RA 1	0	0	37670	-208.73	-239.12	0
7245	SLE RA 2	0	0	36906	-205.89	-235.07	0
7245	SLE RA 3	0	0	38640	-214.1	-244.67	0
7245	SLE RA 4	0	0	38181	-212.4	-242.23	0
7245	SLE RA 5	0	0	37616	-209.83	-238.87	0
7245	SLE RA 6	0	0	39349	-218.04	-248.46	0
7245	SLE RA 7	0	0	38891	-216.33	-246.03	0
7245	SLE RA 8	0	0	39090	-216.61	-246.72	0
7245	SLE RA 9	0	0	38631	-214.9	-244.29	0
7245	SLE RA 10	0	0	39964	-221.92	-255.55	0
7245	SLE RA 11	0	0	41698	-230.13	-265.15	0
7245	SLE RA 12	0	0	41239	-228.43	-262.71	0
7245	SLE RA 13	0	0	40674	-225.86	-259.35	0
7245	SLE RA 14	0	0	42408	-234.07	-268.95	0
7245	SLE RA 15	0	0	41949	-232.36	-266.51	0
7245	SLE RA 16	0	0	42148	-232.64	-267.21	0
7245	SLE RA 17	0	0	41690	-230.93	-264.77	0
7245	SLE RA 18	0	0	42039	-231.63	-268.39	0
7245	SLE RA 19	0	0	41581	-229.93	-265.95	0
7245	SLE RA 20	0	0	42749	-235.57	-272.19	0
7245	SLE RA 21	0	0	42291	-233.87	-269.75	0
7245	SLE FR 1	0	0	37670	-208.73	-239.12	0
7245	SLE FR 2	0	0	37517	-208.16	-238.31	0
7245	SLE FR 3	0	0	37954	-210.31	-240.64	0
7245	SLE FR 4	0	0	38828	-215.03	-247.09	0
7245	SLE FR 5	0	0	39265	-217.18	-249.42	0
7245	SLE FR 6	0	0	39855	-220.18	-253.76	0



Nodo Ind.	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
7245	SLE QP 1	0	0	37670	-208.73	-239.12	0
7245	SLE QP 2	0	0	38981	-215.6	-247.9	0
7245	SLD 1	0	0	47750	-265.89	-282.1	0
7245	SLD 2	0	0	47750	-265.89	-282.1	0
7245	SLD 3	0	0	52063	-285.44	-308.54	0
7245	SLD 4	0	0	52063	-285.44	-308.54	0
7245	SLD 5	0	0	35070	-201.03	-218.06	0
7245	SLD 6	0	0	35070	-201.03	-218.06	0
7245	SLD 7	0	0	49447	-266.21	-306.2	0
7245	SLD 8	0	0	49447	-266.21	-306.2	0
7245	SLD 9	0	0	28515	-164.99	-189.61	0
7245	SLD 10	0	0	28515	-164.99	-189.61	0
7245	SLD 11	0	0	42892	-230.17	-277.75	0
7245	SLD 12	0	0	42892	-230.17	-277.75	0
7245	SLD 13	0	0	25899	-145.76	-187.27	0
7245	SLD 14	0	0	25899	-145.76	-187.27	0
7245	SLD 15	0	0	30212	-165.31	-213.71	0
7245	SLD 16	0	0	30212	-165.31	-213.71	0
7245	SLV 1	0	0	59526	-333.41	-327.97	0
7245	SLV 2	0	0	59526	-333.41	-327.97	0
7245	SLV 3	0	0	69633	-379.36	-390.07	0
7245	SLV 4	0	0	69633	-379.36	-390.07	0
7245	SLV 5	0	0	29814	-181.25	-177.74	0
7245	SLV 6	0	0	29814	-181.25	-177.74	0
7245	SLV 7	0	0	63507	-334.42	-384.74	0
7245	SLV 8	0	0	63507	-334.42	-384.74	0
7245	SLV 9	0	0	14455	-96.78	-111.07	0
7245	SLV 10	0	0	14455	-96.78	-111.07	0
7245	SLV 11	0	0	48148	-249.95	-318.07	0
7245	SLV 12	0	0	48148	-249.95	-318.07	0
7245	SLV 13	0	0	8329	-51.84	-105.74	0
7245	SLV 14	0	0	8329	-51.84	-105.74	0
7245	SLV 15	0	0	18436	-97.79	-167.84	0
7245	SLV 16	0	0	18436	-97.79	-167.84	0

1.3 Risposta modale

Modo: identificativo del modo di vibrare.

Periodo: periodo. [s]

Massa X: massa partecipante in direzione globale X. Il valore è adimensionale.

Massa Y: massa partecipante in direzione globale Y. Il valore è adimensionale.

Massa Z: massa partecipante in direzione globale Z. Il valore è adimensionale.

Massa rot. X: massa rotazionale partecipante attorno la direzione globale X. Il valore è adimensionale.

Massa rot. Y: massa rotazionale partecipante attorno la direzione globale Y. Il valore è adimensionale.

Massa rot. Z: massa rotazionale partecipante attorno la direzione globale Z. Il valore è adimensionale.

Massa sX: massa partecipante in direzione Sisma X. Il valore è adimensionale.

Massa sY: massa partecipante in direzione Sisma Y. Il valore è adimensionale.

Totale masse partecipanti:

Traslazione X: 0.876984

Traslazione Y: 0.916944

Traslazione Z: 0

Rotazione X: 0.849252

Rotazione Y: 0.92227

Rotazione Z: 0.720298

Modo	Periodo	Massa X	Massa Y	Massa Z	Massa rot. X	Massa rot. Y	Massa rot. Z	Massa sX	Massa sY
1	3.105236748	0.000001744	0.016554912	0	0.018703721	0.000001523	0.011320814	0.000001744	0.016554912
2	2.785009393	0.000000708	0.000374711	0	0.000979336	0.000000251	0.000244577	0.000000708	0.000374711
3	2.374890481	0.000000004	0.001393586	0	0.000711383	0.000000019	0.001036616	0.000000004	0.001393586
4	2.365980563	0.000013178	0.004850168	0	0.012604893	0.000026686	0.011574216	0.000013178	0.004850168
5	2.134653774	0.005157461	0.000044541	0	0.000053521	0.009106313	0.000461195	0.005157461	0.000044541
6	2.069725922	0.000006382	0.017792831	0	0.028648402	0.000007558	0.0109895	0.000006382	0.017792831
7	2.059164251	0.000017745	0.005864971	0	0.009115448	0.000022074	0.020368801	0.000017745	0.005864971
8	2.044025717	0.000000041	0.000077957	0	0.000029689	0.000000008	0.000031098	0.000000041	0.000077957
9	2.043181362	0.000340545	0.009381995	0	0.014391684	0.000549614	0.000148275	0.000340545	0.009381995
10	1.956752876	0.00607772	0.000073643	0	0.000136341	0.010435794	0.00125523	0.00607772	0.000073643
11	1.906553713	0.000005139	0.008052629	0	0.006680343	0.000002732	0.000054866	0.000005139	0.008052629
12	1.899249265	0.000009862	0.013516026	0	0.01256873	0.000002133	0.029061448	0.000009862	0.013516026
13	1.856781606	0.00002683	0.000281709	0	0.000356095	0.000043969	0.004254361	0.00002683	0.000281709
14	1.623836814	0.000000007	0.007806248	0	0.012580925	0.000000023	0.002954663	0.000000007	0.007806248
15	1.570324378	0.000018247	0.005540138	0	0.011147501	0.000017888	0.00491067	0.000018247	0.005540138
16	1.495373854	0.000037056	0.01940363	0	0.017394151	0.000000947	0.040082844	0.000037056	0.01940363
17	1.479408673	0.00006687	0.014389266	0	0.016449435	0.000006147	0.001096908	0.00006687	0.014389266
18	1.417537768	0.000000632	0.00575936	0	0.000015428	0.000002333	0.00380011	0.000000632	0.00575936
19	1.393718323	0.000030187	0.000001817	0	0.000326199	0.000067031	0.000508318	0.000030187	0.000001817
20	1.365954721	0.000039504	0.024102403	0	0.022151726	0.000002896	0.028193361	0.000039504	0.024102403
21	1.357114455	0.001401823	0.003599388	0	0.004661265	0.000420748	0.002802662	0.001401823	0.003599388
22	1.325452995	0.002075038	0.007399781	0	0.004095484	0.002030022	0.011064517	0.002075038	0.007399781
23	1.284430236	0.00144056	0.016358907	0	0.008233669	0.000751336	0.018102363	0.00144056	0.016358907
24	1.278863806	0.008205912	0.005169123	0	0.005014481	0.005359881	0.001083861	0.008205912	0.005169123
25	1.225314948	0.001791328	0.009457256	0	0.002900008	0.001678325	0.001991535	0.001791328	0.009457256



Modo	Periodo	Massa X	Massa Y	Massa Z	Massa rot. X	Massa rot. Y	Massa rot. Z	Massa sX	Massa sY
26	1.199145339	0.013118051	0.004024515	0	0.00401221	0.016002454	0.000031494	0.013118051	0.004024515
27	1.166507405	0.001881339	0.009459534	0	0.014620468	0.001259038	0.006571377	0.001881339	0.009459534
28	1.128190377	0.002009703	0.00260819	0	0.001766224	0.000001703	0.002880413	0.002009703	0.00260819
29	1.05453066	0.003995131	0.00180835	0	0.00038473	0.003884985	0.000027009	0.003995131	0.00180835
30	1.049570921	0.000011517	0.047751517	0	0.02780384	0.000006132	0.023771762	0.000011517	0.047751517
31	0.984491632	0.000097623	0.008334883	0	0.004310726	0.000256518	0.006277704	0.000097623	0.008334883
32	0.90775102	0.00880045	0.000000283	0	0.000511374	0.009239987	0.000000367	0.00880045	0.000000283
33	0.862483967	0.015137115	0.005435171	0	0.001653504	0.019450937	0.000606492	0.015137115	0.005435171
34	0.836759039	0.013083792	0.019233012	0	0.012091765	0.018698247	0.008573116	0.013083792	0.019233012
35	0.761764906	0.021006824	0.009969119	0	0.003835789	0.015974175	0.010700685	0.021006824	0.009969119
36	0.746513686	0.017800899	0.012577223	0	0.006164286	0.008596208	0.01026877	0.017800899	0.012577223
37	0.661597231	0.003757065	0.042261646	0	0.034378508	0.002324035	0.039623195	0.003757065	0.042261646
38	0.628219318	0.017268239	0.003646644	0	0.002049273	0.011386134	0.005911582	0.017268239	0.003646644
39	0.547301077	0.011656311	0.011136341	0	0.003161706	0.004977868	0.00825124	0.011656311	0.011136341
40	0.523416134	0.004374141	0.031692522	0	0.009959509	0.001493406	0.019900569	0.004374141	0.031692522
41	0.441572418	0.012465111	0.013231639	0	0.009069328	0.005862597	0.008088314	0.012465111	0.013231639
42	0.425296053	0.004818776	0.032641266	0	0.024242505	0.003109422	0.027320401	0.004818776	0.032641266
43	0.323316322	0.000240152	0.088197414	0	0.071501171	0.000218798	0.060628659	0.000240152	0.088197414
44	0.297927629	0.024079394	0.000549078	0	0.000416238	0.012158124	0.000266096	0.024079394	0.000549078
45	0.20498991	0.000243463	0.203127551	0	0.32379968	0.000223034	0.13648621	0.000243463	0.203127551
46	0.175876357	0.489962448	0.000250316	0	0.000365689	0.683287382	0.00094612	0.489962448	0.000250316
47	0.108855932	0.015210724	0.159744361	0	0.077986327	0.008527322	0.097272227	0.015210724	0.159744361
48	0.098341235	0.169146984	0.012003045	0	0.004589706	0.064642038	0.038437118	0.169146984	0.012003045
49	0.011859336	0.000054261	0.000000937	0	0.000104112	0.000068405	0.000061113	0.000054261	0.000000937
50	0.00852206	0.00000011	0.000012516	0	0.000523502	0.00008526	0.000003494	0.00000011	0.000012516

1.4 Equilibrio globale forze

Contributo: Nome attribuito al sistema risultante.

F_x: Componente X di forza del sistema risultante. [daN]

F_y: Componente Y di forza del sistema risultante. [daN]

F_z: Componente Z di forza del sistema risultante. [daN]

M_x: Componente di momento attorno l'asse X del sistema risultante. [daN*m]

M_y: Componente di momento attorno l'asse Y del sistema risultante. [daN*m]

M_z: Componente di momento attorno l'asse Z del sistema risultante. [daN*m]

Bilancio in condizione di carico: Pesi strutturali

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	-0.212	-3.604	-1275789.668	-1332011.62	-15807813.28	44.94
Reazioni	0.212	3.604	1275789.668	1332011.62	15807813.28	-44.94
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Permanenti portati

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	-281913.953	-379274.75	-3489426.08	0
Reazioni	0	0	281913.953	379274.75	3489426.08	0
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Variabile A

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	-208537.908	-254270.88	-2584139.24	0
Reazioni	0	0	208537.908	254270.88	2584139.24	0
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Neve

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	-34418.512	-45307.74	-420876.39	0
Reazioni	0	0	34418.512	45307.74	420876.39	0
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Variabile H

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	-26673.681	-37547.67	-327855.96	0
Reazioni	0	0	26673.681	37547.67	327855.96	0
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Vento

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	-6072.671	0	50802.8	0	75387.09
Reazioni	0	6072.671	0	-50802.8	0	-75387.09
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Sisma X SLV

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	492518.444	0	0	0	5256338.89	-553424.08
Reazioni	-492518.444	0	0	0	-5256338.89	553424.08
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0



Bilancio in condizione di carico: Sisma Y SLV

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	492518.444	0	-5256338.89	0	-6101231.27
Reazioni	0	-492518.444	0	5256338.89	0	6101231.27
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Sisma X SLD

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	210597.105	0	0	0	2247570.15	-236639.89
Reazioni	-210597.105	0	0	0	-2247570.15	236639.89
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Sisma Y SLD

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	210597.105	0	-2247570.15	0	-2608839.65
Reazioni	0	-210597.105	0	2247570.15	0	2608839.65
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Rig Ux

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	0	0	0	0
Reazioni	0	0	0	0	0	0
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Rig Uy

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	0	0	0	0
Reazioni	0	0	0	0	0	0
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Rig Rz

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	0	0	0	0
Reazioni	0	0	0	0	0	0
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

1.5 Risposta di spettro

Spettro: condizione elementare corrispondente allo spettro.

N.b.: nome breve della condizione elementare.

Fx: componente della forza lungo l'asse X. [daN]

Fy: componente della forza lungo l'asse Y. [daN]

Fz: componente della forza lungo l'asse Z. [daN]

Mx: componente della coppia attorno all'asse X. [daN*m]

My: componente della coppia attorno all'asse Y. [daN*m]

Mz: componente della coppia attorno all'asse Z. [daN*m]

Max X: massima reazione lungo l'asse X.

Valore: valore massimo della reazione. [daN]

Angolo: angolo d'ingresso del sisma che provoca il valore massimo della reazione. [deg]

Max Y: massima reazione lungo l'asse Y.

Valore: valore massimo della reazione. [daN]

Angolo: angolo d'ingresso del sisma che provoca il valore massimo della reazione. [deg]

Max Z: massima reazione lungo l'asse Z.

Valore: valore massimo della reazione. [daN]

Angolo: angolo d'ingresso del sisma che provoca il valore massimo della reazione. [deg]

Spettro	Fx	Fy	Fz	Mx	My	Mz	Max X		Max Y		Max Z	
N.b.							Valore	Angolo	Valore	Angolo	Valore	Angolo
SLV X	302484.32	25664.63	0	1.678E05	3.084E06	5.567E05	302560.99	1	170042.43	93	0	0
SLV Y	25664.63	169834.47	0	1.594E06	1.725E05	2.088E06	302560.99	1	170042.43	93	0	0
X SLD	129451.69	11140.91	0	7.260E04	1.319E06	2.416E05	129484.85	1	72528.11	93	0	0
Y SLD	11140.91	72431.47	0	6.799E05	7.474E04	8.903E05	129484.85	1	72528.11	93	0	0

1.6 Annotazioni solutore

Informazioni: informazioni fornite dal solutore al termine del calcolo del modello.

Informazioni



1.7 Statistiche soluzione

Tipo di equazioni	Lineari
Tecnica di soluzione	Intel MKL PARDISO
Numero equazioni	107256
Elemento min. diagonale	503.62832788
Elemento max diagonale	8215049155.34425
Rapporto max/min	16311729.7033906
Elementi non nulli	4177083

2 Verifiche

2.1 Verifica regolarità strutturale

Le unità di misura elencate nel capitolo sono in [m, daN] ove non espressamente specificato.

Livello:

Descr: descrizione livello.

Quota: quota livello. [m]

Q: quota livello. [m]

Qinf: quota livello precedente. [m]

Comb: combinazione.

A1: a1 (Distribuzione masse).

A1n: a1 numeratore (distanza tra centro massa vs. centro rigidezza [se presente] o centro dell'ingombro del piano). [m]

A1d: a1 denominatore (ingombro del piano nella medesima direzione [x o y globale]). [m]

A1r: a1 rapporto (distanza centro massa/rigidezza su ingombro del piano).

A2: a2 (Distribuzione rigidezze).

A2n: a2 numeratore (rigidezza max [x o y globale]).

A2d: a2 denominatore (rigidezza min [x o y globale]).

A2r: a2 rapporto (rigidezza max/min).

A3: a3 (Forma compatta).

A3n: a3 numeratore (area convessa). [m²]

A3d: a3 denominatore (area piano). [m²]

A3r: a3 rapporto (area convessa/area piano).

B: b (Rapporto lati).

Bn: b numeratore (lato max [x o y globale]). [m]

Bd: b denominatore (lato min [x o y globale]). [m]

Br: b rapporto (lato max/min).

C: c (Rapporto rigidezze piano).

Cn: c numeratore (rigidezza elementi verticali).

Cd: c denominatore (rigidezza piano).

Cr: c rapporto (rigidezza elementi verticali/rigidezza piano).

E1: e1 (Variazione masse).

E1n: e1 numeratore (massa max). [daN]

E1d: e1 denominatore (massa min). [daN]

E1r: e1 rapporto (massa max/min).

E2: e2 (Riduzione rigidezze).

E2n: e2 numeratore (rigidezza relativa alla traslazione KUmax). [daN/m]

E2d: e2 denominatore (rigidezza relativa alla traslazione KUmin). [daN/m]

E2r: e2 rapporto (variazione massima in decremento Kmax/Kmin).

E3: e3 (Incremento rigidezze).

E3n: e3 numeratore (rigidezza relativa alla traslazione KUmax). [daN/m]

E3d: e3 denominatore (rigidezza relativa alla traslazione KUmin). [daN/m]

E3r: e3 rapporto (variazione massima in incremento Kmax/Kmin).

F: f (Rapporto Capacità/Domanda).

Fn: f numeratore (rapporto capacità/domanda massimo [c/d max]). [daN]

Fd: f denominatore (rapporto capacità/domanda minimo [c/d min]). [daN]

Fr: f rapporto (variazione massima [rapporto (c/d max)/(c/d min)]).

G1: g1 (Rastremazione di piano).

G1n: g1 numeratore (L1). [m]

G1d: g1 denominatore (L2). [m]

G1r: g1 rapporto (L1/L2).

G2: g2 (Rastremazione totale).

G2n: g2 numeratore (L0). [m]

G2d: g2 denominatore (Li). [m]

G2r: g2 rapporto (L0/Li).

Capacità/Domanda in X:

VrdX: taglio resistente complessivo in direzione X. [daN]



VedX: taglio agente complessivo in direzione X). [daN]
|Rd/Ed|: |Rd/Ed| (rapporto capacità/domanda in termini di resistenza a taglio).
Capacità/Domanda in Y:
VrdY: taglio resistente complessivo in direzione Y. [daN]
VedY: taglio agente complessivo in direzione Y). [daN]

Verifica regolarità strutturale

Controllo regolarità edificio secondo D.M. 17-01-18 (N.T.C.) §7.2.1 - §C7.2.1

Avvertenze

La seguente procedura valuta la regolarità della costruzione secondo quanto indicato nelle NTC 2018 §7.2.1.
Tali valutazioni sono a carattere puramente informativo e vengono condotte sulla base del modello e delle verifiche presenti alla sua generazione, con le limitazioni indicate nella manualistica.
In ogni caso l'impostazione di regolarità della costruzione, in pianta ed elevazione, va indicata nelle preferenze di analisi dall'utente utilizzatore del software.

Sintesi dei risultati

Orizzontamenti considerati nella valutazione
Nessun livello di fondazione trovato
Livelli di elevazione considerati: Rialzato(L3), Primo(L4), Secondo(L5), Terzo(L6), Sottotetto(L7), Colmo maggiore(L9),

Regolarità in pianta - NO

L'edificio risulta NON regolare in pianta, in base alle condizioni indicate in NTC 2018 §7.2.1
N.V. - Criterio A1 (Distribuzione masse) non valutabile al livello Rialzato
N.V. - Criterio A2 (Distribuzione rigidezze) non valutabile al livello Rialzato
No - Criterio A3 (Forma compatta) NON rispettato, con rapporto massimo 2769480.5/2550581.3=1.1 (limite=1,05) al livello Terzo
Ok - Criterio B (Rapporto lati) rispettato, con rapporto massimo 2,12 (limite=4) al livello Sottotetto
No - Criterio C (Rapporto rigidezze piano) NON rispettato, con rapporto massimo > 999 (limite=0) al livello Rialzato

Regolarità in altezza - NO

L'edificio risulta NON regolare in altezza, in base alle condizioni indicate in NTC 2018 §7.2.1
Ok - Criterio D (Altezza elementi sismoresistenti) rispettato, con rapporto massimo 1 (limite=1,01)
No - Criterio E1 (Variazione masse) NON rispettato, con rapporto massimo 131950.2/71349.5=1.8 (limite=1,25) tra il livello Colmo maggiore ed il precedente
N.V. - Criterio E2 (Riduzione rigidezze) non valutabile tra il livello Primo ed il precedente
N.V. - Criterio E3 (Incremento rigidezze) non valutabile tra il livello Primo ed il precedente
N.V. - Criterio F (Rapporto Capacità/Domanda) non valutabile tra il livello Colmo maggiore ed il precedente
Ok - Criterio G1 (Rastremazione di piano) rispettato, con rapporto massimo 0 (limite=0,1) tra il livello Primo ed il precedente
Ok - Criterio G2 (Rastremazione totale) rispettato, con rapporto massimo 0 (limite=0,3) tra il livello Primo ed il precedente

Valori per piano

Verifiche di regolarità in pianta

Livello		A1			A2			A3			B			C		
Descr	Quota	A1n	A1d	A1r	A2n	A2d	A2r	A3n	A3d	A3r	Bn	Bd	Br	Cn	Cd	Cr
Rialzato	1.39							279.4776	260.5241	1.07	24.93	11.81	2.11	9999		1 9999
Primo	5.07							276.9481	258.4548	1.07	24.84	11.74	2.12	9999		1 9999
Secondo	8.62							276.9481	258.4548	1.07	24.84	11.74	2.12	9999		1 9999
Terzo	12.17							276.9481	255.0581	1.09	24.84	11.74	2.12	9999		1 9999
Sottotetto	15.32							278.1082	263.1759	1.06	24.91	11.76	2.12	9999		1 9999
Colmo maggiore	17.8							278.1072	263.174	1.06	24.91	11.76	2.12	9999		1 9999

Verifiche di regolarità in elevazione

Rapporto di regolarità per la condizione D (Altezza elementi sismoresistenti): 16.41/16.41=0.01.

Livello			E1			E2			E3			F			G1			G2		
Descr	Q	Qinf	E1n	E1d	E1r	E2n	E2d	E2r	E3n	E3d	E3r	Fn	Fd	Fr	G1n	G1d	G1r	G2n	G2d	G2r
Primo	5.07	1.39	172623	131054	1.32							4	2.6	1.54	0.08	24.93	0	0.08	24.93	0
Secondo	8.62	5.07	131054	128598	1.02							3.6	2.9	1.22	0	11.74	0	0.08	24.93	0
Terzo	12.17	8.62	128598	127121	1.01							3.9	3	1.32	0	11.74	0	0.08	24.93	0
Sottotetto	15.32	12.17	131950	127121	1.04							8.5	3.5	2.43	0	11.74	0	0.01	24.93	0
Colmo maggiore	17.8	15.32	131950	71349	1.85										0	11.76	0	0	0.01	0

Dettaglio delle resistenze di piano a taglio (per valutazione punto F)

Livello			Capacità/Domanda in X			Capacità/Domanda in Y		
Descr	Q	Comb	VrdX	VedX	Rd/Ed	VrdY	VedY	Rd/Ed
Rialzato	1.39	SLV 1	329561	-324727	1	253086	-71437	3.5
Rialzato	1.39	SLV 2	329561	-324727	1	253086	-71437	3.5
Rialzato	1.39	SLV 3	321772	-315362	1	255699	71295	3.6
Rialzato	1.39	SLV 4	321772	-315362	1	255699	71295	3.6
Rialzato	1.39	SLV 5	318288	-111620	2.9	252901	-237911	1.1
Rialzato	1.39	SLV 6	318288	-111620	2.9	252901	-237911	1.1
Rialzato	1.39	SLV 7	322259	-80404	4	264783	237864	1.1
Rialzato	1.39	SLV 8	322259	-80404	4	264783	237864	1.1
Rialzato	1.39	SLV 9	325052	80409	4	265935	-237871	1.1
Rialzato	1.39	SLV 10	325052	80409	4	265935	-237871	1.1
Rialzato	1.39	SLV 11	342901	111625	3.1	273723	237904	1.2
Rialzato	1.39	SLV 12	342901	111625	3.1	273723	237904	1.2
Rialzato	1.39	SLV 13	355882	315367	1.1	272831	-71303	3.8
Rialzato	1.39	SLV 14	355882	315367	1.1	272831	-71303	3.8
Rialzato	1.39	SLV 15	346391	324732	1.1	276787	71430	3.9
Rialzato	1.39	SLV 16	346391	324732	1.1	276787	71430	3.9
Primo	5.07	SLV 1	200400	-286860	0.7	150893	-48847	3.1
Primo	5.07	SLV 2	200400	-286860	0.7	150893	-48847	3.1



Livello			Capacità/Domanda in X			Capacità/Domanda in Y		
Descr	Q	Comb	VrdX	VedX	[Rd/Ed]	VrdY	VedY	[Rd/Ed]
Primo	5.07	SLV 3	205018	-287013	0.7	150932	51313	2.9
Primo	5.07	SLV 4	205018	-287013	0.7	150932	51313	2.9
Primo	5.07	SLV 5	221481	-85805	2.6	152307	-166566	0.9
Primo	5.07	SLV 6	221481	-85805	2.6	152307	-166566	0.9
Primo	5.07	SLV 7	224263	-86312	2.6	153915	167300	0.9
Primo	5.07	SLV 8	224263	-86312	2.6	153915	167300	0.9
Primo	5.07	SLV 9	229957	86375	2.7	158216	-167308	0.9
Primo	5.07	SLV 10	229957	86375	2.7	158216	-167308	0.9
Primo	5.07	SLV 11	227542	85868	2.6	158270	166559	1
Primo	5.07	SLV 12	227542	85868	2.6	158270	166559	1
Primo	5.07	SLV 13	221113	287076	0.8	159654	-51320	3.1
Primo	5.07	SLV 14	221113	287076	0.8	159654	-51320	3.1
Primo	5.07	SLV 15	219437	286923	0.8	159499	48840	3.3
Primo	5.07	SLV 16	219437	286923	0.8	159499	48840	3.3
Secondo	8.62	SLV 1	202634	-253533	0.8	144787	-40778	3.6
Secondo	8.62	SLV 2	202634	-253533	0.8	144787	-40778	3.6
Secondo	8.62	SLV 3	201947	-253816	0.8	147290	41079	3.6
Secondo	8.62	SLV 4	201947	-253816	0.8	147290	41079	3.6
Secondo	8.62	SLV 5	225008	-75631	3	140257	-136385	1
Secondo	8.62	SLV 6	225008	-75631	3	140257	-136385	1
Secondo	8.62	SLV 7	222408	-76574	2.9	147856	136470	1.1
Secondo	8.62	SLV 8	222408	-76574	2.9	147856	136470	1.1
Secondo	8.62	SLV 9	225408	76574	2.9	138907	-136478	1
Secondo	8.62	SLV 10	225408	76574	2.9	138907	-136478	1
Secondo	8.62	SLV 11	223250	75631	3	145830	136378	1.1
Secondo	8.62	SLV 12	223250	75631	3	145830	136378	1.1
Secondo	8.62	SLV 13	202967	253817	0.8	140725	-41086	3.4
Secondo	8.62	SLV 14	202967	253817	0.8	140725	-41086	3.4
Secondo	8.62	SLV 15	200128	253534	0.8	143105	40771	3.5
Secondo	8.62	SLV 16	200128	253534	0.8	143105	40771	3.5
Terzo	12.17	SLV 1	157002	-170430	0.9	123166	-27933	4.4
Terzo	12.17	SLV 2	157002	-170430	0.9	123166	-27933	4.4
Terzo	12.17	SLV 3	157819	-172139	0.9	123013	27258	4.5
Terzo	12.17	SLV 4	157819	-172139	0.9	123013	27258	4.5
Terzo	12.17	SLV 5	190376	-48537	3.9	117526	-92090	1.3
Terzo	12.17	SLV 6	190376	-48537	3.9	117526	-92090	1.3
Terzo	12.17	SLV 7	188965	-54233	3.5	121057	91882	1.3
Terzo	12.17	SLV 8	188965	-54233	3.5	121057	91882	1.3
Terzo	12.17	SLV 9	189921	54234	3.5	117942	-91889	1.3
Terzo	12.17	SLV 10	189921	54234	3.5	117942	-91889	1.3
Terzo	12.17	SLV 11	187626	48538	3.9	120436	92082	1.3
Terzo	12.17	SLV 12	187626	48538	3.9	120436	92082	1.3
Terzo	12.17	SLV 13	151015	172140	0.9	118855	-27265	4.4
Terzo	12.17	SLV 14	151015	172140	0.9	118855	-27265	4.4
Terzo	12.17	SLV 15	156433	170431	0.9	121032	27926	4.3
Terzo	12.17	SLV 16	156433	170431	0.9	121032	27926	4.3
Sottotetto	15.32	SLV 1	90470	-52629	1.7	65386	-11505	5.7
Sottotetto	15.32	SLV 2	90470	-52629	1.7	65386	-11505	5.7
Sottotetto	15.32	SLV 3	99249	-52112	1.9	55324	10305	5.4
Sottotetto	15.32	SLV 4	99249	-52112	1.9	55324	10305	5.4
Sottotetto	15.32	SLV 5	123963	-16573	7.5	55758	-36543	1.5
Sottotetto	15.32	SLV 6	123963	-16573	7.5	55758	-36543	1.5
Sottotetto	15.32	SLV 7	123678	-14850	8.3	41176	36158	1.1
Sottotetto	15.32	SLV 8	123678	-14850	8.3	41176	36158	1.1
Sottotetto	15.32	SLV 9	126435	14849	8.5	49062	-36194	1.4
Sottotetto	15.32	SLV 10	126435	14849	8.5	49062	-36194	1.4
Sottotetto	15.32	SLV 11	125734	16572	7.6	43418	36507	1.2
Sottotetto	15.32	SLV 12	125734	16572	7.6	43418	36507	1.2
Sottotetto	15.32	SLV 13	81824	52111	1.6	66235	-10341	6.4
Sottotetto	15.32	SLV 14	81824	52111	1.6	66235	-10341	6.4
Sottotetto	15.32	SLV 15	79996	52628	1.5	75954	11470	6.6
Sottotetto	15.32	SLV 16	79996	52628	1.5	75954	11470	6.6

2.2 Verifica sismica globale

Desc.: descrizione.

Stato limite: (muratura) V=Taglio; PF=Pressoflessione; PFFP=Pressoflessione fuori piano; R=Ribaltamento.

Molt.: moltiplicatore minimo della azione sismica che produce lo stato limite.

Comb.: combinazione.

PGA: accelerazione al suolo.

iPGA (ξE): indicatore di rischio sismico in termini di PGA ovvero rapporto tra l'azione sismica massima sopportabile dall'elemento e l'azione sismica massima che si utilizzerebbe nel progetto nuovo (§C8.3).

TR: tempo di ritorno.

(TR/TRrif)^.41: indicatore di rischio sismico in termini di periodo di ritorno.

fa: fattore di accelerazione.

Stato limite: (muratura) V=Taglio; PF=Presso flessione; PFFP=Pressoflessione fuori piano; R=Ribaltamento.

Coeff.s.: coefficiente minimo prodotto dallo stato limite.

Verifica: stato di verifica.

Maschio: maschio.

Stato limite: (maschio muratura) V=Taglio; PF=Presso flessione; PFFP=Presso flessione fuori piano; R=Ribaltamento.

Trave: trave di collegamento in muratura.

Stato limite: (trave muratura) V=Taglio; F=Flessione.



S. L.: stato limite di riferimento.
TR,C: periodo di ritorno di capacità.
PGA,C: accelerazione di aggancio di capacità.
TR,Rif: periodo di ritorno di riferimento.
PGA,Rif: accelerazione di aggancio di riferimento.
Tipo rottura: tipo di rottura che fornisce il valore minimo degli elementi considerati.
PAM: perdita media annua attesa.
Classe PAM: classe di rischio PAM.
IS-V: indice di sicurezza.
Classe IS-V: classe di rischio IS-V.

Verifica di elementi dotati di indicatori di rischio sismico mediante analisi con fattore q

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.) § C8.7.1

Accelerazioni e tempi di ritorno

Accelerazione di aggancio SLO ($ag/g_{SLO} \cdot S \cdot ST$) $PGA, SLOrif = 0.081$
Accelerazione di aggancio SLD ($ag/g_{SLD} \cdot S \cdot ST$) $PGA, SLDrif = 0.101$
Accelerazione di aggancio SLV ($ag/g_{SLV} \cdot S \cdot ST$) $PGA, SLVrif = 0.244$
 $Tr, SLOrif = 30$ anni
 $Tr, SLDrif = 50$ anni
 $Tr, SLVrif = 475$ anni

Moltiplicatori minimi delle condizioni sismiche

(Il valore di ζE corrisponde al valore di I.R. PGA secondo quanto riportato nella Circolare 7 21-01-19 §C8.3)

Rottura a taglio

Moltiplicatore: 0
Maschio 6
Lunghezza: 2.06; altezza: 2.69; spessore: 0.45; sezione a quota: 1.1
Combinazione SLV 1 N = -4881 V par. = 3481 I' = 0.6343 fvd = 11753 Vt scorrimento = 3355 Vt fess. diag. = 0
Tempo di ritorno 0 anni
Indicatore $iTr = (Tr/Tr, SLVrif)^{.41} = 0$
PGA 0
Indicatore $iPGA = PGA/PGA, SLVrif = 0$
Fattore di accelerazione $fa = 0$

Rottura a flessione

Moltiplicatore: 0
Maschio 17
Lunghezza: 0.304; altezza: 2.69; spessore: 0.3 sezione a quota 1.39
Combinazione SLV 1 N = 16 M = -4.34 $\sigma_0 = 0$ fd = 143750 Mu = 0
Tempo di ritorno 0 anni
Indicatore $iTr = (Tr/Tr, SLVrif)^{.41} = 0$
PGA 0
Indicatore $iPGA = PGA/PGA, SLVrif = 0$
Fattore di accelerazione $fa = 0$

Rottura a pressoflessione nel piano ortogonale

Moltiplicatore: 0
Maschio 131
Lunghezza: 0.126; altezza: 3.55; spessore: 0.28; sezione a quota: 6.845
Combinazione SLV 1 fd = 143750 Ta = 0.08 Wa = 504 N = 0 M = 0 Mc = 0
Tempo di ritorno 0 anni
Indicatore $iTr = (Tr/Tr, SLVrif)^{.41} = 0$
PGA 0
Indicatore $iPGA = PGA/PGA, SLVrif = 0$
Fattore di accelerazione $fa = 0$

Rottura per meccanismi locali di collasso

Moltiplicatore: 0
Maschio 17
Lunghezza: 0.304; altezza: 2.69; spessore: 0.3 f.agg. = 0 a.lim. = 0
Combinazione SLV 1 N top = 16 N base = -144 T orto = -1 $\alpha_0 = 0$ M* = 0 e* = 0 a0* = 0
Tempo di ritorno 0 anni
Indicatore $iTr = (Tr/Tr, SLVrif)^{.41} = 0$
PGA 0
Indicatore $iPGA = PGA/PGA, SLVrif = 0$
Fattore di accelerazione $fa = 0$

Indicatori minimi riferiti al solo materiale muratura

Desc.	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	$(TR/TRrif)^{.41}$	fa
Maschio 17	PF	0	SLV 1	0	0	0	0	0
Maschio 6	V	0	SLV 1	0	0	0	0	0
Maschio 131	PFFP	0	SLV 1	0	0	0	0	0
Maschio 17	R	0	SLV 1	0	0	0	0	0
Trave di accoppiamento 8	PF	0.051	SLV 9	0	0	0	0	0



Desc.	Stato limite	Molt.	Comb.	PGA	IPGA (ZE)	TR	(TR/TRrif)^.41	fa
Trave di accoppiamento 1	V	0	SLV 1	0	0	0	0	0

Coefficienti di sicurezza riferiti al solo materiale muratura

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 1	PF SLU	24.873	SLU 2	Si
Maschio 1	V SLU	14.824	SLU 2	Si
Maschio 1	PF	4.014	SLV 9	Si
Maschio 1	V	0.819	SLV 9	No
Maschio 1	PFFP	2.636	SLV 13	Si
Maschio 1	R	0.247	SLV 3	No
Maschio 2	PF SLU	1.24	SLU 48	Si
Maschio 2	V SLU	1.164	SLU 50	Si
Maschio 2	PF	0	SLV 1	No
Maschio 2	V	0	SLV 1	No
Maschio 2	PFFP	6.559	SLV 5	Si
Maschio 2	R	0	SLV 12	No
Maschio 3	PF SLU	5.209	SLU 49	Si
Maschio 3	V SLU	2.835	SLU 78	Si
Maschio 3	PF	1.475	SLV 9	Si
Maschio 3	V	0.24	SLV 9	No
Maschio 3	PFFP	18.957	SLV 9	Si
Maschio 3	R	0.259	SLV 5	No
Maschio 4	PF SLU	24.317	SLU 44	Si
Maschio 4	V SLU	44.494	SLU 50	Si
Maschio 4	PF	1.374	SLV 9	Si
Maschio 4	V	0.698	SLV 9	No
Maschio 4	PFFP	25.082	SLV 13	Si
Maschio 4	R	0.225	SLV 1	No
Maschio 6	PF SLU	0	SLU 2	No
Maschio 6	V SLU	0	SLU 2	No
Maschio 6	PF	0	SLV 10	No
Maschio 6	V	0	SLV 1	No
Maschio 6	PFFP	7.154	SLV 5	Si
Maschio 6	R	0	SLV 10	No
Maschio 7	PF SLU	2.343	SLU 5	Si
Maschio 7	V SLU	2.112	SLU 47	Si
Maschio 7	PF	1.747	SLV 13	Si
Maschio 7	V	0.625	SLV 1	No
Maschio 7	PFFP	13.453	SLV 11	Si
Maschio 7	R	0.248	SLV 13	No
Maschio 8	PF SLU	1.216	SLU 84	Si
Maschio 8	V SLU	1.743	SLU 76	Si
Maschio 8	PF	1.475	SLV 11	Si
Maschio 8	V	0.506	SLV 13	No
Maschio 8	PFFP	22.192	SLV 7	Si
Maschio 8	R	0	SLV 7	No
Maschio 9	PF SLU	1.184	SLU 84	Si
Maschio 9	V SLU	1.085	SLU 82	Si
Maschio 9	PF	0	SLV 13	No
Maschio 9	V	0	SLV 13	No
Maschio 9	PFFP	39.734	SLV 7	Si
Maschio 9	R	0.146	SLV 7	No
Maschio 10	PF SLU	4.963	SLU 83	Si
Maschio 10	V SLU	3.083	SLU 2	Si
Maschio 10	PF	2.131	SLV 7	Si
Maschio 10	V	0.907	SLV 7	No
Maschio 10	PFFP	22.095	SLV 7	Si
Maschio 10	R	0.222	SLV 13	No
Maschio 11	PF SLU	3.234	SLU 44	Si
Maschio 11	V SLU	6.18	SLU 83	Si
Maschio 11	PF	0	SLV 14	No
Maschio 11	V	0	SLV 5	No
Maschio 11	PFFP	11.589	SLV 11	Si
Maschio 11	R	0	SLV 14	No
Maschio 12	PF SLU	3.865	SLU 76	Si
Maschio 12	V SLU	1.9	SLU 84	Si
Maschio 12	PF	0	SLV 12	No
Maschio 12	V	0	SLV 7	No
Maschio 12	PFFP	3.798	SLV 11	Si
Maschio 12	R	0	SLV 12	No
Maschio 13	PF SLU	2.961	SLU 84	Si
Maschio 13	V SLU	4.308	SLU 83	Si
Maschio 13	PF	1.606	SLV 11	Si
Maschio 13	V	0.853	SLV 11	No
Maschio 13	PFFP	21.413	SLV 15	Si
Maschio 13	R	0.22	SLV 3	No
Maschio 14	PF SLU	7.248	SLU 84	Si
Maschio 14	V SLU	0.873	SLU 84	No
Maschio 14	PF	1.972	SLV 7	Si
Maschio 14	V	0.705	SLV 9	No
Maschio 14	PFFP	11.852	SLV 7	Si
Maschio 14	R	0.183	SLV 13	No
Maschio 16	PF SLU	2.818	SLU 84	Si
Maschio 16	V SLU	4.321	SLU 84	Si
Maschio 16	PF	3.262	SLV 5	Si
Maschio 16	V	1.111	SLV 7	Si
Maschio 16	PFFP	46.405	SLV 1	Si
Maschio 16	R	0.391	SLV 5	No
Maschio 17	PF SLU	0	SLU 84	No
Maschio 17	V SLU	0	SLU 1	No
Maschio 17	PF	0	SLV 16	No



Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 17	V	0	SLV 1	No
Maschio 17	PFFP	0	SLV 12	No
Maschio 17	R	0	SLV 16	No
Maschio 19	PF SLU	0	SLU 84	No
Maschio 19	V SLU	0	SLU 1	No
Maschio 19	PF	0	SLV 16	No
Maschio 19	V	0	SLV 3	No
Maschio 19	PFFP	7.135	SLV 11	Si
Maschio 19	R	0	SLV 16	No
Maschio 21	PF SLU	4.953	SLU 27	Si
Maschio 21	V SLU	1.614	SLU 77	Si
Maschio 21	PF	2.094	SLV 11	Si
Maschio 21	V	0.881	SLV 11	No
Maschio 21	PFFP	14.656	SLV 1	Si
Maschio 21	R	0.745	SLV 13	No
Maschio 23	PF SLU	1.409	SLU 48	Si
Maschio 23	V SLU	1.774	SLU 69	Si
Maschio 23	PF	1.371	SLV 15	Si
Maschio 23	V	1.5	SLV 13	Si
Maschio 23	PFFP	9.591	SLV 1	Si
Maschio 23	R	0.107	SLV 3	No
Maschio 24	PF SLU	1.356	SLU 83	Si
Maschio 24	V SLU	1.462	SLU 83	Si
Maschio 24	PF	0	SLV 3	No
Maschio 24	V	0	SLV 3	No
Maschio 24	PFFP	18.941	SLV 15	Si
Maschio 24	R	0.206	SLV 11	No
Maschio 25	PF SLU	3.104	SLU 83	Si
Maschio 25	V SLU	14.256	SLU 83	Si
Maschio 25	PF	2.051	SLV 3	Si
Maschio 25	V	1.288	SLV 3	Si
Maschio 25	PFFP	20.272	SLV 7	Si
Maschio 25	R	0.178	SLV 3	No
Maschio 26	PF SLU	4.3	SLU 70	Si
Maschio 26	V SLU	16.461	SLU 43	Si
Maschio 26	PF	2.626	SLV 1	Si
Maschio 26	V	1.091	SLV 13	Si
Maschio 26	PFFP	19.786	SLV 9	Si
Maschio 26	R	0.211	SLV 5	No
Maschio 27	PF SLU	8.311	SLU 84	Si
Maschio 27	V SLU	5.28	SLU 78	Si
Maschio 27	PF	3.159	SLV 5	Si
Maschio 27	V	1.058	SLV 1	Si
Maschio 27	PFFP	17.494	SLV 9	Si
Maschio 27	R	0	SLV 5	No
Maschio 28	PF SLU	7.698	SLU 83	Si
Maschio 28	V SLU	12.182	SLU 77	Si
Maschio 28	PF	4.163	SLV 13	Si
Maschio 28	V	1.15	SLV 13	Si
Maschio 28	PFFP	19.772	SLV 5	Si
Maschio 28	R	0	SLV 5	No
Maschio 29	PF SLU	3.497	SLU 82	Si
Maschio 29	V SLU	3.902	SLU 81	Si
Maschio 29	PF	0	SLV 5	No
Maschio 29	V	0	SLV 5	No
Maschio 29	PFFP	9.738	SLV 5	Si
Maschio 29	R	0.357	SLV 15	No
Maschio 30	PF SLU	14.335	SLU 83	Si
Maschio 30	V SLU	1.573	SLU 83	Si
Maschio 30	PF	2.515	SLV 15	Si
Maschio 30	V	0.904	SLV 3	No
Maschio 30	PFFP	31.03	SLV 15	Si
Maschio 30	R	0.394	SLV 1	No
Maschio 31	PF SLU	5.977	SLU 84	Si
Maschio 31	V SLU	5.874	SLU 84	Si
Maschio 31	PF	1.989	SLV 13	Si
Maschio 31	V	1.049	SLV 3	Si
Maschio 31	PFFP	43.116	SLV 5	Si
Maschio 31	R	0.336	SLV 5	No
Maschio 32	PF SLU	0.534	SLU 83	No
Maschio 32	V SLU	7.114	SLU 83	Si
Maschio 32	PF	1.485	SLV 13	Si
Maschio 32	V	2.785	SLV 13	Si
Maschio 32	PFFP	32.618	SLV 1	Si
Maschio 32	R	0.355	SLV 13	No
Maschio 33	PF SLU	3.247	SLU 83	Si
Maschio 33	V SLU	5.485	SLU 83	Si
Maschio 33	PF	1.499	SLV 1	Si
Maschio 33	V	2.48	SLV 1	Si
Maschio 33	PFFP	26.672	SLV 1	Si
Maschio 33	R	0.336	SLV 3	No
Maschio 34	PF SLU	6.632	SLU 83	Si
Maschio 34	V SLU	11.376	SLU 49	Si
Maschio 34	PF	1.872	SLV 13	Si
Maschio 34	V	0.981	SLV 15	No
Maschio 34	PFFP	42.061	SLV 13	Si
Maschio 34	R	0.375	SLV 9	No
Maschio 35	PF SLU	0.383	SLU 83	No
Maschio 35	V SLU	15.888	SLU 83	Si
Maschio 35	PF	1.85	SLV 13	Si
Maschio 35	V	4.43	SLV 15	Si



Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 35	PFFP	46.57	SLV 5	Si
Maschio 35	R	0.066	SLV 7	No
Maschio 36	PF SLU	9.933	SLU 83	Si
Maschio 36	V SLU	1.36	SLU 83	Si
Maschio 36	PF	2.458	SLV 15	Si
Maschio 36	V	0.875	SLV 15	No
Maschio 36	PFFP	36.433	SLV 3	Si
Maschio 36	R	0.386	SLV 5	No
Maschio 37	PF SLU	9.623	SLU 83	Si
Maschio 37	V SLU	1.499	SLU 84	Si
Maschio 37	PF	3.142	SLV 11	Si
Maschio 37	V	0.843	SLV 5	No
Maschio 37	PFFP	33.194	SLV 11	Si
Maschio 37	R	0.364	SLV 1	No
Maschio 38	PF SLU	5.002	SLU 83	Si
Maschio 38	V SLU	3.771	SLU 84	Si
Maschio 38	PF	2.773	SLV 11	Si
Maschio 38	V	1.035	SLV 9	Si
Maschio 38	PFFP	213.664	SLV 11	Si
Maschio 38	R	1.079	SLV 1	Si
Maschio 39	PF SLU	12.782	SLU 84	Si
Maschio 39	V SLU	2.824	SLU 84	Si
Maschio 39	PF	5.399	SLV 7	Si
Maschio 39	V	0.988	SLV 7	No
Maschio 39	PFFP	35.553	SLV 13	Si
Maschio 39	R	0.275	SLV 1	No
Maschio 41	PF SLU	5.063	SLU 83	Si
Maschio 41	V SLU	1.101	SLU 84	Si
Maschio 41	PF	3.101	SLV 7	Si
Maschio 41	V	0.849	SLV 11	No
Maschio 41	PFFP	23.451	SLV 13	Si
Maschio 41	R	0.17	SLV 3	No
Maschio 42	PF SLU	3.023	SLU 84	Si
Maschio 42	V SLU	34.089	SLU 81	Si
Maschio 42	PF	1.608	SLV 7	Si
Maschio 42	V	0.873	SLV 7	No
Maschio 42	PFFP	21.378	SLV 1	Si
Maschio 42	R	0.222	SLV 15	No
Maschio 43	PF SLU	2.887	SLU 76	Si
Maschio 43	V SLU	1.694	SLU 84	Si
Maschio 43	PF	0	SLV 3	No
Maschio 43	V	0	SLV 3	No
Maschio 43	PFFP	4.48	SLV 7	Si
Maschio 43	R	0	SLV 7	No
Maschio 44	PF SLU	1.135	SLU 84	Si
Maschio 44	V SLU	1.019	SLU 84	Si
Maschio 44	PF	0	SLV 3	No
Maschio 44	V	0	SLV 3	No
Maschio 44	PFFP	37.067	SLV 11	Si
Maschio 44	R	0.094	SLV 11	No
Maschio 45	PF SLU	4.008	SLU 41	Si
Maschio 45	V SLU	6.104	SLU 83	Si
Maschio 45	PF	0	SLV 1	No
Maschio 45	V	0	SLV 1	No
Maschio 45	PFFP	8.806	SLV 7	Si
Maschio 45	R	0.346	SLV 5	No
Maschio 46	PF SLU	3.735	SLU 83	Si
Maschio 46	V SLU	2.863	SLU 76	Si
Maschio 46	PF	2.113	SLV 11	Si
Maschio 46	V	0.995	SLV 11	No
Maschio 46	PFFP	22.508	SLV 11	Si
Maschio 46	R	0.221	SLV 1	No
Maschio 47	PF SLU	1.183	SLU 84	Si
Maschio 47	V SLU	1.644	SLU 76	Si
Maschio 47	PF	1.572	SLV 7	Si
Maschio 47	V	0.96	SLV 1	No
Maschio 47	PFFP	23.742	SLV 11	Si
Maschio 47	R	0	SLV 7	No
Maschio 48	PF SLU	1.445	SLU 83	Si
Maschio 48	V SLU	22.343	SLU 78	Si
Maschio 48	PF	1.555	SLV 11	Si
Maschio 48	V	1.172	SLV 5	Si
Maschio 48	PFFP	24.558	SLV 5	Si
Maschio 48	R	0.216	SLV 3	No
Maschio 49	PF SLU	2.332	SLU 47	Si
Maschio 49	V SLU	1.456	SLU 76	Si
Maschio 49	PF	2.042	SLV 3	Si
Maschio 49	V	0.616	SLV 9	No
Maschio 49	PFFP	13.425	SLV 7	Si
Maschio 49	R	0.186	SLV 7	No
Maschio 50	PF SLU	3.821	SLU 5	Si
Maschio 50	V SLU	2.583	SLU 2	Si
Maschio 50	PF	1.817	SLV 3	Si
Maschio 50	V	0.611	SLV 11	No
Maschio 50	PFFP	8.632	SLV 7	Si
Maschio 50	R	0.289	SLV 7	No
Maschio 51	PF SLU	3.525	SLU 83	Si
Maschio 51	V SLU	2.004	SLU 78	Si
Maschio 51	PF	0	SLV 9	No
Maschio 51	V	0	SLV 9	No
Maschio 51	PFFP	15.526	SLV 13	Si



Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 51	R	0.35	SLV 1	No
Maschio 52	PF SLU	6.392	SLU 48	Si
Maschio 52	V SLU	7.383	SLU 38	Si
Maschio 52	PF	0	SLV 6	No
Maschio 52	V	0	SLV 5	No
Maschio 52	PFFP	6.94	SLV 5	Si
Maschio 52	R	0	SLV 6	No
Maschio 53	PF SLU	8.429	SLU 73	Si
Maschio 53	V SLU	21.763	SLU 2	Si
Maschio 53	PF	2.147	SLV 5	Si
Maschio 53	V	1.498	SLV 5	Si
Maschio 53	PFFP	16.712	SLV 1	Si
Maschio 53	R	0.381	SLV 13	No
Maschio 54	PF SLU	10.768	SLU 10	Si
Maschio 54	V SLU	12.579	SLU 2	Si
Maschio 54	PF	3.008	SLV 9	Si
Maschio 54	V	0.563	SLV 9	No
Maschio 54	PFFP	2.403	SLV 15	Si
Maschio 54	R	0.034	SLV 13	No
Maschio 55	PF SLU	0	SLU 1	No
Maschio 55	V SLU	0	SLU 1	No
Maschio 55	PF	0	SLV 1	No
Maschio 55	V	0	SLV 1	No
Maschio 55	PFFP	2.629	SLV 13	Si
Maschio 55	R	0.056	SLV 5	No
Maschio 56	PF SLU	2.992	SLU 81	Si
Maschio 56	V SLU	2.055	SLU 81	Si
Maschio 56	PF	0	SLV 9	No
Maschio 56	V	0	SLV 9	No
Maschio 56	PFFP	2.847	SLV 5	Si
Maschio 56	R	0.067	SLV 13	No
Maschio 57	PF SLU	0	SLU 1	No
Maschio 57	V SLU	0	SLU 1	No
Maschio 57	PF	0	SLV 1	No
Maschio 57	V	0	SLV 1	No
Maschio 57	PFFP	2.21	SLV 15	Si
Maschio 57	R	0.07	SLV 13	No
Maschio 58	PF SLU	1.619	SLU 2	Si
Maschio 58	V SLU	1.49	SLU 2	Si
Maschio 58	PF	0	SLV 1	No
Maschio 58	V	0	SLV 1	No
Maschio 58	PFFP	2.225	SLV 5	Si
Maschio 58	R	0.078	SLV 13	No
Maschio 59	PF SLU	0.264	SLU 84	No
Maschio 59	V SLU	1.331	SLU 73	Si
Maschio 59	PF	0	SLV 15	No
Maschio 59	V	0	SLV 15	No
Maschio 59	PFFP	5.676	SLV 11	Si
Maschio 59	R	0.076	SLV 13	No
Maschio 60	PF SLU	0.404	SLU 83	No
Maschio 60	V SLU	5.257	SLU 84	Si
Maschio 60	PF	2.939	SLV 15	Si
Maschio 60	V	0.694	SLV 9	No
Maschio 60	PFFP	4.664	SLV 9	Si
Maschio 60	R	0.02	SLV 7	No
Maschio 61	PF SLU	0	SLU 10	No
Maschio 61	V SLU	1.464	SLU 83	Si
Maschio 61	PF	0	SLV 1	No
Maschio 61	V	0	SLV 1	No
Maschio 61	PFFP	5.902	SLV 9	Si
Maschio 61	R	0	SLV 5	No
Maschio 62	PF SLU	0.836	SLU 84	No
Maschio 62	V SLU	1.487	SLU 84	Si
Maschio 62	PF	0.914	SLV 1	No
Maschio 62	V	0.396	SLV 3	No
Maschio 62	PFFP	5.883	SLV 15	Si
Maschio 62	R	0.075	SLV 13	No
Maschio 63	PF SLU	0	SLU 73	No
Maschio 63	V SLU	2.336	SLU 76	Si
Maschio 63	PF	1.809	SLV 9	Si
Maschio 63	V	0.631	SLV 7	No
Maschio 63	PFFP	5.082	SLV 7	Si
Maschio 63	R	0.021	SLV 1	No
Maschio 64	PF SLU	0.787	SLU 76	No
Maschio 64	V SLU	1.822	SLU 83	Si
Maschio 64	PF	0	SLV 16	No
Maschio 64	V	0	SLV 5	No
Maschio 64	PFFP	9.413	SLV 15	Si
Maschio 64	R	0	SLV 16	No
Maschio 65	PF SLU	1.183	SLU 82	Si
Maschio 65	V SLU	0.542	SLU 82	No
Maschio 65	PF	0	SLV 1	No
Maschio 65	V	0	SLV 1	No
Maschio 65	PFFP	1.339	SLV 3	Si
Maschio 65	R	0.047	SLV 11	No
Maschio 66	PF SLU	6.567	SLU 83	Si
Maschio 66	V SLU	4.958	SLU 83	Si
Maschio 66	PF	0	SLV 7	No
Maschio 66	V	0	SLV 7	No
Maschio 66	PFFP	6.771	SLV 11	Si
Maschio 66	R	0.087	SLV 1	No



Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 67	PF SLU	0.35	SLU 84	No
Maschio 67	V SLU	1.109	SLU 84	Si
Maschio 67	PF	0	SLV 16	No
Maschio 67	V	0	SLV 11	No
Maschio 67	PFFP	2.242	SLV 11	Si
Maschio 67	R	0	SLV 16	No
Maschio 68	PF SLU	0.882	SLU 83	No
Maschio 68	V SLU	0.598	SLU 83	No
Maschio 68	PF	0	SLV 16	No
Maschio 68	V	0	SLV 3	No
Maschio 68	PFFP	0	SLV 16	No
Maschio 68	R	0	SLV 6	No
Maschio 69	PF SLU	0	SLU 31	No
Maschio 69	V SLU	5.548	SLU 83	Si
Maschio 69	PF	0.881	SLV 7	No
Maschio 69	V	0.592	SLV 9	No
Maschio 69	PFFP	4.675	SLV 9	Si
Maschio 69	R	0.02	SLV 3	No
Maschio 70	PF SLU	4.789	SLU 84	Si
Maschio 70	V SLU	1.091	SLU 84	Si
Maschio 70	PF	1.508	SLV 7	Si
Maschio 70	V	0.711	SLV 9	No
Maschio 70	PFFP	38.276	SLV 7	Si
Maschio 70	R	0.477	SLV 13	No
Maschio 71	PF SLU	7.314	SLU 84	Si
Maschio 71	V SLU	1.537	SLU 84	Si
Maschio 71	PF	2.282	SLV 7	Si
Maschio 71	V	0.822	SLV 9	No
Maschio 71	PFFP	10.694	SLV 11	Si
Maschio 71	R	0.222	SLV 1	No
Maschio 72	PF SLU	0.121	SLU 84	No
Maschio 72	V SLU	0	SLU 2	No
Maschio 72	PF	0	SLV 3	No
Maschio 72	V	0	SLV 3	No
Maschio 72	PFFP	43.652	SLV 7	Si
Maschio 72	R	0.397	SLV 13	No
Maschio 73	PF SLU	0.492	SLU 84	No
Maschio 73	V SLU	0.834	SLU 77	No
Maschio 73	PF	0	SLV 1	No
Maschio 73	V	0	SLV 1	No
Maschio 73	PFFP	14.366	SLV 7	Si
Maschio 73	R	0.143	SLV 5	No
Maschio 75	PF SLU	3.56	SLU 83	Si
Maschio 75	V SLU	3.403	SLU 84	Si
Maschio 75	PF	3.351	SLV 11	Si
Maschio 75	V	0.879	SLV 11	No
Maschio 75	PFFP	11.825	SLV 3	Si
Maschio 75	R	0.114	SLV 5	No
Maschio 76	PF SLU	0	SLU 1	No
Maschio 76	V SLU	0.254	SLU 83	No
Maschio 76	PF	0	SLV 6	No
Maschio 76	V	0	SLV 3	No
Maschio 76	PFFP	7.651	SLV 7	Si
Maschio 76	R	0	SLV 6	No
Maschio 77	PF SLU	0.233	SLU 83	No
Maschio 77	V SLU	7.35	SLU 83	Si
Maschio 77	PF	0	SLV 6	No
Maschio 77	V	0	SLV 5	No
Maschio 77	PFFP	0	SLV 6	No
Maschio 77	R	0.021	SLV 15	No
Maschio 78	PF SLU	3.459	SLU 83	Si
Maschio 78	V SLU	1.781	SLU 83	Si
Maschio 78	PF	1.305	SLV 15	Si
Maschio 78	V	0.673	SLV 15	No
Maschio 78	PFFP	7.445	SLV 15	Si
Maschio 78	R	0.069	SLV 1	No
Maschio 79	PF SLU	13.497	SLU 84	Si
Maschio 79	V SLU	4.943	SLU 84	Si
Maschio 79	PF	2.308	SLV 1	Si
Maschio 79	V	0.794	SLV 3	No
Maschio 79	PFFP	10.529	SLV 7	Si
Maschio 79	R	0.06	SLV 5	No
Maschio 80	PF SLU	4.68	SLU 84	Si
Maschio 80	V SLU	3.951	SLU 78	Si
Maschio 80	PF	3.498	SLV 3	Si
Maschio 80	V	0.713	SLV 15	No
Maschio 80	PFFP	10.266	SLV 13	Si
Maschio 80	R	0.065	SLV 15	No
Maschio 81	PF SLU	3.348	SLU 83	Si
Maschio 81	V SLU	1.356	SLU 83	Si
Maschio 81	PF	2.315	SLV 3	Si
Maschio 81	V	0.795	SLV 13	No
Maschio 81	PFFP	9.176	SLV 3	Si
Maschio 81	R	0.068	SLV 13	No
Maschio 82	PF SLU	0.659	SLU 83	No
Maschio 82	V SLU	44.423	SLU 82	Si
Maschio 82	PF	1.38	SLV 15	Si
Maschio 82	V	0.627	SLV 3	No
Maschio 82	PFFP	5.923	SLV 3	Si
Maschio 82	R	0.017	SLV 5	No
Maschio 83	PF SLU	0	SLU 18	No



Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 83	V SLU	2.657	SLU 82	Si
Maschio 83	PF	0	SLV 1	No
Maschio 83	V	0	SLV 1	No
Maschio 83	PFFP	2.477	SLV 3	Si
Maschio 83	R	0.017	SLV 15	No
Maschio 84	PF SLU	2.071	SLU 84	Si
Maschio 84	V SLU	0.941	SLU 84	No
Maschio 84	PF	0	SLV 5	No
Maschio 84	V	0	SLV 5	No
Maschio 84	PFFP	4.221	SLV 9	Si
Maschio 84	R	0.068	SLV 15	No
Maschio 85	PF SLU	8.592	SLU 83	Si
Maschio 85	V SLU	20.792	SLU 44	Si
Maschio 85	PF	2.627	SLV 13	Si
Maschio 85	V	0.955	SLV 1	No
Maschio 85	PFFP	5.704	SLV 9	Si
Maschio 85	R	0.076	SLV 1	No
Maschio 86	PF SLU	8.812	SLU 83	Si
Maschio 86	V SLU	10.136	SLU 77	Si
Maschio 86	PF	2.698	SLV 9	Si
Maschio 86	V	1.043	SLV 13	Si
Maschio 86	PFFP	5.523	SLV 5	Si
Maschio 86	R	0.075	SLV 15	No
Maschio 87	PF SLU	4.269	SLU 83	Si
Maschio 87	V SLU	1.007	SLU 81	Si
Maschio 87	PF	0	SLV 1	No
Maschio 87	V	0	SLV 1	No
Maschio 87	PFFP	4.185	SLV 5	Si
Maschio 87	R	0.073	SLV 15	No
Maschio 88	PF SLU	4.706	SLU 84	Si
Maschio 88	V SLU	1.071	SLU 84	Si
Maschio 88	PF	3.522	SLV 11	Si
Maschio 88	V	0.814	SLV 5	No
Maschio 88	PFFP	36.903	SLV 7	Si
Maschio 88	R	0.48	SLV 1	No
Maschio 89	PF SLU	6.381	SLU 84	Si
Maschio 89	V SLU	1.179	SLU 84	Si
Maschio 89	PF	2.644	SLV 3	Si
Maschio 89	V	0.803	SLV 1	No
Maschio 89	PFFP	7.743	SLV 7	Si
Maschio 89	R	0.18	SLV 1	No
Maschio 90	PF SLU	0	SLU 1	No
Maschio 90	V SLU	0	SLU 1	No
Maschio 90	PF	0	SLV 1	No
Maschio 90	V	0	SLV 1	No
Maschio 90	PFFP	50.003	SLV 11	Si
Maschio 90	R	0.39	SLV 1	No
Maschio 91	PF SLU	0	SLU 1	No
Maschio 91	V SLU	0	SLU 1	No
Maschio 91	PF	0	SLV 1	No
Maschio 91	V	0	SLV 1	No
Maschio 91	PFFP	14.06	SLV 7	Si
Maschio 91	R	0.086	SLV 7	No
Maschio 92	PF SLU	9.557	SLU 84	Si
Maschio 92	V SLU	3.511	SLU 84	Si
Maschio 92	PF	3.687	SLV 9	Si
Maschio 92	V	0.93	SLV 7	No
Maschio 92	PFFP	20.666	SLV 15	Si
Maschio 92	R	0.196	SLV 3	No
Maschio 94	PF SLU	7.336	SLU 83	Si
Maschio 94	V SLU	3.344	SLU 78	Si
Maschio 94	PF	3.501	SLV 11	Si
Maschio 94	V	0.97	SLV 11	No
Maschio 94	PFFP	9.357	SLV 1	Si
Maschio 94	R	0.041	SLV 15	No
Maschio 95	PF SLU	0.876	SLU 83	No
Maschio 95	V SLU	3.338	SLU 83	Si
Maschio 95	PF	0	SLV 12	No
Maschio 95	V	0	SLV 3	No
Maschio 95	PFFP	0	SLV 12	No
Maschio 95	R	0	SLV 10	No
Maschio 96	PF SLU	0	SLU 31	No
Maschio 96	V SLU	6.77	SLU 83	Si
Maschio 96	PF	0.871	SLV 11	No
Maschio 96	V	0.732	SLV 7	No
Maschio 96	PFFP	5.278	SLV 5	Si
Maschio 96	R	0.02	SLV 11	No
Maschio 97	PF SLU	0.333	SLU 84	No
Maschio 97	V SLU	1.047	SLU 84	Si
Maschio 97	PF	0	SLV 8	No
Maschio 97	V	0	SLV 1	No
Maschio 97	PFFP	2.574	SLV 7	Si
Maschio 97	R	0	SLV 8	No
Maschio 98	PF SLU	4.097	SLU 84	Si
Maschio 98	V SLU	5.605	SLU 76	Si
Maschio 98	PF	0	SLV 3	No
Maschio 98	V	0	SLV 3	No
Maschio 98	PFFP	6.561	SLV 3	Si
Maschio 98	R	0.028	SLV 3	No
Maschio 99	PF SLU	1.23	SLU 84	Si
Maschio 99	V SLU	0.647	SLU 84	No



Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 99	PF	0	SLV 16	No
Maschio 99	V	0	SLV 1	No
Maschio 99	PFFP	0	SLV 16	No
Maschio 99	R	0.052	SLV 15	No
Maschio 100	PF SLU	0	SLU 52	No
Maschio 100	V SLU	2.096	SLU 76	Si
Maschio 100	PF	1.433	SLV 5	Si
Maschio 100	V	0.699	SLV 5	No
Maschio 100	PFFP	4.797	SLV 11	Si
Maschio 100	R	0.02	SLV 9	No
Maschio 101	PF SLU	0.501	SLU 84	No
Maschio 101	V SLU	0.95	SLU 84	No
Maschio 101	PF	0.964	SLV 13	No
Maschio 101	V	0.376	SLV 15	No
Maschio 101	PFFP	7.077	SLV 7	Si
Maschio 101	R	0.049	SLV 11	No
Maschio 102	PF SLU	0	SLU 74	No
Maschio 102	V SLU	2.62	SLU 84	Si
Maschio 102	PF	1.835	SLV 7	Si
Maschio 102	V	0.684	SLV 11	No
Maschio 102	PFFP	4.895	SLV 5	Si
Maschio 102	R	0.02	SLV 11	No
Maschio 103	PF SLU	0	SLU 1	No
Maschio 103	V SLU	0	SLU 1	No
Maschio 103	PF	0	SLV 3	No
Maschio 103	V	0	SLV 1	No
Maschio 103	PFFP	0	SLV 13	No
Maschio 103	R	0	SLV 5	No
Maschio 104	PF SLU	0	SLU 31	No
Maschio 104	V SLU	0.726	SLU 82	No
Maschio 104	PF	0	SLV 10	No
Maschio 104	V	0	SLV 1	No
Maschio 104	PFFP	6.318	SLV 5	Si
Maschio 104	R	0	SLV 14	No
Maschio 105	PF SLU	0	SLU 31	No
Maschio 105	V SLU	2.638	SLU 76	Si
Maschio 105	PF	0.706	SLV 1	No
Maschio 105	V	0.178	SLV 3	No
Maschio 105	PFFP	7.588	SLV 7	Si
Maschio 105	R	0.036	SLV 7	No
Maschio 106	PF SLU	1.594	SLU 76	Si
Maschio 106	V SLU	1.156	SLU 44	Si
Maschio 106	PF	0	SLV 11	No
Maschio 106	V	0	SLV 11	No
Maschio 106	PFFP	6.708	SLV 15	Si
Maschio 106	R	0.078	SLV 1	No
Maschio 107	PF SLU	1.279	SLU 2	Si
Maschio 107	V SLU	0.451	SLU 76	No
Maschio 107	PF	0	SLV 3	No
Maschio 107	V	0	SLV 3	No
Maschio 107	PFFP	1.264	SLV 7	Si
Maschio 107	R	0	SLV 8	No
Maschio 108	PF SLU	2.843	SLU 78	Si
Maschio 108	V SLU	1.813	SLU 81	Si
Maschio 108	PF	0	SLV 5	No
Maschio 108	V	0	SLV 5	No
Maschio 108	PFFP	2.405	SLV 9	Si
Maschio 108	R	0	SLV 10	No
Maschio 109	PF SLU	1.856	SLU 77	Si
Maschio 109	V SLU	0.62	SLU 78	No
Maschio 109	PF	0	SLV 1	No
Maschio 109	V	0	SLV 1	No
Maschio 109	PFFP	0	SLV 6	No
Maschio 109	R	0	SLV 10	No
Maschio 110	PF SLU	2.621	SLU 76	Si
Maschio 110	V SLU	16.663	SLU 73	Si
Maschio 110	PF	1.796	SLV 5	Si
Maschio 110	V	1.385	SLV 5	Si
Maschio 110	PFFP	5.569	SLV 1	Si
Maschio 110	R	0.072	SLV 15	No
Maschio 111	PF SLU	1.604	SLU 76	Si
Maschio 111	V SLU	1.303	SLU 82	Si
Maschio 111	PF	1.49	SLV 13	Si
Maschio 111	V	1.008	SLV 9	Si
Maschio 111	PFFP	3.318	SLV 15	Si
Maschio 111	R	0.072	SLV 3	No
Maschio 112	PF SLU	1.374	SLU 83	Si
Maschio 112	V SLU	1.116	SLU 81	Si
Maschio 112	PF	1.328	SLV 7	Si
Maschio 112	V	0.779	SLV 7	No
Maschio 112	PFFP	2.351	SLV 13	Si
Maschio 112	R	0.07	SLV 3	No
Maschio 113	PF SLU	1.279	SLU 83	Si
Maschio 113	V SLU	1.13	SLU 84	Si
Maschio 113	PF	1.251	SLV 3	Si
Maschio 113	V	0.728	SLV 1	No
Maschio 113	PFFP	4.043	SLV 13	Si
Maschio 113	R	0.068	SLV 1	No
Maschio 114	PF SLU	14.166	SLU 77	Si
Maschio 114	V SLU	8.355	SLU 51	Si
Maschio 114	PF	0	SLV 1	No



Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 114	V	0	SLV 1	No
Maschio 114	PFFP	3.205	SLV 1	Si
Maschio 114	R	0	SLV 5	No
Maschio 115	PF SLU	1.055	SLU 84	Si
Maschio 115	V SLU	0.686	SLU 76	No
Maschio 115	PF	1.102	SLV 15	Si
Maschio 115	V	0.349	SLV 15	No
Maschio 115	PFFP	3.162	SLV 15	Si
Maschio 115	R	0.068	SLV 3	No
Maschio 116	PF SLU	5.256	SLU 76	Si
Maschio 116	V SLU	23.325	SLU 52	Si
Maschio 116	PF	1.616	SLV 3	Si
Maschio 116	V	0.6	SLV 1	No
Maschio 116	PFFP	3.183	SLV 7	Si
Maschio 116	R	0.07	SLV 1	No
Maschio 117	PF SLU	3.013	SLU 76	Si
Maschio 117	V SLU	5.888	SLU 81	Si
Maschio 117	PF	0	SLV 13	No
Maschio 117	V	0	SLV 13	No
Maschio 117	PFFP	3.765	SLV 11	Si
Maschio 117	R	0	SLV 13	No
Maschio 118	PF SLU	12.858	SLU 83	Si
Maschio 118	V SLU	6.784	SLU 84	Si
Maschio 118	PF	4.923	SLV 5	Si
Maschio 118	V	0.64	SLV 9	No
Maschio 118	PFFP	2.936	SLV 9	Si
Maschio 118	R	0.018	SLV 1	No
Maschio 119	PF SLU	2.01	SLU 41	Si
Maschio 119	V SLU	1.627	SLU 41	Si
Maschio 119	PF	0	SLV 6	No
Maschio 119	V	0	SLV 1	No
Maschio 119	PFFP	2.776	SLV 5	Si
Maschio 119	R	0	SLV 6	No
Maschio 120	PF SLU	3.107	SLU 76	Si
Maschio 120	V SLU	2.983	SLU 31	Si
Maschio 120	PF	0	SLV 3	No
Maschio 120	V	0	SLV 3	No
Maschio 120	PFFP	3.158	SLV 15	Si
Maschio 120	R	0.034	SLV 7	No
Maschio 121	PF SLU	5.588	SLU 76	Si
Maschio 121	V SLU	3.212	SLU 2	Si
Maschio 121	PF	3.668	SLV 7	Si
Maschio 121	V	0.632	SLV 7	No
Maschio 121	PFFP	3.348	SLV 11	Si
Maschio 121	R	0.019	SLV 1	No
Maschio 122	PF SLU	2.686	SLU 2	Si
Maschio 122	V SLU	2.876	SLU 83	Si
Maschio 122	PF	0	SLV 14	No
Maschio 122	V	0	SLV 5	No
Maschio 122	PFFP	5.919	SLV 5	Si
Maschio 122	R	0.074	SLV 3	No
Maschio 123	PF SLU	3.973	SLU 82	Si
Maschio 123	V SLU	1.225	SLU 82	Si
Maschio 123	PF	0	SLV 15	No
Maschio 123	V	0	SLV 15	No
Maschio 123	PFFP	4.05	SLV 7	Si
Maschio 123	R	0.029	SLV 11	No
Maschio 124	PF SLU	5.775	SLU 84	Si
Maschio 124	V SLU	6.58	SLU 83	Si
Maschio 124	PF	1.181	SLV 1	Si
Maschio 124	V	1.505	SLV 1	Si
Maschio 124	PFFP	1.589	SLV 11	Si
Maschio 124	R	0.081	SLV 3	No
Maschio 125	PF SLU	15.074	SLU 39	Si
Maschio 125	V SLU	14.126	SLU 81	Si
Maschio 125	PF	1.007	SLV 11	Si
Maschio 125	V	0.127	SLV 11	No
Maschio 125	PFFP	3.74	SLV 11	Si
Maschio 125	R	0.08	SLV 7	No
Maschio 126	PF SLU	0	SLU 77	No
Maschio 126	V SLU	1.515	SLU 83	Si
Maschio 126	PF	0	SLV 16	No
Maschio 126	V	0	SLV 1	No
Maschio 126	PFFP	0	SLV 16	No
Maschio 126	R	0	SLV 10	No
Maschio 127	PF SLU	3.423	SLU 83	Si
Maschio 127	V SLU	19.157	SLU 80	Si
Maschio 127	PF	1.023	SLV 9	Si
Maschio 127	V	0.21	SLV 9	No
Maschio 127	PFFP	2.497	SLV 9	Si
Maschio 127	R	0.014	SLV 13	No
Maschio 128	PF SLU	10.178	SLU 84	Si
Maschio 128	V SLU	2.798	SLU 84	Si
Maschio 128	PF	2.889	SLV 7	Si
Maschio 128	V	0.943	SLV 7	No
Maschio 128	PFFP	3.562	SLV 11	Si
Maschio 128	R	0.076	SLV 13	No
Maschio 130	PF SLU	8.359	SLU 83	Si
Maschio 130	V SLU	6.945	SLU 73	Si
Maschio 130	PF	5.559	SLV 15	Si
Maschio 130	V	0.722	SLV 11	No



Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 130	PFFP	6.9	SLV 7	Si
Maschio 130	R	0.114	SLV 13	No
Maschio 131	PF SLU	1.022	SLU 84	Si
Maschio 131	V SLU	1.288	SLU 84	Si
Maschio 131	PF	0	SLV 12	No
Maschio 131	V	0	SLV 1	No
Maschio 131	PFFP	0	SLV 1	No
Maschio 131	R	0	SLV 10	No
Maschio 132	PF SLU	4.445	SLU 84	Si
Maschio 132	V SLU	11.478	SLU 52	Si
Maschio 132	PF	0	SLV 12	No
Maschio 132	V	0	SLV 1	No
Maschio 132	PFFP	0	SLV 10	No
Maschio 132	R	0	SLV 12	No
Maschio 133	PF SLU	6.431	SLU 83	Si
Maschio 133	V SLU	45.688	SLU 40	Si
Maschio 133	PF	2.728	SLV 13	Si
Maschio 133	V	0.641	SLV 1	No
Maschio 133	PFFP	4.344	SLV 5	Si
Maschio 133	R	0.016	SLV 5	No
Maschio 134	PF SLU	0	SLU 81	No
Maschio 134	V SLU	2.785	SLU 40	Si
Maschio 134	PF	0	SLV 16	No
Maschio 134	V	0	SLV 1	No
Maschio 134	PFFP	0	SLV 3	No
Maschio 134	R	0	SLV 16	No
Maschio 135	PF SLU	4.391	SLU 84	Si
Maschio 135	V SLU	4.303	SLU 84	Si
Maschio 135	PF	0	SLV 13	No
Maschio 135	V	0	SLV 13	No
Maschio 135	PFFP	2.769	SLV 13	Si
Maschio 135	R	0.043	SLV 9	No
Maschio 136	PF SLU	22.519	SLU 78	Si
Maschio 136	V SLU	12.729	SLU 49	Si
Maschio 136	PF	2.75	SLV 13	Si
Maschio 136	V	0.942	SLV 1	No
Maschio 136	PFFP	5.538	SLV 9	Si
Maschio 136	R	0.022	SLV 9	No
Maschio 137	PF SLU	21.605	SLU 81	Si
Maschio 137	V SLU	7.721	SLU 50	Si
Maschio 137	PF	2.693	SLV 1	Si
Maschio 137	V	1.016	SLV 1	Si
Maschio 137	PFFP	5.132	SLV 5	Si
Maschio 137	R	0.073	SLV 15	No
Maschio 138	PF SLU	5.207	SLU 82	Si
Maschio 138	V SLU	7.145	SLU 40	Si
Maschio 138	PF	0	SLV 1	No
Maschio 138	V	0	SLV 1	No
Maschio 138	PFFP	1.849	SLV 1	Si
Maschio 138	R	0	SLV 5	No
Maschio 139	PF SLU	3.878	SLU 83	Si
Maschio 139	V SLU	2.628	SLU 41	Si
Maschio 139	PF	2.473	SLV 13	Si
Maschio 139	V	0.757	SLV 15	No
Maschio 139	PFFP	4.606	SLV 15	Si
Maschio 139	R	0.046	SLV 11	No
Maschio 140	PF SLU	25.206	SLU 84	Si
Maschio 140	V SLU	16.23	SLU 52	Si
Maschio 140	PF	2.468	SLV 15	Si
Maschio 140	V	0.653	SLV 3	No
Maschio 140	PFFP	8.261	SLV 1	Si
Maschio 140	R	0.059	SLV 7	No
Maschio 141	PF SLU	1.883	SLU 78	Si
Maschio 141	V SLU	4.604	SLU 49	Si
Maschio 141	PF	0	SLV 1	No
Maschio 141	V	0	SLV 1	No
Maschio 141	PFFP	9.058	SLV 15	Si
Maschio 141	R	0.067	SLV 15	No
Maschio 142	PF SLU	4.077	SLU 78	Si
Maschio 142	V SLU	8.437	SLU 47	Si
Maschio 142	PF	1.003	SLV 15	Si
Maschio 142	V	0.334	SLV 15	No
Maschio 142	PFFP	8.291	SLV 15	Si
Maschio 142	R	0.033	SLV 11	No
Maschio 143	PF SLU	4.507	SLU 77	Si
Maschio 143	V SLU	3.897	SLU 77	Si
Maschio 143	PF	0.896	SLV 13	No
Maschio 143	V	0.203	SLV 15	No
Maschio 143	PFFP	9.391	SLV 5	Si
Maschio 143	R	0.057	SLV 7	No
Maschio 144	PF SLU	6.021	SLU 83	Si
Maschio 144	V SLU	2.146	SLU 83	Si
Maschio 144	PF	2.077	SLV 3	Si
Maschio 144	V	0.77	SLV 13	No
Maschio 144	PFFP	5.703	SLV 3	Si
Maschio 144	R	0.05	SLV 7	No
Maschio 145	PF SLU	0	SLU 1	No
Maschio 145	V SLU	0	SLU 1	No
Maschio 145	PF	0	SLV 1	No
Maschio 145	V	0	SLV 1	No
Maschio 145	PFFP	0	SLV 7	No



Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 145	R	0.053	SLV 9	No
Maschio 146	PF SLU	8.595	SLU 83	Si
Maschio 146	V SLU	1.874	SLU 83	Si
Maschio 146	PF	0.983	SLV 3	No
Maschio 146	V	0.1	SLV 3	No
Maschio 146	PFFP	13.264	SLV 7	Si
Maschio 146	R	0.471	SLV 13	No
Maschio 147	PF SLU	4.74	SLU 42	Si
Maschio 147	V SLU	3.961	SLU 84	Si
Maschio 147	PF	2.362	SLV 3	Si
Maschio 147	V	1.021	SLV 11	Si
Maschio 147	PFFP	6.156	SLV 7	Si
Maschio 147	R	0.05	SLV 7	No
Maschio 148	PF SLU	6.911	SLU 77	Si
Maschio 148	V SLU	7.865	SLU 39	Si
Maschio 148	PF	3.711	SLV 7	Si
Maschio 148	V	0.6	SLV 7	No
Maschio 148	PFFP	13.863	SLV 3	Si
Maschio 148	R	0.126	SLV 1	No
Maschio 150	PF SLU	2.643	SLU 83	Si
Maschio 150	V SLU	4.431	SLU 63	Si
Maschio 150	PF	2.337	SLV 11	Si
Maschio 150	V	0.697	SLV 15	No
Maschio 150	PFFP	5.501	SLV 1	Si
Maschio 150	R	0.049	SLV 1	No
Maschio 151	PF SLU	0.039	SLU 83	No
Maschio 151	V SLU	6.948	SLU 83	Si
Maschio 151	PF	0.621	SLV 7	No
Maschio 151	V	0.037	SLV 7	No
Maschio 151	PFFP	4.889	SLV 11	Si
Maschio 151	R	0	SLV 1	No
Maschio 152	PF SLU	3.434	SLU 83	Si
Maschio 152	V SLU	36.342	SLU 80	Si
Maschio 152	PF	3.034	SLV 9	Si
Maschio 152	V	0.791	SLV 5	No
Maschio 152	PFFP	3.435	SLV 5	Si
Maschio 152	R	0.017	SLV 1	No
Maschio 153	PF SLU	5.79	SLU 78	Si
Maschio 153	V SLU	10.059	SLU 47	Si
Maschio 153	PF	0	SLV 7	No
Maschio 153	V	0	SLV 7	No
Maschio 153	PFFP	1.883	SLV 7	Si
Maschio 153	R	0.029	SLV 11	No
Maschio 154	PF SLU	2.869	SLU 83	Si
Maschio 154	V SLU	8.587	SLU 84	Si
Maschio 154	PF	0	SLV 10	No
Maschio 154	V	0	SLV 3	No
Maschio 154	PFFP	6.37	SLV 3	Si
Maschio 154	R	0	SLV 10	No
Maschio 155	PF SLU	2.016	SLU 84	Si
Maschio 155	V SLU	1.74	SLU 84	Si
Maschio 155	PF	0	SLV 15	No
Maschio 155	V	0	SLV 15	No
Maschio 155	PFFP	2.548	SLV 15	Si
Maschio 155	R	0	SLV 1	No
Maschio 156	PF SLU	7.217	SLU 76	Si
Maschio 156	V SLU	3.297	SLU 2	Si
Maschio 156	PF	4.263	SLV 7	Si
Maschio 156	V	0.712	SLV 11	No
Maschio 156	PFFP	3.557	SLV 11	Si
Maschio 156	R	0.019	SLV 13	No
Maschio 157	PF SLU	3.554	SLU 76	Si
Maschio 157	V SLU	5.639	SLU 26	Si
Maschio 157	PF	0	SLV 15	No
Maschio 157	V	0	SLV 15	No
Maschio 157	PFFP	5.783	SLV 7	Si
Maschio 157	R	0.049	SLV 15	No
Maschio 158	PF SLU	12.518	SLU 40	Si
Maschio 158	V SLU	5.039	SLU 82	Si
Maschio 158	PF	4.501	SLV 9	Si
Maschio 158	V	0.675	SLV 5	No
Maschio 158	PFFP	3.125	SLV 9	Si
Maschio 158	R	0.018	SLV 13	No
Maschio 159	PF SLU	0	SLU 1	No
Maschio 159	V SLU	0	SLU 1	No
Maschio 159	PF	0	SLV 14	No
Maschio 159	V	0	SLV 7	No
Maschio 159	PFFP	0	SLV 14	No
Maschio 159	R	0	SLV 10	No
Maschio 160	PF SLU	3.145	SLU 83	Si
Maschio 160	V SLU	20.421	SLU 82	Si
Maschio 160	PF	1.338	SLV 1	Si
Maschio 160	V	3.747	SLV 1	Si
Maschio 160	PFFP	2.929	SLV 9	Si
Maschio 160	R	0	SLV 16	No
Maschio 161	PF SLU	2.432	SLU 78	Si
Maschio 161	V SLU	6.063	SLU 83	Si
Maschio 161	PF	0	SLV 3	No
Maschio 161	V	0	SLV 3	No
Maschio 161	PFFP	4.576	SLV 7	Si
Maschio 161	R	0.068	SLV 7	No



Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 162	PF SLU	5.317	SLU 76	Si
Maschio 162	V SLU	8.457	SLU 73	Si
Maschio 162	PF	2.016	SLV 15	Si
Maschio 162	V	0.693	SLV 3	No
Maschio 162	PFFP	3.423	SLV 11	Si
Maschio 162	R	0.078	SLV 1	No
Maschio 163	PF SLU	4.614	SLU 73	Si
Maschio 163	V SLU	0.93	SLU 76	No
Maschio 163	PF	1.302	SLV 3	Si
Maschio 163	V	0.611	SLV 15	No
Maschio 163	PFFP	2.149	SLV 7	Si
Maschio 163	R	0.057	SLV 1	No
Maschio 164	PF SLU	7.413	SLU 77	Si
Maschio 164	V SLU	7.633	SLU 51	Si
Maschio 164	PF	1.227	SLV 13	Si
Maschio 164	V	0.361	SLV 13	No
Maschio 164	PFFP	3.542	SLV 9	Si
Maschio 164	R	0.023	SLV 9	No
Maschio 165	PF SLU	4.544	SLU 78	Si
Maschio 165	V SLU	1.228	SLU 84	Si
Maschio 165	PF	1.585	SLV 1	Si
Maschio 165	V	0.742	SLV 13	No
Maschio 165	PFFP	2.585	SLV 5	Si
Maschio 165	R	0.071	SLV 13	No
Maschio 166	PF SLU	16.27	SLU 73	Si
Maschio 166	V SLU	19.071	SLU 2	Si
Maschio 166	PF	2.776	SLV 5	Si
Maschio 166	V	1.896	SLV 5	Si
Maschio 166	PFFP	4.029	SLV 1	Si
Maschio 166	R	0.073	SLV 15	No
Maschio 167	PF SLU	7.25	SLU 41	Si
Maschio 167	V SLU	4.873	SLU 81	Si
Maschio 167	PF	3.583	SLV 9	Si
Maschio 167	V	1.698	SLV 5	Si
Maschio 167	PFFP	2.611	SLV 11	Si
Maschio 167	R	0.065	SLV 1	No
Maschio 168	PF SLU	4.926	SLU 83	Si
Maschio 168	V SLU	4.287	SLU 81	Si
Maschio 168	PF	3.033	SLV 7	Si
Maschio 168	V	1.965	SLV 7	Si
Maschio 168	PFFP	1.864	SLV 13	Si
Maschio 168	R	0.068	SLV 3	No
Maschio 169	PF SLU	4.176	SLU 84	Si
Maschio 169	V SLU	1.551	SLU 84	Si
Maschio 169	PF	1.498	SLV 13	Si
Maschio 169	V	0.903	SLV 1	No
Maschio 169	PFFP	2.528	SLV 9	Si
Maschio 169	R	0	SLV 5	No
Maschio 170	PF SLU	2.168	SLU 50	Si
Maschio 170	V SLU	1.955	SLU 80	Si
Maschio 170	PF	0	SLV 1	No
Maschio 170	V	0	SLV 1	No
Maschio 170	PFFP	0	SLV 3	No
Maschio 170	R	0	SLV 4	No
Maschio 171	PF SLU	4.156	SLU 84	Si
Maschio 171	V SLU	1.353	SLU 84	Si
Maschio 171	PF	1.642	SLV 15	Si
Maschio 171	V	0.959	SLV 3	No
Maschio 171	PFFP	2.304	SLV 15	Si
Maschio 171	R	0.06	SLV 11	No
Maschio 172	PF SLU	5.616	SLU 76	Si
Maschio 172	V SLU	1.941	SLU 76	Si
Maschio 172	PF	1.724	SLV 3	Si
Maschio 172	V	0.606	SLV 1	No
Maschio 172	PFFP	2.913	SLV 11	Si
Maschio 172	R	0.068	SLV 13	No
Maschio 173	PF SLU	3.471	SLU 84	Si
Maschio 173	V SLU	2.379	SLU 83	Si
Maschio 173	PF	0	SLV 16	No
Maschio 173	V	0	SLV 1	No
Maschio 173	PFFP	1.55	SLV 15	Si
Maschio 173	R	0.073	SLV 3	No
Maschio 174	PF SLU	11.136	SLU 82	Si
Maschio 174	V SLU	20.64	SLU 40	Si
Maschio 174	PF	2.912	SLV 9	Si
Maschio 174	V	0.748	SLV 9	No
Maschio 174	PFFP	1.601	SLV 9	Si
Maschio 174	R	0.018	SLV 3	No
Maschio 175	PF SLU	9.043	SLU 41	Si
Maschio 175	V SLU	4.796	SLU 41	Si
Maschio 175	PF	0	SLV 10	No
Maschio 175	V	0	SLV 5	No
Maschio 175	PFFP	1.109	SLV 9	Si
Maschio 175	R	0	SLV 10	No
Maschio 176	PF SLU	4.432	SLU 2	Si
Maschio 176	V SLU	4.746	SLU 31	Si
Maschio 176	PF	0	SLV 8	No
Maschio 176	V	0	SLV 1	No
Maschio 176	PFFP	0	SLV 15	No
Maschio 176	R	0.023	SLV 11	No
Maschio 177	PF SLU	5.289	SLU 5	Si



Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 177	V SLU	4.945	SLU 2	Si
Maschio 177	PF	2.915	SLV 13	Si
Maschio 177	V	0.665	SLV 7	No
Maschio 177	PFFP	1.835	SLV 15	Si
Maschio 177	R	0.019	SLV 3	No
Maschio 178	PF SLU	1.169	SLU 31	Si
Maschio 178	V SLU	1.47	SLU 34	Si
Maschio 178	PF	0	SLV 16	No
Maschio 178	V	0	SLV 3	No
Maschio 178	PFFP	2.384	SLV 3	Si
Maschio 178	R	0	SLV 10	No
Maschio 179	PF SLU	3.89	SLU 40	Si
Maschio 179	V SLU	1.368	SLU 82	Si
Maschio 179	PF	0	SLV 3	No
Maschio 179	V	0	SLV 3	No
Maschio 179	PFFP	1.668	SLV 3	Si
Maschio 179	R	0.033	SLV 11	No
Maschio 180	PF SLU	5.903	SLU 39	Si
Maschio 180	V SLU	7.082	SLU 83	Si
Maschio 180	PF	0.886	SLV 5	No
Maschio 180	V	0.341	SLV 5	No
Maschio 180	PFFP	1.972	SLV 9	Si
Maschio 180	R	0.048	SLV 9	No
Maschio 181	PF SLU	10.093	SLU 40	Si
Maschio 181	V SLU	5.678	SLU 82	Si
Maschio 181	PF	0	SLV 1	No
Maschio 181	V	0	SLV 1	No
Maschio 181	PFFP	2.937	SLV 3	Si
Maschio 181	R	0	SLV 4	No
Maschio 182	PF SLU	1.064	SLU 77	Si
Maschio 182	V SLU	1.166	SLU 79	Si
Maschio 182	PF	0	SLV 16	No
Maschio 182	V	0	SLV 1	No
Maschio 182	PFFP	0	SLV 16	No
Maschio 182	R	0	SLV 10	No
Maschio 183	PF SLU	10.864	SLU 81	Si
Maschio 183	V SLU	18.948	SLU 80	Si
Maschio 183	PF	1.317	SLV 5	Si
Maschio 183	V	0.488	SLV 5	No
Maschio 183	PFFP	1.696	SLV 5	Si
Maschio 183	R	0.011	SLV 3	No
Maschio 184	PF SLU	11.946	SLU 39	Si
Maschio 184	V SLU	3.677	SLU 82	Si
Maschio 184	PF	4.484	SLV 7	Si
Maschio 184	V	1.061	SLV 7	Si
Maschio 184	PFFP	25.619	SLV 7	Si
Maschio 184	R	0.411	SLV 1	No
Maschio 185	PF SLU	12.488	SLU 40	Si
Maschio 185	V SLU	3.762	SLU 82	Si
Maschio 185	PF	3.571	SLV 13	Si
Maschio 185	V	1.079	SLV 9	Si
Maschio 185	PFFP	5.959	SLV 3	Si
Maschio 185	R	0.188	SLV 13	No
Maschio 187	PF SLU	16.841	SLU 69	Si
Maschio 187	V SLU	8.899	SLU 31	Si
Maschio 187	PF	12.276	SLV 15	Si
Maschio 187	V	0.755	SLV 11	No
Maschio 187	PFFP	3.51	SLV 7	Si
Maschio 187	R	0.074	SLV 7	No
Maschio 188	PF SLU	0	SLU 1	No
Maschio 188	V SLU	0	SLU 1	No
Maschio 188	PF	0	SLV 16	No
Maschio 188	V	0	SLV 1	No
Maschio 188	PFFP	0	SLV 12	No
Maschio 188	R	0	SLV 10	No
Maschio 189	PF SLU	6.46	SLU 77	Si
Maschio 189	V SLU	14.769	SLU 35	Si
Maschio 189	PF	0	SLV 12	No
Maschio 189	V	0	SLV 5	No
Maschio 189	PFFP	0	SLV 10	No
Maschio 189	R	0	SLV 12	No
Maschio 190	PF SLU	11.937	SLU 48	Si
Maschio 190	V SLU	33.1	SLU 40	Si
Maschio 190	PF	2.473	SLV 1	Si
Maschio 190	V	0.734	SLV 13	No
Maschio 190	PFFP	2.077	SLV 9	Si
Maschio 190	R	0.011	SLV 5	No
Maschio 191	PF SLU	1.077	SLU 82	Si
Maschio 191	V SLU	1.552	SLU 40	Si
Maschio 191	PF	0	SLV 16	No
Maschio 191	V	0	SLV 1	No
Maschio 191	PFFP	0	SLV 4	No
Maschio 191	R	0	SLV 16	No
Maschio 192	PF SLU	6.051	SLU 80	Si
Maschio 192	V SLU	5.047	SLU 80	Si
Maschio 192	PF	1.01	SLV 13	Si
Maschio 192	V	0.22	SLV 13	No
Maschio 192	PFFP	1.827	SLV 13	Si
Maschio 192	R	0	SLV 5	No
Maschio 193	PF SLU	34.179	SLU 39	Si
Maschio 193	V SLU	18.207	SLU 39	Si



Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 193	PF	1.92	SLV 13	Si
Maschio 193	V	0.818	SLV 13	No
Maschio 193	PFFP	2.963	SLV 9	Si
Maschio 193	R	0.01	SLV 9	No
Maschio 194	PF SLU	19.502	SLU 9	Si
Maschio 194	V SLU	23.515	SLU 50	Si
Maschio 194	PF	2.381	SLV 1	Si
Maschio 194	V	0.976	SLV 1	No
Maschio 194	PFFP	3.195	SLV 5	Si
Maschio 194	R	0.019	SLV 5	No
Maschio 195	PF SLU	5.309	SLU 9	Si
Maschio 195	V SLU	7.601	SLU 84	Si
Maschio 195	PF	0	SLV 1	No
Maschio 195	V	0	SLV 1	No
Maschio 195	PFFP	0	SLV 1	No
Maschio 195	R	0.06	SLV 5	No
Maschio 196	PF SLU	5.245	SLU 77	Si
Maschio 196	V SLU	1.915	SLU 41	Si
Maschio 196	PF	1.601	SLV 15	Si
Maschio 196	V	0.59	SLV 15	No
Maschio 196	PFFP	2.085	SLV 15	Si
Maschio 196	R	0.019	SLV 9	No
Maschio 197	PF SLU	17.945	SLU 81	Si
Maschio 197	V SLU	13.137	SLU 37	Si
Maschio 197	PF	3.637	SLV 15	Si
Maschio 197	V	0.707	SLV 13	No
Maschio 197	PFFP	5.141	SLV 15	Si
Maschio 197	R	0.037	SLV 11	No
Maschio 198	PF SLU	6.524	SLU 51	Si
Maschio 198	V SLU	10.902	SLU 39	Si
Maschio 198	PF	0	SLV 1	No
Maschio 198	V	0	SLV 1	No
Maschio 198	PFFP	3.547	SLV 11	Si
Maschio 198	R	0.058	SLV 11	No
Maschio 199	PF SLU	6.895	SLU 49	Si
Maschio 199	V SLU	7.514	SLU 47	Si
Maschio 199	PF	1.172	SLV 3	Si
Maschio 199	V	0.674	SLV 3	No
Maschio 199	PFFP	5.564	SLV 3	Si
Maschio 199	R	0.005	SLV 5	No
Maschio 200	PF SLU	5.303	SLU 79	Si
Maschio 200	V SLU	3.853	SLU 79	Si
Maschio 200	PF	0.84	SLV 15	No
Maschio 200	V	0.069	SLV 15	No
Maschio 200	PFFP	5.628	SLV 3	Si
Maschio 200	R	0.035	SLV 7	No
Maschio 201	PF SLU	7.008	SLU 77	Si
Maschio 201	V SLU	2.323	SLU 41	Si
Maschio 201	PF	2.484	SLV 3	Si
Maschio 201	V	0.816	SLV 13	No
Maschio 201	PFFP	2.895	SLV 3	Si
Maschio 201	R	0.021	SLV 7	No
Maschio 202	PF SLU	7.479	SLU 82	Si
Maschio 202	V SLU	9.878	SLU 84	Si
Maschio 202	PF	1.861	SLV 3	Si
Maschio 202	V	1.071	SLV 1	Si
Maschio 202	PFFP	19.357	SLV 7	Si
Maschio 202	R	0.168	SLV 7	No
Maschio 203	PF SLU	6.383	SLU 82	Si
Maschio 203	V SLU	4.035	SLU 83	Si
Maschio 203	PF	2.597	SLV 11	Si
Maschio 203	V	1.155	SLV 11	Si
Maschio 203	PFFP	4.369	SLV 11	Si
Maschio 203	R	0.174	SLV 1	No
Maschio 204	PF SLU	7.296	SLU 77	Si
Maschio 204	V SLU	29.606	SLU 23	Si
Maschio 204	PF	3.498	SLV 7	Si
Maschio 204	V	0.963	SLV 7	No
Maschio 204	PFFP	8.072	SLV 3	Si
Maschio 204	R	0.13	SLV 3	No
Maschio 206	PF SLU	5.345	SLU 69	Si
Maschio 206	V SLU	3.081	SLU 69	Si
Maschio 206	PF	2.766	SLV 5	Si
Maschio 206	V	1.129	SLV 9	Si
Maschio 206	PFFP	2.827	SLV 3	Si
Maschio 206	R	0.021	SLV 11	No
Maschio 207	PF SLU	1.912	SLU 83	Si
Maschio 207	V SLU	7.295	SLU 83	Si
Maschio 207	PF	0	SLV 3	No
Maschio 207	V	0	SLV 3	No
Maschio 207	PFFP	2.355	SLV 3	Si
Maschio 207	R	0	SLV 1	No
Maschio 208	PF SLU	5.064	SLU 83	Si
Maschio 208	V SLU	34.77	SLU 59	Si
Maschio 208	PF	1.665	SLV 5	Si
Maschio 208	V	0.679	SLV 5	No
Maschio 208	PFFP	1.769	SLV 5	Si
Maschio 208	R	0.012	SLV 15	No
Maschio 209	PF SLU	9.891	SLU 49	Si
Maschio 209	V SLU	6.526	SLU 83	Si
Maschio 209	PF	0	SLV 7	No



Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 209	V	0	SLV 7	No
Maschio 209	PFFP	2.235	SLV 11	Si
Maschio 209	R	0	SLV 16	No
Maschio 210	PF SLU	5.617	SLU 31	Si
Maschio 210	V SLU	18.844	SLU 81	Si
Maschio 210	PF	0	SLV 10	No
Maschio 210	V	0	SLV 1	No
Maschio 210	PFFP	0	SLV 6	No
Maschio 210	R	0	SLV 10	No
Maschio 211	PF SLU	2.517	SLU 84	Si
Maschio 211	V SLU	2.125	SLU 84	Si
Maschio 211	PF	0	SLV 13	No
Maschio 211	V	0	SLV 13	No
Maschio 211	PFFP	0.99	SLV 15	No
Maschio 211	R	0	SLV 5	No
Maschio 212	PF SLU	6.678	SLU 2	Si
Maschio 212	V SLU	4.825	SLU 2	Si
Maschio 212	PF	4.066	SLV 5	Si
Maschio 212	V	0.778	SLV 11	No
Maschio 212	PFFP	1.751	SLV 3	Si
Maschio 212	R	0.018	SLV 11	No
Maschio 213	PF SLU	3.893	SLU 2	Si
Maschio 213	V SLU	4.326	SLU 26	Si
Maschio 213	PF	0	SLV 1	No
Maschio 213	V	0	SLV 1	No
Maschio 213	PFFP	2.637	SLV 3	Si
Maschio 213	R	0	SLV 5	No
Maschio 214	PF SLU	8.947	SLU 82	Si
Maschio 214	V SLU	7.813	SLU 79	Si
Maschio 214	PF	2.83	SLV 5	Si
Maschio 214	V	0.767	SLV 5	No
Maschio 214	PFFP	1.816	SLV 9	Si
Maschio 214	R	0.017	SLV 13	No
Maschio 215	PF SLU	1.121	SLU 79	Si
Maschio 215	V SLU	1.722	SLU 79	Si
Maschio 215	PF	0	SLV 5	No
Maschio 215	V	0	SLV 5	No
Maschio 215	PFFP	0	SLV 5	No
Maschio 215	R	0	SLV 10	No
Maschio 216	PF SLU	0	SLU 6	No
Maschio 216	V SLU	1000	SLU 1	Si
Maschio 216	PF	5.512	SLV 5	Si
Maschio 216	V	143.176	SLV 5	Si
Maschio 216	PFFP	0	SLV 1	No
Maschio 216	R	0	SLV 14	No
Maschio 217	PF SLU	4.367	SLU 78	Si
Maschio 217	V SLU	3.89	SLU 81	Si
Maschio 217	PF	0	SLV 1	No
Maschio 217	V	0	SLV 1	No
Maschio 217	PFFP	2.354	SLV 7	Si
Maschio 217	R	0.071	SLV 15	No
Maschio 218	PF SLU	6.662	SLU 76	Si
Maschio 218	V SLU	6.531	SLU 76	Si
Maschio 218	PF	1.521	SLV 15	Si
Maschio 218	V	0.703	SLV 15	No
Maschio 218	PFFP	2.43	SLV 11	Si
Maschio 218	R	0.066	SLV 13	No
Maschio 219	PF SLU	4.541	SLU 84	Si
Maschio 219	V SLU	1.333	SLU 84	Si
Maschio 219	PF	1.756	SLV 3	Si
Maschio 219	V	0.756	SLV 15	No
Maschio 219	PFFP	1.982	SLV 7	Si
Maschio 219	R	0.041	SLV 7	No
Maschio 220	PF SLU	4.944	SLU 51	Si
Maschio 220	V SLU	3.848	SLU 72	Si
Maschio 220	PF	0	SLV 13	No
Maschio 220	V	0	SLV 13	No
Maschio 220	PFFP	2.06	SLV 13	Si
Maschio 220	R	0.065	SLV 1	No
Maschio 221	PF SLU	3.937	SLU 80	Si
Maschio 221	V SLU	1.304	SLU 84	Si
Maschio 221	PF	1.621	SLV 13	Si
Maschio 221	V	0.608	SLV 13	No
Maschio 221	PFFP	2.164	SLV 5	Si
Maschio 221	R	0	SLV 5	No
Maschio 222	PF SLU	81.797	SLU 10	Si
Maschio 222	V SLU	25.192	SLU 2	Si
Maschio 222	PF	3.906	SLV 5	Si
Maschio 222	V	1.951	SLV 5	Si
Maschio 222	PFFP	2.75	SLV 1	Si
Maschio 222	R	0.061	SLV 13	No
Maschio 223	PF SLU	1.82	SLU 41	Si
Maschio 223	V SLU	4.256	SLU 78	Si
Maschio 223	PF	0	SLV 3	No
Maschio 223	V	0	SLV 3	No
Maschio 223	PFFP	0.979	SLV 7	No
Maschio 223	R	0	SLV 1	No
Maschio 224	PF SLU	5.611	SLU 7	Si
Maschio 224	V SLU	4.041	SLU 78	Si
Maschio 224	PF	0	SLV 9	No
Maschio 224	V	0	SLV 9	No



Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 224	PFFP	0.983	SLV 9	No
Maschio 224	R	0.02	SLV 15	No
Maschio 225	PF SLU	1.552	SLU 40	Si
Maschio 225	V SLU	0.917	SLU 40	No
Maschio 225	PF	0	SLV 3	No
Maschio 225	V	0	SLV 3	No
Maschio 225	PFFP	1.796	SLV 9	Si
Maschio 225	R	0.09	SLV 1	No
Maschio 226	PF SLU	1.148	SLU 40	Si
Maschio 226	V SLU	0.6	SLU 40	No
Maschio 226	PF	0	SLV 14	No
Maschio 226	V	0	SLV 1	No
Maschio 226	PFFP	0	SLV 9	No
Maschio 226	R	0	SLV 16	No
Maschio 227	PF SLU	1.954	SLU 40	Si
Maschio 227	V SLU	1.292	SLU 84	Si
Maschio 227	PF	1.63	SLV 1	Si
Maschio 227	V	1.099	SLV 3	Si
Maschio 227	PFFP	1.236	SLV 11	Si
Maschio 227	R	0.076	SLV 3	No
Maschio 228	PF SLU	3.763	SLU 40	Si
Maschio 228	V SLU	1.866	SLU 82	Si
Maschio 228	PF	1.372	SLV 1	Si
Maschio 228	V	0.498	SLV 1	No
Maschio 228	PFFP	1.402	SLV 15	Si
Maschio 228	R	0.114	SLV 5	No
Maschio 229	PF SLU	1.247	SLU 18	Si
Maschio 229	V SLU	1.558	SLU 81	Si
Maschio 229	PF	0	SLV 16	No
Maschio 229	V	0	SLV 1	No
Maschio 229	PFFP	0	SLV 12	No
Maschio 229	R	0	SLV 12	No
Maschio 230	PF SLU	1.452	SLU 50	Si
Maschio 230	V SLU	2.745	SLU 51	Si
Maschio 230	PF	0	SLV 4	No
Maschio 230	V	0	SLV 1	No
Maschio 230	PFFP	0	SLV 1	No
Maschio 230	R	0	SLV 4	No
Maschio 231	PF SLU	0	SLU 82	No
Maschio 231	V SLU	0	SLU 1	No
Maschio 231	PF	0	SLV 16	No
Maschio 231	V	0	SLV 1	No
Maschio 231	PFFP	0	SLV 16	No
Maschio 231	R	0	SLV 16	No
Maschio 232	PF SLU	3.157	SLU 39	Si
Maschio 232	V SLU	6.861	SLU 71	Si
Maschio 232	PF	0	SLV 16	No
Maschio 232	V	0	SLV 1	No
Maschio 232	PFFP	0	SLV 16	No
Maschio 232	R	0	SLV 8	No
Maschio 233	PF SLU	5.324	SLU 68	Si
Maschio 233	V SLU	9.902	SLU 73	Si
Maschio 233	PF	0	SLV 10	No
Maschio 233	V	0	SLV 3	No
Maschio 233	PFFP	0	SLV 1	No
Maschio 233	R	0	SLV 10	No
Maschio 234	PF SLU	2.016	SLU 40	Si
Maschio 234	V SLU	1.389	SLU 40	Si
Maschio 234	PF	0	SLV 4	No
Maschio 234	V	0	SLV 1	No
Maschio 234	PFFP	0	SLV 1	No
Maschio 234	R	0.063	SLV 1	No
Maschio 235	PF SLU	0	SLU 84	No
Maschio 235	V SLU	0	SLU 1	No
Maschio 235	PF	0	SLV 16	No
Maschio 235	V	0	SLV 1	No
Maschio 235	PFFP	0	SLV 16	No
Maschio 235	R	0	SLV 10	No
Maschio 236	PF SLU	4.111	SLU 37	Si
Maschio 236	V SLU	11.44	SLU 80	Si
Maschio 236	PF	0	SLV 7	No
Maschio 236	V	0	SLV 7	No
Maschio 236	PFFP	0	SLV 1	No
Maschio 236	R	0	SLV 16	No
Maschio 237	PF SLU	8.2	SLU 39	Si
Maschio 237	V SLU	6.565	SLU 78	Si
Maschio 237	PF	0	SLV 7	No
Maschio 237	V	0	SLV 7	No
Maschio 237	PFFP	0	SLV 11	No
Maschio 237	R	0.026	SLV 15	No
Maschio 238	PF SLU	1.4	SLU 35	Si
Maschio 238	V SLU	1.666	SLU 35	Si
Maschio 238	PF	0	SLV 16	No
Maschio 238	V	0	SLV 1	No
Maschio 238	PFFP	0	SLV 10	No
Maschio 238	R	0	SLV 16	No
Maschio 239	PF SLU	7.144	SLU 40	Si
Maschio 239	V SLU	25.746	SLU 40	Si
Maschio 239	PF	0	SLV 13	No
Maschio 239	V	0	SLV 13	No
Maschio 239	PFFP	0	SLV 1	No



Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 239	R	0	SLV 1	No
Maschio 240	PF SLU	0	SLU 82	No
Maschio 240	V SLU	0	SLU 10	No
Maschio 240	PF	0	SLV 16	No
Maschio 240	V	0	SLV 1	No
Maschio 240	PFFP	0	SLV 4	No
Maschio 240	R	0	SLV 16	No
Maschio 241	PF SLU	0	SLU 84	No
Maschio 241	V SLU	0	SLU 1	No
Maschio 241	PF	0	SLV 10	No
Maschio 241	V	0	SLV 1	No
Maschio 241	PFFP	0	SLV 10	No
Maschio 241	R	0	SLV 6	No
Maschio 242	PF SLU	9.555	SLU 74	Si
Maschio 242	V SLU	5.748	SLU 81	Si
Maschio 242	PF	1.619	SLV 13	Si
Maschio 242	V	1.045	SLV 13	Si
Maschio 242	PFFP	1.558	SLV 9	Si
Maschio 242	R	0.098	SLV 11	No
Maschio 243	PF SLU	6.749	SLU 42	Si
Maschio 243	V SLU	5.185	SLU 78	Si
Maschio 243	PF	1.585	SLV 1	Si
Maschio 243	V	0.957	SLV 1	No
Maschio 243	PFFP	1.519	SLV 5	Si
Maschio 243	R	0.085	SLV 5	No
Maschio 244	PF SLU	0	SLU 84	No
Maschio 244	V SLU	0	SLU 1	No
Maschio 244	PF	0	SLV 16	No
Maschio 244	V	0	SLV 1	No
Maschio 244	PFFP	0	SLV 14	No
Maschio 244	R	0	SLV 16	No
Maschio 245	PF SLU	3.164	SLU 39	Si
Maschio 245	V SLU	2.01	SLU 83	Si
Maschio 245	PF	0	SLV 13	No
Maschio 245	V	0	SLV 13	No
Maschio 245	PFFP	0	SLV 13	No
Maschio 245	R	0.126	SLV 3	No
Maschio 246	PF SLU	7.675	SLU 39	Si
Maschio 246	V SLU	9.713	SLU 37	Si
Maschio 246	PF	1.269	SLV 15	Si
Maschio 246	V	0.649	SLV 15	No
Maschio 246	PFFP	2.718	SLV 15	Si
Maschio 246	R	0.074	SLV 9	No
Maschio 247	PF SLU	5.808	SLU 39	Si
Maschio 247	V SLU	5.364	SLU 39	Si
Maschio 247	PF	0	SLV 12	No
Maschio 247	V	0	SLV 1	No
Maschio 247	PFFP	1.393	SLV 7	Si
Maschio 247	R	0	SLV 8	No
Maschio 248	PF SLU	4.754	SLU 47	Si
Maschio 248	V SLU	5.448	SLU 80	Si
Maschio 248	PF	0	SLV 4	No
Maschio 248	V	0	SLV 1	No
Maschio 248	PFFP	1.161	SLV 1	Si
Maschio 248	R	0	SLV 2	No
Maschio 249	PF SLU	4.42	SLU 51	Si
Maschio 249	V SLU	2.885	SLU 79	Si
Maschio 249	PF	0	SLV 1	No
Maschio 249	V	0	SLV 1	No
Maschio 249	PFFP	2.683	SLV 1	Si
Maschio 249	R	0	SLV 5	No
Maschio 250	PF SLU	3.398	SLU 41	Si
Maschio 250	V SLU	2.387	SLU 41	Si
Maschio 250	PF	1.165	SLV 3	Si
Maschio 250	V	1.037	SLV 3	Si
Maschio 250	PFFP	1.297	SLV 3	Si
Maschio 250	R	0.109	SLV 9	No
Maschio 251	PF SLU	1.674	SLU 36	Si
Maschio 251	V SLU	6.403	SLU 78	Si
Maschio 251	PF	0	SLV 3	No
Maschio 251	V	0	SLV 3	No
Maschio 251	PFFP	1.624	SLV 11	Si
Maschio 251	R	0	SLV 1	No
Maschio 252	PF SLU	1.325	SLU 41	Si
Maschio 252	V SLU	3.076	SLU 41	Si
Maschio 252	PF	0	SLV 4	No
Maschio 252	V	0	SLV 1	No
Maschio 252	PFFP	0	SLV 4	No
Maschio 252	R	0	SLV 10	No
Maschio 253	PF SLU	3.954	SLU 48	Si
Maschio 253	V SLU	23.346	SLU 80	Si
Maschio 253	PF	0.989	SLV 7	No
Maschio 253	V	0.158	SLV 7	No
Maschio 253	PFFP	0	SLV 1	No
Maschio 253	R	0	SLV 12	No
Maschio 254	PF SLU	0	SLU 40	No
Maschio 254	V SLU	0	SLU 1	No
Maschio 254	PF	0	SLV 6	No
Maschio 254	V	0	SLV 1	No
Maschio 254	PFFP	0	SLV 6	No
Maschio 254	R	0	SLV 10	No



Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 255	PF SLU	3.577	SLU 43	Si
Maschio 255	V SLU	13.138	SLU 84	Si
Maschio 255	PF	0	SLV 6	No
Maschio 255	V	0	SLV 1	No
Maschio 255	PFFP	0	SLV 1	No
Maschio 255	R	0	SLV 6	No
Maschio 256	PF SLU	6.679	SLU 18	Si
Maschio 256	V SLU	3.538	SLU 77	Si
Maschio 256	PF	0	SLV 1	No
Maschio 256	V	0	SLV 1	No
Maschio 256	PFFP	0	SLV 3	No
Maschio 256	R	0	SLV 5	No
Maschio 257	PF SLU	1.141	SLU 72	Si
Maschio 257	V SLU	0.709	SLU 51	No
Maschio 257	PF	0	SLV 16	No
Maschio 257	V	0	SLV 5	No
Maschio 257	PFFP	0	SLV 7	No
Maschio 257	R	0	SLV 16	No
Maschio 258	PF SLU	0.827	SLU 71	No
Maschio 258	V SLU	0.975	SLU 51	No
Maschio 258	PF	0	SLV 1	No
Maschio 258	V	0	SLV 1	No
Maschio 258	PFFP	3.286	SLV 3	Si
Maschio 258	R	0	SLV 1	No
Maschio 259	PF SLU	0	SLU 9	No
Maschio 259	V SLU	0	SLU 8	No
Maschio 259	PF	0	SLV 8	No
Maschio 259	V	0	SLV 1	No
Maschio 259	PFFP	0	SLV 4	No
Maschio 259	R	0	SLV 12	No
Maschio 260	PF SLU	2.895	SLU 61	Si
Maschio 260	V SLU	2.212	SLU 77	Si
Maschio 260	PF	0	SLV 12	No
Maschio 260	V	0	SLV 3	No
Maschio 260	PFFP	0	SLV 16	No
Maschio 260	R	0	SLV 12	No
Maschio 261	PF SLU	7.15	SLU 10	Si
Maschio 261	V SLU	3.856	SLU 82	Si
Maschio 261	PF	2.291	SLV 13	Si
Maschio 261	V	1.307	SLV 13	Si
Maschio 261	PFFP	1.241	SLV 3	Si
Maschio 261	R	0.105	SLV 5	No
Maschio 262	PF SLU	2.194	SLU 40	Si
Maschio 262	V SLU	1.447	SLU 78	Si
Maschio 262	PF	1.035	SLV 11	Si
Maschio 262	V	0.238	SLV 11	No
Maschio 262	PFFP	0	SLV 7	No
Maschio 262	R	0.114	SLV 3	No
Maschio 263	PF SLU	1.743	SLU 19	Si
Maschio 263	V SLU	1.626	SLU 82	Si
Maschio 263	PF	0	SLV 1	No
Maschio 263	V	0	SLV 1	No
Maschio 263	PFFP	0	SLV 5	No
Maschio 263	R	0	SLV 6	No
Maschio 264	PF SLU	1.759	SLU 40	Si
Maschio 264	V SLU	1.073	SLU 40	Si
Maschio 264	PF	1.084	SLV 13	Si
Maschio 264	V	0.284	SLV 13	No
Maschio 264	PFFP	0	SLV 9	No
Maschio 264	R	0.105	SLV 13	No
Maschio 265	PF SLU	84.584	SLU 37	Si
Maschio 265	V SLU	48.457	SLU 10	Si
Maschio 265	PF	1.476	SLV 9	Si
Maschio 265	V	2.464	SLV 5	Si
Maschio 265	PFFP	1.507	SLV 3	Si
Maschio 265	R	0.015	SLV 13	No
Maschio 266	PF SLU	0	SLU 2	No
Maschio 266	V SLU	0	SLU 2	No
Maschio 266	PF	0	SLV 12	No
Maschio 266	V	0	SLV 1	No
Maschio 266	PFFP	0	SLV 10	No
Maschio 266	R	0	SLV 10	No
Maschio 267	PF SLU	2.787	SLU 39	Si
Maschio 267	V SLU	5.392	SLU 77	Si
Maschio 267	PF	0	SLV 12	No
Maschio 267	V	0	SLV 1	No
Maschio 267	PFFP	2.01	SLV 11	Si
Maschio 267	R	0	SLV 12	No
Maschio 268	PF SLU	3.919	SLU 39	Si
Maschio 268	V SLU	3.57	SLU 82	Si
Maschio 268	PF	0	SLV 6	No
Maschio 268	V	0	SLV 1	No
Maschio 268	PFFP	0	SLV 6	No
Maschio 268	R	0	SLV 10	No
Maschio 269	PF SLU	1.964	SLU 36	Si
Maschio 269	V SLU	1.88	SLU 78	Si
Maschio 269	PF	1.108	SLV 7	Si
Maschio 269	V	0.292	SLV 13	No
Maschio 269	PFFP	1.824	SLV 1	Si
Maschio 269	R	0.068	SLV 1	No
Maschio 270	PF SLU	1.705	SLU 36	Si



Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 270	V SLU	1.596	SLU 78	Si
Maschio 270	PF	0	SLV 16	No
Maschio 270	V	0	SLV 13	No
Maschio 270	PFFP	1.261	SLV 15	Si
Maschio 270	R	0	SLV 16	No
Maschio 271	PF SLU	3.122	SLU 40	Si
Maschio 271	V SLU	3.272	SLU 80	Si
Maschio 271	PF	0	SLV 16	No
Maschio 271	V	0	SLV 9	No
Maschio 271	PFFP	0	SLV 14	No
Maschio 271	R	0	SLV 16	No
Maschio 272	PF SLU	3.509	SLU 40	Si
Maschio 272	V SLU	22.074	SLU 77	Si
Maschio 272	PF	0	SLV 16	No
Maschio 272	V	0	SLV 1	No
Maschio 272	PFFP	0	SLV 12	No
Maschio 272	R	0	SLV 16	No
Maschio 275	PF SLU	0.487	SLU 84	No
Maschio 275	V SLU	0.805	SLU 84	No
Maschio 275	PF	0	SLV 8	No
Maschio 275	V	0	SLV 3	No
Maschio 275	PFFP	0	SLV 8	No
Maschio 275	R	0	SLV 8	No
Maschio 276	PF SLU	0.612	SLU 84	No
Maschio 276	V SLU	0.827	SLU 84	No
Maschio 276	PF	0	SLV 12	No
Maschio 276	V	0	SLV 11	No
Maschio 276	PFFP	0	SLV 11	No
Maschio 276	R	0	SLV 12	No
Maschio 277	PF SLU	21.052	SLU 79	Si
Maschio 277	V SLU	26.464	SLU 79	Si
Maschio 277	PF	0	SLV 7	No
Maschio 277	V	0	SLV 7	No
Maschio 277	PFFP	9.832	SLV 11	Si
Maschio 277	R	0.182	SLV 11	No
Maschio 278	PF SLU	7.626	SLU 68	Si
Maschio 278	V SLU	3.309	SLU 73	Si
Maschio 278	PF	0	SLV 16	No
Maschio 278	V	0	SLV 1	No
Maschio 278	PFFP	0	SLV 11	No
Maschio 278	R	0	SLV 12	No
Maschio 279	PF SLU	4.886	SLU 82	Si
Maschio 279	V SLU	5.382	SLU 73	Si
Maschio 279	PF	0	SLV 16	No
Maschio 279	V	0	SLV 3	No
Maschio 279	PFFP	0	SLV 1	No
Maschio 279	R	0	SLV 4	No
Maschio 280	PF SLU	1.575	SLU 84	Si
Maschio 280	V SLU	1.516	SLU 84	Si
Maschio 280	PF	0	SLV 11	No
Maschio 280	V	0	SLV 11	No
Maschio 280	PFFP	1.262	SLV 11	Si
Maschio 280	R	0.001	SLV 11	No
Maschio 281	PF SLU	6.108	SLU 73	Si
Maschio 281	V SLU	4.199	SLU 82	Si
Maschio 281	PF	0	SLV 16	No
Maschio 281	V	0	SLV 1	No
Maschio 281	PFFP	3.338	SLV 7	Si
Maschio 281	R	0.085	SLV 1	No
Maschio 282	PF SLU	5.896	SLU 82	Si
Maschio 282	V SLU	6.126	SLU 73	Si
Maschio 282	PF	0	SLV 4	No
Maschio 282	V	0	SLV 1	No
Maschio 282	PFFP	2.114	SLV 7	Si
Maschio 282	R	0.081	SLV 11	No
Maschio 283	PF SLU	3.308	SLU 84	Si
Maschio 283	V SLU	1.329	SLU 84	Si
Maschio 283	PF	0	SLV 8	No
Maschio 283	V	0	SLV 3	No
Maschio 283	PFFP	0	SLV 7	No
Maschio 283	R	0	SLV 7	No
Maschio 284	PF SLU	0	SLU 1	No
Maschio 284	V SLU	0	SLU 1	No
Maschio 284	PF	0	SLV 1	No
Maschio 284	V	0	SLV 1	No
Maschio 284	PFFP	0	SLV 3	No
Maschio 284	R	0.023	SLV 5	No
Maschio 285	PF SLU	0	SLU 84	No
Maschio 285	V SLU	0	SLU 1	No
Maschio 285	PF	0	SLV 16	No
Maschio 285	V	0	SLV 1	No
Maschio 285	PFFP	0	SLV 16	No
Maschio 285	R	0	SLV 10	No

Verifica maschi in muratura

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ZE)	TR	(TR/TRrif)^.41	Verifica
1	PF	1.252	SLV 15	0.301	1.233	888	1.292	Si
	V	0.821	SLV 9	0.199	0.815	276	0.8	No
	PFFP	1.112	SLV 13	0.27	1.104	638	1.129	Si
	R	0.285	SLV 3	0.067	0.275	20	0.273	No
2	PF	0.346	SLV 3	0.081	0.332	31	0.327	No



Maschio	Stato limite	Molt.	Comb.	PGA	IPGA (ZE)	TR	(TR/TRrif)^.41	Verifica
3	V	0.141	SLV 1	0.031	0.127	3	0.125	No
	PFFP	1.987	SLV 5	0.362	1.483	1618	1.653	Si
	R	0.309	SLV 1	0.073	0.298	24	0.294	No
	PF	1.029	SLV 9	0.251	1.027	514	1.033	Si
	V	0.57	SLV 7	0.135	0.553	108	0.545	No
4	PFFP	2.283	SLV 9	0.362	1.483	1618	1.653	Si
	R	0.284	SLV 1	0.067	0.275	20	0.273	No
	PF	1.331	SLV 9	0.319	1.306	1065	1.392	Si
	V	0.839	SLV 9	0.203	0.833	292	0.819	No
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
6	R	0.229	SLV 3	0.053	0.218	11	0.214	No
	PF	0.108	SLV 5	0.02	0.08	1	0.08	No
	V	0	SLV 1	0	0	0	0	No
	PFFP	2.428	SLV 5	0.362	1.483	1618	1.653	Si
	R	0.29	SLV 3	0.069	0.281	21	0.278	No
7	PF	1.889	SLV 7	0.362	1.483	1618	1.653	Si
	V	0.589	SLV 1	0.14	0.571	117	0.563	No
	PFFP	2.017	SLV 11	0.362	1.483	1618	1.653	Si
	R	0.275	SLV 13	0.064	0.262	18	0.261	No
	PF	1.828	SLV 7	0.362	1.483	1618	1.653	Si
8	V	0.45	SLV 13	0.106	0.433	59	0.425	No
	PFFP	2.169	SLV 7	0.362	1.483	1618	1.653	Si
	R	0.206	SLV 7	0.047	0.191	8	0.187	No
	PF	0.598	SLV 15	0.142	0.58	121	0.571	No
	V	0.453	SLV 15	0.107	0.436	61	0.431	No
9	PFFP	2.936	SLV 7	0.362	1.483	1618	1.653	Si
	R	0.287	SLV 11	0.067	0.275	20	0.273	No
	PF	2.126	SLV 7	0.362	1.483	1618	1.653	Si
	V	0.93	SLV 7	0.227	0.927	388	0.92	No
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
11	R	0.227	SLV 13	0.053	0.218	11	0.214	No
	PF	0.447	SLV 9	0.105	0.43	58	0.422	No
	V	0.421	SLV 9	0.099	0.407	51	0.401	No
	PFFP	1.539	SLV 11	0.362	1.483	1618	1.653	Si
	R	0.425	SLV 1	0.1	0.41	52	0.404	No
12	PF	0.742	SLV 11	0.179	0.733	208	0.713	No
	V	0.739	SLV 11	0.178	0.73	206	0.71	No
	PFFP	1.099	SLV 11	0.267	1.092	618	1.114	Si
	R	0.407	SLV 9	0.096	0.392	46	0.384	No
	PF	1.415	SLV 11	0.338	1.384	1287	1.505	Si
13	V	0.913	SLV 11	0.222	0.91	369	0.902	No
	PFFP	3.14	SLV 15	0.362	1.483	1618	1.653	Si
	R	0.224	SLV 1	0.051	0.21	10	0.205	No
	PF	1.295	SLV 7	0.311	1.273	978	1.345	Si
	V	0.542	SLV 9	0.128	0.523	95	0.517	No
14	PFFP	1.456	SLV 7	0.347	1.421	1406	1.56	Si
	R	0.199	SLV 13	0.047	0.191	8	0.187	No
	PF	2.532	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.124	SLV 7	0.273	1.115	658	1.143	Si
	PFFP	2.981	SLV 1	0.362	1.483	1618	1.653	Si
17	R	0.411	SLV 1	0.097	0.395	47	0.387	No
	PF	0	SLV 1	0	0	0	0	No
	V	0	SLV 1	0	0	0	0	No
	PFFP	0.75	SLV 11	0.181	0.741	214	0.721	No
	R	0	SLV 1	0	0	0	0	No
19	PF	0	SLV 1	0	0	0	0	No
	V	0	SLV 1	0	0	0	0	No
	PFFP	3.2	SLV 11	0.362	1.483	1618	1.653	Si
	R	0	SLV 1	0	0	0	0	No
	PF	1.477	SLV 11	0.352	1.441	1470	1.589	Si
21	V	0.939	SLV 11	0.229	0.936	398	0.93	No
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.775	SLV 3	0.187	0.767	235	0.749	No
	PF	1.295	SLV 1	0.311	1.273	978	1.345	Si
	V	1.295	SLV 1	0.311	1.273	978	1.345	Si
23	PFFP	1.513	SLV 1	0.36	1.473	1583	1.638	Si
	R	0.287	SLV 13	0.067	0.275	20	0.273	No
	PF	0.499	SLV 3	0.117	0.479	77	0.474	No
	V	0.447	SLV 3	0.105	0.43	58	0.422	No
	PFFP	1.822	SLV 15	0.362	1.483	1618	1.653	Si
24	R	0.226	SLV 3	0.053	0.218	11	0.214	No
	PF	2.304	SLV 3	0.362	1.483	1618	1.653	Si
	V	1.201	SLV 3	0.29	1.186	791	1.233	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.223	SLV 13	0.051	0.21	10	0.205	No
26	PF	1.33	SLV 9	0.319	1.306	1062	1.391	Si
	V	1.084	SLV 13	0.263	1.078	594	1.096	Si
	PFFP	2.01	SLV 9	0.362	1.483	1618	1.653	Si
	R	0.288	SLV 1	0.067	0.275	20	0.273	No
	PF	1.289	SLV 9	0.31	1.268	965	1.337	Si
27	V	1.06	SLV 1	0.258	1.056	559	1.069	Si
	PFFP	1.908	SLV 9	0.362	1.483	1618	1.653	Si
	R	0.181	SLV 5	0.041	0.169	6	0.167	No
	PF	1.381	SLV 5	0.33	1.353	1194	1.459	Si
	V	1.148	SLV 13	0.278	1.137	697	1.17	Si
28	PFFP	2.036	SLV 5	0.362	1.483	1618	1.653	Si
	R	0.216	SLV 5	0.049	0.201	9	0.197	No
	PF	0.914	SLV 5	0.223	0.911	370	0.903	No
	V	0.711	SLV 9	0.171	0.699	186	0.681	No
	PFFP	1.529	SLV 5	0.362	1.483	1618	1.653	Si
29	R	0.37	SLV 15	0.087	0.355	37	0.351	No



Maschio	Stato limite	Molt.	Comb.	PGA	IPGA (ZE)	TR	(TR/TRrif)^.41	Verifica
30	PF	2.183	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.868	SLV 3	0.211	0.863	321	0.852	No
	PFFP	3.407	SLV 15	0.362	1.483	1618	1.653	Si
	R	0.4	SLV 1	0.094	0.384	44	0.377	No
31	PF	2.033	SLV 3	0.362	1.483	1618	1.653	Si
	V	1.051	SLV 3	0.256	1.048	545	1.058	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.381	SLV 1	0.09	0.368	40	0.363	No
32	PF	1.301	SLV 1	0.312	1.279	992	1.352	Si
	V	1.325	SLV 1	0.318	1.301	1050	1.384	Si
	PFFP	1.852	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.379	SLV 13	0.089	0.364	39	0.359	No
33	PF	1.139	SLV 1	0.276	1.129	682	1.16	Si
	V	1.144	SLV 1	0.277	1.134	691	1.166	Si
	PFFP	1.671	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.39	SLV 13	0.092	0.376	42	0.37	No
34	PF	1.85	SLV 13	0.362	1.483	1618	1.653	Si
	V	0.98	SLV 15	0.239	0.979	448	0.976	No
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.391	SLV 13	0.092	0.376	42	0.37	No
35	PF	1.835	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.881	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.314	SLV 5	0.074	0.303	25	0.299	No
36	PF	2.413	SLV 3	0.362	1.483	1618	1.653	Si
	V	0.824	SLV 15	0.2	0.817	278	0.803	No
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.401	SLV 13	0.095	0.388	45	0.381	No
37	PF	1.544	SLV 11	0.362	1.483	1618	1.653	Si
	V	0.791	SLV 5	0.192	0.784	249	0.767	No
	PFFP	1.889	SLV 11	0.362	1.483	1618	1.653	Si
	R	0.38	SLV 1	0.09	0.368	40	0.363	No
38	PF	1.48	SLV 11	0.353	1.443	1479	1.593	Si
	V	1.037	SLV 7	0.253	1.035	526	1.043	Si
	PFFP	1.864	SLV 11	0.362	1.483	1618	1.653	Si
	R	1.076	SLV 1	0.262	1.071	582	1.087	Si
39	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.986	SLV 7	0.241	0.986	457	0.984	No
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.288	SLV 1	0.067	0.275	20	0.273	No
41	PF	1.749	SLV 9	0.362	1.483	1618	1.653	Si
	V	0.77	SLV 11	0.186	0.762	231	0.744	No
	PFFP	3.354	SLV 13	0.362	1.483	1618	1.653	Si
	R	0.195	SLV 3	0.044	0.181	7	0.177	No
42	PF	1.562	SLV 7	0.362	1.483	1618	1.653	Si
	V	0.916	SLV 7	0.223	0.913	373	0.906	No
	PFFP	3.683	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.225	SLV 13	0.051	0.21	10	0.205	No
43	PF	0.926	SLV 3	0.226	0.923	384	0.916	No
	V	0.904	SLV 3	0.22	0.9	359	0.892	No
	PFFP	1.133	SLV 7	0.275	1.124	673	1.154	Si
	R	0.396	SLV 9	0.093	0.38	43	0.373	No
44	PF	0.659	SLV 3	0.157	0.642	153	0.628	No
	V	0.495	SLV 3	0.116	0.477	75	0.469	No
	PFFP	2.524	SLV 11	0.362	1.483	1618	1.653	Si
	R	0.286	SLV 7	0.067	0.275	20	0.273	No
45	PF	0.931	SLV 1	0.227	0.928	389	0.921	No
	V	0.784	SLV 5	0.19	0.776	243	0.76	No
	PFFP	1.411	SLV 7	0.337	1.38	1276	1.5	Si
	R	0.427	SLV 5	0.1	0.41	52	0.404	No
46	PF	2.041	SLV 11	0.362	1.483	1618	1.653	Si
	V	0.995	SLV 11	0.243	0.995	468	0.994	No
	PFFP	3.708	SLV 11	0.362	1.483	1618	1.653	Si
	R	0.225	SLV 1	0.051	0.21	10	0.205	No
47	PF	1.596	SLV 7	0.362	1.483	1618	1.653	Si
	V	0.944	SLV 1	0.23	0.941	404	0.936	No
	PFFP	2.087	SLV 11	0.362	1.483	1618	1.653	Si
	R	0.173	SLV 11	0.038	0.157	5	0.155	No
48	PF	1.612	SLV 5	0.362	1.483	1618	1.653	Si
	V	1.134	SLV 5	0.275	1.124	674	1.154	Si
	PFFP	2.749	SLV 5	0.362	1.483	1618	1.653	Si
	R	0.221	SLV 3	0.051	0.21	10	0.205	No
49	PF	1.473	SLV 11	0.351	1.437	1457	1.583	Si
	V	0.533	SLV 9	0.126	0.516	91	0.508	No
	PFFP	1.779	SLV 7	0.362	1.483	1618	1.653	Si
	R	0.23	SLV 3	0.053	0.218	11	0.214	No
50	PF	1.106	SLV 7	0.268	1.098	628	1.121	Si
	V	0.663	SLV 11	0.158	0.646	155	0.632	No
	PFFP	1.298	SLV 7	0.312	1.276	985	1.349	Si
	R	0.315	SLV 15	0.074	0.303	25	0.299	No
51	PF	0.892	SLV 9	0.217	0.888	346	0.878	No
	V	0.37	SLV 11	0.087	0.355	37	0.351	No
	PFFP	3.328	SLV 13	0.362	1.483	1618	1.653	Si
	R	0.371	SLV 3	0.087	0.355	37	0.351	No
52	PF	0.777	SLV 5	0.188	0.77	237	0.752	No
	V	0.773	SLV 5	0.187	0.766	234	0.748	No
	PFFP	1.229	SLV 5	0.296	1.212	843	1.265	Si
	R	0.296	SLV 5	0.07	0.286	22	0.284	No
53	PF	1.293	SLV 1	0.311	1.271	973	1.342	Si
	V	1.262	SLV 1	0.304	1.242	909	1.305	Si
	PFFP	1.46	SLV 1	0.348	1.425	1418	1.566	Si



Maschio	Stato limite	Molt.	Comb.	PGA	IPGA (ZE)	TR	(TR/TRrif)^.41	Verifica
54	R	0.391	SLV 13	0.092	0.376	42	0.37	No
	PF	1.259	SLV 15	0.303	1.24	903	1.301	Si
	V	0.576	SLV 9	0.136	0.558	110	0.549	No
	PFFP	1.333	SLV 15	0.32	1.308	1070	1.395	Si
55	R	0.085	SLV 3	0.02	0.08	1	0.08	No
	PF	0	SLV 1	0	0	0	0	No
	V	0	SLV 1	0	0	0	0	No
	PFFP	1.402	SLV 13	0.335	1.372	1251	1.487	Si
56	R	0.099	SLV 15	0.02	0.08	1	0.08	No
	PF	0.765	SLV 9	0.185	0.757	226	0.737	No
	V	0.505	SLV 13	0.119	0.487	80	0.482	No
	PFFP	1.218	SLV 5	0.294	1.202	822	1.252	Si
57	R	0.079	SLV 3	0	0	0	0	No
	PF	0	SLV 1	0	0	0	0	No
	V	0	SLV 1	0	0	0	0	No
	PFFP	1.27	SLV 15	0.305	1.25	925	1.314	Si
58	R	0.098	SLV 13	0.02	0.08	1	0.08	No
	PF	0.653	SLV 1	0.156	0.637	150	0.623	No
	V	0.393	SLV 13	0.093	0.38	43	0.373	No
	PFFP	1.22	SLV 5	0.294	1.204	826	1.255	Si
59	R	0.083	SLV 1	0.02	0.08	1	0.08	No
	PF	0.602	SLV 13	0.143	0.585	123	0.575	No
	V	0.405	SLV 13	0.096	0.392	46	0.384	No
	PFFP	1.502	SLV 11	0.358	1.463	1548	1.623	Si
60	R	0.078	SLV 13	0	0	0	0	No
	PF	3.063	SLV 13	0.362	1.483	1618	1.653	Si
	V	0.723	SLV 7	0.174	0.711	193	0.691	No
	PFFP	2.509	SLV 9	0.362	1.483	1618	1.653	Si
61	R	0.022	SLV 1	0	0	0	0	No
	PF	0.798	SLV 1	0.193	0.791	254	0.774	No
	V	0.425	SLV 1	0.1	0.41	52	0.404	No
	PFFP	1.486	SLV 9	0.354	1.449	1498	1.601	Si
62	R	0.076	SLV 13	0	0	0	0	No
	PF	0.883	SLV 1	0.215	0.879	337	0.869	No
	V	0.439	SLV 3	0.104	0.424	56	0.416	No
	PFFP	1.491	SLV 15	0.355	1.453	1513	1.608	Si
63	R	0.078	SLV 13	0	0	0	0	No
	PF	1.793	SLV 9	0.362	1.483	1618	1.653	Si
	V	0.639	SLV 7	0.152	0.623	142	0.61	No
	PFFP	2.881	SLV 7	0.362	1.483	1618	1.653	Si
64	R	0.022	SLV 1	0	0	0	0	No
	PF	0.086	SLV 7	0.02	0.08	1	0.08	No
	V	0.133	SLV 11	0.031	0.127	3	0.125	No
	PFFP	2.896	SLV 15	0.362	1.483	1618	1.653	Si
65	R	0.088	SLV 3	0.02	0.08	1	0.08	No
	PF	0.509	SLV 13	0.12	0.49	81	0.484	No
	V	0.039	SLV 13	0	0	0	0	No
	PFFP	1.038	SLV 3	0.253	1.035	526	1.043	Si
66	R	0.078	SLV 1	0	0	0	0	No
	PF	0.954	SLV 3	0.233	0.952	416	0.947	No
	V	0.883	SLV 3	0.215	0.879	337	0.869	No
	PFFP	1.577	SLV 11	0.362	1.483	1618	1.653	Si
67	R	0.09	SLV 1	0.02	0.08	1	0.08	No
	PF	0.481	SLV 1	0.113	0.463	70	0.456	No
	V	0.374	SLV 1	0.088	0.359	38	0.355	No
	PFFP	1.077	SLV 11	0.262	1.072	584	1.088	Si
68	R	0.09	SLV 13	0.02	0.08	1	0.08	No
	PF	0.058	SLV 11	0	0	0	0	No
	V	0.056	SLV 11	0	0	0	0	No
	PFFP	1.03	SLV 11	0.02	0.08	1	0.08	No
69	R	0.022	SLV 1	0	0	0	0	No
	PF	0.856	SLV 7	0.208	0.851	309	0.838	No
	V	0.611	SLV 7	0.145	0.593	127	0.582	No
	PFFP	2.102	SLV 9	0.362	1.483	1618	1.653	Si
70	R	0.022	SLV 1	0	0	0	0	No
	PF	1.115	SLV 7	0.27	1.107	643	1.132	Si
	V	0.596	SLV 9	0.141	0.578	120	0.569	No
	PFFP	1.469	SLV 7	0.35	1.433	1445	1.578	Si
71	R	0.486	SLV 13	0.114	0.468	72	0.461	No
	PF	1.266	SLV 11	0.304	1.246	917	1.31	Si
	V	0.769	SLV 9	0.186	0.761	230	0.743	No
	PFFP	1.46	SLV 11	0.348	1.425	1418	1.566	Si
72	R	0.224	SLV 1	0.051	0.21	10	0.205	No
	PF	0	SLV 1	0	0	0	0	No
	V	0	SLV 1	0	0	0	0	No
	PFFP	1.614	SLV 7	0.362	1.483	1618	1.653	Si
73	R	0.403	SLV 13	0.095	0.388	45	0.381	No
	PF	0	SLV 1	0	0	0	0	No
	V	0.059	SLV 9	0	0	0	0	No
	PFFP	1.801	SLV 7	0.362	1.483	1618	1.653	Si
75	R	0.181	SLV 1	0.041	0.169	6	0.167	No
	PF	2.928	SLV 3	0.362	1.483	1618	1.653	Si
	V	0.861	SLV 11	0.209	0.855	314	0.844	No
	PFFP	3.13	SLV 3	0.362	1.483	1618	1.653	Si
76	R	0.126	SLV 1	0.026	0.107	2	0.106	No
	PF	0	SLV 1	0	0	0	0	No
	V	0	SLV 1	0	0	0	0	No
	PFFP	1.682	SLV 7	0.362	1.483	1618	1.653	Si
77	R	0.04	SLV 3	0	0	0	0	No
	PF	0.61	SLV 5	0.145	0.593	127	0.582	No
	V	0.58	SLV 5	0.137	0.562	112	0.553	No



Maschio	Stato limite	Molt.	Comb.	PGA	IPGA (ZE)	TR	(TR/TRrif)^.41	Verifica
78	PFFP	0.889	SLV 5	0.216	0.885	343	0.875	No
	R	0.065	SLV 13	0	0	0	0	No
	PF	1.173	SLV 15	0.283	1.16	740	1.199	Si
	V	0.708	SLV 1	0.17	0.696	184	0.678	No
79	PFFP	1.921	SLV 15	0.362	1.483	1618	1.653	Si
	R	0.076	SLV 1	0	0	0	0	No
	PF	2.141	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.791	SLV 3	0.192	0.784	249	0.767	No
80	PFFP	1.000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.074	SLV 1	0	0	0	0	No
	PF	1.000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.701	SLV 15	0.168	0.689	180	0.672	No
81	PFFP	1.000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.075	SLV 1	0	0	0	0	No
	PF	1.981	SLV 3	0.362	1.483	1618	1.653	Si
	V	0.735	SLV 13	0.177	0.727	203	0.706	No
82	PFFP	2.585	SLV 3	0.362	1.483	1618	1.653	Si
	R	0.074	SLV 13	0	0	0	0	No
	PF	1.525	SLV 13	0.362	1.483	1618	1.653	Si
	V	0.668	SLV 3	0.159	0.652	158	0.637	No
83	PFFP	3.931	SLV 3	0.362	1.483	1618	1.653	Si
	R	0.021	SLV 5	0	0	0	0	No
	PF	0.3	SLV 15	0.07	0.286	22	0.284	No
	V	0.533	SLV 15	0.126	0.516	91	0.508	No
84	PFFP	1.258	SLV 3	0.303	1.239	901	1.3	Si
	R	0.022	SLV 1	0	0	0	0	No
	PF	0.88	SLV 5	0.214	0.876	334	0.866	No
	V	0.329	SLV 1	0.078	0.318	28	0.313	No
85	PFFP	1.363	SLV 9	0.326	1.336	1146	1.435	Si
	R	0.076	SLV 1	0	0	0	0	No
	PF	1.233	SLV 5	0.297	1.216	851	1.27	Si
	V	0.955	SLV 1	0.233	0.953	418	0.949	No
86	PFFP	1.693	SLV 9	0.362	1.483	1618	1.653	Si
	R	0.078	SLV 1	0	0	0	0	No
	PF	1.252	SLV 9	0.301	1.233	888	1.292	Si
	V	1.042	SLV 13	0.254	1.039	532	1.048	Si
87	PFFP	1.576	SLV 5	0.362	1.483	1618	1.653	Si
	R	0.077	SLV 13	0	0	0	0	No
	PF	0.966	SLV 1	0.236	0.964	431	0.961	No
	V	0.415	SLV 13	0.098	0.399	49	0.394	No
88	PFFP	1.361	SLV 5	0.326	1.334	1141	1.432	Si
	R	0.076	SLV 13	0	0	0	0	No
	PF	1.276	SLV 11	0.307	1.255	938	1.322	Si
	V	0.725	SLV 5	0.175	0.715	196	0.696	No
89	PFFP	1.433	SLV 7	0.342	1.4	1339	1.529	Si
	R	0.487	SLV 1	0.114	0.468	72	0.461	No
	PF	1.278	SLV 7	0.307	1.257	941	1.324	Si
	V	0.745	SLV 1	0.18	0.736	211	0.717	No
90	PFFP	1.273	SLV 7	0.306	1.253	931	1.318	Si
	R	0.218	SLV 1	0.051	0.21	10	0.205	No
	PF	0	SLV 1	0	0	0	0	No
	V	0	SLV 1	0	0	0	0	No
91	PFFP	1.821	SLV 11	0.362	1.483	1618	1.653	Si
	R	0.393	SLV 1	0.093	0.38	43	0.373	No
	PF	0	SLV 1	0	0	0	0	No
	V	0	SLV 1	0	0	0	0	No
92	PFFP	1.781	SLV 7	0.362	1.483	1618	1.653	Si
	R	0.192	SLV 3	0.044	0.181	7	0.177	No
	PF	2.487	SLV 11	0.362	1.483	1618	1.653	Si
	V	0.927	SLV 7	0.226	0.924	385	0.917	No
94	PFFP	3.947	SLV 15	0.362	1.483	1618	1.653	Si
	R	0.201	SLV 1	0.047	0.191	8	0.187	No
	PF	2.689	SLV 9	0.362	1.483	1618	1.653	Si
	V	0.965	SLV 11	0.235	0.963	429	0.959	No
95	PFFP	3.287	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.066	SLV 13	0	0	0	0	No
	PF	0.209	SLV 7	0.049	0.201	9	0.197	No
	V	0.206	SLV 7	0.047	0.191	8	0.187	No
96	PFFP	0.613	SLV 7	0.146	0.596	128	0.584	No
	R	0.022	SLV 3	0	0	0	0	No
	PF	0.831	SLV 11	0.201	0.825	285	0.811	No
	V	0.73	SLV 11	0.176	0.72	199	0.7	No
97	PFFP	2.576	SLV 5	0.362	1.483	1618	1.653	Si
	R	0.022	SLV 1	0	0	0	0	No
	PF	0.482	SLV 13	0.113	0.463	70	0.456	No
	V	0.346	SLV 13	0.081	0.332	31	0.327	No
98	PFFP	1.099	SLV 7	0.267	1.092	618	1.114	Si
	R	0.088	SLV 1	0.02	0.08	1	0.08	No
	PF	0.752	SLV 3	0.182	0.744	217	0.725	No
	V	0.785	SLV 3	0.19	0.778	244	0.761	No
99	PFFP	1.483	SLV 3	0.353	1.446	1488	1.597	Si
	R	0.083	SLV 1	0.02	0.08	1	0.08	No
	PF	0.498	SLV 15	0.117	0.479	77	0.474	No
	V	0.082	SLV 1	0	0	0	0	No
100	PFFP	0.873	SLV 15	0.212	0.868	326	0.857	No
	R	0.075	SLV 13	0	0	0	0	No
	PF	1.4	SLV 5	0.335	1.37	1245	1.484	Si
	V	0.69	SLV 5	0.165	0.676	172	0.659	No
101	PFFP	2.295	SLV 11	0.362	1.483	1618	1.653	Si
	R	0.022	SLV 1	0	0	0	0	No
	PF	0.934	SLV 13	0.227	0.931	393	0.925	No



Maschio	Stato limite	Molt.	Comb.	PGA	IPGA (ZE)	TR	(TR/TRrif)^.41	Verifica
102	V	0.367	SLV 15	0.086	0.351	36	0.347	No
	PFFP	1.68	SLV 7	0.362	1.483	1618	1.653	Si
	R	0.078	SLV 1	0	0	0	0	No
	PF	1.999	SLV 7	0.362	1.483	1618	1.653	Si
103	V	0.644	SLV 11	0.153	0.627	144	0.613	No
	PFFP	2.457	SLV 5	0.362	1.483	1618	1.653	Si
	R	0.022	SLV 1	0	0	0	0	No
	PF	0	SLV 1	0	0	0	0	No
104	V	0	SLV 1	0	0	0	0	No
	PFFP	0.983	SLV 13	0.24	0.982	453	0.981	No
	R	0.075	SLV 15	0	0	0	0	No
	PF	0.046	SLV 15	0	0	0	0	No
105	V	0.091	SLV 13	0.02	0.08	1	0.08	No
	PFFP	1.445	SLV 5	0.345	1.411	1373	1.545	Si
	R	0.079	SLV 15	0	0	0	0	No
	PF	0.695	SLV 1	0.167	0.682	175	0.664	No
106	V	0.62	SLV 3	0.147	0.602	132	0.592	No
	PFFP	1.609	SLV 7	0.362	1.483	1618	1.653	Si
	R	0.078	SLV 3	0	0	0	0	No
	PF	0.728	SLV 11	0.175	0.716	197	0.697	No
107	V	0.456	SLV 1	0.107	0.439	62	0.434	No
	PFFP	3.862	SLV 15	0.362	1.483	1618	1.653	Si
	R	0.081	SLV 1	0	0	0	0	No
	PF	0.902	SLV 3	0.219	0.898	357	0.89	No
108	V	0.102	SLV 13	0.02	0.08	1	0.08	No
	PFFP	1.026	SLV 7	0.25	1.024	510	1.03	Si
	R	0.077	SLV 13	0	0	0	0	No
	PF	0.723	SLV 5	0.174	0.711	193	0.691	No
109	V	0.512	SLV 1	0.12	0.493	82	0.487	No
	PFFP	1.148	SLV 9	0.278	1.137	697	1.17	Si
	R	0.078	SLV 1	0	0	0	0	No
	PF	0.914	SLV 5	0.223	0.911	370	0.903	No
110	V	0.121	SLV 15	0.026	0.107	2	0.106	No
	PFFP	0.846	SLV 5	0.205	0.841	300	0.828	No
	R	0.078	SLV 13	0	0	0	0	No
	PF	1.308	SLV 1	0.314	1.285	1009	1.362	Si
111	V	1.188	SLV 5	0.287	1.174	768	1.218	Si
	PFFP	1.435	SLV 1	0.343	1.402	1344	1.532	Si
	R	0.075	SLV 13	0	0	0	0	No
	PF	1.234	SLV 13	0.297	1.216	853	1.271	Si
112	V	1.01	SLV 9	0.247	1.009	488	1.011	Si
	PFFP	1.381	SLV 15	0.33	1.353	1194	1.459	Si
	R	0.077	SLV 1	0	0	0	0	No
	PF	1.28	SLV 13	0.308	1.259	946	1.326	Si
113	V	0.713	SLV 7	0.171	0.701	187	0.682	No
	PFFP	1.18	SLV 13	0.285	1.167	753	1.208	Si
	R	0.077	SLV 1	0	0	0	0	No
	PF	1.214	SLV 13	0.293	1.198	815	1.248	Si
114	V	0.695	SLV 1	0.167	0.682	175	0.664	No
	PFFP	1.384	SLV 13	0.331	1.355	1202	1.463	Si
	R	0.074	SLV 1	0	0	0	0	No
	PF	0.992	SLV 1	0.242	0.992	464	0.99	No
115	V	0.711	SLV 3	0.171	0.699	186	0.681	No
	PFFP	1.519	SLV 1	0.362	1.48	1606	1.648	Si
	R	0.079	SLV 1	0	0	0	0	No
	PF	1.016	SLV 15	0.248	1.015	496	1.018	Si
116	V	0.324	SLV 3	0.077	0.313	27	0.309	No
	PFFP	1.243	SLV 15	0.299	1.225	871	1.282	Si
	R	0.074	SLV 1	0	0	0	0	No
	PF	1.671	SLV 3	0.362	1.483	1618	1.653	Si
117	V	0.603	SLV 1	0.143	0.585	123	0.575	No
	PFFP	1.59	SLV 7	0.362	1.483	1618	1.653	Si
	R	0.08	SLV 1	0	0	0	0	No
	PF	0.648	SLV 15	0.154	0.631	147	0.618	No
118	V	0.475	SLV 15	0.112	0.457	68	0.451	No
	PFFP	1.667	SLV 11	0.362	1.483	1618	1.653	Si
	R	0.075	SLV 13	0	0	0	0	No
	PF	2.363	SLV 9	0.362	1.483	1618	1.653	Si
119	V	0.679	SLV 9	0.162	0.663	165	0.648	No
	PFFP	2.052	SLV 9	0.362	1.483	1618	1.653	Si
	R	0.02	SLV 1	0	0	0	0	No
	PF	0.23	SLV 1	0.053	0.218	11	0.214	No
120	V	0.185	SLV 1	0.041	0.169	6	0.167	No
	PFFP	1.389	SLV 5	0.332	1.36	1215	1.47	Si
	R	0.067	SLV 15	0	0	0	0	No
	PF	0.557	SLV 13	0.132	0.539	102	0.532	No
121	V	0.369	SLV 13	0.087	0.355	37	0.351	No
	PFFP	1.385	SLV 15	0.331	1.356	1204	1.464	Si
	R	0.078	SLV 15	0	0	0	0	No
	PF	3.146	SLV 7	0.362	1.483	1618	1.653	Si
122	V	0.633	SLV 7	0.151	0.617	139	0.604	No
	PFFP	2.695	SLV 11	0.362	1.483	1618	1.653	Si
	R	0.02	SLV 1	0	0	0	0	No
	PF	0.183	SLV 9	0.041	0.169	6	0.167	No
123	V	0.204	SLV 9	0.047	0.191	8	0.187	No
	PFFP	2.203	SLV 5	0.362	1.483	1618	1.653	Si
	R	0.087	SLV 3	0.02	0.08	1	0.08	No
	PF	0.867	SLV 15	0.21	0.861	319	0.849	No
	V	0.427	SLV 15	0.1	0.41	52	0.404	No
	PFFP	1.62	SLV 7	0.362	1.483	1618	1.653	Si
	R	0.073	SLV 1	0	0	0	0	No



Maschio	Stato limite	Molt.	Comb.	PGA	IPGA (ZE)	TR	(TR/TRrif)^.41	Verifica
124	PF	1.206	SLV 1	0.291	1.191	800	1.238	Si
	V	1.151	SLV 1	0.279	1.14	702	1.174	Si
	PFFP	1.059	SLV 11	0.258	1.055	557	1.067	Si
	R	0.088	SLV 3	0.02	0.08	1	0.08	No
125	PF	1	SLV 11	0.244	1	475	1	Si
	V	0.836	SLV 15	0.203	0.829	289	0.816	No
	PFFP	1.46	SLV 11	0.348	1.425	1418	1.566	Si
	R	0.091	SLV 13	0.02	0.08	1	0.08	No
126	PF	0.112	SLV 11	0.026	0.107	2	0.106	No
	V	0.095	SLV 11	0.02	0.08	1	0.08	No
	PFFP	0.329	SLV 11	0.078	0.318	28	0.313	No
	R	0.02	SLV 1	0	0	0	0	No
127	PF	1.015	SLV 9	0.248	1.014	495	1.017	Si
	V	0.592	SLV 9	0.14	0.574	118	0.565	No
	PFFP	1.539	SLV 9	0.362	1.483	1618	1.653	Si
	R	0.02	SLV 1	0	0	0	0	No
128	PF	1.388	SLV 11	0.332	1.359	1212	1.468	Si
	V	0.962	SLV 7	0.235	0.96	426	0.956	No
	PFFP	1.538	SLV 11	0.362	1.483	1618	1.653	Si
	R	0.078	SLV 1	0	0	0	0	No
130	PF	3.579	SLV 7	0.362	1.483	1618	1.653	Si
	V	0.716	SLV 11	0.172	0.705	189	0.685	No
	PFFP	2.426	SLV 7	0.362	1.483	1618	1.653	Si
	R	0.119	SLV 15	0.026	0.107	2	0.106	No
131	PF	0.133	SLV 7	0.031	0.127	3	0.125	No
	V	0.156	SLV 7	0.035	0.143	4	0.141	No
	PFFP	0	SLV 1	0	0	0	0	No
	R	0.014	SLV 3	0	0	0	0	No
132	PF	0.458	SLV 5	0.108	0.442	63	0.437	No
	V	0.435	SLV 11	0.103	0.42	55	0.413	No
	PFFP	0.718	SLV 5	0.173	0.706	190	0.687	No
	R	0.071	SLV 1	0	0	0	0	No
133	PF	2.381	SLV 3	0.362	1.483	1618	1.653	Si
	V	0.659	SLV 1	0.157	0.642	153	0.628	No
	PFFP	3.709	SLV 5	0.362	1.483	1618	1.653	Si
	R	0.02	SLV 1	0	0	0	0	No
134	PF	0.349	SLV 15	0.082	0.337	33	0.335	No
	V	0.326	SLV 15	0.077	0.313	27	0.309	No
	PFFP	0.924	SLV 3	0.225	0.921	381	0.914	No
	R	0.02	SLV 1	0	0	0	0	No
135	PF	0.942	SLV 13	0.229	0.939	401	0.933	No
	V	0.819	SLV 13	0.199	0.813	274	0.798	No
	PFFP	1.274	SLV 13	0.306	1.254	934	1.319	Si
	R	0.078	SLV 1	0	0	0	0	No
136	PF	2.044	SLV 13	0.362	1.483	1618	1.653	Si
	V	0.939	SLV 1	0.229	0.936	398	0.93	No
	PFFP	2.468	SLV 9	0.362	1.483	1618	1.653	Si
	R	0.077	SLV 1	0	0	0	0	No
137	PF	1.877	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.013	SLV 1	0.247	1.012	492	1.015	Si
	PFFP	2.102	SLV 5	0.362	1.483	1618	1.653	Si
	R	0.077	SLV 1	0	0	0	0	No
138	PF	0.858	SLV 1	0.208	0.853	311	0.841	No
	V	0.754	SLV 1	0.182	0.746	218	0.727	No
	PFFP	1.117	SLV 1	0.271	1.109	646	1.134	Si
	R	0.077	SLV 15	0	0	0	0	No
139	PF	1.602	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.738	SLV 1	0.178	0.728	205	0.709	No
	PFFP	1.817	SLV 15	0.362	1.483	1618	1.653	Si
	R	0.075	SLV 1	0	0	0	0	No
140	PF	2.281	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.653	SLV 3	0.156	0.637	150	0.623	No
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.073	SLV 1	0	0	0	0	No
141	PF	0.52	SLV 15	0.122	0.501	85	0.494	No
	V	0.494	SLV 15	0.116	0.477	75	0.469	No
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.074	SLV 13	0	0	0	0	No
142	PF	1.002	SLV 15	0.245	1.002	477	1.002	Si
	V	0.667	SLV 15	0.159	0.652	158	0.637	No
	PFFP	3.568	SLV 15	0.362	1.483	1618	1.653	Si
	R	0.072	SLV 1	0	0	0	0	No
143	PF	0.893	SLV 13	0.217	0.889	347	0.879	No
	V	0.515	SLV 15	0.121	0.495	83	0.489	No
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.073	SLV 1	0	0	0	0	No
144	PF	1.796	SLV 3	0.362	1.483	1618	1.653	Si
	V	0.717	SLV 13	0.173	0.706	190	0.687	No
	PFFP	2.06	SLV 3	0.362	1.483	1618	1.653	Si
	R	0.074	SLV 1	0	0	0	0	No
145	PF	0	SLV 1	0	0	0	0	No
	V	0	SLV 1	0	0	0	0	No
	PFFP	0.891	SLV 7	0.217	0.887	345	0.877	No
	R	0.087	SLV 13	0.02	0.08	1	0.08	No
146	PF	0.994	SLV 3	0.243	0.993	466	0.992	No
	V	0.723	SLV 1	0.174	0.711	193	0.691	No
	PFFP	1.201	SLV 7	0.29	1.186	791	1.233	Si
	R	0.475	SLV 13	0.112	0.457	68	0.451	No
147	PF	1.274	SLV 7	0.306	1.254	934	1.319	Si
	V	1.016	SLV 11	0.248	1.015	496	1.018	Si
	PFFP	1.595	SLV 7	0.362	1.483	1618	1.653	Si



Maschio	Stato limite	Molt.	Comb.	PGA	IPGA (ZE)	TR	(TR/TRrif)^.41	Verifica
148	R	0.177	SLV 13	0.041	0.169	6	0.167	No
	PF	2.222	SLV 7	0.362	1.483	1618	1.653	Si
	V	0.612	SLV 7	0.145	0.593	127	0.582	No
	PFFP	2.83	SLV 3	0.362	1.483	1618	1.653	Si
150	R	0.183	SLV 1	0.041	0.169	6	0.167	No
	PF	2.55	SLV 9	0.362	1.483	1618	1.653	Si
	V	0.679	SLV 15	0.162	0.663	165	0.648	No
	PFFP	1.833	SLV 1	0.362	1.483	1618	1.653	Si
151	R	0.073	SLV 1	0	0	0	0	No
	PF	0.565	SLV 7	0.134	0.548	106	0.541	No
	V	0.663	SLV 7	0.158	0.648	156	0.633	No
	PFFP	3.717	SLV 11	0.362	1.483	1618	1.653	Si
152	R	0.02	SLV 1	0	0	0	0	No
	PF	3.031	SLV 5	0.362	1.483	1618	1.653	Si
	V	0.808	SLV 5	0.196	0.802	264	0.786	No
	PFFP	2.276	SLV 5	0.362	1.483	1618	1.653	Si
153	R	0.02	SLV 1	0	0	0	0	No
	PF	0.98	SLV 7	0.239	0.979	448	0.976	No
	V	0.905	SLV 7	0.22	0.901	360	0.893	No
	PFFP	1.11	SLV 7	0.269	1.102	635	1.126	Si
154	R	0.092	SLV 1	0.02	0.08	1	0.08	No
	PF	0.678	SLV 5	0.162	0.663	165	0.648	No
	V	0.671	SLV 5	0.16	0.656	160	0.64	No
	PFFP	2.114	SLV 3	0.362	1.483	1618	1.653	Si
155	R	0.082	SLV 3	0	0	0	0	No
	PF	0.82	SLV 15	0.199	0.814	275	0.799	No
	V	0.696	SLV 1	0.167	0.682	175	0.664	No
	PFFP	1.191	SLV 15	0.288	1.177	773	1.221	Si
156	R	0.069	SLV 1	0	0	0	0	No
	PF	2.654	SLV 11	0.362	1.483	1618	1.653	Si
	V	0.733	SLV 11	0.177	0.723	201	0.703	No
	PFFP	2.738	SLV 11	0.362	1.483	1618	1.653	Si
157	R	0.02	SLV 1	0	0	0	0	No
	PF	0.952	SLV 15	0.232	0.95	415	0.946	No
	V	0.602	SLV 1	0.143	0.585	123	0.575	No
	PFFP	2.353	SLV 7	0.362	1.483	1618	1.653	Si
158	R	0.076	SLV 1	0	0	0	0	No
	PF	2.756	SLV 9	0.362	1.483	1618	1.653	Si
	V	0.706	SLV 5	0.17	0.694	183	0.676	No
	PFFP	2.102	SLV 9	0.362	1.483	1618	1.653	Si
159	R	0.02	SLV 1	0	0	0	0	No
	PF	0	SLV 1	0	0	0	0	No
	V	0	SLV 1	0	0	0	0	No
	PFFP	0.709	SLV 13	0.17	0.698	185	0.679	No
160	R	0.07	SLV 3	0	0	0	0	No
	PF	1.197	SLV 9	0.289	1.182	783	1.227	Si
	V	1.222	SLV 1	0.294	1.205	830	1.257	Si
	PFFP	1.406	SLV 9	0.336	1.375	1262	1.493	Si
161	R	0.038	SLV 1	0	0	0	0	No
	PF	0.83	SLV 3	0.201	0.823	283	0.809	No
	V	0.633	SLV 3	0.151	0.617	139	0.604	No
	PFFP	1.812	SLV 7	0.362	1.483	1618	1.653	Si
162	R	0.078	SLV 3	0	0	0	0	No
	PF	1.812	SLV 11	0.362	1.483	1618	1.653	Si
	V	0.686	SLV 3	0.164	0.671	169	0.655	No
	PFFP	1.592	SLV 11	0.362	1.483	1618	1.653	Si
163	R	0.08	SLV 1	0	0	0	0	No
	PF	1.057	SLV 3	0.257	1.053	554	1.065	Si
	V	0.516	SLV 15	0.122	0.498	84	0.491	No
	PFFP	1.178	SLV 7	0.285	1.165	750	1.206	Si
164	R	0.077	SLV 1	0	0	0	0	No
	PF	1.078	SLV 13	0.262	1.073	585	1.089	Si
	V	0.732	SLV 15	0.176	0.722	200	0.701	No
	PFFP	1.53	SLV 9	0.362	1.483	1618	1.653	Si
165	R	0.077	SLV 3	0	0	0	0	No
	PF	1.206	SLV 1	0.291	1.191	800	1.238	Si
	V	0.7	SLV 13	0.168	0.687	178	0.669	No
	PFFP	1.253	SLV 5	0.302	1.234	891	1.294	Si
166	R	0.077	SLV 15	0	0	0	0	No
	PF	1.474	SLV 1	0.351	1.438	1460	1.585	Si
	V	1.428	SLV 1	0.341	1.396	1324	1.522	Si
	PFFP	1.563	SLV 1	0.362	1.483	1618	1.653	Si
167	R	0.077	SLV 13	0	0	0	0	No
	PF	1.757	SLV 15	0.362	1.483	1618	1.653	Si
	V	1.488	SLV 11	0.354	1.451	1504	1.604	Si
	PFFP	1.662	SLV 11	0.362	1.483	1618	1.653	Si
168	R	0.077	SLV 13	0	0	0	0	No
	PF	1.415	SLV 13	0.338	1.384	1287	1.505	Si
	V	1.381	SLV 13	0.33	1.353	1194	1.459	Si
	PFFP	1.223	SLV 13	0.295	1.206	832	1.258	Si
169	R	0.075	SLV 3	0	0	0	0	No
	PF	1.107	SLV 13	0.269	1.1	631	1.123	Si
	V	0.898	SLV 1	0.218	0.894	352	0.884	No
	PFFP	1.409	SLV 9	0.337	1.378	1270	1.497	Si
170	R	0.069	SLV 3	0	0	0	0	No
	PF	0.401	SLV 3	0.095	0.388	45	0.381	No
	V	0.295	SLV 3	0.069	0.281	21	0.278	No
	PFFP	0.938	SLV 3	0.228	0.935	397	0.929	No
171	R	0.078	SLV 13	0	0	0	0	No
	PF	1.117	SLV 15	0.271	1.109	646	1.134	Si
	V	0.938	SLV 3	0.228	0.935	397	0.929	No



Maschio	Stato limite	Molt.	Comb.	PGA	IPGA (ZE)	TR	(TR/TRrif)^.41	Verifica
172	PFFP	1.324	SLV 15	0.318	1.3	1047	1.383	Si
	R	0.072	SLV 1	0	0	0	0	No
	PF	1.833	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.545	SLV 1	0.129	0.528	97	0.521	No
173	PFFP	2.061	SLV 11	0.362	1.483	1618	1.653	Si
	R	0.076	SLV 1	0	0	0	0	No
	PF	0.549	SLV 13	0.129	0.53	98	0.524	No
	V	0.493	SLV 15	0.116	0.474	74	0.467	No
174	PFFP	1.176	SLV 15	0.284	1.163	746	1.203	Si
	R	0.08	SLV 3	0	0	0	0	No
	PF	1.837	SLV 9	0.362	1.483	1618	1.653	Si
	V	0.774	SLV 9	0.187	0.767	235	0.749	No
175	PFFP	1.4	SLV 9	0.335	1.37	1245	1.484	Si
	R	0.02	SLV 1	0	0	0	0	No
	PF	0.629	SLV 5	0.15	0.612	137	0.601	No
	V	0.609	SLV 5	0.144	0.591	126	0.58	No
176	PFFP	1.026	SLV 9	0.25	1.024	510	1.03	Si
	R	0.072	SLV 1	0	0	0	0	No
	PF	0.458	SLV 13	0.108	0.442	63	0.437	No
	V	0.343	SLV 13	0.08	0.328	31	0.327	No
177	PFFP	0.912	SLV 15	0.222	0.909	369	0.902	No
	R	0.074	SLV 15	0	0	0	0	No
	PF	3.268	SLV 13	0.362	1.483	1618	1.653	Si
	V	0.661	SLV 7	0.157	0.644	154	0.63	No
178	PFFP	1.722	SLV 15	0.362	1.483	1618	1.653	Si
	R	0.02	SLV 1	0	0	0	0	No
	PF	0.166	SLV 9	0.038	0.157	5	0.155	No
	V	0.189	SLV 9	0.044	0.181	7	0.177	No
179	PFFP	1.378	SLV 3	0.33	1.35	1186	1.455	Si
	R	0.085	SLV 15	0.02	0.08	1	0.08	No
	PF	0.833	SLV 15	0.202	0.827	287	0.813	No
	V	0.408	SLV 13	0.096	0.392	46	0.384	No
180	PFFP	1.17	SLV 3	0.283	1.158	736	1.197	Si
	R	0.075	SLV 1	0	0	0	0	No
	PF	0.877	SLV 5	0.213	0.872	330	0.861	No
	V	0.92	SLV 5	0.224	0.917	377	0.91	No
181	PFFP	1.225	SLV 9	0.295	1.208	836	1.261	Si
	R	0.086	SLV 3	0.02	0.08	1	0.08	No
	PF	0.676	SLV 1	0.162	0.661	164	0.647	No
	V	0.666	SLV 1	0.159	0.65	157	0.635	No
182	PFFP	1.825	SLV 3	0.362	1.483	1618	1.653	Si
	R	0.087	SLV 13	0.02	0.08	1	0.08	No
	PF	0.064	SLV 11	0	0	0	0	No
	V	0.055	SLV 11	0	0	0	0	No
183	PFFP	0.227	SLV 11	0.053	0.218	11	0.214	No
	R	0.018	SLV 1	0	0	0	0	No
	PF	1.191	SLV 5	0.288	1.177	773	1.221	Si
	V	0.731	SLV 9	0.176	0.72	199	0.7	No
184	PFFP	1.427	SLV 5	0.341	1.395	1321	1.521	Si
	R	0.019	SLV 1	0	0	0	0	No
	PF	1.722	SLV 7	0.362	1.483	1618	1.653	Si
	V	1.045	SLV 7	0.255	1.042	537	1.052	Si
185	PFFP	2.621	SLV 7	0.362	1.483	1618	1.653	Si
	R	0.432	SLV 1	0.102	0.417	54	0.41	No
	PF	2.072	SLV 3	0.362	1.483	1618	1.653	Si
	V	1.094	SLV 9	0.266	1.087	610	1.108	Si
187	PFFP	3.288	SLV 3	0.362	1.483	1618	1.653	Si
	R	0.194	SLV 13	0.044	0.181	7	0.177	No
	PF	2.241	SLV 7	0.362	1.483	1618	1.653	Si
	V	0.76	SLV 11	0.184	0.751	222	0.732	No
188	PFFP	2.054	SLV 7	0.362	1.483	1618	1.653	Si
	R	0.108	SLV 3	0.02	0.08	1	0.08	No
	PF	0	SLV 1	0	0	0	0	No
	V	0	SLV 1	0	0	0	0	No
189	PFFP	0.488	SLV 11	0.115	0.471	73	0.464	No
	R	0	SLV 1	0	0	0	0	No
	PF	0.349	SLV 9	0.082	0.337	33	0.335	No
	V	0.339	SLV 9	0.079	0.323	30	0.322	No
190	PFFP	0.579	SLV 9	0.137	0.56	111	0.551	No
	R	0.064	SLV 13	0	0	0	0	No
	PF	1.918	SLV 13	0.362	1.483	1618	1.653	Si
	V	0.741	SLV 1	0.179	0.731	207	0.711	No
191	PFFP	1.755	SLV 9	0.362	1.483	1618	1.653	Si
	R	0.019	SLV 1	0	0	0	0	No
	PF	0.183	SLV 13	0.041	0.169	6	0.167	No
	V	0.172	SLV 13	0.038	0.157	5	0.155	No
192	PFFP	0.721	SLV 3	0.173	0.71	192	0.69	No
	R	0.02	SLV 1	0	0	0	0	No
	PF	1.003	SLV 13	0.245	1.003	479	1.003	Si
	V	0.902	SLV 13	0.219	0.898	357	0.89	No
193	PFFP	1.265	SLV 13	0.304	1.245	915	1.308	Si
	R	0.076	SLV 1	0	0	0	0	No
	PF	1.54	SLV 13	0.362	1.483	1618	1.653	Si
	V	0.901	SLV 13	0.219	0.896	355	0.887	No
194	PFFP	1.868	SLV 9	0.362	1.483	1618	1.653	Si
	R	0.074	SLV 3	0	0	0	0	No
	PF	1.841	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.984	SLV 1	0.24	0.984	454	0.982	No
195	PFFP	2.043	SLV 5	0.362	1.483	1618	1.653	Si
	R	0.074	SLV 15	0	0	0	0	No
	PF	0.845	SLV 1	0.205	0.84	299	0.827	No



Maschio	Stato limite	Molt.	Comb.	PGA	IPGA (ZE)	TR	(TR/TRrif)^.41	Verifica
196	V	0.801	SLV 1	0.194	0.793	257	0.777	No
	PFFP	0.954	SLV 1	0.233	0.952	416	0.947	No
	R	0.078	SLV 13	0	0	0	0	No
	PF	1.174	SLV 15	0.284	1.161	743	1.201	Si
	V	0.699	SLV 1	0.167	0.685	177	0.667	No
197	PFFP	1.327	SLV 15	0.318	1.303	1055	1.387	Si
	R	0.07	SLV 3	0	0	0	0	No
	PF	2.954	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.703	SLV 13	0.169	0.691	181	0.673	No
	PFFP	1.000	SLV 1	0.362	1.483	1618	1.653	Si
198	R	0.068	SLV 1	0	0	0	0	No
	PF	0.416	SLV 1	0.098	0.403	50	0.397	No
	V	0.391	SLV 1	0.092	0.376	42	0.37	No
	PFFP	1.635	SLV 11	0.362	1.483	1618	1.653	Si
	R	0.069	SLV 13	0	0	0	0	No
199	PF	1.083	SLV 3	0.263	1.077	593	1.095	Si
	V	0.795	SLV 13	0.193	0.788	252	0.771	No
	PFFP	3.984	SLV 3	0.362	1.483	1618	1.653	Si
	R	0.066	SLV 1	0	0	0	0	No
	PF	0.824	SLV 15	0.2	0.817	278	0.803	No
200	V	0.474	SLV 15	0.112	0.457	68	0.451	No
	PFFP	1.000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.068	SLV 1	0	0	0	0	No
	PF	1.402	SLV 3	0.335	1.372	1251	1.487	Si
	V	0.779	SLV 13	0.188	0.771	238	0.753	No
201	PFFP	1.613	SLV 3	0.362	1.483	1618	1.653	Si
	R	0.07	SLV 13	0	0	0	0	No
	PF	1.508	SLV 3	0.359	1.469	1567	1.631	Si
	V	1.048	SLV 1	0.255	1.045	541	1.055	Si
	PFFP	1.862	SLV 7	0.362	1.483	1618	1.653	Si
202	R	0.388	SLV 7	0.091	0.372	41	0.366	No
	PF	1.619	SLV 11	0.362	1.483	1618	1.653	Si
	V	1.106	SLV 11	0.268	1.098	628	1.121	Si
	PFFP	1.788	SLV 11	0.362	1.483	1618	1.653	Si
	R	0.194	SLV 1	0.044	0.181	7	0.177	No
203	PF	2.155	SLV 3	0.362	1.483	1618	1.653	Si
	V	0.966	SLV 7	0.236	0.964	431	0.961	No
	PFFP	2.22	SLV 3	0.362	1.483	1618	1.653	Si
	R	0.179	SLV 1	0.041	0.169	6	0.167	No
	PF	1.747	SLV 11	0.362	1.483	1618	1.653	Si
204	V	1.17	SLV 9	0.283	1.158	736	1.197	Si
	PFFP	1.493	SLV 3	0.356	1.455	1520	1.611	Si
	R	0.067	SLV 1	0	0	0	0	No
	PF	0.422	SLV 7	0.099	0.407	51	0.401	No
	V	0.448	SLV 7	0.105	0.43	58	0.422	No
205	PFFP	1.62	SLV 3	0.362	1.483	1618	1.653	Si
	R	0.019	SLV 1	0	0	0	0	No
	PF	1.535	SLV 5	0.362	1.483	1618	1.653	Si
	V	0.792	SLV 5	0.192	0.784	249	0.767	No
	PFFP	1.478	SLV 5	0.352	1.441	1473	1.59	Si
206	R	0.019	SLV 1	0	0	0	0	No
	PF	0.808	SLV 13	0.196	0.802	264	0.786	No
	V	0.769	SLV 13	0.186	0.761	230	0.743	No
	PFFP	1.397	SLV 11	0.334	1.367	1237	1.481	Si
	R	0.091	SLV 1	0.02	0.08	1	0.08	No
207	PF	0.484	SLV 5	0.114	0.466	71	0.459	No
	V	0.482	SLV 5	0.113	0.463	70	0.456	No
	PFFP	0.82	SLV 5	0.199	0.814	275	0.799	No
	R	0.074	SLV 7	0	0	0	0	No
	PF	0.749	SLV 15	0.181	0.741	214	0.721	No
208	V	0.698	SLV 15	0.167	0.683	176	0.666	No
	PFFP	0.998	SLV 15	0.244	0.997	471	0.997	No
	R	0.073	SLV 13	0	0	0	0	No
	PF	1.000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.78	SLV 11	0.189	0.773	239	0.755	No
209	PFFP	1.491	SLV 3	0.355	1.453	1513	1.608	Si
	R	0.02	SLV 1	0	0	0	0	No
	PF	0.716	SLV 15	0.172	0.705	189	0.685	No
	V	0.49	SLV 1	0.115	0.471	73	0.464	No
	PFFP	1.559	SLV 3	0.362	1.483	1618	1.653	Si
210	R	0.07	SLV 3	0	0	0	0	No
	PF	1.904	SLV 5	0.362	1.483	1618	1.653	Si
	V	0.789	SLV 5	0.191	0.782	247	0.765	No
	PFFP	1.526	SLV 9	0.362	1.483	1618	1.653	Si
	R	0.019	SLV 1	0	0	0	0	No
211	PF	0.903	SLV 5	0.22	0.899	358	0.891	No
	V	0.893	SLV 5	0.217	0.889	347	0.879	No
	PFFP	0.794	SLV 5	0.192	0.787	251	0.77	No
	R	0.071	SLV 13	0	0	0	0	No
	PF	1.244	SLV 5	0.299	1.226	873	1.283	Si
212	V	1.236	SLV 5	0.298	1.218	857	1.274	Si
	PFFP	0.52	SLV 5	0.122	0.501	85	0.494	No
	R	0.081	SLV 3	0	0	0	0	No
	PF	0.649	SLV 3	0.155	0.633	148	0.62	No
	V	0.554	SLV 3	0.131	0.535	100	0.528	No
213	PFFP	1.509	SLV 7	0.359	1.47	1570	1.633	Si
	R	0.079	SLV 13	0	0	0	0	No
	PF	1.485	SLV 15	0.354	1.448	1494	1.6	Si
	V	0.737	SLV 13	0.178	0.728	205	0.709	No
	PFFP	1.593	SLV 11	0.362	1.483	1618	1.653	Si
214	R	0.076	SLV 1	0	0	0	0	No



Maschio	Stato limite	Molt.	Comb.	PGA	IPGA (ZE)	TR	(TR/TRrif)^.41	Verifica
219	PF	1.198	SLV 3	0.289	1.183	785	1.229	Si
	V	0.77	SLV 15	0.186	0.762	231	0.744	No
	PFFP	1.299	SLV 7	0.312	1.277	987	1.35	Si
	R	0.073	SLV 13	0	0	0	0	No
220	PF	0.803	SLV 15	0.194	0.796	259	0.78	No
	V	0.595	SLV 15	0.141	0.578	120	0.569	No
	PFFP	1.364	SLV 13	0.327	1.337	1149	1.436	Si
	R	0.075	SLV 1	0	0	0	0	No
221	PF	1.25	SLV 1	0.301	1.231	885	1.291	Si
	V	0.675	SLV 13	0.161	0.66	162	0.643	No
	PFFP	1.353	SLV 5	0.324	1.327	1120	1.421	Si
	R	0.072	SLV 1	0	0	0	0	No
222	PF	1.922	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.683	SLV 5	0.362	1.483	1618	1.653	Si
	PFFP	1.722	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.075	SLV 1	0	0	0	0	No
223	PF	0.735	SLV 7	0.177	0.727	203	0.706	No
	V	0.602	SLV 7	0.143	0.585	123	0.575	No
	PFFP	0.986	SLV 7	0.241	0.986	457	0.984	No
	R	0.105	SLV 13	0.02	0.08	1	0.08	No
224	PF	0.982	SLV 9	0.24	0.982	452	0.98	No
	V	0.899	SLV 9	0.219	0.895	353	0.885	No
	PFFP	0.99	SLV 9	0.242	0.99	462	0.989	No
	R	0.113	SLV 15	0.026	0.107	2	0.106	No
225	PF	0.858	SLV 3	0.208	0.853	311	0.841	No
	V	0.416	SLV 3	0.098	0.403	50	0.397	No
	PFFP	1.558	SLV 9	0.362	1.483	1618	1.653	Si
	R	0.107	SLV 1	0.02	0.08	1	0.08	No
226	PF	0.223	SLV 3	0.051	0.21	10	0.205	No
	V	0.091	SLV 3	0.02	0.08	1	0.08	No
	PFFP	0.7	SLV 13	0.168	0.687	178	0.669	No
	R	0.106	SLV 7	0.02	0.08	1	0.08	No
227	PF	1.42	SLV 15	0.339	1.388	1301	1.512	Si
	V	1.097	SLV 3	0.266	1.09	615	1.112	Si
	PFFP	1.115	SLV 11	0.27	1.107	643	1.132	Si
	R	0.108	SLV 3	0.02	0.08	1	0.08	No
228	PF	1.354	SLV 1	0.324	1.328	1123	1.423	Si
	V	0.7	SLV 1	0.168	0.687	178	0.669	No
	PFFP	1.257	SLV 15	0.302	1.238	899	1.299	Si
	R	0.121	SLV 1	0.026	0.107	2	0.106	No
229	PF	0.118	SLV 3	0.026	0.107	2	0.106	No
	V	0.12	SLV 3	0.026	0.107	2	0.106	No
	PFFP	0.356	SLV 7	0.083	0.342	34	0.339	No
	R	0.119	SLV 1	0.026	0.107	2	0.106	No
230	PF	0.346	SLV 5	0.081	0.332	31	0.327	No
	V	0.276	SLV 9	0.064	0.262	18	0.261	No
	PFFP	0.72	SLV 3	0.173	0.708	191	0.688	No
	R	0.029	SLV 13	0	0	0	0	No
231	PF	0	SLV 1	0	0	0	0	No
	V	0	SLV 1	0	0	0	0	No
	PFFP	0.736	SLV 15	0.177	0.727	203	0.706	No
	R	0	SLV 1	0	0	0	0	No
232	PF	0.195	SLV 3	0.044	0.181	7	0.177	No
	V	0.188	SLV 3	0.044	0.181	7	0.177	No
	PFFP	0.471	SLV 15	0.111	0.454	67	0.448	No
	R	0.114	SLV 1	0.026	0.107	2	0.106	No
233	PF	0.151	SLV 9	0.035	0.143	4	0.141	No
	V	0.145	SLV 9	0.031	0.127	3	0.125	No
	PFFP	0.661	SLV 5	0.157	0.644	154	0.63	No
	R	0.032	SLV 1	0	0	0	0	No
234	PF	0.506	SLV 3	0.119	0.487	80	0.482	No
	V	0.351	SLV 13	0.082	0.337	33	0.335	No
	PFFP	0.678	SLV 3	0.162	0.663	165	0.648	No
	R	0.124	SLV 15	0.026	0.107	2	0.106	No
235	PF	0	SLV 1	0	0	0	0	No
	V	0	SLV 1	0	0	0	0	No
	PFFP	0.108	SLV 11	0.02	0.08	1	0.08	No
	R	0.026	SLV 15	0	0	0	0	No
236	PF	0.805	SLV 7	0.195	0.798	261	0.782	No
	V	0.641	SLV 7	0.153	0.625	143	0.611	No
	PFFP	0.664	SLV 3	0.158	0.648	156	0.633	No
	R	0.032	SLV 1	0	0	0	0	No
237	PF	0.75	SLV 11	0.181	0.741	214	0.721	No
	V	0.671	SLV 11	0.16	0.656	160	0.64	No
	PFFP	0.926	SLV 11	0.226	0.923	384	0.916	No
	R	0.119	SLV 15	0.026	0.107	2	0.106	No
238	PF	0.086	SLV 5	0.02	0.08	1	0.08	No
	V	0.081	SLV 5	0	0	0	0	No
	PFFP	0.501	SLV 9	0.118	0.482	78	0.477	No
	R	0.111	SLV 1	0.026	0.107	2	0.106	No
239	PF	0.968	SLV 13	0.236	0.967	434	0.964	No
	V	0.818	SLV 13	0.198	0.811	273	0.797	No
	PFFP	0.725	SLV 9	0.175	0.715	196	0.696	No
	R	0.028	SLV 1	0	0	0	0	No
240	PF	0	SLV 1	0	0	0	0	No
	V	0	SLV 1	0	0	0	0	No
	PFFP	0.409	SLV 3	0.096	0.392	46	0.384	No
	R	0.03	SLV 1	0	0	0	0	No
241	PF	0	SLV 1	0	0	0	0	No
	V	0	SLV 1	0	0	0	0	No
	PFFP	0.232	SLV 1	0.053	0.218	11	0.214	No



Maschio	Stato limite	Molt.	Comb.	PGA	IPGA (ZE)	TR	(TR/TRrif)^.41	Verifica
	R	0.083	SLV 7	0.02	0.08	1	0.08	No
242	PF	1.431	SLV 13	0.342	1.398	1333	1.527	Si
	V	1.017	SLV 13	0.248	1.016	497	1.019	Si
	PFFP	1.381	SLV 9	0.33	1.353	1194	1.459	Si
	R	0.117	SLV 1	0.026	0.107	2	0.106	No
243	PF	1.532	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.98	SLV 1	0.239	0.979	448	0.976	No
	PFFP	1.376	SLV 5	0.329	1.348	1180	1.452	Si
	R	0.12	SLV 15	0.026	0.107	2	0.106	No
244	PF	0	SLV 1	0	0	0	0	No
	V	0	SLV 1	0	0	0	0	No
	PFFP	0.264	SLV 9	0.062	0.256	17	0.255	No
	R	0	SLV 1	0	0	0	0	No
245	PF	0.748	SLV 15	0.181	0.74	213	0.72	No
	V	0.72	SLV 15	0.173	0.708	191	0.688	No
	PFFP	0.761	SLV 15	0.184	0.753	223	0.733	No
	R	0.131	SLV 1	0.031	0.127	3	0.125	No
246	PF	1.148	SLV 15	0.278	1.137	697	1.17	Si
	V	0.888	SLV 13	0.216	0.884	342	0.874	No
	PFFP	1.922	SLV 15	0.362	1.483	1618	1.653	Si
	R	0.093	SLV 1	0.02	0.08	1	0.08	No
247	PF	0.317	SLV 1	0.074	0.303	25	0.299	No
	V	0.299	SLV 1	0.07	0.286	22	0.284	No
	PFFP	1.083	SLV 7	0.263	1.077	593	1.095	Si
	R	0.078	SLV 1	0	0	0	0	No
248	PF	0.456	SLV 1	0.107	0.439	62	0.434	No
	V	0.435	SLV 1	0.103	0.42	55	0.413	No
	PFFP	1.043	SLV 1	0.254	1.04	534	1.049	Si
	R	0.095	SLV 15	0.02	0.08	1	0.08	No
249	PF	0.787	SLV 1	0.19	0.779	245	0.762	No
	V	0.477	SLV 15	0.112	0.46	69	0.453	No
	PFFP	1.745	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.089	SLV 1	0.02	0.08	1	0.08	No
250	PF	1.074	SLV 3	0.261	1.069	579	1.085	Si
	V	1.003	SLV 3	0.245	1.003	479	1.003	Si
	PFFP	1.194	SLV 3	0.288	1.18	778	1.224	Si
	R	0.129	SLV 3	0.026	0.107	2	0.106	No
251	PF	0.656	SLV 7	0.156	0.639	151	0.625	No
	V	0.557	SLV 7	0.132	0.539	102	0.532	No
	PFFP	1.399	SLV 11	0.334	1.369	1243	1.484	Si
	R	0.096	SLV 3	0.02	0.08	1	0.08	No
252	PF	0.197	SLV 3	0.044	0.181	7	0.177	No
	V	0.202	SLV 3	0.047	0.191	8	0.187	No
	PFFP	0.629	SLV 1	0.15	0.612	137	0.601	No
	R	0.029	SLV 3	0	0	0	0	No
253	PF	0.984	SLV 7	0.24	0.984	454	0.982	No
	V	0.756	SLV 7	0.183	0.748	220	0.729	No
	PFFP	0.821	SLV 13	0.199	0.815	276	0.8	No
	R	0.032	SLV 1	0	0	0	0	No
254	PF	0	SLV 1	0	0	0	0	No
	V	0	SLV 1	0	0	0	0	No
	PFFP	0.278	SLV 1	0.066	0.269	19	0.267	No
	R	0	SLV 1	0	0	0	0	No
255	PF	0.144	SLV 5	0.031	0.127	3	0.125	No
	V	0.137	SLV 5	0.031	0.127	3	0.125	No
	PFFP	0.694	SLV 1	0.166	0.68	174	0.662	No
	R	0.032	SLV 1	0	0	0	0	No
256	PF	0.366	SLV 15	0.086	0.351	36	0.347	No
	V	0.359	SLV 15	0.085	0.346	35	0.343	No
	PFFP	0.934	SLV 3	0.227	0.931	393	0.925	No
	R	0.116	SLV 1	0.026	0.107	2	0.106	No
257	PF	0.358	SLV 9	0.085	0.346	35	0.343	No
	V	0.172	SLV 5	0.038	0.157	5	0.155	No
	PFFP	0.853	SLV 11	0.207	0.848	306	0.835	No
	R	0.027	SLV 1	0	0	0	0	No
258	PF	0.263	SLV 3	0.061	0.249	16	0.249	No
	V	0.237	SLV 3	0.055	0.226	12	0.221	No
	PFFP	2.418	SLV 3	0.362	1.483	1618	1.653	Si
	R	0.07	SLV 3	0	0	0	0	No
259	PF	0.153	SLV 3	0.035	0.143	4	0.141	No
	V	0.152	SLV 3	0.035	0.143	4	0.141	No
	PFFP	0.318	SLV 3	0.074	0.303	25	0.299	No
	R	0	SLV 1	0	0	0	0	No
260	PF	0.347	SLV 15	0.081	0.332	31	0.327	No
	V	0.35	SLV 15	0.082	0.337	33	0.335	No
	PFFP	0.421	SLV 11	0.099	0.407	51	0.401	No
	R	0.118	SLV 3	0.026	0.107	2	0.106	No
261	PF	1.927	SLV 7	0.362	1.483	1618	1.653	Si
	V	1.167	SLV 13	0.282	1.155	730	1.193	Si
	PFFP	1.152	SLV 3	0.279	1.141	704	1.175	Si
	R	0.12	SLV 1	0.026	0.107	2	0.106	No
262	PF	1.015	SLV 11	0.248	1.014	495	1.017	Si
	V	0.737	SLV 15	0.178	0.728	205	0.709	No
	PFFP	0.913	SLV 11	0.222	0.91	369	0.902	No
	R	0.116	SLV 1	0.026	0.107	2	0.106	No
263	PF	0.696	SLV 1	0.167	0.682	175	0.664	No
	V	0.609	SLV 15	0.144	0.591	126	0.58	No
	PFFP	0.974	SLV 5	0.238	0.972	441	0.97	No
	R	0.104	SLV 7	0.02	0.08	1	0.08	No
264	PF	1.067	SLV 13	0.26	1.062	569	1.077	Si
	V	0.675	SLV 13	0.161	0.66	162	0.643	No



Maschio	Stato limite	Molt.	Comb.	PGA	IPGA (ZE)	TR	(TR/TRrif)^.41	Verifica
265	PFFP	0.972	SLV 9	0.237	0.97	438	0.967	No
	R	0.112	SLV 13	0.026	0.107	2	0.106	No
	PF	1.253	SLV 9	0.302	1.234	891	1.294	Si
	V	1.193	SLV 9	0.288	1.179	776	1.223	Si
266	PFFP	1.403	SLV 3	0.335	1.373	1253	1.488	Si
	R	0.096	SLV 13	0.02	0.08	1	0.08	No
	PF	0.043	SLV 11	0	0	0	0	No
	V	0.042	SLV 11	0	0	0	0	No
267	PFFP	0.195	SLV 5	0.044	0.181	7	0.177	No
	R	0.061	SLV 5	0	0	0	0	No
	PF	0.318	SLV 5	0.074	0.303	25	0.299	No
	V	0.3	SLV 5	0.07	0.286	22	0.284	No
268	PFFP	1.364	SLV 11	0.327	1.337	1149	1.436	Si
	R	0.194	SLV 5	0.044	0.181	7	0.177	No
	PF	0.407	SLV 3	0.096	0.392	46	0.384	No
	V	0.398	SLV 3	0.094	0.384	44	0.377	No
269	PFFP	0.564	SLV 1	0.133	0.546	105	0.539	No
	R	0.189	SLV 15	0.044	0.181	7	0.177	No
	PF	1.032	SLV 7	0.252	1.03	518	1.036	Si
	V	0.546	SLV 13	0.129	0.528	97	0.521	No
270	PFFP	1.658	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.139	SLV 1	0.031	0.127	3	0.125	No
	PF	0.664	SLV 15	0.158	0.648	156	0.633	No
	V	0.562	SLV 1	0.133	0.544	104	0.536	No
271	PFFP	1.115	SLV 15	0.27	1.107	643	1.132	Si
	R	0.118	SLV 3	0.026	0.107	2	0.106	No
	PF	0.383	SLV 15	0.09	0.368	40	0.363	No
	V	0.38	SLV 15	0.089	0.364	39	0.359	No
272	PFFP	0.676	SLV 13	0.162	0.661	164	0.647	No
	R	0.18	SLV 3	0.041	0.169	6	0.167	No
	PF	0.204	SLV 11	0.047	0.191	8	0.187	No
	V	0.204	SLV 11	0.047	0.191	8	0.187	No
275	PFFP	0.468	SLV 11	0.11	0.451	66	0.445	No
	R	0.162	SLV 9	0.038	0.157	5	0.155	No
	PF	0.71	SLV 9	0.17	0.698	185	0.679	No
	V	0.609	SLV 9	0.144	0.591	126	0.58	No
276	PFFP	0.881	SLV 7	0.214	0.877	335	0.867	No
	R	0.311	SLV 1	0.073	0.298	24	0.294	No
	PF	0.814	SLV 1	0.197	0.808	269	0.792	No
	V	0.642	SLV 13	0.153	0.625	143	0.611	No
277	PFFP	0.994	SLV 11	0.243	0.993	466	0.992	No
	R	0.311	SLV 13	0.073	0.298	24	0.294	No
	PF	0.965	SLV 7	0.235	0.963	429	0.959	No
	V	0.963	SLV 7	0.235	0.962	428	0.958	No
278	PFFP	1.15	SLV 11	0.278	1.139	701	1.173	Si
	R	0.602	SLV 11	0.143	0.585	123	0.575	No
	PF	0.583	SLV 3	0.138	0.565	113	0.555	No
	V	0.506	SLV 3	0.119	0.487	80	0.482	No
279	PFFP	0.699	SLV 15	0.168	0.687	178	0.669	No
	R	0.04	SLV 15	0	0	0	0	No
	PF	0.648	SLV 15	0.154	0.631	147	0.618	No
	V	0.514	SLV 15	0.121	0.495	83	0.489	No
280	PFFP	0.725	SLV 3	0.175	0.715	196	0.696	No
	R	0.039	SLV 13	0	0	0	0	No
	PF	0.784	SLV 15	0.19	0.776	243	0.76	No
	V	0.421	SLV 1	0.099	0.407	51	0.401	No
281	PFFP	1.015	SLV 11	0.248	1.014	495	1.017	Si
	R	0.092	SLV 1	0.02	0.08	1	0.08	No
	PF	0.525	SLV 13	0.124	0.508	88	0.501	No
	V	0.409	SLV 13	0.096	0.392	46	0.384	No
282	PFFP	1.471	SLV 7	0.351	1.435	1451	1.581	Si
	R	0.093	SLV 1	0.02	0.08	1	0.08	No
	PF	0.495	SLV 3	0.116	0.477	75	0.469	No
	V	0.42	SLV 3	0.099	0.407	51	0.401	No
283	PFFP	1.18	SLV 7	0.285	1.167	753	1.208	Si
	R	0.093	SLV 13	0.02	0.08	1	0.08	No
	PF	0.803	SLV 3	0.194	0.796	259	0.78	No
	V	0.324	SLV 13	0.077	0.313	27	0.309	No
284	PFFP	0.961	SLV 7	0.234	0.959	425	0.955	No
	R	0.092	SLV 13	0.02	0.08	1	0.08	No
	PF	0	SLV 1	0	0	0	0	No
	V	0	SLV 1	0	0	0	0	No
285	PFFP	0.732	SLV 7	0.176	0.722	200	0.701	No
	R	0.026	SLV 5	0	0	0	0	No
	PF	0	SLV 1	0	0	0	0	No
	V	0	SLV 1	0	0	0	0	No
	PFFP	0.113	SLV 11	0.026	0.107	2	0.106	No
	R	0.015	SLV 5	0	0	0	0	No

Verifica travi di collegamento in muratura

Trave	Stato limite	Molt.	Comb.	PGA	IPGA (ZE)	TR	(TR/TRrif)^.41	Verifica
1	F	3.219	SLV 9	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
2	F	0.111	SLV 9	0.026	0.107	2	0.106	No
	V	0	SLV 1	0	0	0	0	No
3	F	0.551	SLV 7	0.13	0.532	99	0.526	No
	V	0	SLV 1	0	0	0	0	No
4	F	0.567	SLV 11	0.134	0.548	106	0.541	No
	V	0	SLV 1	0	0	0	0	No
5	F	2.782	SLV 15	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No



Trave	Stato limite	Molt.	Comb.	PGA	IPGA (ZE)	TR	(TR/TRrif)^.41	Verifica
6	F	0.33	SLV 3	0.078	0.318	28	0.313	No
	V	0	SLV 1	0	0	0	0	No
7	F	1.586	SLV 13	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
8	F	0.051	SLV 9	0	0	0	0	No
	V	0	SLV 1	0	0	0	0	No
9	F	0.346	SLV 13	0.081	0.332	31	0.327	No
	V	0	SLV 1	0	0	0	0	No
10	F	1.688	SLV 13	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
11	F	3.523	SLV 7	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
12	F	0.068	SLV 1	0	0	0	0	No
	V	0	SLV 1	0	0	0	0	No
13	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
14	F	0.185	SLV 7	0.041	0.169	6	0.167	No
	V	0	SLV 1	0	0	0	0	No
15	F	3.491	SLV 13	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
16	F	0.077	SLV 15	0	0	0	0	No
	V	0	SLV 1	0	0	0	0	No
17	F	0.853	SLV 13	0.207	0.848	306	0.835	No
	V	0	SLV 1	0	0	0	0	No
18	F	0.768	SLV 3	0.186	0.759	229	0.741	No
	V	0	SLV 1	0	0	0	0	No
19	F	2.517	SLV 7	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
20	F	0.64	SLV 3	0.152	0.623	142	0.61	No
	V	0.129	SLV 13	0.026	0.107	2	0.106	No
21	F	0.768	SLV 1	0.186	0.759	229	0.741	No
	V	0	SLV 1	0	0	0	0	No
22	F	1.256	SLV 15	0.302	1.237	896	1.297	Si
	V	0	SLV 1	0	0	0	0	No
23	F	0.41	SLV 7	0.097	0.395	47	0.387	No
	V	0	SLV 1	0	0	0	0	No
24	F	0.479	SLV 15	0.112	0.46	69	0.453	No
	V	0	SLV 1	0	0	0	0	No
25	F	0.396	SLV 11	0.093	0.38	43	0.373	No
	V	0	SLV 1	0	0	0	0	No
26	F	1.548	SLV 1	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
27	F	0.484	SLV 1	0.114	0.466	71	0.459	No
	V	0	SLV 1	0	0	0	0	No
28	F	2.441	SLV 15	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
29	F	0.111	SLV 11	0.026	0.107	2	0.106	No
	V	0	SLV 1	0	0	0	0	No
30	F	1.9	SLV 11	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
31	F	0.153	SLV 5	0.035	0.143	4	0.141	No
	V	0	SLV 1	0	0	0	0	No
32	F	0.38	SLV 3	0.089	0.364	39	0.359	No
	V	0	SLV 1	0	0	0	0	No
33	F	1.093	SLV 3	0.265	1.086	608	1.107	Si
	V	0	SLV 1	0	0	0	0	No
34	F	0.243	SLV 1	0.057	0.234	13	0.229	No
	V	0	SLV 1	0	0	0	0	No
35	F	0.676	SLV 1	0.162	0.661	164	0.647	No
	V	0	SLV 1	0	0	0	0	No
36	F	1.819	SLV 13	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
37	F	1.09	SLV 13	0.265	1.084	603	1.103	Si
	V	0	SLV 1	0	0	0	0	No
38	F	0.4	SLV 13	0.094	0.384	44	0.377	No
	V	0	SLV 1	0	0	0	0	No
39	F	0.938	SLV 3	0.228	0.935	397	0.929	No
	V	0	SLV 1	0	0	0	0	No
40	F	0.156	SLV 9	0.035	0.143	4	0.141	No
	V	0	SLV 1	0	0	0	0	No
41	F	0.609	SLV 13	0.144	0.591	126	0.58	No
	V	0	SLV 1	0	0	0	0	No
42	F	0.402	SLV 15	0.095	0.388	45	0.381	No
	V	0	SLV 1	0	0	0	0	No
43	F	0.122	SLV 11	0.026	0.107	2	0.106	No
	V	0	SLV 1	0	0	0	0	No
44	F	0.599	SLV 11	0.142	0.583	122	0.573	No
	V	0.036	SLV 11	0	0	0	0	No
45	F	0.57	SLV 1	0.135	0.553	108	0.545	No
	V	0	SLV 1	0	0	0	0	No
46	F	0.306	SLV 13	0.071	0.292	23	0.289	No
	V	0	SLV 1	0	0	0	0	No
47	F	0.611	SLV 13	0.145	0.593	127	0.582	No
	V	0	SLV 1	0	0	0	0	No
48	F	0.482	SLV 15	0.113	0.463	70	0.456	No
	V	0	SLV 1	0	0	0	0	No
49	F	0.318	SLV 11	0.074	0.303	25	0.299	No
	V	0	SLV 1	0	0	0	0	No
50	F	1.09	SLV 15	0.265	1.084	603	1.103	Si
	V	0	SLV 1	0	0	0	0	No
51	F	0.411	SLV 11	0.097	0.395	47	0.387	No



Trave	Stato limite	Molt.	Comb.	PGA	IPGA (ZE)	TR	(TR/TRrif)^.41	Verifica
	V	0	SLV 1	0	0	0	0	No
52	F	1.214	SLV 15	0.293	1.198	815	1.248	Si
	V	0	SLV 1	0	0	0	0	No
53	F	0.351	SLV 7	0.082	0.337	33	0.335	No
	V	0	SLV 1	0	0	0	0	No
54	F	1.122	SLV 15	0.272	1.113	654	1.14	Si
	V	0	SLV 1	0	0	0	0	No
55	F	0.202	SLV 7	0.047	0.191	8	0.187	No
	V	0	SLV 1	0	0	0	0	No
56	F	0.411	SLV 13	0.097	0.395	47	0.387	No
	V	0	SLV 1	0	0	0	0	No
57	F	0.857	SLV 1	0.208	0.852	310	0.839	No
	V	0	SLV 13	0	0	0	0	No
58	F	0.874	SLV 5	0.212	0.869	327	0.858	No
	V	0.061	SLV 11	0	0	0	0	No
59	F	1.73	SLV 13	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
60	F	0.932	SLV 13	0.227	0.929	390	0.922	No
	V	0	SLV 1	0	0	0	0	No
61	F	0.217	SLV 13	0.051	0.21	10	0.205	No
	V	0	SLV 1	0	0	0	0	No
62	F	1.048	SLV 15	0.255	1.045	541	1.055	Si
	V	0	SLV 1	0	0	0	0	No
63	F	1.274	SLV 5	0.306	1.254	934	1.319	Si
	V	0	SLV 1	0	0	0	0	No
64	F	1.058	SLV 1	0.258	1.054	556	1.067	Si
	V	0	SLV 1	0	0	0	0	No
65	F	0.382	SLV 13	0.09	0.368	40	0.363	No
	V	0	SLV 1	0	0	0	0	No
66	F	0.567	SLV 13	0.134	0.548	106	0.541	No
	V	0	SLV 1	0	0	0	0	No
67	F	0.391	SLV 15	0.092	0.376	42	0.37	No
	V	0	SLV 1	0	0	0	0	No
68	F	0.651	SLV 15	0.155	0.635	149	0.622	No
	V	0	SLV 1	0	0	0	0	No
69	F	1.45	SLV 7	0.346	1.416	1388	1.552	Si
	V	0	SLV 1	0	0	0	0	No
70	F	0.804	SLV 3	0.195	0.797	260	0.781	No
	V	0	SLV 1	0	0	0	0	No
71	F	0.55	SLV 3	0.13	0.532	99	0.526	No
	V	0	SLV 1	0	0	0	0	No
72	F	0.413	SLV 1	0.098	0.399	49	0.394	No
	V	0	SLV 1	0	0	0	0	No
73	F	0.528	SLV 1	0.125	0.511	89	0.503	No
	V	0	SLV 1	0	0	0	0	No
74	F	3.262	SLV 1	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
75	F	1.234	SLV 3	0.297	1.216	853	1.271	Si
	V	0	SLV 1	0	0	0	0	No
76	F	0.782	SLV 13	0.189	0.775	242	0.758	No
	V	0	SLV 1	0	0	0	0	No
77	F	1.023	SLV 3	0.25	1.021	506	1.026	Si
	V	0	SLV 1	0	0	0	0	No
78	F	0.918	SLV 9	0.224	0.915	375	0.908	No
	V	0.04	SLV 5	0	0	0	0	No
79	F	0.567	SLV 13	0.134	0.548	106	0.541	No
	V	0	SLV 1	0	0	0	0	No
80	F	0.403	SLV 1	0.095	0.388	45	0.381	No
	V	0	SLV 1	0	0	0	0	No
81	F	0.238	SLV 11	0.055	0.226	12	0.221	No
	V	0	SLV 1	0	0	0	0	No
82	F	0.517	SLV 7	0.122	0.498	84	0.491	No
	V	0.037	SLV 7	0	0	0	0	No
83	F	0.454	SLV 15	0.107	0.439	62	0.434	No
	V	0	SLV 1	0	0	0	0	No
84	F	0.913	SLV 1	0.222	0.91	369	0.902	No
	V	0	SLV 1	0	0	0	0	No
85	F	1.035	SLV 3	0.252	1.033	522	1.039	Si
	V	0	SLV 1	0	0	0	0	No
86	F	1.788	SLV 15	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
87	F	1.605	SLV 15	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
88	F	1.074	SLV 15	0.261	1.069	579	1.085	Si
	V	0	SLV 1	0	0	0	0	No
89	F	1.464	SLV 15	0.349	1.429	1430	1.571	Si
	V	0	SLV 1	0	0	0	0	No
90	F	0.726	SLV 1	0.175	0.715	196	0.696	No
	V	0	SLV 1	0	0	0	0	No
91	F	0.312	SLV 13	0.073	0.298	24	0.294	No
	V	0	SLV 1	0	0	0	0	No
92	F	0.385	SLV 15	0.091	0.372	41	0.366	No
	V	0.074	SLV 3	0	0	0	0	No
93	F	0.625	SLV 13	0.148	0.606	134	0.595	No
	V	0	SLV 1	0	0	0	0	No
94	F	0.615	SLV 13	0.146	0.598	129	0.586	No
	V	0	SLV 1	0	0	0	0	No
95	F	0.224	SLV 7	0.051	0.21	10	0.205	No
	V	0	SLV 1	0	0	0	0	No
96	F	0.232	SLV 13	0.053	0.218	11	0.214	No
	V	0	SLV 1	0	0	0	0	No



Trave	Stato limite	Molt.	Comb.	PGA	IPGA (ZE)	TR	(TR/TRrif)^.41	Verifica
97	F	0.877	SLV 1	0.213	0.872	330	0.861	No
	V	0	SLV 1	0	0	0	0	No
98	F	0.496	SLV 5	0.116	0.477	75	0.469	No
	V	0.03	SLV 5	0	0	0	0	No
99	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
100	F	0.944	SLV 15	0.23	0.941	404	0.936	No
	V	0	SLV 1	0	0	0	0	No
101	F	0.94	SLV 15	0.229	0.937	400	0.932	No
	V	0	SLV 1	0	0	0	0	No
102	F	1.735	SLV 15	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
103	F	3.686	SLV 3	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
104	F	1.221	SLV 3	0.294	1.204	828	1.256	Si
	V	0	SLV 1	0	0	0	0	No
105	F	0.933	SLV 13	0.227	0.93	392	0.924	No
	V	0	SLV 1	0	0	0	0	No
106	F	0.691	SLV 13	0.165	0.676	172	0.659	No
	V	0	SLV 1	0	0	0	0	No
107	F	0.887	SLV 15	0.216	0.882	340	0.872	No
	V	0	SLV 1	0	0	0	0	No
108	F	1.035	SLV 15	0.252	1.033	522	1.039	Si
	V	0	SLV 1	0	0	0	0	No
109	F	1.433	SLV 7	0.342	1.4	1339	1.529	Si
	V	0	SLV 1	0	0	0	0	No
110	F	0.75	SLV 3	0.181	0.741	214	0.721	No
	V	0	SLV 1	0	0	0	0	No
111	F	0.844	SLV 3	0.205	0.838	297	0.825	No
	V	0	SLV 1	0	0	0	0	No
112	F	0.664	SLV 1	0.158	0.648	156	0.633	No
	V	0	SLV 1	0	0	0	0	No
113	F	0.942	SLV 1	0.229	0.939	401	0.933	No
	V	0	SLV 1	0	0	0	0	No
114	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.124	SLV 1	0.026	0.107	2	0.106	No
115	F	1.456	SLV 1	0.347	1.421	1406	1.56	Si
	V	0	SLV 1	0	0	0	0	No
116	F	0.918	SLV 3	0.224	0.915	375	0.908	No
	V	0	SLV 1	0	0	0	0	No
117	F	1.179	SLV 3	0.285	1.166	751	1.207	Si
	V	0	SLV 1	0	0	0	0	No
118	F	0.207	SLV 11	0.049	0.201	9	0.197	No
	V	0.051	SLV 7	0	0	0	0	No
119	F	0.843	SLV 13	0.205	0.837	296	0.824	No
	V	0	SLV 1	0	0	0	0	No
120	F	0.705	SLV 5	0.169	0.692	182	0.675	No
	V	0	SLV 1	0	0	0	0	No
121	F	0.293	SLV 11	0.069	0.281	21	0.278	No
	V	0	SLV 1	0	0	0	0	No
122	F	0.641	SLV 5	0.153	0.625	143	0.611	No
	V	0.011	SLV 5	0	0	0	0	No
123	F	0.638	SLV 13	0.152	0.621	141	0.608	No
	V	0	SLV 1	0	0	0	0	No
124	F	1.538	SLV 15	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
125	F	1.982	SLV 1	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
126	F	2.363	SLV 15	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
127	F	2.207	SLV 15	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
128	F	2.355	SLV 1	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
129	F	2.582	SLV 1	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
130	F	0.953	SLV 1	0.232	0.951	415	0.946	No
	V	0.033	SLV 1	0	0	0	0	No
131	F	0.384	SLV 13	0.091	0.372	41	0.366	No
	V	0	SLV 1	0	0	0	0	No
132	F	0.457	SLV 1	0.107	0.439	62	0.434	No
	V	0.011	SLV 1	0	0	0	0	No
133	F	0.844	SLV 13	0.205	0.838	297	0.825	No
	V	0	SLV 1	0	0	0	0	No
134	F	0.82	SLV 13	0.199	0.814	275	0.799	No
	V	0	SLV 1	0	0	0	0	No
135	F	0.279	SLV 7	0.066	0.269	19	0.267	No
	V	0	SLV 1	0	0	0	0	No
136	F	0.3	SLV 7	0.07	0.286	22	0.284	No
	V	0	SLV 1	0	0	0	0	No
137	F	0.861	SLV 1	0.209	0.855	314	0.844	No
	V	0	SLV 1	0	0	0	0	No
138	F	0.213	SLV 11	0.049	0.201	9	0.197	No
	V	0.037	SLV 5	0	0	0	0	No
139	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.1	SLV 7	0.02	0.08	1	0.08	No
140	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
141	F	1.094	SLV 15	0.266	1.087	610	1.108	Si
	V	0	SLV 1	0	0	0	0	No
142	F	1.843	SLV 15	0.362	1.483	1618	1.653	Si



Trave	Stato limite	Molt.	Comb.	PGA	IPGA (ZE)	TR	(TR/TRrif)^.41	Verifica
	V	0	SLV 1	0	0	0	0	No
143	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.076	SLV 13	0	0	0	0	No
144	F	1.633	SLV 15	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
145	F	1.118	SLV 13	0.271	1.11	648	1.136	Si
	V	0	SLV 1	0	0	0	0	No
146	F	1.262	SLV 13	0.304	1.242	909	1.305	Si
	V	0	SLV 1	0	0	0	0	No
147	F	1.078	SLV 15	0.262	1.073	585	1.089	Si
	V	0	SLV 1	0	0	0	0	No
148	F	1.165	SLV 15	0.282	1.153	726	1.19	Si
	V	0	SLV 1	0	0	0	0	No
149	F	3.54	SLV 7	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
150	F	1.308	SLV 3	0.314	1.285	1009	1.362	Si
	V	0	SLV 1	0	0	0	0	No
151	F	0.755	SLV 3	0.183	0.747	219	0.728	No
	V	0	SLV 1	0	0	0	0	No
152	F	1.465	SLV 1	0.349	1.43	1433	1.573	Si
	V	0	SLV 1	0	0	0	0	No
153	F	1.338	SLV 3	0.321	1.313	1082	1.401	Si
	V	0	SLV 1	0	0	0	0	No
154	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.131	SLV 1	0.031	0.127	3	0.125	No
155	F	0.752	SLV 5	0.182	0.744	217	0.725	No
	V	0.013	SLV 5	0	0	0	0	No
156	F	1.315	SLV 3	0.316	1.292	1025	1.371	Si
	V	0.019	SLV 3	0	0	0	0	No
157	F	1.069	SLV 3	0.26	1.064	572	1.079	Si
	V	0	SLV 1	0	0	0	0	No
158	F	1.405	SLV 13	0.336	1.375	1259	1.491	Si
	V	0	SLV 1	0	0	0	0	No
159	F	0.498	SLV 11	0.117	0.479	77	0.474	No
	V	0	SLV 1	0	0	0	0	No
160	F	0.877	SLV 5	0.213	0.872	330	0.861	No
	V	0	SLV 1	0	0	0	0	No
161	F	1.253	SLV 13	0.302	1.234	891	1.294	Si
	V	0	SLV 1	0	0	0	0	No
162	F	2.734	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.096	SLV 3	0.02	0.08	1	0.08	No
163	F	1.458	SLV 13	0.348	1.423	1412	1.563	Si
	V	0	SLV 1	0	0	0	0	No
164	F	3.386	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.01	SLV 15	0	0	0	0	No
165	F	1.341	SLV 1	0.321	1.316	1090	1.406	Si
	V	0	SLV 1	0	0	0	0	No
166	F	3.799	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.036	SLV 3	0	0	0	0	No
167	F	1.11	SLV 1	0.269	1.102	635	1.126	Si
	V	0	SLV 1	0	0	0	0	No
168	F	2.098	SLV 1	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
169	F	0.582	SLV 1	0.138	0.565	113	0.555	No
	V	0	SLV 1	0	0	0	0	No
170	F	0.834	SLV 15	0.202	0.827	287	0.813	No
	V	0	SLV 1	0	0	0	0	No
171	F	2.059	SLV 15	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
172	F	1.658	SLV 13	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
173	F	0.449	SLV 7	0.106	0.433	59	0.425	No
	V	0	SLV 1	0	0	0	0	No
174	F	1.68	SLV 1	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
175	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.355	SLV 7	0.083	0.342	34	0.339	No
176	F	0.376	SLV 7	0.088	0.359	38	0.355	No
	V	0	SLV 1	0	0	0	0	No
177	F	1.601	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.035	SLV 15	0	0	0	0	No
178	F	1.455	SLV 15	0.347	1.42	1403	1.559	Si
	V	0	SLV 1	0	0	0	0	No
179	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.176	SLV 13	0.041	0.169	6	0.167	No
180	F	1.109	SLV 9	0.269	1.101	634	1.126	Si
	V	0.231	SLV 9	0.053	0.218	11	0.214	No
181	F	2.259	SLV 13	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
182	F	1.392	SLV 15	0.333	1.363	1224	1.474	Si
	V	0	SLV 1	0	0	0	0	No
183	F	1.897	SLV 15	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
184	F	2.016	SLV 13	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
185	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.171	SLV 5	0.038	0.157	5	0.155	No
186	F	3.55	SLV 11	0.362	1.483	1618	1.653	Si
	V	0.018	SLV 3	0	0	0	0	No
187	F	2.179	SLV 11	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No



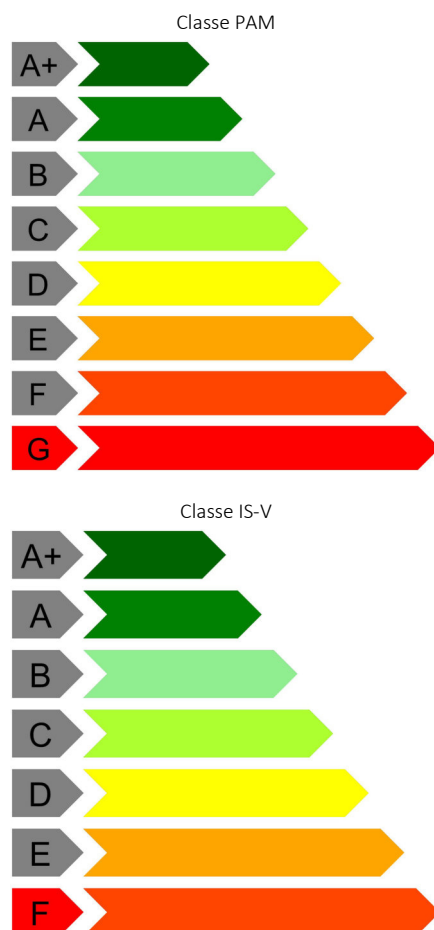
Trave	Stato limite	Molt.	Comb.	PGA	IPGA (ZE)	TR	(TR/TRrif)^.41	Verifica
188	F	1.685	SLV 11	0.362	1.483	1618	1.653	Si
	V	0.007	SLV 11	0	0	0	0	No
189	F	0.191	SLV 13	0.044	0.181	7	0.177	No
	V	0.021	SLV 13	0	0	0	0	No
190	F	0.521	SLV 13	0.123	0.503	86	0.496	No
	V	0	SLV 1	0	0	0	0	No
191	F	0.954	SLV 15	0.233	0.952	416	0.947	No
	V	0	SLV 5	0	0	0	0	No
192	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.059	SLV 13	0	0	0	0	No
193	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No
194	F	0.334	SLV 13	0.078	0.318	28	0.313	No
	V	0	SLV 1	0	0	0	0	No
195	F	0.713	SLV 13	0.171	0.701	187	0.682	No
	V	0	SLV 1	0	0	0	0	No
196	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0	SLV 1	0	0	0	0	No

Periodi di ritorno e accelerazioni di aggancio per gli Stati Limite

S. L.	TR,C	PGA,C	TR,Rif	PGA,Rif	Tipo rottura
Stato limite di salvaguardia della vita	0	0	475	0.244	taglio maschio muratura

Coefficienti relativi alle Linee guida per la classificazione del rischio sismico delle costruzioni secondo il D.M. 24 09/01/2020

TR,C	TR,Rif	PAM	Classe PAM	IS-V	Classe IS-V	Tipo rottura
0	475	8.22	G	0	F	taglio maschio muratura



2.3 Verifiche maschi in muratura

Le unità di misura elencate nel capitolo sono in [m, daN, s] ove non espressamente specificato.

X ini.: coordinate del punto iniziale del maschio. [m]

Y ini.: coordinate del punto iniziale del maschio. [m]

X fin.: coordinate del punto finale del maschio. [m]

Y fin.: coordinate del punto finale del maschio. [m]



Quota i.: livello o falda inferiore.
Quota.s: livello o falda superiore.
l: lunghezza del maschio. [m]
Sp.: spessore. [m]
h netta: altezza netta (a filo solai). [m]
h ini.: altezza nel modello al punto iniziale. [m]
h fin.: altezza nel modello al punto finale. [m]
a: distanza tra irrigidimenti laterali. [m]
a.s.,sx: lunghezza di appoggio del solaio di sinistra. [m]
a.s.,dx: lunghezza di appoggio del solaio di destra. [m]
fb: resistenza normalizzata a compressione verticale dei blocchi. [daN/m²]
fk: resistenza caratteristica a compressione della muratura utilizzata. [daN/m²]
fvk0: resistenza caratteristica a taglio in assenza di carichi verticali. [daN/m²]
fmedio: resistenza media a compressione della muratura utilizzata. [daN/m²]
τ0: resistenza media a taglio in assenza di azioni normali [C8.7.1.16]. [daN/m²]
fv0: resistenza media a taglio in assenza di azioni normali [C8.7.1.17]. [daN/m²]
μ: coefficiente di attrito [C8.7.1.17].
φ: coefficiente di ammassamento o ingranamento secondo Circolare 7 21-01-19 §C8.7.1.3.1.1.
fv,lim: valore massimo della resistenza a taglio che può essere impiegata nel calcolo. [daN/m²]
E: modulo di elasticità longitudinale della muratura utilizzato. [daN/m²]
G: modulo di elasticità tangenziale della muratura utilizzato. [daN/m²]
FC: fattore di confidenza della muratura.
Comb.: combinazione.
Quota: quota della sezione di verifica. [m]
N: sforzo normale. [daN]
M: momento flettente nel piano. [daN*m]
σ0: tensione media di compressione. [daN/m²]
Mu: momento flettente ultimo. [daN*m]
c.s.: coefficiente di sicurezza.
Verifica: stato di verifica.
V par: taglio nel piano. [daN]
σN: tensione media di compressione sulla parte reagente. [daN/m²]
l': lunghezza della parte compressa della parete. [m]
fvd: resistenza a taglio di calcolo. [daN/m²]
Vt scorr.: taglio ultimo per verifica a scorrimento. [daN]
Vt fess.diag.: taglio ultimo per verifica a fessurazione diagonale regolare [C8.7.1.17]. [daN]
Vt,lim: taglio limite [C8.7.1.18]. [daN]
c.s.: coefficiente di sicurezza a taglio.
fd: resistenza a compressione di calcolo. [daN/m²]
Sa: accelerazione massima, adimensionalizzata rispetto a g, che l'elemento strutturale subisce durante il sisma.
M: momento flettente fuori piano. [daN*m]
Mc: momento di collasso per azioni perpendicolari al piano. [daN*m]
Coeff.s.: coefficiente di sicurezza.
N top: sforzo normale in sommità. [daN]
N base: sforzo normale al piede. [daN]
V orto: taglio fuori piano. [daN]
α0: moltiplicatore secondo [C8.7.1.1].
M*: massa partecipante al cinematismo. [daN/(m/s²)]
e*: frazione di massa partecipante della muratura [C8.7.1.5].
α0*: accelerazione spettrale di attivazione del meccanismo [C8.7.1.8]. [m/s²]
αLim: accelerazione limite [C7.2.11]. [m/s²]
Stato limite: pF_SLU=Presso flessione per azioni non sismiche; V_SLU=Taglio per azioni non sismiche; PF_SLV=Presso flessione per azioni sismiche; V_SLV=Taglio per azioni sismiche; PFFP_SLV=Presso flessione fuori piano per azioni sismiche; R_SLV=Ribaltamento per azioni sismiche.

Maschio 1

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.603	5.876	-24.603	-3.284	L1	L3	9.16	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.l) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 34	-1.3	-63053	7672.84	15297	234554.36	30.569	Si
SLU 34	1.39	-31736	5158.68	7699	131611.62	25.513	Si
SLU 13	-1.3	-57747	6670.72	14009	218993.63	32.829	Si
SLU 13	1.39	-28526	4724.16	6920	119550.54	25.306	Si
SLU 2	-1.3	-51346	5520.12	12457	199203.47	36.087	Si
SLU 2	1.39	-24778	4225.87	6011	105110.12	24.873	Si
SLU 5	-1.3	-52117	5422.32	12644	201646.9	37.188	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 5	1.39	-25300	4289.32	6138	107144.23	24.979	Si
SLU 23	-1.3	-56653	6522.23	13744	215690.81	33.07	Si
SLU 23	1.39	-27988	4660.39	6790	117499.36	25.212	Si
SLU 81	-1.3	-79302	11045.5	19239	277421.75	25.116	Si
SLU 81	1.39	-37844	3414.67	9181	153791.86	45.039	Si
SLU 83	-1.3	-80073	10947.71	19426	279277.1	25.51	Si
SLU 83	1.39	-38366	3478.12	9308	155639.91	44.748	Si
SLU 10	-1.3	-56975	6768.52	13822	216668.62	32.011	Si
SLU 10	1.39	-28004	4660.71	6794	117562.36	25.224	Si
SLU 31	-1.3	-62282	7770.63	15110	232340.99	29.9	Si
SLU 31	1.39	-31214	5095.23	7572	129669.15	25.449	Si
SLU 26	-1.3	-57424	6424.44	13931	218022.6	33.936	Si
SLU 26	1.39	-28510	4723.84	6916	119487.77	25.295	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 7	-1.3	-69203	-28746.06	16789	273399.32	9.511	Si
SLV 7	1.39	-28347	19254.16	6877	122523.08	6.363	Si
SLV 8	-1.3	-69203	-28746.06	16789	273399.32	9.511	Si
SLV 8	1.39	-28347	19254.16	6877	122523.08	6.363	Si
SLV 6	-1.3	-65718	50368.67	15943	261716.58	5.196	Si
SLV 6	1.39	-28356	-11232.2	6879	122558.42	10.911	Si
SLV 5	-1.3	-65718	50368.67	15943	261716.58	5.196	Si
SLV 5	1.39	-28356	-11232.2	6879	122558.42	10.911	Si
SLV 11	-1.3	-44796	-35846.45	10868	186918.06	5.214	Si
SLV 11	1.39	-23209	15587.33	5631	101398.62	6.505	Si
SLV 12	-1.3	-44796	-35846.45	10868	186918.06	5.214	Si
SLV 12	1.39	-23209	15587.33	5631	101398.62	6.505	Si
SLV 15	-1.3	-15102	-16440.08	3664	67094.05	4.081	Si
SLV 15	1.39	-17217	639.14	4177	76159.52	119.159	Si
SLV 9	-1.3	-41312	43268.28	10022	173688.76	4.014	Si
SLV 9	1.39	-23218	-14899.03	5633	101434.78	6.808	Si
SLV 16	-1.3	-15102	-16440.08	3664	67094.05	4.081	Si
SLV 16	1.39	-17217	639.14	4177	76159.52	119.159	Si
SLV 10	-1.3	-41312	43268.28	10022	173688.76	4.014	Si
SLV 10	1.39	-23218	-14899.03	5633	101434.78	6.808	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 13	-1.3	-57747	1762	6670.72	14009	9.16	7423	30600				17.37	Si
SLU 13	1.39	-28526	1752	4724.16	6920	9.16	6478	26704				15.25	Si
SLU 52	-1.3	-70796	1783	8410.37	17175	9.16	7846	32339				18.13	Si
SLU 52	1.39	-34087	1772	5090.48	8270	9.16	6658	27445				15.49	Si
SLU 34	-1.3	-63053	1764	7672.84	15297	9.16	7595	31307				17.75	Si
SLU 34	1.39	-31736	1753	5158.68	7699	9.16	6582	27131				15.47	Si
SLU 31	-1.3	-62282	1792	7770.63	15110	9.16	7570	31204				17.41	Si
SLU 31	1.39	-31214	1783	5095.23	7572	9.16	6565	27062				15.18	Si
SLU 44	-1.3	-65166	1771	7161.97	15809	9.16	7663	31589				17.84	Si
SLU 44	1.39	-30861	1758	4655.64	7487	9.16	6554	27015				15.36	Si
SLU 2	-1.3	-51346	1777	5520.12	12457	9.16	7216	29746				16.74	Si
SLU 2	1.39	-24778	1768	4225.87	6011	9.16	6357	26204				14.82	Si
SLU 26	-1.3	-57424	1751	6424.44	13931	9.16	7413	30557				17.45	Si
SLU 26	1.39	-28510	1740	4723.84	6916	9.16	6478	26701				15.34	Si
SLU 23	-1.3	-56653	1780	6522.23	13744	9.16	7388	30454				17.11	Si
SLU 23	1.39	-27988	1770	4660.39	6790	9.16	6461	26632				15.05	Si
SLU 10	-1.3	-56975	1790	6768.52	13822	9.16	7399	30497				17.04	Si
SLU 10	1.39	-28004	1781	4660.71	6794	9.16	6461	26634				14.95	Si
SLU 5	-1.3	-52117	1749	5422.32	12644	9.16	7241	29849				17.07	Si
SLU 5	1.39	-25300	1738	4289.32	6138	9.16	6374	26273				15.11	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 14	-1.3	-14057	11187	7294.34	3410	9.16	9015	37161				3.32	Si
SLV 14	1.39	-17220	18710	-8506.77	4178	9.16	9169	37794				2.02	Si
SLV 7	-1.3	-69203	-38481	-28746.06	16789	9.16	11691	48191				1.25	Si
SLV 7	1.39	-28347	-47646	19254.16	6877	9.16	9709	40019				0.84	No, Vu<V
SLV 6	-1.3	-65718	38672	50368.67	15943	9.16	11522	47494				1.23	Si
SLV 6	1.39	-28356	44662	-11232.2	6879	9.16	9709	40021				0.9	No, Vu<V
SLV 5	-1.3	-65718	38672	50368.67	15943	9.16	11522	47494				1.23	Si
SLV 5	1.39	-28356	44662	-11232.2	6879	9.16	9709	40021				0.9	No, Vu<V
SLV 9	-1.3	-41312	38449	43268.28	10022	9.16	10338	42612				1.11	Si
SLV 9	1.39	-23218	47596	-14899.03	5633	9.16	9460	38994				0.82	No, Vu<V
SLV 13	-1.3	-14057	11187	7294.34	3410	9.16	9015	37161				3.32	Si
SLV 13	1.39	-17220	18710	-8506.77	4178	9.16	9169	37794				2.02	Si
SLV 12	-1.3	-44796	-38703	-35846.45	10868	9.16	10507	43309				1.12	Si
SLV 12	1.39	-23209	-44712	15587.33	5631	9.16	9459	38992				0.87	No, Vu<V
SLV 11	-1.3	-44796	-38703	-35846.45	10868	9.16	10507	43309				1.12	Si
SLV 11	1.39	-23209	-44712	15587.33	5631	9.16	9459	38992				0.87	No, Vu<V
SLV 8	-1.3	-69203	-38481	-28746.06	16789	9.16	11691	48191				1.25	Si
SLV 8	1.39	-28347	-47646	19254.16	6877	9.16	9709	40019				0.84	No, Vu<V
SLV 10	-1.3	-41312	38449	43268.28	10022	9.16	10338	42612				1.11	Si
SLV 10	1.39	-23218	47596	-14899.03	5633	9.16	9460	38994				0.82	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.08 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 13	143750	0.25	1580	-6511	548.62	1446.02	2.64	Si
SLV 14	143750	0.25	1580	-6511	548.62	1446.02	2.64	Si
SLV 15	143750	0.25	1699	-7004	548.62	1553.88	2.83	Si



Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 16	143750	0.25	1699	-7004	548.62	1553.88	2.83	Si
SLV 10	143750	0.25	7113	-29320	548.62	6213.05	11.32	Si
SLV 9	143750	0.25	7113	-29320	548.62	6213.05	11.32	Si
SLV 11	143750	0.25	7512	-30962	548.62	6538.28	11.92	Si
SLV 12	143750	0.25	7512	-30962	548.62	6538.28	11.92	Si
SLV 5	143750	0.25	11976	-49364	548.62	10018.31	18.26	Si
SLV 6	143750	0.25	11976	-49364	548.62	10018.31	18.26	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 0.045 $W_a = 0.08$ $T_a = 0.0269$

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 3	-34345	-96458	2246	0.052	5091.4	0.92	0.81854	3.31979	No
SLV 4	-34345	-96458	2246	0.052	5091.4	0.92	0.81854	3.31979	No
SLV 1	-34348	-95412	2205	0.053	5091.7	0.92	0.83328	3.31979	No
SLV 2	-34348	-95412	2205	0.053	5091.7	0.92	0.83328	3.31979	No
SLV 7	-28347	-69203	1831	0.058	4491.7	0.912	0.91841	3.16379	No
SLV 8	-28347	-69203	1831	0.058	4491.7	0.912	0.91841	3.16379	No
SLV 5	-28356	-65718	1694	0.061	4492.5	0.912	0.9757	3.16379	No
SLV 6	-28356	-65718	1694	0.061	4492.5	0.912	0.9757	3.16379	No
SLV 12	-23209	-44796	1434	0.066	3981.7	0.905	1.05322	3.16379	No
SLV 11	-23209	-44796	1434	0.066	3981.7	0.905	1.05322	3.16379	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	24.873	SLU 2	Si
V_SLU	14.824	SLU 2	Si
PF_SLV	4.014	SLV 9	Si
V_SLV	0.819	SLV 9	No
PFFP_SLV	2.636	SLV 13	Si
R_SLV	0.247	SLV 3	No

Maschio 2

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.763	5.876	-24.603	5.876	L1	L3	1.84	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 48	0.7	-6451	-3026.06	7791	5367.48	1.774	Si
SLU 48	1.1	-5687	-3864.24	6868	4790.55	1.24	Si
SLU 69	0.7	-7478	-3431.5	9031	6116.75	1.783	Si
SLU 69	1.1	-6730	-4364.6	8128	5573.97	1.277	Si
SLU 51	0.7	-6397	-2975.08	7726	5327.2	1.791	Si
SLU 51	1.1	-5666	-3800.9	6843	4774.55	1.256	Si
SLU 6	0.7	-5244	-2436.59	6333	4449.14	1.826	Si
SLU 6	1.1	-4665	-3132.51	5634	3995.11	1.275	Si
SLU 50	0.7	-6416	-3007.48	7749	5341.55	1.776	Si
SLU 50	1.1	-5655	-3844.89	6830	4766.64	1.24	Si
SLU 45	0.7	-6446	-3031.18	7785	5363.54	1.769	Si
SLU 45	1.1	-5668	-3813.12	6846	4776.55	1.253	Si
SLU 8	0.7	-5209	-2418.01	6291	4422.07	1.829	Si
SLU 8	1.1	-4634	-3113.16	5597	3970.33	1.275	Si
SLU 43	0.7	-6406	-3017.72	7737	5333.66	1.767	Si
SLU 43	1.1	-5619	-3742.66	6786	4738.6	1.266	Si
SLU 46	0.7	-6427	-2998.78	7762	5349.2	1.784	Si
SLU 46	1.1	-5679	-3769.14	6858	4784.46	1.269	Si
SLU 49	0.7	-6432	-2993.66	7768	5353.15	1.788	Si
SLU 49	1.1	-5697	-3820.25	6880	4798.45	1.256	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 8	0.7	-6743	-6318.25	0	0	0	No, $e > l/2$
SLV 8	1.1	-3966	-4829.68	0	0	0	No, $e > l/2$
SLV 12	0.7	-8020	-7136.21	9686	6793.6	0.952	No, $M > M_u$
SLV 12	1.1	-4879	-3668.39	5893	4272.41	1.165	Si
SLV 1	0.7	-3275	-110.97	3955	2915.33	26.271	Si
SLV 1	1.1	-4007	-4976.88	0	0	0	No, $e > l/2$
SLV 2	0.7	-3275	-110.97	3955	2915.33	26.271	Si
SLV 2	1.1	-4007	-4976.88	0	0	0	No, $e > l/2$
SLV 4	0.7	-4188	-2535.42	5058	3693.65	1.457	Si
SLV 4	1.1	-3496	-5534.25	0	0	0	No, $e > l/2$
SLV 3	0.7	-4188	-2535.42	5058	3693.65	1.457	Si
SLV 3	1.1	-3496	-5534.25	0	0	0	No, $e > l/2$
SLV 15	0.7	-8444	-5261.97	10198	7120.15	1.353	Si
SLV 15	1.1	-6540	-1663.28	7899	5628.18	3.384	Si
SLV 7	0.7	-6743	-6318.25	0	0	0	No, $e > l/2$
SLV 7	1.1	-3966	-4829.68	0	0	0	No, $e > l/2$
SLV 11	0.7	-8020	-7136.21	9686	6793.6	0.952	No, $M > M_u$



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 11	1.1	-4879	-3668.39	5893	4272.41	1.165	Si
SLV 16	0.7	-8444	-5261.97	10198	7120.15	1.353	Si
SLV 16	1.1	-6540	-1663.28	7899	5628.18	3.384	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 51	0.7	-6397	2074	-2975.08		10416	1.3648	6944	4265			2.06	Si
SLU 51	1.1	-5666	2232	-3800.9		16846	0.7474	7802	2624			1.18	Si
SLU 50	0.7	-6416	2034	-3007.48		10532	1.3539	6960	4240			2.08	Si
SLU 50	1.1	-5655	2195	-3844.89		17445	0.7204	7882	2555			1.16	Si
SLU 80	0.7	-8711	2658	-3878.85		13592	1.4242	7368	4722			1.78	Si
SLU 80	1.1	-8033	2847	-4882.94		19064	0.9364	8097	3412			1.2	Si
SLU 72	0.7	-7424	2372	-3380.53		11835	1.3939	7134	4474			1.89	Si
SLU 72	1.1	-6709	2546	-4301.26		17819	0.8367	7931	2986			1.17	Si
SLU 48	0.7	-6451	2027	-3026.06		10597	1.3528	6969	4242			2.09	Si
SLU 48	1.1	-5687	2189	-3864.24		17518	0.7214	7891	2562			1.17	Si
SLU 69	0.7	-7478	2326	-3431.5		12013	1.3833	7157	4455			1.92	Si
SLU 69	1.1	-6730	2503	-4364.6		18363	0.8145	8004	2934			1.17	Si
SLU 70	0.7	-7458	2365	-3399.11		11900	1.3928	7142	4476			1.89	Si
SLU 70	1.1	-6741	2541	-4320.61		17895	0.837	7942	2991			1.18	Si
SLU 79	0.7	-8731	2618	-3911.25		13701	1.416	7382	4704			1.8	Si
SLU 79	1.1	-8023	2810	-4926.93		19429	0.9176	8146	3364			1.2	Si
SLU 49	0.7	-6432	2067	-2993.66		10481	1.3637	6953	4267			2.06	Si
SLU 49	1.1	-5697	2227	-3820.25		16919	0.7482	7811	2630			1.18	Si
SLU 71	0.7	-7443	2332	-3412.92		11948	1.3843	7149	4453			1.91	Si
SLU 71	1.1	-6699	2509	-4345.25		18287	0.8141	7994	2928			1.17	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 7	0.7	-6743	6968	-6318.25		0	0	8333	0			0	No, Vu<V
SLV 7	1.1	-3966	-3053	-4829.68		0	0	8333	0			0	No, Vu<V
SLV 4	0.7	-4188	11122	-2535.42		9860	0.9439	10305	4377			0.39	No, Vu<V
SLV 4	1.1	-3496	9941	-5534.25		0	0	8333	0			0	No, Vu<V
SLV 2	0.7	-3275	9442	-110.97		3955	1.84	9124	7555			0.8	No, Vu<V
SLV 2	1.1	-4007	14696	-4976.88		0	0	8333	0			0	No, Vu<V
SLV 5	0.7	-3699	1370	1763.27		6181	1.3299	9569	5727			4.18	Si
SLV 5	1.1	-5668	12797	-2971.77		10610	1.1871	10455	5585			0.44	No, Vu<V
SLV 6	0.7	-3699	1370	1763.27		6181	1.3299	9569	5727			4.18	Si
SLV 6	1.1	-5668	12797	-2971.77		10610	1.1871	10455	5585			0.44	No, Vu<V
SLV 3	0.7	-4188	11122	-2535.42		9860	0.9439	10305	4377			0.39	No, Vu<V
SLV 3	1.1	-3496	9941	-5534.25		0	0	8333	0			0	No, Vu<V
SLV 12	0.7	-8020	1729	-7136.21		196637	0.0906	16250	663			0.38	No, Vu<V
SLV 12	1.1	-4879	-9436	-3668.39		21492	0.5045	12632	2868			0.3	No, Vu<V
SLV 11	0.7	-8020	1729	-7136.21		196637	0.0906	16250	663			0.38	No, Vu<V
SLV 11	1.1	-4879	-9436	-3668.39		21492	0.5045	12632	2868			0.3	No, Vu<V
SLV 8	0.7	-6743	6968	-6318.25		0	0	8333	0			0	No, Vu<V
SLV 8	1.1	-3966	-3053	-4829.68		0	0	8333	0			0	No, Vu<V
SLV 1	0.7	-3275	9442	-110.97		3955	1.84	9124	7555			0.8	No, Vu<V
SLV 1	1.1	-4007	14696	-4976.88		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.08 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 6	143750	0.25	4166	-3449	114.28	749.63	6.56	Si
SLV 5	143750	0.25	4166	-3449	114.28	749.63	6.56	Si
SLV 9	143750	0.25	4841	-4008	114.28	866.08	7.58	Si
SLV 10	143750	0.25	4841	-4008	114.28	866.08	7.58	Si
SLV 2	143750	0.25	5224	-4325	114.28	931.54	8.15	Si
SLV 1	143750	0.25	5224	-4325	114.28	931.54	8.15	Si
SLV 4	143750	0.25	6805	-5634	114.28	1197.15	10.48	Si
SLV 3	143750	0.25	6805	-5634	114.28	1197.15	10.48	Si
SLV 14	143750	0.25	7473	-6187	114.28	1307.03	11.44	Si
SLV 13	143750	0.25	7473	-6187	114.28	1307.03	11.44	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.045 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 7	2833	-14942	2	0	0	0	0	3.16379	No, Trazione
SLV 8	2833	-14942	2	0	0	0	0	3.16379	No, Trazione
SLV 11	1792	-13603	-25	0	0	0	0	3.16379	No, Trazione
SLV 12	1792	-13603	-25	0	0	0	0	3.16379	No, Trazione
SLV 1	-3973	-8708	372	0.05	732.1	0.9	0.79999	3.31979	No
SLV 2	-3973	-8708	372	0.05	732.1	0.9	0.79999	3.31979	No
SLV 6	-9507	-2947	523	0.053	1285.3	0.933	0.82166	3.16379	No
SLV 5	-9507	-2947	523	0.053	1285.3	0.933	0.82166	3.16379	No
SLV 9	-10547	-1608	497	0.057	1390.6	0.937	0.89035	3.16379	No
SLV 10	-10547	-1608	497	0.057	1390.6	0.937	0.89035	3.16379	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.24	SLU 48	Si
V_SLU	1.164	SLU 50	Si
PF_SLV	0	SLV 1	No
V_SLV	0	SLV 1	No
PFFP_SLV	6.559	SLV 5	Si
R_SLV	0	SLV 12	No



Maschio 3

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.618	5.876	-21.763	5.876	L1	L3	2.145	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ ₀	f _{v0}	μ	φ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLU 49	0.7	-22462	-3182.71	23271	17208.42	5.407	Si
SLU 49	1.1	-20523	-3122.7	21262	16265.69	5.209	Si
SLU 46	0.7	-22207	-3182.48	23007	17090.52	5.37	Si
SLU 46	1.1	-20298	-3078.42	21029	16149.77	5.246	Si
SLU 48	0.7	-22466	-3187.07	23275	17210.39	5.4	Si
SLU 48	1.1	-20530	-3121.02	21269	16269.38	5.213	Si
SLU 50	0.7	-22288	-3135.44	23090	17128.04	5.463	Si
SLU 50	1.1	-20363	-3075.23	21096	16183.14	5.262	Si
SLU 67	0.7	-25037	-3385.54	25938	18301.79	5.406	Si
SLU 67	1.1	-23010	-3282.96	23839	17456.45	5.317	Si
SLU 70	0.7	-25292	-3385.76	26202	18400.04	5.435	Si
SLU 70	1.1	-23235	-3327.24	24072	17555.74	5.276	Si
SLU 45	0.7	-22212	-3186.85	23011	17092.52	5.363	Si
SLU 45	1.1	-20305	-3076.75	21036	16153.51	5.25	Si
SLU 47	0.7	-22026	-3127.94	22819	17005.56	5.437	Si
SLU 47	1.1	-20126	-3033.74	20850	16059.94	5.294	Si
SLU 51	0.7	-22284	-3131.08	23086	17126.05	5.47	Si
SLU 51	1.1	-20355	-3076.9	21088	16179.41	5.258	Si
SLU 69	0.7	-25296	-3390.13	26207	18401.68	5.428	Si
SLU 69	1.1	-23242	-3325.56	24079	17558.9	5.28	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLV 6	0.7	-8819	-592.17	9137	8751.58	14.779	Si
SLV 6	1.1	-2857	1138.28	2959	2989.44	2.626	Si
SLV 7	0.7	-31150	-3177.4	32271	24584.77	7.737	Si
SLV 7	1.1	-33584	-6177.23	34793	25762.51	4.171	Si
SLV 10	0.7	-7275	-1954.04	7537	7321.17	3.747	Si
SLV 10	1.1	-1789	1281.32	1853	1889.39	1.475	Si
SLV 5	0.7	-8819	-592.17	9137	8751.58	14.779	Si
SLV 5	1.1	-2857	1138.28	2959	2989.44	2.626	Si
SLV 8	0.7	-31150	-3177.4	32271	24584.77	7.737	Si
SLV 8	1.1	-33584	-6177.23	34793	25762.51	4.171	Si
SLV 15	0.7	-19988	-5223.3	20708	17804.06	3.409	Si
SLV 15	1.1	-20516	-3306.88	21255	18175.95	5.496	Si
SLV 16	0.7	-19988	-5223.3	20708	17804.06	3.409	Si
SLV 16	1.1	-20516	-3306.88	21255	18175.95	5.496	Si
SLV 13	0.7	-13289	-4447.73	13767	12646.39	2.843	Si
SLV 13	1.1	-11298	-1112.23	11705	10956.18	9.851	Si
SLV 14	0.7	-13289	-4447.73	13767	12646.39	2.843	Si
SLV 14	1.1	-11298	-1112.23	11705	10956.18	9.851	Si
SLV 9	0.7	-7275	-1954.04	7537	7321.17	3.747	Si
SLV 9	1.1	-1789	1281.32	1853	1889.39	1.475	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 84	0.7	-29383	3036	-3547.02		30440	2.145	9614	9280			3.06	Si
SLU 84	1.1	-27236	3012	-3427.79		28216	2.145	9318	8994			2.99	Si
SLU 69	0.7	-25296	2927	-3390.13		26207	2.145	9050	8735			2.98	Si
SLU 69	1.1	-23242	2906	-3325.56		24079	2.145	8766	8461			2.91	Si
SLU 71	0.7	-25118	2914	-3338.49		26022	2.145	9025	8712			2.99	Si
SLU 71	1.1	-23075	2893	-3279.77		23906	2.145	8743	8439			2.92	Si
SLU 72	0.7	-25113	2937	-3334.13		26017	2.145	9025	8711			2.97	Si
SLU 72	1.1	-23068	2916	-3281.45		23898	2.145	8742	8438			2.89	Si
SLU 79	0.7	-28284	3116	-3487.67		29302	2.145	9463	9134			2.93	Si
SLU 79	1.1	-26150	3093	-3413.21		27091	2.145	9168	8849			2.86	Si
SLU 70	0.7	-25292	2950	-3385.76		26202	2.145	9049	8735			2.96	Si
SLU 70	1.1	-23235	2929	-3327.24		24072	2.145	8765	8461			2.89	Si
SLU 78	0.7	-28458	3153	-3534.94		29483	2.145	9487	9157			2.9	Si
SLU 78	1.1	-26310	3129	-3460.68		27257	2.145	9190	8871			2.83	Si
SLU 77	0.7	-28462	3130	-3539.3		29487	2.145	9487	9157			2.93	Si
SLU 77	1.1	-26317	3106	-3459		27265	2.145	9191	8871			2.86	Si
SLU 57	0.7	-25629	2875	-3331.89		26551	2.145	9096	8780			3.05	Si
SLU 57	1.1	-23598	2854	-3256.13		24447	2.145	8815	8509			2.98	Si
SLU 80	0.7	-28280	3139	-3483.31		29298	2.145	9462	9133			2.91	Si
SLU 80	1.1	-26143	3116	-3414.88		27084	2.145	9167	8848			2.84	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 3	0.7	-25136	14975	-683.72		26041	2.145	13542	13071			0.87	No, Vu<V
SLV 3	1.1	-24075	17028	-3783.68		24942	2.145	13322	12859			0.76	No, Vu<V
SLV 6	0.7	-8819	-8425	-592.17		9137	2.145	10161	9808			1.16	Si
SLV 6	1.1	-2857	-12195	1138.28		3139	2.0221	8961	8154			0.67	No, Vu<V
SLV 9	0.7	-7275	-13883	-1954.04		7537	2.145	9841	9499			0.68	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 9	1.1	-1789	-18173	1281.32		3720	1.0686	9077	4365			0.24	No, Vu<V
SLV 8	0.7	-31150	17777	-3177.4		32271	2.145	14788	14274			0.8	No, Vu<V
SLV 8	1.1	-33584	22034	-6177.23		34793	2.145	15292	14761			0.67	No, Vu<V
SLV 14	0.7	-13289	-11081	-4447.73		13767	2.145	11087	10702			0.97	No, Vu<V
SLV 14	1.1	-11298	-13167	-1112.23		11705	2.145	10674	10303			0.78	No, Vu<V
SLV 13	0.7	-13289	-11081	-4447.73		13767	2.145	11087	10702			0.97	No, Vu<V
SLV 13	1.1	-11298	-13167	-1112.23		11705	2.145	10674	10303			0.78	No, Vu<V
SLV 5	0.7	-8819	-8425	-592.17		9137	2.145	10161	9808			1.16	Si
SLV 5	1.1	-2857	-12195	1138.28		3139	2.0221	8961	8154			0.67	No, Vu<V
SLV 4	0.7	-25136	14975	-683.72		26041	2.145	13542	13071			0.87	No, Vu<V
SLV 4	1.1	-24075	17028	-3783.68		24942	2.145	13322	12859			0.76	No, Vu<V
SLV 7	0.7	-31150	17777	-3177.4		32271	2.145	14788	14274			0.8	No, Vu<V
SLV 7	1.1	-33584	22034	-6177.23		34793	2.145	15292	14761			0.67	No, Vu<V
SLV 10	0.7	-7275	-13883	-1954.04		7537	2.145	9841	9499			0.68	No, Vu<V
SLV 10	1.1	-1789	-18173	1281.32		3720	1.0686	9077	4365			0.24	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.08 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 10	143750	0.25	13016	-12563	133.23	2525.64	18.96	Si
SLV 9	143750	0.25	13016	-12563	133.23	2525.64	18.96	Si
SLV 5	143750	0.25	13580	-13108	133.23	2621.59	19.68	Si
SLV 6	143750	0.25	13580	-13108	133.23	2621.59	19.68	Si
SLV 13	143750	0.25	18484	-17841	133.23	3407.03	25.57	Si
SLV 14	143750	0.25	18484	-17841	133.23	3407.03	25.57	Si
SLV 1	143750	0.25	20366	-19658	133.23	3685.87	27.67	Si
SLV 2	143750	0.25	20366	-19658	133.23	3685.87	27.67	Si
SLV 15	143750	0.25	23735	-22910	133.23	4153.47	31.18	Si
SLV 16	143750	0.25	23735	-22910	133.23	4153.47	31.18	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.045 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 6	-14112	-14956	696	0.053	1804.9	0.943	0.82033	3.16379	No
SLV 5	-14112	-14956	696	0.053	1804.9	0.943	0.82033	3.16379	No
SLV 9	-12754	-16461	658	0.053	1667.4	0.939	0.82051	3.16379	No
SLV 10	-12754	-16461	658	0.053	1667.4	0.939	0.82051	3.16379	No
SLV 1	-17480	-18540	675	0.059	2146.7	0.951	0.90912	3.31979	No
SLV 2	-17480	-18540	675	0.059	2146.7	0.951	0.90912	3.31979	No
SLV 13	-12954	-23556	548	0.061	1687.6	0.939	0.93796	3.31979	No
SLV 14	-12954	-23556	548	0.061	1687.6	0.939	0.93796	3.31979	No
SLV 4	-19010	-23117	618	0.064	2302	0.954	0.97309	3.31979	No
SLV 3	-19010	-23117	618	0.064	2302	0.954	0.97309	3.31979	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.209	SLU 49	Si
V_SLU	2.835	SLU 78	Si
PF_SLV	1.475	SLV 9	Si
V_SLV	0.24	SLV 9	No
PFFP_SLV	18.957	SLV 9	Si
R_SLV	0.259	SLV 5	No

Maschio 4

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.618	2.071	-19.618	4.851	L1	L3	2.78	0.3	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 46	-1.3	-37030	547.08	44400	23416.07	42.802	Si
SLU 46	0.7	-33203	870.83	39812	23595.88	27.096	Si
SLU 49	-1.3	-37523	491.61	44992	23349.25	47.496	Si
SLU 49	0.7	-33697	836.88	40404	23606.34	28.207	Si
SLU 43	-1.3	-36451	448.94	43706	23481.7	52.305	Si
SLU 43	0.7	-32625	813.36	39118	23570.92	28.98	Si
SLU 51	-1.3	-37169	482.67	44568	23398.15	48.477	Si
SLU 51	0.7	-33343	838.34	39980	23599.85	28.151	Si
SLU 65	-1.3	-39998	606.65	47959	22863.98	37.689	Si
SLU 65	0.7	-36171	840.53	43371	23508.53	27.969	Si
SLU 2	-1.3	-28645	564.46	34347	23028.09	40.797	Si
SLU 2	0.7	-25702	746.8	30817	22209.67	29.74	Si
SLU 68	-1.3	-40491	551.18	48551	22737.22	41.252	Si
SLU 68	0.7	-36665	806.58	43963	23459.05	29.085	Si
SLU 47	-1.3	-36497	634.59	43761	23477.02	36.996	Si
SLU 47	0.7	-32670	934.21	39173	23573.39	25.234	Si
SLU 44	-1.3	-36003	690.06	43169	23523.1	34.088	Si
SLU 44	0.7	-32177	968.16	38581	23542.2	24.317	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 52	-1.3	-40098	604.76	48079	22839.07	37.766	Si
SLU 52	0.7	-36271	801.02	43491	23499.3	29.337	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 8	-1.3	-34996	21013.63	41961	31938.85	1.52	Si
SLV 8	0.7	-31916	-6275.18	38268	30468.71	4.855	Si
SLV 11	-1.3	-31794	21237.75	38122	30405.05	1.432	Si
SLV 11	0.7	-29108	-5150.66	34902	28903.32	5.612	Si
SLV 6	-1.3	-31014	-20687.49	37188	29989.58	1.45	Si
SLV 6	0.7	-27813	6166.22	33349	28108.28	4.558	Si
SLV 5	-1.3	-31014	-20687.49	37188	29989.58	1.45	Si
SLV 5	0.7	-27813	6166.22	33349	28108.28	4.558	Si
SLV 16	-1.3	-26664	6903.84	31971	27365.25	3.964	Si
SLV 16	0.7	-24397	515.78	29253	25793.1	50.008	Si
SLV 7	-1.3	-34996	21013.63	41961	31938.85	1.52	Si
SLV 7	0.7	-31916	-6275.18	38268	30468.71	4.855	Si
SLV 12	-1.3	-31794	21237.75	38122	30405.05	1.432	Si
SLV 12	0.7	-29108	-5150.66	34902	28903.32	5.612	Si
SLV 9	-1.3	-27812	-20463.36	33348	28107.97	1.374	Si
SLV 9	0.7	-25005	7290.74	29982	26228.66	3.598	Si
SLV 15	-1.3	-26664	6903.84	31971	27365.25	3.964	Si
SLV 15	0.7	-24397	515.78	29253	25793.1	50.008	Si
SLV 10	-1.3	-27812	-20463.36	33348	28107.97	1.374	Si
SLV 10	0.7	-25005	7290.74	29982	26228.66	3.598	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 69	-1.3	-41786	-176	263.52		50104	2.78	10833	9035			51.41	Si
SLU 69	0.7	-37960	-176	616.38		45516	2.78	10833	9035			51.41	Si
SLU 51	-1.3	-37169	-177	482.67		44568	2.78	10833	9035			51	Si
SLU 51	0.7	-33343	-177	838.34		39980	2.78	10833	9035			51	Si
SLU 49	-1.3	-37523	-172	491.61		44992	2.78	10833	9035			52.54	Si
SLU 49	0.7	-33697	-172	836.88		40404	2.78	10833	9035			52.54	Si
SLU 71	-1.3	-41433	-181	254.58		49679	2.78	10833	9035			49.93	Si
SLU 71	0.7	-37606	-181	617.84		45091	2.78	10833	9035			49.93	Si
SLU 8	-1.3	-30080	-155	212.4		36067	2.78	10364	8644			55.65	Si
SLU 8	0.7	-27136	-155	524.11		32538	2.78	9894	8252			53.12	Si
SLU 50	-1.3	-37438	-203	337.99		44890	2.78	10833	9035			44.49	Si
SLU 50	0.7	-33612	-203	745.46		40302	2.78	10833	9035			44.49	Si
SLU 48	-1.3	-37792	-198	346.93		45314	2.78	10833	9035			45.66	Si
SLU 48	0.7	-33965	-198	744.01		40726	2.78	10833	9035			45.66	Si
SLU 43	-1.3	-36451	-182	448.94		43706	2.78	10833	9035			49.77	Si
SLU 43	0.7	-32625	-182	813.36		39118	2.78	10771	8983			49.48	Si
SLU 45	-1.3	-37298	-187	402.4		44722	2.78	10833	9035			48.29	Si
SLU 45	0.7	-33472	-187	777.95		40134	2.78	10833	9035			48.29	Si
SLU 66	-1.3	-41293	-165	318.99		49512	2.78	10833	9035			54.76	Si
SLU 66	0.7	-37466	-165	650.32		44924	2.78	10833	9035			54.76	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 6	-1.3	-31014	-13170	-20687.49		47665	2.1689	16250	10573			0.8	No, Vu<V
SLV 6	0.7	-27813	-13423	6166.22		33349	2.78	15003	12513			0.93	No, Vu<V
SLV 14	-1.3	-25470	-4993	-5606.49		30539	2.78	14441	12044			2.41	Si
SLV 14	0.7	-23166	-5535	4248.2		27777	2.78	13889	11583			2.09	Si
SLV 12	-1.3	-31794	12938	21237.75		48927	2.166	16250	10559			0.82	No, Vu<V
SLV 12	0.7	-29108	13191	-5150.66		34902	2.78	15314	12772			0.97	No, Vu<V
SLV 5	-1.3	-31014	-13170	-20687.49		47665	2.1689	16250	10573			0.8	No, Vu<V
SLV 5	0.7	-27813	-13423	6166.22		33349	2.78	15003	12513			0.93	No, Vu<V
SLV 10	-1.3	-27812	-13699	-20463.36		47235	1.9627	16250	9568			0.7	No, Vu<V
SLV 10	0.7	-25005	-14208	7290.74		29982	2.78	14330	11951			0.84	No, Vu<V
SLV 8	-1.3	-34996	13467	21013.63		49249	2.3686	16250	11547			0.86	No, Vu<V
SLV 8	0.7	-31916	13977	-6275.18		38268	2.78	15987	13333			0.95	No, Vu<V
SLV 7	-1.3	-34996	13467	21013.63		49249	2.3686	16250	11547			0.86	No, Vu<V
SLV 7	0.7	-31916	13977	-6275.18		38268	2.78	15987	13333			0.95	No, Vu<V
SLV 11	-1.3	-31794	12938	21237.75		48927	2.166	16250	10559			0.82	No, Vu<V
SLV 11	0.7	-29108	13191	-5150.66		34902	2.78	15314	12772			0.97	No, Vu<V
SLV 9	-1.3	-27812	-13699	-20463.36		47235	1.9627	16250	9568			0.7	No, Vu<V
SLV 9	0.7	-25005	-14208	7290.74		29982	2.78	14330	11951			0.84	No, Vu<V
SLV 13	-1.3	-25470	-4993	-5606.49		30539	2.78	14441	12044			2.41	Si
SLV 13	0.7	-23166	-5535	4248.2		27777	2.78	13889	11583			2.09	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 14	143750	0.25	29264	-24407	111	2784.16	25.08	Si
SLV 13	143750	0.25	29264	-24407	111	2784.16	25.08	Si
SLV 9	143750	0.25	30645	-25558	111	2872.2	25.88	Si
SLV 10	143750	0.25	30645	-25558	111	2872.2	25.88	Si
SLV 16	143750	0.25	31241	-26055	111	2908.98	26.21	Si
SLV 15	143750	0.25	31241	-26055	111	2908.98	26.21	Si
SLV 6	143750	0.25	33805	-28194	111	3059	27.56	Si
SLV 5	143750	0.25	33805	-28194	111	3059	27.56	Si
SLV 12	143750	0.25	37234	-31053	111	3238.53	29.18	Si
SLV 11	143750	0.25	37234	-31053	111	3238.53	29.18	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.045 Wa = 0.05 Ta = 0.0403

Comb.	N top	N base	V orto	σ_0	M*	e*	a0*	aLim	Verifica
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Sismicad 12.19 - Licenza assegnata a Sidel ingegneria Srl - Via Isonzo, 13 - Villanova di Castenaso (BO)



Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 2	-24333	-36144	-25	0.059	2793.3	0.966	0.88916	3.95507	No
SLV 1	-24333	-36144	-25	0.059	2793.3	0.966	0.88916	3.95507	No
SLV 3	-25921	-37338	10	0.059	2954.9	0.968	0.89273	3.95507	No
SLV 4	-25921	-37338	10	0.059	2954.9	0.968	0.89273	3.95507	No
SLV 15	-19168	-26664	32	0.06	2267.8	0.959	0.90265	3.95507	No
SLV 16	-19168	-26664	32	0.06	2267.8	0.959	0.90265	3.95507	No
SLV 14	-17580	-25470	-2	0.061	2106.3	0.956	0.93336	3.95507	No
SLV 13	-17580	-25470	-2	0.061	2106.3	0.956	0.93336	3.95507	No
SLV 8	-25411	-34996	59	0.058	2903	0.967	0.86765	3.66678	No
SLV 7	-25411	-34996	59	0.058	2903	0.967	0.86765	3.66678	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	24.317	SLU 44	Si
V_SLU	44.494	SLU 50	Si
PF_SLV	1.374	SLV 9	Si
V_SLV	0.698	SLV 9	No
PFFP_SLV	25.082	SLV 13	Si
R_SLV	0.225	SLV 1	No

Maschio 6

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-22.543	-3.284	-24.603	-3.284	L1	L3	2.06	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	$\tau 0$	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	$\alpha 0$	Mu	c.s.	Verifica
SLU 47	0.7	-4241	-2369.77	4575	4122.57	1.74	Si
SLU 47	1.1	-2897	-3735	0	0	0	No, e>l/2
SLU 44	0.7	-4217	-2363.5	4549	4100.8	1.735	Si
SLU 44	1.1	-2869	-3684.82	0	0	0	No, e>l/2
SLU 13	0.7	-4348	-2300.55	4690	4220.46	1.835	Si
SLU 13	1.1	-3245	-3520.15	0	0	0	No, e>l/2
SLU 46	0.7	-5008	-2604.77	5402	4815.79	1.849	Si
SLU 46	1.1	-3836	-4099.45	0	0	0	No, e>l/2
SLU 65	0.7	-5198	-2760.08	5607	4985.49	1.806	Si
SLU 65	1.1	-3867	-4257.92	0	0	0	No, e>l/2
SLU 26	0.7	-4081	-2198.52	4402	3975.99	1.808	Si
SLU 26	1.1	-2967	-3413.46	0	0	0	No, e>l/2
SLU 10	0.7	-4324	-2294.28	4665	4198.76	1.83	Si
SLU 10	1.1	-3217	-3469.97	0	0	0	No, e>l/2
SLU 49	0.7	-5031	-2611.04	5428	4837.05	1.853	Si
SLU 49	1.1	-3864	-4149.63	0	0	0	No, e>l/2
SLU 55	0.7	-5489	-2868.39	5921	5242.79	1.828	Si
SLU 55	1.1	-4172	-4414.8	0	0	0	No, e>l/2
SLU 68	0.7	-5222	-2766.35	5633	5006.63	1.81	Si
SLU 68	1.1	-3895	-4308.1	0	0	0	No, e>l/2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	$\alpha 0$	Mu	c.s.	Verifica
SLV 2	0.7	-787	-801.54	849	804.99	1.004	Si
SLV 2	1.1	-783	-6480.99	0	0	0	No, e>l/2
SLV 6	0.7	1294	-1952.77	0	0	0	No, Trazione
SLV 6	1.1	2065	-4904.82	0	0	0	No, Trazione
SLV 5	0.7	1294	-1952.77	0	0	0	No, Trazione
SLV 5	1.1	2065	-4904.82	0	0	0	No, Trazione
SLV 1	0.7	-787	-801.54	849	804.99	1.004	Si
SLV 1	1.1	-783	-6480.99	0	0	0	No, e>l/2
SLV 10	0.7	-498	-3011.38	0	0	0	No, e>l/2
SLV 10	1.1	737	-3445.72	0	0	0	No, Trazione
SLV 4	0.7	-4363	-873.38	4707	4321.12	4.948	Si
SLV 4	1.1	-4552	-6372.89	0	0	0	No, e>l/2
SLV 14	0.7	-6762	-4330.24	7294	6548.9	1.512	Si
SLV 14	1.1	-5209	-1617.32	5619	5118.37	3.165	Si
SLV 3	0.7	-4363	-873.38	4707	4321.12	4.948	Si
SLV 3	1.1	-4552	-6372.89	0	0	0	No, e>l/2
SLV 9	0.7	-498	-3011.38	0	0	0	No, e>l/2
SLV 9	1.1	737	-3445.72	0	0	0	No, Trazione
SLV 13	0.7	-6762	-4330.24	7294	6548.9	1.512	Si
SLV 13	1.1	-5209	-1617.32	5619	5118.37	3.165	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	$\alpha 0$	αN	l'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 65	0.7	-5198	2430	-2760.08		7716	1.4971	6584	4436			1.83	Si
SLU 65	1.1	-3867	2574	-4257.92		0	0	5556	0			0	No, Vu<V
SLU 44	0.7	-4217	1953	-2363.5		6653	1.4085	6443	4084			2.09	Si
SLU 44	1.1	-2869	2080	-3684.82		0	0	5556	0			0	No, Vu<V
SLU 13	0.7	-4348	1833	-2300.55		6430	1.5026	6413	4336			2.37	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 13	1.1	-3245	1948	-3520.15		0	0	5556	0			0	No, Vu<V
SLU 23	0.7	-4057	1674	-2192.25		6138	1.4689	6374	4213			2.52	Si
SLU 23	1.1	-2939	1786	-3363.28		0	0	5556	0			0	No, Vu<V
SLU 49	0.7	-5031	2956	-2611.04		7293	1.5332	6528	4504			1.52	Si
SLU 49	1.1	-3864	3102	-4149.63		0	0	5556	0			0	No, Vu<V
SLU 26	0.7	-4081	1794	-2198.52		6153	1.4737	6376	4228			2.36	Si
SLU 26	1.1	-2967	1909	-3413.46		0	0	5556	0			0	No, Vu<V
SLU 51	0.7	-5004	2939	-2596.18		7251	1.5337	6522	4501			1.53	Si
SLU 51	1.1	-3841	3083	-4123.96		0	0	5556	0			0	No, Vu<V
SLU 68	0.7	-5222	2550	-2766.35		7732	1.5007	6587	4448			1.74	Si
SLU 68	1.1	-3895	2696	-4308.1		0	0	5556	0			0	No, Vu<V
SLU 46	0.7	-5008	2836	-2604.77		7276	1.5295	6526	4491			1.58	Si
SLU 46	1.1	-3836	2979	-4099.45		0	0	5556	0			0	No, Vu<V
SLU 47	0.7	-4241	2073	-2369.77		6667	1.4135	6444	4099			1.98	Si
SLU 47	1.1	-2897	2203	-3735		0	0	5556	0			0	No, Vu<V

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 2	0.7	-787	13565	-801.54		50512	0.0346	16250	253			0.02	No, Vu<V
SLV 2	1.1	-783	13765	-6480.99		0	0	8333	0			0	No, Vu<V
SLV 10	0.7	-498	-7023	-3011.38		0	0	8333	0			0	No, Vu<V
SLV 10	1.1	737	-8936	-3445.72		0	0	8333	0			0	No, Vu<V
SLV 9	0.7	-498	-7023	-3011.38		0	0	8333	0			0	No, Vu<V
SLV 9	1.1	737	-8936	-3445.72		0	0	8333	0			0	No, Vu<V
SLV 1	0.7	-787	13565	-801.54		50512	0.0346	16250	253			0.02	No, Vu<V
SLV 1	1.1	-783	13765	-6480.99		0	0	8333	0			0	No, Vu<V
SLV 6	0.7	1294	314	-1952.77		0	0	8333	0			0	No, Vu<V
SLV 6	1.1	2065	-1225	-4904.82		0	0	8333	0			0	No, Vu<V
SLV 5	0.7	1294	314	-1952.77		0	0	8333	0			0	No, Vu<V
SLV 5	1.1	2065	-1225	-4904.82		0	0	8333	0			0	No, Vu<V
SLV 4	0.7	-4363	17586	-873.38		4707	2.06	9275	8598			0.49	No, Vu<V
SLV 4	1.1	-4552	18902	-6372.89		0	0	8333	0			0	No, Vu<V
SLV 13	0.7	-6762	-10892	-4330.24		12856	1.1688	10905	5735			0.53	No, Vu<V
SLV 13	1.1	-5209	-11940	-1617.32		5619	2.06	9457	8767			0.73	No, Vu<V
SLV 14	0.7	-6762	-10892	-4330.24		12856	1.1688	10905	5735			0.53	No, Vu<V
SLV 14	1.1	-5209	-11940	-1617.32		5619	2.06	9457	8767			0.73	No, Vu<V
SLV 3	0.7	-4363	17586	-873.38		4707	2.06	9275	8598			0.49	No, Vu<V
SLV 3	1.1	-4552	18902	-6372.89		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.08 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 5	143750	0.25	4390	-4069	123.38	882.71	7.15	Si
SLV 6	143750	0.25	4390	-4069	123.38	882.71	7.15	Si
SLV 1	143750	0.25	4932	-4572	123.38	987.26	8	Si
SLV 2	143750	0.25	4932	-4572	123.38	987.26	8	Si
SLV 10	143750	0.25	4981	-4617	123.38	996.48	8.08	Si
SLV 9	143750	0.25	4981	-4617	123.38	996.48	8.08	Si
SLV 4	143750	0.25	5988	-5551	123.38	1187.82	9.63	Si
SLV 3	143750	0.25	5988	-5551	123.38	1187.82	9.63	Si
SLV 13	143750	0.25	6902	-6398	123.38	1358.21	11.01	Si
SLV 14	143750	0.25	6902	-6398	123.38	1358.21	11.01	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezziera = 0.045 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 6	2794	-16077	17	0	0	0	0	3.16379	No, Trazione
SLV 2	1030	-14543	-262	0	0	0	0	3.31979	No, Trazione
SLV 10	1142	-13998	73	0	0	0	0	3.16379	No, Trazione
SLV 5	2794	-16077	17	0	0	0	0	3.16379	No, Trazione
SLV 1	1030	-14543	-262	0	0	0	0	3.31979	No, Trazione
SLV 9	1142	-13998	73	0	0	0	0	3.16379	No, Trazione
SLV 4	-2134	-11149	-446	0.025	600.1	0.889	0.40214	3.31979	No
SLV 3	-2134	-11149	-446	0.025	600.1	0.889	0.40214	3.31979	No
SLV 8	-7754	-4764	-596	0.043	1148	0.92	0.6756	3.16379	No
SLV 7	-7754	-4764	-596	0.043	1148	0.92	0.6756	3.16379	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0	SLU 2	No
V_SLU	0	SLU 2	No
PF_SLV	0	SLV 10	No
V_SLV	0	SLV 1	No
PFFP_SLV	7.154	SLV 5	Si
R_SLV	0	SLV 10	No

Maschio 7

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.313	-3.284	-21.543	-3.284	L1	L3	3.23	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

Sismicad 12.19 - Licenza assegnata a Sidel ingegneria Srl - Via Isonzo, 13 - Villanova di Castenaso (BO)



fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 23	0.7	-25084	-10843.03	17258	31928.35	2.945	Si
SLU 23	1.1	-23949	-12534.37	16477	30854.26	2.462	Si
SLU 65	0.7	-30809	-12809.25	21196	36809.32	2.874	Si
SLU 65	1.1	-29333	-14630.42	20181	35636.63	2.436	Si
SLU 68	0.7	-31163	-12915.74	21440	37081.81	2.871	Si
SLU 68	1.1	-29687	-14800.98	20425	35923.37	2.427	Si
SLU 26	0.7	-25438	-10949.51	17501	32256.13	2.946	Si
SLU 26	1.1	-24303	-12704.93	16720	31193	2.455	Si
SLU 44	0.7	-27202	-11959.26	18715	33837.75	2.829	Si
SLU 44	1.1	-25726	-13698.49	17699	32519.82	2.374	Si
SLU 55	0.7	-31757	-12924.97	21848	37531.09	2.904	Si
SLU 55	1.1	-30281	-14791.25	20833	36396.55	2.461	Si
SLU 5	0.7	-21831	-10099.52	15019	28756	2.847	Si
SLU 5	1.1	-20696	-11773	14238	27581.16	2.343	Si
SLU 47	0.7	-27556	-12065.74	18958	34145.08	2.83	Si
SLU 47	1.1	-26080	-13869.05	17943	32841.41	2.368	Si
SLU 52	0.7	-31403	-12818.49	21605	37264.34	2.907	Si
SLU 52	1.1	-29927	-14620.69	20590	36115.55	2.47	Si
SLU 2	0.7	-21477	-9993.03	14776	28393.38	2.841	Si
SLU 2	1.1	-20342	-11602.44	13995	27207.58	2.345	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 2	0.7	-28527	-1655.15	19626	38670.48	23.364	Si
SLV 2	1.1	-25771	-8415.89	17730	35580.81	4.228	Si
SLV 13	0.7	-26726	-20985.29	18387	36666.67	1.747	Si
SLV 13	1.1	-25939	-15548.62	17846	35773.12	2.301	Si
SLV 5	0.7	-33005	-16135.54	22707	43397.42	2.69	Si
SLV 5	1.1	-29455	-18847.09	20265	39680.46	2.105	Si
SLV 9	0.7	-32465	-21934.58	22336	42846.48	1.953	Si
SLV 9	1.1	-29506	-20986.92	20300	39734.83	1.893	Si
SLV 15	0.7	-22346	-14372.57	15374	31548.55	2.195	Si
SLV 15	1.1	-22832	-8747.41	15708	32132.81	3.673	Si
SLV 1	0.7	-28527	-1655.15	19626	38670.48	23.364	Si
SLV 1	1.1	-25771	-8415.89	17730	35580.81	4.228	Si
SLV 14	0.7	-26726	-20985.29	18387	36666.67	1.747	Si
SLV 14	1.1	-25939	-15548.62	17846	35773.12	2.301	Si
SLV 10	0.7	-32465	-21934.58	22336	42846.48	1.953	Si
SLV 10	1.1	-29506	-20986.92	20300	39734.83	1.893	Si
SLV 16	0.7	-22346	-14372.57	15374	31548.55	2.195	Si
SLV 16	1.1	-22832	-8747.41	15708	32132.81	3.673	Si
SLV 6	0.7	-33005	-16135.54	22707	43397.42	2.69	Si
SLV 6	1.1	-29455	-18847.09	20265	39680.46	2.105	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 26	0.7	-25438	5129	-10949.51		17501	3.23	7889	11467			2.24	Si
SLU 26	1.1	-24303	5129	-12704.93		16720	3.23	7785	11315			2.21	Si
SLU 76	0.7	-35364	5833	-13774.96		24330	3.23	8800	12790			2.19	Si
SLU 76	1.1	-33888	5833	-15723.18		23315	3.23	8664	12593			2.16	Si
SLU 73	0.7	-35010	5673	-13668.48		24087	3.23	8767	12743			2.25	Si
SLU 73	1.1	-33534	5673	-15552.62		23072	3.23	8632	12546			2.21	Si
SLU 52	0.7	-31403	5468	-12818.49		21605	3.23	8436	12262			2.24	Si
SLU 52	1.1	-29927	5468	-14620.69		20590	3.23	8301	12065			2.21	Si
SLU 65	0.7	-30809	5515	-12809.25		21196	3.23	8382	12183			2.21	Si
SLU 65	1.1	-29333	5515	-14630.42		20181	3.23	8246	11986			2.17	Si
SLU 55	0.7	-31757	5628	-12924.97		21848	3.23	8469	12309			2.19	Si
SLU 55	1.1	-30281	5628	-14791.25		20833	3.23	8333	12112			2.15	Si
SLU 68	0.7	-31163	5676	-12915.74		21440	3.23	8414	12230			2.15	Si
SLU 68	1.1	-29687	5676	-14800.98		20425	3.23	8279	12033			2.12	Si
SLU 44	0.7	-27202	5311	-11959.26		18715	3.23	8051	11702			2.2	Si
SLU 44	1.1	-25726	5311	-13698.49		17699	3.23	7915	11505			2.17	Si
SLU 5	0.7	-21831	4924	-10099.52		15019	3.23	7558	10986			2.23	Si
SLU 5	1.1	-20696	4924	-11773		14654	3.1384	7509	10605			2.15	Si
SLU 47	0.7	-27556	5471	-12065.74		18958	3.23	8083	11749			2.15	Si
SLU 47	1.1	-26080	5471	-13869.05		17943	3.23	7948	11552			2.11	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 11	0.7	-17868	-17059	107.82		12293	3.23	10792	15686			0.92	No, Vu<V
SLV 11	1.1	-19148	-21378	1683.8		13173	3.23	10968	15942			0.75	No, Vu<V
SLV 2	0.7	-28527	25763	-1655.15		19626	3.23	12259	17818			0.69	No, Vu<V
SLV 2	1.1	-25771	27614	-8415.89		17730	3.23	11879	17267			0.63	No, Vu<V
SLV 16	0.7	-22346	-21444	-14372.57		17033	2.9155	11740	15402			0.72	No, Vu<V
SLV 16	1.1	-22832	-23295	-8747.41		15708	3.23	11475	16679			0.72	No, Vu<V
SLV 3	0.7	-24148	17760	4957.57		16613	3.23	11656	16942			0.95	No, Vu<V
SLV 3	1.1	-22664	17130	-1614.67		15592	3.23	11452	16645			0.97	No, Vu<V
SLV 6	0.7	-33005	21378	-16135.54		22707	3.23	12875	18714			0.88	No, Vu<V
SLV 6	1.1	-29455	25698	-18847.09		22375	2.9254	12808	16861			0.66	No, Vu<V
SLV 15	0.7	-22346	-21444	-14372.57		17033	2.9155	11740	15402			0.72	No, Vu<V
SLV 15	1.1	-22832	-23295	-8747.41		15708	3.23	11475	16679			0.72	No, Vu<V
SLV 4	0.7	-24148	17760	4957.57		16613	3.23	11656	16942			0.95	No, Vu<V
SLV 4	1.1	-22664	17130	-1614.67		15592	3.23	11452	16645			0.97	No, Vu<V
SLV 5	0.7	-33005	21378	-16135.54		22707	3.23	12875	18714			0.88	No, Vu<V
SLV 5	1.1	-29455	25698	-18847.09		22375	2.9254	12808	16861			0.66	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 12	0.7	-17868	-17059	107.82		12293	3.23	10792	15686			0.92	No, Vu<V
SLV 12	1.1	-19148	-21378	1683.8		13173	3.23	10968	15942			0.75	No, Vu<V
SLV 1	0.7	-28527	25763	-1655.15		19626	3.23	12259	17818			0.69	No, Vu<V
SLV 1	1.1	-25771	27614	-8415.89		17730	3.23	11879	17267			0.63	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.08 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 11	143750	0.25	8557	-12438	193.45	2602.6	13.45	Si
SLV 12	143750	0.25	8557	-12438	193.45	2602.6	13.45	Si
SLV 8	143750	0.25	8810	-12806	193.45	2673.53	13.82	Si
SLV 7	143750	0.25	8810	-12806	193.45	2673.53	13.82	Si
SLV 16	143750	0.25	13232	-19232	193.45	3858.67	19.95	Si
SLV 15	143750	0.25	13232	-19232	193.45	3858.67	19.95	Si
SLV 3	143750	0.25	14074	-20457	193.45	4072.67	21.05	Si
SLV 4	143750	0.25	14074	-20457	193.45	4072.67	21.05	Si
SLV 14	143750	0.25	17491	-25423	193.45	4901.38	25.34	Si
SLV 13	143750	0.25	17491	-25423	193.45	4901.38	25.34	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.045 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 13	-20703	-27013	-1030	0.053	2662.5	0.942	0.82225	3.31979	No
SLV 14	-20703	-27013	-1030	0.053	2662.5	0.942	0.82225	3.31979	No
SLV 16	-20334	-20306	-980	0.055	2625.1	0.941	0.84781	3.31979	No
SLV 15	-20334	-20306	-980	0.055	2625.1	0.941	0.84781	3.31979	No
SLV 9	-21268	-35265	-962	0.057	2719.8	0.943	0.87435	3.16379	No
SLV 10	-21268	-35265	-962	0.057	2719.8	0.943	0.87435	3.16379	No
SLV 6	-21384	-35631	-854	0.061	2731.5	0.943	0.94296	3.16379	No
SLV 5	-21384	-35631	-854	0.061	2731.5	0.943	0.94296	3.16379	No
SLV 12	-20039	-12909	-796	0.062	2595.2	0.94	0.96352	3.16379	No
SLV 11	-20039	-12909	-796	0.062	2595.2	0.94	0.96352	3.16379	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.343	SLU 5	Si
V_SLU	2.112	SLU 47	Si
PF_SLV	1.747	SLV 13	Si
V_SLV	0.625	SLV 1	No
PFFP_SLV	13.453	SLV 11	Si
R_SLV	0.248	SLV 13	No

Maschio 8

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.523	-3.284	-17.313	-3.284	L1	L3	0.79	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 82	0.7	-18832	-726.26	52975	2601.15	3.582	Si
SLU 82	1.1	-13494	2322.08	37958	2846.41	1.226	Si
SLU 83	0.7	-18586	-727.28	52282	2629.58	3.616	Si
SLU 83	1.1	-13192	2266.5	37109	2837.05	1.252	Si
SLU 73	0.7	-18171	-669.05	51115	2673.71	3.996	Si
SLU 73	1.1	-13150	2273.14	36991	2835.55	1.247	Si
SLU 81	0.7	-18431	-727.34	51844	2646.69	3.639	Si
SLU 81	1.1	-13071	2244.99	36767	2832.58	1.262	Si
SLU 84	0.7	-18988	-726.19	53412	2582.35	3.556	Si
SLU 84	1.1	-13616	2343.58	38300	2849.48	1.216	Si
SLU 78	0.7	-18279	-667.38	51418	2662.71	3.99	Si
SLU 78	1.1	-13170	2275.76	37045	2836.25	1.246	Si
SLU 75	0.7	-18123	-667.45	50980	2678.51	4.013	Si
SLU 75	1.1	-13048	2254.26	36703	2831.7	1.256	Si
SLU 76	0.7	-18327	-668.99	51552	2657.71	3.973	Si
SLU 76	1.1	-13272	2294.64	37333	2839.76	1.238	Si
SLU 77	0.7	-17877	-668.47	50287	2702.17	4.042	Si
SLU 77	1.1	-12746	2198.68	35853	2818.66	1.282	Si
SLU 80	0.7	-18214	-669.65	51236	2669.34	3.986	Si
SLU 80	1.1	-13111	2264.75	36880	2834.1	1.251	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 12	0.7	-8493	218.14	23891	2698.91	12.372	Si
SLV 12	1.1	-5891	1363.55	16572	2011.44	1.475	Si
SLV 8	0.7	-9300	-52.69	26159	2886.91	54.785	Si
SLV 8	1.1	-5110	1132.04	14374	1780.95	1.573	Si
SLV 11	0.7	-8493	218.14	23891	2698.91	12.372	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 11	1.1	-5891	1363.55	16572	2011.44	1.475	Si
SLV 16	0.7	-9742	173.06	27405	2985.16	17.249	Si
SLV 16	1.1	-8968	1804.48	25226	2810.94	1.558	Si
SLV 7	0.7	-9300	-52.69	26159	2886.91	54.785	Si
SLV 7	1.1	-5110	1132.04	14374	1780.95	1.573	Si
SLV 10	0.7	-14749	-813.47	41489	3847.78	4.73	Si
SLV 10	1.1	-12076	1851.65	33970	3443.98	1.86	Si
SLV 13	0.7	-11619	-136.43	32684	3361.93	24.643	Si
SLV 13	1.1	-10823	1950.91	30445	3209.94	1.645	Si
SLV 15	0.7	-9742	173.06	27405	2985.16	17.249	Si
SLV 15	1.1	-8968	1804.48	25226	2810.94	1.558	Si
SLV 9	0.7	-14749	-813.47	41489	3847.78	4.73	Si
SLV 9	1.1	-12076	1851.65	33970	3443.98	1.86	Si
SLV 14	0.7	-11619	-136.43	32684	3361.93	24.643	Si
SLV 14	1.1	-10823	1950.91	30445	3209.94	1.645	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 55	0.7	-16553	-2109	-581.42		46564	0.79	10833	3851			1.83	Si
SLU 55	1.1	-12033	-932	2091.23		40293	0.6636	10833	3235			3.47	Si
SLU 76	0.7	-18327	-2210	-668.99		51552	0.79	10833	3851			1.74	Si
SLU 76	1.1	-13272	-947	2294.64		44263	0.6663	10833	3248			3.43	Si
SLU 65	0.7	-16003	-2186	-537.27		45016	0.79	10833	3851			1.76	Si
SLU 65	1.1	-11688	-940	2039.04		39257	0.6616	10790	3213			3.42	Si
SLU 78	0.7	-18279	-1975	-667.38		51418	0.79	10833	3851			1.95	Si
SLU 78	1.1	-13170	-827	2275.76		43904	0.6666	10833	3250			3.93	Si
SLU 68	0.7	-16159	-2192	-537.2		45454	0.79	10833	3851			1.76	Si
SLU 68	1.1	-11810	-947	2060.54		39669	0.6616	10833	3225			3.41	Si
SLU 47	0.7	-14385	-2092	-449.64		40465	0.79	10833	3851			1.84	Si
SLU 47	1.1	-10571	-932	1857.12		35703	0.6579	10316	3054			3.28	Si
SLU 75	0.7	-18123	-1969	-667.45		50980	0.79	10833	3851			1.96	Si
SLU 75	1.1	-13048	-820	2254.26		43491	0.6667	10833	3250			3.96	Si
SLU 44	0.7	-14230	-2086	-449.7		40028	0.79	10833	3851			1.85	Si
SLU 44	1.1	-10449	-925	1835.62		35290	0.658	10261	3038			3.28	Si
SLU 73	0.7	-18171	-2204	-669.05		51115	0.79	10833	3851			1.75	Si
SLU 73	1.1	-13150	-940	2273.14		43850	0.6664	10833	3249			3.46	Si
SLU 52	0.7	-16398	-2103	-581.49		46126	0.79	10833	3851			1.83	Si
SLU 52	1.1	-11911	-925	2069.72		39881	0.6637	10833	3236			3.5	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 15	0.7	-9742	-7587	173.06		27405	0.79	13814	4911			0.65	No, Vu<V
SLV 15	1.1	-8968	-1379	1804.48		34280	0.5813	15189	3974			2.88	Si
SLV 14	0.7	-11619	-10453	-136.43		32684	0.79	14870	5286			0.51	No, Vu<V
SLV 14	1.1	-10823	-2189	1950.91		37333	0.6442	15800	4581			2.09	Si
SLV 10	0.7	-14749	-8282	-813.47		41489	0.79	16250	5777			0.7	No, Vu<V
SLV 10	1.1	-12076	-2208	1851.65		37015	0.725	15736	5134			2.32	Si
SLV 8	0.7	-9300	5999	-52.69		26159	0.79	13565	4822			0.8	No, Vu<V
SLV 8	1.1	-5110	1288	1132.04		21821	0.5204	12698	2973			2.31	Si
SLV 4	0.7	-12430	8170	-729.74		34964	0.79	15326	5448			0.67	No, Vu<V
SLV 4	1.1	-6363	1269	1032.78		20256	0.6981	12385	3890			3.07	Si
SLV 7	0.7	-9300	5999	-52.69		26159	0.79	13565	4822			0.8	No, Vu<V
SLV 7	1.1	-5110	1288	1132.04		21821	0.5204	12698	2973			2.31	Si
SLV 3	0.7	-12430	8170	-729.74		34964	0.79	15326	5448			0.67	No, Vu<V
SLV 3	1.1	-6363	1269	1032.78		20256	0.6981	12385	3890			3.07	Si
SLV 9	0.7	-14749	-8282	-813.47		41489	0.79	16250	5777			0.7	No, Vu<V
SLV 9	1.1	-12076	-2208	1851.65		37015	0.725	15736	5134			2.32	Si
SLV 16	0.7	-9742	-7587	173.06		27405	0.79	13814	4911			0.65	No, Vu<V
SLV 16	1.1	-8968	-1379	1804.48		34280	0.5813	15189	3974			2.88	Si
SLV 13	0.7	-11619	-10453	-136.43		32684	0.79	14870	5286			0.51	No, Vu<V
SLV 13	1.1	-10823	-2189	1950.91		37333	0.6442	15800	4581			2.09	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.08 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 8	143750	0.25	14959	-5318	47.32	1050.03	22.19	Si
SLV 7	143750	0.25	14959	-5318	47.32	1050.03	22.19	Si
SLV 4	143750	0.25	17301	-6151	47.32	1187.92	25.11	Si
SLV 3	143750	0.25	17301	-6151	47.32	1187.92	25.11	Si
SLV 12	143750	0.25	18806	-6686	47.32	1272.73	26.9	Si
SLV 11	143750	0.25	18806	-6686	47.32	1272.73	26.9	Si
SLV 2	143750	0.25	23156	-8232	47.32	1501.18	31.73	Si
SLV 1	143750	0.25	23156	-8232	47.32	1501.18	31.73	Si
SLV 15	143750	0.25	30126	-10710	47.32	1815.56	38.37	Si
SLV 16	143750	0.25	30126	-10710	47.32	1815.56	38.37	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 0.045 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 12	-2697	-7204	-458	0	412.5	0.916	0	3.16379	No
SLV 8	-2244	-2588	-477	0	367.4	0.909	0	3.16379	No
SLV 7	-2244	-2588	-477	0	367.4	0.909	0	3.16379	No
SLV 11	-2697	-7204	-458	0	412.5	0.916	0	3.16379	No
SLV 4	-4815	-643	-394	0.027	626	0.94	0.41535	3.31979	No
SLV 3	-4815	-643	-394	0.027	626	0.94	0.41535	3.31979	No
SLV 16	-6325	-16028	-332	0.047	779.2	0.95	0.72627	3.31979	No
SLV 15	-6325	-16028	-332	0.047	779.2	0.95	0.72627	3.31979	No
SLV 2	-7472	-3590	-305	0.056	895.7	0.956	0.84745	3.31979	No
SLV 1	-7472	-3590	-305	0.056	895.7	0.956	0.84745	3.31979	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.216	SLU 84	Si
V_SLU	1.743	SLU 76	Si
PF_SLV	1.475	SLV 11	Si
V_SLV	0.506	SLV 13	No
PFFP_SLV	22.192	SLV 7	Si
R_SLV	0	SLV 7	No

Maschio 9

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-3.284	-14.223	-3.284	L1	L3	0.46	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLU 81	-1.3	-8906	-790.3	43025	966.48	1.223	Si
SLU 81	0.8	-10261	-25.28	49570	923.88	36.551	Si
SLU 78	-1.3	-8839	-780.2	42701	967.29	1.24	Si
SLU 78	0.8	-10176	-36.97	49159	928.02	25.101	Si
SLU 75	-1.3	-8733	-777.07	42187	968.32	1.246	Si
SLU 75	0.8	-10077	-34.29	48683	932.58	27.198	Si
SLU 76	-1.3	-8695	-788.52	42007	968.6	1.228	Si
SLU 76	0.8	-10106	-32.1	48822	931.28	29.012	Si
SLU 77	-1.3	-8843	-758.35	42721	967.24	1.275	Si
SLU 77	0.8	-10069	-38.98	48640	932.98	23.935	Si
SLU 84	-1.3	-9008	-815.28	43519	965.01	1.184	Si
SLU 84	0.8	-10467	-25.95	50564	913.02	35.182	Si
SLU 73	-1.3	-8589	-785.4	41492	969.22	1.234	Si
SLU 73	0.8	-10008	-29.42	48346	935.65	31.806	Si
SLU 82	-1.3	-8902	-812.15	43004	966.53	1.19	Si
SLU 82	0.8	-10368	-23.27	50088	918.36	39.469	Si
SLU 80	-1.3	-8805	-777.08	42534	967.65	1.245	Si
SLU 80	0.8	-10133	-36.12	48952	930.04	25.747	Si
SLU 83	-1.3	-9013	-793.43	43539	964.94	1.216	Si
SLU 83	0.8	-10359	-27.96	50045	918.83	32.862	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma M = 2$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLV 11	-1.3	-3541	-638.68	17106	700.41	1.097	Si
SLV 11	0.8	-5468	89.95	26415	985.75	10.958	Si
SLV 8	-1.3	-4592	-254.05	22182	864.37	3.402	Si
SLV 8	0.8	-4369	30.5	21106	831.27	27.253	Si
SLV 14	-1.3	-5022	-1171.67	0	0	0	No, $e > l/2$
SLV 14	0.8	-9311	34.61	44983	1353.2	39.093	Si
SLV 10	-1.3	-7706	-768.3	37226	1232.36	1.604	Si
SLV 10	0.8	-9408	-101.89	45450	1358.98	13.338	Si
SLV 12	-1.3	-3541	-638.68	17106	700.41	1.097	Si
SLV 12	0.8	-5468	89.95	26415	985.75	10.958	Si
SLV 16	-1.3	-3773	-1132.79	0	0	0	No, $e > l/2$
SLV 16	0.8	-8129	92.17	39272	1268.8	13.766	Si
SLV 13	-1.3	-5022	-1171.67	0	0	0	No, $e > l/2$
SLV 13	0.8	-9311	34.61	44983	1353.2	39.093	Si
SLV 9	-1.3	-7706	-768.3	37226	1232.36	1.604	Si
SLV 9	0.8	-9408	-101.89	45450	1358.98	13.338	Si
SLV 15	-1.3	-3773	-1132.79	0	0	0	No, $e > l/2$
SLV 15	0.8	-8129	92.17	39272	1268.8	13.766	Si
SLV 7	-1.3	-4592	-254.05	22182	864.37	3.402	Si
SLV 7	0.8	-4369	30.5	21106	831.27	27.253	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	V par	M	$\sigma 0$	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 78	-1.3	-8839	-1792	-780.2		46196	0.4252	10833	2073			1.16	Si
SLU 78	0.8	-10176	345	-36.97		49159	0.46	10833	2242			6.5	Si
SLU 75	-1.3	-8733	-1785	-777.07		45872	0.423	10833	2062			1.16	Si
SLU 75	0.8	-10077	340	-34.29		48683	0.46	10833	2242			6.6	Si
SLU 76	-1.3	-8695	-1808	-788.52		46233	0.418	10833	2038			1.13	Si
SLU 76	0.8	-10106	347	-32.1		48822	0.46	10833	2242			6.46	Si
SLU 84	-1.3	-9008	-1877	-815.28		47835	0.4185	10833	2040			1.09	Si
SLU 84	0.8	-10467	343	-25.95		50564	0.46	10833	2242			6.54	Si
SLU 82	-1.3	-8902	-1870	-812.15		47519	0.4163	10833	2029			1.09	Si
SLU 82	0.8	-10368	337	-23.27		50088	0.46	10833	2242			6.65	Si
SLU 80	-1.3	-8805	-1786	-777.08		46013	0.4252	10833	2073			1.16	Si
SLU 80	0.8	-10133	343	-36.12		48952	0.46	10833	2242			6.55	Si
SLU 74	-1.3	-8737	-1740	-755.23		45081	0.4307	10833	2100			1.21	Si
SLU 74	0.8	-9970	325	-36.3		48164	0.46	10833	2242			6.9	Si
SLU 73	-1.3	-8589	-1801	-785.4		45917	0.4157	10833	2026			1.13	Si
SLU 73	0.8	-10008	341	-29.42		48346	0.46	10833	2242			6.57	Si
SLU 81	-1.3	-8906	-1825	-790.3		46701	0.4238	10833	2066			1.13	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 81	0.8	-10261	323	-25.28		49570	0.46	10833	2242			6.95	Si
SLU 83	-1.3	-9013	-1832	-793.43		47026	0.4259	10833	2076			1.13	Si
SLU 83	0.8	-10359	328	-27.96		50045	0.46	10833	2242			6.83	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 12	-1.3	-3541	-1045	-638.68		52849	0.1489	16250	1089			1.04	Si
SLV 12	0.8	-5468	-454	89.95		26415	0.46	13616	2819			6.21	Si
SLV 5	-1.3	-8756	-1303	-383.67		42302	0.46	16250	3364			2.58	Si
SLV 5	0.8	-8309	924	-161.34		40141	0.46	16250	3364			3.64	Si
SLV 14	-1.3	-5022	-2422	-1171.67		0	0	8333	0			0	No, Vu<V
SLV 14	0.8	-9311	131	34.61		44983	0.46	16250	3364			25.65	Si
SLV 16	-1.3	-3773	-2145	-1132.79		0	0	8333	0			0	No, Vu<V
SLV 16	0.8	-8129	-231	92.17		39272	0.46	16188	3351			14.51	Si
SLV 9	-1.3	-7706	-1969	-768.3		43808	0.3909	16250	2858			1.45	Si
SLV 9	0.8	-9408	753	-101.89		45450	0.46	16250	3364			4.47	Si
SLV 6	-1.3	-8756	-1303	-383.67		42302	0.46	16250	3364			2.58	Si
SLV 6	0.8	-8309	924	-161.34		40141	0.46	16250	3364			3.64	Si
SLV 11	-1.3	-3541	-1045	-638.68		52849	0.1489	16250	1089			1.04	Si
SLV 11	0.8	-5468	-454	89.95		26415	0.46	13616	2819			6.21	Si
SLV 13	-1.3	-5022	-2422	-1171.67		0	0	8333	0			0	No, Vu<V
SLV 13	0.8	-9311	131	34.61		44983	0.46	16250	3364			25.65	Si
SLV 10	-1.3	-7706	-1969	-768.3		43808	0.3909	16250	2858			1.45	Si
SLV 10	0.8	-9408	753	-101.89		45450	0.46	16250	3364			4.47	Si
SLV 15	-1.3	-3773	-2145	-1132.79		0	0	8333	0			0	No, Vu<V
SLV 15	0.8	-8129	-231	92.17		39272	0.46	16188	3351			14.51	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.08 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 8	143750	0.25	31758	-6574	27.55	1094.69	39.73	Si
SLV 7	143750	0.25	31758	-6574	27.55	1094.69	39.73	Si
SLV 4	143750	0.25	34929	-7230	27.55	1161.77	42.17	Si
SLV 3	143750	0.25	34929	-7230	27.55	1161.77	42.17	Si
SLV 11	143750	0.25	36815	-7621	27.55	1198.03	43.48	Si
SLV 12	143750	0.25	36815	-7621	27.55	1198.03	43.48	Si
SLV 1	143750	0.25	42703	-8840	27.55	1293.8	46.96	Si
SLV 2	143750	0.25	42703	-8840	27.55	1293.8	46.96	Si
SLV 15	143750	0.25	51784	-10719	27.55	1389.69	50.44	Si
SLV 16	143750	0.25	51784	-10719	27.55	1389.69	50.44	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 0.045 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 8	-2359	-4592	-197	0.03	319.5	0.933	0.46039	3.16379	No
SLV 7	-2359	-4592	-197	0.03	319.5	0.933	0.46039	3.16379	No
SLV 11	-3250	-3541	-229	0.034	409.8	0.945	0.51725	3.16379	No
SLV 12	-3250	-3541	-229	0.034	409.8	0.945	0.51725	3.16379	No
SLV 15	-5800	-3773	-211	0.057	668.9	0.965	0.85542	3.31979	No
SLV 16	-5800	-3773	-211	0.057	668.9	0.965	0.85542	3.31979	No
SLV 13	-7094	-5022	-163	0.068	800.6	0.97	1.01493	3.31979	No
SLV 14	-7094	-5022	-163	0.068	800.6	0.97	1.01493	3.31979	No
SLV 4	-2829	-7275	-102	0.066	367	0.94	1.0157	3.31979	No
SLV 3	-2829	-7275	-102	0.066	367	0.94	1.0157	3.31979	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.184	SLU 84	Si
V_SLU	1.085	SLU 82	Si
PF_SLV	0	SLV 13	No
V_SLV	0	SLV 13	No
PFFP_SLV	39.734	SLV 7	Si
R_SLV	0.146	SLV 7	No

Maschio 10

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-18.448	1.046	-18.448	-3.284	L1	L3	4.33	0.3	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 39	-1.3	-50255	-9895.08	38688	57128.13	5.773	Si
SLU 39	1.39	-46121	5339.4	35505	56329.72	10.55	Si
SLU 77	-1.3	-58936	-10904.22	45370	56528.48	5.184	Si
SLU 77	1.39	-53803	6774.4	41419	57255.61	8.452	Si
SLU 35	-1.3	-49612	-9676.34	38193	57049.93	5.896	Si
SLU 35	1.39	-45677	5286.08	35163	56202.41	10.632	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 79	-1.3	-58548	-10770.17	45072	56620.94	5.257	Si
SLU 79	1.39	-53396	6779.9	41105	57267.15	8.447	Si
SLU 81	-1.3	-59578	-11122.96	45865	56361.49	5.067	Si
SLU 81	1.39	-54247	6827.72	41760	57235.31	8.383	Si
SLU 83	-1.3	-60267	-11315.71	46395	56163.82	4.963	Si
SLU 83	1.39	-54997	6829.1	42338	57182.71	8.373	Si
SLU 41	-1.3	-50944	-10087.84	39218	57193.15	5.67	Si
SLU 41	1.39	-46870	5340.78	36082	56526.42	10.584	Si
SLU 62	-1.3	-55061	-9756.5	42388	57177.08	5.86	Si
SLU 62	1.39	-49771	6731.2	38315	57070.74	8.479	Si
SLU 74	-1.3	-58247	-10711.46	44840	56688.65	5.292	Si
SLU 74	1.39	-53053	6773.03	40842	57271.59	8.456	Si
SLU 84	-1.3	-60557	-9462.03	46618	56074.62	5.926	Si
SLU 84	1.39	-55828	8029.21	42977	57097.51	7.111	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 9	-1.3	-45434	13983.46	34976	70207.32	5.021	Si
SLV 9	1.39	-44128	14425.58	33971	68975.53	4.781	Si
SLV 11	-1.3	-33884	-21409.26	26085	57698.25	2.695	Si
SLV 11	1.39	-29323	360.56	22574	51756.38	143.543	Si
SLV 13	-1.3	-40320	8828.55	31039	65117.61	7.376	Si
SLV 13	1.39	-40360	14772.53	31070	65160.3	4.411	Si
SLV 12	-1.3	-33884	-21409.26	26085	57698.25	2.695	Si
SLV 12	1.39	-29323	360.56	22574	51756.38	143.543	Si
SLV 4	-1.3	-39916	-22453.67	30728	64685.51	2.881	Si
SLV 4	1.39	-31880	-4503.28	24542	55156.53	12.248	Si
SLV 3	-1.3	-39916	-22453.67	30728	64685.51	2.881	Si
SLV 3	1.39	-31880	-4503.28	24542	55156.53	12.248	Si
SLV 7	-1.3	-34802	-27608.58	26792	58826.09	2.131	Si
SLV 7	1.39	-28112	-4156.33	21641	50082.3	12.05	Si
SLV 10	-1.3	-45434	13983.46	34976	70207.32	5.021	Si
SLV 10	1.39	-44128	14425.58	33971	68975.53	4.781	Si
SLV 8	-1.3	-34802	-27608.58	26792	58826.09	2.131	Si
SLV 8	1.39	-28112	-4156.33	21641	50082.3	12.05	Si
SLV 14	-1.3	-40320	8828.55	31039	65117.61	7.376	Si
SLV 14	1.39	-40360	14772.53	31070	65160.3	4.411	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 2	-1.3	-37510	2986	-2785.4		28876	4.33	9406	12218			4.09	Si
SLU 2	1.39	-34445	3831	7073.13		26516	4.33	9091	11809			3.08	Si
SLU 34	-1.3	-49021	3014	-6260.07		37737	4.33	10587	13753			4.56	Si
SLU 34	1.39	-45905	4071	7290.39		35339	4.33	10267	13337			3.28	Si
SLU 44	-1.3	-46833	2982	-4013.28		36053	4.33	10363	13461			4.51	Si
SLU 44	1.39	-42571	4028	8561.45		32772	4.33	9925	12893			3.2	Si
SLU 47	-1.3	-47522	2999	-4206.04		36583	4.33	10433	13553			4.52	Si
SLU 47	1.39	-43321	4060	8562.82		33349	4.33	10002	12993			3.2	Si
SLU 31	-1.3	-48332	2997	-6067.32		37207	4.33	10517	13661			4.56	Si
SLU 31	1.39	-45155	4039	7289.02		34762	4.33	10190	13237			3.28	Si
SLU 5	-1.3	-38199	3003	-2978.16		29406	4.33	9476	12310			4.1	Si
SLU 5	1.39	-35194	3863	7074.5		27094	4.33	9168	11909			3.08	Si
SLU 26	-1.3	-43404	3015	-4537.37		33413	4.33	10011	13004			4.31	Si
SLU 26	1.39	-40420	3971	7172.4		31117	4.33	9704	12606			3.17	Si
SLU 13	-1.3	-43815	3003	-4700.86		33730	4.33	10053	13059			4.35	Si
SLU 13	1.39	-40679	3962	7192.5		31316	4.33	9731	12641			3.19	Si
SLU 23	-1.3	-42716	2998	-4344.61		32883	4.33	9940	12912			4.31	Si
SLU 23	1.39	-39671	3940	7171.02		30539	4.33	9627	12506			3.17	Si
SLU 10	-1.3	-43127	2986	-4508.11		33200	4.33	9982	12967			4.34	Si
SLU 10	1.39	-39929	3931	7191.12		30739	4.33	9654	12541			3.19	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 5	-1.3	-46352	17404	7784.14		35683	4.33	15470	20095			1.15	Si
SLV 5	1.39	-42916	18650	9908.69		33038	4.33	14941	19408			1.04	Si
SLV 12	-1.3	-33884	-17401	-21409.26		26085	4.33	13550	17602			1.01	Si
SLV 12	1.39	-29323	-16964	360.56		22574	4.33	12848	16690			0.98	No, Vu<V
SLV 9	-1.3	-45434	19025	13983.46		34976	4.33	15328	19912			1.05	Si
SLV 9	1.39	-44128	19094	14425.58		33971	4.33	15127	19651			1.03	Si
SLV 8	-1.3	-34802	-19023	-27608.58		28191	4.1151	13971	17248			0.91	No, Vu<V
SLV 8	1.39	-28112	-17408	-4156.33		21641	4.33	12662	16447			0.94	No, Vu<V
SLV 4	-1.3	-39916	-8165	-22453.67		30728	4.33	14479	18808			2.3	Si
SLV 4	1.39	-31880	-5306	-4503.28		24542	4.33	13242	17201			3.24	Si
SLV 11	-1.3	-33884	-17401	-21409.26		26085	4.33	13550	17602			1.01	Si
SLV 11	1.39	-29323	-16964	360.56		22574	4.33	12848	16690			0.98	No, Vu<V
SLV 3	-1.3	-39916	-8165	-22453.67		30728	4.33	14479	18808			2.3	Si
SLV 3	1.39	-31880	-5306	-4503.28		24542	4.33	13242	17201			3.24	Si
SLV 10	-1.3	-45434	19025	13983.46		34976	4.33	15328	19912			1.05	Si
SLV 10	1.39	-44128	19094	14425.58		33971	4.33	15127	19651			1.03	Si
SLV 6	-1.3	-46352	17404	7784.14		35683	4.33	15470	20095			1.15	Si
SLV 6	1.39	-42916	18650	9908.69		33038	4.33	14941	19408			1.04	Si
SLV 7	-1.3	-34802	-19023	-27608.58		28191	4.1151	13971	17248			0.91	No, Vu<V
SLV 7	1.39	-28112	-17408	-4156.33		21641	4.33	12662	16447			0.94	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 7	143750	0.25	24529	-31864	172.89	3820.06	22.1	Si
SLV 8	143750	0.25	24529	-31864	172.89	3820.06	22.1	Si



Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 11	143750	0.25	24888	-32330	172.89	3861.69	22.34	Si
SLV 12	143750	0.25	24888	-32330	172.89	3861.69	22.34	Si
SLV 3	143750	0.25	27982	-36349	172.89	4203.72	24.31	Si
SLV 4	143750	0.25	27982	-36349	172.89	4203.72	24.31	Si
SLV 15	143750	0.25	29178	-37903	172.89	4327.73	25.03	Si
SLV 16	143750	0.25	29178	-37903	172.89	4327.73	25.03	Si
SLV 2	143750	0.25	31301	-40660	172.89	4536.6	26.24	Si
SLV 1	143750	0.25	31301	-40660	172.89	4536.6	26.24	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 0.045 $W_a = 0.05$ $T_a = 0.0403$

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 13	-40360	-40320	53	0.059	4601	0.968	0.87992	3.95507	No
SLV 14	-40360	-40320	53	0.059	4601	0.968	0.87992	3.95507	No
SLV 15	-35919	-36855	42	0.059	4149	0.964	0.89181	3.95507	No
SLV 16	-35919	-36855	42	0.059	4149	0.964	0.89181	3.95507	No
SLV 2	-36321	-43381	-17	0.06	4190	0.965	0.90068	3.95507	No
SLV 1	-36321	-43381	-17	0.06	4190	0.965	0.90068	3.95507	No
SLV 3	-31880	-39916	-27	0.06	3738.1	0.961	0.90745	3.95507	No
SLV 4	-31880	-39916	-27	0.06	3738.1	0.961	0.90745	3.95507	No
SLV 9	-44128	-45434	41	0.059	4984.6	0.97	0.87823	3.66678	No
SLV 10	-44128	-45434	41	0.059	4984.6	0.97	0.87823	3.66678	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.963	SLV 83	Si
V_SLV	3.083	SLV 2	Si
PF_SLV	2.131	SLV 7	Si
V_SLV	0.907	SLV 7	No
PFFP_SLV	22.095	SLV 7	Si
R_SLV	0.222	SLV 13	No

Maschio 11

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota s.	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-17.053	-4.784	-17.053	-3.284	L1	L3	1.5	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	t0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 65	-1.3	-19606	546.12	29046	9461.3	17.325	Si
SLV 65	1.39	-8701	-1633.45	12891	5493.16	3.363	Si
SLV 52	-1.3	-19855	572.19	29414	9513.91	16.627	Si
SLV 52	1.39	-8795	-1644.71	13030	5541.37	3.369	Si
SLV 68	-1.3	-19765	543.31	29282	9495.17	17.477	Si
SLV 68	1.39	-8797	-1646.33	13033	5542.36	3.366	Si
SLV 46	-1.3	-18256	299.68	27046	9145.98	30.519	Si
SLV 46	1.39	-7878	-1515.82	11671	5062.07	3.34	Si
SLV 49	-1.3	-18415	296.87	27282	9185.72	30.942	Si
SLV 49	1.39	-7974	-1528.69	11814	5113.43	3.345	Si
SLV 2	-1.3	-14491	416.7	21468	8003.85	19.208	Si
SLV 2	1.39	-6564	-1290.83	9724	4335.12	3.358	Si
SLV 47	-1.3	-18386	405.04	27238	9178.36	22.66	Si
SLV 47	1.39	-8176	-1611.46	12112	5220.11	3.239	Si
SLV 51	-1.3	-18360	286.97	27200	9172.01	31.962	Si
SLV 51	1.39	-7952	-1534.28	11781	5101.45	3.325	Si
SLV 5	-1.3	-14650	413.89	21703	8059.93	19.474	Si
SLV 5	1.39	-6660	-1303.71	9867	4389.93	3.367	Si
SLV 44	-1.3	-18226	407.85	27002	9138.5	22.407	Si
SLV 44	1.39	-8080	-1598.58	11970	5169.28	3.234	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 4	-1.3	-14083	-2601.8	20864	8758.68	3.366	Si
SLV 4	1.39	-13548	-5135.8	20071	8492.03	1.653	Si
SLV 3	-1.3	-14083	-2601.8	20864	8758.68	3.366	Si
SLV 3	1.39	-13548	-5135.8	20071	8492.03	1.653	Si
SLV 13	-1.3	-15694	3031.78	23251	9530.9	3.144	Si
SLV 13	1.39	1257	2958.13	0	0	0	No, Trazione
SLV 6	-1.3	-23432	-1003.3	34714	12581.07	12.54	Si
SLV 6	1.39	881	2505.8	0	0	0	No, Trazione
SLV 10	-1.3	-22464	748.41	33281	12259.3	16.38	Si
SLV 10	1.39	3796	4139.88	0	0	0	No, Trazione
SLV 9	-1.3	-22464	748.41	33281	12259.3	16.38	Si
SLV 9	1.39	3796	4139.88	0	0	0	No, Trazione
SLV 8	-1.3	-7313	-318.43	10834	4998.25	15.696	Si
SLV 8	1.39	-16087	-6317.55	23833	9711.93	1.537	Si
SLV 7	-1.3	-7313	-318.43	10834	4998.25	15.696	Si
SLV 7	1.39	-16087	-6317.55	23833	9711.93	1.537	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 14	-1.3	-15694	3031.78	23251	9530.9	3.144	Si
SLV 14	1.39	1257	2958.13	0	0	0	No, Trazione
SLV 5	-1.3	-23432	-1003.3	34714	12581.07	12.54	Si
SLV 5	1.39	881	2505.8	0	0	0	No, Trazione

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 79	-1.3	-21091	-102	416.67		31246	1.5	9722	6562			64.38	Si
SLU 79	1.39	-8809	-783	-1480.2		13051	1.5	7296	4925			6.29	Si
SLU 58	-1.3	-19711	-82	278.4		29202	1.5	9449	6378			77.58	Si
SLU 58	1.39	-8188	-715	-1445.33		12130	1.5	7173	4842			6.77	Si
SLU 83	-1.3	-21630	-110	489.91		32044	1.5	9828	6634			60.28	Si
SLU 83	1.39	-9020	-801	-1487.09		13362	1.5	7337	4953			6.18	Si
SLU 56	-1.3	-19766	-84	288.31		29284	1.5	9460	6386			76.24	Si
SLU 56	1.39	-8210	-721	-1439.74		12163	1.5	7177	4845			6.72	Si
SLU 62	-1.3	-20250	-90	351.64		30000	1.5	9556	6450			71.4	Si
SLU 62	1.39	-8398	-734	-1452.22		12442	1.5	7214	4870			6.64	Si
SLU 69	-1.3	-19518	-81	262.24		28916	1.5	9411	6352			78.91	Si
SLU 69	1.39	-8116	-716	-1428.48		12023	1.5	7159	4832			6.75	Si
SLU 77	-1.3	-21146	-103	426.58		31328	1.5	9733	6569			63.49	Si
SLU 77	1.39	-8832	-788	-1474.61		13084	1.5	7300	4928			6.25	Si
SLU 74	-1.3	-20987	-102	429.39		31092	1.5	9701	6548			64.36	Si
SLU 74	1.39	-8735	-776	-1461.74		12941	1.5	7281	4915			6.33	Si
SLU 81	-1.3	-21471	-108	492.72		31808	1.5	9797	6613			61.04	Si
SLU 81	1.39	-8923	-789	-1474.22		13220	1.5	7318	4940			6.26	Si
SLU 60	-1.3	-20091	-89	354.45		29764	1.5	9524	6429			72.54	Si
SLU 60	1.39	-8302	-721	-1439.35		12299	1.5	7195	4857			6.73	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 7	-1.3	-7313	2622	-318.43		10834	1.5	10500	7088			2.7	Si
SLV 7	1.39	-16087	3840	-6317.55		33352	1.0719	15004	7237			1.88	Si
SLV 6	-1.3	-23432	-2971	-1003.3		34714	1.5	15276	10311			3.47	Si
SLV 6	1.39	881	-4950	2505.8		0	0	8333	0			0	No, Vu<V
SLV 12	-1.3	-6345	2850	1433.28		9401	1.5	10213	6894			2.42	Si
SLV 12	1.39	-13173	3884	-4683.48		24737	1.1834	13281	7072			1.82	Si
SLV 11	-1.3	-6345	2850	1433.28		9401	1.5	10213	6894			2.42	Si
SLV 11	1.39	-13173	3884	-4683.48		24737	1.1834	13281	7072			1.82	Si
SLV 13	-1.3	-15694	-519	3031.78		23251	1.5	12983	8764			16.88	Si
SLV 13	1.39	1257	-1779	2958.13		0	0	8333	0			0	No, Vu<V
SLV 10	-1.3	-22464	-2743	748.41		33281	1.5	14989	10118			3.69	Si
SLV 10	1.39	3796	-4907	4139.88		0	0	8333	0			0	No, Vu<V
SLV 5	-1.3	-23432	-2971	-1003.3		34714	1.5	15276	10311			3.47	Si
SLV 5	1.39	881	-4950	2505.8		0	0	8333	0			0	No, Vu<V
SLV 9	-1.3	-22464	-2743	748.41		33281	1.5	14989	10118			3.69	Si
SLV 9	1.39	3796	-4907	4139.88		0	0	8333	0			0	No, Vu<V
SLV 14	-1.3	-15694	-519	3031.78		23251	1.5	12983	8764			16.88	Si
SLV 14	1.39	1257	-1779	2958.13		0	0	8333	0			0	No, Vu<V
SLV 8	-1.3	-7313	2622	-318.43		10834	1.5	10500	7088			2.7	Si
SLV 8	1.39	-16087	3840	-6317.55		33352	1.0719	15004	7237			1.88	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.08 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 12	143750	0.25	7290	-4921	89.84	1041.13	11.59	Si
SLV 11	143750	0.25	7290	-4921	89.84	1041.13	11.59	Si
SLV 7	143750	0.25	8752	-5908	89.84	1234.03	13.74	Si
SLV 8	143750	0.25	8752	-5908	89.84	1234.03	13.74	Si
SLV 15	143750	0.25	13340	-9004	89.84	1804.76	20.09	Si
SLV 16	143750	0.25	13340	-9004	89.84	1804.76	20.09	Si
SLV 3	143750	0.25	18213	-12294	89.84	2353.79	26.2	Si
SLV 4	143750	0.25	18213	-12294	89.84	2353.79	26.2	Si
SLV 13	143750	0.25	19987	-13491	89.84	2538.96	28.26	Si
SLV 14	143750	0.25	19987	-13491	89.84	2538.96	28.26	Si

Verifica dei meccanismi locali di colla con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzzeria = 0.045 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 5	881	-23432	-212	0	0	0	0	3.16379	No, Trazione
SLV 14	1257	-15694	-123	0	0	0	0	3.31979	No, Trazione
SLV 6	881	-23432	-212	0	0	0	0	3.16379	No, Trazione
SLV 13	1257	-15694	-123	0	0	0	0	3.31979	No, Trazione
SLV 10	3796	-22464	-220	0	0	0	0	3.16379	No, Trazione
SLV 9	3796	-22464	-220	0	0	0	0	3.16379	No, Trazione
SLV 2	-8458	-18919	-97	0.088	1119.4	0.936	1.3597	3.31979	No
SLV 1	-8458	-18919	-97	0.088	1119.4	0.936	1.3597	3.31979	No
SLV 7	-16087	-7313	92	0.086	1893.8	0.96	1.30491	3.16379	No
SLV 8	-16087	-7313	92	0.086	1893.8	0.96	1.30491	3.16379	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.234	SLU 44	Si
V_SLU	6.18	SLU 83	Si
PF_SLV	0	SLV 14	No
V_SLV	0	SLV 5	No
PFFP_SLV	11.589	SLV 11	Si
R_SLV	0	SLV 14	No



Maschio 12

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-4.784	-17.053	-4.784	L1	L3	3.29	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ ₀	f _{v0}	μ	φ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLU 82	-1.3	-45270	-4778.47	30577	46515.08	9.734	Si
SLU 82	1.39	-34393	-10082.42	23231	40441.58	4.011	Si
SLU 78	-1.3	-44927	-4665.46	30346	46373.18	9.94	Si
SLU 78	1.39	-34035	-10063.7	22989	40186.71	3.993	Si
SLU 84	-1.3	-45648	-4820.14	30833	46668.29	9.682	Si
SLU 84	1.39	-34748	-10213.24	23471	40691.08	3.984	Si
SLU 65	-1.3	-41314	-4200.58	27905	44679.68	10.637	Si
SLU 65	1.39	-30493	-9419.98	20597	37478.23	3.979	Si
SLU 52	-1.3	-41832	-4351.56	28256	44944.6	10.328	Si
SLU 52	1.39	-30956	-9563.75	20909	37851.22	3.958	Si
SLU 55	-1.3	-42211	-4393.23	28511	45133.29	10.273	Si
SLU 55	1.39	-31311	-9694.57	21149	38134.05	3.934	Si
SLU 76	-1.3	-44461	-4785.53	30031	46174.53	9.649	Si
SLU 76	1.39	-33532	-10303.97	22649	39822.94	3.865	Si
SLU 68	-1.3	-41692	-4242.25	28161	44873.73	10.578	Si
SLU 68	1.39	-30849	-9550.8	20837	37765.54	3.954	Si
SLU 73	-1.3	-44082	-4743.86	29775	46009.06	9.699	Si
SLU 73	1.39	-33176	-10173.15	22409	39561.65	3.889	Si
SLU 80	-1.3	-44840	-4628.97	30287	46336.39	10.01	Si
SLU 80	1.39	-33954	-10021.28	22934	40128.75	4.004	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLV 14	-1.3	-27210	-13343.71	18379	38027.59	2.85	Si
SLV 14	1.39	-17112	5733.72	11558	25486.29	4.445	Si
SLV 3	-1.3	-36946	7505.67	24955	48363.25	6.444	Si
SLV 3	1.39	-30614	-18798.07	20678	41837.73	2.226	Si
SLV 4	-1.3	-36946	7505.67	24955	48363.25	6.444	Si
SLV 4	1.39	-30614	-18798.07	20678	41837.73	2.226	Si
SLV 15	-1.3	-13437	-10738.26	9076	20461.42	1.905	Si
SLV 15	1.39	-2267	5741.55	0	0	0	No, e>l/2
SLV 12	-1.3	-5596	-1313.19	3780	8920.63	6.793	Si
SLV 12	1.39	5130	-2838.18	0	0	0	No, Trazione
SLV 16	-1.3	-13437	-10738.26	9076	20461.42	1.905	Si
SLV 16	1.39	-2267	5741.55	0	0	0	No, e>l/2
SLV 8	-1.3	-12649	4159.99	8544	19352.3	4.652	Si
SLV 8	1.39	-3374	-10200.07	0	0	0	No, e>l/2
SLV 13	-1.3	-27210	-13343.71	18379	38027.59	2.85	Si
SLV 13	1.39	-17112	5733.72	11558	25486.29	4.445	Si
SLV 11	-1.3	-5596	-1313.19	3780	8920.63	6.793	Si
SLV 11	1.39	5130	-2838.18	0	0	0	No, Trazione
SLV 7	-1.3	-12649	4159.99	8544	19352.3	4.652	Si
SLV 7	1.39	-3374	-10200.07	0	0	0	No, e>l/2

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 77	-1.3	-44929	7283	-4368.12		30347	3.29	9602	14215			1.95	Si
SLU 77	1.39	-34135	3365	-9443.43		23056	3.29	8630	12776			3.8	Si
SLU 83	-1.3	-45649	7427	-4522.8		30834	3.29	9667	14312			1.93	Si
SLU 83	1.39	-34848	3419	-9592.97		23538	3.29	8694	12871			3.76	Si
SLU 81	-1.3	-45271	7347	-4481.13		30578	3.29	9633	14261			1.94	Si
SLU 81	1.39	-34493	3370	-9462.15		23298	3.29	8662	12824			3.81	Si
SLU 76	-1.3	-44461	7353	-4785.53		30031	3.29	9560	14153			1.92	Si
SLU 76	1.39	-33532	3386	-10303.97		22649	3.29	8575	12696			3.75	Si
SLU 75	-1.3	-44549	7306	-4623.79		30091	3.29	9568	14165			1.94	Si
SLU 75	1.39	-33679	3363	-9932.88		22749	3.29	8589	12716			3.78	Si
SLU 80	-1.3	-44840	7365	-4628.97		30287	3.29	9594	14204			1.93	Si
SLU 80	1.39	-33954	3403	-10021.28		22934	3.29	8613	12752			3.75	Si
SLU 78	-1.3	-44927	7387	-4665.46		30346	3.29	9602	14215			1.92	Si
SLU 78	1.39	-34035	3412	-10063.7		22989	3.29	8621	12763			3.74	Si
SLU 73	-1.3	-44082	7272	-4743.86		29775	3.29	9526	14103			1.94	Si
SLU 73	1.39	-33176	3337	-10173.15		22409	3.29	8543	12649			3.79	Si
SLU 84	-1.3	-45648	7531	-4820.14		30833	3.29	9667	14311			1.9	Si
SLU 84	1.39	-34748	3467	-10213.24		23471	3.29	8685	12858			3.71	Si
SLU 82	-1.3	-45270	7450	-4778.47		30577	3.29	9633	14261			1.91	Si
SLU 82	1.39	-34393	3417	-10082.42		23231	3.29	8653	12811			3.75	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 12	-1.3	-5596	-2851	-1313.19		3780	3.29	9089	13457			4.72	Si
SLV 12	1.39	5130	-2430	-2838.18		0	0	8333	0			0	No, Vu<V
SLV 7	-1.3	-12649	1020	4159.99		8544	3.29	10042	14867			14.58	Si
SLV 7	1.39	-3374	2168	-10200.07		0	0	8333	0			0	No, Vu<V
SLV 1	-1.3	-50719	13333	4900.21		34258	3.29	15185	22481			1.69	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 1	1.39	-45459	10733	-18805.9		30705	3.29	14474	21429			2	Si
SLV 11	-1.3	-5596	-2851	-1313.19		3780	3.29	9089	13457			4.72	Si
SLV 11	1.39	5130	-2430	-2838.18		0	0	8333	0			0	No, Vu<V
SLV 2	-1.3	-50719	13333	4900.21		34258	3.29	15185	22481			1.69	Si
SLV 2	1.39	-45459	10733	-18805.9		30705	3.29	14474	21429			2	Si
SLV 15	-1.3	-13437	-3169	-10738.26		11767	2.5375	10687	12203			3.85	Si
SLV 15	1.39	-2267	-6069	5741.55		0	0	8333	0			0	No, Vu<V
SLV 8	-1.3	-12649	1020	4159.99		8544	3.29	10042	14867			14.58	Si
SLV 8	1.39	-3374	2168	-10200.07		0	0	8333	0			0	No, Vu<V
SLV 5	-1.3	-58560	13016	-4524.85		39554	3.29	16244	24049			1.85	Si
SLV 5	1.39	-52856	7094	-10226.17		35702	3.29	15474	22909			3.23	Si
SLV 16	-1.3	-13437	-3169	-10738.26		11767	2.5375	10687	12203			3.85	Si
SLV 16	1.39	-2267	-6069	5741.55		0	0	8333	0			0	No, Vu<V
SLV 6	-1.3	-58560	13016	-4524.85		39554	3.29	16244	24049			1.85	Si
SLV 6	1.39	-52856	7094	-10226.17		35702	3.29	15474	22909			3.23	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.08 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 11	143750	0.25	2290	-3390	197.05	748.44	3.8	Si
SLV 12	143750	0.25	2290	-3390	197.05	748.44	3.8	Si
SLV 15	143750	0.25	5901	-8736	197.05	1870.74	9.49	Si
SLV 16	143750	0.25	5901	-8736	197.05	1870.74	9.49	Si
SLV 8	143750	0.25	7514	-11125	197.05	2349.19	11.92	Si
SLV 7	143750	0.25	7514	-11125	197.05	2349.19	11.92	Si
SLV 13	143750	0.25	14221	-21054	197.05	4185.82	21.24	Si
SLV 14	143750	0.25	14221	-21054	197.05	4185.82	21.24	Si
SLV 3	143750	0.25	23316	-34520	197.05	6284.86	31.9	Si
SLV 4	143750	0.25	23316	-34520	197.05	6284.86	31.9	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.045 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 12	5130	-5596	-461	0	0	0	0	3.16379	No, Trazione
SLV 11	5130	-5596	-461	0	0	0	0	3.16379	No, Trazione
SLV 8	-3374	-12649	-595	0.041	955.4	0.889	0.67471	3.16379	No
SLV 7	-3374	-12649	-595	0.041	955.4	0.889	0.67471	3.16379	No
SLV 10	-44352	-51507	617	0.077	5076.3	0.967	1.15815	3.16379	No
SLV 9	-44352	-51507	617	0.077	5076.3	0.967	1.15815	3.16379	No
SLV 13	-17112	-27210	396	0.079	2309.7	0.933	1.23056	3.31979	No
SLV 14	-17112	-27210	396	0.079	2309.7	0.933	1.23056	3.31979	No
SLV 4	-30614	-36946	-373	0.081	3678.9	0.955	1.23999	3.31979	No
SLV 3	-30614	-36946	-373	0.081	3678.9	0.955	1.23999	3.31979	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.865	SLU 76	Si
V_SLU	1.9	SLU 84	Si
PF_SLV	0	SLV 12	No
V_SLV	0	SLV 7	No
PFFP_SLV	3.798	SLV 11	Si
R_SLV	0	SLV 12	No

Maschio 13

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.058	2.271	-15.058	6.576	L1	L3	4.305	0.3	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 75	-1.3	-65762	-3234.79	50919	53068.89	16.406	Si
SLU 75	1.39	-62091	17719.5	48076	54770.35	3.091	Si
SLU 80	-1.3	-65981	-3237.5	51088	52950.32	16.355	Si
SLU 80	1.39	-62345	17814.74	48273	54670.19	3.069	Si
SLU 74	-1.3	-65806	-3264.62	50953	53045.31	16.249	Si
SLU 74	1.39	-62136	17649.61	48111	54752.71	3.102	Si
SLU 84	-1.3	-67902	-3413.02	52576	51822.72	15.184	Si
SLU 84	1.39	-64230	18182.21	49733	53846.09	2.961	Si
SLU 83	-1.3	-67946	-3442.85	52610	51795.31	15.044	Si
SLU 83	1.39	-64275	18112.32	49768	53824.49	2.972	Si
SLU 82	-1.3	-67159	-3349.58	52001	52276.75	15.607	Si
SLU 82	1.39	-63400	17964.77	49090	54226.79	3.019	Si
SLU 77	-1.3	-66549	-3328.06	51529	52632.43	15.815	Si
SLU 77	1.39	-62966	17867.05	48754	54414.93	3.046	Si
SLU 79	-1.3	-66024	-3267.33	51122	52926.35	16.199	Si
SLU 79	1.39	-62391	17744.85	48309	54652.08	3.08	Si
SLU 78	-1.3	-66505	-3298.23	51495	52657.35	15.965	Si
SLU 78	1.39	-62920	17936.94	48719	54434.1	3.035	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 81	-1.3	-67203	-3379.41	52035	52250.67	15.461	Si
SLU 81	1.39	-63445	17894.88	49125	54206.73	3.029	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 8	-1.3	-42180	31069.82	32660	66524.79	2.141	Si
SLV 8	1.39	-50361	30684.52	38994	73807.18	2.405	Si
SLV 11	-1.3	-34069	35796.85	26380	57501.52	1.606	Si
SLV 11	1.39	-43364	32253.35	33576	67690.99	2.099	Si
SLV 12	-1.3	-34069	35796.85	26380	57501.52	1.606	Si
SLV 12	1.39	-43364	32253.35	33576	67690.99	2.099	Si
SLV 15	-1.3	-29657	16486.88	22964	51840.18	3.144	Si
SLV 15	1.39	-32009	20700.39	24785	54924.47	2.653	Si
SLV 6	-1.3	-56613	-39858.25	43835	78142.12	1.961	Si
SLV 6	1.39	-41245	-7553.38	31936	65575.69	8.682	Si
SLV 16	-1.3	-29657	16486.88	22964	51840.18	3.144	Si
SLV 16	1.39	-32009	20700.39	24785	54924.47	2.653	Si
SLV 10	-1.3	-48502	-35131.23	37555	72312.49	2.058	Si
SLV 10	1.39	-34248	-5984.55	26518	57719.35	9.645	Si
SLV 9	-1.3	-48502	-35131.23	37555	72312.49	2.058	Si
SLV 9	1.39	-34248	-5984.55	26518	57719.35	9.645	Si
SLV 7	-1.3	-42180	31069.82	32660	66524.79	2.141	Si
SLV 7	1.39	-50361	30684.52	38994	73807.18	2.405	Si
SLV 5	-1.3	-56613	-39858.25	43835	78142.12	1.961	Si
SLV 5	1.39	-41245	-7553.38	31936	65575.69	8.682	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 77	-1.3	-66549	476	-3328.06		51529	4.305	10833	13991			29.36	Si
SLU 77	1.39	-62966	3178	17867.05		48754	4.305	10833	13991			4.4	Si
SLU 79	-1.3	-66024	467	-3267.33		51122	4.305	10833	13991			29.95	Si
SLU 79	1.39	-62391	3146	17744.85		48309	4.305	10833	13991			4.45	Si
SLU 82	-1.3	-67159	470	-3349.58		52001	4.305	10833	13991			29.8	Si
SLU 82	1.39	-63400	3187	17964.77		49090	4.305	10833	13991			4.39	Si
SLU 74	-1.3	-65806	474	-3264.62		50953	4.305	10833	13991			29.5	Si
SLU 74	1.39	-62136	3141	17649.61		48111	4.305	10833	13991			4.45	Si
SLU 80	-1.3	-65981	442	-3237.5		51088	4.305	10833	13991			31.63	Si
SLU 80	1.39	-62345	3122	17814.74		48273	4.305	10833	13991			4.48	Si
SLU 84	-1.3	-67902	472	-3413.02		52576	4.305	10833	13991			29.66	Si
SLU 84	1.39	-64230	3224	18182.21		49733	4.305	10833	13991			4.34	Si
SLU 78	-1.3	-66505	452	-3298.23		51495	4.305	10833	13991			30.97	Si
SLU 78	1.39	-62920	3155	17936.94		48719	4.305	10833	13991			4.44	Si
SLU 83	-1.3	-67946	497	-3442.85		52610	4.305	10833	13991			28.18	Si
SLU 83	1.39	-64275	3248	18112.32		49768	4.305	10833	13991			4.31	Si
SLU 75	-1.3	-65762	449	-3234.79		50919	4.305	10833	13991			31.13	Si
SLU 75	1.39	-62091	3118	17719.5		48076	4.305	10833	13991			4.49	Si
SLU 81	-1.3	-67203	494	-3379.41		52035	4.305	10833	13991			28.3	Si
SLU 81	1.39	-63445	3211	17894.88		49125	4.305	10833	13991			4.36	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 4	-1.3	-56695	5441	730.13		43899	4.305	16250	20987			3.86	Si
SLV 4	1.39	-55334	8611	15470.95		42845	4.305	16250	20987			2.44	Si
SLV 10	-1.3	-48502	-17024	-35131.23		37734	4.2845	15880	20412			1.2	Si
SLV 10	1.39	-34248	-16390	-5984.55		26518	4.305	13637	17612			1.07	Si
SLV 12	-1.3	-34069	17679	35796.85		34357	3.3054	15205	15077			0.85	No, Vu<V
SLV 12	1.39	-43364	20064	32253.35		34203	4.2261	15174	19238			0.96	No, Vu<V
SLV 3	-1.3	-56695	5441	730.13		43899	4.305	16250	20987			3.86	Si
SLV 3	1.39	-55334	8611	15470.95		42845	4.305	16250	20987			2.44	Si
SLV 7	-1.3	-42180	17636	31069.82		33100	4.2477	14953	19055			1.08	Si
SLV 7	1.39	-50361	20667	30684.52		38994	4.305	16132	20835			1.01	Si
SLV 9	-1.3	-48502	-17024	-35131.23		37734	4.2845	15880	20412			1.2	Si
SLV 9	1.39	-34248	-16390	-5984.55		26518	4.305	13637	17612			1.07	Si
SLV 8	-1.3	-42180	17636	31069.82		33100	4.2477	14953	19055			1.08	Si
SLV 8	1.39	-50361	20667	30684.52		38994	4.305	16132	20835			1.01	Si
SLV 6	-1.3	-56613	-17066	-39858.25		43835	4.305	16250	20987			1.23	Si
SLV 6	1.39	-41245	-15787	-7553.38		31936	4.305	14720	19011			1.2	Si
SLV 5	-1.3	-56613	-17066	-39858.25		43835	4.305	16250	20987			1.23	Si
SLV 5	1.39	-41245	-15787	-7553.38		31936	4.305	14720	19011			1.2	Si
SLV 11	-1.3	-34069	17679	35796.85		34357	3.3054	15205	15077			0.85	No, Vu<V
SLV 11	1.39	-43364	20064	32253.35		34203	4.2261	15174	19238			0.96	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 15	143750	0.25	23532	-30391	171.89	3680.76	21.41	Si
SLV 16	143750	0.25	23532	-30391	171.89	3680.76	21.41	Si
SLV 14	143750	0.25	23892	-30857	171.89	3723.47	21.66	Si
SLV 13	143750	0.25	23892	-30857	171.89	3723.47	21.66	Si
SLV 11	143750	0.25	29749	-38421	171.89	4359.98	25.36	Si
SLV 12	143750	0.25	29749	-38421	171.89	4359.98	25.36	Si
SLV 9	143750	0.25	30950	-39972	171.89	4477.08	26.05	Si
SLV 10	143750	0.25	30950	-39972	171.89	4477.08	26.05	Si
SLV 7	143750	0.25	35438	-45769	171.89	4874.13	28.36	Si
SLV 8	143750	0.25	35438	-45769	171.89	4874.13	28.36	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.045 Wa = 0.05 Ta = 0.0403

Comb.	N top	N base	V orto	σ_0	M*	e*	a0*	aLim	Verifica
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Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 4	-55334	-56695	-21	0.058	6123	0.975	0.8699	3.95507	No
SLV 3	-55334	-56695	-21	0.058	6123	0.975	0.8699	3.95507	No
SLV 2	-52599	-61025	11	0.059	5844.5	0.974	0.87557	3.95507	No
SLV 1	-52599	-61025	11	0.059	5844.5	0.974	0.87557	3.95507	No
SLV 15	-32009	-29657	-11	0.06	3748.5	0.961	0.91345	3.95507	No
SLV 16	-32009	-29657	-11	0.06	3748.5	0.961	0.91345	3.95507	No
SLV 13	-29275	-33987	21	0.06	3470.3	0.958	0.91739	3.95507	No
SLV 14	-29275	-33987	21	0.06	3470.3	0.958	0.91739	3.95507	No
SLV 7	-50361	-42180	-56	0.058	5616.5	0.973	0.8658	3.66678	No
SLV 8	-50361	-42180	-56	0.058	5616.5	0.973	0.8658	3.66678	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.961	SLU 84	Si
V_SLU	4.308	SLU 83	Si
PF_SLV	1.606	SLV 11	Si
V_SLV	0.853	SLV 11	No
PFFP_SLV	21.413	SLV 15	Si
R_SLV	0.22	SLV 3	No

Maschio 14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-13.763	-4.784	-13.763	-3.314	L1	L3	1.47	0.3	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	M	$\alpha 0$	Mu	c.s.	Verifica
SLU 84	-1.3	-24759	780.03	56147	5653.9	7.248	Si
SLU 84	1.39	-24428	649.6	55398	5743.61	8.842	Si
SLU 75	-1.3	-23970	727.47	54358	5860.68	8.056	Si
SLU 75	1.39	-23742	614.99	53842	5915.61	9.619	Si
SLU 83	-1.3	-24528	760.47	55624	5716.97	7.518	Si
SLU 83	1.39	-24192	641.75	54861	5805.1	9.046	Si
SLU 81	-1.3	-24306	754.44	55121	5775.66	7.656	Si
SLU 81	1.39	-23918	630.3	54241	5873.34	9.318	Si
SLU 80	-1.3	-24104	727.78	54662	5827.37	8.007	Si
SLU 80	1.39	-23917	616.98	54240	5873.47	9.52	Si
SLU 77	-1.3	-23961	713.94	54339	5862.77	8.212	Si
SLU 77	1.39	-23779	618.58	53926	5906.83	9.549	Si
SLU 78	-1.3	-24192	733.5	54862	5805.05	7.914	Si
SLU 78	1.39	-24016	626.44	54462	5849.34	9.337	Si
SLU 76	-1.3	-24035	734.79	54507	5844.46	7.954	Si
SLU 76	1.39	-23802	610.77	53977	5901.44	9.662	Si
SLU 82	-1.3	-24537	774	55644	5714.69	7.383	Si
SLU 82	1.39	-24155	638.16	54777	5814.5	9.111	Si
SLU 73	-1.3	-23813	728.76	54003	5898.67	8.094	Si
SLU 73	1.39	-23528	599.33	53356	5965.31	9.953	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma M = 2$

Comb.	Quota	N	M	$\alpha 0$	Mu	c.s.	Verifica
SLV 16	-1.3	-17273	1594.84	39172	8624.93	5.408	Si
SLV 16	1.39	-15818	705.68	35871	8212.19	11.637	Si
SLV 12	-1.3	-8928	2602.66	20247	5474.21	2.103	Si
SLV 12	1.39	-6377	554.98	14461	4131.86	7.445	Si
SLV 6	-1.3	-24432	-1713.2	55406	9813.68	5.728	Si
SLV 6	1.39	-26745	206.41	60651	9898.96	47.958	Si
SLV 7	-1.3	-7003	2271.18	15882	4477.97	1.972	Si
SLV 7	1.39	-4852	375.18	11004	3244.94	8.649	Si
SLV 9	-1.3	-26357	-1381.73	59771	9894.84	7.161	Si
SLV 9	1.39	-28269	386.21	64109	9875.37	25.57	Si
SLV 15	-1.3	-17273	1594.84	39172	8624.93	5.408	Si
SLV 15	1.39	-15818	705.68	35871	8212.19	11.637	Si
SLV 5	-1.3	-24432	-1713.2	55406	9813.68	5.728	Si
SLV 5	1.39	-26745	206.41	60651	9898.96	47.958	Si
SLV 10	-1.3	-26357	-1381.73	59771	9894.84	7.161	Si
SLV 10	1.39	-28269	386.21	64109	9875.37	25.57	Si
SLV 8	-1.3	-7003	2271.18	15882	4477.97	1.972	Si
SLV 8	1.39	-4852	375.18	11004	3244.94	8.649	Si
SLV 11	-1.3	-8928	2602.66	20247	5474.21	2.103	Si
SLV 11	1.39	-6377	554.98	14461	4131.86	7.445	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	V par	M	$\alpha 0$	αN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 76	-1.3	-24035	-5274	734.79		54507	1.4699	10833	4777			0.91	No, Vu<V
SLU 76	1.39	-23802	-3569	610.77		53977	1.4699	10833	4777			1.34	Si
SLU 77	-1.3	-23961	-5281	713.94		54339	1.4699	10833	4777			0.9	No, Vu<V
SLU 77	1.39	-23779	-3561	618.58		53926	1.4699	10833	4777			1.34	Si
SLU 83	-1.3	-24528	-5428	760.47		55624	1.4699	10833	4777			0.88	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 83	1.39	-24192	-3686	641.75		54861	1.4699	10833	4777			1.3	Si
SLU 84	-1.3	-24759	-5470	780.03		56147	1.4699	10833	4777			0.87	No, Vu<V
SLU 84	1.39	-24428	-3721	649.6		55398	1.4699	10833	4777			1.28	Si
SLU 79	-1.3	-23873	-5256	708.22		54139	1.4699	10833	4777			0.91	No, Vu<V
SLU 79	1.39	-23681	-3544	609.13		53703	1.4699	10833	4777			1.35	Si
SLU 82	-1.3	-24537	-5417	774		55644	1.4699	10833	4777			0.88	No, Vu<V
SLU 82	1.39	-24155	-3688	638.16		54777	1.4699	10833	4777			1.3	Si
SLU 80	-1.3	-24104	-5298	727.78		54662	1.4699	10833	4777			0.9	No, Vu<V
SLU 80	1.39	-23917	-3579	616.98		54240	1.4699	10833	4777			1.33	Si
SLU 81	-1.3	-24306	-5375	754.44		55121	1.4699	10833	4777			0.89	No, Vu<V
SLU 81	1.39	-23918	-3653	630.3		54241	1.4699	10833	4777			1.31	Si
SLU 75	-1.3	-23970	-5270	727.47		54358	1.4699	10833	4777			0.91	No, Vu<V
SLU 75	1.39	-23742	-3563	614.99		53842	1.4699	10833	4777			1.34	Si
SLU 78	-1.3	-24192	-5323	733.5		54862	1.4699	10833	4777			0.9	No, Vu<V
SLU 78	1.39	-24016	-3596	626.44		54462	1.4699	10833	4777			1.33	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 2	-1.3	-16086	-4577	-705.39		36481	1.4699	15629	6892			1.51	Si
SLV 2	1.39	-17304	-3008	55.71		39241	1.4699	16182	7135			2.37	Si
SLV 5	-1.3	-24432	-9605	-1713.2		55406	1.4699	16250	7166			0.75	No, Vu<V
SLV 5	1.39	-26745	-7795	206.41		60651	1.4699	16250	7166			0.92	No, Vu<V
SLV 9	-1.3	-26357	-10159	-1381.73		59771	1.4699	16250	7166			0.71	No, Vu<V
SLV 9	1.39	-28269	-8467	386.21		64109	1.4699	16250	7166			0.85	No, Vu<V
SLV 14	-1.3	-22502	-6423	399.53		51030	1.4699	16250	7166			1.12	Si
SLV 14	1.39	-22386	-5250	655.05		50766	1.4699	16250	7166			1.36	Si
SLV 7	-1.3	-7003	2914	2271.18		18950	1.2319	12123	4480			1.54	Si
SLV 7	1.39	-4852	3640	375.18		11004	1.4699	10534	4645			1.28	Si
SLV 1	-1.3	-16086	-4577	-705.39		36481	1.4699	15629	6892			1.51	Si
SLV 1	1.39	-17304	-3008	55.71		39241	1.4699	16182	7135			2.37	Si
SLV 13	-1.3	-22502	-6423	399.53		51030	1.4699	16250	7166			1.12	Si
SLV 13	1.39	-22386	-5250	655.05		50766	1.4699	16250	7166			1.36	Si
SLV 8	-1.3	-7003	2914	2271.18		18950	1.2319	12123	4480			1.54	Si
SLV 8	1.39	-4852	3640	375.18		11004	1.4699	10534	4645			1.28	Si
SLV 10	-1.3	-26357	-10159	-1381.73		59771	1.4699	16250	7166			0.71	No, Vu<V
SLV 10	1.39	-28269	-8467	386.21		64109	1.4699	16250	7166			0.85	No, Vu<V
SLV 6	-1.3	-24432	-9605	-1713.2		55406	1.4699	16250	7166			0.75	No, Vu<V
SLV 6	1.39	-26745	-7795	206.41		60651	1.4699	16250	7166			0.92	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 7	143750	0.25	11622	-5125	58.69	695.59	11.85	Si
SLV 8	143750	0.25	11622	-5125	58.69	695.59	11.85	Si
SLV 11	143750	0.25	14726	-6494	58.69	856.64	14.6	Si
SLV 12	143750	0.25	14726	-6494	58.69	856.64	14.6	Si
SLV 4	143750	0.25	22738	-10027	58.69	1224.11	20.86	Si
SLV 3	143750	0.25	22738	-10027	58.69	1224.11	20.86	Si
SLV 15	143750	0.25	33085	-14589	58.69	1595.83	27.19	Si
SLV 16	143750	0.25	33085	-14589	58.69	1595.83	27.19	Si
SLV 1	143750	0.25	35371	-15597	58.69	1662.31	28.32	Si
SLV 2	143750	0.25	35371	-15597	58.69	1662.31	28.32	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezziera = 0.045 Wa = 0.05 Ta = 0.0403

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 14	-22386	-22502	-222	0.049	2446.4	0.979	0.72518	3.95507	No
SLV 13	-22386	-22502	-222	0.049	2446.4	0.979	0.72518	3.95507	No
SLV 16	-15818	-17273	-167	0.049	1777.4	0.971	0.73924	3.95507	No
SLV 15	-15818	-17273	-167	0.049	1777.4	0.971	0.73924	3.95507	No
SLV 10	-28269	-26357	-212	0.051	3045.9	0.983	0.74751	3.66678	No
SLV 9	-28269	-26357	-212	0.051	3045.9	0.983	0.74751	3.66678	No
SLV 5	-26745	-24432	-149	0.053	2890.6	0.982	0.77756	3.66678	No
SLV 6	-26745	-24432	-149	0.053	2890.6	0.982	0.77756	3.66678	No
SLV 3	-10736	-10858	43	0.057	1260.2	0.96	0.8643	3.95507	No
SLV 4	-10736	-10858	43	0.057	1260.2	0.96	0.8643	3.95507	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.248	SLU 84	Si
V_SLU	0.873	SLU 84	No
PF_SLV	1.972	SLV 7	Si
V_SLV	0.705	SLV 9	No
PFFP_SLV	11.852	SLV 7	Si
R_SLV	0.183	SLV 13	No

Maschio 16

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-3.314	-13.763	1.046	Z medio -32 cm	L3	4.36	0.3	1.715	0.74	2.69			



Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fν0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 82	0.65	-67273	1915.43	51431	54062.95	28.225	Si
SLU 82	1.39	-65526	-19192.03	50095	55001.15	2.866	Si
SLU 73	0.65	-64483	1335.39	49298	55501.85	41.562	Si
SLU 73	1.39	-62853	-18974.85	48051	56195.14	2.962	Si
SLU 77	0.65	-66596	2113.96	50913	54441.36	25.753	Si
SLU 77	1.39	-64871	-18750.68	49594	55321.1	2.95	Si
SLU 83	0.65	-68085	2299.51	52051	53584.81	23.303	Si
SLU 83	1.39	-66286	-19005.66	50676	54608.62	2.873	Si
SLU 76	0.65	-65431	1468.02	50022	55049.01	37.499	Si
SLU 76	1.39	-63796	-19127.58	48772	55807.44	2.918	Si
SLU 80	0.65	-66287	1768.28	50677	54607.93	30.882	Si
SLU 80	1.39	-64616	-19054.24	49399	55440.4	2.91	Si
SLU 75	0.65	-65785	1729.88	50293	54870.1	31.719	Si
SLU 75	1.39	-64111	-18937.04	49013	55669.66	2.94	Si
SLU 84	0.65	-68221	2048.07	52155	53501.96	26.123	Si
SLU 84	1.39	-66469	-19344.75	50816	54510.32	2.818	Si
SLU 81	0.65	-67137	2166.88	51327	54140.53	24.985	Si
SLU 81	1.39	-65343	-18852.93	49955	55092.38	2.922	Si
SLU 78	0.65	-66732	1862.51	51017	54366.8	29.19	Si
SLU 78	1.39	-65054	-19089.77	49734	55233.42	2.893	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 1	0.65	-30754	-6558.21	23511	54144.51	8.256	Si
SLV 1	1.39	-30230	-15838.06	23111	53438.1	3.374	Si
SLV 10	0.65	-45000	-9073.19	34403	70482.02	7.768	Si
SLV 10	1.39	-44419	-18478.08	33958	69923.69	3.784	Si
SLV 4	0.65	-33073	4.6	25284	57180.95	1000	Si
SLV 4	1.39	-32104	-12695.61	24544	55930.38	4.405	Si
SLV 5	0.65	-37176	-11446.25	28421	62195.2	5.434	Si
SLV 5	1.39	-36861	-18951.7	28180	61826.11	3.262	Si
SLV 2	0.65	-30754	-6558.21	23511	54144.51	8.256	Si
SLV 2	1.39	-30230	-15838.06	23111	53438.1	3.374	Si
SLV 14	0.65	-56834	1351.99	43450	79842.47	59.055	Si
SLV 14	1.39	-55423	-14259.33	42371	78927.27	5.535	Si
SLV 9	0.65	-45000	-9073.19	34403	70482.02	7.768	Si
SLV 9	1.39	-44419	-18478.08	33958	69923.69	3.784	Si
SLV 6	0.65	-37176	-11446.25	28421	62195.2	5.434	Si
SLV 6	1.39	-36861	-18951.7	28180	61826.11	3.262	Si
SLV 3	0.65	-33073	4.6	25284	57180.95	1000	Si
SLV 3	1.39	-32104	-12695.61	24544	55930.38	4.405	Si
SLV 13	0.65	-56834	1351.99	43450	79842.47	59.055	Si
SLV 13	1.39	-55423	-14259.33	42371	78927.27	5.535	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 80	0.65	-66287	3069	1768.28		50677	4.3601	10833	14170			4.62	Si
SLU 80	1.39	-64616	3149	-19054.24		49399	4.3601	10833	14170			4.5	Si
SLU 73	0.65	-64483	3074	1335.39		49298	4.3601	10833	14170			4.61	Si
SLU 73	1.39	-62853	3152	-18974.85		48051	4.3601	10833	14170			4.5	Si
SLU 84	0.65	-68221	3194	2048.07		52155	4.3601	10833	14170			4.44	Si
SLU 84	1.39	-66469	3279	-19344.75		50816	4.3601	10833	14170			4.32	Si
SLU 75	0.65	-65785	3058	1729.88		50293	4.3601	10833	14170			4.63	Si
SLU 75	1.39	-64111	3138	-18937.04		49013	4.3601	10833	14170			4.52	Si
SLU 76	0.65	-65431	3098	1468.02		50022	4.3601	10833	14170			4.57	Si
SLU 76	1.39	-63796	3176	-19127.58		48772	4.3601	10833	14170			4.46	Si
SLU 81	0.65	-67137	3091	2166.88		51327	4.3601	10833	14170			4.58	Si
SLU 81	1.39	-65343	3178	-18852.93		49955	4.3601	10833	14170			4.46	Si
SLU 83	0.65	-68085	3115	2299.51		52051	4.3601	10833	14170			4.55	Si
SLU 83	1.39	-66286	3202	-19005.66		50676	4.3601	10833	14170			4.43	Si
SLU 78	0.65	-66732	3082	1862.51		51017	4.3601	10833	14170			4.6	Si
SLU 78	1.39	-65054	3162	-19089.77		49734	4.3601	10833	14170			4.48	Si
SLU 77	0.65	-66596	3003	2113.96		50913	4.3601	10833	14170			4.72	Si
SLU 77	1.39	-64871	3085	-18750.68		49594	4.3601	10833	14170			4.59	Si
SLU 82	0.65	-67273	3170	1915.43		51431	4.3601	10833	14170			4.47	Si
SLU 82	1.39	-65526	3255	-19192.03		50095	4.3601	10833	14170			4.35	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, γM = 2

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 5	0.65	-37176	-13763	-11446.25		28421	4.3601	14018	18336			1.33	Si
SLV 5	1.39	-36861	-14074	-18951.7		28180	4.3601	13969	18273			1.3	Si
SLV 16	0.65	-59153	8471	7914.81		45222	4.3601	16250	21256			2.51	Si
SLV 16	1.39	-57297	8001	-11116.87		43804	4.3601	16250	21256			2.66	Si
SLV 6	0.65	-37176	-13763	-11446.25		28421	4.3601	14018	18336			1.33	Si
SLV 6	1.39	-36861	-14074	-18951.7		28180	4.3601	13969	18273			1.3	Si
SLV 10	0.65	-45000	-12651	-9073.19		34403	4.3601	15214	19900			1.57	Si
SLV 10	1.39	-44419	-13379	-18478.08		33958	4.3601	15125	19784			1.48	Si
SLV 15	0.65	-59153	8471	7914.81		45222	4.3601	16250	21256			2.51	Si
SLV 15	1.39	-57297	8001	-11116.87		43804	4.3601	16250	21256			2.66	Si
SLV 9	0.65	-45000	-12651	-9073.19		34403	4.3601	15214	19900			1.57	Si
SLV 9	1.39	-44419	-13379	-18478.08		33958	4.3601	15125	19784			1.48	Si
SLV 7	0.65	-44906	16737	10429.79		34331	4.3601	15199	19882			1.19	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 7	1.39	-43108	17570	-8476.85		32956	4.3601	14925	19522			1.11	Si
SLV 8	0.65	-44906	16737	10429.79		34331	4.3601	15199	19882			1.19	Si
SLV 8	1.39	-43108	17570	-8476.85		32956	4.3601	14925	19522			1.11	Si
SLV 12	0.65	-52730	17849	12802.85		40312	4.3601	16250	21256			1.19	Si
SLV 12	1.39	-50666	18265	-8003.23		38734	4.3601	16080	21034			1.15	Si
SLV 11	0.65	-52730	17849	12802.85		40312	4.3601	16250	21256			1.19	Si
SLV 11	1.39	-50666	18265	-8003.23		38734	4.3601	16080	21034			1.15	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 1.02 W_a 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 1	143750	0.27	22105	-28914	76.56	3552.51	46.4	Si
SLV 2	143750	0.27	22105	-28914	76.56	3552.51	46.4	Si
SLV 3	143750	0.27	23667	-30957	76.56	3744.14	48.91	Si
SLV 4	143750	0.27	23667	-30957	76.56	3744.14	48.91	Si
SLV 6	143750	0.27	27129	-35486	76.56	4141.06	54.09	Si
SLV 5	143750	0.27	27129	-35486	76.56	4141.06	54.09	Si
SLV 7	143750	0.27	32335	-42295	76.56	4665.36	60.94	Si
SLV 8	143750	0.27	32335	-42295	76.56	4665.36	60.94	Si
SLV 10	143750	0.27	32997	-43161	76.56	4725.84	61.73	Si
SLV 9	143750	0.27	32997	-43161	76.56	4725.84	61.73	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 1.02 $W_a = 0.05$ $T_a = 0.0164$

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 6	-36861	-37176	526	0.078	4069	0.976	1.16852	2.98744	No
SLV 5	-36861	-37176	526	0.078	4069	0.976	1.16852	2.98744	No
SLV 1	-30230	-30754	403	0.08	3393.6	0.971	1.20348	3.0729	No
SLV 2	-30230	-30754	403	0.08	3393.6	0.971	1.20348	3.0729	No
SLV 10	-44419	-45000	451	0.082	4838.9	0.98	1.20987	2.98744	No
SLV 9	-44419	-45000	451	0.082	4838.9	0.98	1.20987	2.98744	No
SLV 4	-32104	-33073	222	0.086	3584.4	0.973	1.28665	3.0729	No
SLV 3	-32104	-33073	222	0.086	3584.4	0.973	1.28665	3.0729	No
SLV 14	-55423	-56834	152	0.088	5960.2	0.983	1.2989	3.0729	No
SLV 13	-55423	-56834	152	0.088	5960.2	0.983	1.2989	3.0729	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.818	SLU 84	Si
V_SLU	4.321	SLU 84	Si
PF_SLV	3.262	SLV 5	Si
V_SLV	1.111	SLV 7	Si
PFFP_SLV	46.405	SLV 1	Si
R_SLV	0.391	SLV 5	No

Maschio 17

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-12.463	-3.619	-12.463	-3.315	L1	L3	0.304	0.3	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	f _{vk0}	f _{medio}	τ_0	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 61	-1.3	-346	29.91	3793	50.17	1.677	Si
SLU 61	1.39	27	-7.37	0	0	0	No, Trazione
SLU 53	-1.3	-266	28.8	2920	39.05	1.356	Si
SLU 53	1.39	24	-6.52	0	0	0	No, Trazione
SLU 55	-1.3	-279	28.38	3057	40.81	1.438	Si
SLU 55	1.39	23	-6.49	0	0	0	No, Trazione
SLU 58	-1.3	-259	29.06	2837	37.98	1.307	Si
SLU 58	1.39	24	-6.55	0	0	0	No, Trazione
SLU 1	-1.3	-117	18.94	0	0	0	No, $e > l/2$
SLU 1	1.39	13	-3.5	0	0	0	No, Trazione
SLU 59	-1.3	-262	28.96	2870	38.41	1.326	Si
SLU 59	1.39	24	-6.54	0	0	0	No, Trazione
SLU 57	-1.3	-254	29.21	2788	37.35	1.279	Si
SLU 57	1.39	24	-6.56	0	0	0	No, Trazione
SLU 60	-1.3	-343	30.01	3760	49.75	1.658	Si
SLU 60	1.39	27	-7.38	0	0	0	No, Trazione
SLU 54	-1.3	-269	28.7	2953	39.48	1.375	Si
SLU 54	1.39	24	-6.52	0	0	0	No, Trazione
SLU 56	-1.3	-251	29.31	2755	36.93	1.26	Si
SLU 56	1.39	24	-6.57	0	0	0	No, Trazione

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 2	-1.3	-965	-12.1	10582	134.07	11.078	Si
SLV 2	1.39	8	-2.17	0	0	0	No, Trazione



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 4	-1.3	-184	21.7	2013	27.46	1.266	Si
SLV 4	1.39	14	-3.84	0	0	0	No, Trazione
SLV 9	-1.3	-1318	-30.17	14445	176.68	5.856	Si
SLV 9	1.39	7	-1.97	0	0	0	No, Trazione
SLV 8	-1.3	1030	72.63	0	0	0	No, Trazione
SLV 8	1.39	24	-6.72	0	0	0	No, Trazione
SLV 3	-1.3	-184	21.7	2013	27.46	1.266	Si
SLV 3	1.39	14	-3.84	0	0	0	No, Trazione
SLV 7	-1.3	1030	72.63	0	0	0	No, Trazione
SLV 7	1.39	24	-6.72	0	0	0	No, Trazione
SLV 5	-1.3	-1576	-40.03	17276	205.76	5.14	Si
SLV 5	1.39	4	-1.16	0	0	0	No, Trazione
SLV 1	-1.3	-965	-12.1	10582	134.07	11.078	Si
SLV 1	1.39	8	-2.17	0	0	0	No, Trazione
SLV 10	-1.3	-1318	-30.17	14445	176.68	5.856	Si
SLV 10	1.39	7	-1.97	0	0	0	No, Trazione
SLV 6	-1.3	-1576	-40.03	17276	205.76	5.14	Si
SLV 6	1.39	4	-1.16	0	0	0	No, Trazione

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 1	-1.3	-117	47	18.94		0	0	5556	0			0	No, Vu<V
SLU 1	1.39	13	8	-3.5		0	0	5556	0			0	No, Vu<V
SLU 53	-1.3	-266	64	28.8		6738	0.1318	6454	255			3.97	Si
SLU 53	1.39	24	14	-6.52		0	0	5556	0			0	No, Vu<V
SLU 59	-1.3	-262	65	28.96		7018	0.1244	6491	242			3.71	Si
SLU 59	1.39	24	15	-6.54		0	0	5556	0			0	No, Vu<V
SLU 61	-1.3	-346	60	29.91		5859	0.1969	6337	374			6.24	Si
SLU 61	1.39	27	16	-7.37		0	0	5556	0			0	No, Vu<V
SLU 54	-1.3	-269	64	28.7		6577	0.1365	6433	263			4.15	Si
SLU 54	1.39	24	14	-6.52		0	0	5556	0			0	No, Vu<V
SLU 55	-1.3	-279	61	28.38		6162	0.1509	6377	289			4.7	Si
SLU 55	1.39	23	14	-6.49		0	0	5556	0			0	No, Vu<V
SLU 60	-1.3	-343	61	30.01		5903	0.1937	6343	369			6.08	Si
SLU 60	1.39	27	16	-7.38		0	0	5556	0			0	No, Vu<V
SLU 57	-1.3	-254	67	29.21		7597	0.1116	6568	220			3.29	Si
SLU 57	1.39	24	15	-6.56		0	0	5556	0			0	No, Vu<V
SLU 56	-1.3	-251	68	29.31		7883	0.1063	6607	211			3.12	Si
SLU 56	1.39	24	15	-6.57		0	0	5556	0			0	No, Vu<V
SLU 58	-1.3	-259	66	29.06		7230	0.1193	6520	233			3.54	Si
SLU 58	1.39	24	15	-6.55		0	0	5556	0			0	No, Vu<V

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 3	-1.3	-184	49	21.7		6020	0.1017	9537	291			5.89	Si
SLV 3	1.39	14	15	-3.84		0	0	8333	0			0	No, Vu<V
SLV 10	-1.3	-1318	-253	-30.17		14445	0.3041	11222	1024			4.05	Si
SLV 10	1.39	7	-38	-1.97		0	0	8333	0			0	No, Vu<V
SLV 2	-1.3	-965	-152	-12.1		10582	0.3041	10450	953			6.26	Si
SLV 2	1.39	8	-16	-2.17		0	0	8333	0			0	No, Vu<V
SLV 1	-1.3	-965	-152	-12.1		10582	0.3041	10450	953			6.26	Si
SLV 1	1.39	8	-16	-2.17		0	0	8333	0			0	No, Vu<V
SLV 5	-1.3	-1576	-315	-40.03		17276	0.3041	11789	1075			3.42	Si
SLV 5	1.39	4	-44	-1.16		0	0	8333	0			0	No, Vu<V
SLV 8	-1.3	1030	357	72.63		0	0	8333	0			0	No, Vu<V
SLV 8	1.39	24	58	-6.72		0	0	8333	0			0	No, Vu<V
SLV 6	-1.3	-1576	-315	-40.03		17276	0.3041	11789	1075			3.42	Si
SLV 6	1.39	4	-44	-1.16		0	0	8333	0			0	No, Vu<V
SLV 7	-1.3	1030	357	72.63		0	0	8333	0			0	No, Vu<V
SLV 7	1.39	24	58	-6.72		0	0	8333	0			0	No, Vu<V
SLV 9	-1.3	-1318	-253	-30.17		14445	0.3041	11222	1024			4.05	Si
SLV 9	1.39	7	-38	-1.97		0	0	8333	0			0	No, Vu<V
SLV 4	-1.3	-184	49	21.7		6020	0.1017	9537	291			5.89	Si
SLV 4	1.39	14	15	-3.84		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 7	143750	0.25	0	-49	12.14	0	0	No, $e > t/2$
SLV 8	143750	0.25	0	-49	12.14	0	0	No, $e > t/2$
SLV 12	143750	0.25	0	25	12.14	0	0	No, Trazione
SLV 11	143750	0.25	0	25	12.14	0	0	No, Trazione
SLV 16	143750	0.25	1143	-104	12.14	15.5	1.28	Si
SLV 15	143750	0.25	1143	-104	12.14	15.5	1.28	Si
SLV 14	143750	0.25	3165	-289	12.14	42.19	3.47	Si
SLV 13	143750	0.25	3165	-289	12.14	42.19	3.47	Si
SLV 4	143750	0.25	3833	-350	12.14	50.81	4.18	Si
SLV 3	143750	0.25	3833	-350	12.14	50.81	4.18	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.045 Wa = 0.05 Ta = 0.0403

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 6	4	-1576	-2	0	0	0	0	3.66678	No, Trazione
SLV 3	14	-184	33	0	0	0	0	3.95507	No, Trazione
SLV 2	8	-965	27	0	0	0	0	3.95507	No, Trazione
SLV 9	7	-1318	-21	0	0	0	0	3.66678	No, Trazione
SLV 5	4	-1576	-2	0	0	0	0	3.66678	No, Trazione
SLV 7	24	1030	18	0	0	0	0	3.66678	No, Trazione
SLV 4	14	-184	33	0	0	0	0	3.95507	No, Trazione



Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 8	24	1030	18	0	0	0	0	3.66678	No, Trazione
SLV 10	7	-1318	-21	0	0	0	0	3.66678	No, Trazione
SLV 1	8	-965	27	0	0	0	0	3.95507	No, Trazione

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0	SLU 84	No
V_SLU	0	SLU 1	No
PF_SLV	0	SLV 16	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 12	No
R_SLV	0	SLV 16	No

Maschio 19

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-12.463	-3.315	-12.463	-1.916	L2	L3	1.399	0.3	0.74	0.74	0.74			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	M	$\alpha 0$	Mu	c.s.	Verifica
SLU 1	0.65	-434	121.45	1034	299.7	2.468	Si
SLU 1	1.39	30	-37.95	0	0	0	No, Trazione
SLU 59	0.65	-570	213.4	1357	391.94	1.837	Si
SLU 59	1.39	36	-58.03	0	0	0	No, Trazione
SLU 56	0.65	-566	215.68	1349	389.47	1.806	Si
SLU 56	1.39	37	-58.73	0	0	0	No, Trazione
SLU 61	0.65	-584	232.54	1391	401.41	1.726	Si
SLU 61	1.39	33	-59.94	0	0	0	No, Trazione
SLU 60	0.65	-583	233.2	1388	400.71	1.718	Si
SLU 60	1.39	33	-60.13	0	0	0	No, Trazione
SLU 58	0.65	-569	214.06	1355	391.23	1.828	Si
SLU 58	1.39	37	-58.23	0	0	0	No, Trazione
SLU 54	0.65	-572	211.75	1364	393.74	1.859	Si
SLU 54	1.39	36	-57.52	0	0	0	No, Trazione
SLU 57	0.65	-567	215.02	1351	390.17	1.815	Si
SLU 57	1.39	37	-58.54	0	0	0	No, Trazione
SLU 53	0.65	-571	212.41	1361	393.03	1.85	Si
SLU 53	1.39	36	-57.71	0	0	0	No, Trazione
SLU 55	0.65	-576	209.7	1372	395.97	1.888	Si
SLU 55	1.39	35	-56.89	0	0	0	No, Trazione

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma M = 2$

Comb.	Quota	N	M	$\alpha 0$	Mu	c.s.	Verifica
SLV 7	0.65	-125	238.35	0	0	0	No, e>1/2
SLV 7	1.39	65	-77.56	0	0	0	No, Trazione
SLV 9	0.65	-736	55.93	1754	507.6	9.076	Si
SLV 9	1.39	-5	-7.48	0	0	0	No, e>1/2
SLV 12	0.65	-39	291.56	0	0	0	No, e>1/2
SLV 12	1.39	81	-92.57	0	0	0	No, Trazione
SLV 14	0.65	-392	200.48	934	272.24	1.358	Si
SLV 14	1.39	44	-54.77	0	0	0	No, Trazione
SLV 3	0.65	-469	93.8	1116	324.83	3.463	Si
SLV 3	1.39	16	-30.28	0	0	0	No, Trazione
SLV 8	0.65	-125	238.35	0	0	0	No, e>1/2
SLV 8	1.39	65	-77.56	0	0	0	No, Trazione
SLV 13	0.65	-392	200.48	934	272.24	1.358	Si
SLV 13	1.39	44	-54.77	0	0	0	No, Trazione
SLV 4	0.65	-469	93.8	1116	324.83	3.463	Si
SLV 4	1.39	16	-30.28	0	0	0	No, Trazione
SLV 10	0.65	-736	55.93	1754	507.6	9.076	Si
SLV 10	1.39	-5	-7.48	0	0	0	No, e>1/2
SLV 11	0.65	-39	291.56	0	0	0	No, e>1/2
SLV 11	1.39	81	-92.57	0	0	0	No, Trazione

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	V par	M	$\alpha 0$	αN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 54	0.65	-572	972	211.75		1930	0.9889	5813	1724			1.77	Si
SLU 54	1.39	36	376	-57.52		0	0	5556	0			0	No, Vu<V
SLU 56	0.65	-566	990	215.68		1975	0.9557	5819	1668			1.68	Si
SLU 56	1.39	37	384	-58.73		0	0	5556	0			0	No, Vu<V
SLU 57	0.65	-567	987	215.02		1967	0.9613	5818	1678			1.7	Si
SLU 57	1.39	37	382	-58.54		0	0	5556	0			0	No, Vu<V
SLU 61	0.65	-584	1032	232.54		2153	0.9036	5843	1584			1.53	Si
SLU 61	1.39	33	397	-59.94		0	0	5556	0			0	No, Vu<V
SLU 58	0.65	-569	983	214.06		1955	0.9695	5816	1692			1.72	Si
SLU 58	1.39	37	381	-58.23		0	0	5556	0			0	No, Vu<V
SLU 60	0.65	-583	1035	233.2		2163	0.8981	5844	1575			1.52	Si
SLU 60	1.39	33	398	-60.13		0	0	5556	0			0	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 1	0.65	-434	616	121.45		1149	1.259	5709	2156			3.5	Si
SLU 1	1.39	30	242	-37.95		0	0	5556	0			0	No, Vu<V
SLU 53	0.65	-571	975	212.41		1937	0.9834	5814	1715			1.76	Si
SLU 53	1.39	36	378	-57.71		0	0	5556	0			0	No, Vu<V
SLU 55	0.65	-576	963	209.7		1908	1.006	5810	1753			1.82	Si
SLU 55	1.39	35	373	-56.89		0	0	5556	0			0	No, Vu<V
SLU 59	0.65	-570	980	213.4		1948	0.975	5815	1701			1.74	Si
SLU 59	1.39	36	379	-58.03		0	0	5556	0			0	No, Vu<V

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 4	0.65	-469	628	93.8		1116	1.3991	8557	3591			5.72	Si
SLV 4	1.39	16	191	-30.28		0	0	8333	0			0	No, Vu<V
SLV 7	0.65	-125	1955	238.35		0	0	8333	0			0	No, Vu<V
SLV 7	1.39	65	356	-77.56		0	0	8333	0			0	No, Vu<V
SLV 11	0.65	-39	2253	291.56		0	0	8333	0			0	No, Vu<V
SLV 11	1.39	81	427	-92.57		0	0	8333	0			0	No, Vu<V
SLV 9	0.65	-736	-548	55.93		1754	1.3991	8684	3645			6.65	Si
SLV 9	1.39	-5	193	-7.48		0	0	8333	0			0	No, Vu<V
SLV 12	0.65	-39	2253	291.56		0	0	8333	0			0	No, Vu<V
SLV 12	1.39	81	427	-92.57		0	0	8333	0			0	No, Vu<V
SLV 8	0.65	-125	1955	238.35		0	0	8333	0			0	No, Vu<V
SLV 8	1.39	65	356	-77.56		0	0	8333	0			0	No, Vu<V
SLV 3	0.65	-469	628	93.8		1116	1.3991	8557	3591			5.72	Si
SLV 3	1.39	16	191	-30.28		0	0	8333	0			0	No, Vu<V
SLV 13	0.65	-392	779	200.48		2314	0.565	8796	1491			1.91	Si
SLV 13	1.39	44	358	-54.77		0	0	8333	0			0	No, Vu<V
SLV 10	0.65	-736	-548	55.93		1754	1.3991	8684	3645			6.65	Si
SLV 10	1.39	-5	193	-7.48		0	0	8333	0			0	No, Vu<V
SLV 14	0.65	-392	779	200.48		2314	0.565	8796	1491			1.91	Si
SLV 14	1.39	44	358	-54.77		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 1.02 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 12	143750	0.27	521	-218	4.57	32.63	7.13	Si
SLV 11	143750	0.27	521	-218	4.57	32.63	7.13	Si
SLV 16	143750	0.27	555	-233	4.57	34.81	7.61	Si
SLV 15	143750	0.27	555	-233	4.57	34.81	7.61	Si
SLV 8	143750	0.27	558	-234	4.57	34.96	7.64	Si
SLV 7	143750	0.27	558	-234	4.57	34.96	7.64	Si
SLV 13	143750	0.27	623	-261	4.57	39.01	8.53	Si
SLV 14	143750	0.27	623	-261	4.57	39.01	8.53	Si
SLV 3	143750	0.27	680	-285	4.57	42.56	9.31	Si
SLV 4	143750	0.27	680	-285	4.57	42.56	9.31	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 1.02 Wa = 0.05 Ta = 0.003

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 3	16	-469	39	0	0	0	0	2.62405	No, Trazione
SLV 8	65	-125	23	0	0	0	0	2.61101	No, Trazione
SLV 16	70	-183	-32	0	0	0	0	2.62405	No, Trazione
SLV 7	65	-125	23	0	0	0	0	2.61101	No, Trazione
SLV 13	44	-392	-40	0	0	0	0	2.62405	No, Trazione
SLV 15	70	-183	-32	0	0	0	0	2.62405	No, Trazione
SLV 12	81	-39	1	0	0	0	0	2.61101	No, Trazione
SLV 14	44	-392	-40	0	0	0	0	2.62405	No, Trazione
SLV 11	81	-39	1	0	0	0	0	2.61101	No, Trazione
SLV 4	16	-469	39	0	0	0	0	2.62405	No, Trazione

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0	SLU 84	No
V_SLV	0	SLU 1	No
PF_SLV	0	SLV 16	No
V_SLV	0	SLV 3	No
PFFP_SLV	7.135	SLV 11	Si
R_SLV	0	SLV 16	No

Maschio 21

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-12.463	-1.916	-12.463	-0.354	Z medio -32 cm	Z medio 102 cm	1.562	0.3	1.345	0.626	2.064			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
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Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 71	0.02	-2710	382.65	5784	1966.13	5.138	Si
SLU 71	0.65	-1275	40.92	2722	962.71	23.528	Si
SLU 70	0.02	-2713	385.23	5790	1967.75	5.108	Si
SLU 70	0.65	-1276	40.32	2722	962.79	23.877	Si
SLU 25	0.02	-2177	314.31	4645	1602.75	5.099	Si
SLU 25	0.65	-1040	36.79	2220	789.96	21.471	Si
SLU 29	0.02	-2180	320.31	4653	1605.31	5.012	Si
SLU 29	0.65	-1039	35.07	2217	788.94	22.494	Si
SLU 24	0.02	-2177	315.98	4647	1603.21	5.074	Si
SLU 24	0.65	-1039	36.26	2218	789.48	21.77	Si
SLU 28	0.02	-2183	322.89	4658	1606.98	4.977	Si
SLU 28	0.65	-1039	34.48	2217	789.02	22.886	Si
SLU 30	0.02	-2180	318.64	4652	1604.85	5.037	Si
SLU 30	0.65	-1039	35.6	2218	789.43	22.175	Si
SLU 27	0.02	-2183	324.57	4660	1607.44	4.953	Si
SLU 27	0.65	-1038	33.95	2215	788.53	23.227	Si
SLU 69	0.02	-2713	386.9	5791	1968.19	5.087	Si
SLU 69	0.65	-1275	39.79	2721	962.31	24.182	Si
SLU 72	0.02	-2710	380.98	5783	1965.68	5.16	Si
SLU 72	0.65	-1276	41.45	2724	963.19	23.24	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 6	0.02	-2445	33.05	5217	1827.48	55.295	Si
SLV 6	0.65	-1463	369.66	3122	1113.02	3.011	Si
SLV 16	0.02	-2227	590.77	4752	1671.16	2.829	Si
SLV 16	0.65	-870	-128.94	1858	669.31	5.191	Si
SLV 12	0.02	-1968	525.87	4199	1483.7	2.821	Si
SLV 12	0.65	-713	-262.68	1523	550.13	2.094	Si
SLV 7	0.02	-1907	369.35	4070	1439.49	3.897	Si
SLV 7	0.65	-783	-204.94	1671	602.93	2.942	Si
SLV 9	0.02	-2505	189.57	5347	1870.8	9.869	Si
SLV 9	0.65	-1393	311.92	2974	1061.51	3.403	Si
SLV 15	0.02	-2227	590.77	4752	1671.16	2.829	Si
SLV 15	0.65	-870	-128.94	1858	669.31	5.191	Si
SLV 5	0.02	-2445	33.05	5217	1827.48	55.295	Si
SLV 5	0.65	-1463	369.66	3122	1113.02	3.011	Si
SLV 8	0.02	-1907	369.35	4070	1439.49	3.897	Si
SLV 8	0.65	-783	-204.94	1671	602.93	2.942	Si
SLV 10	0.02	-2505	189.57	5347	1870.8	9.869	Si
SLV 10	0.65	-1393	311.92	2974	1061.51	3.403	Si
SLV 11	0.02	-1968	525.87	4199	1483.7	2.821	Si
SLV 11	0.65	-713	-262.68	1523	550.13	2.094	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 82	0.02	-3557	1511	404.32		7591	1.5618	6568	3077			2.04	Si
SLU 82	0.65	-1932	1711	148.69		4124	1.5618	6105	2861			1.67	Si
SLU 78	0.02	-3314	1540	413.59		7074	1.5618	6499	3045			1.98	Si
SLU 78	0.65	-1733	1749	112.15		3699	1.5618	6049	2834			1.62	Si
SLU 74	0.02	-3309	1516	406.68		7062	1.5618	6497	3044			2.01	Si
SLU 74	0.65	-1734	1721	113.94		3700	1.5618	6049	2834			1.65	Si
SLU 81	0.02	-3558	1517	405.99		7593	1.5618	6568	3077			2.03	Si
SLU 81	0.65	-1932	1717	148.17		4123	1.5618	6105	2861			1.67	Si
SLU 84	0.02	-3563	1541	412.9		7604	1.5618	6569	3078			2	Si
SLU 84	0.65	-1931	1745	146.38		4121	1.5618	6105	2860			1.64	Si
SLU 75	0.02	-3308	1510	405		7061	1.5618	6497	3044			2.02	Si
SLU 75	0.65	-1734	1714	114.47		3702	1.5618	6049	2834			1.65	Si
SLU 83	0.02	-3564	1547	414.58		7606	1.5618	6570	3078			1.99	Si
SLU 83	0.65	-1930	1752	145.85		4120	1.5618	6105	2860			1.63	Si
SLU 80	0.02	-3311	1525	409.34		7067	1.5618	6498	3045			2	Si
SLU 80	0.65	-1734	1732	113.28		3700	1.5618	6049	2834			1.64	Si
SLU 77	0.02	-3315	1546	415.26		7075	1.5618	6499	3045			1.97	Si
SLU 77	0.65	-1732	1756	111.63		3698	1.5618	6049	2834			1.61	Si
SLU 79	0.02	-3312	1531	411.01		7069	1.5618	6498	3045			1.99	Si
SLU 79	0.65	-1733	1739	112.75		3699	1.5618	6049	2834			1.63	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 15	0.02	-2227	2787	590.77		4799	1.5467	9293	4312			1.55	Si
SLV 15	0.65	-870	2803	-128.94		1858	1.5618	8705	4079			1.45	Si
SLV 10	0.02	-2505	-1699	189.57		5347	1.5618	9403	4406			2.59	Si
SLV 10	0.65	-1393	-720	311.92		2974	1.5618	8928	4183			5.81	Si
SLV 12	0.02	-1968	4297	525.87		4256	1.5409	9185	4246			0.99	No, Vu<V
SLV 12	0.65	-713	3674	-262.68		1921	1.238	8717	3238			0.88	No, Vu<V
SLV 6	0.02	-2445	-2203	33.05		5217	1.5618	9377	4393			1.99	Si
SLV 6	0.65	-1463	-1292	369.66		3122	1.5618	8958	4197			3.25	Si
SLV 11	0.02	-1968	4297	525.87		4256	1.5409	9185	4246			0.99	No, Vu<V
SLV 11	0.65	-713	3674	-262.68		1921	1.238	8717	3238			0.88	No, Vu<V
SLV 16	0.02	-2227	2787	590.77		4799	1.5467	9293	4312			1.55	Si
SLV 16	0.65	-870	2803	-128.94		1858	1.5618	8705	4079			1.45	Si
SLV 8	0.02	-1907	3793	369.35		4070	1.5618	9147	4286			1.13	Si
SLV 8	0.65	-783	3103	-204.94		1676	1.5573	8668	4050			1.31	Si
SLV 5	0.02	-2445	-2203	33.05		5217	1.5618	9377	4393			1.99	Si
SLV 5	0.65	-1463	-1292	369.66		3122	1.5618	8958	4197			3.25	Si
SLV 9	0.02	-2505	-1699	189.57		5347	1.5618	9403	4406			2.59	Si
SLV 9	0.65	-1393	-720	311.92		2974	1.5618	8928	4183			5.81	Si
SLV 7	0.02	-1907	3793	369.35		4070	1.5618	9147	4286			1.13	Si
SLV 7	0.65	-783	3103	-204.94		1676	1.5573	8668	4050			1.31	Si



Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.337 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 1	143750	0.25	3426	-1605	15.97	234.03	14.66	Si
SLV 2	143750	0.25	3426	-1605	15.97	234.03	14.66	Si
SLV 6	143750	0.25	3427	-1606	15.97	234.08	14.66	Si
SLV 5	143750	0.25	3427	-1606	15.97	234.08	14.66	Si
SLV 4	143750	0.25	3433	-1608	15.97	234.48	14.68	Si
SLV 3	143750	0.25	3433	-1608	15.97	234.48	14.68	Si
SLV 9	143750	0.25	3434	-1609	15.97	234.58	14.69	Si
SLV 10	143750	0.25	3434	-1609	15.97	234.58	14.69	Si
SLV 8	143750	0.25	3450	-1616	15.97	235.6	14.75	Si
SLV 7	143750	0.25	3450	-1616	15.97	235.6	14.75	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.337 Wa = 0.05 Ta = 0.0101

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 14	-1074	-2388	-39	0.126	202.3	0.898	2.0446	2.74515	No
SLV 13	-1074	-2388	-39	0.126	202.3	0.898	2.0446	2.74515	No
SLV 4	-1102	-2024	38	0.127	204.9	0.899	2.04478	2.74515	No
SLV 3	-1102	-2024	38	0.127	204.9	0.899	2.04478	2.74515	No
SLV 1	-1306	-2186	30	0.129	225	0.905	2.07951	2.74515	No
SLV 2	-1306	-2186	30	0.129	225	0.905	2.07951	2.74515	No
SLV 9	-1393	-2505	-25	0.131	233.6	0.907	2.10218	2.69909	No
SLV 10	-1393	-2505	-25	0.131	233.6	0.907	2.10218	2.69909	No
SLV 16	-870	-2227	-30	0.134	182.5	0.893	2.187	2.74515	No
SLV 15	-870	-2227	-30	0.134	182.5	0.893	2.187	2.74515	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.953	SLU 27	Si
V_SLU	1.614	SLU 77	Si
PF_SLV	2.094	SLV 11	Si
V_SLV	0.881	SLV 11	No
PFFP_SLV	14.656	SLV 1	Si
R_SLV	0.745	SLV 13	No

Maschio 23

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-12.463	-0.354	-12.463	1.046	Z medio -99 cm	L3	1.4	0.3	2.377	2.064	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 50	-0.67	-11414	1603.32	27175	5324.16	3.321	Si
SLU 50	1.39	-2672	1218.84	6361	1724.13	1.415	Si
SLU 47	-0.67	-11147	1557.01	26540	5260.57	3.379	Si
SLU 47	1.39	-2604	1176.11	6200	1684.18	1.432	Si
SLU 49	-0.67	-11474	1613.67	27319	5338.21	3.308	Si
SLU 49	1.39	-2690	1229.56	6405	1734.91	1.411	Si
SLU 51	-0.67	-11374	1596.36	27082	5315	3.329	Si
SLU 51	1.39	-2664	1213.35	6342	1719.44	1.417	Si
SLU 46	-0.67	-11273	1578.96	26840	5290.96	3.351	Si
SLU 46	1.39	-2636	1195.97	6275	1702.85	1.424	Si
SLU 44	-0.67	-10945	1522.3	26060	5210.62	3.423	Si
SLU 44	1.39	-2550	1142.52	6071	1651.93	1.446	Si
SLU 6	-0.67	-9318	1321.03	22184	4745.99	3.593	Si
SLU 6	1.39	-2214	1003.21	5271	1449.43	1.445	Si
SLU 48	-0.67	-11513	1620.63	27413	5347.21	3.299	Si
SLU 48	1.39	-2698	1235.05	6423	1739.59	1.409	Si
SLU 43	-0.67	-11011	1533.89	26216	5227	3.408	Si
SLU 43	1.39	-2563	1151.67	6103	1659.81	1.441	Si
SLU 45	-0.67	-11312	1585.91	26933	5300.28	3.342	Si
SLU 45	1.39	-2644	1201.47	6294	1707.55	1.421	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 9	-0.67	-8070	1281.53	19215	4760.89	3.715	Si
SLV 9	1.39	-1881	784.15	4478	1268.21	1.617	Si
SLV 13	-0.67	-13107	1993.93	31208	6831.72	3.426	Si
SLV 13	1.39	-3432	1629.54	8172	2242.01	1.376	Si
SLV 7	-0.67	-11252	1423.86	26791	6149.58	4.319	Si
SLV 7	1.39	-2917	1116.62	6946	1926.03	1.725	Si
SLV 14	-0.67	-13107	1993.93	31208	6831.72	3.426	Si
SLV 14	1.39	-3432	1629.54	8172	2242.01	1.376	Si
SLV 12	-0.67	-13839	1860.74	32950	7074.99	3.802	Si
SLV 12	1.39	-3701	1597.29	8812	2404.01	1.505	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 11	-0.67	-13839	1860.74	32950	7074.99	3.802	Si
SLV 11	1.39	-3701	1597.29	8812	2404.01	1.505	Si
SLV 15	-0.67	-14838	2167.7	35328	7383.48	3.406	Si
SLV 15	1.39	-3979	1873.48	9473	2569.12	1.371	Si
SLV 16	-0.67	-14838	2167.7	35328	7383.48	3.406	Si
SLV 16	1.39	-3979	1873.48	9473	2569.12	1.371	Si
SLV 10	-0.67	-8070	1281.53	19215	4760.89	3.715	Si
SLV 10	1.39	-1881	784.15	4478	1268.21	1.617	Si
SLV 8	-0.67	-11252	1423.86	26791	6149.58	4.319	Si
SLV 8	1.39	-2917	1116.62	6946	1926.03	1.725	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 49	-0.67	-11474	-1076	1613.67		27319	1.4	9198	3863			3.59	Si
SLU 49	1.39	-2690	-870	1229.56		12304	0.7287	7196	1573			1.81	Si
SLU 67	-0.67	-12581	-1205	1785.11		29955	1.4	9550	4011			3.33	Si
SLU 67	1.39	-3043	-942	1324.64		12773	0.7942	7259	1729			1.84	Si
SLU 66	-0.67	-12620	-1210	1792.07		30049	1.4	9562	4016			3.32	Si
SLU 66	1.39	-3051	-947	1330.14		12839	0.7922	7267	1727			1.82	Si
SLU 51	-0.67	-11374	-1063	1596.36		27082	1.4	9166	3850			3.62	Si
SLU 51	1.39	-2664	-859	1213.35		12105	0.7335	7170	1578			1.84	Si
SLU 50	-0.67	-11414	-1069	1603.32		27175	1.4	9179	3855			3.61	Si
SLU 50	1.39	-2672	-864	1218.84		12176	0.7314	7179	1575			1.82	Si
SLU 48	-0.67	-11513	-1082	1620.63		27413	1.4	9211	3868			3.58	Si
SLU 48	1.39	-2698	-874	1235.05		12376	0.7266	7206	1571			1.8	Si
SLU 72	-0.67	-12683	-1218	1802.52		30197	1.4	9582	4024			3.3	Si
SLU 72	1.39	-3071	-953	1342.02		12973	0.7892	7285	1725			1.81	Si
SLU 70	-0.67	-12783	-1231	1819.83		30435	1.4	9614	4038			3.28	Si
SLU 70	1.39	-3098	-964	1358.23		13161	0.7845	7310	1721			1.78	Si
SLU 69	-0.67	-12822	-1237	1826.78		30528	1.4	9626	4043			3.27	Si
SLU 69	1.39	-3105	-968	1363.72		13227	0.7826	7319	1718			1.77	Si
SLU 71	-0.67	-12722	-1223	1809.47		30290	1.4	9594	4030			3.29	Si
SLU 71	1.39	-3079	-958	1347.51		13039	0.7872	7294	1723			1.8	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 11	-0.67	-13839	-2376	1860.74		32950	1.4	14923	6268			2.64	Si
SLV 11	1.39	-3701	-204	1597.29		15320	0.8053	11397	2754			13.5	Si
SLV 9	-0.67	-8070	230	1281.53		19215	1.4	12176	5114			22.21	Si
SLV 9	1.39	-1881	-1581	784.15		7383	0.8491	9810	2499			1.58	Si
SLV 8	-0.67	-11252	-2049	1423.86		26791	1.4	13692	5750			2.81	Si
SLV 8	1.39	-2917	212	1116.62		10217	0.9517	10377	2963			14	Si
SLV 15	-0.67	-14838	-1845	2167.7		35328	1.4	15399	6468			3.51	Si
SLV 15	1.39	-3979	-1171	1873.48		19295	0.6873	12192	2514			2.15	Si
SLV 12	-0.67	-13839	-2376	1860.74		32950	1.4	14923	6268			2.64	Si
SLV 12	1.39	-3701	-204	1597.29		15320	0.8053	11397	2754			13.5	Si
SLV 13	-0.67	-13107	-1063	1993.93		31208	1.4	14575	6121			5.76	Si
SLV 13	1.39	-3432	-1584	1629.54		16931	0.6758	11720	2376			1.5	Si
SLV 14	-0.67	-13107	-1063	1993.93		31208	1.4	14575	6121			5.76	Si
SLV 14	1.39	-3432	-1584	1629.54		16931	0.6758	11720	2376			1.5	Si
SLV 16	-0.67	-14838	-1845	2167.7		35328	1.4	15399	6468			3.51	Si
SLV 16	1.39	-3979	-1171	1873.48		19295	0.6873	12192	2514			2.15	Si
SLV 7	-0.67	-11252	-2049	1423.86		26791	1.4	13692	5750			2.81	Si
SLV 7	1.39	-2917	212	1116.62		10217	0.9517	10377	2963			14	Si
SLV 10	-0.67	-8070	230	1281.53		19215	1.4	12176	5114			22.21	Si
SLV 10	1.39	-1881	-1581	784.15		7383	0.8491	9810	2499			1.58	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.358 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 2	143750	0.25	7249	-3045	44.79	429.61	9.59	Si
SLV 1	143750	0.25	7249	-3045	44.79	429.61	9.59	Si
SLV 5	143750	0.25	8845	-3715	44.79	516.92	11.54	Si
SLV 6	143750	0.25	8845	-3715	44.79	516.92	11.54	Si
SLV 4	143750	0.25	11744	-4933	44.79	668.77	14.93	Si
SLV 3	143750	0.25	11744	-4933	44.79	668.77	14.93	Si
SLV 10	143750	0.25	14709	-6178	44.79	815.1	18.2	Si
SLV 9	143750	0.25	14709	-6178	44.79	815.1	18.2	Si
SLV 7	143750	0.25	23829	-10008	44.79	1208.45	26.98	Si
SLV 8	143750	0.25	23829	-10008	44.79	1208.45	26.98	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.358 Wa = 0.05 Ta = 0.0315

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 4	-1366	-6215	146	0.024	287.9	0.893	0.38433	3.58325	No
SLV 3	-1366	-6215	146	0.024	287.9	0.893	0.38433	3.58325	No
SLV 2	-819	-4485	119	0.027	237.1	0.889	0.43441	3.58325	No
SLV 1	-819	-4485	119	0.027	237.1	0.889	0.43441	3.58325	No
SLV 14	-3432	-13107	-159	0.039	492.6	0.924	0.62032	3.58325	No
SLV 13	-3432	-13107	-159	0.039	492.6	0.924	0.62032	3.58325	No
SLV 16	-3979	-14838	-133	0.048	547.6	0.93	0.74306	3.58325	No
SLV 15	-3979	-14838	-133	0.048	547.6	0.93	0.74306	3.58325	No
SLV 10	-1881	-8070	-93	0.05	337.9	0.901	0.80828	3.38361	No
SLV 9	-1881	-8070	-93	0.05	337.9	0.901	0.80828	3.38361	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF SLU	1.409	SLU 48	Si
V SLU	1.774	SLU 69	Si



Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.371	SLV 15	Si
V_SLV	1.5	SLV 13	Si
PFFP_SLV	9.591	SLV 1	Si
R_SLV	0.107	SLV 3	No

Maschio 24

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-15.058	3.311	-14.758	3.311	L1	L3	0.3	0.3	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 81	-1.3	-3108	-197.02	34533	268.56	1.363	Si
SLU 81	0.86	-4844	10.76	53827	246.49	22.911	Si
SLU 78	-1.3	-3103	-190.3	34481	268.45	1.411	Si
SLU 78	0.86	-4747	9.43	52741	251.01	26.617	Si
SLU 74	-1.3	-3068	-188.9	34092	267.62	1.417	Si
SLU 74	0.86	-4700	9.52	52225	253.02	26.567	Si
SLU 79	-1.3	-3081	-189.01	34236	267.94	1.418	Si
SLU 79	0.86	-4712	9.39	52359	252.51	26.894	Si
SLU 82	-1.3	-3104	-196.75	34492	268.47	1.365	Si
SLU 82	0.86	-4837	10.76	53747	246.84	22.931	Si
SLU 84	-1.3	-3143	-198.42	34921	269.33	1.357	Si
SLU 84	0.86	-4891	10.67	54343	244.2	22.897	Si
SLU 83	-1.3	-3147	-198.68	34962	269.41	1.356	Si
SLU 83	0.86	-4898	10.66	54423	243.84	22.876	Si
SLU 75	-1.3	-3065	-188.64	34052	267.53	1.418	Si
SLU 75	0.86	-4693	9.53	52145	253.32	26.583	Si
SLU 80	-1.3	-3078	-188.75	34196	267.85	1.419	Si
SLU 80	0.86	-4705	9.39	52279	252.81	26.911	Si
SLU 77	-1.3	-3107	-190.56	34521	268.53	1.409	Si
SLU 77	0.86	-4754	9.42	52821	250.69	26.599	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 2	-1.3	-2366	-306.08	26293	278.57	0.91	No, M>Mu
SLV 2	0.86	-4886	25.26	54289	407.27	16.125	Si
SLV 8	-1.3	-467	-207.39	0	0	0	No, e>l/2
SLV 8	0.86	-2982	17.28	33135	326.02	18.871	Si
SLV 5	-1.3	-3661	-156.01	40677	366.33	2.348	Si
SLV 5	0.86	-4259	6.71	47324	391.43	58.317	Si
SLV 7	-1.3	-467	-207.39	0	0	0	No, e>l/2
SLV 7	0.86	-2982	17.28	33135	326.02	18.871	Si
SLV 1	-1.3	-2366	-306.08	26293	278.57	0.91	No, M>Mu
SLV 1	0.86	-4886	25.26	54289	407.27	16.125	Si
SLV 4	-1.3	-1408	-321.49	0	0	0	No, e>l/2
SLV 4	0.86	-4503	28.43	50033	398.86	14.032	Si
SLV 6	-1.3	-3661	-156.01	40677	366.33	2.348	Si
SLV 6	0.86	-4259	6.71	47324	391.43	58.317	Si
SLV 11	-1.3	-618	-94.17	0	0	0	No, e>l/2
SLV 11	0.86	-2062	4.55	22909	251.28	55.231	Si
SLV 12	-1.3	-618	-94.17	0	0	0	No, e>l/2
SLV 12	0.86	-2062	4.55	22909	251.28	55.231	Si
SLV 3	-1.3	-1408	-321.49	0	0	0	No, e>l/2
SLV 3	0.86	-4503	28.43	50033	398.86	14.032	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 77	-1.3	-3107	-473	-190.56		38934	0.266	10747	858			1.81	Si
SLU 77	0.86	-4754	-642	9.42		52821	0.3	10833	975			1.52	Si
SLU 80	-1.3	-3078	-469	-188.75		38565	0.266	10698	854			1.82	Si
SLU 80	0.86	-4705	-636	9.39		52279	0.3	10833	975			1.53	Si
SLU 78	-1.3	-3103	-472	-190.3		38884	0.266	10740	857			1.81	Si
SLU 78	0.86	-4747	-641	9.43		52741	0.3	10833	975			1.52	Si
SLU 84	-1.3	-3143	-493	-198.42		40200	0.2606	10833	847			1.72	Si
SLU 84	0.86	-4891	-666	10.67		54343	0.3	10833	975			1.46	Si
SLU 74	-1.3	-3068	-469	-188.9		38551	0.2653	10696	851			1.82	Si
SLU 74	0.86	-4700	-635	9.52		52225	0.3	10833	975			1.53	Si
SLU 83	-1.3	-3147	-493	-198.68		40251	0.2606	10833	847			1.72	Si
SLU 83	0.86	-4898	-667	10.66		54423	0.3	10833	975			1.46	Si
SLU 82	-1.3	-3104	-488	-196.75		39821	0.2599	10833	845			1.73	Si
SLU 82	0.86	-4837	-660	10.76		53747	0.3	10833	975			1.48	Si
SLU 81	-1.3	-3108	-489	-197.02		39872	0.2598	10833	844			1.73	Si
SLU 81	0.86	-4844	-660	10.76		53827	0.3	10833	975			1.48	Si
SLU 79	-1.3	-3081	-469	-189.01		38616	0.266	10704	854			1.82	Si
SLU 79	0.86	-4712	-637	9.39		52359	0.3	10833	975			1.53	Si
SLU 75	-1.3	-3065	-468	-188.64		38500	0.2653	10689	851			1.82	Si
SLU 75	0.86	-4693	-634	9.53		52145	0.3	10833	975			1.54	Si



Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 6	-1.3	-3661	-336	-156.01		40677	0.3	16250	1462			4.35	Si
SLV 6	0.86	-4259	-424	6.71		47324	0.3	16250	1462			3.45	Si
SLV 7	-1.3	-467	-493	-207.39		0	0	8333	0			0	No, Vu<V
SLV 7	0.86	-2982	-596	17.28		33135	0.3	14960	1346			2.26	Si
SLV 1	-1.3	-2366	-633	-306.08		127305	0.062	16250	302			0.48	No, Vu<V
SLV 1	0.86	-4886	-688	25.26		54289	0.3	16250	1462			2.12	Si
SLV 11	-1.3	-618	-285	-94.17		0	0	8333	0			0	No, Vu<V
SLV 11	0.86	-2062	-422	4.55		22909	0.3	12915	1162			2.76	Si
SLV 12	-1.3	-618	-285	-94.17		0	0	8333	0			0	No, Vu<V
SLV 12	0.86	-2062	-422	4.55		22909	0.3	12915	1162			2.76	Si
SLV 8	-1.3	-467	-493	-207.39		0	0	8333	0			0	No, Vu<V
SLV 8	0.86	-2982	-596	17.28		33135	0.3	14960	1346			2.26	Si
SLV 3	-1.3	-1408	-680	-321.49		0	0	8333	0			0	No, Vu<V
SLV 3	0.86	-4503	-740	28.43		50033	0.3	16250	1462			1.98	Si
SLV 5	-1.3	-3661	-336	-156.01		40677	0.3	16250	1462			4.35	Si
SLV 5	0.86	-4259	-424	6.71		47324	0.3	16250	1462			3.45	Si
SLV 2	-1.3	-2366	-633	-306.08		127305	0.062	16250	302			0.48	No, Vu<V
SLV 2	0.86	-4886	-688	25.26		54289	0.3	16250	1462			2.12	Si
SLV 4	-1.3	-1408	-680	-321.49		0	0	8333	0			0	No, Vu<V
SLV 4	0.86	-4503	-740	28.43		50033	0.3	16250	1462			1.98	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 16	143750	0.25	20119	-1811	11.98	226.88	18.94	Si
SLV 15	143750	0.25	20119	-1811	11.98	226.88	18.94	Si
SLV 11	143750	0.25	24580	-2212	11.98	265.08	22.13	Si
SLV 12	143750	0.25	24580	-2212	11.98	265.08	22.13	Si
SLV 14	143750	0.25	27543	-2479	11.98	288.02	24.04	Si
SLV 13	143750	0.25	27543	-2479	11.98	288.02	24.04	Si
SLV 7	143750	0.25	35829	-3225	11.98	341.86	28.54	Si
SLV 8	143750	0.25	35829	-3225	11.98	341.86	28.54	Si
SLV 9	143750	0.25	49329	-4440	11.98	397.09	33.15	Si
SLV 10	143750	0.25	49329	-4440	11.98	397.09	33.15	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.045 Wa = 0.05 Ta = 0.0403

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 12	-1411	-618	23	0.049	177.9	0.945	0.75547	3.66678	No
SLV 11	-1411	-618	23	0.049	177.9	0.945	0.75547	3.66678	No
SLV 7	-2007	-467	24	0.05	238.5	0.958	0.76264	3.66678	No
SLV 8	-2007	-467	24	0.05	238.5	0.958	0.76264	3.66678	No
SLV 10	-2261	-3812	-22	0.052	264.3	0.961	0.78016	3.66678	No
SLV 9	-2261	-3812	-22	0.052	264.3	0.961	0.78016	3.66678	No
SLV 4	-2999	-1408	10	0.056	339.5	0.969	0.845	3.95507	No
SLV 3	-2999	-1408	10	0.056	339.5	0.969	0.845	3.95507	No
SLV 5	-2857	-3661	-21	0.053	325	0.968	0.79397	3.66678	No
SLV 6	-2857	-3661	-21	0.053	325	0.968	0.79397	3.66678	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.356	SLU 83	Si
V_SLU	1.462	SLU 83	Si
PF_SLV	0	SLV 3	No
V_SLV	0	SLV 3	No
PFFP_SLV	18.941	SLV 15	Si
R_SLV	0.206	SLV 11	No

Maschio 25

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.758	3.311	-9.728	3.311	L1	L3	4.03	0.3	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ_0	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 74	-1.3	-53954	-13434.2	44627	49156.47	3.659	Si
SLU 74	0.86	-42793	-15222.77	35396	48760.11	3.203	Si
SLU 82	-1.3	-55817	-14028.78	46168	48726.28	3.473	Si
SLU 82	0.86	-44598	-15684.63	36888	49169.71	3.135	Si
SLU 83	-1.3	-56311	-14157.42	46577	48588.2	3.432	Si
SLU 83	0.86	-45013	-15867.45	37232	49245.04	3.104	Si
SLU 80	-1.3	-53901	-13441.15	44583	49166.63	3.658	Si
SLU 80	0.86	-42739	-15223.51	35351	48745.74	3.202	Si
SLU 77	-1.3	-54375	-13557.47	44975	49071.67	3.62	Si
SLU 77	0.86	-43147	-15388.12	35688	48850.92	3.175	Si
SLU 75	-1.3	-53881	-13428.83	44566	49170.56	3.662	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 75	0.86	-42732	-15205.3	35345	48743.89	3.206	Si
SLU 81	-1.3	-55890	-14034.14	46229	48706.36	3.471	Si
SLU 81	0.86	-44659	-15702.1	36939	49181.26	3.132	Si
SLU 78	-1.3	-54302	-13552.1	44914	49087.02	3.622	Si
SLU 78	0.86	-43086	-15370.65	35638	48835.58	3.177	Si
SLU 84	-1.3	-56238	-14152.05	46516	48609.39	3.435	Si
SLU 84	0.86	-44952	-15849.98	37181	49234.38	3.106	Si
SLU 79	-1.3	-53975	-13446.51	44644	49152.48	3.655	Si
SLU 79	0.86	-42800	-15240.98	35401	48761.94	3.199	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 7	-1.3	-30087	-14253.49	24886	48277.57	3.387	Si
SLV 7	0.86	-22259	-9222.9	18411	38093.66	4.13	Si
SLV 2	-1.3	-36742	-24952.45	30391	55621.49	2.229	Si
SLV 2	0.86	-22250	-9067.52	18403	38080.57	4.2	Si
SLV 12	-1.3	-31035	-4499.24	25670	49397.5	10.979	Si
SLV 12	0.86	-26626	-10015.94	22023	43981.28	4.391	Si
SLV 1	-1.3	-36742	-24952.45	30391	55621.49	2.229	Si
SLV 1	0.86	-22250	-9067.52	18403	38080.57	4.2	Si
SLV 6	-1.3	-42028	-13205.8	34762	60592.69	4.588	Si
SLV 6	0.86	-30083	-10407.26	24883	48272.96	4.638	Si
SLV 11	-1.3	-31035	-4499.24	25670	49397.5	10.979	Si
SLV 11	0.86	-26626	-10015.94	22023	43981.28	4.391	Si
SLV 5	-1.3	-42028	-13205.8	34762	60592.69	4.588	Si
SLV 5	0.86	-30083	-10407.26	24883	48272.96	4.638	Si
SLV 4	-1.3	-33160	-25266.75	27428	51818.86	2.051	Si
SLV 4	0.86	-19903	-8712.21	16462	34700.54	3.983	Si
SLV 8	-1.3	-30087	-14253.49	24886	48277.57	3.387	Si
SLV 8	0.86	-22259	-9222.9	18411	38093.66	4.13	Si
SLV 3	-1.3	-33160	-25266.75	27428	51818.86	2.051	Si
SLV 3	0.86	-19903	-8712.21	16462	34700.54	3.983	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 78	-1.3	-54302	480	-13552.1		44914	4.03	10833	13097			27.28	Si
SLU 78	0.86	-43086	844	-15370.65		35638	4.03	10307	12461			14.76	Si
SLU 84	-1.3	-56238	500	-14152.05		46516	4.03	10833	13097			26.19	Si
SLU 84	0.86	-44952	891	-15849.98		37181	4.03	10513	12710			14.26	Si
SLU 80	-1.3	-53901	476	-13441.15		44583	4.03	10833	13097			27.5	Si
SLU 80	0.86	-42739	837	-15223.51		35351	4.03	10269	12415			14.83	Si
SLU 79	-1.3	-53975	477	-13446.51		44644	4.03	10833	13097			27.46	Si
SLU 79	0.86	-42800	838	-15240.98		35401	4.03	10276	12423			14.83	Si
SLU 83	-1.3	-56311	501	-14157.42		46577	4.03	10833	13097			26.16	Si
SLU 83	0.86	-45013	892	-15867.45		37232	4.03	10520	12718			14.26	Si
SLU 74	-1.3	-53954	476	-13434.2		44627	4.03	10833	13097			27.5	Si
SLU 74	0.86	-42793	840	-15222.77		35396	4.03	10275	12422			14.79	Si
SLU 82	-1.3	-55817	496	-14028.78		46168	4.03	10833	13097			26.43	Si
SLU 82	0.86	-44598	886	-15684.63		36888	4.03	10474	12663			14.29	Si
SLU 81	-1.3	-55890	496	-14034.14		46229	4.03	10833	13097			26.39	Si
SLU 81	0.86	-44659	887	-15702.1		36939	4.03	10481	12671			14.28	Si
SLU 77	-1.3	-54375	481	-13557.47		44975	4.03	10833	13097			27.24	Si
SLU 77	0.86	-43147	845	-15388.12		35688	4.03	10314	12470			14.75	Si
SLU 75	-1.3	-53881	476	-13428.83		44566	4.03	10833	13097			27.53	Si
SLU 75	0.86	-42732	839	-15205.3		35345	4.03	10268	12414			14.79	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 16	-1.3	-36320	12946	7247.41		30042	4.03	14342	17339			1.34	Si
SLV 16	0.86	-34459	10037	-11355.67		28502	4.03	14034	16967			1.69	Si
SLV 14	-1.3	-39903	13073	7561.71		33005	4.03	14934	18056			1.38	Si
SLV 14	0.86	-36806	9536	-11710.98		30444	4.03	14422	17436			1.83	Si
SLV 4	-1.3	-33160	-12442	-25266.75		29404	3.7591	14214	16030			1.29	Si
SLV 4	0.86	-19903	-8446	-8712.21		16462	4.03	11626	14056			1.66	Si
SLV 13	-1.3	-39903	13073	7561.71		33005	4.03	14934	18056			1.38	Si
SLV 13	0.86	-36806	9536	-11710.98		30444	4.03	14422	17436			1.83	Si
SLV 3	-1.3	-33160	-12442	-25266.75		29404	3.7591	14214	16030			1.29	Si
SLV 3	0.86	-19903	-8446	-8712.21		16462	4.03	11626	14056			1.66	Si
SLV 1	-1.3	-36742	-12314	-24952.45		30560	4.0076	14445	17368			1.41	Si
SLV 1	0.86	-22250	-8947	-9067.52		18403	4.03	12014	14525			1.62	Si
SLV 2	-1.3	-36742	-12314	-24952.45		30560	4.0076	14445	17368			1.41	Si
SLV 2	0.86	-22250	-8947	-9067.52		18403	4.03	12014	14525			1.62	Si
SLV 12	-1.3	-31035	3911	-4499.24		25670	4.03	13467	16282			4.16	Si
SLV 12	0.86	-26626	4154	-10015.94		22023	4.03	12738	15400			3.71	Si
SLV 15	-1.3	-36320	12946	7247.41		30042	4.03	14342	17339			1.34	Si
SLV 15	0.86	-34459	10037	-11355.67		28502	4.03	14034	16967			1.69	Si
SLV 11	-1.3	-31035	3911	-4499.24		25670	4.03	13467	16282			4.16	Si
SLV 11	0.86	-26626	4154	-10015.94		22023	4.03	12738	15400			3.71	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 8	143750	0.25	21920	-26501	160.91	3262.05	20.27	Si
SLV 7	143750	0.25	21920	-26501	160.91	3262.05	20.27	Si
SLV 4	143750	0.25	22264	-26917	160.91	3301.87	20.52	Si
SLV 3	143750	0.25	22264	-26917	160.91	3301.87	20.52	Si
SLV 11	143750	0.25	24362	-29453	160.91	3537.14	21.98	Si
SLV 12	143750	0.25	24362	-29453	160.91	3537.14	21.98	Si
SLV 1	143750	0.25	25000	-30226	160.91	3606.18	22.41	Si



Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 2	143750	0.25	25000	-30226	160.91	3606.18	22.41	Si
SLV 15	143750	0.25	30403	-36757	160.91	4141.68	25.74	Si
SLV 16	143750	0.25	30403	-36757	160.91	4141.68	25.74	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.045 $W_a = 0.05$ $T_a = 0.0403$

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 3	-17892	-33160	372	0.046	2282.7	0.943	0.70502	3.95507	No
SLV 4	-17892	-33160	372	0.046	2282.7	0.943	0.70502	3.95507	No
SLV 8	-21400	-30087	465	0.043	2638.5	0.95	0.66331	3.66678	No
SLV 7	-21400	-30087	465	0.043	2638.5	0.95	0.66331	3.66678	No
SLV 13	-34520	-39903	-371	0.05	3972.5	0.965	0.75603	3.95507	No
SLV 14	-34520	-39903	-371	0.05	3972.5	0.965	0.75603	3.95507	No
SLV 10	-31013	-42976	-465	0.047	3615.7	0.962	0.70821	3.66678	No
SLV 9	-31013	-42976	-465	0.047	3615.7	0.962	0.70821	3.66678	No
SLV 12	-25930	-31035	312	0.051	3098.8	0.956	0.76882	3.66678	No
SLV 11	-25930	-31035	312	0.051	3098.8	0.956	0.76882	3.66678	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.104	SLU 83	Si
V_SLV	14.256	SLU 83	Si
PF_SLV	2.051	SLV 3	Si
V_SLV	1.288	SLV 3	Si
PFFP_SLV	20.272	SLV 7	Si
R_SLV	0.178	SLV 3	No

Maschio 26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota s.	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.618	6.576	-17.768	6.576	L1	L3	1.85	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ_0	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 48	0.7	-21953	-3152.36	26370	13732.96	4.356	Si
SLU 48	1.1	-20285	-2418.56	24367	13151.07	5.438	Si
SLU 67	0.7	-24560	-3327.59	29501	14490.2	4.355	Si
SLU 67	1.1	-22815	-2497.53	27405	14003.8	5.607	Si
SLU 49	0.7	-21982	-3162.38	26404	13742.19	4.346	Si
SLU 49	1.1	-20312	-2425.91	24399	13160.86	5.425	Si
SLU 72	0.7	-24593	-3337.75	29542	14498.8	4.344	Si
SLU 72	1.1	-22855	-2499.22	27454	14015.91	5.608	Si
SLU 80	0.7	-27765	-3484.77	33351	15167.4	4.352	Si
SLU 80	1.1	-25953	-2524.55	31175	14819.04	5.87	Si
SLU 78	0.7	-27947	-3529.26	33569	15197.41	4.306	Si
SLU 78	1.1	-26124	-2560.65	31380	14855.79	5.802	Si
SLU 71	0.7	-24565	-3327.72	29508	14491.58	4.355	Si
SLU 71	1.1	-22829	-2491.87	27422	14007.95	5.621	Si
SLU 70	0.7	-24775	-3382.23	29760	14544.54	4.3	Si
SLU 70	1.1	-23026	-2535.33	27659	14067.13	5.548	Si
SLU 77	0.7	-27918	-3519.23	33535	15192.79	4.317	Si
SLU 77	1.1	-26098	-2553.29	31349	14850.17	5.816	Si
SLU 69	0.7	-24747	-3372.21	29726	14537.47	4.311	Si
SLU 69	1.1	-23000	-2527.97	27628	14059.29	5.561	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 11	0.7	-28616	-2807.91	34373	19023.2	6.775	Si
SLV 11	1.1	-29484	-3600.01	35416	19367.48	5.38	Si
SLV 6	0.7	-9098	-2130.93	10928	7662.84	3.596	Si
SLV 6	1.1	-5564	-83.7	6684	4865.58	58.128	Si
SLV 8	0.7	-28441	-4324.07	34163	18952.29	4.383	Si
SLV 8	1.1	-30001	-3860.48	36037	19566.13	5.068	Si
SLV 12	0.7	-28616	-2807.91	34373	19023.2	6.775	Si
SLV 12	1.1	-29484	-3600.01	35416	19367.48	5.38	Si
SLV 7	0.7	-28441	-4324.07	34163	18952.29	4.383	Si
SLV 7	1.1	-30001	-3860.48	36037	19566.13	5.068	Si
SLV 4	0.7	-21467	-5325.33	25786	15666.51	2.942	Si
SLV 4	1.1	-22051	-2842.49	26488	15975.74	5.62	Si
SLV 5	0.7	-9098	-2130.93	10928	7662.84	3.596	Si
SLV 5	1.1	-5564	-83.7	6684	4865.58	58.128	Si
SLV 2	0.7	-15664	-4667.39	18816	12258.18	2.626	Si
SLV 2	1.1	-14721	-1709.45	17682	11646.02	6.813	Si
SLV 1	0.7	-15664	-4667.39	18816	12258.18	2.626	Si
SLV 1	1.1	-14721	-1709.45	17682	11646.02	6.813	Si
SLV 3	0.7	-21467	-5325.33	25786	15666.51	2.942	Si
SLV 3	1.1	-22051	-2842.49	26488	15975.74	5.62	Si



Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 44	0.7	-21388	384	-3015.3		25691	1.85	8981	7477			19.46	Si
SLU 44	1.1	-19736	437	-2319.12		23706	1.85	8716	7256			16.6	Si
SLU 50	0.7	-21772	324	-3107.87		26152	1.85	9042	7528			23.21	Si
SLU 50	1.1	-20114	379	-2382.45		24161	1.85	8777	7307			19.26	Si
SLU 48	0.7	-21953	328	-3152.36		26370	1.85	9072	7552			23.01	Si
SLU 48	1.1	-20285	384	-2418.56		24367	1.85	8804	7330			19.1	Si
SLU 1	0.7	-17152	275	-2364.59		20604	1.85	8303	6912			25.17	Si
SLU 1	1.1	-15863	317	-1803.36		19055	1.85	8096	6740			21.28	Si
SLU 47	0.7	-21603	353	-3069.94		25950	1.85	9016	7505			21.29	Si
SLU 47	1.1	-19947	407	-2356.91		23960	1.85	8750	7285			17.91	Si
SLU 46	0.7	-21766	358	-3107.74		26146	1.85	9042	7527			21.03	Si
SLU 46	1.1	-20100	412	-2388.11		24145	1.85	8775	7305			17.71	Si
SLU 45	0.7	-21738	360	-3097.72		26112	1.85	9037	7523			20.9	Si
SLU 45	1.1	-20074	414	-2380.76		24113	1.85	8771	7302			17.62	Si
SLU 49	0.7	-21982	326	-3162.38		26404	1.85	9076	7556			23.17	Si
SLU 49	1.1	-20312	382	-2425.91		24399	1.85	8809	7333			19.2	Si
SLU 51	0.7	-21800	322	-3117.89		26186	1.85	9047	7532			23.37	Si
SLU 51	1.1	-20141	377	-2389.81		24193	1.85	8781	7310			19.37	Si
SLU 43	0.7	-21340	388	-2998.59		25634	1.85	8973	7470			19.26	Si
SLU 43	1.1	-19692	440	-2306.86		23654	1.85	8709	7251			16.46	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 1	0.7	-15664	-7751	-4667.39		18816	1.85	12097	10070			1.3	Si
SLV 1	1.1	-14721	-6843	-1709.45		17682	1.85	11870	9882			1.44	Si
SLV 10	0.7	-9272	971	-614.76		11138	1.85	10561	8792			9.06	Si
SLV 10	1.1	-5047	4907	176.76		6063	1.85	9546	7947			1.62	Si
SLV 13	0.7	-16246	7277	386.5		19515	1.85	12236	10187			1.4	Si
SLV 13	1.1	-12997	8745	-841.23		15611	1.85	11456	9537			1.09	Si
SLV 16	0.7	-22049	8174	-271.45		26486	1.85	13630	11347			1.39	Si
SLV 16	1.1	-20327	7358	-1974.26		24417	1.85	13217	11003			1.5	Si
SLV 4	0.7	-21467	-6854	-5325.33		25786	1.85	13491	11231			1.64	Si
SLV 4	1.1	-22051	-8230	-2842.49		26488	1.85	13631	11348			1.38	Si
SLV 9	0.7	-9272	971	-614.76		11138	1.85	10561	8792			9.06	Si
SLV 9	1.1	-5047	4907	176.76		6063	1.85	9546	7947			1.62	Si
SLV 14	0.7	-16246	7277	386.5		19515	1.85	12236	10187			1.4	Si
SLV 14	1.1	-12997	8745	-841.23		15611	1.85	11456	9537			1.09	Si
SLV 3	0.7	-21467	-6854	-5325.33		25786	1.85	13491	11231			1.64	Si
SLV 3	1.1	-22051	-8230	-2842.49		26488	1.85	13631	11348			1.38	Si
SLV 2	0.7	-15664	-7751	-4667.39		18816	1.85	12097	10070			1.3	Si
SLV 2	1.1	-14721	-6843	-1709.45		17682	1.85	11870	9882			1.44	Si
SLV 15	0.7	-22049	8174	-271.45		26486	1.85	13630	11347			1.39	Si
SLV 15	1.1	-20327	7358	-1974.26		24417	1.85	13217	11003			1.5	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.08 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 10	143750	0.25	13111	-10915	110.8	2192.27	19.79	Si
SLV 9	143750	0.25	13111	-10915	110.8	2192.27	19.79	Si
SLV 5	143750	0.25	13358	-11120	110.8	2228.51	20.11	Si
SLV 6	143750	0.25	13358	-11120	110.8	2228.51	20.11	Si
SLV 13	143750	0.25	20987	-17471	110.8	3255.89	29.38	Si
SLV 14	143750	0.25	20987	-17471	110.8	3255.89	29.38	Si
SLV 2	143750	0.25	21810	-18157	110.8	3356.07	30.29	Si
SLV 1	143750	0.25	21810	-18157	110.8	3356.07	30.29	Si
SLV 15	143750	0.25	27985	-23297	110.8	4041.34	36.47	Si
SLV 16	143750	0.25	27985	-23297	110.8	4041.34	36.47	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.045 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 5	-6697	-14084	-529	0.042	1004.3	0.918	0.66835	3.16379	No
SLV 6	-6697	-14084	-529	0.042	1004.3	0.918	0.66835	3.16379	No
SLV 9	-7055	-11789	-520	0.045	1040.1	0.92	0.70809	3.16379	No
SLV 10	-7055	-11789	-520	0.045	1040.1	0.92	0.70809	3.16379	No
SLV 2	-12258	-24416	-529	0.058	1565.5	0.943	0.90009	3.31979	No
SLV 1	-12258	-24416	-529	0.058	1565.5	0.943	0.90009	3.31979	No
SLV 13	-13450	-16767	-499	0.062	1686.4	0.946	0.95606	3.31979	No
SLV 14	-13450	-16767	-499	0.062	1686.4	0.946	0.95606	3.31979	No
SLV 4	-17382	-30977	-520	0.066	2085.7	0.956	0.99682	3.31979	No
SLV 3	-17382	-30977	-520	0.066	2085.7	0.956	0.99682	3.31979	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.3	SLU 70	Si
V_SLU	16.461	SLU 43	Si
PF_SLV	2.626	SLV 1	Si
V_SLV	1.091	SLV 13	Si
PFFP_SLV	19.786	SLV 9	Si
R_SLV	0.211	SLV 5	No

Maschio 27

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-16.768	6.576	-12.888	6.576	L1	L3	3.88	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 84	0.7	-62071	-8166.01	35550	67864.49	8.311	Si
SLU 84	1.1	-58002	-6271.25	33220	66635.08	10.625	Si
SLU 82	0.7	-61449	-8094.19	35194	67705.88	8.365	Si
SLU 82	1.1	-57416	-6226.16	32884	66420.66	10.668	Si
SLU 79	0.7	-59834	-7763.22	34269	67244.5	8.662	Si
SLU 79	1.1	-55814	-5918.58	31967	65787.25	11.115	Si
SLU 83	0.7	-62050	-8147.95	35538	67859.34	8.328	Si
SLU 83	1.1	-57981	-6260.29	33208	66627.39	10.643	Si
SLU 77	0.7	-60248	-7814.72	34506	67369.44	8.621	Si
SLU 77	1.1	-56204	-5949.21	32190	65947.88	11.085	Si
SLU 75	0.7	-59647	-7760.96	34162	67186.44	8.657	Si
SLU 75	1.1	-55639	-5915.09	31867	65713.77	11.11	Si
SLU 74	0.7	-59626	-7742.89	34150	67179.92	8.676	Si
SLU 74	1.1	-55618	-5904.13	31854	65704.7	11.129	Si
SLU 78	0.7	-60269	-7832.78	34518	67375.61	8.602	Si
SLU 78	1.1	-56226	-5960.18	32203	65956.6	11.066	Si
SLU 80	0.7	-59855	-7781.28	34281	67250.9	8.643	Si
SLU 80	1.1	-55836	-5929.55	31979	65796.21	11.096	Si
SLU 81	0.7	-61428	-8076.12	35182	67700.38	8.383	Si
SLU 81	1.1	-57394	-6215.2	32872	66412.63	10.686	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 9	0.7	-17689	-731.78	10131	31471.77	43.007	Si
SLV 9	1.1	-10632	-5041.42	6089	19597.29	3.887	Si
SLV 2	0.7	-34980	-13765.85	20034	56734.52	4.121	Si
SLV 2	1.1	-31432	-7373.08	18002	51994.26	7.052	Si
SLV 10	0.7	-17689	-731.78	10131	31471.77	43.007	Si
SLV 10	1.1	-10632	-5041.42	6089	19597.29	3.887	Si
SLV 7	0.7	-63431	-9559.76	36329	86468.36	9.045	Si
SLV 7	1.1	-64696	-2725.15	37054	87448.83	32.09	Si
SLV 1	0.7	-34980	-13765.85	20034	56734.52	4.121	Si
SLV 1	1.1	-31432	-7373.08	18002	51994.26	7.052	Si
SLV 4	0.7	-48491	-14772.06	27773	72690.25	4.921	Si
SLV 4	1.1	-47341	-6159.28	27114	71461.94	11.602	Si
SLV 3	0.7	-48491	-14772.06	27773	72690.25	4.921	Si
SLV 3	1.1	-47341	-6159.28	27114	71461.94	11.602	Si
SLV 8	0.7	-63431	-9559.76	36329	86468.36	9.045	Si
SLV 8	1.1	-64696	-2725.15	37054	87448.83	32.09	Si
SLV 5	0.7	-18395	-6205.69	10535	32608.61	5.255	Si
SLV 5	1.1	-11665	-6771.16	6681	21393.29	3.159	Si
SLV 6	0.7	-18395	-6205.69	10535	32608.61	5.255	Si
SLV 6	1.1	-11665	-6771.16	6681	21393.29	3.159	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 76	0.7	-59247	-3179	-7721.5		33933	3.88	10080	17600			5.54	Si
SLU 76	1.1	-55264	-3184	-5891.77		31652	3.88	9776	17069			5.36	Si
SLU 78	0.7	-60269	-3252	-7832.78		34518	3.88	10158	17736			5.45	Si
SLU 78	1.1	-56226	-3257	-5960.18		32203	3.88	9849	17197			5.28	Si
SLU 82	0.7	-61449	-3246	-8094.19		35194	3.88	10248	17893			5.51	Si
SLU 82	1.1	-57416	-3251	-6226.16		32884	3.88	9940	17355			5.34	Si
SLU 74	0.7	-59626	-3187	-7742.89		34150	3.88	10109	17650			5.54	Si
SLU 74	1.1	-55618	-3192	-5904.13		31854	3.88	9803	17116			5.36	Si
SLU 75	0.7	-59647	-3205	-7760.96		34162	3.88	10111	17653			5.51	Si
SLU 75	1.1	-55639	-3210	-5915.09		31867	3.88	9804	17119			5.33	Si
SLU 80	0.7	-59855	-3213	-7781.28		34281	3.88	10126	17681			5.5	Si
SLU 80	1.1	-55836	-3218	-5929.55		31979	3.88	9819	17145			5.33	Si
SLU 77	0.7	-60248	-3233	-7814.72		34506	3.88	10156	17733			5.48	Si
SLU 77	1.1	-56204	-3239	-5949.21		32190	3.88	9848	17194			5.31	Si
SLU 79	0.7	-59834	-3195	-7763.22		34269	3.88	10125	17678			5.53	Si
SLU 79	1.1	-55814	-3200	-5918.58		31967	3.88	9818	17142			5.36	Si
SLU 84	0.7	-62071	-3292	-8166.01		35550	3.88	10296	17976			5.46	Si
SLU 84	1.1	-58002	-3297	-6271.25		33220	3.88	9985	17434			5.29	Si
SLU 83	0.7	-62050	-3274	-8147.95		35538	3.88	10294	17973			5.49	Si
SLU 83	1.1	-57981	-3279	-6260.29		33208	3.88	9983	17431			5.32	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, γM = 2

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 5	0.7	-18395	-8049	-6205.69		10535	3.88	10440	18229			2.26	Si
SLV 5	1.1	-11665	-9771	-6771.16		6681	3.88	9670	16883			1.73	Si
SLV 3	0.7	-48491	-17993	-14772.06		27773	3.88	13888	24248			1.35	Si
SLV 3	1.1	-47341	-18150	-6159.28		27114	3.88	13756	24018			1.32	Si
SLV 14	0.7	-32629	13634	4480.53		18688	3.88	12071	21076			1.55	Si
SLV 14	1.1	-27986	13785	-1607.28		16029	3.88	11539	20147			1.46	Si
SLV 1	0.7	-34980	-18612	-13765.85		20034	3.88	12340	21546			1.16	Si
SLV 1	1.1	-31432	-19690	-7373.08		18002	3.88	11934	20836			1.06	Si
SLV 6	0.7	-18395	-8049	-6205.69		10535	3.88	10440	18229			2.26	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 6	1.1	-11665	-9771	-6771.16		6681	3.88	9670	16883			1.73	Si
SLV 13	0.7	-32629	13634	4480.53		18688	3.88	12071	21076			1.55	Si
SLV 13	1.1	-27986	13785	-1607.28		16029	3.88	11539	20147			1.46	Si
SLV 2	0.7	-34980	-18612	-13765.85		20034	3.88	12340	21546			1.16	Si
SLV 2	1.1	-31432	-19690	-7373.08		18002	3.88	11934	20836			1.06	Si
SLV 16	0.7	-46140	14254	3474.31		26426	3.88	13619	23778			1.67	Si
SLV 16	1.1	-43895	15325	-393.48		25141	3.88	13361	23329			1.52	Si
SLV 4	0.7	-48491	-17993	-14772.06		27773	3.88	13888	24248			1.35	Si
SLV 4	1.1	-47341	-18150	-6159.28		27114	3.88	13756	24018			1.32	Si
SLV 15	0.7	-46140	14254	3474.31		26426	3.88	13619	23778			1.67	Si
SLV 15	1.1	-43895	15325	-393.48		25141	3.88	13361	23329			1.52	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.08 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 10	143750	0.25	11414	-19930	232.38	4065.26	17.49	Si
SLV 9	143750	0.25	11414	-19930	232.38	4065.26	17.49	Si
SLV 6	143750	0.25	11647	-20336	232.38	4139.41	17.81	Si
SLV 5	143750	0.25	11647	-20336	232.38	4139.41	17.81	Si
SLV 13	143750	0.25	18980	-33138	232.38	6297.98	27.1	Si
SLV 14	143750	0.25	18980	-33138	232.38	6297.98	27.1	Si
SLV 2	143750	0.25	19755	-34493	232.38	6506.08	28	Si
SLV 1	143750	0.25	19755	-34493	232.38	6506.08	28	Si
SLV 15	143750	0.25	25697	-44867	232.38	7971.96	34.31	Si
SLV 16	143750	0.25	25697	-44867	232.38	7971.96	34.31	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.045 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 9	-5367	-19998	-1998	0	1254.3	0.89	0	3.16379	No
SLV 5	-6304	-20191	-2063	0	1343.1	0.893	0	3.16379	No
SLV 10	-5367	-19998	-1998	0	1254.3	0.89	0	3.16379	No
SLV 6	-6304	-20191	-2063	0	1343.1	0.893	0	3.16379	No
SLV 1	-27303	-35544	-2020	0.031	3445	0.945	0.47359	3.31979	No
SLV 2	-27303	-35544	-2020	0.031	3445	0.945	0.47359	3.31979	No
SLV 13	-24179	-34901	-1803	0.033	3128.4	0.94	0.50384	3.31979	No
SLV 14	-24179	-34901	-1803	0.033	3128.4	0.94	0.50384	3.31979	No
SLV 4	-44365	-48511	-1918	0.051	5178.5	0.962	0.77738	3.31979	No
SLV 3	-44365	-48511	-1918	0.051	5178.5	0.962	0.77738	3.31979	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	8.311	SLV 84	Si
V_SLV	5.28	SLV 78	Si
PF_SLV	3.159	SLV 5	Si
V_SLV	1.058	SLV 1	Si
PFFP_SLV	17.494	SLV 9	Si
R_SLV	0	SLV 5	No

Maschio 28

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.888	6.576	-8.008	6.576	L1	L3	3.88	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 83	0.7	-66612	8924.38	38151	68703.42	7.698	Si
SLU 83	1.1	-62349	7743.22	35710	67932.11	8.773	Si
SLU 79	0.7	-64198	8524.65	36769	68327.5	8.015	Si
SLU 79	1.1	-59997	7369.08	34363	67294.38	9.132	Si
SLU 84	0.7	-66600	8910.09	38145	68701.94	7.711	Si
SLU 84	1.1	-62339	7734.14	35704	67929.52	8.783	Si
SLU 77	0.7	-64673	8582.88	37040	68413.92	7.971	Si
SLU 77	1.1	-60444	7413.3	34619	67427.16	9.095	Si
SLU 74	0.7	-64056	8496.03	36687	68300.37	8.039	Si
SLU 74	1.1	-59859	7344.78	34284	67252.25	9.156	Si
SLU 81	0.7	-65996	8837.54	37798	68622.51	7.765	Si
SLU 81	1.1	-61764	7674.7	35375	67787.6	8.833	Si
SLU 80	0.7	-64186	8510.36	36762	68325.23	8.028	Si
SLU 80	1.1	-59987	7359.99	34357	67291.1	9.143	Si
SLU 78	0.7	-64661	8568.59	37034	68411.81	7.984	Si
SLU 78	1.1	-60434	7404.21	34613	67424.01	9.106	Si
SLU 75	0.7	-64044	8481.74	36680	68298.06	8.052	Si
SLU 75	1.1	-59849	7335.69	34278	67248.93	9.167	Si
SLU 82	0.7	-65984	8823.24	37791	68620.83	7.777	Si
SLU 82	1.1	-61754	7665.61	35369	67784.84	8.843	Si



Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 10	0.7	-20159	6243.89	11546	35412.88	5.672	Si
SLV 10	1.1	-13534	4643.6	7751	24590.04	5.295	Si
SLV 13	0.7	-38846	14806.43	22249	61639.44	4.163	Si
SLV 13	1.1	-34973	7791.05	20030	56724.89	7.281	Si
SLV 9	0.7	-20159	6243.89	11546	35412.88	5.672	Si
SLV 9	1.1	-13534	4643.6	7751	24590.04	5.295	Si
SLV 5	0.7	-18663	328.48	10689	33039.3	100.582	Si
SLV 5	1.1	-11885	2673.47	6807	21772.77	8.144	Si
SLV 12	0.7	-68566	10990.29	39270	90266.76	8.213	Si
SLV 12	1.1	-69292	7069.23	39686	90765.36	12.839	Si
SLV 15	0.7	-53368	16230.35	30566	77634.74	4.783	Si
SLV 15	1.1	-51700	8518.74	29611	75992.34	8.921	Si
SLV 11	0.7	-68566	10990.29	39270	90266.76	8.213	Si
SLV 11	1.1	-69292	7069.23	39686	90765.36	12.839	Si
SLV 14	0.7	-38846	14806.43	22249	61639.44	4.163	Si
SLV 14	1.1	-34973	7791.05	20030	56724.89	7.281	Si
SLV 6	0.7	-18663	328.48	10689	33039.3	100.582	Si
SLV 6	1.1	-11885	2673.47	6807	21772.77	8.144	Si
SLV 16	0.7	-53368	16230.35	30566	77634.74	4.783	Si
SLV 16	1.1	-51700	8518.74	29611	75992.34	8.921	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 83	0.7	-66612	1468	8924.38		38151	3.88	10642	18582			12.65	Si
SLU 83	1.1	-62349	1468	7743.22		35710	3.88	10317	18013			12.27	Si
SLU 78	0.7	-64661	1446	8568.59		37034	3.88	10493	18321			12.67	Si
SLU 78	1.1	-60434	1445	7404.21		34613	3.88	10171	17758			12.29	Si
SLU 75	0.7	-64044	1418	8481.74		36680	3.88	10446	18239			12.86	Si
SLU 75	1.1	-59849	1417	7335.69		34278	3.88	10126	17680			12.48	Si
SLU 77	0.7	-64673	1458	8582.88		37040	3.88	10494	18323			12.56	Si
SLU 77	1.1	-60444	1458	7413.3		34619	3.88	10171	17759			12.18	Si
SLU 82	0.7	-65984	1428	8823.24		37791	3.88	10594	18498			12.96	Si
SLU 82	1.1	-61754	1427	7665.61		35369	3.88	10271	17934			12.57	Si
SLU 84	0.7	-66600	1456	8910.09		38145	3.88	10641	18580			12.76	Si
SLU 84	1.1	-62339	1455	7734.14		35704	3.88	10316	18012			12.38	Si
SLU 79	0.7	-64198	1439	8524.65		36769	3.88	10458	18260			12.69	Si
SLU 79	1.1	-59997	1438	7369.08		34363	3.88	10137	17700			12.31	Si
SLU 74	0.7	-64056	1430	8496.03		36687	3.88	10447	18241			12.75	Si
SLU 74	1.1	-59859	1429	7344.78		34284	3.88	10127	17681			12.37	Si
SLU 81	0.7	-65996	1440	8837.54		37798	3.88	10595	18499			12.85	Si
SLU 81	1.1	-61764	1439	7674.7		35375	3.88	10272	17935			12.46	Si
SLU 80	0.7	-64186	1426	8510.36		36762	3.88	10457	18258			12.8	Si
SLU 80	1.1	-59987	1426	7359.99		34357	3.88	10136	17698			12.41	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 9	0.7	-20159	7270	6243.89		11546	3.88	10642	18582			2.56	Si
SLV 9	1.1	-13534	6631	4643.6		7751	3.88	9884	17257			2.6	Si
SLV 1	0.7	-33861	-15487	-4911.58		19393	3.88	12212	21322			1.38	Si
SLV 1	1.1	-29477	-16582	1223.96		16883	3.88	11710	20445			1.23	Si
SLV 15	0.7	-53368	17421	16230.35		30566	3.88	14447	25224			1.45	Si
SLV 15	1.1	-51700	18515	8518.74		29611	3.88	14255	24890			1.34	Si
SLV 4	0.7	-48383	-16239	-3487.66		27711	3.88	13875	24227			1.49	Si
SLV 4	1.1	-46205	-16801	1951.65		26463	3.88	13626	23791			1.42	Si
SLV 14	0.7	-38846	18174	14806.43		22249	3.88	12783	22319			1.23	Si
SLV 14	1.1	-34973	18735	7791.05		20030	3.88	12339	21545			1.15	Si
SLV 16	0.7	-53368	17421	16230.35		30566	3.88	14447	25224			1.45	Si
SLV 16	1.1	-51700	18515	8518.74		29611	3.88	14255	24890			1.34	Si
SLV 10	0.7	-20159	7270	6243.89		11546	3.88	10642	18582			2.56	Si
SLV 10	1.1	-13534	6631	4643.6		7751	3.88	9884	17257			2.6	Si
SLV 2	0.7	-33861	-15487	-4911.58		19393	3.88	12212	21322			1.38	Si
SLV 2	1.1	-29477	-16582	1223.96		16883	3.88	11710	20445			1.23	Si
SLV 3	0.7	-48383	-16239	-3487.66		27711	3.88	13875	24227			1.49	Si
SLV 3	1.1	-46205	-16801	1951.65		26463	3.88	13626	23791			1.42	Si
SLV 13	0.7	-38846	18174	14806.43		22249	3.88	12783	22319			1.23	Si
SLV 13	1.1	-34973	18735	7791.05		20030	3.88	12339	21545			1.15	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.08 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 6	143750	0.25	13101	-22874	232.38	4594.79	19.77	Si
SLV 5	143750	0.25	13101	-22874	232.38	4594.79	19.77	Si
SLV 10	143750	0.25	13701	-23921	232.38	4778.75	20.56	Si
SLV 9	143750	0.25	13701	-23921	232.38	4778.75	20.56	Si
SLV 2	143750	0.25	20222	-35308	232.38	6629.57	28.53	Si
SLV 1	143750	0.25	20222	-35308	232.38	6629.57	28.53	Si
SLV 13	143750	0.25	22222	-38800	232.38	7142.22	30.73	Si
SLV 14	143750	0.25	22222	-38800	232.38	7142.22	30.73	Si
SLV 4	143750	0.25	26927	-47014	232.38	8247.04	35.49	Si
SLV 3	143750	0.25	26927	-47014	232.38	8247.04	35.49	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.045 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 6	-12208	-23294	-1840	0	1922.5	0.913	0	3.16379	No
SLV 5	-12208	-23294	-1840	0	1922.5	0.913	0	3.16379	No
SLV 9	-14641	-24224	-1929	0	2165.9	0.92	0.00246	3.16379	No



Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 10	-14641	-24224	-1929	0	2165.9	0.92	0.00246	3.16379	No
SLV 2	-25979	-36688	-1628	0.041	3310.8	0.943	0.63876	3.31979	No
SLV 1	-25979	-36688	-1628	0.041	3310.8	0.943	0.63876	3.31979	No
SLV 13	-34089	-39789	-1922	0.043	4133.8	0.953	0.65104	3.31979	No
SLV 14	-34089	-39789	-1922	0.043	4133.8	0.953	0.65104	3.31979	No
SLV 16	-48326	-52200	-1828	0.056	5581.5	0.964	0.83762	3.31979	No
SLV 15	-48326	-52200	-1828	0.056	5581.5	0.964	0.83762	3.31979	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.698	SLU 83	Si
V_SLU	12.182	SLU 77	Si
PF_SLV	4.163	SLV 13	Si
V_SLV	1.15	SLV 13	Si
PFFP_SLV	19.772	SLV 5	Si
R_SLV	0	SLV 5	No

Maschio 29

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.008	6.576	-5.308	6.576	L1	L3	1.7	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLU 81	0.7	-19063	-2464.39	24919	11246.68	4.564	Si
SLU 81	1.1	-18378	-3149.18	24024	11014.33	3.498	Si
SLU 76	0.7	-18230	-2319.55	23831	10962.54	4.726	Si
SLU 76	1.1	-17546	-2957.41	22935	10714.63	3.623	Si
SLU 74	0.7	-18351	-2324.84	23989	11004.96	4.734	Si
SLU 74	1.1	-17666	-2971.64	23093	10759.31	3.621	Si
SLU 75	0.7	-18339	-2324.75	23973	11000.71	4.732	Si
SLU 75	1.1	-17654	-2970.94	23077	10754.83	3.62	Si
SLU 83	0.7	-19229	-2478.42	25135	11300.96	4.56	Si
SLU 83	1.1	-18544	-3164.65	24240	11071.71	3.499	Si
SLU 84	0.7	-19216	-2478.33	25119	11297	4.558	Si
SLU 84	1.1	-18532	-3163.95	24224	11067.51	3.498	Si
SLU 78	0.7	-18505	-2338.78	24189	11058.26	4.728	Si
SLU 78	1.1	-17820	-2986.41	23294	10815.48	3.622	Si
SLU 82	0.7	-19051	-2464.3	24903	11242.66	4.562	Si
SLU 82	1.1	-18366	-3148.48	24008	11010.08	3.497	Si
SLU 73	0.7	-18065	-2305.52	23614	10903.75	4.729	Si
SLU 73	1.1	-17380	-2941.94	22719	10652.75	3.621	Si
SLU 77	0.7	-18517	-2338.87	24205	11062.46	4.73	Si
SLU 77	1.1	-17832	-2987.11	23310	10819.91	3.622	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLV 4	0.7	-12946	-3895.61	16922	9479.74	2.433	Si
SLV 4	1.1	-12852	-1580.05	16800	9421.97	5.963	Si
SLV 5	0.7	-4492	-2183.81	5872	3635.04	1.665	Si
SLV 5	1.1	-2744	-2965.76	0	0	0	No, $e > l/2$
SLV 13	0.7	-11813	835.62	15441	8771.92	10.497	Si
SLV 13	1.1	-10853	-2314.18	14187	8153.99	3.523	Si
SLV 10	0.7	-5483	-773.67	7167	4387.21	5.671	Si
SLV 10	1.1	-3698	-2999.6	4834	3018.75	1.006	Si
SLV 9	0.7	-5483	-773.67	7167	4387.21	5.671	Si
SLV 9	1.1	-3698	-2999.6	4834	3018.75	1.006	Si
SLV 6	0.7	-4492	-2183.81	5872	3635.04	1.665	Si
SLV 6	1.1	-2744	-2965.76	0	0	0	No, $e > l/2$
SLV 14	0.7	-11813	835.62	15441	8771.92	10.497	Si
SLV 14	1.1	-10853	-2314.18	14187	8153.99	3.523	Si
SLV 3	0.7	-12946	-3895.61	16922	9479.74	2.433	Si
SLV 3	1.1	-12852	-1580.05	16800	9421.97	5.963	Si
SLV 2	0.7	-8511	-3864.86	11125	6575.42	1.701	Si
SLV 2	1.1	-7673	-2201.39	10030	5986.42	2.719	Si
SLV 1	0.7	-8511	-3864.86	11125	6575.42	1.701	Si
SLV 1	1.1	-7673	-2201.39	10030	5986.42	2.719	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	$\sigma 0$	σN	l'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 79	0.7	-18416	1606	-2333.73		24074	1.7	8765	6706			4.18	Si
SLU 79	1.1	-17732	1606	-2974.06		23178	1.7	8646	6614			4.12	Si
SLU 75	0.7	-18339	1621	-2324.75		23973	1.7	8752	6695			4.13	Si
SLU 75	1.1	-17654	1621	-2970.94		23077	1.7	8633	6604			4.08	Si
SLU 84	0.7	-19216	1719	-2478.33		25119	1.7	8905	6812			3.96	Si
SLU 84	1.1	-18532	1719	-3163.95		24224	1.7	8785	6721			3.91	Si
SLU 83	0.7	-19229	1721	-2478.42		25135	1.7	8907	6814			3.96	Si
SLU 83	1.1	-18544	1721	-3164.65		24240	1.7	8788	6722			3.91	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 82	0.7	-19051	1716	-2464.3		24903	1.7	8876	6790			3.96	Si
SLU 82	1.1	-18366	1716	-3148.48		24008	1.7	8757	6699			3.9	Si
SLU 74	0.7	-18351	1622	-2324.84		23989	1.7	8754	6697			4.13	Si
SLU 74	1.1	-17666	1622	-2971.64		23093	1.7	8635	6606			4.07	Si
SLU 73	0.7	-18065	1596	-2305.52		23614	1.7	8704	6659			4.17	Si
SLU 73	1.1	-17380	1596	-2941.94		22719	1.7	8585	6567			4.11	Si
SLU 81	0.7	-19063	1717	-2464.39		24919	1.7	8878	6792			3.96	Si
SLU 81	1.1	-18378	1717	-3149.18		24024	1.7	8759	6700			3.9	Si
SLU 77	0.7	-18517	1626	-2338.87		24205	1.7	8783	6719			4.13	Si
SLU 77	1.1	-17832	1626	-2987.11		23310	1.7	8664	6628			4.08	Si
SLU 78	0.7	-18505	1624	-2338.78		24189	1.7	8781	6717			4.14	Si
SLU 78	1.1	-17820	1624	-2986.41		23294	1.7	8661	6626			4.08	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 5	0.7	-4492	3648	-2183.81		9145	1.0917	10162	4992			1.37	Si
SLV 5	1.1	-2744	3965	-2965.76		0	0	8333	0			0	No, Vu<V
SLV 14	0.7	-11813	8171	835.62		15441	1.7	11422	8738			1.07	Si
SLV 14	1.1	-10853	8630	-2314.18		14187	1.7	11171	8546			0.99	No, Vu<V
SLV 15	0.7	-16248	5563	804.87		21239	1.7	12581	9625			1.73	Si
SLV 15	1.1	-16032	5771	-1692.84		20957	1.7	12525	9581			1.66	Si
SLV 3	0.7	-12946	-6078	-3895.61		17464	1.6472	11826	8766			1.44	Si
SLV 3	1.1	-12852	-6536	-1580.05		16800	1.7	11693	8945			1.37	Si
SLV 10	0.7	-5483	7140	-773.67		7167	1.7	9767	7472			1.05	Si
SLV 10	1.1	-3698	7657	-2999.6		70589	0.1164	16250	851			0.11	No, Vu<V
SLV 13	0.7	-11813	8171	835.62		15441	1.7	11422	8738			1.07	Si
SLV 13	1.1	-10853	8630	-2314.18		14187	1.7	11171	8546			0.99	No, Vu<V
SLV 6	0.7	-4492	3648	-2183.81		9145	1.0917	10162	4992			1.37	Si
SLV 6	1.1	-2744	3965	-2965.76		0	0	8333	0			0	No, Vu<V
SLV 4	0.7	-12946	-6078	-3895.61		17464	1.6472	11826	8766			1.44	Si
SLV 4	1.1	-12852	-6536	-1580.05		16800	1.7	11693	8945			1.37	Si
SLV 16	0.7	-16248	5563	804.87		21239	1.7	12581	9625			1.73	Si
SLV 16	1.1	-16032	5771	-1692.84		20957	1.7	12525	9581			1.66	Si
SLV 9	0.7	-5483	7140	-773.67		7167	1.7	9767	7472			1.05	Si
SLV 9	1.1	-3698	7657	-2999.6		70589	0.1164	16250	851			0.11	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.08 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 6	143750	0.25	6061	-4637	101.82	991.51	9.74	Si
SLV 5	143750	0.25	6061	-4637	101.82	991.51	9.74	Si
SLV 2	143750	0.25	7738	-5920	101.82	1247.63	12.25	Si
SLV 1	143750	0.25	7738	-5920	101.82	1247.63	12.25	Si
SLV 10	143750	0.25	9436	-7219	101.82	1498.75	14.72	Si
SLV 9	143750	0.25	9436	-7219	101.82	1498.75	14.72	Si
SLV 4	143750	0.25	12551	-9602	101.82	1938.46	19.04	Si
SLV 3	143750	0.25	12551	-9602	101.82	1938.46	19.04	Si
SLV 14	143750	0.25	18988	-14526	101.82	2760.45	27.11	Si
SLV 13	143750	0.25	18988	-14526	101.82	2760.45	27.11	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.045 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 16	-13118	-25202	-251	0.077	1626.6	0.949	1.18362	3.31979	No
SLV 15	-13118	-25202	-251	0.077	1626.6	0.949	1.18362	3.31979	No
SLV 11	-19009	-23094	-304	0.077	2225.3	0.961	1.157	3.16379	No
SLV 12	-19009	-23094	-304	0.077	2225.3	0.961	1.157	3.16379	No
SLV 8	-18636	-17944	-281	0.077	2187.4	0.961	1.17222	3.16379	No
SLV 7	-18636	-17944	-281	0.077	2187.4	0.961	1.17222	3.16379	No
SLV 3	-11874	-8034	-176	0.082	1500.4	0.945	1.26258	3.31979	No
SLV 4	-11874	-8034	-176	0.082	1500.4	0.945	1.26258	3.31979	No
SLV 14	-7695	-21858	-183	0.081	1077.7	0.927	1.26487	3.31979	No
SLV 13	-7695	-21858	-183	0.081	1077.7	0.927	1.26487	3.31979	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF SLU	3.497	SLU 82	Si
V SLU	3.902	SLU 81	Si
PF SLV	0	SLV 5	No
V SLV	0	SLV 5	No
PFFP SLV	9.738	SLV 5	Si
R SLV	0.357	SLV 15	No

Maschio 30

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.638	1.046	-24.603	1.046	L1	L3	4.965	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2



Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 84	-1.3	-106141	-6198.47	47506	109825.42	17.718	Si
SLU 84	0.8	-107887	-6938.8	48288	109062.52	15.718	Si
SLU 39	-1.3	-89920	-5661.58	40246	112936.79	19.948	Si
SLU 39	0.8	-92531	-6932.76	41415	112920.68	16.288	Si
SLU 81	-1.3	-105570	-6326.48	47251	110056.68	17.396	Si
SLU 81	0.8	-107348	-7418.94	48047	109306.78	14.733	Si
SLU 82	-1.3	-105111	-6115.9	47045	110236.18	18.025	Si
SLU 82	0.8	-106733	-6769.83	47771	109575.82	16.186	Si
SLU 35	-1.3	-87795	-5272.73	39295	112812.61	21.395	Si
SLU 35	0.8	-90080	-6592.85	40318	112941.17	17.131	Si
SLU 41	-1.3	-90949	-5744.15	40707	112952.65	19.664	Si
SLU 41	0.8	-93684	-7101.73	41931	112854.33	15.891	Si
SLU 79	-1.3	-102790	-6018.42	46006	111056.43	18.453	Si
SLU 79	0.8	-104123	-7044.93	46603	110603.23	15.7	Si
SLU 77	-1.3	-103445	-5937.63	46300	110839.83	18.667	Si
SLU 77	0.8	-104898	-7079.03	46950	110317.86	15.584	Si
SLU 83	-1.3	-106600	-6409.05	47712	109633.03	17.106	Si
SLU 83	0.8	-108502	-7587.91	48563	108774.14	14.335	Si
SLU 74	-1.3	-102416	-5855.06	45839	111174.89	18.988	Si
SLU 74	0.8	-103744	-6910.06	46433	110737.08	16.025	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 13	-1.3	-63670	-47374.79	28497	121196.72	2.558	Si
SLV 13	0.8	-50070	-17877.97	22410	101501.21	5.677	Si
SLV 14	-1.3	-63670	-47374.79	28497	121196.72	2.558	Si
SLV 14	0.8	-50070	-17877.97	22410	101501.21	5.677	Si
SLV 9	-1.3	-75075	-19478.73	33602	135120.24	6.937	Si
SLV 9	0.8	-70699	-12052.8	31643	130057.92	10.791	Si
SLV 15	-1.3	-58983	-45645.78	26400	114789.3	2.515	Si
SLV 15	0.8	-45457	-15338.71	20346	94056.9	6.132	Si
SLV 1	-1.3	-80633	38091.61	36090	141048.71	3.703	Si
SLV 1	0.8	-93634	7229.59	41909	152721.01	21.124	Si
SLV 3	-1.3	-75947	39820.61	33992	136087.2	3.418	Si
SLV 3	0.8	-89021	9768.85	39844	148931.46	15.246	Si
SLV 10	-1.3	-75075	-19478.73	33602	135120.24	6.937	Si
SLV 10	0.8	-70699	-12052.8	31643	130057.92	10.791	Si
SLV 16	-1.3	-58983	-45645.78	26400	114789.3	2.515	Si
SLV 16	0.8	-45457	-15338.71	20346	94056.9	6.132	Si
SLV 4	-1.3	-75947	39820.61	33992	136087.2	3.418	Si
SLV 4	0.8	-89021	9768.85	39844	148931.46	15.246	Si
SLV 2	-1.3	-80633	38091.61	36090	141048.71	3.703	Si
SLV 2	0.8	-93634	7229.59	41909	152721.01	21.124	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 84	-1.3	-106141	14425	-6198.47	47506	4.965	10833	24204				1.68	Si
SLU 84	0.8	-107887	14995	-6938.8	48288	4.965	10833	24204				1.61	Si
SLU 74	-1.3	-102416	14085	-5855.06	45839	4.965	10833	24204				1.72	Si
SLU 74	0.8	-103744	14639	-6910.06	46433	4.965	10833	24204				1.65	Si
SLU 83	-1.3	-106600	14817	-6409.05	47712	4.965	10833	24204				1.63	Si
SLU 83	0.8	-108502	15386	-7587.91	48563	4.965	10833	24204				1.57	Si
SLU 79	-1.3	-102790	14077	-6018.42	46006	4.965	10833	24204				1.72	Si
SLU 79	0.8	-104123	14634	-7044.93	46603	4.965	10833	24204				1.65	Si
SLU 82	-1.3	-105111	14239	-6115.9	47045	4.965	10833	24204				1.7	Si
SLU 82	0.8	-106733	14801	-6769.83	47771	4.965	10833	24204				1.64	Si
SLU 78	-1.3	-102986	13879	-5727.05	46094	4.965	10833	24204				1.74	Si
SLU 78	0.8	-104283	14441	-6429.93	46675	4.965	10833	24204				1.68	Si
SLU 77	-1.3	-103445	14271	-5937.63	46300	4.965	10833	24204				1.7	Si
SLU 77	0.8	-104898	14832	-7079.03	46950	4.965	10833	24204				1.63	Si
SLU 80	-1.3	-102331	13685	-5807.84	45801	4.965	10833	24204				1.77	Si
SLU 80	0.8	-103509	14242	-6395.82	46328	4.965	10833	24204				1.7	Si
SLU 81	-1.3	-105570	14631	-6326.48	47251	4.965	10833	24204				1.65	Si
SLU 81	0.8	-107348	15193	-7418.94	48047	4.965	10833	24204				1.59	Si
SLU 75	-1.3	-101957	13693	-5644.48	45634	4.965	10833	24204				1.77	Si
SLU 75	0.8	-103129	14247	-6260.96	46158	4.965	10833	24204				1.7	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 2	-1.3	-80633	38112	38091.61	36090	4.965	15551	34745				0.91	No, Vu<V
SLV 2	0.8	-93634	38013	7229.59	41909	4.965	16250	36307				0.96	No, Vu<V
SLV 1	-1.3	-80633	38112	38091.61	36090	4.965	15551	34745				0.91	No, Vu<V
SLV 1	0.8	-93634	38013	7229.59	41909	4.965	16250	36307				0.96	No, Vu<V
SLV 4	-1.3	-75947	37379	39820.61	33992	4.965	15132	33808				0.9	No, Vu<V
SLV 4	0.8	-89021	38507	9768.85	39844	4.965	16250	36307				0.94	No, Vu<V
SLV 14	-1.3	-63670	-19230	-47374.79	28497	4.965	14033	31353				1.63	Si
SLV 14	0.8	-50070	-19589	-17877.97	22410	4.965	12815	28633				1.46	Si
SLV 13	-1.3	-63670	-19230	-47374.79	28497	4.965	14033	31353				1.63	Si
SLV 13	0.8	-50070	-19589	-17877.97	22410	4.965	12815	28633				1.46	Si
SLV 16	-1.3	-58983	-19962	-45645.78	26400	4.965	13613	30415				1.52	Si
SLV 16	0.8	-45457	-19095	-15338.71	20346	4.965	12402	27710				1.45	Si
SLV 7	-1.3	-64542	16455	11924.55	28887	4.965	14111	31527				1.92	Si
SLV 7	0.8	-68392	18922	3943.68	30611	4.965	14456	32297				1.71	Si
SLV 15	-1.3	-58983	-19962	-45645.78	26400	4.965	13613	30415				1.52	Si
SLV 15	0.8	-45457	-19095	-15338.71	20346	4.965	12402	27710				1.45	Si
SLV 8	-1.3	-64542	16455	11924.55	28887	4.965	14111	31527				1.92	Si
SLV 8	0.8	-68392	18922	3943.68	30611	4.965	14456	32297				1.71	Si
SLV 3	-1.3	-75947	37379	39820.61	33992	4.965	15132	33808				0.9	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 3	0.8	-89021	38507	9768.85		39844	4.965	16250	36307			0.94	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.08 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 16	143750	0.25	22497	-50265	297.37	9227.25	31.03	Si
SLV 15	143750	0.25	22497	-50265	297.37	9227.25	31.03	Si
SLV 13	143750	0.25	24734	-55261	297.37	9916.89	33.35	Si
SLV 14	143750	0.25	24734	-55261	297.37	9916.89	33.35	Si
SLV 12	143750	0.25	25050	-55968	297.37	10011.16	33.67	Si
SLV 11	143750	0.25	25050	-55968	297.37	10011.16	33.67	Si
SLV 8	143750	0.25	29475	-65853	297.37	11242.81	37.81	Si
SLV 7	143750	0.25	29475	-65853	297.37	11242.81	37.81	Si
SLV 10	143750	0.25	32504	-72623	297.37	11993.35	40.33	Si
SLV 9	143750	0.25	32504	-72623	297.37	11993.35	40.33	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 0.045 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 1	-87061	-80633	92	0.088	9710.2	0.973	1.30722	3.31979	No
SLV 2	-87061	-80633	92	0.088	9710.2	0.973	1.30722	3.31979	No
SLV 3	-83794	-75947	-58	0.088	9377.4	0.972	1.31633	3.31979	No
SLV 4	-83794	-75947	-58	0.088	9377.4	0.972	1.31633	3.31979	No
SLV 5	-75741	-80164	283	0.086	8557.4	0.97	1.28478	3.16379	No
SLV 6	-75741	-80164	283	0.086	8557.4	0.97	1.28478	3.16379	No
SLV 10	-62770	-75075	295	0.086	7237.1	0.965	1.29475	3.16379	No
SLV 9	-62770	-75075	295	0.086	7237.1	0.965	1.29475	3.16379	No
SLV 7	-64850	-64542	-219	0.087	7448.8	0.966	1.30882	3.16379	No
SLV 8	-64850	-64542	-219	0.087	7448.8	0.966	1.30882	3.16379	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	14.335	SLU 83	Si
V_SLU	1.573	SLU 83	Si
PF_SLV	2.515	SLV 15	Si
V_SLV	0.904	SLV 3	No
PFFP_SLV	31.03	SLV 15	Si
R_SLV	0.394	SLV 1	No

Maschio 31

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-14.963	1.046	-18.838	1.046	L1	L3	3.875	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 84	-1.3	-114371	-4101.43	65589	43169.04	10.525	Si
SLU 84	0.8	-107780	-8427.38	61809	50371.27	5.977	Si
SLU 81	-1.3	-114540	-3138.91	65686	42969.71	13.689	Si
SLU 81	0.8	-107437	-7786.04	61613	50713.67	6.513	Si
SLU 80	-1.3	-110352	-4092.93	63284	47702.44	11.655	Si
SLU 80	0.8	-103671	-8237.97	59453	54261.6	6.587	Si
SLU 76	-1.3	-107701	-4506.59	61764	50451.05	11.195	Si
SLU 76	0.8	-101345	-8384.61	58119	56259.43	6.71	Si
SLU 77	-1.3	-112868	-3220.63	64727	44915.89	13.946	Si
SLU 77	0.8	-105695	-7859.83	60613	52403.37	6.667	Si
SLU 79	-1.3	-112043	-3267.23	64254	45848.42	14.033	Si
SLU 79	0.8	-104861	-7765.19	60135	53182.65	6.849	Si
SLU 82	-1.3	-112848	-3964.62	64716	44938.93	11.335	Si
SLU 82	0.8	-106248	-8258.83	60930	51876.24	6.281	Si
SLU 83	-1.3	-116063	-3275.72	66559	41129.53	12.556	Si
SLU 83	0.8	-108970	-7954.6	62492	49158.96	6.18	Si
SLU 75	-1.3	-109653	-3909.52	62884	48445.1	12.392	Si
SLU 75	0.8	-102972	-8164.06	59052	54877.4	6.722	Si
SLU 78	-1.3	-111177	-4046.33	63757	46807.98	11.568	Si
SLU 78	0.8	-104505	-8332.61	59931	53509.38	6.422	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 3	-1.3	-72740	43848.88	41715	92819.29	2.117	Si
SLV 3	0.8	-68796	-12684.97	39453	90254.06	7.115	Si
SLV 2	-1.3	-67598	33564.79	38766	89418.19	2.664	Si
SLV 2	0.8	-64736	-9639.97	37124	87317.08	9.058	Si
SLV 1	-1.3	-67598	33564.79	38766	89418.19	2.664	Si
SLV 1	0.8	-64736	-9639.97	37124	87317.08	9.058	Si
SLV 9	-1.3	-67928	-31442.32	38955	89651.22	2.851	Si
SLV 9	0.8	-63357	1693.93	36334	86252.1	50.918	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 4	-1.3	-72740	43848.88	41715	92819.29	2.117	Si
SLV 4	0.8	-68796	-12684.97	39453	90254.06	7.115	Si
SLV 14	-1.3	-77337	-47987.53	44351	95451.93	1.989	Si
SLV 14	0.8	-69904	2331.4	40088	91002.98	39.034	Si
SLV 13	-1.3	-77337	-47987.53	44351	95451.93	1.989	Si
SLV 13	0.8	-69904	2331.4	40088	91002.98	39.034	Si
SLV 10	-1.3	-67928	-31442.32	38955	89651.22	2.851	Si
SLV 10	0.8	-63357	1693.93	36334	86252.1	50.918	Si
SLV 15	-1.3	-82479	-37703.44	47300	97942.12	2.598	Si
SLV 15	0.8	-73965	-713.6	42417	93558.25	131.107	Si
SLV 16	-1.3	-82479	-37703.44	47300	97942.12	2.598	Si
SLV 16	0.8	-73965	-713.6	42417	93558.25	131.107	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 73	-1.3	-106177	3144	-4369.78		60890	3.875	10833	18891			6.01	Si
SLU 73	0.8	-99813	3154	-8216.05		57240	3.875	10833	18891			5.99	Si
SLU 83	-1.3	-116063	3004	-3275.72		66559	3.875	10833	18891			6.29	Si
SLU 83	0.8	-108970	3014	-7954.6		62492	3.875	10833	18891			6.27	Si
SLU 63	-1.3	-102763	2943	-3785.13		58932	3.875	10833	18891			6.42	Si
SLU 63	0.8	-96002	2952	-7821.02		55055	3.875	10833	18891			6.4	Si
SLU 80	-1.3	-110352	3054	-4092.93		63284	3.875	10833	18891			6.19	Si
SLU 80	0.8	-103671	3064	-8237.97		59453	3.875	10833	18891			6.17	Si
SLU 82	-1.3	-112848	3184	-3964.62		64716	3.875	10833	18891			5.93	Si
SLU 82	0.8	-106248	3194	-8258.83		60930	3.875	10833	18891			5.91	Si
SLU 81	-1.3	-114540	2982	-3138.91		65686	3.875	10833	18891			6.33	Si
SLU 81	0.8	-107437	2992	-7786.04		61613	3.875	10833	18891			6.31	Si
SLU 84	-1.3	-114371	3206	-4101.43		65589	3.875	10833	18891			5.89	Si
SLU 84	0.8	-107780	3216	-8427.38		61809	3.875	10833	18891			5.87	Si
SLU 76	-1.3	-107701	3166	-4506.59		61764	3.875	10833	18891			5.97	Si
SLU 76	0.8	-101345	3176	-8384.61		58119	3.875	10833	18891			5.95	Si
SLU 75	-1.3	-109653	3106	-3909.52		62884	3.875	10833	18891			6.08	Si
SLU 75	0.8	-102972	3116	-8164.06		59052	3.875	10833	18891			6.06	Si
SLU 78	-1.3	-111177	3128	-4046.33		63757	3.875	10833	18891			6.04	Si
SLU 78	0.8	-104505	3138	-8332.61		59931	3.875	10833	18891			6.02	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 13	-1.3	-77337	-23210	-47987.53		44351	3.875	16250	28336			1.22	Si
SLV 13	0.8	-69904	-22569	2331.4		40088	3.875	16250	28336			1.26	Si
SLV 2	-1.3	-67598	23598	33564.79		38766	3.875	16086	28051			1.19	Si
SLV 2	0.8	-64736	23796	-9639.97		37124	3.875	15758	27478			1.15	Si
SLV 14	-1.3	-77337	-23210	-47987.53		44351	3.875	16250	28336			1.22	Si
SLV 14	0.8	-69904	-22569	2331.4		40088	3.875	16250	28336			1.26	Si
SLV 7	-1.3	-82149	14636	27303.68		47110	3.875	16250	28336			1.94	Si
SLV 7	0.8	-75343	13200	-12047.49		43208	3.875	16250	28336			2.15	Si
SLV 4	-1.3	-72740	27023	43848.88		41715	3.875	16250	28336			1.05	Si
SLV 4	0.8	-68796	26395	-12684.97		39453	3.875	16224	28291			1.07	Si
SLV 3	-1.3	-72740	27023	43848.88		41715	3.875	16250	28336			1.05	Si
SLV 3	0.8	-68796	26395	-12684.97		39453	3.875	16224	28291			1.07	Si
SLV 1	-1.3	-67598	23598	33564.79		38766	3.875	16086	28051			1.19	Si
SLV 1	0.8	-64736	23796	-9639.97		37124	3.875	15758	27478			1.15	Si
SLV 8	-1.3	-82149	14636	27303.68		47110	3.875	16250	28336			1.94	Si
SLV 8	0.8	-75343	13200	-12047.49		43208	3.875	16250	28336			2.15	Si
SLV 15	-1.3	-82479	-19785	-37703.44		47300	3.875	16250	28336			1.43	Si
SLV 15	0.8	-73965	-19970	-713.6		42417	3.875	16250	28336			1.42	Si
SLV 16	-1.3	-82479	-19785	-37703.44		47300	3.875	16250	28336			1.43	Si
SLV 16	0.8	-73965	-19970	-713.6		42417	3.875	16250	28336			1.42	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.08 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 6	143750	0.25	36272	-63249	232.08	10006.51	43.12	Si
SLV 5	143750	0.25	36272	-63249	232.08	10006.51	43.12	Si
SLV 10	143750	0.25	37329	-65092	232.08	10171.37	43.83	Si
SLV 9	143750	0.25	37329	-65092	232.08	10171.37	43.83	Si
SLV 2	143750	0.25	37840	-65983	232.08	10248.56	44.16	Si
SLV 1	143750	0.25	37840	-65983	232.08	10248.56	44.16	Si
SLV 4	143750	0.25	40241	-70170	232.08	10588.57	45.62	Si
SLV 3	143750	0.25	40241	-70170	232.08	10588.57	45.62	Si
SLV 13	143750	0.25	41362	-72126	232.08	10734.75	46.25	Si
SLV 14	143750	0.25	41362	-72126	232.08	10734.75	46.25	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.045 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 5	-60610	-65006	1173	0.071	6831.2	0.97	1.06321	3.16379	No
SLV 6	-60610	-65006	1173	0.071	6831.2	0.97	1.06321	3.16379	No
SLV 12	-59729	-85071	-1075	0.072	6741.4	0.97	1.08389	3.16379	No
SLV 11	-59729	-85071	-1075	0.072	6741.4	0.97	1.08389	3.16379	No
SLV 10	-62067	-67928	983	0.074	6979.5	0.971	1.10974	3.16379	No
SLV 9	-62067	-67928	983	0.074	6979.5	0.971	1.10974	3.16379	No
SLV 2	-58093	-67598	675	0.078	6574.9	0.969	1.17655	3.1979	No
SLV 1	-58093	-67598	675	0.078	6574.9	0.969	1.17655	3.1979	No
SLV 7	-58272	-82149	-885	0.075	6593.1	0.969	1.12635	3.16379	No
SLV 8	-58272	-82149	-885	0.075	6593.1	0.969	1.12635	3.16379	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
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Sismicad 12.19 - Licenza assegnata a Sidel ingegneria Srl - Via Isonzo, 13 - Villanova di Castenaso (BO)



Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.977	SLU 84	Si
V_SLU	5.874	SLU 84	Si
PF_SLV	1.989	SLV 13	Si
V_SLV	1.049	SLV 3	Si
PFFP_SLV	43.116	SLV 5	Si
R_SLV	0.336	SLV 5	No

Maschio 32

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.583	1.046	-14.163	1.046	L1	L3	0.58	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ ₀	f _{v0}	μ	φ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLU 74	-1.3	-19939	-271.11	76395	359.41	1.326	Si
SLU 74	0.86	-15899	-477.91	60915	1162.78	2.433	Si
SLU 80	-1.3	-20032	-273.64	76751	335.68	1.227	Si
SLU 80	0.86	-15964	-479.78	61165	1153.35	2.404	Si
SLU 81	-1.3	-20412	-279.45	78206	236.36	0.846	No, M>Mu
SLU 81	0.86	-16311	-489.58	62493	1101.26	2.249	Si
SLU 82	-1.3	-20352	-276.32	77977	252.21	0.913	No, M>Mu
SLU 82	0.86	-16240	-488.14	62220	1112.23	2.278	Si
SLU 75	-1.3	-19880	-267.98	76167	374.5	1.397	Si
SLU 75	0.86	-15828	-476.46	60642	1172.94	2.462	Si
SLU 78	-1.3	-20189	-274.11	77352	295.14	1.077	Si
SLU 78	0.86	-16099	-484.23	61680	1133.52	2.341	Si
SLU 77	-1.3	-20248	-277.25	77580	279.55	1.008	Si
SLU 77	0.86	-16170	-485.67	61953	1122.83	2.312	Si
SLU 84	-1.3	-20661	-282.45	79163	168.86	0.598	No, M>Mu
SLU 84	0.86	-16511	-495.91	63259	1069.76	2.157	Si
SLU 83	-1.3	-20721	-285.59	79391	152.51	0.534	No, M>Mu
SLU 83	0.86	-16582	-497.35	63531	1058.27	2.128	Si
SLU 79	-1.3	-20092	-276.77	76980	320.35	1.157	Si
SLU 79	0.86	-16035	-481.22	61438	1142.92	2.375	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLV 9	-1.3	-8449	-679.08	32373	1801.11	2.652	Si
SLV 9	0.86	-13742	-255.78	52652	2267.95	8.867	Si
SLV 1	-1.3	-8266	1136.84	31671	1775.83	1.562	Si
SLV 1	0.86	-5905	-283.29	22624	1395.36	4.926	Si
SLV 10	-1.3	-8449	-679.08	32373	1801.11	2.652	Si
SLV 10	0.86	-13742	-255.78	52652	2267.95	8.867	Si
SLV 15	-1.3	-18729	-1494.64	71758	2241.65	1.5	Si
SLV 15	0.86	-15340	-357.94	58773	2308.76	6.45	Si
SLV 16	-1.3	-18729	-1494.64	71758	2241.65	1.5	Si
SLV 16	0.86	-15340	-357.94	58773	2308.76	6.45	Si
SLV 4	-1.3	-11909	1194.89	45627	2163.91	1.811	Si
SLV 4	0.86	-4967	-325.14	19029	1216	3.74	Si
SLV 14	-1.3	-15086	-1552.69	57801	2305.38	1.485	Si
SLV 14	0.86	-16278	-316.09	62368	2311.09	7.312	Si
SLV 2	-1.3	-8266	1136.84	31671	1775.83	1.562	Si
SLV 2	0.86	-5905	-283.29	22624	1395.36	4.926	Si
SLV 3	-1.3	-11909	1194.89	45627	2163.91	1.811	Si
SLV 3	0.86	-4967	-325.14	19029	1216	3.74	Si
SLV 13	-1.3	-15086	-1552.69	57801	2305.38	1.485	Si
SLV 13	0.86	-16278	-316.09	62368	2311.09	7.312	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 78	-1.3	-20189	-378	-274.11		77352	0.58	10833	2827			7.47	Si
SLU 78	0.86	-16099	-252	-484.23		61680	0.58	10833	2827			11.24	Si
SLU 75	-1.3	-19880	-371	-267.98		76167	0.58	10833	2827			7.63	Si
SLU 75	0.86	-15828	-246	-476.46		60642	0.58	10833	2827			11.52	Si
SLU 81	-1.3	-20412	-390	-279.45		78206	0.58	10833	2827			7.25	Si
SLU 81	0.86	-16311	-251	-489.58		62493	0.58	10833	2827			11.28	Si
SLU 83	-1.3	-20721	-397	-285.59		79391	0.58	10833	2827			7.11	Si
SLU 83	0.86	-16582	-257	-497.35		63531	0.58	10833	2827			11.01	Si
SLU 79	-1.3	-20092	-383	-276.77		76980	0.58	10833	2827			7.39	Si
SLU 79	0.86	-16035	-249	-481.22		61438	0.58	10833	2827			11.38	Si
SLU 80	-1.3	-20032	-377	-273.64		76751	0.58	10833	2827			7.5	Si
SLU 80	0.86	-15964	-249	-479.78		61165	0.58	10833	2827			11.35	Si
SLU 74	-1.3	-19939	-376	-271.11		76395	0.58	10833	2827			7.51	Si
SLU 74	0.86	-15899	-245	-477.91		60915	0.58	10833	2827			11.54	Si
SLU 84	-1.3	-20661	-392	-282.45		79163	0.58	10833	2827			7.22	Si
SLU 84	0.86	-16511	-257	-495.91		63259	0.58	10833	2827			10.99	Si
SLU 82	-1.3	-20352	-384	-276.32		77977	0.58	10833	2827			7.36	Si
SLU 82	0.86	-16240	-251	-488.14		62220	0.58	10833	2827			11.26	Si
SLU 77	-1.3	-20248	-384	-277.25		77580	0.58	10833	2827			7.36	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 77	0.86	-16170	-251	-485.67		61953	0.58	10833	2827			11.26	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 1	-1.3	-8266	790	1136.84		40159	0.4574	16250	3345			4.23	Si
SLV 1	0.86	-5905	57	-283.29		22624	0.58	12858	3356			58.62	Si
SLV 13	-1.3	-15086	-1474	-1552.69		59734	0.5612	16250	4104			2.78	Si
SLV 13	0.86	-16278	-529	-316.09		62368	0.58	16250	4241			8.01	Si
SLV 16	-1.3	-18729	-1282	-1494.64		71758	0.58	16250	4241			3.31	Si
SLV 16	0.86	-15340	-375	-357.94		58773	0.58	16250	4241			11.31	Si
SLV 3	-1.3	-11909	982	1194.89		46510	0.569	16250	4161			4.24	Si
SLV 3	0.86	-4967	212	-325.14		19029	0.58	12139	3168			14.98	Si
SLV 15	-1.3	-18729	-1282	-1494.64		71758	0.58	16250	4241			3.31	Si
SLV 15	0.86	-15340	-375	-357.94		58773	0.58	16250	4241			11.31	Si
SLV 14	-1.3	-15086	-1474	-1552.69		59734	0.5612	16250	4104			2.78	Si
SLV 14	0.86	-16278	-529	-316.09		62368	0.58	16250	4241			8.01	Si
SLV 10	-1.3	-8449	-905	-679.08		32373	0.58	14808	3865			4.27	Si
SLV 10	0.86	-13742	-504	-255.78		52652	0.58	16250	4241			8.41	Si
SLV 2	-1.3	-8266	790	1136.84		40159	0.4574	16250	3345			4.23	Si
SLV 2	0.86	-5905	57	-283.29		22624	0.58	12858	3356			58.62	Si
SLV 4	-1.3	-11909	982	1194.89		46510	0.569	16250	4161			4.24	Si
SLV 4	0.86	-4967	212	-325.14		19029	0.58	12139	3168			14.98	Si
SLV 9	-1.3	-8449	-905	-679.08		32373	0.58	14808	3865			4.27	Si
SLV 9	0.86	-13742	-504	-255.78		52652	0.58	16250	4241			8.41	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.08 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 2	143750	0.25	24015	-6268	34.74	1133.09	32.62	Si
SLV 1	143750	0.25	24015	-6268	34.74	1133.09	32.62	Si
SLV 4	143750	0.25	31119	-8122	34.74	1362.04	39.21	Si
SLV 3	143750	0.25	31119	-8122	34.74	1362.04	39.21	Si
SLV 6	143750	0.25	32048	-8365	34.74	1388.4	39.97	Si
SLV 5	143750	0.25	32048	-8365	34.74	1388.4	39.97	Si
SLV 16	143750	0.25	77753	-20294	34.74	1660.48	47.8	Si
SLV 15	143750	0.25	77753	-20294	34.74	1660.48	47.8	Si
SLV 9	143750	0.25	46038	-12016	34.74	1684.93	48.5	Si
SLV 10	143750	0.25	46038	-12016	34.74	1684.93	48.5	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.045 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 14	-11619	-15086	107	0.079	1281.9	0.976	1.17992	3.31979	No
SLV 13	-11619	-15086	107	0.079	1281.9	0.976	1.17992	3.31979	No
SLV 4	-4917	-11909	-82	0.078	599.7	0.952	1.19568	3.31979	No
SLV 3	-4917	-11909	-82	0.078	599.7	0.952	1.19568	3.31979	No
SLV 15	-12016	-18729	73	0.082	1322.3	0.977	1.22127	3.31979	No
SLV 16	-12016	-18729	73	0.082	1322.3	0.977	1.22127	3.31979	No
SLV 10	-8671	-8449	92	0.079	981.7	0.969	1.19057	3.16379	No
SLV 9	-8671	-8449	92	0.079	981.7	0.969	1.19057	3.16379	No
SLV 7	-7864	-18546	-68	0.082	899.5	0.967	1.23072	3.16379	No
SLV 8	-7864	-18546	-68	0.082	899.5	0.967	1.23072	3.16379	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0.534	SLU 83	No
V_SLU	7.114	SLU 83	Si
PF_SLV	1.485	SLV 13	Si
V_SLV	2.785	SLV 13	Si
PFFP_SLV	32.618	SLV 1	Si
R_SLV	0.355	SLV 13	No

Maschio 33

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-12.238	1.046	-12.613	1.046	L1	L3	0.375	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 80	-1.3	-9895	-148.87	58638	519.76	3.491	Si
SLU 80	0.86	-7509	-42.24	44497	638.83	15.124	Si
SLU 79	-1.3	-9924	-149.25	58811	517.35	3.466	Si
SLU 79	0.86	-7533	-42.44	44638	638.41	15.044	Si
SLU 75	-1.3	-9818	-145.48	58183	526.01	3.616	Si
SLU 75	0.86	-7442	-42.38	44098	639.94	15.101	Si
SLU 83	-1.3	-10236	-150.92	60660	490.05	3.247	Si
SLU 83	0.86	-7777	-44.43	46086	633.2	14.253	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 78	-1.3	-9969	-150	59074	513.63	3.424	Si
SLU 78	0.86	-7571	-42.67	44865	637.7	14.944	Si
SLU 77	-1.3	-9998	-150.38	59247	511.15	3.399	Si
SLU 77	0.86	-7595	-42.87	45006	637.24	14.865	Si
SLU 84	-1.3	-10207	-150.55	60487	492.71	3.273	Si
SLU 84	0.86	-7753	-44.23	45945	633.78	14.329	Si
SLU 82	-1.3	-10057	-146.03	59597	506.08	3.466	Si
SLU 82	0.86	-7624	-43.93	45178	636.66	14.491	Si
SLU 74	-1.3	-9848	-145.85	58356	523.66	3.59	Si
SLU 74	0.86	-7465	-42.57	44239	639.56	15.022	Si
SLU 81	-1.3	-10086	-146.4	59770	503.53	3.439	Si
SLU 81	0.86	-7648	-44.13	45319	636.16	14.416	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 9	-1.3	-6193	-243.17	36699	812.42	3.341	Si
SLV 9	0.86	-4723	6.6	27988	682.71	103.49	Si
SLV 16	-1.3	-10848	-470.59	64284	963.89	2.048	Si
SLV 16	0.86	-8706	20.28	51590	943.13	46.508	Si
SLV 2	-1.3	-2506	275.38	14852	412.8	1.499	Si
SLV 2	0.86	-1302	-77.5	7715	228.68	2.951	Si
SLV 3	-1.3	-3461	293.92	20512	540.07	1.837	Si
SLV 3	0.86	-2068	-88.81	12253	348.83	3.928	Si
SLV 1	-1.3	-2506	275.38	14852	412.8	1.499	Si
SLV 1	0.86	-1302	-77.5	7715	228.68	2.951	Si
SLV 14	-1.3	-9893	-489.13	58623	964.94	1.973	Si
SLV 14	0.86	-7940	31.59	47051	915.46	28.983	Si
SLV 10	-1.3	-6193	-243.17	36699	812.42	3.341	Si
SLV 10	0.86	-4723	6.6	27988	682.71	103.49	Si
SLV 15	-1.3	-10848	-470.59	64284	963.89	2.048	Si
SLV 15	0.86	-8706	20.28	51590	943.13	46.508	Si
SLV 4	-1.3	-3461	293.92	20512	540.07	1.837	Si
SLV 4	0.86	-2068	-88.81	12253	348.83	3.928	Si
SLV 13	-1.3	-9893	-489.13	58623	964.94	1.973	Si
SLV 13	0.86	-7940	31.59	47051	915.46	28.983	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 84	-1.3	-10207	-129	-150.55		60487	0.375	10833	1828			14.17	Si
SLU 84	0.86	-7753	-332	-44.23		45945	0.375	10833	1828			5.51	Si
SLU 81	-1.3	-10086	-125	-146.4		59770	0.375	10833	1828			14.63	Si
SLU 81	0.86	-7648	-327	-44.13		45319	0.375	10833	1828			5.58	Si
SLU 74	-1.3	-9848	-125	-145.85		58356	0.375	10833	1828			14.6	Si
SLU 74	0.86	-7465	-324	-42.57		44239	0.375	10833	1828			5.64	Si
SLU 82	-1.3	-10057	-125	-146.03		59597	0.375	10833	1828			14.66	Si
SLU 82	0.86	-7624	-326	-43.93		45178	0.375	10833	1828			5.61	Si
SLU 78	-1.3	-9969	-129	-150		59074	0.375	10833	1828			14.14	Si
SLU 78	0.86	-7571	-329	-42.67		44865	0.375	10833	1828			5.56	Si
SLU 83	-1.3	-10236	-129	-150.92		60660	0.375	10833	1828			14.14	Si
SLU 83	0.86	-7777	-333	-44.43		46086	0.375	10833	1828			5.48	Si
SLU 79	-1.3	-9924	-129	-149.25		58811	0.375	10833	1828			14.22	Si
SLU 79	0.86	-7533	-326	-42.44		44638	0.375	10833	1828			5.61	Si
SLU 80	-1.3	-9895	-128	-148.87		58638	0.375	10833	1828			14.25	Si
SLU 80	0.86	-7509	-324	-42.24		44497	0.375	10833	1828			5.63	Si
SLU 75	-1.3	-9818	-125	-145.48		58183	0.375	10833	1828			14.63	Si
SLU 75	0.86	-7442	-323	-42.38		44098	0.375	10833	1828			5.66	Si
SLU 77	-1.3	-9998	-130	-150.38		59247	0.375	10833	1828			14.11	Si
SLU 77	0.86	-7595	-330	-42.87		45006	0.375	10833	1828			5.54	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 15	-1.3	-10848	-435	-470.59		64284	0.375	16250	2742			6.3	Si
SLV 15	0.86	-8706	233	20.28		51590	0.375	16250	2742			11.76	Si
SLV 14	-1.3	-9893	-444	-489.13		58623	0.375	16250	2742			6.17	Si
SLV 14	0.86	-7940	237	31.59		47051	0.375	16250	2742			11.58	Si
SLV 4	-1.3	-3461	276	293.92		24993	0.3078	13332	1846			6.68	Si
SLV 4	0.86	-2068	-676	-88.81		12253	0.375	10784	1820			2.69	Si
SLV 13	-1.3	-9893	-444	-489.13		58623	0.375	16250	2742			6.17	Si
SLV 13	0.86	-7940	237	31.59		47051	0.375	16250	2742			11.58	Si
SLV 1	-1.3	-2506	267	275.38		23917	0.2329	13117	1374			5.14	Si
SLV 1	0.86	-1302	-672	-77.5		7715	0.375	9876	1667			2.48	Si
SLV 5	-1.3	-3977	7	-13.82		23568	0.375	13047	2202			294.51	Si
SLV 5	0.86	-2732	-350	-26.13		16187	0.375	11571	1953			5.58	Si
SLV 3	-1.3	-3461	276	293.92		24993	0.3078	13332	1846			6.68	Si
SLV 3	0.86	-2068	-676	-88.81		12253	0.375	10784	1820			2.69	Si
SLV 16	-1.3	-10848	-435	-470.59		64284	0.375	16250	2742			6.3	Si
SLV 16	0.86	-8706	233	20.28		51590	0.375	16250	2742			11.76	Si
SLV 2	-1.3	-2506	267	275.38		23917	0.2329	13117	1374			5.14	Si
SLV 2	0.86	-1302	-672	-77.5		7715	0.375	9876	1667			2.48	Si
SLV 6	-1.3	-3977	7	-13.82		23568	0.375	13047	2202			294.51	Si
SLV 6	0.86	-2732	-350	-26.13		16187	0.375	11571	1953			5.58	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.08 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 2	143750	0.25	18613	-3141	22.46	599.06	26.67	Si
SLV 1	143750	0.25	18613	-3141	22.46	599.06	26.67	Si
SLV 3	143750	0.25	25252	-4261	22.46	760.64	33.87	Si
SLV 4	143750	0.25	25252	-4261	22.46	760.64	33.87	Si



Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	143750	0.25	26890	-4538	22.46	796.3	35.45	Si
SLV 5	143750	0.25	26890	-4538	22.46	796.3	35.45	Si
SLV 9	143750	0.25	40625	-6855	22.46	1029.63	45.84	Si
SLV 10	143750	0.25	40625	-6855	22.46	1029.63	45.84	Si
SLV 7	143750	0.25	49022	-8272	22.46	1114.54	49.62	Si
SLV 8	143750	0.25	49022	-8272	22.46	1114.54	49.62	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.045 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 3	-968	-3461	54	0.07	164.8	0.906	1.11706	3.31979	No
SLV 4	-968	-3461	54	0.07	164.8	0.906	1.11706	3.31979	No
SLV 13	-9318	-9893	-38	0.083	1012.7	0.98	1.23397	3.31979	No
SLV 14	-9318	-9893	-38	0.083	1012.7	0.98	1.23397	3.31979	No
SLV 7	-5036	-7161	54	0.08	576.7	0.966	1.20346	3.16379	No
SLV 8	-5036	-7161	54	0.08	576.7	0.966	1.20346	3.16379	No
SLV 15	-10073	-10848	-17	0.085	1089.7	0.982	1.26293	3.31979	No
SLV 16	-10073	-10848	-17	0.085	1089.7	0.982	1.26293	3.31979	No
SLV 10	-5249	-6193	-39	0.083	598.4	0.968	1.2448	3.16379	No
SLV 9	-5249	-6193	-39	0.083	598.4	0.968	1.2448	3.16379	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.247	SLU 83	Si
V_SLU	5.485	SLU 83	Si
PF_SLV	1.499	SLV 1	Si
V_SLV	2.48	SLV 1	Si
PFFP_SLV	26.672	SLV 1	Si
R_SLV	0.336	SLV 3	No

Maschio 34

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.sx	a.s.dx
-7.428	1.046	-11.238	1.046	L1	L3	3.81	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 83	-1.3	-109948	-6719.07	64128	44560.05	6.632	Si
SLU 83	0.86	-90680	-1819.7	52890	60583.61	33.293	Si
SLU 79	-1.3	-105740	-6483.33	61674	48924.23	7.546	Si
SLU 79	0.86	-86820	-1542.54	50639	62575.71	40.567	Si
SLU 74	-1.3	-105316	-6303.83	61427	49336.79	7.826	Si
SLU 74	0.86	-86471	-1581.96	50435	62736.12	39.657	Si
SLU 82	-1.3	-107914	-6278.94	62942	46729.78	7.442	Si
SLU 82	0.86	-88900	-1550.02	51852	61553.02	39.711	Si
SLU 84	-1.3	-109132	-6509.02	63653	45443.77	6.982	Si
SLU 84	0.86	-89958	-1501.85	52469	60987.01	40.608	Si
SLU 80	-1.3	-104924	-6273.28	61198	49714.29	7.925	Si
SLU 80	0.86	-86099	-1224.69	50218	62903.12	51.363	Si
SLU 77	-1.3	-106534	-6533.91	62137	48137.12	7.367	Si
SLU 77	0.86	-87529	-1533.79	51052	62240.25	40.579	Si
SLU 81	-1.3	-108730	-6488.99	63418	45873.18	7.069	Si
SLU 81	0.86	-89621	-1867.87	52273	61170.46	32.749	Si
SLU 75	-1.3	-104500	-6093.77	60951	50117.43	8.224	Si
SLU 75	0.86	-85749	-1264.11	50014	63056.64	49.882	Si
SLU 78	-1.3	-105719	-6323.86	61661	48944.86	7.74	Si
SLU 78	0.86	-86808	-1215.94	50631	62581.62	51.468	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 3	-1.3	-77329	37648.64	45103	92934.79	2.468	Si
SLV 3	0.86	-61322	-2415.46	35767	82623.37	34.206	Si
SLV 2	-1.3	-69270	32975.1	40402	88325.68	2.679	Si
SLV 2	0.86	-62934	-3788.3	36707	83872.9	22.14	Si
SLV 4	-1.3	-77329	37648.64	45103	92934.79	2.468	Si
SLV 4	0.86	-61322	-2415.46	35767	82623.37	34.206	Si
SLV 1	-1.3	-69270	32975.1	40402	88325.68	2.679	Si
SLV 1	0.86	-62934	-3788.3	36707	83872.9	22.14	Si
SLV 14	-1.3	-64465	-45414.29	37600	85015.53	1.872	Si
SLV 14	0.86	-53469	644.92	31186	75860.31	117.628	Si
SLV 13	-1.3	-64465	-45414.29	37600	85015.53	1.872	Si
SLV 13	0.86	-53469	644.92	31186	75860.31	117.628	Si
SLV 9	-1.3	-56744	-23430.46	33097	78817.46	3.364	Si
SLV 9	0.86	-58662	-2508.36	34215	80458.57	32.076	Si
SLV 15	-1.3	-72524	-40740.76	42300	90328.93	2.217	Si
SLV 15	0.86	-51856	2017.76	30246	74333.26	36.839	Si
SLV 10	-1.3	-56744	-23430.46	33097	78817.46	3.364	Si
SLV 10	0.86	-58662	-2508.36	34215	80458.57	32.076	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 16	-1.3	-72524	-40740.76	42300	90328.93	2.217	Si
SLV 16	0.86	-51856	2017.76	30246	74333.26	36.839	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 70	-1.3	-93056	-1558	-5236.94		54276	3.81	10833	18574			11.92	Si
SLU 70	0.86	-75332	-1362	-681.62		43938	3.81	10833	18574			13.64	Si
SLU 78	-1.3	-105719	-1485	-6323.86		61661	3.81	10833	18574			12.51	Si
SLU 78	0.86	-86808	-1271	-1215.94		50631	3.81	10833	18574			14.62	Si
SLU 72	-1.3	-92262	-1534	-5186.36		53813	3.81	10833	18574			12.11	Si
SLU 72	0.86	-74623	-1339	-690.37		43525	3.81	10833	18574			13.87	Si
SLU 59	-1.3	-93801	-1535	-5250.28		54711	3.81	10833	18574			12.1	Si
SLU 59	0.86	-76033	-1339	-692.1		44347	3.81	10833	18574			13.87	Si
SLU 68	-1.3	-90500	-1498	-4816.24		52785	3.81	10833	18574			12.4	Si
SLU 68	0.86	-73083	-1299	-526.64		42627	3.81	10833	18574			14.29	Si
SLU 57	-1.3	-94596	-1560	-5300.85		55174	3.81	10833	18574			11.91	Si
SLU 57	0.86	-76742	-1362	-683.35		44760	3.81	10833	18574			13.64	Si
SLU 47	-1.3	-79377	-1573	-3793.24		46298	3.81	10833	18574			11.81	Si
SLU 47	0.86	-63017	-1391	5.95		36756	3.81	10456	17927			12.89	Si
SLU 55	-1.3	-92039	-1499	-4880.16		53683	3.81	10833	18574			12.39	Si
SLU 55	0.86	-74493	-1300	-528.36		43449	3.81	10833	18574			14.29	Si
SLU 51	-1.3	-81139	-1608	-4163.36		47325	3.81	10833	18574			11.55	Si
SLU 51	0.86	-64557	-1430	-157.78		37654	3.81	10576	18133			12.68	Si
SLU 49	-1.3	-81934	-1633	-4213.93		47789	3.81	10833	18574			11.38	Si
SLU 49	0.86	-65266	-1453	-149.03		38067	3.81	10631	18227			12.54	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 15	-1.3	-72524	-28399	-40740.76		42300	3.81	16250	27861			0.98	No, Vu<V
SLV 15	0.86	-51856	-20771	2017.76		30246	3.81	14382	24659			1.19	Si
SLV 2	-1.3	-69270	26865	32975.1		40402	3.81	16250	27861			1.04	Si
SLV 2	0.86	-62934	19350	-3788.3		36707	3.81	15675	26874			1.39	Si
SLV 12	-1.3	-83608	-14526	-7852.02		48765	3.81	16250	27861			1.92	Si
SLV 12	0.86	-53289	-10142	2067.78		31081	3.81	14550	24945			2.46	Si
SLV 14	-1.3	-64465	-24793	-45414.29		39776	3.6016	16250	26336			1.06	Si
SLV 14	0.86	-53469	-18519	644.92		31186	3.81	14571	24981			1.35	Si
SLV 4	-1.3	-77329	23259	37648.64		45103	3.81	16250	27861			1.2	Si
SLV 4	0.86	-61322	17099	-2415.46		35767	3.81	15487	26552			1.55	Si
SLV 3	-1.3	-77329	23259	37648.64		45103	3.81	16250	27861			1.2	Si
SLV 3	0.86	-61322	17099	-2415.46		35767	3.81	15487	26552			1.55	Si
SLV 11	-1.3	-83608	-14526	-7852.02		48765	3.81	16250	27861			1.92	Si
SLV 11	0.86	-53289	-10142	2067.78		31081	3.81	14550	24945			2.46	Si
SLV 16	-1.3	-72524	-28399	-40740.76		42300	3.81	16250	27861			0.98	No, Vu<V
SLV 16	0.86	-51856	-20771	2017.76		30246	3.81	14382	24659			1.19	Si
SLV 13	-1.3	-64465	-24793	-45414.29		39776	3.6016	16250	26336			1.06	Si
SLV 13	0.86	-53469	-18519	644.92		31186	3.81	14571	24981			1.35	Si
SLV 1	-1.3	-69270	26865	32975.1		40402	3.81	16250	27861			1.04	Si
SLV 1	0.86	-62934	19350	-3788.3		36707	3.81	15675	26874			1.39	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.08 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 14	143750	0.25	34781	-59632	228.19	9597.98	42.06	Si
SLV 13	143750	0.25	34781	-59632	228.19	9597.98	42.06	Si
SLV 15	143750	0.25	35213	-60373	228.19	9669.19	42.37	Si
SLV 16	143750	0.25	35213	-60373	228.19	9669.19	42.37	Si
SLV 10	143750	0.25	36551	-62667	228.19	9882.21	43.31	Si
SLV 9	143750	0.25	36551	-62667	228.19	9882.21	43.31	Si
SLV 12	143750	0.25	37992	-65137	228.19	10098.91	44.26	Si
SLV 11	143750	0.25	37992	-65137	228.19	10098.91	44.26	Si
SLV 6	143750	0.25	38501	-66010	228.19	10172.33	44.58	Si
SLV 5	143750	0.25	38501	-66010	228.19	10172.33	44.58	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.045 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 10	-54096	-56744	617	0.079	6156.9	0.968	1.18621	3.16379	No
SLV 9	-54096	-56744	617	0.079	6156.9	0.968	1.18621	3.16379	No
SLV 14	-48226	-64465	372	0.083	5559.4	0.965	1.25271	3.31979	No
SLV 13	-48226	-64465	372	0.083	5559.4	0.965	1.25271	3.31979	No
SLV 5	-58376	-58186	525	0.081	6592.6	0.97	1.21073	3.16379	No
SLV 6	-58376	-58186	525	0.081	6592.6	0.97	1.21073	3.16379	No
SLV 3	-61742	-77329	-239	0.085	6935.3	0.971	1.27614	3.31979	No
SLV 4	-61742	-77329	-239	0.085	6935.3	0.971	1.27614	3.31979	No
SLV 7	-55872	-85050	-484	0.081	6337.7	0.969	1.22066	3.16379	No
SLV 8	-55872	-85050	-484	0.081	6337.7	0.969	1.22066	3.16379	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.632	SLU 83	Si
V_SLU	11.376	SLU 49	Si
PF_SLV	1.872	SLV 13	Si
V_SLV	0.981	SLV 15	No
PFFP_SLV	42.061	SLV 13	Si
R_SLV	0.375	SLV 9	No



Maschio 35

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.988	1.046	-6.528	1.046	L1	L3	0.54	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 84	-1.3	-17785	-194.73	73189	487.46	2.503	Si
SLU 84	0.8	-19263	176.11	79272	139.59	0.793	No, M>Mu
SLU 78	-1.3	-17212	-192.94	70830	606.32	3.143	Si
SLU 78	0.8	-18567	174.11	76406	310.94	1.786	Si
SLU 74	-1.3	-17655	-185.99	72654	515.24	2.77	Si
SLU 74	0.8	-18619	166.54	76623	298.43	1.792	Si
SLU 75	-1.3	-17006	-186.01	69982	646.89	3.478	Si
SLU 75	0.8	-18339	167.88	75471	363.95	2.168	Si
SLU 83	-1.3	-18434	-194.7	75861	342	1.757	Si
SLU 83	0.8	-19543	174.77	80424	67.01	0.383	No, M>Mu
SLU 80	-1.3	-17079	-190.17	70282	632.66	3.327	Si
SLU 80	0.8	-18420	171.49	75801	345.4	2.014	Si
SLU 81	-1.3	-18228	-187.78	75012	389.45	2.074	Si
SLU 81	0.8	-19316	168.55	79489	126.07	0.748	No, M>Mu
SLU 82	-1.3	-17579	-187.81	72341	531.26	2.829	Si
SLU 82	0.8	-19036	169.88	78337	196.91	1.159	Si
SLU 77	-1.3	-17861	-192.91	73502	471.01	2.442	Si
SLU 77	0.8	-18846	172.77	77557	243.68	1.41	Si
SLU 79	-1.3	-17728	-190.15	72954	499.71	2.628	Si
SLU 79	0.8	-18699	170.15	76953	279.27	1.641	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 2	-1.3	-9685	796.85	39857	1762.01	2.211	Si
SLV 2	0.8	-12137	-718.27	49948	1937.48	2.697	Si
SLV 13	-1.3	-11293	-1021.25	46474	1889.41	1.85	Si
SLV 13	0.8	-13355	906.31	54960	1983.98	2.189	Si
SLV 1	-1.3	-9685	796.85	39857	1762.01	2.211	Si
SLV 1	0.8	-12137	-718.27	49948	1937.48	2.697	Si
SLV 4	-1.3	-12435	786.12	51173	1951.33	2.482	Si
SLV 4	0.8	-11313	-697.51	46555	1890.67	2.711	Si
SLV 9	-1.3	-7522	-372.4	30956	1516.45	4.072	Si
SLV 9	0.8	-13891	313.49	57165	1995.89	6.367	Si
SLV 15	-1.3	-14043	-1031.97	57790	1998.32	1.936	Si
SLV 15	0.8	-12531	927.07	51567	1955.44	2.109	Si
SLV 16	-1.3	-14043	-1031.97	57790	1998.32	1.936	Si
SLV 16	0.8	-12531	927.07	51567	1955.44	2.109	Si
SLV 10	-1.3	-7522	-372.4	30956	1516.45	4.072	Si
SLV 10	0.8	-13891	313.49	57165	1995.89	6.367	Si
SLV 14	-1.3	-11293	-1021.25	46474	1889.41	1.85	Si
SLV 14	0.8	-13355	906.31	54960	1983.98	2.189	Si
SLV 3	-1.3	-12435	786.12	51173	1951.33	2.482	Si
SLV 3	0.8	-11313	-697.51	46555	1890.67	2.711	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 77	-1.3	-17861	-163	-192.91	73502	0.54	10833	2633	2633			16.14	Si
SLU 77	0.8	-18846	-164	172.77	77557	0.54	10833	2633				16.01	Si
SLU 81	-1.3	-18228	-158	-187.78	75012	0.54	10833	2633				16.65	Si
SLU 81	0.8	-19316	-160	168.55	79489	0.54	10833	2633				16.5	Si
SLU 82	-1.3	-17579	-156	-187.81	72341	0.54	10833	2633				16.83	Si
SLU 82	0.8	-19036	-159	169.88	78337	0.54	10833	2633				16.57	Si
SLU 79	-1.3	-17728	-161	-190.15	72954	0.54	10833	2633				16.39	Si
SLU 79	0.8	-18699	-162	170.15	76953	0.54	10833	2633				16.25	Si
SLU 78	-1.3	-17212	-161	-192.94	70830	0.54	10833	2633				16.31	Si
SLU 78	0.8	-18567	-164	174.11	76406	0.54	10833	2633				16.07	Si
SLU 84	-1.3	-17785	-163	-194.73	73189	0.54	10833	2633				16.19	Si
SLU 84	0.8	-19263	-165	176.11	79272	0.54	10833	2633				15.95	Si
SLU 80	-1.3	-17079	-159	-190.17	70282	0.54	10833	2633				16.57	Si
SLU 80	0.8	-18420	-161	171.49	75801	0.54	10833	2633				16.32	Si
SLU 83	-1.3	-18434	-164	-194.7	75861	0.54	10833	2633				16.02	Si
SLU 83	0.8	-19543	-166	174.77	80424	0.54	10833	2633				15.89	Si
SLU 75	-1.3	-17006	-155	-186.01	69982	0.54	10833	2633				16.96	Si
SLU 75	0.8	-18339	-158	167.88	75471	0.54	10833	2633				16.7	Si
SLU 74	-1.3	-17655	-157	-185.99	72654	0.54	10833	2633				16.78	Si
SLU 74	0.8	-18619	-158	166.54	76623	0.54	10833	2633				16.63	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, γM = 2

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 13	-1.3	-11293	-866	-1021.25	46585	0.5387	16250	3939	3939			4.55	Si
SLV 13	0.8	-13355	-657	906.31	54960	0.54	16250	3949				6.01	Si
SLV 14	-1.3	-11293	-866	-1021.25	46585	0.5387	16250	3939				4.55	Si
SLV 14	0.8	-13355	-657	906.31	54960	0.54	16250	3949				6.01	Si
SLV 1	-1.3	-9685	694	796.85	39857	0.54	16250	3949				5.69	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 1	0.8	-12137	495	-718.27		49948	0.54	16250	3949			7.97	Si
SLV 2	-1.3	-9685	694	796.85		39857	0.54	16250	3949			5.69	Si
SLV 2	0.8	-12137	495	-718.27		49948	0.54	16250	3949			7.97	Si
SLV 15	-1.3	-14043	-891	-1031.97		57790	0.54	16250	3949			4.43	Si
SLV 15	0.8	-12531	-694	927.07		51567	0.54	16250	3949			5.69	Si
SLV 3	-1.3	-12435	668	786.12		51173	0.54	16250	3949			5.91	Si
SLV 3	0.8	-11313	458	-697.51		46555	0.54	16250	3949			8.62	Si
SLV 11	-1.3	-16688	-376	-408.16		68677	0.54	16250	3949			10.51	Si
SLV 11	0.8	-11142	-334	382.69		45853	0.54	16250	3949			11.81	Si
SLV 16	-1.3	-14043	-891	-1031.97		57790	0.54	16250	3949			4.43	Si
SLV 16	0.8	-12531	-694	927.07		51567	0.54	16250	3949			5.69	Si
SLV 12	-1.3	-16688	-376	-408.16		68677	0.54	16250	3949			10.51	Si
SLV 12	0.8	-11142	-334	382.69		45853	0.54	16250	3949			11.81	Si
SLV 4	-1.3	-12435	668	786.12		51173	0.54	16250	3949			5.91	Si
SLV 4	0.8	-11313	458	-697.51		46555	0.54	16250	3949			8.62	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.08 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 6	143750	0.25	41950	-10194	32.34	1506.17	46.57	Si
SLV 5	143750	0.25	41950	-10194	32.34	1506.17	46.57	Si
SLV 10	143750	0.25	43075	-10467	32.34	1524.87	47.15	Si
SLV 9	143750	0.25	43075	-10467	32.34	1524.87	47.15	Si
SLV 2	143750	0.25	43915	-10671	32.34	1538.1	47.56	Si
SLV 1	143750	0.25	43915	-10671	32.34	1538.1	47.56	Si
SLV 4	143750	0.25	46724	-11354	32.34	1577.75	48.78	Si
SLV 3	143750	0.25	46724	-11354	32.34	1577.75	48.78	Si
SLV 13	143750	0.25	47664	-11582	32.34	1589.44	49.14	Si
SLV 14	143750	0.25	47664	-11582	32.34	1589.44	49.14	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.045 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 8	-5377	-16206	-466	0.014	639.6	0.957	0.20935	3.16379	No
SLV 7	-5377	-16206	-466	0.014	639.6	0.957	0.20935	3.16379	No
SLV 12	-5404	-16688	-466	0.014	642.4	0.958	0.21442	3.16379	No
SLV 11	-5404	-16688	-466	0.014	642.4	0.958	0.21442	3.16379	No
SLV 5	-6635	-7040	500	0.021	767.5	0.964	0.31994	3.16379	No
SLV 6	-6635	-7040	500	0.021	767.5	0.964	0.31994	3.16379	No
SLV 10	-6662	-7522	500	0.021	770.3	0.964	0.32311	3.16379	No
SLV 9	-6662	-7522	500	0.021	770.3	0.964	0.32311	3.16379	No
SLV 1	-6163	-9685	162	0.067	719.6	0.962	1.01188	3.31979	No
SLV 2	-6163	-9685	162	0.067	719.6	0.962	1.01188	3.31979	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0.383	SLU 83	No
V_SLU	15.888	SLU 83	Si
PF_SLV	1.85	SLV 13	Si
V_SLV	4.43	SLV 15	Si
PFFP_SLV	46.57	SLV 5	Si
R_SLV	0.066	SLV 7	No

Maschio 36

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.123	1.046	-5.088	1.046	L1	L3	4.965	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 74	-1.3	-111300	-6967.92	49816	107331	15.404	Si
SLU 74	0.8	-108626	9527.38	48618	108714.8	11.411	Si
SLU 39	-1.3	-97268	-4782.1	43535	112416.67	23.508	Si
SLU 39	0.8	-96398	10261.75	43146	112555.1	10.968	Si
SLU 77	-1.3	-112430	-7380.15	50321	106688.21	14.456	Si
SLU 77	0.8	-109867	9565.41	49174	108096.72	11.301	Si
SLU 81	-1.3	-114539	-6278.31	51265	105394.28	16.787	Si
SLU 81	0.8	-112200	10641.54	50218	106821.87	10.038	Si
SLU 41	-1.3	-98397	-5194.33	44040	112206.17	21.602	Si
SLU 41	0.8	-97640	10299.78	43701	112351.2	10.908	Si
SLU 84	-1.3	-115495	-7053.94	51693	104767.92	14.852	Si
SLU 84	0.8	-113137	9683.67	50638	106267.76	10.974	Si
SLU 83	-1.3	-115668	-6690.53	51770	104651.73	15.642	Si
SLU 83	0.8	-113441	10679.57	50774	106082.72	9.933	Si
SLU 42	-1.3	-98224	-5557.74	43963	112240.73	20.195	Si
SLU 42	0.8	-97335	9303.88	43565	112405.06	12.082	Si
SLU 79	-1.3	-111747	-7217.24	50016	107080.64	14.837	Si
SLU 79	0.8	-109111	9500.85	48836	108478.09	11.418	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 82	-1.3	-114366	-6641.72	51188	105505.14	15.885	Si
SLU 82	0.8	-111895	9645.63	50082	106996.6	11.093	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 14	-1.3	-83197	-54833.05	37237	143593.86	2.619	Si
SLV 14	0.8	-88988	-5542.73	39829	148902.72	26.865	Si
SLV 15	-1.3	-78370	-56427.56	35077	138703.1	2.458	Si
SLV 15	0.8	-84241	-8067.55	37705	144596.25	17.923	Si
SLV 3	-1.3	-69163	44775.83	30956	128198.01	2.863	Si
SLV 3	0.8	-57323	16283.58	25656	112423.31	6.904	Si
SLV 4	-1.3	-69163	44775.83	30956	128198.01	2.863	Si
SLV 4	0.8	-57323	16283.58	25656	112423.31	6.904	Si
SLV 1	-1.3	-73989	46370.35	33116	133897.03	2.888	Si
SLV 1	0.8	-62069	18808.4	27781	119053.66	6.33	Si
SLV 2	-1.3	-73989	46370.35	33116	133897.03	2.888	Si
SLV 2	0.8	-62069	18808.4	27781	119053.66	6.33	Si
SLV 11	-1.3	-69517	-22866.64	31114	128630.29	5.625	Si
SLV 11	0.8	-69282	-2490.28	31009	128343.72	51.538	Si
SLV 16	-1.3	-78370	-56427.56	35077	138703.1	2.458	Si
SLV 16	0.8	-84241	-8067.55	37705	144596.25	17.923	Si
SLV 12	-1.3	-69517	-22866.64	31114	128630.29	5.625	Si
SLV 12	0.8	-69282	-2490.28	31009	128343.72	51.538	Si
SLV 13	-1.3	-83197	-54833.05	37237	143593.86	2.619	Si
SLV 13	0.8	-88988	-5542.73	39829	148902.72	26.865	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 84	-1.3	-115495	-17262	-7053.94		51693	4.965	10833	24204			1.4	Si
SLU 84	0.8	-113137	-17346	9683.67		50638	4.965	10833	24204			1.4	Si
SLU 82	-1.3	-114366	-16916	-6641.72		51188	4.965	10833	24204			1.43	Si
SLU 82	0.8	-111895	-16998	9645.63		50082	4.965	10833	24204			1.42	Si
SLU 81	-1.3	-114539	-17370	-6278.31		51265	4.965	10833	24204			1.39	Si
SLU 81	0.8	-112200	-17454	10641.54		50218	4.965	10833	24204			1.39	Si
SLU 80	-1.3	-111574	-16471	-7580.66		49938	4.965	10833	24204			1.47	Si
SLU 80	0.8	-108807	-16551	8504.95		48699	4.965	10833	24204			1.46	Si
SLU 77	-1.3	-112430	-17119	-7380.15		50321	4.965	10833	24204			1.41	Si
SLU 77	0.8	-109867	-17203	9565.41		49174	4.965	10833	24204			1.41	Si
SLU 75	-1.3	-111127	-16320	-7331.33		49738	4.965	10833	24204			1.48	Si
SLU 75	0.8	-108321	-16399	8531.47		48482	4.965	10833	24204			1.48	Si
SLU 74	-1.3	-111300	-16773	-6967.92		49816	4.965	10833	24204			1.44	Si
SLU 74	0.8	-108626	-16856	9527.38		48618	4.965	10833	24204			1.44	Si
SLU 79	-1.3	-111747	-16924	-7217.24		50016	4.965	10833	24204			1.43	Si
SLU 79	0.8	-109111	-17007	9500.85		48836	4.965	10833	24204			1.42	Si
SLU 78	-1.3	-112256	-16666	-7743.56		50243	4.965	10833	24204			1.45	Si
SLU 78	0.8	-109563	-16747	8569.51		49038	4.965	10833	24204			1.45	Si
SLU 83	-1.3	-115668	-17716	-6690.53		51770	4.965	10833	24204			1.37	Si
SLU 83	0.8	-113441	-17802	10679.57		50774	4.965	10833	24204			1.36	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 11	-1.3	-69517	-19146	-22866.64		31114	4.965	14556	32522			1.7	Si
SLV 11	0.8	-69282	-19401	-2490.28		31009	4.965	14535	32475			1.67	Si
SLV 4	-1.3	-69163	17921	44775.83		30956	4.965	14524	32451			1.81	Si
SLV 4	0.8	-57323	17635	16283.58		25656	4.965	13465	30083			1.71	Si
SLV 12	-1.3	-69517	-19146	-22866.64		31114	4.965	14556	32522			1.7	Si
SLV 12	0.8	-69282	-19401	-2490.28		31009	4.965	14535	32475			1.67	Si
SLV 1	-1.3	-73989	17861	46370.35		33116	4.965	14957	33417			1.87	Si
SLV 1	0.8	-62069	17722	18808.4		27781	4.965	13890	31033			1.75	Si
SLV 2	-1.3	-73989	17861	46370.35		33116	4.965	14957	33417			1.87	Si
SLV 2	0.8	-62069	17722	18808.4		27781	4.965	13890	31033			1.75	Si
SLV 16	-1.3	-78370	-39213	-56427.56		35077	4.965	15349	34293			0.87	No, Vu<V
SLV 16	0.8	-84241	-39186	-8067.55		37705	4.965	15874	35467			0.91	No, Vu<V
SLV 3	-1.3	-69163	17921	44775.83		30956	4.965	14524	32451			1.81	Si
SLV 3	0.8	-57323	17635	16283.58		25656	4.965	13465	30083			1.71	Si
SLV 14	-1.3	-83197	-39274	-54833.05		37237	4.965	15781	35258			0.9	No, Vu<V
SLV 14	0.8	-88988	-39099	-5542.73		39829	4.965	16250	36307			0.93	No, Vu<V
SLV 15	-1.3	-78370	-39213	-56427.56		35077	4.965	15349	34293			0.87	No, Vu<V
SLV 15	0.8	-84241	-39186	-8067.55		37705	4.965	15874	35467			0.91	No, Vu<V
SLV 13	-1.3	-83197	-39274	-54833.05		37237	4.965	15781	35258			0.9	No, Vu<V
SLV 13	0.8	-88988	-39099	-5542.73		39829	4.965	16250	36307			0.93	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.08 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 4	143750	0.25	27940	-62425	297.37	10833.85	36.43	Si
SLV 3	143750	0.25	27940	-62425	297.37	10833.85	36.43	Si
SLV 7	143750	0.25	28235	-63085	297.37	10914.09	36.7	Si
SLV 8	143750	0.25	28235	-63085	297.37	10914.09	36.7	Si
SLV 2	143750	0.25	30255	-67596	297.37	11443.25	38.48	Si
SLV 1	143750	0.25	30255	-67596	297.37	11443.25	38.48	Si
SLV 11	143750	0.25	30803	-68822	297.37	11581.23	38.95	Si
SLV 12	143750	0.25	30803	-68822	297.37	11581.23	38.95	Si
SLV 5	143750	0.25	35951	-80323	297.37	12755.21	42.89	Si
SLV 6	143750	0.25	35951	-80323	297.37	12755.21	42.89	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.045 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	σ_0	M*	e*	a0*	aLim	Verifica
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Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 5	-67099	-82843	634	0.081	7677.6	0.967	1.22003	3.16379	No
SLV 6	-67099	-82843	634	0.081	7677.6	0.967	1.22003	3.16379	No
SLV 10	-72998	-85605	600	0.082	8278.1	0.969	1.22646	3.16379	No
SLV 9	-72998	-85605	600	0.082	8278.1	0.969	1.22646	3.16379	No
SLV 11	-61814	-69517	-592	0.082	7139.7	0.964	1.22932	3.16379	No
SLV 12	-61814	-69517	-592	0.082	7139.7	0.964	1.22932	3.16379	No
SLV 7	-55914	-66754	-558	0.082	6539.5	0.961	1.23843	3.16379	No
SLV 8	-55914	-66754	-558	0.082	6539.5	0.961	1.23843	3.16379	No
SLV 15	-72611	-78370	-214	0.087	8238.7	0.969	1.30065	3.31979	No
SLV 16	-72611	-78370	-214	0.087	8238.7	0.969	1.30065	3.31979	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.933	SLU 83	Si
V_SLU	1.36	SLU 83	Si
PF_SLV	2.458	SLV 15	Si
V_SLV	0.875	SLV 15	No
PFFP_SLV	36.433	SLV 3	Si
R_SLV	0.386	SLV 5	No

Maschio 37

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.sx	a.s.dx
-11.013	-4.784	-11.013	-1.916	L1	L2	2.868	0.3	1.95	1.95	1.95			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	$\tau 0$	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	$\alpha 0$	Mu	c.s.	Verifica
SLU 81	-1.3	-49985	1985.61	58091	20562.95	10.356	Si
SLU 81	0.65	-45073	2326.66	52383	23072.07	9.916	Si
SLU 84	-1.3	-50899	1978.52	59154	19986.94	10.102	Si
SLU 84	0.65	-45900	2326.3	53344	22718.84	9.766	Si
SLU 77	-1.3	-49397	1920.68	57408	20915.54	10.89	Si
SLU 77	0.65	-44733	2253.23	51987	23209.61	10.301	Si
SLU 83	-1.3	-50506	2015.47	58697	20238.77	10.042	Si
SLU 83	0.65	-45619	2373.74	53017	22842.22	9.623	Si
SLU 74	-1.3	-48876	1890.83	56802	21216.05	11.221	Si
SLU 74	0.65	-44187	2206.15	51353	23419.69	10.616	Si
SLU 82	-1.3	-50378	1948.66	58548	20319.51	10.427	Si
SLU 82	0.65	-45355	2279.22	52710	22954.97	10.071	Si
SLU 78	-1.3	-49790	1883.74	57865	20681.55	10.979	Si
SLU 78	0.65	-45014	2205.79	52314	23096.44	10.471	Si
SLU 75	-1.3	-49269	1853.88	57259	20990.45	11.322	Si
SLU 75	0.65	-44469	2158.71	51680	23312.8	10.799	Si
SLU 79	-1.3	-49185	1887.97	57162	21039	11.144	Si
SLU 79	0.65	-44521	2209.86	51741	23292.6	10.54	Si
SLU 80	-1.3	-49578	1851.02	57618	20808.43	11.242	Si
SLU 80	0.65	-44802	2162.42	52068	23181.86	10.72	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	$\alpha 0$	Mu	c.s.	Verifica
SLV 4	-1.3	-35750	3156.65	41548	33835.88	10.719	Si
SLV 4	0.65	-30087	3572.52	34966	30799.89	8.621	Si
SLV 7	-1.3	-20644	6702.46	23992	23792.16	3.55	Si
SLV 7	0.65	-15989	4916.33	18583	19443.15	3.955	Si
SLV 10	-1.3	-47707	-4384.32	55444	37371.82	8.524	Si
SLV 10	0.65	-45720	-2304.09	53135	37054.54	16.082	Si
SLV 5	-1.3	-51422	-4163.73	59761	37676.28	9.049	Si
SLV 5	0.65	-48154	-1523.86	55964	37428.43	24.562	Si
SLV 11	-1.3	-16929	6481.87	19674	20368.59	3.142	Si
SLV 11	0.65	-13556	4136.1	15754	16933.67	4.094	Si
SLV 12	-1.3	-16929	6481.87	19674	20368.59	3.142	Si
SLV 12	0.65	-13556	4136.1	15754	16933.67	4.094	Si
SLV 3	-1.3	-35750	3156.65	41548	33835.88	10.719	Si
SLV 3	0.65	-30087	3572.52	34966	30799.89	8.621	Si
SLV 8	-1.3	-20644	6702.46	23992	23792.16	3.55	Si
SLV 8	0.65	-15989	4916.33	18583	19443.15	3.955	Si
SLV 6	-1.3	-51422	-4163.73	59761	37676.28	9.049	Si
SLV 6	0.65	-48154	-1523.86	55964	37428.43	24.562	Si
SLV 9	-1.3	-47707	-4384.32	55444	37371.82	8.524	Si
SLV 9	0.65	-45720	-2304.09	53135	37054.54	16.082	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	$\alpha 0$	αN	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 74	-1.3	-48876	-5994	1890.83		58802	2.8682	10833	9322			1.56	Si
SLU 74	0.65	-44187	-2653	2206.15		51353	2.8682	10833	9322			3.51	Si
SLU 82	-1.3	-50378	-6129	1948.66		58548	2.8682	10833	9322			1.52	Si
SLU 82	0.65	-45355	-2712	2279.22		52710	2.8682	10833	9322			3.44	Si
SLU 83	-1.3	-50506	-6198	2015.47		58697	2.8682	10833	9322			1.5	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 83	0.65	-45619	-2746	2373.74		53017	2.8682	10833	9322			3.39	Si
SLU 81	-1.3	-49985	-6109	1985.61		58091	2.8682	10833	9322			1.53	Si
SLU 81	0.65	-45073	-2693	2326.66		52383	2.8682	10833	9322			3.46	Si
SLU 78	-1.3	-49790	-6102	1883.74		57865	2.8682	10833	9322			1.53	Si
SLU 78	0.65	-45014	-2725	2205.79		52314	2.8682	10833	9322			3.42	Si
SLU 80	-1.3	-49578	-6065	1851.02		57618	2.8682	10833	9322			1.54	Si
SLU 80	0.65	-44802	-2706	2162.42		52068	2.8682	10833	9322			3.45	Si
SLU 75	-1.3	-49269	-6014	1853.88		57259	2.8682	10833	9322			1.55	Si
SLU 75	0.65	-44469	-2672	2158.71		51680	2.8682	10833	9322			3.49	Si
SLU 77	-1.3	-49397	-6083	1920.68		57408	2.8682	10833	9322			1.53	Si
SLU 77	0.65	-44733	-2706	2253.23		51987	2.8682	10833	9322			3.44	Si
SLU 79	-1.3	-49185	-6045	1887.97		57162	2.8682	10833	9322			1.54	Si
SLU 79	0.65	-44521	-2687	2209.86		51741	2.8682	10833	9322			3.47	Si
SLU 84	-1.3	-50899	-6217	1978.52		59154	2.8682	10833	9322			1.5	Si
SLU 84	0.65	-45900	-2765	2326.3		53344	2.8682	10833	9322			3.37	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 12	-1.3	-16929	8301	6481.87		19674	2.8682	12268	10556			1.27	Si
SLV 12	0.65	-13556	9322	4136.1		15754	2.8682	11484	9882			1.06	Si
SLV 9	-1.3	-47707	-15834	-4384.32		55444	2.8682	16250	13982			0.88	No, Vu<V
SLV 9	0.65	-45720	-13263	-2304.09		53135	2.8682	16250	13982			1.05	Si
SLV 8	-1.3	-20644	7554	6702.46		23992	2.8682	13132	11299			1.5	Si
SLV 8	0.65	-15989	9635	4916.33		18583	2.8682	12050	10368			1.08	Si
SLV 2	-1.3	-44983	-9005	-103.21		52278	2.8682	16250	13982			1.55	Si
SLV 2	0.65	-39736	-4680	1640.47		46180	2.8682	16250	13982			2.99	Si
SLV 1	-1.3	-44983	-9005	-103.21		52278	2.8682	16250	13982			1.55	Si
SLV 1	0.65	-39736	-4680	1640.47		46180	2.8682	16250	13982			2.99	Si
SLV 6	-1.3	-51422	-16581	-4163.73		59761	2.8682	16250	13982			0.84	No, Vu<V
SLV 6	0.65	-48154	-12950	-1523.86		55964	2.8682	16250	13982			1.08	Si
SLV 7	-1.3	-20644	7554	6702.46		23992	2.8682	13132	11299			1.5	Si
SLV 7	0.65	-15989	9635	4916.33		18583	2.8682	12050	10368			1.08	Si
SLV 10	-1.3	-47707	-15834	-4384.32		55444	2.8682	16250	13982			0.88	No, Vu<V
SLV 10	0.65	-45720	-13263	-2304.09		53135	2.8682	16250	13982			1.05	Si
SLV 11	-1.3	-16929	8301	6481.87		19674	2.8682	12268	10556			1.27	Si
SLV 11	0.65	-13556	9322	4136.1		15754	2.8682	11484	9882			1.06	Si
SLV 5	-1.3	-51422	-16581	-4163.73		59761	2.8682	16250	13982			0.84	No, Vu<V
SLV 5	0.65	-48154	-12950	-1523.86		55964	2.8682	16250	13982			1.08	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.325 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 12	143750	0.24	18100	-15574	59.95	1990.1	33.19	Si
SLV 11	143750	0.24	18100	-15574	59.95	1990.1	33.19	Si
SLV 8	143750	0.24	21720	-18690	59.95	2305.08	38.45	Si
SLV 7	143750	0.24	21720	-18690	59.95	2305.08	38.45	Si
SLV 16	143750	0.24	26163	-22512	59.95	2653.8	44.26	Si
SLV 15	143750	0.24	26163	-22512	59.95	2653.8	44.26	Si
SLV 14	143750	0.24	36695	-31574	59.95	3313.82	55.27	Si
SLV 13	143750	0.24	36695	-31574	59.95	3313.82	55.27	Si
SLV 4	143750	0.24	38231	-32896	59.95	3390.5	56.55	Si
SLV 3	143750	0.24	38231	-32896	59.95	3390.5	56.55	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = -0.325 Wa = 0.05 Ta = 0.0212

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 2	-39736	-44983	216	0.074	4282.9	0.983	1.10171	3.02669	No
SLV 1	-39736	-44983	216	0.074	4282.9	0.983	1.10171	3.02669	No
SLV 15	-21974	-23367	-193	0.074	2473.4	0.971	1.10253	3.02669	No
SLV 16	-21974	-23367	-193	0.074	2473.4	0.971	1.10253	3.02669	No
SLV 3	-30087	-35750	170	0.075	3299.7	0.978	1.11784	3.02669	No
SLV 4	-30087	-35750	170	0.075	3299.7	0.978	1.11784	3.02669	No
SLV 13	-31623	-32601	-147	0.076	3456.3	0.979	1.12838	3.02669	No
SLV 14	-31623	-32601	-147	0.076	3456.3	0.979	1.12838	3.02669	No
SLV 6	-48154	-51422	143	0.076	5140.8	0.985	1.12652	2.91634	No
SLV 5	-48154	-51422	143	0.076	5140.8	0.985	1.12652	2.91634	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.623	SLU 83	Si
V_SLU	1.499	SLU 84	Si
PF_SLV	3.142	SLV 11	Si
V_SLV	0.843	SLV 5	No
PFFP_SLV	33.194	SLV 11	Si
R_SLV	0.364	SLV 1	No

Maschio 38

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.013	-4.784	-11.013	-1.916	L2	L3	2.868	0.3	0.74	0.74	0.74			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

Sismicad 12.19 - Licenza assegnata a Sidel ingegneria Srl - Via Isonzo, 13 - Villanova di Castenaso (BO)



fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 80	0.65	-49784	3887.93	57857	20685.26	5.32	Si
SLU 80	1.39	-48231	177.42	56053	21572.17	121.59	Si
SLU 81	0.65	-49963	3959.6	58065	20576.81	5.197	Si
SLU 81	1.39	-48421	249.39	56274	21469.04	86.085	Si
SLU 83	0.65	-50580	4037.02	58783	20192.07	5.002	Si
SLU 83	1.39	-49030	281.47	56981	21128.39	75.066	Si
SLU 82	0.65	-50280	3908.7	58434	20380.93	5.214	Si
SLU 82	1.39	-48767	199.68	56676	21277.29	106.556	Si
SLU 74	0.65	-49091	3924.39	57052	21093.16	5.375	Si
SLU 74	1.39	-47512	235.83	55217	21949.84	93.075	Si
SLU 79	0.65	-49466	3938.84	57488	20874.69	5.3	Si
SLU 79	1.39	-47886	227.13	55651	21756.34	95.789	Si
SLU 84	0.65	-50898	3986.12	59152	19988.17	5.014	Si
SLU 84	1.39	-49376	231.75	57383	20928.03	90.303	Si
SLU 78	0.65	-50026	3950.91	58139	20537.86	5.198	Si
SLU 78	1.39	-48466	218.19	56326	21444.35	98.284	Si
SLU 75	0.65	-49409	3873.49	57421	20908.61	5.398	Si
SLU 75	1.39	-47858	186.12	55619	21770.96	116.974	Si
SLU 77	0.65	-49709	4001.82	57770	20730.44	5.18	Si
SLU 77	1.39	-48120	267.9	55924	21631.84	80.746	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 3	0.65	-33659	5401.2	39118	32817.02	6.076	Si
SLV 3	1.39	-33219	2801.65	38607	32587.46	11.632	Si
SLV 12	0.65	-15656	6890.85	18195	19108.49	2.773	Si
SLV 12	1.39	-15233	3313.77	17704	18680.6	5.637	Si
SLV 10	0.65	-50396	-2527.45	58569	37629.83	14.888	Si
SLV 10	1.39	-48075	-4367.19	55872	37418.84	8.568	Si
SLV 7	0.65	-18353	7724.74	21330	21725.65	2.812	Si
SLV 7	1.39	-18229	4318.18	21186	21609.77	5.004	Si
SLV 9	0.65	-50396	-2527.45	58569	37629.83	14.888	Si
SLV 9	1.39	-48075	-4367.19	55872	37418.84	8.568	Si
SLV 4	0.65	-33659	5401.2	39118	32817.02	6.076	Si
SLV 4	1.39	-33219	2801.65	38607	32587.46	11.632	Si
SLV 8	0.65	-18353	7724.74	21330	21725.65	2.812	Si
SLV 8	1.39	-18229	4318.18	21186	21609.77	5.004	Si
SLV 16	0.65	-24668	2621.58	28668	27075.76	10.328	Si
SLV 16	1.39	-23232	-546.37	27000	25955.31	47.505	Si
SLV 15	0.65	-24668	2621.58	28668	27075.76	10.328	Si
SLV 15	1.39	-23232	-546.37	27000	25955.31	47.505	Si
SLV 11	0.65	-15656	6890.85	18195	19108.49	2.773	Si
SLV 11	1.39	-15233	3313.77	17704	18680.6	5.637	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 75	0.65	-49409	-2381	3873.49		57421	2.8682	10833	9322			3.91	Si
SLU 75	1.39	-47858	-2404	186.12		55619	2.8682	10833	9322			3.88	Si
SLU 76	0.65	-49378	-2380	3776.57		57386	2.8682	10833	9322			3.92	Si
SLU 76	1.39	-47854	-2415	112.2		55614	2.8682	10833	9322			3.86	Si
SLU 79	0.65	-49466	-2389	3938.84		57488	2.8682	10833	9322			3.9	Si
SLU 79	1.39	-47886	-2393	227.13		55651	2.8682	10833	9322			3.89	Si
SLU 78	0.65	-50026	-2434	3950.91		58139	2.8682	10833	9322			3.83	Si
SLU 78	1.39	-48466	-2458	218.19		56326	2.8682	10833	9322			3.79	Si
SLU 84	0.65	-50898	-2450	3986.12		59152	2.8682	10833	9322			3.8	Si
SLU 84	1.39	-49376	-2472	231.75		57383	2.8682	10833	9322			3.77	Si
SLU 83	0.65	-50580	-2424	4037.02		58783	2.8682	10833	9322			3.85	Si
SLU 83	1.39	-49030	-2427	281.47		56981	2.8682	10833	9322			3.84	Si
SLU 80	0.65	-49784	-2415	3887.93		57857	2.8682	10833	9322			3.86	Si
SLU 80	1.39	-48231	-2438	177.42		56053	2.8682	10833	9322			3.82	Si
SLU 82	0.65	-50280	-2397	3908.7		58434	2.8682	10833	9322			3.89	Si
SLU 82	1.39	-48767	-2418	199.68		56676	2.8682	10833	9322			3.85	Si
SLU 77	0.65	-49709	-2408	4001.82		57770	2.8682	10833	9322			3.87	Si
SLU 77	1.39	-48120	-2413	267.9		55924	2.8682	10833	9322			3.86	Si
SLU 81	0.65	-49963	-2371	3959.6		58065	2.8682	10833	9322			3.93	Si
SLU 81	1.39	-48421	-2373	249.39		56274	2.8682	10833	9322			3.93	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 9	0.65	-50396	-13512	-2527.45		58569	2.8682	16250	13982			1.03	Si
SLV 9	1.39	-48075	-12543	-4367.19		55872	2.8682	16250	13982			1.11	Si
SLV 8	0.65	-18353	10271	7724.74		21330	2.8682	12599	10841			1.06	Si
SLV 8	1.39	-18229	9290	4318.18		21186	2.8682	12570	10816			1.16	Si
SLV 7	0.65	-18353	10271	7724.74		21330	2.8682	12599	10841			1.06	Si
SLV 7	1.39	-18229	9290	4318.18		21186	2.8682	12570	10816			1.16	Si
SLV 5	0.65	-53093	-12944	-1693.57		61704	2.8682	16250	13982			1.08	Si
SLV 5	1.39	-51071	-12102	-3362.78		59354	2.8682	16250	13982			1.16	Si
SLV 11	0.65	-15656	9702	6890.85		18195	2.8682	11972	10302			1.06	Si
SLV 11	1.39	-15233	8849	3313.77		17704	2.8682	11874	10217			1.15	Si
SLV 13	0.65	-35090	-6051	-203.91		40780	2.8682	16250	13982			2.31	Si
SLV 13	1.39	-33085	-5570	-2850.66		38451	2.8682	16023	13788			2.48	Si
SLV 14	0.65	-35090	-6051	-203.91		40780	2.8682	16250	13982			2.31	Si
SLV 14	1.39	-33085	-5570	-2850.66		38451	2.8682	16023	13788			2.48	Si
SLV 6	0.65	-53093	-12944	-1693.57		61704	2.8682	16250	13982			1.08	Si
SLV 6	1.39	-51071	-12102	-3362.78		59354	2.8682	16250	13982			1.16	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 12	0.65	-15656	9702	6890.85		18195	2.8682	11972	10302			1.06	Si
SLV 12	1.39	-15233	8849	3313.77		17704	2.8682	11874	10217			1.15	Si
SLV 10	0.65	-50396	-13512	-2527.45		58569	2.8682	16250	13982			1.03	Si
SLV 10	1.39	-48075	-12543	-4367.19		55872	2.8682	16250	13982			1.11	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 1.02 W_a 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 11	143750	0.27	18246	-15700	9.38	2003.32	213.66	Si
SLV 12	143750	0.27	18246	-15700	9.38	2003.32	213.66	Si
SLV 8	143750	0.27	21576	-18566	9.38	2293.09	244.57	Si
SLV 7	143750	0.27	21576	-18566	9.38	2293.09	244.57	Si
SLV 16	143750	0.27	27860	-23973	9.38	2775.97	296.07	Si
SLV 15	143750	0.27	27860	-23973	9.38	2775.97	296.07	Si
SLV 4	143750	0.27	38962	-33525	9.38	3425.25	365.32	Si
SLV 3	143750	0.27	38962	-33525	9.38	3425.25	365.32	Si
SLV 13	143750	0.27	39432	-33929	9.38	3446.97	367.64	Si
SLV 14	143750	0.27	39432	-33929	9.38	3446.97	367.64	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 1.02 $W_a = 0.05$ $T_a = 0.003$

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 2	-43072	-44081	516	0.194	4478.5	0.994	2.83087	2.62405	Si
SLV 1	-43072	-44081	516	0.194	4478.5	0.994	2.83087	2.62405	Si
SLV 5	-51071	-53093	615	0.193	5293.8	0.995	2.82089	2.61101	Si
SLV 6	-51071	-53093	615	0.193	5293.8	0.995	2.82089	2.61101	Si
SLV 10	-48075	-50396	506	0.195	4988.4	0.994	2.84609	2.61101	Si
SLV 9	-48075	-50396	506	0.195	4988.4	0.994	2.84609	2.61101	Si
SLV 4	-33219	-33659	322	0.197	3474.2	0.992	2.88119	2.62405	Si
SLV 3	-33219	-33659	322	0.197	3474.2	0.992	2.88119	2.62405	Si
SLV 14	-33085	-35090	151	0.202	3460.5	0.992	2.95552	2.62405	Si
SLV 13	-33085	-35090	151	0.202	3460.5	0.992	2.95552	2.62405	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.002	SLU 83	Si
V_SLU	3.771	SLU 84	Si
PF_SLV	2.773	SLV 11	Si
V_SLV	1.035	SLV 9	Si
PFFP_SLV	213.664	SLV 11	Si
R_SLV	1.079	SLV 1	Si

Maschio 39

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.013	-1.916	-11.013	-0.354	L1	Z medio 102 cm	1.562	0.3	2.32	1.95	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 82	-1.3	-26815	146.04	57231	6227.93	42.645	Si
SLU 82	0.65	-26076	-496.41	55654	6450.58	12.995	Si
SLU 78	-1.3	-26520	138.05	56601	6319.59	45.776	Si
SLU 78	0.65	-25805	-472.44	55076	6526.57	13.815	Si
SLU 76	-1.3	-26077	125.37	55656	6450.32	51.45	Si
SLU 76	0.65	-25324	-490.03	54049	6654.15	13.579	Si
SLU 73	-1.3	-25766	123.19	54993	6537.23	53.065	Si
SLU 73	0.65	-24985	-489.57	53324	6738.55	13.764	Si
SLU 83	-1.3	-27079	156.58	57793	6143.14	39.233	Si
SLU 83	0.65	-26362	-475.59	56265	6366.96	13.387	Si
SLU 81	-1.3	-26768	154.4	57131	6242.79	40.432	Si
SLU 81	0.65	-26023	-475.13	55540	6465.78	13.608	Si
SLU 80	-1.3	-26356	133.13	56252	6368.81	47.841	Si
SLU 80	0.65	-25628	-476.3	54698	6574.58	13.803	Si
SLU 75	-1.3	-26209	135.88	55938	6412.13	47.191	Si
SLU 75	0.65	-25466	-471.98	54351	6617.65	14.021	Si
SLU 84	-1.3	-27126	148.22	57894	6127.69	41.342	Si
SLU 84	0.65	-26416	-496.86	56379	6351.02	12.782	Si
SLU 63	-1.3	-25006	106.71	53369	6733.42	63.101	Si
SLU 63	0.65	-24206	-492.59	51662	6914.21	14.037	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 12	-1.3	-17545	1732.57	37445	9501.97	5.484	Si
SLV 12	0.65	-16823	-991.61	35905	9276.66	9.355	Si
SLV 11	-1.3	-17545	1732.57	37445	9501.97	5.484	Si
SLV 11	0.65	-16823	-991.61	35905	9276.66	9.355	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 3	-1.3	-21416	802.32	45707	10467.69	13.047	Si
SLV 3	0.65	-20508	-484.18	43770	10277.95	21.227	Si
SLV 5	-1.3	-18606	-1578.82	39711	9807.48	6.212	Si
SLV 5	0.65	-17964	342.26	38340	9626.24	28.125	Si
SLV 4	-1.3	-21416	802.32	45707	10467.69	13.047	Si
SLV 4	0.65	-20508	-484.18	43770	10277.95	21.227	Si
SLV 10	-1.3	-16680	-1704.73	35600	9230.38	5.415	Si
SLV 10	0.65	-16155	319.93	34479	9055.54	28.305	Si
SLV 7	-1.3	-19471	1858.48	41557	10033.63	5.399	Si
SLV 7	0.65	-18632	-969.28	39765	9814.41	10.126	Si
SLV 6	-1.3	-18606	-1578.82	39711	9807.48	6.212	Si
SLV 6	0.65	-17964	342.26	38340	9626.24	28.125	Si
SLV 8	-1.3	-19471	1858.48	41557	10033.63	5.399	Si
SLV 8	0.65	-18632	-969.28	39765	9814.41	10.126	Si
SLV 9	-1.3	-16680	-1704.73	35600	9230.38	5.415	Si
SLV 9	0.65	-16155	319.93	34479	9055.54	28.305	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 84	-1.3	-27126	1798	148.22		57894	1.5618	10833	5076			2.82	Si
SLU 84	0.65	-26416	1317	-496.86		56379	1.5618	10833	5076			3.86	Si
SLU 77	-1.3	-26473	1721	146.42		56500	1.5618	10833	5076			2.95	Si
SLU 77	0.65	-25752	1226	-451.17		54962	1.5618	10833	5076			4.14	Si
SLU 83	-1.3	-27079	1763	156.58		57793	1.5618	10833	5076			2.88	Si
SLU 83	0.65	-26362	1284	-475.59		56265	1.5618	10833	5076			3.95	Si
SLU 76	-1.3	-26077	1758	125.37		55656	1.5618	10833	5076			2.89	Si
SLU 76	0.65	-25324	1270	-490.03		54049	1.5618	10833	5076			4	Si
SLU 78	-1.3	-26520	1756	138.05		56601	1.5618	10833	5076			2.89	Si
SLU 78	0.65	-25805	1259	-472.44		55076	1.5618	10833	5076			4.03	Si
SLU 82	-1.3	-26815	1782	146.04		57231	1.5618	10833	5076			2.85	Si
SLU 82	0.65	-26076	1310	-496.41		55654	1.5618	10833	5076			3.88	Si
SLU 75	-1.3	-26209	1740	135.88		55938	1.5618	10833	5076			2.92	Si
SLU 75	0.65	-25466	1252	-471.98		54351	1.5618	10833	5076			4.05	Si
SLU 73	-1.3	-25766	1742	123.19		54993	1.5618	10833	5076			2.91	Si
SLU 73	0.65	-24985	1264	-489.57		53324	1.5618	10833	5076			4.02	Si
SLU 81	-1.3	-26768	1747	154.4		57131	1.5618	10833	5076			2.9	Si
SLU 81	0.65	-26023	1277	-475.13		55540	1.5618	10833	5076			3.97	Si
SLU 80	-1.3	-26356	1750	133.13		56252	1.5618	10833	5076			2.9	Si
SLU 80	0.65	-25628	1255	-476.3		54698	1.5618	10833	5076			4.04	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 6	-1.3	-18606	-4825	-1578.82		39711	1.5618	16250	7614			1.58	Si
SLV 6	0.65	-17964	-4773	342.26		38340	1.5618	16001	7497			1.57	Si
SLV 8	-1.3	-19471	7247	1858.48		41557	1.5618	16250	7614			1.05	Si
SLV 8	0.65	-18632	7707	-969.28		39765	1.5618	16250	7614			0.99	No, Vu<V
SLV 3	-1.3	-21416	3047	802.32		45707	1.5618	16250	7614			2.5	Si
SLV 3	0.65	-20508	4821	-484.18		43770	1.5618	16250	7614			1.58	Si
SLV 5	-1.3	-18606	-4825	-1578.82		39711	1.5618	16250	7614			1.58	Si
SLV 5	0.65	-17964	-4773	342.26		38340	1.5618	16001	7497			1.57	Si
SLV 4	-1.3	-21416	3047	802.32		45707	1.5618	16250	7614			2.5	Si
SLV 4	0.65	-20508	4821	-484.18		43770	1.5618	16250	7614			1.58	Si
SLV 10	-1.3	-16680	-4847	-1704.73		35600	1.5618	15453	7240			1.49	Si
SLV 10	0.65	-16155	-6044	319.93		34479	1.5618	15229	7135			1.18	Si
SLV 12	-1.3	-17545	7225	1732.57		37445	1.5618	15822	7413			1.03	Si
SLV 12	0.65	-16823	6436	-991.61		35905	1.5618	15514	7269			1.13	Si
SLV 11	-1.3	-17545	7225	1732.57		37445	1.5618	15822	7413			1.03	Si
SLV 11	0.65	-16823	6436	-991.61		35905	1.5618	15514	7269			1.13	Si
SLV 7	-1.3	-19471	7247	1858.48		41557	1.5618	16250	7614			1.05	Si
SLV 7	0.65	-18632	7707	-969.28		39765	1.5618	16250	7614			0.99	No, Vu<V
SLV 9	-1.3	-16680	-4847	-1704.73		35600	1.5618	15453	7240			1.49	Si
SLV 9	0.65	-16155	-6044	319.93		34479	1.5618	15229	7135			1.18	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.325 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 14	143750	0.24	31494	-14756	46.21	1642.91	35.55	Si
SLV 13	143750	0.24	31494	-14756	46.21	1642.91	35.55	Si
SLV 15	143750	0.24	32039	-15012	46.21	1661.31	35.95	Si
SLV 16	143750	0.24	32039	-15012	46.21	1661.31	35.95	Si
SLV 9	143750	0.24	35668	-16712	46.21	1775.02	38.41	Si
SLV 10	143750	0.24	35668	-16712	46.21	1775.02	38.41	Si
SLV 11	143750	0.24	37487	-17564	46.21	1826.31	39.52	Si
SLV 12	143750	0.24	37487	-17564	46.21	1826.31	39.52	Si
SLV 5	143750	0.24	39791	-18644	46.21	1885.85	40.81	Si
SLV 6	143750	0.24	39791	-18644	46.21	1885.85	40.81	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = -0.325 Wa = 0.05 Ta = 0.03

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	α_{lim}	Verifica
SLV 1	-20308	-21156	108	0.063	2220.9	0.979	0.92929	3.38279	No
SLV 2	-20308	-21156	108	0.063	2220.9	0.979	0.92929	3.38279	No
SLV 3	-20508	-21416	104	0.063	2241.3	0.979	0.93217	3.38279	No
SLV 4	-20508	-21416	104	0.063	2241.3	0.979	0.93217	3.38279	No
SLV 16	-14479	-14995	-67	0.064	1627.1	0.971	0.96422	3.38279	No
SLV 15	-14479	-14995	-67	0.064	1627.1	0.971	0.96422	3.38279	No
SLV 13	-14278	-14735	-63	0.065	1606.7	0.971	0.96844	3.38279	No
SLV 14	-14278	-14735	-63	0.065	1606.7	0.971	0.96844	3.38279	No
SLV 5	-17964	-18606	53	0.065	1982.1	0.976	0.97097	3.20395	No



Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 6	-17964	-18606	53	0.065	1982.1	0.976	0.97097	3.20395	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	12.782	SLU 84	Si
V_SLU	2.824	SLU 84	Si
PF_SLV	5.399	SLV 7	Si
V_SLV	0.988	SLV 7	No
PFFP_SLV	35.553	SLV 13	Si
R_SLV	0.275	SLV 1	No

Maschio 41

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.013	-0.354	-11.013	1.046	L1	L3	1.4	0.3	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLU 74	-1.3	-23523	921.13	56006	5144.9	5.585	Si
SLU 74	1.39	-21947	-377.5	52256	5507.71	14.59	Si
SLU 82	-1.3	-24109	952.28	57401	4984.01	5.234	Si
SLU 82	1.39	-22445	-396.98	53440	5404.06	13.613	Si
SLU 83	-1.3	-24428	965.79	58163	4890.27	5.063	Si
SLU 83	1.39	-22827	-388.03	54350	5317.65	13.704	Si
SLU 80	-1.3	-23566	914.87	56109	5133.54	5.611	Si
SLU 80	1.39	-22033	-395.82	52460	5490.52	13.871	Si
SLU 78	-1.3	-23739	923.44	56521	5087.16	5.509	Si
SLU 78	1.39	-22230	-394.7	52928	5450.15	13.808	Si
SLU 77	-1.3	-23791	929.04	56644	5073.05	5.461	Si
SLU 77	1.39	-22280	-381.63	53046	5439.66	14.254	Si
SLU 79	-1.3	-23618	920.47	56232	5119.8	5.562	Si
SLU 79	1.39	-22083	-382.74	52579	5480.43	14.319	Si
SLU 84	-1.3	-24377	960.19	58039	4905.73	5.109	Si
SLU 84	1.39	-22777	-401.1	54231	5329.25	13.287	Si
SLU 81	-1.3	-24160	957.88	57525	4969.12	5.188	Si
SLU 81	1.39	-22495	-383.9	53559	5393.13	14.048	Si
SLU 75	-1.3	-23471	915.53	55883	5158.44	5.634	Si
SLU 75	1.39	-21898	-390.57	52137	5517.52	14.127	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma M = 2$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLV 4	-1.3	-23590	1972.53	56167	8922.43	4.523	Si
SLV 4	1.39	-18206	-474.1	43348	8223.16	17.345	Si
SLV 8	-1.3	-22241	2844.56	52955	8821.46	3.101	Si
SLV 8	1.39	-19129	-392.92	45544	8399.07	21.376	Si
SLV 10	-1.3	-9879	-1620.99	23522	5584.16	3.445	Si
SLV 10	1.39	-10431	-162.48	24836	5817.68	35.805	Si
SLV 3	-1.3	-23590	1972.53	56167	8922.43	4.523	Si
SLV 3	1.39	-18206	-474.1	43348	8223.16	17.345	Si
SLV 12	-1.3	-18499	2389.01	44045	8281.46	3.466	Si
SLV 12	1.39	-17730	-286.21	42213	8123.12	28.381	Si
SLV 9	-1.3	-9879	-1620.99	23522	5584.16	3.445	Si
SLV 9	1.39	-10431	-162.48	24836	5817.68	35.805	Si
SLV 5	-1.3	-13621	-1165.44	32432	7004.15	6.01	Si
SLV 5	1.39	-11830	-269.19	28167	6372.18	23.672	Si
SLV 6	-1.3	-13621	-1165.44	32432	7004.15	6.01	Si
SLV 6	1.39	-11830	-269.19	28167	6372.18	23.672	Si
SLV 11	-1.3	-18499	2389.01	44045	8281.46	3.466	Si
SLV 11	1.39	-17730	-286.21	42213	8123.12	28.381	Si
SLV 7	-1.3	-22241	2844.56	52955	8821.46	3.101	Si
SLV 7	1.39	-19129	-392.92	45544	8399.07	21.376	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	V par	M	$\sigma 0$	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 83	-1.3	-24428	4104	965.79		58163	1.4	10833	4550			1.11	Si
SLU 83	1.39	-22827	1164	-388.03		54350	1.4	10833	4550			3.91	Si
SLU 80	-1.3	-23566	4032	914.87		56109	1.4	10833	4550			1.13	Si
SLU 80	1.39	-22033	1197	-395.82		52460	1.4	10833	4550			3.8	Si
SLU 79	-1.3	-23618	4003	920.47		56232	1.4	10833	4550			1.14	Si
SLU 79	1.39	-22083	1170	-382.74		52579	1.4	10833	4550			3.89	Si
SLU 77	-1.3	-23791	4030	929.04		56644	1.4	10833	4550			1.13	Si
SLU 77	1.39	-22280	1182	-381.63		53046	1.4	10833	4550			3.85	Si
SLU 78	-1.3	-23739	4059	923.44		56521	1.4	10833	4550			1.12	Si
SLU 78	1.39	-22230	1209	-394.7		52928	1.4	10833	4550			3.76	Si
SLU 75	-1.3	-23471	4004	915.53		55883	1.4	10833	4550			1.14	Si
SLU 75	1.39	-21898	1178	-390.57		52137	1.4	10833	4550			3.86	Si
SLU 76	-1.3	-23263	3996	903.22		55388	1.4	10833	4550			1.14	Si
SLU 76	1.39	-21668	1183	-400.4		51591	1.4	10833	4550			3.85	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 81	-1.3	-24160	4049	957.88		57525	1.4	10833	4550			1.12	Si
SLU 81	1.39	-22495	1133	-383.9		53559	1.4	10833	4550			4.02	Si
SLU 82	-1.3	-24109	4079	952.28		57401	1.4	10833	4550			1.12	Si
SLU 82	1.39	-22445	1160	-396.98		53440	1.4	10833	4550			3.92	Si
SLU 84	-1.3	-24377	4134	960.19		58039	1.4	10833	4550			1.1	Si
SLU 84	1.39	-22777	1191	-401.1		54231	1.4	10833	4550			3.82	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 7	-1.3	-22241	7847	2844.56		52955	1.4	16250	6825			0.87	No, Vu<V
SLV 7	1.39	-19129	5143	-392.92		45544	1.4	16250	6825			1.33	Si
SLV 12	-1.3	-18499	8039	2389.01		44045	1.4	16250	6825			0.85	No, Vu<V
SLV 12	1.39	-17730	6205	-286.21		42213	1.4	16250	6825			1.1	Si
SLV 9	-1.3	-9879	-2349	-1620.99		23522	1.4	13038	5476			2.33	Si
SLV 9	1.39	-10431	-3517	-162.48		24836	1.4	13301	5586			1.59	Si
SLV 5	-1.3	-13621	-2541	-1165.44		32432	1.4	14820	6224			2.45	Si
SLV 5	1.39	-11830	-4579	-269.19		28167	1.4	13967	5866			1.28	Si
SLV 10	-1.3	-9879	-2349	-1620.99		23522	1.4	13038	5476			2.33	Si
SLV 10	1.39	-10431	-3517	-162.48		24836	1.4	13301	5586			1.59	Si
SLV 6	-1.3	-13621	-2541	-1165.44		32432	1.4	14820	6224			2.45	Si
SLV 6	1.39	-11830	-4579	-269.19		28167	1.4	13967	5866			1.28	Si
SLV 11	-1.3	-18499	8039	2389.01		44045	1.4	16250	6825			0.85	No, Vu<V
SLV 11	1.39	-17730	6205	-286.21		42213	1.4	16250	6825			1.1	Si
SLV 16	-1.3	-11116	4628	454.04		26467	1.4	13627	5723			1.24	Si
SLV 16	1.39	-13543	4041	-118.42		32245	1.4	14782	6209			1.54	Si
SLV 8	-1.3	-22241	7847	2844.56		52955	1.4	16250	6825			0.87	No, Vu<V
SLV 8	1.39	-19129	5143	-392.92		45544	1.4	16250	6825			1.33	Si
SLV 15	-1.3	-11116	4628	454.04		26467	1.4	13627	5723			1.24	Si
SLV 15	1.39	-13543	4041	-118.42		32245	1.4	14782	6209			1.54	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 14	143750	0.25	26598	-11171	55.9	1310.9	23.45	Si
SLV 13	143750	0.25	26598	-11171	55.9	1310.9	23.45	Si
SLV 10	143750	0.25	27109	-11386	55.9	1328.96	23.77	Si
SLV 9	143750	0.25	27109	-11386	55.9	1328.96	23.77	Si
SLV 16	143750	0.25	30875	-12967	55.9	1453.62	26	Si
SLV 15	143750	0.25	30875	-12967	55.9	1453.62	26	Si
SLV 5	143750	0.25	31824	-13366	55.9	1482.74	26.52	Si
SLV 6	143750	0.25	31824	-13366	55.9	1482.74	26.52	Si
SLV 12	143750	0.25	41366	-17374	55.9	1723.79	30.84	Si
SLV 11	143750	0.25	41366	-17374	55.9	1723.79	30.84	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 0.045 Wa = 0.05 Ta = 0.0403

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 4	-18206	-23590	259	0.045	2012.8	0.976	0.67409	3.95507	No
SLV 3	-18206	-23590	259	0.045	2012.8	0.976	0.67409	3.95507	No
SLV 1	-16017	-21004	202	0.047	1789.8	0.973	0.70612	3.95507	No
SLV 2	-16017	-21004	202	0.047	1789.8	0.973	0.70612	3.95507	No
SLV 7	-19129	-22241	229	0.047	2106.7	0.977	0.70292	3.66678	No
SLV 8	-19129	-22241	229	0.047	2106.7	0.977	0.70292	3.66678	No
SLV 13	-11353	-8530	-76	0.054	1315	0.964	0.8175	3.95507	No
SLV 14	-11353	-8530	-76	0.054	1315	0.964	0.8175	3.95507	No
SLV 12	-17730	-18499	145	0.051	1964.2	0.975	0.76078	3.66678	No
SLV 11	-17730	-18499	145	0.051	1964.2	0.975	0.76078	3.66678	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.063	SLU 83	Si
V_SLU	1.101	SLU 84	Si
PF_SLV	3.101	SLV 7	Si
V_SLV	0.849	SLV 11	No
PFFP_SLV	23.451	SLV 13	Si
R_SLV	0.17	SLV 3	No

Maschio 42

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.728	2.201	-9.728	6.576	L1	L3	4.375	0.3	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	32000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 82	-1.3	-60594	6241.45	46167	57426.44	9.201	Si
SLU 82	0.9	-61465	18610.27	46830	57156.68	3.071	Si
SLU 77	-1.3	-59831	6251.89	45586	57637.27	9.219	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 77	0.9	-60752	18531.49	46287	57379.78	3.096	Si
SLU 84	-1.3	-61151	6316.92	46591	57257.38	9.064	Si
SLU 84	0.9	-62123	18833.07	47332	56932.13	3.023	Si
SLU 74	-1.3	-59274	6176.42	45161	57776.24	9.354	Si
SLU 74	0.9	-60094	18308.69	45786	57567.41	3.144	Si
SLU 79	-1.3	-59358	6214.27	45225	57756.2	9.294	Si
SLU 79	0.9	-60187	18388.12	45857	57541.96	3.129	Si
SLU 81	-1.3	-60675	6197.17	46229	57402.56	9.263	Si
SLU 81	0.9	-61554	18555.71	46899	57127.07	3.079	Si
SLU 80	-1.3	-59277	6258.55	45163	57775.69	9.231	Si
SLU 80	0.9	-60097	18442.68	45788	57566.55	3.121	Si
SLU 83	-1.3	-61232	6272.64	46653	57231.65	9.124	Si
SLU 83	0.9	-62213	18778.51	47400	56900.1	3.03	Si
SLU 75	-1.3	-59193	6220.7	45099	57795.46	9.291	Si
SLU 75	0.9	-60004	18363.25	45717	57591.65	3.136	Si
SLU 78	-1.3	-59750	6296.17	45524	57658.35	9.158	Si
SLU 78	0.9	-60662	18586.05	46219	57406.44	3.089	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 4	-1.3	-28936	18045.12	22047	51877.11	2.875	Si
SLV 4	0.9	-33885	17668.55	25817	58461.93	3.309	Si
SLV 6	-1.3	-40004	-25897.09	30479	65680.23	2.536	Si
SLV 6	0.9	-32719	-6332.81	24929	56970.09	8.996	Si
SLV 10	-1.3	-46729	-28376.72	35603	72435.05	2.553	Si
SLV 10	0.9	-37961	-5857.29	28922	63383.16	10.821	Si
SLV 12	-1.3	-41772	34776.07	31826	67575.59	1.943	Si
SLV 12	0.9	-49164	31921.38	37458	74576.19	2.336	Si
SLV 8	-1.3	-35047	37255.7	26703	59911.36	1.608	Si
SLV 8	0.9	-43922	31445.86	33464	69765.18	2.219	Si
SLV 5	-1.3	-40004	-25897.09	30479	65680.23	2.536	Si
SLV 5	0.9	-32719	-6332.81	24929	56970.09	8.996	Si
SLV 3	-1.3	-28936	18045.12	22047	51877.11	2.875	Si
SLV 3	0.9	-33885	17668.55	25817	58461.93	3.309	Si
SLV 7	-1.3	-35047	37255.7	26703	59911.36	1.608	Si
SLV 7	0.9	-43922	31445.86	33464	69765.18	2.219	Si
SLV 11	-1.3	-41772	34776.07	31826	67575.59	1.943	Si
SLV 11	0.9	-49164	31921.38	37458	74576.19	2.336	Si
SLV 9	-1.3	-46729	-28376.72	35603	72435.05	2.553	Si
SLV 9	0.9	-37961	-5857.29	28922	63383.16	10.821	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 75	-1.3	-59193	381	6220.7		45099	4.375	10833	14219			37.29	Si
SLU 75	0.9	-60004	373	18363.25		45717	4.375	10833	14219			38.12	Si
SLU 74	-1.3	-59274	393	6176.42		45161	4.375	10833	14219			36.14	Si
SLU 74	0.9	-60094	379	18308.69		45786	4.375	10833	14219			37.54	Si
SLU 73	-1.3	-58108	370	6137.13		44273	4.375	10833	14219			38.4	Si
SLU 73	0.9	-58721	366	18033.46		44740	4.375	10833	14219			38.87	Si
SLU 84	-1.3	-61151	399	6316.92		46591	4.375	10833	14219			35.59	Si
SLU 84	0.9	-62123	378	18833.07		47332	4.375	10833	14219			37.66	Si
SLU 82	-1.3	-60594	405	6241.45		46167	4.375	10833	14219			35.1	Si
SLU 82	0.9	-61465	385	18610.27		46830	4.375	10833	14219			36.94	Si
SLU 79	-1.3	-59358	379	6214.27		45225	4.375	10833	14219			37.49	Si
SLU 79	0.9	-60187	361	18388.12		45857	4.375	10833	14219			39.41	Si
SLU 81	-1.3	-60675	417	6197.17		46229	4.375	10833	14219			34.09	Si
SLU 81	0.9	-61554	391	18555.71		46899	4.375	10833	14219			36.39	Si
SLU 78	-1.3	-59750	376	6296.17		45524	4.375	10833	14219			37.84	Si
SLU 78	0.9	-60662	366	18586.05		46219	4.375	10833	14219			38.88	Si
SLU 83	-1.3	-61232	412	6272.64		46653	4.375	10833	14219			34.55	Si
SLU 83	0.9	-62213	383	18778.51		47400	4.375	10833	14219			37.09	Si
SLU 77	-1.3	-59831	388	6251.89		45586	4.375	10833	14219			36.66	Si
SLU 77	0.9	-60752	371	18531.49		46287	4.375	10833	14219			38.28	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 6	-1.3	-40004	-17842	-25897.09		30479	4.375	14429	18938			1.06	Si
SLV 6	0.9	-32719	-16409	-6332.81		24929	4.375	13319	17481			1.07	Si
SLV 2	-1.3	-30423	-6195	-900.71		23180	4.375	12969	17022			2.75	Si
SLV 2	0.9	-30524	-6677	6334.95		23257	4.375	12985	17042			2.55	Si
SLV 10	-1.3	-46729	-17166	-28376.72		35603	4.375	15454	20283			1.18	Si
SLV 10	0.9	-37961	-15131	-5857.29		28922	4.375	14118	18530			1.22	Si
SLV 12	-1.3	-41772	18360	34776.07		34254	4.0649	15184	18517			1.01	Si
SLV 12	0.9	-49164	16936	31921.38		37458	4.375	15825	20770			1.23	Si
SLV 11	-1.3	-41772	18360	34776.07		34254	4.0649	15184	18517			1.01	Si
SLV 11	0.9	-49164	16936	31921.38		37458	4.375	15825	20770			1.23	Si
SLV 8	-1.3	-35047	17685	37255.7		34630	3.3735	15259	15443			0.87	No, Vu<V
SLV 8	0.9	-43922	15658	31445.86		33464	4.375	15026	19722			1.26	Si
SLV 7	-1.3	-35047	17685	37255.7		34630	3.3735	15259	15443			0.87	No, Vu<V
SLV 7	0.9	-43922	15658	31445.86		33464	4.375	15026	19722			1.26	Si
SLV 1	-1.3	-30423	-6195	-900.71		23180	4.375	12969	17022			2.75	Si
SLV 1	0.9	-30524	-6677	6334.95		23257	4.375	12985	17042			2.55	Si
SLV 9	-1.3	-46729	-17166	-28376.72		35603	4.375	15454	20283			1.18	Si
SLV 9	0.9	-37961	-15131	-5857.29		28922	4.375	14118	18530			1.22	Si
SLV 5	-1.3	-40004	-17842	-25897.09		30479	4.375	14429	18938			1.06	Si
SLV 5	0.9	-32719	-16409	-6332.81		24929	4.375	13319	17481			1.07	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.05 denominatore 8 $\gamma_M = 2$



Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	143750	0.25	23481	-30819	174.69	3734.43	21.38	Si
SLV 1	143750	0.25	23481	-30819	174.69	3734.43	21.38	Si
SLV 4	143750	0.25	24313	-31911	174.69	3834.23	21.95	Si
SLV 3	143750	0.25	24313	-31911	174.69	3834.23	21.95	Si
SLV 6	143750	0.25	27466	-36050	174.69	4191.92	24	Si
SLV 5	143750	0.25	27466	-36050	174.69	4191.92	24	Si
SLV 7	143750	0.25	30242	-39692	174.69	4480.24	25.65	Si
SLV 8	143750	0.25	30242	-39692	174.69	4480.24	25.65	Si
SLV 9	143750	0.25	31715	-41626	174.69	4623.24	26.47	Si
SLV 10	143750	0.25	31715	-41626	174.69	4623.24	26.47	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 0.045 Wa = 0.05 Ta = 0.0403

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 16	-53013	-51353	-4	0.059	5894.5	0.974	0.87793	3.95507	No
SLV 15	-53013	-51353	-4	0.059	5894.5	0.974	0.87793	3.95507	No
SLV 13	-49964	-52840	13	0.059	5584	0.973	0.87933	3.95507	No
SLV 14	-49964	-52840	13	0.059	5584	0.973	0.87933	3.95507	No
SLV 3	-34399	-28936	-13	0.06	3999.5	0.963	0.90781	3.95507	No
SLV 4	-34399	-28936	-13	0.06	3999.5	0.963	0.90781	3.95507	No
SLV 2	-31350	-30423	5	0.061	3689.4	0.96	0.91996	3.95507	No
SLV 1	-31350	-30423	5	0.061	3689.4	0.96	0.91996	3.95507	No
SLV 12	-50055	-41772	-28	0.059	5593.3	0.973	0.87515	3.66678	No
SLV 11	-50055	-41772	-28	0.059	5593.3	0.973	0.87515	3.66678	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.023	SLU 84	Si
V_SLU	34.089	SLU 81	Si
PF_SLV	1.608	SLV 7	Si
V_SLV	0.873	SLV 7	No
PFFP_SLV	21.378	SLV 1	Si
R_SLV	0.222	SLV 15	No

Maschio 43

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.723	-4.784	-11.013	-4.784	L1	L3	3.29	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 55	-1.3	-40594	6974.06	27419	44299.62	6.352	Si
SLU 55	1.39	-30658	12817.38	20708	37611.6	2.934	Si
SLU 73	-1.3	-42403	7418.05	28641	45227.39	6.097	Si
SLU 73	1.39	-32479	13445.84	21938	39039.1	2.903	Si
SLU 68	-1.3	-40080	6828.17	27072	44019.72	6.447	Si
SLU 68	1.39	-30191	12683.07	20392	37231	2.935	Si
SLU 75	-1.3	-42719	7434.43	28854	45380.37	6.104	Si
SLU 75	1.39	-32716	13443.52	22098	39218.2	2.917	Si
SLU 78	-1.3	-43069	7546.43	29091	45546.7	6.036	Si
SLU 78	1.39	-33039	13602.37	22316	39459.81	2.901	Si
SLU 82	-1.3	-43428	7579.19	29333	45713.7	6.031	Si
SLU 82	1.39	-33434	13604.92	22583	39751.64	2.922	Si
SLU 76	-1.3	-42753	7530.05	28877	45396.74	6.029	Si
SLU 76	1.39	-32802	13604.7	22156	39282.81	2.887	Si
SLU 57	-1.3	-40910	6990.44	27632	44468.2	6.361	Si
SLU 57	1.39	-30895	12815.06	20868	37802.47	2.95	Si
SLU 80	-1.3	-42983	7502.39	29033	45506.17	6.066	Si
SLU 80	1.39	-32961	13527.65	2264	39401.82	2.913	Si
SLU 84	-1.3	-43778	7691.19	29570	45873.25	5.964	Si
SLU 84	1.39	-33757	13763.78	22801	39986.92	2.905	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 9	-1.3	-55665	6687.88	37599	63391.73	9.479	Si
SLV 9	1.39	-44395	23672.25	29987	55107.42	2.328	Si
SLV 3	-1.3	-9803	11409.91	6621	15251.66	1.337	Si
SLV 3	1.39	-976	-5273.63	0	0	0	No, e>l/2
SLV 7	-1.3	-5574	3264.22	3765	8886.44	2.722	Si
SLV 7	1.39	-1475	-5131.01	0	0	0	No, e>l/2
SLV 14	-1.3	-51436	-1457.81	34742	60553.8	41.538	Si
SLV 14	1.39	-44894	23814.87	30323	55522.72	2.331	Si
SLV 10	-1.3	-55665	6687.88	37599	63391.73	9.479	Si
SLV 10	1.39	-44395	23672.25	29987	55107.42	2.328	Si
SLV 13	-1.3	-51436	-1457.81	34742	60553.8	41.538	Si
SLV 13	1.39	-44894	23814.87	30323	55522.72	2.331	Si
SLV 8	-1.3	-5574	3264.22	3765	8886.44	2.722	Si
SLV 8	1.39	-1475	-5131.01	0	0	0	No, e>l/2



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 1	-1.3	-22199	13811.22	14994	32035.69	2.32	Si
SLV 1	1.39	-10782	1345.07	7283	16679.61	12.401	Si
SLV 2	-1.3	-22199	13811.22	14994	32035.69	2.32	Si
SLV 2	1.39	-10782	1345.07	7283	16679.61	12.401	Si
SLV 4	-1.3	-9803	11409.91	6621	15251.66	1.337	Si
SLV 4	1.39	-976	-5273.63	0	0	0	No, e>l/2

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 75	-1.3	-42719	-8067	7434.43		28854	3.29	9403	13921			1.73	Si
SLU 75	1.39	-32716	-3982	13443.52		22098	3.29	8502	12587			3.16	Si
SLU 83	-1.3	-43598	-8156	7481.7		29448	3.29	9482	14038			1.72	Si
SLU 83	1.39	-33511	-3983	13409.91		22635	3.29	8574	12693			3.19	Si
SLU 73	-1.3	-42403	-8054	7418.05		28641	3.29	9374	13879			1.72	Si
SLU 73	1.39	-32479	-3995	13445.84		21938	3.29	8481	12556			3.14	Si
SLU 76	-1.3	-42753	-8133	7530.05		28877	3.29	9406	13925			1.71	Si
SLU 76	1.39	-32802	-4031	13604.7		22156	3.29	8510	12599			3.13	Si
SLU 84	-1.3	-43778	-8300	7691.19		29570	3.29	9498	14062			1.69	Si
SLU 84	1.39	-33757	-4085	13763.78		22801	3.29	8596	12726			3.12	Si
SLU 81	-1.3	-43248	-8077	7369.7		29212	3.29	9450	13991			1.73	Si
SLU 81	1.39	-33188	-3946	13251.05		22417	3.29	8544	12650			3.21	Si
SLU 82	-1.3	-43428	-8221	7579.19		29333	3.29	9467	14015			1.7	Si
SLU 82	1.39	-33434	-4049	13604.92		22583	3.29	8567	12683			3.13	Si
SLU 80	-1.3	-42983	-8115	7502.39		29033	3.29	9427	13956			1.72	Si
SLU 80	1.39	-32961	-4000	13527.65		22264	3.29	8524	12620			3.16	Si
SLU 77	-1.3	-42889	-8002	7336.94		28969	3.29	9418	13944			1.74	Si
SLU 77	1.39	-32793	-3916	13248.51		22150	3.29	8509	12597			3.22	Si
SLU 78	-1.3	-43069	-8146	7546.43		29091	3.29	9434	13968			1.71	Si
SLU 78	1.39	-33039	-4019	13602.37		22316	3.29	8531	12630			3.14	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 14	-1.3	-51436	-14078	-1457.81		34742	3.29	15282	22625			1.61	Si
SLV 14	1.39	-44894	-11220	23814.87		30323	3.29	14398	21316			1.9	Si
SLV 16	-1.3	-39040	-10515	-3859.12		26369	3.29	13607	20145			1.92	Si
SLV 16	1.39	-35088	-9610	17196.17		23700	3.29	13073	19355			2.01	Si
SLV 15	-1.3	-39040	-10515	-3859.12		26369	3.29	13607	20145			1.92	Si
SLV 15	1.39	-35088	-9610	17196.17		23700	3.29	13073	19355			2.01	Si
SLV 3	-1.3	-9803	2867	11409.91		15095	1.4431	11352	7372			2.57	Si
SLV 3	1.39	-976	5719	-5273.63		0	0	8333	0			0	No, Vu<V
SLV 9	-1.3	-55665	-13552	6687.88		37599	3.29	15853	23470			1.73	Si
SLV 9	1.39	-44395	-7734	23672.25		29987	3.29	14331	21217			2.74	Si
SLV 13	-1.3	-51436	-14078	-1457.81		34742	3.29	15282	22625			1.61	Si
SLV 13	1.39	-44894	-11220	23814.87		30323	3.29	14398	21316			1.9	Si
SLV 10	-1.3	-55665	-13552	6687.88		37599	3.29	15853	23470			1.73	Si
SLV 10	1.39	-44395	-7734	23672.25		29987	3.29	14331	21217			2.74	Si
SLV 4	-1.3	-9803	2867	11409.91		15095	1.4431	11352	7372			2.57	Si
SLV 4	1.39	-976	5719	-5273.63		0	0	8333	0			0	No, Vu<V
SLV 8	-1.3	-5574	2340	3264.22		3897	3.1781	9113	13033			5.57	Si
SLV 8	1.39	-1475	2232	-5131.01		0	0	8333	0			0	No, Vu<V
SLV 7	-1.3	-5574	2340	3264.22		3897	3.1781	9113	13033			5.57	Si
SLV 7	1.39	-1475	2232	-5131.01		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.08 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 7	143750	0.25	2710	-4012	197.05	882.69	4.48	Si
SLV 8	143750	0.25	2710	-4012	197.05	882.69	4.48	Si
SLV 4	143750	0.25	3089	-4573	197.05	1002.83	5.09	Si
SLV 3	143750	0.25	3089	-4573	197.05	1002.83	5.09	Si
SLV 11	143750	0.25	9468	-14018	197.05	2909.56	14.77	Si
SLV 12	143750	0.25	9468	-14018	197.05	2909.56	14.77	Si
SLV 2	143750	0.25	10171	-15059	197.05	3106.14	15.76	Si
SLV 1	143750	0.25	10171	-15059	197.05	3106.14	15.76	Si
SLV 15	143750	0.25	25616	-37924	197.05	6744.09	34.23	Si
SLV 16	143750	0.25	25616	-37924	197.05	6744.09	34.23	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.045 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 7	-1475	-5574	-789	0	798.6	0.906	0	3.16379	No
SLV 8	-1475	-5574	-789	0	798.6	0.906	0	3.16379	No
SLV 12	-11708	-14345	-698	0.058	1765.8	0.918	0.91235	3.16379	No
SLV 11	-11708	-14345	-698	0.058	1765.8	0.918	0.91235	3.16379	No
SLV 3	-976	-9803	-363	0.07	765.8	0.922	1.10023	3.31979	No
SLV 4	-976	-9803	-363	0.07	765.8	0.922	1.10023	3.31979	No
SLV 10	-44395	-55665	821	0.073	5080.6	0.967	1.09442	3.16379	No
SLV 9	-44395	-55665	821	0.073	5080.6	0.967	1.09442	3.16379	No
SLV 6	-34162	-46894	730	0.072	4039.5	0.959	1.0951	3.16379	No
SLV 5	-34162	-46894	730	0.072	4039.5	0.959	1.0951	3.16379	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.887	SLU 76	Si
V_SLU	1.694	SLU 84	Si
PF_SLV	0	SLV 3	No
V_SLV	0	SLV 3	No
PFFP_SLV	4.48	SLV 7	Si
R_SLV	0	SLV 7	No



Maschio 44

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota s.	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.013	-3.284	-10.553	-3.284	L1	L3	0.46	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 75	-1.3	-8729	-807.38	42168	968.35	1.199	Si
SLU 75	0.75	-10144	14.04	49007	929.51	66.194	Si
SLU 84	-1.3	-8966	-850.84	43314	965.65	1.135	Si
SLU 84	0.75	-10560	20.34	51013	907.74	44.62	Si
SLU 78	-1.3	-8828	-813.03	42648	967.41	1.19	Si
SLU 78	0.75	-10248	12.56	49508	924.51	73.605	Si
SLU 77	-1.3	-8833	-790.21	42671	967.35	1.224	Si
SLU 77	0.75	-10141	8.65	48988	929.69	107.472	Si
SLU 81	-1.3	-8871	-822.35	42857	966.91	1.176	Si
SLU 81	0.75	-10348	17.92	49991	919.42	51.318	Si
SLU 82	-1.3	-8867	-845.18	42833	966.97	1.144	Si
SLU 82	0.75	-10456	21.83	50512	913.63	41.86	Si
SLU 76	-1.3	-8689	-819.48	41977	968.65	1.182	Si
SLU 76	0.75	-10173	17.06	49145	928.16	54.414	Si
SLU 80	-1.3	-8792	-809.92	42473	967.78	1.195	Si
SLU 80	0.75	-10205	12.97	49300	926.62	71.448	Si
SLU 73	-1.3	-8590	-813.83	41497	969.21	1.191	Si
SLU 73	0.75	-10069	18.54	48644	932.95	50.323	Si
SLU 83	-1.3	-8971	-828.01	43337	965.58	1.166	Si
SLU 83	0.75	-10452	16.43	50493	913.84	55.606	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 7	-1.3	-3311	-590.74	15993	661.76	1.12	Si
SLV 7	0.75	-5247	63.68	25347	956.44	15.02	Si
SLV 3	-1.3	-3858	-1053.86	0	0	0	No, e>l/2
SLV 3	0.75	-7987	50.88	38582	1256.88	24.7	Si
SLV 5	-1.3	-8104	-793.96	39148	1266.68	1.595	Si
SLV 5	0.75	-9592	-42.2	46338	1369.5	32.451	Si
SLV 8	-1.3	-3311	-590.74	15993	661.76	1.12	Si
SLV 8	0.75	-5247	63.68	25347	956.44	15.02	Si
SLV 1	-1.3	-5296	-1114.83	25587	963.08	0.864	No, M>Mu
SLV 1	0.75	-9290	19.12	44879	1351.9	70.7	Si
SLV 10	-1.3	-9072	-457.97	43826	1338.16	2.922	Si
SLV 10	0.75	-8547	-63	41291	1301.53	20.659	Si
SLV 6	-1.3	-8104	-793.96	39148	1266.68	1.595	Si
SLV 6	0.75	-9592	-42.2	46338	1369.5	32.451	Si
SLV 2	-1.3	-5296	-1114.83	25587	963.08	0.864	No, M>Mu
SLV 2	0.75	-9290	19.12	44879	1351.9	70.7	Si
SLV 9	-1.3	-9072	-457.97	43826	1338.16	2.922	Si
SLV 9	0.75	-8547	-63	41291	1301.53	20.659	Si
SLV 4	-1.3	-3858	-1053.86	0	0	0	No, e>l/2
SLV 4	0.75	-7987	50.88	38582	1256.88	24.7	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 73	-1.3	-8590	-1851	-813.83		47043	0.4058	10833	1978			1.07	Si
SLU 73	0.75	-10069	125	18.54		48644	0.46	10833	2242			18.01	Si
SLU 83	-1.3	-8971	-1891	-828.01		48258	0.4131	10833	2014			1.06	Si
SLU 83	0.75	-10452	105	16.43		50493	0.46	10833	2242			21.35	Si
SLU 76	-1.3	-8689	-1863	-819.48		47435	0.4071	10833	1984			1.07	Si
SLU 76	0.75	-10173	129	17.06		49145	0.46	10833	2242			17.39	Si
SLU 81	-1.3	-8871	-1879	-822.35		47861	0.4119	10833	2008			1.07	Si
SLU 81	0.75	-10348	101	17.92		49991	0.46	10833	2242			22.29	Si
SLU 80	-1.3	-8792	-1843	-809.92		47234	0.4136	10833	2016			1.09	Si
SLU 80	0.75	-10205	127	12.97		49300	0.46	10833	2242			17.67	Si
SLU 42	-1.3	-7385	-1692	-741.57		42215	0.3888	10833	1895			1.12	Si
SLU 42	0.75	-8959	81	25.83		43281	0.46	10833	2242			27.8	Si
SLU 75	-1.3	-8729	-1837	-807.38		47022	0.4125	10833	2011			1.09	Si
SLU 75	0.75	-10144	124	14.04		49007	0.46	10833	2242			18.02	Si
SLU 82	-1.3	-8867	-1927	-845.18		48767	0.404	10833	1970			1.02	Si
SLU 82	0.75	-10456	110	21.83		50512	0.46	10833	2242			20.33	Si
SLU 84	-1.3	-8966	-1939	-850.84		49158	0.4053	10833	1976			1.02	Si
SLU 84	0.75	-10560	115	20.34		51013	0.46	10833	2242			19.55	Si
SLU 78	-1.3	-8828	-1849	-813.03		47420	0.4137	10833	2017			1.09	Si
SLU 78	0.75	-10248	129	12.56		49508	0.46	10833	2242			17.41	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, γM = 2

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 7	-1.3	-3311	-973	-590.74		47564	0.1547	16250	1131			1.16	Si
SLV 7	0.75	-5247	-424	63.68		25347	0.46	13403	2774			6.54	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 8	-1.3	-3311	-973	-590.74		47564	0.1547	16250	1131			1.16	Si
SLV 8	0.75	-5247	-424	63.68		25347	0.46	13403	2774			6.54	Si
SLV 9	-1.3	-9072	-1413	-457.97		43826	0.46	16250	3364			2.38	Si
SLV 9	0.75	-8547	613	-63		41291	0.46	16250	3364			5.49	Si
SLV 3	-1.3	-3858	-2049	-1053.86		0	0	8333	0			0	No, Vu<V
SLV 3	0.75	-7987	-87	50.88		38582	0.46	16050	3322			37.99	Si
SLV 1	-1.3	-5296	-2363	-1114.83		201058	0.0585	16250	428			0.18	No, Vu<V
SLV 1	0.75	-9290	218	19.12		44879	0.46	16250	3364			15.4	Si
SLV 6	-1.3	-8104	-2021	-793.96		45467	0.3961	16250	2896			1.43	Si
SLV 6	0.75	-9592	595	-42.2		46338	0.46	16250	3364			5.65	Si
SLV 4	-1.3	-3858	-2049	-1053.86		0	0	8333	0			0	No, Vu<V
SLV 4	0.75	-7987	-87	50.88		38582	0.46	16050	3322			37.99	Si
SLV 10	-1.3	-9072	-1413	-457.97		43826	0.46	16250	3364			2.38	Si
SLV 10	0.75	-8547	613	-63		41291	0.46	16250	3364			5.49	Si
SLV 5	-1.3	-8104	-2021	-793.96		45467	0.3961	16250	2896			1.43	Si
SLV 5	0.75	-9592	595	-42.2		46338	0.46	16250	3364			5.65	Si
SLV 2	-1.3	-5296	-2363	-1114.83		201058	0.0585	16250	428			0.18	No, Vu<V
SLV 2	0.75	-9290	218	19.12		44879	0.46	16250	3364			15.4	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.08 denominatore 8 $\gamma M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 11	143750	0.25	28639	-5928	27.55	1021.22	37.07	Si
SLV 12	143750	0.25	28639	-5928	27.55	1021.22	37.07	Si
SLV 8	143750	0.25	33572	-6949	27.55	1134	41.16	Si
SLV 7	143750	0.25	33572	-6949	27.55	1134	41.16	Si
SLV 15	143750	0.25	33613	-6958	27.55	1134.86	41.19	Si
SLV 16	143750	0.25	33613	-6958	27.55	1134.86	41.19	Si
SLV 14	143750	0.25	42810	-8862	27.55	1295.29	47.01	Si
SLV 13	143750	0.25	42810	-8862	27.55	1295.29	47.01	Si
SLV 4	143750	0.25	50057	-10362	27.55	1376.29	49.95	Si
SLV 3	143750	0.25	50057	-10362	27.55	1376.29	49.95	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.045 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 11	-1809	-4279	192	0.019	264.2	0.922	0.29733	3.16379	No
SLV 12	-1809	-4279	192	0.019	264.2	0.922	0.29733	3.16379	No
SLV 7	-2738	-3311	221	0.028	357.9	0.939	0.4368	3.16379	No
SLV 8	-2738	-3311	221	0.028	357.9	0.939	0.4368	3.16379	No
SLV 3	-5564	-3858	201	0.057	645	0.963	0.86563	3.31979	No
SLV 4	-5564	-3858	201	0.057	645	0.963	0.86563	3.31979	No
SLV 15	-2468	-7086	102	0.064	330.5	0.934	0.98848	3.31979	No
SLV 16	-2468	-7086	102	0.064	330.5	0.934	0.98848	3.31979	No
SLV 2	-7058	-5296	154	0.069	796.9	0.97	1.03132	3.31979	No
SLV 1	-7058	-5296	154	0.069	796.9	0.97	1.03132	3.31979	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.135	SLU 84	Si
V_SLU	1.019	SLU 84	Si
PF_SLV	0	SLV 3	No
V_SLV	0	SLV 3	No
PFFP_SLV	37.067	SLV 11	Si
R_SLV	0.094	SLV 11	No

Maschio 45

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.723	-3.284	-7.723	-4.784	L1	L3	1.5	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 83	-1.3	-19962	-1161.57	29574	9536.21	8.21	Si
SLU 83	1.39	-8952	-1388.37	13262	5620.81	4.048	Si
SLU 39	-1.3	-16404	-1041.13	24303	8632.59	8.292	Si
SLU 39	1.39	-7431	-1193.75	11009	4820.21	4.038	Si
SLU 84	-1.3	-20314	-1302.76	30095	9606.78	7.374	Si
SLU 84	1.39	-9231	-1415.79	13676	5760.97	4.069	Si
SLU 81	-1.3	-19814	-1146.85	29354	9505.4	8.288	Si
SLU 81	1.39	-8854	-1366.21	13117	5571.21	4.078	Si
SLU 41	-1.3	-16553	-1055.84	24523	8677.23	8.218	Si
SLU 41	1.39	-7529	-1215.91	11154	4873.61	4.008	Si
SLU 35	-1.3	-16098	-996.15	23849	8538.67	8.572	Si
SLU 35	1.39	-7319	-1176.69	10843	4758.55	4.044	Si
SLU 40	-1.3	-16756	-1182.32	24824	8737.3	7.39	Si
SLU 40	1.39	-7711	-1221.17	11423	4971.95	4.071	Si
SLU 32	-1.3	-15949	-981.44	23629	8492.19	8.653	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 32	1.39	-7221	-1154.53	10698	4704.59	4.075	Si
SLU 42	-1.3	-16904	-1197.03	25044	8780.51	7.335	Si
SLU 42	1.39	-7808	-1243.33	11568	5024.6	4.041	Si
SLU 37	-1.3	-16040	-982.6	23763	8520.64	8.672	Si
SLU 37	1.39	-7281	-1161.55	10786	4737.41	4.079	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 5	-1.3	-22089	-1883.62	32724	12129.78	6.44	Si
SLV 5	1.39	-4436	-3345.1	0	0	0	No, $e \geq l/2$
SLV 2	-1.3	-14969	-3829.22	22177	9189.35	2.4	Si
SLV 2	1.39	-3459	-2731.38	0	0	0	No, $e \geq l/2$
SLV 3	-1.3	-9688	-3656.12	14352	6412.26	1.754	Si
SLV 3	1.39	-3986	-1466.9	5906	2845.21	1.94	Si
SLV 9	-1.3	-22909	-42.86	33940	12409.45	289.519	Si
SLV 9	1.39	-5800	-2606.67	8592	4043.89	1.551	Si
SLV 7	-1.3	-4483	-1306.62	6641	3179.37	2.433	Si
SLV 7	1.39	-6193	869.83	9174	4295.83	4.939	Si
SLV 10	-1.3	-22909	-42.86	33940	12409.45	289.519	Si
SLV 10	1.39	-5800	-2606.67	8592	4043.89	1.551	Si
SLV 8	-1.3	-4483	-1306.62	6641	3179.37	2.433	Si
SLV 8	1.39	-6193	869.83	9174	4295.83	4.939	Si
SLV 1	-1.3	-14969	-3829.22	22177	9189.35	2.4	Si
SLV 1	1.39	-3459	-2731.38	0	0	0	No, $e \geq l/2$
SLV 6	-1.3	-22089	-1883.62	32724	12129.78	6.44	Si
SLV 6	1.39	-4436	-3345.1	0	0	0	No, $e \geq l/2$
SLV 4	-1.3	-9688	-3656.12	14352	6412.26	1.754	Si
SLV 4	1.39	-3986	-1466.9	5906	2845.21	1.94	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 83	-1.3	-19962	72	-1161.57		29574	1.5	9499	6412			88.48	Si
SLU 83	1.39	-8952	810	-1388.37		13262	1.5	7324	4944			6.1	Si
SLU 56	-1.3	-18185	52	-917.3		26941	1.5	9148	6175			119.16	Si
SLU 56	1.39	-8026	719	-1179.37		11890	1.5	7141	4820			6.7	Si
SLU 62	-1.3	-18640	59	-976.99		27614	1.5	9237	6235			106.28	Si
SLU 62	1.39	-8236	737	-1218.59		12201	1.5	7182	4848			6.58	Si
SLU 81	-1.3	-19814	72	-1146.85		29354	1.5	9469	6392			88.92	Si
SLU 81	1.39	-8854	799	-1366.21		13117	1.5	7304	4931			6.17	Si
SLU 58	-1.3	-18127	52	-903.75		26855	1.5	9136	6167			119.03	Si
SLU 58	1.39	-7987	714	-1164.23		11833	1.5	7133	4815			6.74	Si
SLU 74	-1.3	-19359	65	-1087.17		28680	1.5	9380	6331			97.35	Si
SLU 74	1.39	-8644	781	-1326.99		12806	1.5	7263	4903			6.28	Si
SLU 79	-1.3	-19450	66	-1088.33		28815	1.5	9397	6343			96.69	Si
SLU 79	1.39	-8703	787	-1334.01		12894	1.5	7275	4910			6.24	Si
SLU 77	-1.3	-19508	66	-1101.88		28900	1.5	9409	6351			96.8	Si
SLU 77	1.39	-8742	792	-1349.15		12951	1.5	7282	4916			6.21	Si
SLU 60	-1.3	-18491	58	-962.28		27394	1.5	9208	6215			106.99	Si
SLU 60	1.39	-8138	726	-1196.43		12056	1.5	7163	4835			6.66	Si
SLU 84	-1.3	-20314	-14	-1302.76		30095	1.5	9568	6459			472.8	Si
SLU 84	1.39	-9231	745	-1415.79		13676	1.5	7379	4981			6.69	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 6	-1.3	-22089	-325	-1883.62		32724	1.5	14878	10043			30.88	Si
SLV 6	1.39	-4436	3369	-3345.1		0	0	8333	0			0	No, $V_u < V$
SLV 9	-1.3	-22909	-178	-42.86		33940	1.5	15121	10207			57.5	Si
SLV 9	1.39	-5800	3658	-2606.67		14294	0.9016	11192	4541			1.24	Si
SLV 7	-1.3	-4483	254	-1306.62		7242	1.3756	9782	6055			23.86	Si
SLV 7	1.39	-6193	-2590	869.83		9174	1.5	10168	6864			2.65	Si
SLV 5	-1.3	-22089	-325	-1883.62		32724	1.5	14878	10043			30.88	Si
SLV 5	1.39	-4436	3369	-3345.1		0	0	8333	0			0	No, $V_u < V$
SLV 8	-1.3	-4483	254	-1306.62		7242	1.3756	9782	6055			23.86	Si
SLV 8	1.39	-6193	-2590	869.83		9174	1.5	10168	6864			2.65	Si
SLV 10	-1.3	-22909	-178	-42.86		33940	1.5	15121	10207			57.5	Si
SLV 10	1.39	-5800	3658	-2606.67		14294	0.9016	11192	4541			1.24	Si
SLV 2	-1.3	-14969	-295	-3829.22		22437	1.4826	12821	8554			29	Si
SLV 2	1.39	-3459	946	-2731.38		0	0	8333	0			0	No, $V_u < V$
SLV 1	-1.3	-14969	-295	-3829.22		22437	1.4826	12821	8554			29	Si
SLV 1	1.39	-3459	946	-2731.38		0	0	8333	0			0	No, $V_u < V$
SLV 12	-1.3	-5303	402	534.13		7857	1.5	9905	6686			16.65	Si
SLV 12	1.39	-7557	-2302	1608.27		11195	1.5	10572	7136			3.1	Si
SLV 11	-1.3	-5303	402	534.13		7857	1.5	9905	6686			16.65	Si
SLV 11	1.39	-7557	-2302	1608.27		11195	1.5	10572	7136			3.1	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.08 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 7	143750	0.25	5452	-3680	89.84	791.12	8.81	Si
SLV 8	143750	0.25	5452	-3680	89.84	791.12	8.81	Si
SLV 12	143750	0.25	6880	-4644	89.84	986.04	10.98	Si
SLV 11	143750	0.25	6880	-4644	89.84	986.04	10.98	Si
SLV 4	143750	0.25	11143	-7521	89.84	1537.99	17.12	Si
SLV 3	143750	0.25	11143	-7521	89.84	1537.99	17.12	Si
SLV 15	143750	0.25	15901	-10733	89.84	2100.71	23.38	Si
SLV 16	143750	0.25	15901	-10733	89.84	2100.71	23.38	Si
SLV 1	143750	0.25	17448	-11777	89.84	2271.51	25.28	Si
SLV 2	143750	0.25	17448	-11777	89.84	2271.51	25.28	Si



Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.045 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 6	-4436	-22089	-228	0.069	715	0.91	1.09449	3.16379	No
SLV 5	-4436	-22089	-228	0.069	715	0.91	1.09449	3.16379	No
SLV 9	-5800	-22909	-200	0.075	851.4	0.921	1.18517	3.16379	No
SLV 10	-5800	-22909	-200	0.075	851.4	0.921	1.18517	3.16379	No
SLV 1	-3459	-14969	-144	0.082	618.4	0.902	1.32401	3.31979	No
SLV 2	-3459	-14969	-144	0.082	618.4	0.902	1.32401	3.31979	No
SLV 12	-7557	-5303	133	0.084	1028.3	0.932	1.3103	3.16379	No
SLV 11	-7557	-5303	133	0.084	1028.3	0.932	1.3103	3.16379	No
SLV 16	-8533	-12423	49	0.092	1127	0.937	1.4309	3.31979	No
SLV 15	-8533	-12423	49	0.092	1127	0.937	1.4309	3.31979	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.008	SLU 41	Si
V_SLU	6.104	SLU 83	Si
PF_SLV	0	SLV 1	No
V_SLV	0	SLV 1	No
PFFP_SLV	8.806	SLV 7	Si
R_SLV	0.346	SLV 5	No

Maschio 46

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-6.268	1.046	-6.268	-3.284	L1	L3	4.33	0.3	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.l) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLU 81	-1.3	-66169	-14082.16	50939	53673.39	3.811	Si
SLU 81	1.39	-58201	10090.19	44805	56698.54	5.619	Si
SLU 84	-1.3	-67058	-12148.1	51622	53175.22	4.377	Si
SLU 84	1.39	-60055	11813.63	46231	56226.77	4.759	Si
SLU 41	-1.3	-56788	-12740.34	43717	56963.83	4.471	Si
SLU 41	1.39	-50380	8181.33	38784	57141.37	6.984	Si
SLU 73	-1.3	-63635	-9603.51	48988	54917.17	5.718	Si
SLU 73	1.39	-57432	12609.32	44213	56853.05	4.509	Si
SLU 74	-1.3	-64521	-13447.83	49670	54512.46	4.054	Si
SLU 74	1.39	-56811	10101.33	43735	56960.2	5.639	Si
SLU 83	-1.3	-66893	-14262.93	51496	53270	3.735	Si
SLU 83	1.39	-58958	10215.53	45387	56522.85	5.533	Si
SLU 76	-1.3	-64359	-9784.28	49545	54588.8	5.579	Si
SLU 76	1.39	-58189	12734.66	44795	56701.17	4.453	Si
SLU 82	-1.3	-66334	-11967.33	51065	53583.49	4.477	Si
SLU 82	1.39	-59298	11688.29	45649	56436.42	4.828	Si
SLU 79	-1.3	-64808	-13489.76	49891	54374.19	4.031	Si
SLU 79	1.39	-57119	10196.5	43971	56909.1	5.581	Si
SLU 77	-1.3	-65244	-13628.59	50227	54157.88	3.974	Si
SLU 77	1.39	-57568	10226.67	44317	56827.57	5.557	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma M = 2$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLV 9	-1.3	-50600	7780.16	38953	74625.04	9.592	Si
SLV 9	1.39	-48548	17945.16	37373	72957.37	4.066	Si
SLV 8	-1.3	-37871	-24942	29154	62427.21	2.503	Si
SLV 8	1.39	-28602	-3132.55	22018	50764.36	16.205	Si
SLV 11	-1.3	-36077	-28557.74	27773	60353.3	2.113	Si
SLV 11	1.39	-25291	-5348.83	19470	46030.46	8.606	Si
SLV 12	-1.3	-36077	-28557.74	27773	60353.3	2.113	Si
SLV 12	1.39	-25291	-5348.83	19470	46030.46	8.606	Si
SLV 5	-1.3	-52393	11395.9	40334	75988.38	6.668	Si
SLV 5	1.39	-51858	20161.43	39922	75590.81	3.749	Si
SLV 15	-1.3	-39068	-20057.84	30075	63762.59	3.179	Si
SLV 15	1.39	-29568	218.42	22762	52090.17	238.489	Si
SLV 6	-1.3	-52393	11395.9	40334	75988.38	6.668	Si
SLV 6	1.39	-51858	20161.43	39922	75590.81	3.749	Si
SLV 10	-1.3	-50600	7780.16	38953	74625.04	9.592	Si
SLV 10	1.39	-48548	17945.16	37373	72957.37	4.066	Si
SLV 16	-1.3	-39068	-20057.84	30075	63762.59	3.179	Si
SLV 16	1.39	-29568	218.42	22762	52090.17	238.489	Si
SLV 7	-1.3	-37871	-24942	29154	62427.21	2.503	Si
SLV 7	1.39	-28602	-3132.55	22018	50764.36	16.205	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	V par	M	$\sigma 0$	σN	l'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 10	-1.3	-47454	2988	-6072.16		36531	4.33	10426	13544			4.53	Si
SLU 10	1.39	-43079	4404	10204.54		33163	4.33	9977	12961			2.94	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 2	-1.3	-40901	2987	-3846.31		31487	4.33	9754	12670			4.24	Si
SLU 2	1.39	-37021	4239	9867.68		28500	4.33	9356	12153			2.87	Si
SLU 47	-1.3	-51729	3000	-5549.67		39822	4.33	10833	14072			4.69	Si
SLU 47	1.39	-46356	4584	12027.22		35686	4.33	10314	13398			2.92	Si
SLU 44	-1.3	-51006	2999	-5368.91		39265	4.33	10791	14017			4.67	Si
SLU 44	1.39	-45599	4559	11901.88		35103	4.33	10236	13297			2.92	Si
SLU 23	-1.3	-46978	2994	-5855.07		36165	4.33	10378	13480			4.5	Si
SLU 23	1.39	-42796	4405	10238.26		32945	4.33	9948	12923			2.93	Si
SLU 76	-1.3	-64359	3007	-9784.28		49545	4.33	10833	14072			4.68	Si
SLU 76	1.39	-58189	4915	12734.66		44795	4.33	10833	14072			2.86	Si
SLU 13	-1.3	-48178	2988	-6252.93		37088	4.33	10501	13640			4.56	Si
SLU 13	1.39	-43836	4429	10329.88		33746	4.33	10055	13061			2.95	Si
SLU 73	-1.3	-63635	3007	-9603.51		48988	4.33	10833	14072			4.68	Si
SLU 73	1.39	-57432	4889	12609.32		44213	4.33	10833	14072			2.88	Si
SLU 5	-1.3	-41625	2988	-4027.08		32044	4.33	9828	12767			4.27	Si
SLU 5	1.39	-37778	4264	9993.02		29082	4.33	9433	12254			2.87	Si
SLU 26	-1.3	-47702	2994	-6035.84		36722	4.33	10452	13577			4.53	Si
SLU 26	1.39	-43553	4430	10363.6		33528	4.33	10026	13024			2.94	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 8	-1.3	-37871	-17065	-24942		29154	4.33	14164	18399			1.08	Si
SLV 8	1.39	-28602	-15110	-3132.55		22018	4.33	12737	16545			1.1	Si
SLV 10	-1.3	-50600	17164	7780.16		38953	4.33	16124	20945			1.22	Si
SLV 10	1.39	-48548	17809	17945.16		37373	4.33	15808	20535			1.15	Si
SLV 9	-1.3	-50600	17164	7780.16		38953	4.33	16124	20945			1.22	Si
SLV 9	1.39	-48548	17809	17945.16		37373	4.33	15808	20535			1.15	Si
SLV 11	-1.3	-36077	-17215	-28557.74		29187	4.1203	14171	17516			1.02	Si
SLV 11	1.39	-25291	-15968	-5348.83		19470	4.33	12227	15883			0.99	No, Vu<V
SLV 7	-1.3	-37871	-17065	-24942		29154	4.33	14164	18399			1.08	Si
SLV 7	1.39	-28602	-15110	-3132.55		22018	4.33	12737	16545			1.1	Si
SLV 12	-1.3	-36077	-17215	-28557.74		29187	4.1203	14171	17516			1.02	Si
SLV 12	1.39	-25291	-15968	-5348.83		19470	4.33	12227	15883			0.99	No, Vu<V
SLV 2	-1.3	-49403	5455	2896		38031	4.33	15940	20706			3.8	Si
SLV 2	1.39	-47581	7846	14594.19		36629	4.33	15659	20341			2.59	Si
SLV 6	-1.3	-52393	17313	11395.9		40334	4.33	16250	21109			1.22	Si
SLV 6	1.39	-51858	18667	20161.43		39922	4.33	16250	21109			1.13	Si
SLV 1	-1.3	-49403	5455	2896		38031	4.33	15940	20706			3.8	Si
SLV 1	1.39	-47581	7846	14594.19		36629	4.33	15659	20341			2.59	Si
SLV 5	-1.3	-52393	17313	11395.9		40334	4.33	16250	21109			1.22	Si
SLV 5	1.39	-51858	18667	20161.43		39922	4.33	16250	21109			1.13	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 11	143750	0.25	25147	-32665	172.89	3891.42	22.51	Si
SLV 12	143750	0.25	25147	-32665	172.89	3891.42	22.51	Si
SLV 7	143750	0.25	27108	-35213	172.89	4110.11	23.77	Si
SLV 8	143750	0.25	27108	-35213	172.89	4110.11	23.77	Si
SLV 15	143750	0.25	27799	-36110	172.89	4184.25	24.2	Si
SLV 16	143750	0.25	27799	-36110	172.89	4184.25	24.2	Si
SLV 13	143750	0.25	32033	-41610	172.89	4605.27	26.64	Si
SLV 14	143750	0.25	32033	-41610	172.89	4605.27	26.64	Si
SLV 4	143750	0.25	34335	-44601	172.89	4810.24	27.82	Si
SLV 3	143750	0.25	34335	-44601	172.89	4810.24	27.82	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.045 Wa = 0.05 Ta = 0.0403

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 1	-47581	-49403	-37	0.058	5336.3	0.972	0.8747	3.95507	No
SLV 2	-47581	-49403	-37	0.058	5336.3	0.972	0.8747	3.95507	No
SLV 3	-40604	-45046	-52	0.059	4625.9	0.968	0.87977	3.95507	No
SLV 4	-40604	-45046	-52	0.059	4625.9	0.968	0.87977	3.95507	No
SLV 13	-36545	-43424	22	0.06	4212.8	0.965	0.89811	3.95507	No
SLV 14	-36545	-43424	22	0.06	4212.8	0.965	0.89811	3.95507	No
SLV 15	-29568	-39068	7	0.061	3503.1	0.958	0.92351	3.95507	No
SLV 16	-29568	-39068	7	0.061	3503.1	0.958	0.92351	3.95507	No
SLV 9	-48548	-50600	19	0.059	5434.7	0.972	0.87886	3.66678	No
SLV 10	-48548	-50600	19	0.059	5434.7	0.972	0.87886	3.66678	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.735	SLU 83	Si
V_SLU	2.863	SLU 76	Si
PF_SLV	2.113	SLV 11	Si
V_SLV	0.995	SLV 11	No
PFFP_SLV	22.508	SLV 11	Si
R_SLV	0.221	SLV 1	No

Maschio 47

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-8.253	-3.284	-7.463	-3.284	L1	L3	0.79	0.45	2.69	2.69	2.69			



Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fν0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 73	0.7	-17052	952.35	47967	2769.34	2.908	Si
SLU 73	1.1	-15098	2344.83	42469	2854.43	1.217	Si
SLU 81	0.7	-17025	988.11	47890	2771.24	2.805	Si
SLU 81	1.1	-14943	2276.04	42035	2856.71	1.255	Si
SLU 78	0.7	-17112	982.01	48134	2765.12	2.816	Si
SLU 78	1.1	-15128	2341.42	42555	2853.9	1.219	Si
SLU 76	0.7	-17212	964.98	48418	2757.75	2.858	Si
SLU 76	1.1	-15249	2370.06	42896	2851.55	1.203	Si
SLU 80	0.7	-17034	976.14	47915	2770.62	2.838	Si
SLU 80	1.1	-15054	2328.51	42345	2855.14	1.226	Si
SLU 84	0.7	-17693	1002.96	49770	2718.74	2.711	Si
SLU 84	1.1	-15616	2401.46	43927	2842.02	1.183	Si
SLU 75	0.7	-16952	969.38	47684	2776.27	2.864	Si
SLU 75	1.1	-14977	2316.19	42129	2856.27	1.233	Si
SLU 83	0.7	-17185	1000.74	48341	2759.77	2.758	Si
SLU 83	1.1	-15095	2301.28	42462	2854.47	1.24	Si
SLU 77	0.7	-16604	979.79	46705	2798.08	2.856	Si
SLU 77	1.1	-14608	2241.24	41090	2859.42	1.276	Si
SLU 82	0.7	-17533	990.32	49320	2732.43	2.759	Si
SLU 82	1.1	-15464	2376.22	43500	2846.41	1.198	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 7	0.7	-7289	503.68	20503	2396.01	4.757	Si
SLV 7	1.1	-5280	1165.78	14853	1832.13	1.572	Si
SLV 6	0.7	-15331	510.3	43125	3918.41	7.679	Si
SLV 6	1.1	-15176	2183.42	42689	3900.19	1.786	Si
SLV 1	0.7	-12811	135.53	36037	3567.92	26.326	Si
SLV 1	1.1	-12655	2189.97	35597	3542.4	1.618	Si
SLV 12	0.7	-7036	822.93	19793	2329.11	2.83	Si
SLV 12	1.1	-4472	854.88	12580	1584.68	1.854	Si
SLV 5	0.7	-15331	510.3	43125	3918.41	7.679	Si
SLV 5	1.1	-15176	2183.42	42689	3900.19	1.786	Si
SLV 2	0.7	-12811	135.53	36037	3567.92	26.326	Si
SLV 2	1.1	-12655	2189.97	35597	3542.4	1.618	Si
SLV 4	0.7	-10399	133.54	29250	3124.14	23.394	Si
SLV 4	1.1	-9686	1884.67	27247	2972.86	1.577	Si
SLV 11	0.7	-7036	822.93	19793	2329.11	2.83	Si
SLV 11	1.1	-4472	854.88	12580	1584.68	1.854	Si
SLV 3	0.7	-10399	133.54	29250	3124.14	23.394	Si
SLV 3	1.1	-9686	1884.67	27247	2972.86	1.577	Si
SLV 8	0.7	-7289	503.68	20503	2396.01	4.757	Si
SLV 8	1.1	-5280	1165.78	14853	1832.13	1.572	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 78	0.7	-17112	-2209	982.01		48134	0.79	10833	3851			1.74	Si
SLU 78	1.1	-15128	-185	2341.42		46648	0.7207	10833	3513			19.04	Si
SLU 84	0.7	-17693	-2224	1002.96		49770	0.79	10833	3851			1.73	Si
SLU 84	1.1	-15616	-138	2401.46		47954	0.7237	10833	3528			25.61	Si
SLU 75	0.7	-16952	-2180	969.38		47684	0.79	10833	3851			1.77	Si
SLU 75	1.1	-14977	-180	2316.19		46158	0.721	10833	3515			19.52	Si
SLU 76	0.7	-17212	-2343	964.98		48418	0.79	10833	3851			1.64	Si
SLU 76	1.1	-15249	-324	2370.06		47149	0.7187	10833	3504			10.83	Si
SLU 73	0.7	-17052	-2313	952.35		47967	0.79	10833	3851			1.66	Si
SLU 73	1.1	-15098	-319	2344.83		46658	0.7191	10833	3505			10.99	Si
SLU 82	0.7	-17533	-2194	990.32		49320	0.79	10833	3851			1.76	Si
SLU 82	1.1	-15464	-133	2376.22		47464	0.724	10833	3530			26.48	Si
SLU 80	0.7	-17034	-2191	976.14		47915	0.79	10833	3851			1.76	Si
SLU 80	1.1	-15054	-180	2328.51		46400	0.721	10833	3515			19.56	Si
SLU 65	0.7	-15140	-2168	860.3		42588	0.79	10833	3851			1.78	Si
SLU 65	1.1	-13432	-407	2115.75		41896	0.7125	10833	3473			8.54	Si
SLU 55	0.7	-15586	-2175	880.28		43841	0.79	10833	3851			1.77	Si
SLU 55	1.1	-13810	-380	2163.67		42923	0.715	10833	3486			9.17	Si
SLU 68	0.7	-15300	-2198	872.93		43038	0.79	10833	3851			1.75	Si
SLU 68	1.1	-13584	-411	2140.98		42387	0.7122	10833	3472			8.45	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, γM = 2

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 2	0.7	-12811	-5752	135.53		36037	0.79	15541	5525			0.96	No, Vu<V
SLV 2	1.1	-12655	-2092	2189.97		42235	0.6658	16250	4869			2.33	Si
SLV 3	0.7	-10399	-4129	133.54		29250	0.79	14183	5042			1.22	Si
SLV 3	1.1	-9686	-1998	1884.67		35798	0.6013	15493	4192			2.1	Si
SLV 12	0.7	-7036	2466	822.93		19793	0.79	12292	4370			1.77	Si
SLV 12	1.1	-4472	752	854.88		16251	0.6115	11584	3188			4.24	Si
SLV 1	0.7	-12811	-5752	135.53		36037	0.79	15541	5525			0.96	No, Vu<V
SLV 1	1.1	-12655	-2092	2189.97		42235	0.6658	16250	4869			2.33	Si
SLV 11	0.7	-7036	2466	822.93		19793	0.79	12292	4370			1.77	Si
SLV 11	1.1	-4472	752	854.88		16251	0.6115	11584	3188			4.24	Si
SLV 6	0.7	-15331	-5115	510.3		43125	0.79	16250	5777			1.13	Si
SLV 6	1.1	-15176	-782	2183.42		44764	0.7534	16250	5509			7.05	Si
SLV 15	0.7	-9556	3104	1197.69		26881	0.79	13709	4874			1.57	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 15	1.1	-6993	2062	848.34		19672	0.79	12268	4361			2.11	Si
SLV 16	0.7	-9556	3104	1197.69		26881	0.79	13709	4874			1.57	Si
SLV 16	1.1	-6993	2062	848.34		19672	0.79	12268	4361			2.11	Si
SLV 4	0.7	-10399	-4129	133.54		29250	0.79	14183	5042			1.22	Si
SLV 4	1.1	-9686	-1998	1884.67		35798	0.6013	15493	4192			2.1	Si
SLV 5	0.7	-15331	-5115	510.3		43125	0.79	16250	5777			1.13	Si
SLV 5	1.1	-15176	-782	2183.42		44764	0.7534	16250	5509			7.05	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.08 denominatore $8 \gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 12	143750	0.25	16189	-5755	47.32	1123.34	23.74	Si
SLV 11	143750	0.25	16189	-5755	47.32	1123.34	23.74	Si
SLV 8	143750	0.25	19814	-7044	47.32	1327.89	28.06	Si
SLV 7	143750	0.25	19814	-7044	47.32	1327.89	28.06	Si
SLV 15	143750	0.25	20308	-7219	47.32	1354.39	28.62	Si
SLV 16	143750	0.25	20308	-7219	47.32	1354.39	28.62	Si
SLV 13	143750	0.25	27463	-9763	47.32	1702.98	35.99	Si
SLV 14	143750	0.25	27463	-9763	47.32	1702.98	35.99	Si
SLV 4	143750	0.25	32392	-11516	47.32	1904.11	40.24	Si
SLV 3	143750	0.25	32392	-11516	47.32	1904.11	40.24	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.045 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 12	-1707	-2881	483	0	314.4	0.9	0	3.16379	No
SLV 7	-1776	-7190	461	0	321.2	0.901	0	3.16379	No
SLV 8	-1776	-7190	461	0	321.2	0.901	0	3.16379	No
SLV 11	-1707	-2881	483	0	314.4	0.9	0	3.16379	No
SLV 16	-5144	-1522	441	0.022	659.3	0.942	0.34145	3.31979	No
SLV 15	-5144	-1522	441	0.022	659.3	0.942	0.34145	3.31979	No
SLV 3	-5372	-15884	367	0.036	682.5	0.944	0.55799	3.31979	No
SLV 4	-5372	-15884	367	0.036	682.5	0.944	0.55799	3.31979	No
SLV 13	-8158	-4666	383	0.049	965.4	0.959	0.74443	3.31979	No
SLV 14	-8158	-4666	383	0.049	965.4	0.959	0.74443	3.31979	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.183	SLU 84	Si
V_SLU	1.644	SLU 76	Si
PF_SLV	1.572	SLV 7	Si
V_SLV	0.96	SLV 1	No
PFFP_SLV	23.742	SLV 11	Si
R_SLV	0	SLV 7	No

Maschio 48

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.158	2.071	-5.158	6.801	L1	L3	4.73	0.3	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	f ν_0	μ	ϕ	f ν_{lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 77	-1.3	-94623	26321.56	66683	40590.64	1.542	Si
SLU 77	0.8	-87818	25172.25	61887	49899.35	1.982	Si
SLU 84	-1.3	-95701	26830.99	67442	38943.59	1.451	Si
SLU 84	0.8	-88895	25642.31	62646	48552.27	1.893	Si
SLU 83	-1.3	-96159	26464.22	67765	38228.92	1.445	Si
SLU 83	0.8	-89353	25343.88	62969	47965.14	1.893	Si
SLU 74	-1.3	-93332	25907.18	65773	42502.56	1.641	Si
SLU 74	0.8	-86527	24837.33	60977	51451.67	2.072	Si
SLU 81	-1.3	-94867	26049.85	66855	40221.95	1.544	Si
SLU 81	0.8	-88062	25008.95	62059	49598.57	1.983	Si
SLU 75	-1.3	-92874	26273.95	65450	43164.26	1.643	Si
SLU 75	0.8	-86069	25135.76	60654	51985.83	2.068	Si
SLU 80	-1.3	-93505	26507.37	65895	42250.88	1.594	Si
SLU 80	0.8	-86699	25295.74	61099	51248.07	2.026	Si
SLU 82	-1.3	-94409	26416.62	66532	40912.42	1.549	Si
SLU 82	0.8	-87604	25307.39	61736	50161.5	1.982	Si
SLU 79	-1.3	-93963	26140.6	66218	41577.36	1.591	Si
SLU 79	0.8	-87157	24997.31	61422	50702.09	2.028	Si
SLU 78	-1.3	-94165	26688.33	66360	41276.54	1.547	Si
SLU 78	0.8	-87360	25470.69	61564	50457.71	1.981	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 5	-1.3	-43130	-29441.25	30394	76628.39	2.603	Si
SLV 5	0.8	-37973	187.38	26760	70137.55	374.297	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 12	-1.3	-86034	65926.27	60630	102507.42	1.555	Si
SLV 12	0.8	-80721	34975.7	56886	102026.97	2.917	Si
SLV 10	-1.3	-47788	-27239.38	33677	81868.89	3.006	Si
SLV 10	0.8	-39784	1232.1	28037	72500.38	58.843	Si
SLV 16	-1.3	-78083	35887.13	55027	101502.47	2.828	Si
SLV 16	0.8	-68506	24384.27	48278	98002.27	4.019	Si
SLV 6	-1.3	-43130	-29441.25	30394	76628.39	2.603	Si
SLV 6	0.8	-37973	187.38	26760	70137.55	374.297	Si
SLV 7	-1.3	-81375	63724.4	57347	102127.76	1.603	Si
SLV 7	0.8	-78909	33930.98	55609	101687.12	2.997	Si
SLV 9	-1.3	-47788	-27239.38	33677	81868.89	3.006	Si
SLV 9	0.8	-39784	1232.1	28037	72500.38	58.843	Si
SLV 15	-1.3	-78083	35887.13	55027	101502.47	2.828	Si
SLV 15	0.8	-68506	24384.27	48278	98002.27	4.019	Si
SLV 11	-1.3	-86034	65926.27	60630	102507.42	1.555	Si
SLV 11	0.8	-80721	34975.7	56886	102026.97	2.917	Si
SLV 8	-1.3	-81375	63724.4	57347	102127.76	1.603	Si
SLV 8	0.8	-78909	33930.98	55609	101687.12	2.997	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 75	-1.3	-92874	650	26273.95		65450	4.73	10833	15373			23.64	Si
SLU 75	0.8	-86069	650	25135.76		60654	4.73	10833	15373			23.64	Si
SLU 77	-1.3	-94623	655	26321.56		66683	4.73	10833	15373			23.45	Si
SLU 77	0.8	-87818	655	25172.25		61887	4.73	10833	15373			23.45	Si
SLU 78	-1.3	-94165	688	26688.33		66360	4.73	10833	15373			22.34	Si
SLU 78	0.8	-87360	688	25470.69		61564	4.73	10833	15373			22.34	Si
SLU 76	-1.3	-91908	669	26337.51		64770	4.73	10833	15373			22.98	Si
SLU 76	0.8	-85103	669	25159.78		59974	4.73	10833	15373			22.98	Si
SLU 79	-1.3	-93963	653	26140.6		66218	4.73	10833	15373			23.56	Si
SLU 79	0.8	-87157	653	24997.31		61422	4.73	10833	15373			23.56	Si
SLU 80	-1.3	-93505	685	26507.37		65895	4.73	10833	15373			22.44	Si
SLU 80	0.8	-86699	685	25295.74		61099	4.73	10833	15373			22.44	Si
SLU 83	-1.3	-96159	642	26464.22		67765	4.73	10833	15373			23.96	Si
SLU 83	0.8	-89353	642	25343.88		62969	4.73	10833	15373			23.96	Si
SLU 82	-1.3	-94409	636	26416.62		66532	4.73	10833	15373			24.16	Si
SLU 82	0.8	-87604	636	25307.39		61736	4.73	10833	15373			24.16	Si
SLU 84	-1.3	-95701	674	26830.99		67442	4.73	10833	15373			22.8	Si
SLU 84	0.8	-88895	674	25642.31		62646	4.73	10833	15373			22.8	Si
SLU 73	-1.3	-90617	631	25923.13		63860	4.73	10833	15373			24.36	Si
SLU 73	0.8	-83811	631	24824.85		59064	4.73	10833	15373			24.36	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 15	-1.3	-78083	4023	35887.13		55027	4.73	16250	23059			5.73	Si
SLV 15	0.8	-68506	7035	24384.27		48278	4.73	16250	23059			3.28	Si
SLV 8	-1.3	-81375	17756	63724.4		57347	4.73	16250	23059			1.3	Si
SLV 8	0.8	-78909	16345	33930.98		55609	4.73	16250	23059			1.41	Si
SLV 11	-1.3	-86034	16886	65926.27		60630	4.73	16250	23059			1.37	Si
SLV 11	0.8	-80721	17365	34975.7		56886	4.73	16250	23059			1.33	Si
SLV 16	-1.3	-78083	4023	35887.13		55027	4.73	16250	23059			5.73	Si
SLV 16	0.8	-68506	7035	24384.27		48278	4.73	16250	23059			3.28	Si
SLV 5	-1.3	-43130	-16090	-29441.25		30394	4.73	14412	20451			1.27	Si
SLV 5	0.8	-37973	-16569	187.38		26760	4.73	13685	19420			1.17	Si
SLV 7	-1.3	-81375	17756	63724.4		57347	4.73	16250	23059			1.3	Si
SLV 7	0.8	-78909	16345	33930.98		55609	4.73	16250	23059			1.41	Si
SLV 10	-1.3	-47788	-16961	-27239.38		33677	4.73	15069	21383			1.26	Si
SLV 10	0.8	-39784	-15549	1232.1		28037	4.73	13941	19782			1.27	Si
SLV 12	-1.3	-86034	16886	65926.27		60630	4.73	16250	23059			1.37	Si
SLV 12	0.8	-80721	17365	34975.7		56886	4.73	16250	23059			1.33	Si
SLV 6	-1.3	-43130	-16090	-29441.25		30394	4.73	14412	20451			1.27	Si
SLV 6	0.8	-37973	-16569	187.38		26760	4.73	13685	19420			1.17	Si
SLV 9	-1.3	-47788	-16961	-27239.38		33677	4.73	15069	21383			1.26	Si
SLV 9	0.8	-39784	-15549	1232.1		28037	4.73	13941	19782			1.27	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 6	143750	0.25	28383	-40276	188.86	4638.03	24.56	Si
SLV 5	143750	0.25	28383	-40276	188.86	4638.03	24.56	Si
SLV 9	143750	0.25	29706	-42153	188.86	4785.73	25.34	Si
SLV 10	143750	0.25	29706	-42153	188.86	4785.73	25.34	Si
SLV 1	143750	0.25	36736	-52128	188.86	5468.38	28.95	Si
SLV 2	143750	0.25	36736	-52128	188.86	5468.38	28.95	Si
SLV 14	143750	0.25	41145	-58385	188.86	5808.69	30.76	Si
SLV 13	143750	0.25	41145	-58385	188.86	5808.69	30.76	Si
SLV 4	143750	0.25	45218	-64165	188.86	6062.86	32.1	Si
SLV 3	143750	0.25	45218	-64165	188.86	6062.86	32.1	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.045 Wa = 0.05 Ta = 0.0403

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 4	-58978	-62554	-89	0.057	6542.3	0.975	0.856	3.95507	No
SLV 3	-58978	-62554	-89	0.057	6542.3	0.975	0.856	3.95507	No
SLV 16	-63704	-78083	63	0.058	7023.7	0.976	0.8585	3.95507	No
SLV 15	-63704	-78083	63	0.058	7023.7	0.976	0.8585	3.95507	No
SLV 13	-51877	-66610	96	0.057	5819.1	0.972	0.85982	3.95507	No
SLV 14	-51877	-66610	96	0.057	5819.1	0.972	0.85982	3.95507	No
SLV 1	-47151	-51080	-56	0.058	5337.9	0.969	0.87617	3.95507	No



Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 2	-47151	-51080	-56	0.058	5337.9	0.969	0.87617	3.95507	No
SLV 7	-74430	-81375	-74	0.057	8116.4	0.979	0.84994	3.66678	No
SLV 8	-74430	-81375	-74	0.057	8116.4	0.979	0.84994	3.66678	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.445	SLU 83	Si
V_SLU	22.343	SLU 78	Si
PF_SLV	1.555	SLV 11	Si
V_SLV	1.172	SLV 5	Si
PFFP_SLV	24.558	SLV 5	Si
R_SLV	0.216	SLV 3	No

Maschio 49

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-6.463	-3.284	-3.233	-3.284	L1	L3	3.23	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	M	$\alpha 0$	Mu	c.s.	Verifica
SLU 65	0.7	-36705	-13572.59	25253	40901.47	3.014	Si
SLU 65	1.1	-35414	-17041.71	24364	40086.39	2.352	Si
SLU 2	0.7	-25823	-10508.92	17766	32608.83	3.103	Si
SLU 2	1.1	-24830	-13367.12	17083	31691.06	2.371	Si
SLU 73	0.7	-41548	-14581.66	28585	43553.67	2.987	Si
SLU 73	1.1	-40257	-18239.22	27696	42909.18	2.353	Si
SLU 55	0.7	-37754	-13731.99	25975	41530.41	3.024	Si
SLU 55	1.1	-36463	-17247.7	25086	40752.29	2.363	Si
SLU 47	0.7	-32911	-12722.92	22642	38376.95	3.016	Si
SLU 47	1.1	-31620	-16050.19	21754	37428.24	2.332	Si
SLU 68	0.7	-37143	-13739.01	25554	41168.02	2.996	Si
SLU 68	1.1	-35852	-17253.03	24666	40368.39	2.34	Si
SLU 44	0.7	-32472	-12556.51	22341	38059.75	3.031	Si
SLU 44	1.1	-31181	-15838.87	21452	37095.59	2.342	Si
SLU 52	0.7	-37315	-13565.58	25673	41271.17	3.042	Si
SLU 52	1.1	-36024	-17036.38	24784	40477.6	2.376	Si
SLU 76	0.7	-41986	-14748.08	28886	43762.27	2.967	Si
SLU 76	1.1	-40695	-18450.54	27998	43133.23	2.338	Si
SLU 5	0.7	-26262	-10675.33	18068	33005.59	3.092	Si
SLU 5	1.1	-25269	-13578.44	17385	32099.7	2.364	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma M = 2$

Comb.	Quota	N	M	$\alpha 0$	Mu	c.s.	Verifica
SLV 5	0.7	-47746	-17455.42	32849	56379.53	3.23	Si
SLV 5	1.1	-33681	-18895.76	23172	44078.58	2.333	Si
SLV 6	0.7	-47746	-17455.42	32849	56379.53	3.23	Si
SLV 6	1.1	-33681	-18895.76	23172	44078.58	2.333	Si
SLV 8	0.7	-11467	-5525.82	7889	17323.27	3.135	Si
SLV 8	1.1	-23316	-3316.96	16042	32712.21	9.862	Si
SLV 9	0.7	-47719	-11604.52	32830	56359.22	4.857	Si
SLV 9	1.1	-33883	-17282.31	23311	44281.14	2.562	Si
SLV 10	0.7	-47719	-11604.52	32830	56359.22	4.857	Si
SLV 10	1.1	-33883	-17282.31	23311	44281.14	2.562	Si
SLV 3	0.7	-24196	-16527.23	16647	33753.11	2.042	Si
SLV 3	1.1	-26708	-10651.9	18375	36646.46	3.44	Si
SLV 1	0.7	-35080	-20106.11	24135	45463.7	2.261	Si
SLV 1	1.1	-29817	-15325.54	20514	40069.73	2.615	Si
SLV 2	0.7	-35080	-20106.11	24135	45463.7	2.261	Si
SLV 2	1.1	-29817	-15325.54	20514	40069.73	2.615	Si
SLV 7	0.7	-11467	-5525.82	7889	17323.27	3.135	Si
SLV 7	1.1	-23316	-3316.96	16042	32712.21	9.862	Si
SLV 4	0.7	-24196	-16527.23	16647	33753.11	2.042	Si
SLV 4	1.1	-26708	-10651.9	18375	36646.46	3.44	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	V par	M	$\alpha 0$	αN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 34	0.7	-35338	8208	-12700.48		24312	3.23	8797	12787			1.56	Si
SLU 34	1.1	-34344	8208	-15978.79		23629	3.23	8706	12654			1.54	Si
SLU 73	0.7	-41548	9160	-14581.66		28585	3.23	9367	13615			1.49	Si
SLU 73	1.1	-40257	9160	-18239.22		27696	3.23	9248	13443			1.47	Si
SLU 52	0.7	-37315	8693	-13565.58		25673	3.23	8979	13050			1.5	Si
SLU 52	1.1	-36024	8693	-17036.38		24784	3.23	8860	12878			1.48	Si
SLU 47	0.7	-32911	8334	-12722.92		22642	3.23	8575	12463			1.5	Si
SLU 47	1.1	-31620	8334	-16050.19		21754	3.23	8456	12291			1.47	Si
SLU 55	0.7	-37754	8806	-13731.99		25975	3.23	9019	13109			1.49	Si
SLU 55	1.1	-36463	8806	-17247.7		25086	3.23	8900	12937			1.47	Si
SLU 65	0.7	-36705	8689	-13572.59		25253	3.23	8923	12969			1.49	Si
SLU 65	1.1	-35414	8689	-17041.71		24364	3.23	8804	12797			1.47	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 44	0.7	-32472	8222	-12556.51		22341	3.23	8534	12405			1.51	Si
SLU 44	1.1	-31181	8222	-15838.87		21452	3.23	8416	12232			1.49	Si
SLU 76	0.7	-41986	9272	-14748.08		28886	3.23	9407	13673			1.47	Si
SLU 76	1.1	-40695	9272	-18450.54		27998	3.23	9289	13501			1.46	Si
SLU 26	0.7	-30494	7737	-11691.41		20980	3.23	8353	12141			1.57	Si
SLU 26	1.1	-29501	7737	-14781.28		20297	3.23	8262	12009			1.55	Si
SLU 68	0.7	-37143	8801	-13739.01		25554	3.23	8963	13027			1.48	Si
SLU 68	1.1	-35852	8801	-17253.03		24666	3.23	8844	12855			1.46	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 7	0.7	-11467	-14798	-5525.82		7889	3.23	9911	14406			0.97	No, Vu<V
SLV 7	1.1	-23316	-21962	-3316.96		16042	3.23	11542	16776			0.76	No, Vu<V
SLV 8	0.7	-11467	-14798	-5525.82		7889	3.23	9911	14406			0.97	No, Vu<V
SLV 8	1.1	-23316	-21962	-3316.96		16042	3.23	11542	16776			0.76	No, Vu<V
SLV 13	0.7	-34989	26392	-603.1		24073	3.23	13148	19110			0.72	No, Vu<V
SLV 13	1.1	-30492	29124	-9947.37		20978	3.23	12529	18211			0.63	No, Vu<V
SLV 15	0.7	-24106	18128	2975.78		16585	3.23	11650	16934			0.93	No, Vu<V
SLV 15	1.1	-27382	16677	-5273.73		18839	3.23	12101	17589			1.05	Si
SLV 16	0.7	-24106	18128	2975.78		16585	3.23	11650	16934			0.93	No, Vu<V
SLV 16	1.1	-27382	16677	-5273.73		18839	3.23	12101	17589			1.05	Si
SLV 9	0.7	-47719	23495	-11604.52		32830	3.23	14899	21656			0.92	No, Vu<V
SLV 9	1.1	-33883	30659	-17282.31		23311	3.23	12996	18889			0.62	No, Vu<V
SLV 10	0.7	-47719	23495	-11604.52		32830	3.23	14899	21656			0.92	No, Vu<V
SLV 10	1.1	-33883	30659	-17282.31		23311	3.23	12996	18889			0.62	No, Vu<V
SLV 14	0.7	-34989	26392	-603.1		24073	3.23	13148	19110			0.72	No, Vu<V
SLV 14	1.1	-30492	29124	-9947.37		20978	3.23	12529	18211			0.63	No, Vu<V
SLV 4	0.7	-24196	-17694	-16527.23		19232	2.7959	12180	15324			0.87	No, Vu<V
SLV 4	1.1	-26708	-20426	-10651.9		18375	3.23	12008	17454			0.85	No, Vu<V
SLV 3	0.7	-24196	-17694	-16527.23		19232	2.7959	12180	15324			0.87	No, Vu<V
SLV 3	1.1	-26708	-20426	-10651.9		18375	3.23	12008	17454			0.85	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.08 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 8	143750	0.25	8538	-12409	193.45	2597.04	13.42	Si
SLV 7	143750	0.25	8538	-12409	193.45	2597.04	13.42	Si
SLV 12	143750	0.25	8659	-12586	193.45	2631.1	13.6	Si
SLV 11	143750	0.25	8659	-12586	193.45	2631.1	13.6	Si
SLV 4	143750	0.25	15069	-21903	193.45	4320.33	22.33	Si
SLV 3	143750	0.25	15069	-21903	193.45	4320.33	22.33	Si
SLV 16	143750	0.25	15473	-22490	193.45	4419.45	22.85	Si
SLV 15	143750	0.25	15473	-22490	193.45	4419.45	22.85	Si
SLV 1	143750	0.25	20788	-30216	193.45	5641.89	29.16	Si
SLV 2	143750	0.25	20788	-30216	193.45	5641.89	29.16	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 0.045 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 7	-20322	-13839	1382	0.038	2623.9	0.941	0.58715	3.16379	No
SLV 8	-20322	-13839	1382	0.038	2623.9	0.941	0.58715	3.16379	No
SLV 3	-22625	-23059	1387	0.042	2857.3	0.945	0.64345	3.31979	No
SLV 4	-22625	-23059	1387	0.042	2857.3	0.945	0.64345	3.31979	No
SLV 11	-20554	-14119	1281	0.043	2647.4	0.941	0.65884	3.16379	No
SLV 12	-20554	-14119	1281	0.043	2647.4	0.941	0.65884	3.16379	No
SLV 1	-24831	-31242	1290	0.049	3081.2	0.948	0.74354	3.31979	No
SLV 2	-24831	-31242	1290	0.049	3081.2	0.948	0.74354	3.31979	No
SLV 15	-23398	-23991	1049	0.056	2935.8	0.946	0.85432	3.31979	No
SLV 16	-23398	-23991	1049	0.056	2935.8	0.946	0.85432	3.31979	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.332	SLU 47	Si
V_SLV	1.456	SLU 76	Si
PF_SLV	2.042	SLV 3	Si
V_SLV	0.616	SLV 9	No
PFFP_SLV	13.425	SLV 7	Si
R_SLV	0.186	SLV 7	No

Maschio 50

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-2.233	-3.284	-0.123	-3.284	L1	L3	2.11	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ_0	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 76	0.7	-25034	4303.96	26366	17862.69	4.15	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 76	1.1	-22667	3797.99	23872	16905.4	4.451	Si
SLU 44	0.7	-19620	3923.79	20664	15448.61	3.937	Si
SLU 44	1.1	-17389	3613.25	18314	14220.78	3.936	Si
SLU 52	0.7	-22373	4045.95	23563	16775.9	4.146	Si
SLU 52	1.1	-20086	3643.58	21154	15687.57	4.306	Si
SLU 2	0.7	-15587	3264.24	16415	13130.02	4.022	Si
SLU 2	1.1	-13750	3111.35	14481	11927.18	3.833	Si
SLU 47	0.7	-19858	3990.63	20914	15571.25	3.902	Si
SLU 47	1.1	-17614	3663.46	18551	14350.77	3.917	Si
SLU 55	0.7	-22610	4112.79	23813	16880.71	4.104	Si
SLU 55	1.1	-20311	3693.79	21391	15801	4.278	Si
SLU 68	0.7	-22282	4181.81	23467	16735.25	4.002	Si
SLU 68	1.1	-19970	3767.66	21032	15628.52	4.148	Si
SLU 65	0.7	-22044	4114.97	23217	16628.31	4.041	Si
SLU 65	1.1	-19745	3717.45	20795	15512.99	4.173	Si
SLU 26	0.7	-18248	3522.26	19218	14709.55	4.176	Si
SLU 26	1.1	-16331	3265.77	17199	13591.15	4.162	Si
SLU 5	0.7	-15824	3331.08	16666	13278.79	3.986	Si
SLU 5	1.1	-13975	3161.56	14718	12079.51	3.821	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 16	0.7	-20037	8023.51	21103	17488.14	2.18	Si
SLV 16	1.1	-19032	4673.52	20044	16784.61	3.591	Si
SLV 7	0.7	-3221	-1331.61	3392	3303.55	2.481	Si
SLV 7	1.1	-2560	-17.85	2696	2641.52	148.006	Si
SLV 11	0.7	-6900	2339.08	7267	6846.41	2.927	Si
SLV 11	1.1	-6346	1852.35	6683	6328.54	3.416	Si
SLV 14	0.7	-27618	9225.18	29087	22201.04	2.407	Si
SLV 14	1.1	-26120	5221.47	27509	21352.36	4.089	Si
SLV 3	0.7	-7773	-4212.15	8187	7651.39	1.817	Si
SLV 3	1.1	-6414	-1560.46	6755	6392.26	4.096	Si
SLV 15	0.7	-20037	8023.51	21103	17488.14	2.18	Si
SLV 15	1.1	-19032	4673.52	20044	16784.61	3.591	Si
SLV 12	0.7	-6900	2339.08	7267	6846.41	2.927	Si
SLV 12	1.1	-6346	1852.35	6683	6328.54	3.416	Si
SLV 8	0.7	-3221	-1331.61	3392	3303.55	2.481	Si
SLV 8	1.1	-2560	-17.85	2696	2641.52	148.006	Si
SLV 13	0.7	-27618	9225.18	29087	22201.04	2.407	Si
SLV 13	1.1	-26120	5221.47	27509	21352.36	4.089	Si
SLV 4	0.7	-7773	-4212.15	8187	7651.39	1.817	Si
SLV 4	1.1	-6414	-1560.46	6755	6392.26	4.096	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 47	0.7	-19858	-2838	3990.63		20914	2.11	8344	7923			2.79	Si
SLU 47	1.1	-17614	-2871	3663.46		18551	2.11	8029	7624			2.65	Si
SLU 5	0.7	-15824	-2711	3331.08		16666	2.11	7778	7385			2.72	Si
SLU 5	1.1	-13975	-2743	3161.56		14718	2.11	7518	7138			2.6	Si
SLU 26	0.7	-18248	-2672	3522.26		19218	2.11	8118	7708			2.88	Si
SLU 26	1.1	-16331	-2704	3265.77		17199	2.11	7849	7452			2.76	Si
SLU 23	0.7	-18010	-2681	3455.42		18968	2.11	8085	7676			2.86	Si
SLU 23	1.1	-16106	-2713	3215.56		16962	2.11	7817	7422			2.74	Si
SLU 13	0.7	-18577	-2627	3453.24		19565	2.11	8164	7752			2.95	Si
SLU 13	1.1	-16672	-2659	3191.89		17559	2.11	7897	7498			2.82	Si
SLU 2	0.7	-15587	-2720	3264.24		16415	2.11	7744	7353			2.7	Si
SLU 2	1.1	-13750	-2752	3111.35		14481	2.11	7486	7108			2.58	Si
SLU 68	0.7	-22282	-2800	4181.81		23467	2.11	8684	8246			2.95	Si
SLU 68	1.1	-19970	-2833	3767.66		21032	2.11	8360	7938			2.8	Si
SLU 65	0.7	-22044	-2809	4114.97		23217	2.11	8651	8214			2.92	Si
SLU 65	1.1	-19745	-2842	3717.45		20795	2.11	8328	7908			2.78	Si
SLU 44	0.7	-19620	-2848	3923.79		20664	2.11	8311	7891			2.77	Si
SLU 44	1.1	-17389	-2881	3613.25		18314	2.11	7997	7594			2.64	Si
SLU 10	0.7	-18339	-2636	3386.4		19314	2.11	8131	7720			2.93	Si
SLU 10	1.1	-16447	-2668	3141.68		17322	2.11	7865	7468			2.8	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 16	0.7	-20037	12402	8023.51		22675	1.9637	12868	11371			0.92	No, Vu<V
SLV 16	1.1	-19032	13469	4673.52		20044	2.11	12342	11719			0.87	No, Vu<V
SLV 2	0.7	-15355	-13094	-3010.49		16171	2.11	11568	10983			0.84	No, Vu<V
SLV 2	1.1	-13502	-14168	-1012.51		14220	2.11	11177	10613			0.75	No, Vu<V
SLV 6	0.7	-28492	-14305	2673.94		30007	2.11	14335	13611			0.95	No, Vu<V
SLV 6	1.1	-26188	-15729	1808.66		27580	2.11	13849	13150			0.84	No, Vu<V
SLV 1	0.7	-15355	-13094	-3010.49		16171	2.11	11568	10983			0.84	No, Vu<V
SLV 1	1.1	-13502	-14168	-1012.51		14220	2.11	11177	10613			0.75	No, Vu<V
SLV 7	0.7	-3221	7969	-1331.61		3719	1.9247	9077	7862			0.99	No, Vu<V
SLV 7	1.1	-2560	8961	-17.85		2696	2.11	8873	8425			0.94	No, Vu<V
SLV 12	0.7	-6900	13613	2339.08		7267	2.11	9787	9292			0.68	No, Vu<V
SLV 12	1.1	-6346	15030	1852.35		6683	2.11	9670	9182			0.61	No, Vu<V
SLV 15	0.7	-20037	12402	8023.51		22675	1.9637	12868	11371			0.92	No, Vu<V
SLV 15	1.1	-19032	13469	4673.52		20044	2.11	12342	11719			0.87	No, Vu<V
SLV 5	0.7	-28492	-14305	2673.94		30007	2.11	14335	13611			0.95	No, Vu<V
SLV 5	1.1	-26188	-15729	1808.66		27580	2.11	13849	13150			0.84	No, Vu<V
SLV 8	0.7	-3221	7969	-1331.61		3719	1.9247	9077	7862			0.99	No, Vu<V
SLV 8	1.1	-2560	8961	-17.85		2696	2.11	8873	8425			0.94	No, Vu<V
SLV 11	0.7	-6900	13613	2339.08		7267	2.11	9787	9292			0.68	No, Vu<V
SLV 11	1.1	-6346	15030	1852.35		6683	2.11	9670	9182			0.61	No, Vu<V



Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	143750	0.25	5339	-5070	126.37	1090.83	8.63	Si
SLV 8	143750	0.25	5339	-5070	126.37	1090.83	8.63	Si
SLV 3	143750	0.25	7706	-7317	126.37	1542.55	12.21	Si
SLV 4	143750	0.25	7706	-7317	126.37	1542.55	12.21	Si
SLV 12	143750	0.25	10831	-10284	126.37	2108.74	16.69	Si
SLV 11	143750	0.25	10831	-10284	126.37	2108.74	16.69	Si
SLV 1	143750	0.25	15227	-14458	126.37	2847.63	22.53	Si
SLV 2	143750	0.25	15227	-14458	126.37	2847.63	22.53	Si
SLV 15	143750	0.25	26011	-24697	126.37	4373.98	34.61	Si
SLV 16	143750	0.25	26011	-24697	126.37	4373.98	34.61	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.045 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-12202	-6288	549	0.059	1605.4	0.937	0.9153	3.16379	No
SLV 7	-12202	-6288	549	0.059	1605.4	0.937	0.9153	3.16379	No
SLV 12	-15380	-13850	610	0.06	1927.4	0.946	0.92125	3.16379	No
SLV 11	-15380	-13850	610	0.06	1927.4	0.946	0.92125	3.16379	No
SLV 16	-19524	-32038	573	0.066	2348.2	0.955	1.00753	3.31979	No
SLV 15	-19524	-32038	573	0.066	2348.2	0.955	1.00753	3.31979	No
SLV 4	-8933	-6832	368	0.068	1275.4	0.925	1.06806	3.31979	No
SLV 3	-8933	-6832	368	0.068	1275.4	0.925	1.06806	3.31979	No
SLV 13	-19899	-40066	479	0.071	2386.3	0.956	1.07538	3.31979	No
SLV 14	-19899	-40066	479	0.071	2386.3	0.956	1.07538	3.31979	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.821	SLU 5	Si
V_SLU	2.583	SLU 2	Si
PF_SLV	1.817	SLV 3	Si
V_SLV	0.611	SLV 11	No
PFFP_SLV	8.632	SLV 7	Si
R_SLV	0.289	SLV 7	No

Maschio 51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.008	5.876	-3.013	5.876	L1	L3	1.995	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 79	0.7	-20351	4135.67	22669	14650.8	3.543	Si
SLU 79	1.1	-19548	2626.8	21775	14286.91	5.439	Si
SLU 80	0.7	-20283	4114.67	22594	14620.86	3.553	Si
SLU 80	1.1	-19481	2604.81	21699	14255.49	5.473	Si
SLU 83	0.7	-21126	4251.32	23533	14985.58	3.525	Si
SLU 83	1.1	-20324	2770.9	22638	14638.67	5.283	Si
SLU 84	0.7	-21059	4230.32	23457	14957.07	3.536	Si
SLU 84	1.1	-20256	2748.91	22563	14608.68	5.314	Si
SLU 82	0.7	-20818	4125.91	23190	14854.61	3.6	Si
SLU 82	1.1	-20016	2714.78	22295	14500.95	5.341	Si
SLU 81	0.7	-20886	4146.9	23265	14883.56	3.589	Si
SLU 81	1.1	-20083	2736.76	22371	14531.38	5.31	Si
SLU 75	0.7	-20140	4022.55	22434	14556.76	3.619	Si
SLU 75	1.1	-19337	2574.63	21539	14188.24	5.511	Si
SLU 74	0.7	-20207	4043.55	22509	14586.96	3.607	Si
SLU 74	1.1	-19404	2596.62	21614	14219.92	5.476	Si
SLU 77	0.7	-20448	4147.96	22776	14693.43	3.542	Si
SLU 77	1.1	-19645	2630.75	21882	14331.66	5.448	Si
SLU 78	0.7	-20380	4126.96	22701	14663.67	3.553	Si
SLU 78	1.1	-19577	2608.76	21807	14300.42	5.482	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 15	0.7	-17544	6408.68	19542	14700.9	2.294	Si
SLV 15	1.1	-16498	2129.83	18377	13981.92	6.565	Si
SLV 11	0.7	-24139	2962.03	26888	18779.68	6.34	Si
SLV 11	1.1	-21153	-201.78	23562	17031.33	84.405	Si
SLV 14	0.7	-11413	6956.65	12713	10200.31	1.466	Si
SLV 14	1.1	-11845	3465.95	13194	10539.48	3.041	Si
SLV 16	0.7	-17544	6408.68	19542	14700.9	2.294	Si
SLV 16	1.1	-16498	2129.83	18377	13981.92	6.565	Si
SLV 6	0.7	-3228	2382.3	3595	3124.87	1.312	Si
SLV 6	1.1	-4978	3589.55	5545	4740.16	1.321	Si
SLV 10	0.7	-3705	4788.6	0	0	0	No, e>l/2



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 10	1.1	-5642	4251.95	6284	5338.09	1.255	Si
SLV 12	0.7	-24139	2962.03	26888	18779.68	6.34	Si
SLV 12	1.1	-21153	-201.78	23562	17031.33	84.405	Si
SLV 5	0.7	-3228	2382.3	3595	3124.87	1.312	Si
SLV 5	1.1	-4978	3589.55	5545	4740.16	1.321	Si
SLV 9	0.7	-3705	4788.6	0	0	0	No, $e>l/2$
SLV 9	1.1	-5642	4251.95	6284	5338.09	1.255	Si
SLV 13	0.7	-11413	6956.65	12713	10200.31	1.466	Si
SLV 13	1.1	-11845	3465.95	13194	10539.48	3.041	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 70	0.7	-18010	3547	3613.48		20061	1.995	8230	7389			2.08	Si
SLU 70	1.1	-17207	3547	2192.91		19167	1.995	8111	7282			2.05	Si
SLU 78	0.7	-20380	3791	4126.96		22701	1.995	8582	7705			2.03	Si
SLU 78	1.1	-19577	3791	2608.76		21807	1.995	8463	7598			2	Si
SLU 83	0.7	-21126	3697	4251.32		23533	1.995	8693	7804			2.11	Si
SLU 83	1.1	-20324	3697	2770.9		22638	1.995	8574	7697			2.08	Si
SLU 77	0.7	-20448	3789	4147.96		22776	1.995	8592	7714			2.04	Si
SLU 77	1.1	-19645	3789	2630.75		21882	1.995	8473	7607			2.01	Si
SLU 80	0.7	-20283	3770	4114.67		22594	1.995	8568	7692			2.04	Si
SLU 80	1.1	-19481	3770	2604.81		21699	1.995	8449	7585			2.01	Si
SLU 79	0.7	-20351	3768	4135.67		22669	1.995	8578	7701			2.04	Si
SLU 79	1.1	-19548	3768	2626.8		21775	1.995	8459	7594			2.02	Si
SLU 84	0.7	-21059	3699	4230.32		23457	1.995	8683	7795			2.11	Si
SLU 84	1.1	-20256	3699	2748.91		22563	1.995	8564	7688			2.08	Si
SLU 69	0.7	-18077	3545	3634.47		20136	1.995	8240	7398			2.09	Si
SLU 69	1.1	-17275	3545	2214.9		19242	1.995	8121	7291			2.06	Si
SLU 71	0.7	-17981	3524	3622.18		20029	1.995	8226	7385			2.1	Si
SLU 71	1.1	-17178	3524	2210.95		19134	1.995	8107	7278			2.07	Si
SLU 72	0.7	-17913	3526	3601.18		19953	1.995	8216	7376			2.09	Si
SLU 72	1.1	-17110	3526	2188.96		19059	1.995	8097	7269			2.06	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 10	0.7	-3705	-8199	4788.6		0	0	8333	0			0	No, $V_u < V$
SLV 10	1.1	-5642	-14635	4251.95		17139	0.7315	11761	3871			0.26	No, $V_u < V$
SLV 6	0.7	-3228	-13128	2382.3		9216	0.7783	10177	3564			0.27	No, $V_u < V$
SLV 6	1.1	-4978	-19829	3589.55		13340	0.8292	11001	4105			0.21	No, $V_u < V$
SLV 7	0.7	-23661	13084	555.73		26356	1.995	13605	12214			0.93	No, $V_u < V$
SLV 7	1.1	-20489	19520	-864.19		22823	1.995	12898	11579			0.59	No, $V_u < V$
SLV 9	0.7	-3705	-8199	4788.6		0	0	8333	0			0	No, $V_u < V$
SLV 9	1.1	-5642	-14635	4251.95		17139	0.7315	11761	3871			0.26	No, $V_u < V$
SLV 12	0.7	-24139	18012	2962.03		26888	1.995	13711	12309			0.68	No, $V_u < V$
SLV 12	1.1	-21153	24713	-201.78		23562	1.995	13046	11712			0.47	No, $V_u < V$
SLV 15	0.7	-17544	14588	6408.68		20556	1.8966	12444	10621			0.73	No, $V_u < V$
SLV 15	1.1	-16498	17000	2129.83		18377	1.995	12009	10781			0.63	No, $V_u < V$
SLV 11	0.7	-24139	18012	2962.03		26888	1.995	13711	12309			0.68	No, $V_u < V$
SLV 11	1.1	-21153	24713	-201.78		23562	1.995	13046	11712			0.47	No, $V_u < V$
SLV 5	0.7	-3228	-13128	2382.3		9216	0.7783	10177	3564			0.27	No, $V_u < V$
SLV 5	1.1	-4978	-19829	3589.55		13340	0.8292	11001	4105			0.21	No, $V_u < V$
SLV 8	0.7	-23661	13084	555.73		26356	1.995	13605	12214			0.93	No, $V_u < V$
SLV 8	1.1	-20489	19520	-864.19		22823	1.995	12898	11579			0.59	No, $V_u < V$
SLV 16	0.7	-17544	14588	6408.68		20556	1.8966	12444	10621			0.73	No, $V_u < V$
SLV 16	1.1	-16498	17000	2129.83		18377	1.995	12009	10781			0.63	No, $V_u < V$

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 W_a 0.08 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 14	143750	0.25	10003	-8980	119.49	1855.17	15.53	Si
SLV 13	143750	0.25	10003	-8980	119.49	1855.17	15.53	Si
SLV 16	143750	0.25	10235	-9189	119.49	1894.31	15.85	Si
SLV 15	143750	0.25	10235	-9189	119.49	1894.31	15.85	Si
SLV 9	143750	0.25	12056	-10823	119.49	2194.9	18.37	Si
SLV 10	143750	0.25	12056	-10823	119.49	2194.9	18.37	Si
SLV 11	143750	0.25	12830	-11518	119.49	2319.44	19.41	Si
SLV 12	143750	0.25	12830	-11518	119.49	2319.44	19.41	Si
SLV 6	143750	0.25	14047	-12611	119.49	2511.24	21.02	Si
SLV 5	143750	0.25	14047	-12611	119.49	2511.24	21.02	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.045 W_a = 0.08 T_a = 0.0269

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	α_{lim}	Verifica
SLV 1	-8898	-20844	-288	0.074	1251.5	0.927	1.16163	3.31979	No
SLV 2	-8898	-20844	-288	0.074	1251.5	0.927	1.16163	3.31979	No
SLV 3	-11374	-19774	-296	0.075	1501.4	0.937	1.16666	3.31979	No
SLV 4	-11374	-19774	-296	0.075	1501.4	0.937	1.16666	3.31979	No
SLV 8	-15198	-12748	-246	0.08	1888.9	0.948	1.22552	3.16379	No
SLV 7	-15198	-12748	-246	0.08	1888.9	0.948	1.22552	3.16379	No
SLV 5	-6945	-16315	-218	0.08	1055.3	0.917	1.26319	3.16379	No
SLV 6	-6945	-16315	-218	0.08	1055.3	0.917	1.26319	3.16379	No
SLV 11	-15999	-7795	-195	0.083	1970.3	0.95	1.26882	3.16379	No
SLV 12	-15999	-7795	-195	0.083	1970.3	0.95	1.26882	3.16379	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF SLU	3.525	SLU 83	Si
V SLU	2.004	SLU 78	Si
PF SLV	0	SLV 9	No

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Stato limite	Coeff.s.	Comb.	Verifica
V_SLV	0	SLV 9	No
PFFP_SLV	15.526	SLV 13	Si
R_SLV	0.35	SLV 1	No

Maschio 52

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-2.013	5.876	-0.123	5.876	L1	L3	1.89	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	t0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 71	0.7	-20353	2044.3	23930	13583.12	6.644	Si
SLU 71	1.1	-19554	1691.66	22991	13263.06	7.84	Si
SLU 6	0.7	-14834	1609.96	17441	11016.38	6.843	Si
SLU 6	1.1	-14208	1347.1	16705	10673.05	7.923	Si
SLU 51	0.7	-17787	1889.48	20914	12493.37	6.612	Si
SLU 51	1.1	-16999	1563.21	19987	12122.46	7.755	Si
SLU 45	0.7	-17967	1870.93	21125	12575.48	6.722	Si
SLU 45	1.1	-17135	1605.13	20147	12187.59	7.593	Si
SLU 50	0.7	-18199	1973.96	21398	12680.28	6.424	Si
SLU 50	1.1	-17377	1671.39	20431	12302.43	7.361	Si
SLU 49	0.7	-17896	1906.88	21042	12543.31	6.578	Si
SLU 49	1.1	-17105	1580.66	20112	12173.41	7.701	Si
SLU 72	0.7	-19941	1959.82	23446	13420.39	6.848	Si
SLU 72	1.1	-19176	1583.48	22547	13105.54	8.276	Si
SLU 70	0.7	-20050	1977.22	23575	13463.93	6.81	Si
SLU 70	1.1	-19282	1600.92	22672	13150.18	8.214	Si
SLU 69	0.7	-20462	2061.7	24059	13625.43	6.609	Si
SLU 69	1.1	-19660	1709.1	23116	13306.61	7.786	Si
SLU 48	0.7	-18308	1991.36	21526	12729	6.392	Si
SLU 48	1.1	-17483	1688.83	20556	12352.29	7.314	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 14	0.7	-17178	5806.4	20198	13550.1	2.334	Si
SLV 14	1.1	-16143	2854.87	18981	12885.73	4.514	Si
SLV 5	0.7	-1385	-1416.6	0	0	0	No, e>l/2
SLV 5	1.1	2548	-1868.83	0	0	0	No, Trazione
SLV 13	0.7	-17178	5806.4	20198	13550.1	2.334	Si
SLV 13	1.1	-16143	2854.87	18981	12885.73	4.514	Si
SLV 1	0.7	-6125	-3877.49	7202	5446.88	1.405	Si
SLV 1	1.1	-4026	-1940.03	4733	3657.03	1.885	Si
SLV 10	0.7	-4701	1488.57	5527	4241.59	2.849	Si
SLV 10	1.1	-1087	-430.36	1279	1016.89	2.363	Si
SLV 16	0.7	-24557	6602.23	28874	17722.62	2.684	Si
SLV 16	1.1	-25413	4232.32	29881	18142.7	4.287	Si
SLV 9	0.7	-4701	1488.57	5527	4241.59	2.849	Si
SLV 9	1.1	-1087	-430.36	1279	1016.89	2.363	Si
SLV 15	0.7	-24557	6602.23	28874	17722.62	2.684	Si
SLV 15	1.1	-25413	4232.32	29881	18142.7	4.287	Si
SLV 6	0.7	-1385	-1416.6	0	0	0	No, e>l/2
SLV 6	1.1	2548	-1868.83	0	0	0	No, Trazione
SLV 2	0.7	-6125	-3877.49	7202	5446.88	1.405	Si
SLV 2	1.1	-4026	-1940.03	4733	3657.03	1.885	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	l'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 31	0.7	-17901	861	1248.23		21048	1.89	8362	7112			8.26	Si
SLU 31	1.1	-17376	752	925.57		20430	1.89	8280	7042			9.36	Si
SLU 38	0.7	-18857	981	1545.41		22172	1.89	8512	7239			7.38	Si
SLU 38	1.1	-18324	865	1165.09		21546	1.89	8428	7168			8.29	Si
SLU 33	0.7	-18625	867	1442.37		21899	1.89	8475	7208			8.32	Si
SLU 33	1.1	-18082	754	1098.83		21261	1.89	8390	7136			9.47	Si
SLU 76	0.7	-21716	993	1750.05		25534	1.89	8960	7621			7.67	Si
SLU 76	1.1	-20999	859	1351		24691	1.89	8848	7525			8.76	Si
SLU 80	0.7	-22332	1006	1926.8		26257	1.89	9057	7703			7.66	Si
SLU 80	1.1	-21600	869	1506.82		25396	1.89	8942	7605			8.75	Si
SLU 78	0.7	-22441	999	1944.2		26385	1.89	9074	7717			7.73	Si
SLU 78	1.1	-21706	861	1524.26		25521	1.89	8958	7619			8.85	Si
SLU 36	0.7	-18966	973	1562.8		22300	1.89	8529	7254			7.45	Si
SLU 36	1.1	-18431	857	1182.53		21670	1.89	8445	7182			8.39	Si
SLU 34	0.7	-18242	968	1368.66		21449	1.89	8415	7157			7.4	Si
SLU 34	1.1	-17724	855	1009.27		20840	1.89	8334	7088			8.29	Si
SLU 84	0.7	-23015	976	1792.22		27061	1.89	9164	7794			7.99	Si
SLU 84	1.1	-22290	837	1390.26		26208	1.89	9050	7697			9.19	Si
SLU 42	0.7	-19541	950	1410.83		22976	1.89	8619	7330			7.71	Si
SLU 42	1.1	-19015	833	1048.53		22357	1.89	8537	7260			8.71	Si



Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 16	0.7	-24557	8765	6602.23		28874	1.89	14108	11999			1.37	Si
SLV 16	1.1	-25413	8774	4232.32		29881	1.89	14309	12170			1.39	Si
SLV 13	0.7	-17178	8993	5806.4		20964	1.821	12526	10264			1.14	Si
SLV 13	1.1	-16143	9337	2854.87		18981	1.89	12130	10316			1.1	Si
SLV 6	0.7	-1385	-1791	-1416.6		0	0	8333	0			0	No, Vu<V
SLV 6	1.1	2548	-1405	-1868.83		0	0	8333	0			0	No, Vu<V
SLV 3	0.7	-13504	-8236	-3081.66		15877	1.89	11509	9788			1.19	Si
SLV 3	1.1	-13296	-8762	-562.58		15633	1.89	11460	9747			1.11	Si
SLV 1	0.7	-6125	-8007	-3877.49		14545	0.9358	11242	4734			0.59	No, Vu<V
SLV 1	1.1	-4026	-8199	-1940.03		6439	1.3893	9621	6015			0.73	No, Vu<V
SLV 15	0.7	-24557	8765	6602.23		28874	1.89	14108	11999			1.37	Si
SLV 15	1.1	-25413	8774	4232.32		29881	1.89	14309	12170			1.39	Si
SLV 4	0.7	-13504	-8236	-3081.66		15877	1.89	11509	9788			1.19	Si
SLV 4	1.1	-13296	-8762	-562.58		15633	1.89	11460	9747			1.11	Si
SLV 5	0.7	-1385	-1791	-1416.6		0	0	8333	0			0	No, Vu<V
SLV 5	1.1	2548	-1405	-1868.83		0	0	8333	0			0	No, Vu<V
SLV 2	0.7	-6125	-8007	-3877.49		14545	0.9358	11242	4734			0.59	No, Vu<V
SLV 2	1.1	-4026	-8199	-1940.03		6439	1.3893	9621	6015			0.73	No, Vu<V
SLV 14	0.7	-17178	8993	5806.4		20964	1.821	12526	10264			1.14	Si
SLV 14	1.1	-16143	9337	2854.87		18981	1.89	12130	10316			1.1	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.08 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 5	143750	0.25	4253	-3618	113.2	785.62	6.94	Si
SLV 6	143750	0.25	4253	-3618	113.2	785.62	6.94	Si
SLV 2	143750	0.25	6503	-5531	113.2	1178.18	10.41	Si
SLV 1	143750	0.25	6503	-5531	113.2	1178.18	10.41	Si
SLV 10	143750	0.25	9864	-8389	113.2	1735.18	15.33	Si
SLV 9	143750	0.25	9864	-8389	113.2	1735.18	15.33	Si
SLV 4	143750	0.25	14041	-11942	113.2	2378.19	21.01	Si
SLV 3	143750	0.25	14041	-11942	113.2	2378.19	21.01	Si
SLV 14	143750	0.25	25204	-21436	113.2	3828.21	33.82	Si
SLV 13	143750	0.25	25204	-21436	113.2	3828.21	33.82	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.045 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 10	-249	-11191	-574	0	424.7	0.954	0	3.16379	No
SLV 9	-249	-11191	-574	0	424.7	0.954	0	3.16379	No
SLV 5	2791	-4803	-522	0	0	0	0	3.16379	No, Trazione
SLV 6	2791	-4803	-522	0	0	0	0	3.16379	No, Trazione
SLV 2	-3532	-5425	-339	0.054	698.5	0.896	0.87162	3.31979	No
SLV 1	-3532	-5425	-339	0.054	698.5	0.896	0.87162	3.31979	No
SLV 13	-13665	-26719	-513	0.062	1715.2	0.946	0.9517	3.31979	No
SLV 14	-13665	-26719	-513	0.062	1715.2	0.946	0.9517	3.31979	No
SLV 16	-22124	-33641	-409	0.074	2574.8	0.963	1.11495	3.31979	No
SLV 15	-22124	-33641	-409	0.074	2574.8	0.963	1.11495	3.31979	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.392	SLU 48	Si
V_SLU	7.383	SLU 38	Si
PF_SLV	0	SLV 6	No
V_SLV	0	SLV 5	No
PFFP_SLV	6.94	SLV 5	Si
R_SLV	0	SLV 6	No

Maschio 53

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.123	6.101	-0.123	-3.284	L1	L3	9.385	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 76	-1.3	-212161	28898.37	50236	381587.59	13.204	Si
SLU 76	1.39	-184848	46502.69	43769	401328.94	8.63	Si
SLU 34	-1.3	-176055	26553.33	41687	403353.94	15.19	Si
SLU 34	1.39	-154659	41935.99	36621	399470.93	9.526	Si
SLU 68	-1.3	-195425	26269.77	46274	396098.18	15.078	Si
SLU 68	1.39	-169364	43121.23	40103	403481.72	9.357	Si
SLU 10	-1.3	-156464	26468.57	37048	400281.07	15.123	Si
SLU 10	1.39	-136098	40688.12	32226	385986.2	9.486	Si
SLU 55	-1.3	-195692	27320.16	46337	395926.59	14.492	Si
SLU 55	1.39	-169333	44033.29	40096	403479.5	9.163	Si
SLU 73	-1.3	-209038	30391.81	49497	384874.63	12.664	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 73	1.39	-181801	47724.22	43048	402269.39	8.429	Si
SLU 65	-1.3	-192303	27763.21	45534	397959.74	14.334	Si
SLU 65	1.39	-166317	44342.76	39381	403135.23	9.091	Si
SLU 52	-1.3	-192570	28813.61	45598	397810.9	13.806	Si
SLU 52	1.39	-166287	45254.82	39374	403130.48	8.908	Si
SLU 31	-1.3	-172933	28046.77	40948	403565.56	14.389	Si
SLU 31	1.39	-151612	43157.52	35899	397902.22	9.22	Si
SLU 44	-1.3	-175835	26185.01	41635	403377.57	15.405	Si
SLU 44	1.39	-150803	41873.35	35708	397442.97	9.492	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 7	-1.3	-122628	-164506.32	29036	438686.65	2.667	Si
SLV 7	1.39	-103786	-142418.74	24575	389064.02	2.732	Si
SLV 5	-1.3	-117173	182393.19	27745	424984.93	2.33	Si
SLV 5	1.39	-98745	174522.78	23381	374694.02	2.147	Si
SLV 6	-1.3	-117173	182393.19	27745	424984.93	2.33	Si
SLV 6	1.39	-98745	174522.78	23381	374694.02	2.147	Si
SLV 8	-1.3	-122628	-164506.32	29036	438686.65	2.667	Si
SLV 8	1.39	-103786	-142418.74	24575	389064.02	2.732	Si
SLV 1	-1.3	-51977	56594.09	12307	219336.54	3.876	Si
SLV 1	1.39	-39956	55043.53	9461	172974.39	3.143	Si
SLV 12	-1.3	-180146	-160748.38	42656	550227.85	3.423	Si
SLV 12	1.39	-155689	-135090.42	36865	510152.43	3.776	Si
SLV 9	-1.3	-174691	186151.13	41364	542232.3	2.913	Si
SLV 9	1.39	-150648	181851.11	35671	500540.66	2.752	Si
SLV 10	-1.3	-174691	186151.13	41364	542232.3	2.913	Si
SLV 10	1.39	-150648	181851.11	35671	500540.66	2.752	Si
SLV 2	-1.3	-51977	56594.09	12307	219336.54	3.876	Si
SLV 2	1.39	-39956	55043.53	9461	172974.39	3.143	Si
SLV 11	-1.3	-180146	-160748.38	42656	550227.85	3.423	Si
SLV 11	1.39	-155689	-135090.42	36865	510152.43	3.776	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 13	-1.3	-159587	1747	24975.13		37788	9.385	10594	44741			25.62	Si
SLU 13	1.39	-139145	1817	39466.59		32947	9.385	9949	42015			23.12	Si
SLU 26	-1.3	-159320	1739	23924.73		37724	9.385	10585	44705			25.71	Si
SLU 26	1.39	-139175	1806	38554.53		32955	9.385	9949	42019			23.27	Si
SLU 34	-1.3	-176055	1754	26553.33		41687	9.385	10833	45752			26.08	Si
SLU 34	1.39	-154659	1829	41935.99		36621	9.385	10438	44084			24.11	Si
SLU 2	-1.3	-139729	1749	23839.97		33086	9.385	9967	42093			24.07	Si
SLU 2	1.39	-120614	1817	37306.65		28560	9.385	9363	39544			21.76	Si
SLU 5	-1.3	-142852	1731	22346.53		33825	9.385	10066	42509			24.55	Si
SLU 5	1.39	-123661	1795	36085.13		29281	9.385	9460	39951			22.26	Si
SLU 31	-1.3	-172933	1772	28046.77		40948	9.385	10833	45752			25.82	Si
SLU 31	1.39	-151612	1851	43157.52		35899	9.385	10342	43677			23.59	Si
SLU 47	-1.3	-178957	1726	24691.57		42374	9.385	10833	45752			26.5	Si
SLU 47	1.39	-153850	1796	40651.82		36429	9.385	10413	43976			24.49	Si
SLU 23	-1.3	-156197	1757	25418.18		36985	9.385	10487	44289			25.21	Si
SLU 23	1.39	-136128	1829	39776.06		32233	9.385	9853	41613			22.76	Si
SLU 44	-1.3	-175835	1744	26185.01		41635	9.385	10833	45752			26.23	Si
SLU 44	1.39	-150803	1818	41873.35		35708	9.385	10317	43570			23.96	Si
SLU 10	-1.3	-156464	1764	26468.57		37048	9.385	10495	44324			25.12	Si
SLU 10	1.39	-136098	1840	40688.12		32226	9.385	9852	41609			22.62	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 9	-1.3	-174691	37561	186151.13		41364	9.385	16250	68628			1.83	Si
SLV 9	1.39	-150648	30284	181851.11		35671	9.385	15468	65323			2.16	Si
SLV 2	-1.3	-51977	14139	56594.09		12307	9.385	10795	45589			3.22	Si
SLV 2	1.39	-39956	10866	55043.53		9461	9.385	10226	43185			3.97	Si
SLV 1	-1.3	-51977	14139	56594.09		12307	9.385	10795	45589			3.22	Si
SLV 1	1.39	-39956	10866	55043.53		9461	9.385	10226	43185			3.97	Si
SLV 6	-1.3	-117173	39141	182393.19		27745	9.385	13882	58628			1.5	Si
SLV 6	1.39	-98745	31254	174522.78		25006	8.7753	13335	52656			1.68	Si
SLV 12	-1.3	-180146	-39142	-160748.38		42656	9.385	16250	68628			1.75	Si
SLV 12	1.39	-155689	-31202	-135090.42		36865	9.385	15706	66332			2.13	Si
SLV 7	-1.3	-122628	-37562	-164506.32		29036	9.385	14141	59719			1.59	Si
SLV 7	1.39	-103786	-30231	-142418.74		24575	9.385	13248	55951			1.85	Si
SLV 5	-1.3	-117173	39141	182393.19		27745	9.385	13882	58628			1.5	Si
SLV 5	1.39	-98745	31254	174522.78		25006	8.7753	13335	52656			1.68	Si
SLV 8	-1.3	-122628	-37562	-164506.32		29036	9.385	14141	59719			1.59	Si
SLV 8	1.39	-103786	-30231	-142418.74		24575	9.385	13248	55951			1.85	Si
SLV 11	-1.3	-180146	-39142	-160748.38		42656	9.385	16250	68628			1.75	Si
SLV 11	1.39	-155689	-31202	-135090.42		36865	9.385	15706	66332			2.13	Si
SLV 10	-1.3	-174691	37561	186151.13		41364	9.385	16250	68628			1.83	Si
SLV 10	1.39	-150648	30284	181851.11		35671	9.385	15468	65323			2.16	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.045 Wa 0.08 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 1	143750	0.25	10849	-45818	562.09	9393.78	16.71	Si
SLV 2	143750	0.25	10849	-45818	562.09	9393.78	16.71	Si
SLV 3	143750	0.25	11132	-47013	562.09	9614.21	17.1	Si
SLV 4	143750	0.25	11132	-47013	562.09	9614.21	17.1	Si
SLV 5	143750	0.25	25614	-108172	562.09	19236.78	34.22	Si
SLV 6	143750	0.25	25614	-108172	562.09	19236.78	34.22	Si
SLV 8	143750	0.25	26556	-112154	562.09	19750.19	35.14	Si



Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 7	143750	0.25	26556	-112154	562.09	19750.19	35.14	Si
SLV 9	143750	0.25	38552	-162813	562.09	25074.84	44.61	Si
SLV 10	143750	0.25	38552	-162813	562.09	25074.84	44.61	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 0.045 $W_a = 0.08$ $T_a = 0.0269$

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 14	-212966	-243705	519	0.085	23284.7	0.979	1.26458	3.31979	No
SLV 13	-212966	-243705	519	0.085	23284.7	0.979	1.26458	3.31979	No
SLV 16	-214478	-245342	446	0.085	23438.7	0.979	1.26906	3.31979	No
SLV 15	-214478	-245342	446	0.085	23438.7	0.979	1.26906	3.31979	No
SLV 10	-150648	-174691	365	0.087	16937.1	0.971	1.2974	3.16379	No
SLV 9	-150648	-174691	365	0.087	16937.1	0.971	1.2974	3.16379	No
SLV 11	-155689	-180146	122	0.088	17450.4	0.972	1.31681	3.16379	No
SLV 12	-155689	-180146	122	0.088	17450.4	0.972	1.31681	3.16379	No
SLV 6	-98745	-117173	160	0.09	11654.8	0.959	1.3639	3.16379	No
SLV 5	-98745	-117173	160	0.09	11654.8	0.959	1.3639	3.16379	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	8.429	SLV 73	Si
V_SLV	21.763	SLV 2	Si
PF_SLV	2.147	SLV 5	Si
V_SLV	1.498	SLV 5	Si
PFFP_SLV	16.712	SLV 1	Si
R_SLV	0.381	SLV 13	No

Maschio 54

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota s.	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.678	-3.359	-24.678	5.951	L3	L4	9.311	0.28	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 5	1.39	-45075	-14881.53	17290	165300.09	11.108	Si
SLV 5	5.07	-26607	-3700.56	10206	108347.01	29.279	Si
SLV 34	1.39	-55053	-17085.04	21117	189849.3	11.112	Si
SLV 34	5.07	-35381	-5821.74	13571	137267.33	23.578	Si
SLV 73	1.39	-65071	-18742.03	24960	210105.83	11.21	Si
SLV 73	5.07	-40607	-6347.26	15576	152891.24	24.088	Si
SLV 2	1.39	-44097	-15085.69	16915	162657.88	10.782	Si
SLV 2	5.07	-25786	-3753	9891	105467.71	28.102	Si
SLV 23	1.39	-49121	-16066.94	18842	175779.69	10.94	Si
SLV 23	5.07	-30126	-4753.14	11556	120351.6	25.32	Si
SLV 13	1.39	-50029	-16103.79	19190	178034.2	11.055	Si
SLV 13	5.07	-31041	-4821.6	11907	123383.21	25.59	Si
SLV 31	1.39	-54075	-17289.19	20742	187635.11	10.853	Si
SLV 31	5.07	-34559	-5874.18	13256	134703.85	22.932	Si
SLV 52	1.39	-60047	-17760.78	23033	200497.37	11.289	Si
SLV 52	5.07	-36267	-5347.11	13911	140001.51	26.183	Si
SLV 10	1.39	-49051	-16307.94	18815	175604.5	10.768	Si
SLV 10	5.07	-30220	-4874.04	11592	120663.5	24.756	Si
SLV 26	1.39	-50099	-15862.78	19217	178206.39	11.234	Si
SLV 26	5.07	-30947	-4700.7	11871	123074.68	26.182	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 15	1.39	-18903	20768.75	7251	82775.87	3.986	Si
SLV 15	5.07	-7271	-8019.14	2789	33077.18	4.125	Si
SLV 9	1.39	-37110	-50743.12	14235	152634.6	3.008	Si
SLV 9	5.07	-23552	-7048.74	9034	101538.03	14.405	Si
SLV 11	1.39	-37539	45326.75	14399	154161.25	3.401	Si
SLV 11	5.07	-19819	-2801.41	7602	86525.48	30.886	Si
SLV 5	1.39	-52956	-58514.37	20313	205543.31	3.513	Si
SLV 5	5.07	-35428	-3850.59	13590	146586.42	38.069	Si
SLV 13	1.39	-18774	-8052.21	7201	82248.45	10.214	Si
SLV 13	5.07	-8391	-9293.34	3219	38034.47	4.093	Si
SLV 6	1.39	-52956	-58514.37	20313	205543.31	3.513	Si
SLV 6	5.07	-35428	-3850.59	13590	146586.42	38.069	Si
SLV 10	1.39	-37110	-50743.12	14235	152634.6	3.008	Si
SLV 10	5.07	-23552	-7048.74	9034	101538.03	14.405	Si
SLV 16	1.39	-18903	20768.75	7251	82775.87	3.986	Si
SLV 16	5.07	-7271	-8019.14	2789	33077.18	4.125	Si
SLV 14	1.39	-18774	-8052.21	7201	82248.45	10.214	Si
SLV 14	5.07	-8391	-9293.34	3219	38034.47	4.093	Si
SLV 12	1.39	-37539	45326.75	14399	154161.25	3.401	Si
SLV 12	5.07	-19819	-2801.41	7602	86525.48	30.886	Si



Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 5	1.39	-45075	-1588	-14881.53		17290	9.3107	7861	20493			12.9	Si
SLU 5	5.07	-26607	-1379	-3700.56		10206	9.3107	6916	18031			13.07	Si
SLU 23	1.39	-49121	-1622	-16066.94		18842	9.3107	8068	21033			12.97	Si
SLU 23	5.07	-30126	-1412	-4753.14		11556	9.3107	7096	18500			13.1	Si
SLU 44	1.39	-55093	-1617	-16538.53		21133	9.3107	8373	21829			13.5	Si
SLU 44	5.07	-31834	-1407	-4226.07		12211	9.3107	7184	18728			13.31	Si
SLU 52	1.39	-60047	-1632	-17760.78		23033	9.3107	8627	22490			13.78	Si
SLU 52	5.07	-36267	-1421	-5347.11		13911	9.3107	7410	19319			13.6	Si
SLU 31	1.39	-54075	-1637	-17289.19		20742	9.3107	8321	21693			13.25	Si
SLU 31	5.07	-34559	-1426	-5874.18		13256	9.3107	7323	19091			13.39	Si
SLU 26	1.39	-50099	-1591	-15862.78		19217	9.3107	8118	21163			13.3	Si
SLU 26	5.07	-30947	-1382	-4700.7		11871	9.3107	7138	18610			13.47	Si
SLU 13	1.39	-50029	-1603	-16103.79		19190	9.3107	8114	21154			13.19	Si
SLU 13	5.07	-31041	-1393	-4821.6		11907	9.3107	7143	18622			13.37	Si
SLU 10	1.39	-49051	-1634	-16307.94		18815	9.3107	8064	21023			12.87	Si
SLU 10	5.07	-30220	-1423	-4874.04		11592	9.3107	7101	18513			13.01	Si
SLU 34	1.39	-55053	-1607	-17085.04		21117	9.3107	8371	21824			13.58	Si
SLU 34	5.07	-35381	-1395	-5821.74		13571	9.3107	7365	19201			13.76	Si
SLU 2	1.39	-44097	-1619	-15085.69		16915	9.3107	7811	20363			12.58	Si
SLU 2	5.07	-25786	-1410	-3753		9891	9.3107	6874	17921			12.71	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 7	1.39	-53384	51771	37555.5		20477	9.3107	12429	32402			0.63	No, Vu<V
SLV 7	5.07	-31695	20599	396.74		12158	9.3107	10765	28064			1.36	Si
SLV 14	1.39	-18774	-15802	-8052.21		7201	9.3107	9774	25480			1.61	Si
SLV 14	5.07	-8391	-7287	-9293.34		3219	9.3107	8977	23403			3.21	Si
SLV 11	1.39	-37539	51595	45326.75		14399	9.3107	11213	29233			0.57	No, Vu<V
SLV 11	5.07	-19819	19867	-2801.41		7602	9.3107	9854	25689			1.29	Si
SLV 10	1.39	-37110	-51777	-50743.12		14235	9.3107	11180	29147			0.56	No, Vu<V
SLV 10	5.07	-23552	-20595	-7048.74		9034	9.3107	10140	26435			1.28	Si
SLV 8	1.39	-53384	51771	37555.5		20477	9.3107	12429	32402			0.63	No, Vu<V
SLV 8	5.07	-31695	20599	396.74		12158	9.3107	10765	28064			1.36	Si
SLV 6	1.39	-52956	-51601	-58514.37		20313	9.3107	12396	32316			0.63	No, Vu<V
SLV 6	5.07	-35428	-19864	-3850.59		13590	9.3107	11051	28811			1.45	Si
SLV 5	1.39	-52956	-51601	-58514.37		20313	9.3107	12396	32316			0.63	No, Vu<V
SLV 5	5.07	-35428	-19864	-3850.59		13590	9.3107	11051	28811			1.45	Si
SLV 9	1.39	-37110	-51777	-50743.12		14235	9.3107	11180	29147			0.56	No, Vu<V
SLV 9	5.07	-23552	-20595	-7048.74		9034	9.3107	10140	26435			1.28	Si
SLV 12	1.39	-37539	51595	45326.75		14399	9.3107	11213	29233			0.57	No, Vu<V
SLV 12	5.07	-19819	19867	-2801.41		7602	9.3107	9854	25689			1.29	Si
SLV 13	1.39	-18774	-15802	-8052.21		7201	9.3107	9774	25480			1.61	Si
SLV 13	5.07	-8391	-7287	-9293.34		3219	9.3107	8977	23403			3.21	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 15	143750	0.31	5825	-15186	842.6	2024.63	2.4	Si
SLV 16	143750	0.31	5825	-15186	842.6	2024.63	2.4	Si
SLV 14	143750	0.31	5891	-15359	842.6	2046.57	2.43	Si
SLV 13	143750	0.31	5891	-15359	842.6	2046.57	2.43	Si
SLV 12	143750	0.31	11330	-29539	842.6	3751.92	4.45	Si
SLV 11	143750	0.31	11330	-29539	842.6	3751.92	4.45	Si
SLV 10	143750	0.31	11552	-30116	842.6	3817.67	4.53	Si
SLV 9	143750	0.31	11552	-30116	842.6	3817.67	4.53	Si
SLV 8	143750	0.31	16116	-42014	842.6	5106.2	6.06	Si
SLV 7	143750	0.31	16116	-42014	842.6	5106.2	6.06	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 3.23 Wa = 0.05 Ta = 0.0808

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 14	-8391	-18774	686	0.017	2325.1	0.889	0.27887	8.20395	No
SLV 13	-8391	-18774	686	0.017	2325.1	0.889	0.27887	8.20395	No
SLV 15	-7271	-18903	544	0.024	2225.4	0.89	0.40019	8.20395	No
SLV 16	-7271	-18903	544	0.024	2225.4	0.89	0.40019	8.20395	No
SLV 3	-46856	-71720	-732	0.031	6133.8	0.938	0.47668	8.20395	No
SLV 4	-46856	-71720	-732	0.031	6133.8	0.938	0.47668	8.20395	No
SLV 1	-47976	-71592	-590	0.033	6247.1	0.939	0.5172	8.20395	No
SLV 2	-47976	-71592	-590	0.033	6247.1	0.939	0.5172	8.20395	No
SLV 8	-31695	-53384	-451	0.035	4603.9	0.922	0.55167	6.97355	No
SLV 7	-31695	-53384	-451	0.035	4603.9	0.922	0.55167	6.97355	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.768	SLU 10	Si
V_SLU	12.579	SLU 2	Si
PF_SLV	3.008	SLV 9	Si
V_SLV	0.563	SLV 9	No
PFFP_SLV	2.403	SLV 15	Si
R_SLV	0.034	SLV 13	No

Maschio 55

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.sx	a.s.dx
-22.763	5.951	-24.678	5.951	L3	L4	1.915	0.28	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	t0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 59	2.29	-11305	5597.19	21084	8023.03	1.433	Si
SLU 59	4.19	-8828	-8560.46	0	0	0	No, e>l/2
SLU 56	2.29	-11525	5666.6	21494	8123.33	1.434	Si
SLU 56	4.19	-8949	-8666.57	0	0	0	No, e>l/2
SLU 27	2.29	-9465	4702.96	17652	7098.87	1.509	Si
SLU 27	4.19	-7522	-7209.51	0	0	0	No, e>l/2
SLU 57	2.29	-11403	5627.03	21266	8067.74	1.434	Si
SLU 57	4.19	-8911	-8619.77	0	0	0	No, e>l/2
SLU 26	2.29	-8991	4445.8	16768	6836.75	1.538	Si
SLU 26	4.19	-7148	-6853.76	0	0	0	No, e>l/2
SLU 29	2.29	-9368	4673.13	17471	7045.9	1.508	Si
SLU 29	4.19	-7439	-7150.21	0	0	0	No, e>l/2
SLU 55	2.29	-11051	5409.43	20609	7904.02	1.461	Si
SLU 55	4.19	-8574	-8310.82	0	0	0	No, e>l/2
SLU 30	2.29	-9246	4633.56	17243	6978.75	1.506	Si
SLU 30	4.19	-7401	-7103.41	0	0	0	No, e>l/2
SLU 58	2.29	-11428	5636.76	21312	8079.14	1.433	Si
SLU 58	4.19	-8865	-8607.27	0	0	0	No, e>l/2
SLU 1	2.29	-8002	3862.07	14923	6258.08	1.62	Si
SLU 1	4.19	-5852	-5857.24	0	0	0	No, e>l/2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 12	2.29	-5834	7648.64	0	0	0	No, e>l/2
SLV 12	4.19	-6984	-7842.6	0	0	0	No, e>l/2
SLV 11	2.29	-5834	7648.64	0	0	0	No, e>l/2
SLV 11	4.19	-6984	-7842.6	0	0	0	No, e>l/2
SLV 1	2.29	-11570	8525.35	21578	9122.06	1.07	Si
SLV 1	4.19	-10570	-11559.37	0	0	0	No, e>l/2
SLV 2	2.29	-11570	8525.35	21578	9122.06	1.07	Si
SLV 2	4.19	-10570	-11559.37	0	0	0	No, e>l/2
SLV 4	2.29	-10345	11711.99	0	0	0	No, e>l/2
SLV 4	4.19	-11682	-13578.59	0	0	0	No, e>l/2
SLV 5	2.29	-11340	617.78	21149	8978.87	14.534	Si
SLV 5	4.19	-6045	-4846.5	11274	5253.95	1.084	Si
SLV 7	2.29	-7256	11239.92	0	0	0	No, e>l/2
SLV 7	4.19	-9751	-11577.26	0	0	0	No, e>l/2
SLV 3	2.29	-10345	11711.99	0	0	0	No, e>l/2
SLV 3	4.19	-11682	-13578.59	0	0	0	No, e>l/2
SLV 6	2.29	-11340	617.78	21149	8978.87	14.534	Si
SLV 6	4.19	-6045	-4846.5	11274	5253.95	1.084	Si
SLV 8	2.29	-7256	11239.92	0	0	0	No, e>l/2
SLV 8	4.19	-9751	-11577.26	0	0	0	No, e>l/2

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 67	2.29	-11221	7289	5493.22		28546	1.4038	9362	3680			0.5	No, Vu<V
SLU 67	4.19	-8624	7240	-8407.93		0	0	5556	0			0	No, Vu<V
SLU 69	2.29	-11516	7520	5694.18		29608	1.3891	9503	3696			0.49	No, Vu<V
SLU 69	4.19	-8891	7471	-8673.17		0	0	5556	0			0	No, Vu<V
SLU 70	2.29	-11394	7517	5654.61		29410	1.3836	9477	3671			0.49	No, Vu<V
SLU 70	4.19	-8853	7467	-8626.37		0	0	5556	0			0	No, Vu<V
SLU 72	2.29	-11296	7477	5624.77		29262	1.3787	9457	3651			0.49	No, Vu<V
SLU 72	4.19	-8769	7427	-8567.06		0	0	5556	0			0	No, Vu<V
SLU 71	2.29	-11419	7480	5664.34		29459	1.3843	9483	3676			0.49	No, Vu<V
SLU 71	4.19	-8807	7431	-8613.86		0	0	5556	0			0	No, Vu<V
SLU 68	2.29	-11042	7247	5437.01		28263	1.3953	9324	3643			0.5	No, Vu<V
SLU 68	4.19	-8516	7198	-8317.42		0	0	5556	0			0	No, Vu<V
SLU 43	2.29	-10053	6244	4853.29		25210	1.4241	8917	3556			0.57	No, Vu<V
SLU 43	4.19	-7220	6200	-7320.89		0	0	5556	0			0	No, Vu<V
SLU 1	2.29	-8002	5009	3862.07		20061	1.4245	8230	3283			0.66	No, Vu<V
SLU 1	4.19	-5852	4974	-5857.24		0	0	5556	0			0	No, Vu<V
SLU 44	2.29	-9849	6239	4787.34		24871	1.4143	8872	3513			0.56	No, Vu<V
SLU 44	4.19	-7157	6195	-7242.89		0	0	5556	0			0	No, Vu<V
SLU 45	2.29	-10323	6512	5044.51		26213	1.4065	9051	3564			0.55	No, Vu<V
SLU 45	4.19	-7532	6467	-7598.64		0	0	5556	0			0	No, Vu<V

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 6	2.29	-11340	-23	617.78		21149	1.915	12563	6736			295.1	Si
SLV 6	4.19	-6045	3446	-4846.5		46205	0.4672	16250	2126			0.62	No, Vu<V
SLV 12	2.29	-5834	10927	7648.64		0	0	8333	0			0	No, Vu<V
SLV 12	4.19	-6984	7384	-7842.6		0	0	8333	0			0	No, Vu<V
SLV 1	2.29	-11570	10748	8525.35		62420	0.662	16250	3012			0.28	No, Vu<V
SLV 1	4.19	-10570	11628	-11559.37		0	0	8333	0			0	No, Vu<V
SLV 4	2.29	-10345	15405	11711.99		0	0	8333	0			0	No, Vu<V
SLV 4	4.19	-11682	14155	-13578.59		0	0	8333	0			0	No, Vu<V
SLV 8	2.29	-7256	15502	11239.92		0	0	8333	0			0	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 8	4.19	-9751	11870	-11577.26		0	0	8333	0			0	No, Vu<V
SLV 2	2.29	-11570	10748	8525.35		62420	0.662	16250	3012			0.28	No, Vu<V
SLV 2	4.19	-10570	11628	-11559.37		0	0	8333	0			0	No, Vu<V
SLV 5	2.29	-11340	-23	617.78		21149	1.915	12563	6736			295.1	Si
SLV 5	4.19	-6045	3446	-4846.5		46205	0.4672	16250	2126			0.62	No, Vu<V
SLV 11	2.29	-5834	10927	7648.64		0	0	8333	0			0	No, Vu<V
SLV 11	4.19	-6984	7384	-7842.6		0	0	8333	0			0	No, Vu<V
SLV 3	2.29	-10345	15405	11711.99		0	0	8333	0			0	No, Vu<V
SLV 3	4.19	-11682	14155	-13578.59		0	0	8333	0			0	No, Vu<V
SLV 7	2.29	-7256	15502	11239.92		0	0	8333	0			0	No, Vu<V
SLV 7	4.19	-9751	11870	-11577.26		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 13	143750	0.31	6404	-3434	173.3	455.54	2.63	Si
SLV 14	143750	0.31	6404	-3434	173.3	455.54	2.63	Si
SLV 16	143750	0.31	6928	-3715	173.3	490.57	2.83	Si
SLV 15	143750	0.31	6928	-3715	173.3	490.57	2.83	Si
SLV 9	143750	0.31	10958	-5876	173.3	748.85	4.32	Si
SLV 10	143750	0.31	10958	-5876	173.3	748.85	4.32	Si
SLV 11	143750	0.31	12705	-6812	173.3	854.54	4.93	Si
SLV 12	143750	0.31	12705	-6812	173.3	854.54	4.93	Si
SLV 5	143750	0.31	15386	-8250	173.3	1009.57	5.83	Si
SLV 6	143750	0.31	15386	-8250	173.3	1009.57	5.83	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzaria = 3.23 Wa = 0.05 Ta = 0.0808

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 5	-1664	-4738	117	0.024	472.7	0.889	0.3871	6.97355	No
SLV 6	-1664	-4738	117	0.024	472.7	0.889	0.3871	6.97355	No
SLV 9	-1276	-1706	105	0.026	438.8	0.892	0.41947	6.97355	No
SLV 10	-1276	-1706	105	0.026	438.8	0.892	0.41947	6.97355	No
SLV 11	-4180	-16220	-126	0.028	713.5	0.905	0.45401	6.97355	No
SLV 12	-4180	-16220	-126	0.028	713.5	0.905	0.45401	6.97355	No
SLV 7	-4568	-19252	-114	0.031	751.9	0.908	0.49185	6.97355	No
SLV 8	-4568	-19252	-114	0.031	751.9	0.908	0.49185	6.97355	No
SLV 16	-2711	-7603	-59	0.04	570.2	0.893	0.65104	8.20395	No
SLV 15	-2711	-7603	-59	0.04	570.2	0.893	0.65104	8.20395	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0	SLV 1	No
V_SLV	0	SLV 1	No
PF_SLV	0	SLV 1	No
V_SLV	0	SLV 1	No
PFFP_SLV	2.629	SLV 13	Si
R_SLV	0.056	SLV 5	No

Maschio 56

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.618	5.951	-21.763	5.951	L3	L4	2.145	0.28	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 82	2.29	-21845	-4321.15	36372	12967.61	3.001	Si
SLU 82	4.19	-22445	-2399.89	37371	13028.55	5.429	Si
SLU 77	2.29	-21780	-4154.84	36264	12960.04	3.119	Si
SLU 77	4.19	-22118	-2507.28	36827	12997.31	5.184	Si
SLU 76	2.29	-21281	-4121.64	35433	12895.9	3.129	Si
SLU 76	4.19	-21609	-2466.66	35979	12939.26	5.246	Si
SLU 84	2.29	-22144	-4287.66	36869	12999.89	3.032	Si
SLU 84	4.19	-22636	-2495.97	37689	13044.61	5.226	Si
SLU 75	2.29	-21475	-4174.82	35757	12922.2	3.095	Si
SLU 75	4.19	-21872	-2455.38	36417	12970.69	5.283	Si
SLU 83	2.29	-22150	-4301.17	36880	13000.53	3.023	Si
SLU 83	4.19	-22691	-2451.79	37781	13048.98	5.322	Si
SLU 73	2.29	-20983	-4155.13	34936	12852.34	3.093	Si
SLU 73	4.19	-21418	-2370.58	35661	12914.61	5.448	Si
SLU 78	2.29	-21774	-4141.33	36253	12959.31	3.129	Si
SLU 78	4.19	-22063	-2551.46	36735	12991.55	5.092	Si
SLU 74	2.29	-21482	-4188.33	35767	12923.01	3.085	Si
SLU 74	4.19	-21928	-2411.2	36509	12976.91	5.382	Si
SLU 81	2.29	-21852	-4334.66	36383	12968.33	2.992	Si
SLU 81	4.19	-22501	-2355.7	37463	13033.38	5.533	Si



Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 5	2.29	-4344	-3644.52	7233	4383.4	1.203	Si
SLV 5	4.19	-7733	-454.34	12876	7419.81	16.331	Si
SLV 3	2.29	-21838	1081.27	36361	16451.74	15.215	Si
SLV 3	4.19	-12244	-5728.88	20386	10940.74	1.91	Si
SLV 6	2.29	-4344	-3644.52	7233	4383.4	1.203	Si
SLV 6	4.19	-7733	-454.34	12876	7419.81	16.331	Si
SLV 1	2.29	-14942	37.91	24879	12762.45	336.691	Si
SLV 1	4.19	-8719	-4393.76	14517	8240.24	1.875	Si
SLV 10	2.29	-2157	-5757.52	0	0	0	No, $e \geq l/2$
SLV 10	4.19	-10413	1587.2	17337	9583.12	6.038	Si
SLV 13	2.29	-7650	-7005.43	12737	7349.38	1.049	Si
SLV 13	4.19	-17651	2411.36	29390	14377.64	5.962	Si
SLV 2	2.29	-14942	37.91	24879	12762.45	336.691	Si
SLV 2	4.19	-8719	-4393.76	14517	8240.24	1.875	Si
SLV 14	2.29	-7650	-7005.43	12737	7349.38	1.049	Si
SLV 14	4.19	-17651	2411.36	29390	14377.64	5.962	Si
SLV 9	2.29	-2157	-5757.52	0	0	0	No, $e \geq l/2$
SLV 9	4.19	-10413	1587.2	17337	9583.12	6.038	Si
SLV 4	2.29	-21838	1081.27	36361	16451.74	15.215	Si
SLV 4	4.19	-12244	-5728.88	20386	10940.74	1.91	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 62	2.29	-20167	-2698	-3962.94		33578	2.145	10033	6026			2.23	Si
SLU 62	4.19	-20499	-2691	-2261.48		34132	2.145	10106	6070			2.26	Si
SLU 60	2.29	-19869	-2826	-3996.43		33081	2.145	9966	5986			2.12	Si
SLU 60	4.19	-20309	-2820	-2165.4		33814	2.145	10064	6044			2.14	Si
SLU 81	2.29	-21852	-3041	-4334.66		36383	2.145	10407	6250			2.06	Si
SLU 81	4.19	-22501	-3034	-2355.7		37463	2.145	10551	6337			2.09	Si
SLU 73	2.29	-20983	-2819	-4155.13		34936	2.145	10214	6134			2.18	Si
SLU 73	4.19	-21418	-2811	-2370.58		35661	2.145	10310	6192			2.2	Si
SLU 74	2.29	-21482	-2820	-4188.33		35767	2.145	10325	6201			2.2	Si
SLU 74	4.19	-21928	-2813	-2411.2		36509	2.145	10423	6260			2.23	Si
SLU 82	2.29	-21845	-2983	-4321.15		36372	2.145	10405	6249			2.09	Si
SLU 82	4.19	-22445	-2976	-2399.89		37371	2.145	10538	6329			2.13	Si
SLU 64	2.29	-18990	-2620	-3811.25		31618	2.145	9771	5869			2.24	Si
SLU 64	4.19	-19200	-2614	-2159.84		31968	2.145	9818	5897			2.26	Si
SLU 83	2.29	-22150	-2912	-4301.17		36880	2.145	10473	6290			2.16	Si
SLU 83	4.19	-22691	-2905	-2451.79		37781	2.145	10593	6362			2.19	Si
SLU 84	2.29	-22144	-2855	-4287.66		36869	2.145	10471	6289			2.2	Si
SLU 84	4.19	-22636	-2846	-2495.97		37689	2.145	10581	6355			2.23	Si
SLU 61	2.29	-19862	-2769	-3982.92		33071	2.145	9965	5985			2.16	Si
SLU 61	4.19	-20253	-2762	-2209.58		33722	2.145	10052	6037			2.19	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 6	2.29	-4344	-2551	-3644.52		22142	0.7007	12762	2504			0.98	No, $V_u < V$
SLV 6	4.19	-7733	-681	-454.34		12876	2.145	10908	6552			9.62	Si
SLV 14	2.29	-7650	-11037	-7005.43		58096	0.4703	16250	2140			0.19	No, $V_u < V$
SLV 14	4.19	-17651	-10398	2411.36		29390	2.145	14211	8535			0.82	No, $V_u < V$
SLV 16	2.29	-14546	-9279	-5962.06		26134	1.9879	13560	7548			0.81	No, $V_u < V$
SLV 16	4.19	-21176	-9771	1076.24		35258	2.145	15385	9240			0.95	No, $V_u < V$
SLV 13	2.29	-7650	-11037	-7005.43		58096	0.4703	16250	2140			0.19	No, $V_u < V$
SLV 13	4.19	-17651	-10398	2411.36		29390	2.145	14211	8535			0.82	No, $V_u < V$
SLV 2	2.29	-14942	5174	37.91		24879	2.145	13309	7993			1.54	Si
SLV 2	4.19	-8719	5675	-4393.76		18256	1.7057	11985	5724			1.01	Si
SLV 15	2.29	-14546	-9279	-5962.06		26134	1.9879	13560	7548			0.81	No, $V_u < V$
SLV 15	4.19	-21176	-9771	1076.24		35258	2.145	15385	9240			0.95	No, $V_u < V$
SLV 1	2.29	-14942	5174	37.91		24879	2.145	13309	7993			1.54	Si
SLV 1	4.19	-8719	5675	-4393.76		18256	1.7057	11985	5724			1.01	Si
SLV 5	2.29	-4344	-2551	-3644.52		22142	0.7007	12762	2504			0.98	No, $V_u < V$
SLV 5	4.19	-7733	-681	-454.34		12876	2.145	10908	6552			9.62	Si
SLV 9	2.29	-2157	-7415	-5757.52		0	0	8333	0			0	No, $V_u < V$
SLV 9	4.19	-10413	-5503	1587.2		17337	2.145	11801	7088			1.29	Si
SLV 10	2.29	-2157	-7415	-5757.52		0	0	8333	0			0	No, $V_u < V$
SLV 10	4.19	-10413	-5503	1587.2		17337	2.145	11801	7088			1.29	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 6	143750	0.31	6971	-4187	194.12	552.73	2.85	Si
SLV 5	143750	0.31	6971	-4187	194.12	552.73	2.85	Si
SLV 10	143750	0.31	8144	-4891	194.12	639.11	3.29	Si
SLV 9	143750	0.31	8144	-4891	194.12	639.11	3.29	Si
SLV 1	143750	0.31	18291	-10985	194.12	1307.73	6.74	Si
SLV 2	143750	0.31	18291	-10985	194.12	1307.73	6.74	Si
SLV 14	143750	0.31	22198	-13332	194.12	1527.42	7.87	Si
SLV 13	143750	0.31	22198	-13332	194.12	1527.42	7.87	Si
SLV 3	143750	0.31	29165	-17517	194.12	1866.97	9.62	Si
SLV 4	143750	0.31	29165	-17517	194.12	1866.97	9.62	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 3.23 Wa = 0.05 Ta = 0.0808

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	α_{Lim}	Verifica
SLV 14	-14689	-6954	109	0.036	1807.9	0.95	0.55143	8.20395	No
SLV 13	-14689	-6954	109	0.036	1807.9	0.95	0.55143	8.20395	No
SLV 3	-11892	-15627	-106	0.036	1524.2	0.942	0.55336	8.20395	No



Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 4	-11892	-15627	-106	0.036	1524.2	0.942	0.55336	8.20395	No
SLV 16	-18393	-12534	59	0.039	2184.3	0.958	0.58938	8.20395	No
SLV 15	-18393	-12534	59	0.039	2184.3	0.958	0.58938	8.20395	No
SLV 2	-8188	-10047	-56	0.04	1149.8	0.927	0.6263	8.20395	No
SLV 1	-8188	-10047	-56	0.04	1149.8	0.927	0.6263	8.20395	No
SLV 9	-8091	-1526	109	0.035	1140	0.927	0.54493	6.97355	No
SLV 10	-8091	-1526	109	0.035	1140	0.927	0.54493	6.97355	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.992	SLU 81	Si
V_SLU	2.055	SLU 81	Si
PF_SLV	0	SLV 9	No
V_SLV	0	SLV 9	No
PFFP_SLV	2.847	SLV 5	Si
R_SLV	0.067	SLV 13	No

Maschio 57

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.543	-3.359	-24.678	-3.359	L3	L4	2.135	0.28	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLU 56	2.29	-12375	7648.18	20701	9853.09	1.288	Si
SLU 56	4.19	-10189	-10931.53	0	0	0	No, e>l/2
SLU 1	2.29	-8577	5285.31	14348	7543.62	1.427	Si
SLU 1	4.19	-6727	-7452.19	0	0	0	No, e>l/2
SLU 58	2.29	-12264	7597.79	20516	9794.83	1.289	Si
SLU 58	4.19	-10095	-10851.63	0	0	0	No, e>l/2
SLU 51	2.29	-9797	8129.88	16388	8353.94	1.028	Si
SLU 51	4.19	-7874	-9632.13	0	0	0	No, e>l/2
SLU 57	2.29	-11069	8868.74	18516	9130.29	1.029	Si
SLU 57	4.19	-9305	-10844.88	0	0	0	No, e>l/2
SLU 50	2.29	-11102	6909.32	18572	9149.58	1.324	Si
SLU 50	4.19	-8758	-9718.78	0	0	0	No, e>l/2
SLU 53	2.29	-12205	7513.44	20417	9763.34	1.299	Si
SLU 53	4.19	-9969	-10730.39	0	0	0	No, e>l/2
SLU 55	2.29	-9918	9497.3	16592	8431.34	0.888	No, M>Mu
SLU 55	4.19	-8404	-10506.07	0	0	0	No, e>l/2
SLU 52	2.29	-9749	9362.56	16308	8323.31	0.889	No, M>Mu
SLU 52	4.19	-8185	-10304.94	0	0	0	No, e>l/2
SLU 54	2.29	-10899	8734	18232	9030.82	1.034	Si
SLU 54	4.19	-9086	-10643.74	0	0	0	No, e>l/2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma M = 2$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLV 3	2.29	-12191	13407.78	0	0	0	No, e>l/2
SLV 3	4.19	-13306	-17500.51	0	0	0	No, e>l/2
SLV 5	2.29	-8292	14269.79	0	0	0	No, e>l/2
SLV 5	4.19	-11652	-14831.98	0	0	0	No, e>l/2
SLV 15	2.29	-7281	-5512.92	12180	6997.84	1.269	Si
SLV 15	4.19	-282	3488.85	0	0	0	No, e>l/2
SLV 2	2.29	-11185	16862.05	0	0	0	No, e>l/2
SLV 2	4.19	-14646	-19659.47	0	0	0	No, e>l/2
SLV 6	2.29	-8292	14269.79	0	0	0	No, e>l/2
SLV 6	4.19	-11652	-14831.98	0	0	0	No, e>l/2
SLV 9	2.29	-6819	8593.58	0	0	0	No, e>l/2
SLV 9	4.19	-7745	-8535.17	0	0	0	No, e>l/2
SLV 10	2.29	-6819	8593.58	0	0	0	No, e>l/2
SLV 10	4.19	-7745	-8535.17	0	0	0	No, e>l/2
SLV 4	2.29	-12191	13407.78	0	0	0	No, e>l/2
SLV 4	4.19	-13306	-17500.51	0	0	0	No, e>l/2
SLV 1	2.29	-11185	16862.05	0	0	0	No, e>l/2
SLV 1	4.19	-14646	-19659.47	0	0	0	No, e>l/2
SLV 16	2.29	-7281	-5512.92	12180	6997.84	1.269	Si
SLV 16	4.19	-282	3488.85	0	0	0	No, e>l/2

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	V par	M	$\sigma 0$	σN	l'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 1	2.29	-8577	6873	5285.31		22626	1.354	8572	3250			0.47	No, Vu<V
SLU 1	4.19	-6727	6837	-7452.19		0	0	5556	0			0	No, Vu<V
SLU 53	2.29	-12205	9913	7513.44		32153	1.3557	9843	3736			0.38	No, Vu<V
SLU 53	4.19	-9969	9863	-10730.39		0	0	5556	0			0	No, Vu<V
SLU 57	2.29	-11069	10965	8868.74		49487	0.7989	10833	2423			0.22	No, Vu<V
SLU 57	4.19	-9305	10889	-10844.88		0	0	5556	0			0	No, Vu<V
SLU 50	2.29	-11102	8999	6909.32		29690	1.3355	9514	3558			0.4	No, Vu<V
SLU 50	4.19	-8758	8953	-9718.78		0	0	5556	0			0	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 58	2.29	-12264	10059	7597.79		32590	1.344	9901	3726			0.37	No, Vu<V
SLU 58	4.19	-10095	10008	-10851.63		0	0	5556	0			0	No, Vu<V
SLU 52	2.29	-9749	11060	9362.56		108359	0.3213	10833	975			0.09	No, Vu<V
SLU 52	4.19	-8185	10969	-10304.94		0	0	5556	0			0	No, Vu<V
SLU 54	2.29	-10899	10760	8734		48749	0.7985	10833	2422			0.23	No, Vu<V
SLU 54	4.19	-9086	10685	-10643.74		0	0	5556	0			0	No, Vu<V
SLU 51	2.29	-9797	9846	8129.88		49079	0.7129	10833	2162			0.22	No, Vu<V
SLU 51	4.19	-7874	9775	-9632.13		0	0	5556	0			0	No, Vu<V
SLU 55	2.29	-9918	11265	9497.3		107385	0.3299	10833	1001			0.09	No, Vu<V
SLU 55	4.19	-8404	11174	-10506.07		0	0	5556	0			0	No, Vu<V
SLU 56	2.29	-12375	10118	7648.18		32777	1.3484	9926	3747			0.37	No, Vu<V
SLU 56	4.19	-10189	10067	-10931.53		0	0	5556	0			0	No, Vu<V

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 16	2.29	-7281	-7459	-5512.92		27930	0.9311	13919	3629			0.49	No, Vu<V
SLV 16	4.19	-282	-6477	3488.85		0	0	8333	0			0	No, Vu<V
SLV 5	2.29	-8292	18706	14269.79		0	0	8333	0			0	No, Vu<V
SLV 5	4.19	-11652	15277	-14831.98		0	0	8333	0			0	No, Vu<V
SLV 1	2.29	-11185	22386	16862.05		0	0	8333	0			0	No, Vu<V
SLV 1	4.19	-14646	21327	-19659.47		0	0	8333	0			0	No, Vu<V
SLV 3	2.29	-12191	17925	13407.78		0	0	8333	0			0	No, Vu<V
SLV 3	4.19	-13306	18900	-17500.51		0	0	8333	0			0	No, Vu<V
SLV 4	2.29	-12191	17925	13407.78		0	0	8333	0			0	No, Vu<V
SLV 4	4.19	-13306	18900	-17500.51		0	0	8333	0			0	No, Vu<V
SLV 2	2.29	-11185	22386	16862.05		0	0	8333	0			0	No, Vu<V
SLV 2	4.19	-14646	21327	-19659.47		0	0	8333	0			0	No, Vu<V
SLV 9	2.29	-6819	11091	8593.58		0	0	8333	0			0	No, Vu<V
SLV 9	4.19	-7745	7665	-8535.17		0	0	8333	0			0	No, Vu<V
SLV 15	2.29	-7281	-7459	-5512.92		27930	0.9311	13919	3629			0.49	No, Vu<V
SLV 15	4.19	-282	-6477	3488.85		0	0	8333	0			0	No, Vu<V
SLV 10	2.29	-6819	11091	8593.58		0	0	8333	0			0	No, Vu<V
SLV 10	4.19	-7745	7665	-8535.17		0	0	8333	0			0	No, Vu<V
SLV 6	2.29	-8292	18706	14269.79		0	0	8333	0			0	No, Vu<V
SLV 6	4.19	-11652	15277	-14831.98		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 15	143750	0.31	5334	-3189	193.21	426.91	2.21	Si
SLV 16	143750	0.31	5334	-3189	193.21	426.91	2.21	Si
SLV 14	143750	0.31	5959	-3563	193.21	474.43	2.46	Si
SLV 13	143750	0.31	5959	-3563	193.21	474.43	2.46	Si
SLV 12	143750	0.31	10398	-6216	193.21	796.16	4.12	Si
SLV 11	143750	0.31	10398	-6216	193.21	796.16	4.12	Si
SLV 9	143750	0.31	12483	-7462	193.21	938.01	4.85	Si
SLV 10	143750	0.31	12483	-7462	193.21	938.01	4.85	Si
SLV 8	143750	0.31	15364	-9185	193.21	1124.16	5.82	Si
SLV 7	143750	0.31	15364	-9185	193.21	1124.16	5.82	Si

Verifica dei meccanismi locali di colla con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzaria = 3.23 Wa = 0.05 Ta = 0.0808

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 14	-3399	-5133	90	0.035	672	0.896	0.57153	8.20395	No
SLV 13	-3399	-5133	90	0.035	672	0.896	0.57153	8.20395	No
SLV 3	-3202	-18223	-82	0.037	653	0.894	0.59742	8.20395	No
SLV 4	-3202	-18223	-82	0.037	653	0.894	0.59742	8.20395	No
SLV 7	-1339	-12255	-98	0.031	482.1	0.893	0.51026	6.97355	No
SLV 8	-1339	-12255	-98	0.031	482.1	0.893	0.51026	6.97355	No
SLV 9	-5263	-11101	106	0.034	855.2	0.91	0.53991	6.97355	No
SLV 10	-5263	-11101	106	0.034	855.2	0.91	0.53991	6.97355	No
SLV 2	-4476	-19137	-32	0.045	777.3	0.904	0.71996	8.20395	No
SLV 1	-4476	-19137	-32	0.045	777.3	0.904	0.71996	8.20395	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0	SLU 1	No
V_SLU	0	SLU 1	No
PF_SLV	0	SLV 1	No
V_SLV	0	SLV 1	No
PFFP_SLV	2.21	SLV 15	Si
R_SLV	0.07	SLV 13	No

Maschio 58

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.368	-3.359	-21.543	-3.359	L3	L4	2.175	0.28	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2



Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 26	3.39	-10369	-5134.91	17026	8919.41	1.737	Si
SLU 26	4.19	-9539	-3096.12	15664	8379.09	2.706	Si
SLU 10	3.39	-10230	-5098.47	16798	8831.01	1.732	Si
SLU 10	4.19	-9413	-3004.21	15456	8294.18	2.761	Si
SLU 2	3.39	-8313	-4647	13650	7525.56	1.619	Si
SLU 2	4.19	-7496	-2720.4	12309	6920.05	2.544	Si
SLU 47	3.39	-11308	-5547.22	18568	9494.37	1.712	Si
SLU 47	4.19	-10250	-3313.57	16831	8843.77	2.669	Si
SLU 23	3.39	-10101	-5074.89	16586	8747.96	1.724	Si
SLU 23	4.19	-9271	-3000.15	15223	8197.87	2.732	Si
SLU 44	3.39	-11040	-5487.19	18128	9333.96	1.701	Si
SLU 44	4.19	-9982	-3217.6	16390	8670.92	2.695	Si
SLU 52	3.39	-12957	-5938.67	21275	10410.25	1.753	Si
SLU 52	4.19	-11899	-3501.42	19538	9836.13	2.809	Si
SLU 13	3.39	-10499	-5158.49	17239	9000.94	1.745	Si
SLU 13	4.19	-9681	-3100.18	15897	8473.73	2.733	Si
SLU 5	3.39	-8582	-4707.02	14091	7718.05	1.64	Si
SLU 5	4.19	-7764	-2816.37	12749	7122.16	2.529	Si
SLU 65	3.39	-12827	-5915.08	21063	10342.67	1.749	Si
SLU 65	4.19	-11757	-3497.35	19305	9755.3	2.789	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 6	3.39	-7324	-9336.88	0	0	0	No, $e \geq l/2$
SLV 6	4.19	-9853	-10717.47	0	0	0	No, $e \geq l/2$
SLV 13	3.39	-14389	-8047.16	23628	12622.41	1.569	Si
SLV 13	4.19	-14520	4226.77	23842	12709.27	3.007	Si
SLV 1	3.39	-7675	-2969.27	12603	7486.11	2.521	Si
SLV 1	4.19	-7904	-12174.44	0	0	0	No, $e \geq l/2$
SLV 3	3.39	-9991	965.32	16405	9406.04	9.744	Si
SLV 3	4.19	-8218	-8502.9	13495	7950.32	0.935	No, $M > Mu$
SLV 5	3.39	-7324	-9336.88	0	0	0	No, $e \geq l/2$
SLV 5	4.19	-9853	-10717.47	0	0	0	No, $e \geq l/2$
SLV 4	3.39	-9991	965.32	16405	9406.04	9.744	Si
SLV 4	4.19	-8218	-8502.9	13495	7950.32	0.935	No, $M > Mu$
SLV 10	3.39	-9339	-10860.24	0	0	0	No, $e \geq l/2$
SLV 10	4.19	-11838	-5797.11	19438	10825.55	1.867	Si
SLV 14	3.39	-14389	-8047.16	23628	12622.41	1.569	Si
SLV 14	4.19	-14520	4226.77	23842	12709.27	3.007	Si
SLV 2	3.39	-7675	-2969.27	12603	7486.11	2.521	Si
SLV 2	4.19	-7904	-12174.44	0	0	0	No, $e \geq l/2$
SLV 9	3.39	-9339	-10860.24	0	0	0	No, $e \geq l/2$
SLV 9	4.19	-11838	-5797.11	19438	10825.55	1.867	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 5	3.39	-8582	-2354	-4707.02		18954	1.617	8083	3660			1.55	Si
SLU 5	4.19	-7764	-2354	-2816.37		12753	2.1743	7256	4417			1.88	Si
SLU 52	3.39	-12957	-3034	-5938.67		24517	1.8875	8824	4664			1.54	Si
SLU 52	4.19	-11899	-3034	-3501.42		19538	2.175	8161	4970			1.64	Si
SLU 44	3.39	-11040	-2824	-5487.19		22258	1.7714	8523	4227			1.5	Si
SLU 44	4.19	-9982	-2824	-3217.6		16390	2.175	7741	4714			1.67	Si
SLU 65	3.39	-12827	-3010	-5915.08		24380	1.8791	8806	4633			1.54	Si
SLU 65	4.19	-11757	-3010	-3497.35		19305	2.175	8130	4951			1.64	Si
SLU 2	3.39	-8313	-2399	-4647		18726	1.5855	8052	3575			1.49	Si
SLU 2	4.19	-7496	-2399	-2720.4		12316	2.1737	7198	4381			1.83	Si
SLU 10	3.39	-10230	-2608	-5098.47		20673	1.7674	8312	4113			1.58	Si
SLU 10	4.19	-9413	-2608	-3004.21		15456	2.175	7616	4638			1.78	Si
SLU 23	3.39	-10101	-2585	-5074.89		20552	1.7552	8296	4077			1.58	Si
SLU 23	4.19	-9271	-2585	-3000.15		15223	2.175	7585	4619			1.79	Si
SLU 73	3.39	-14744	-3220	-6366.55		26769	1.9671	9125	5026			1.56	Si
SLU 73	4.19	-13674	-3220	-3781.16		22452	2.175	8549	5206			1.62	Si
SLU 47	3.39	-11308	-2779	-5547.22		22551	1.7908	8562	4294			1.54	Si
SLU 47	4.19	-10250	-2779	-3313.57		16831	2.175	7800	4750			1.71	Si
SLU 55	3.39	-13225	-2989	-5998.69		24836	1.9017	8867	4722			1.58	Si
SLU 55	4.19	-12167	-2989	-3597.38		19979	2.175	8219	5006			1.67	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 2	3.39	-7675	10923	-2969.27		13041	2.1019	10942	6440			0.59	No, $V_u < V$
SLV 2	4.19	-7904	11100	-12174.44		0	0	8333	0			0	No, $V_u < V$
SLV 13	3.39	-14389	-16055	-8047.16		32428	1.5848	14819	6576			0.41	No, $V_u < V$
SLV 13	4.19	-14520	-15899	4226.77		23842	2.175	13102	7979			0.5	No, $V_u < V$
SLV 10	3.39	-9339	-8530	-10860.24		0	0	8333	0			0	No, $V_u < V$
SLV 10	4.19	-11838	-7978	-5797.11		23575	1.7934	13048	6552			0.82	No, $V_u < V$
SLV 9	3.39	-9339	-8530	-10860.24		0	0	8333	0			0	No, $V_u < V$
SLV 9	4.19	-11838	-7978	-5797.11		23575	1.7934	13048	6552			0.82	No, $V_u < V$
SLV 5	3.39	-7324	-437	-9336.88		0	0	8333	0			0	No, $V_u < V$
SLV 5	4.19	-9853	122	-10717.47		0	0	8333	0			0	No, $V_u < V$
SLV 1	3.39	-7675	10923	-2969.27		13041	2.1019	10942	6440			0.59	No, $V_u < V$
SLV 1	4.19	-7904	11100	-12174.44		0	0	8333	0			0	No, $V_u < V$
SLV 3	3.39	-9991	12567	965.32		16405	2.175	11614	7073			0.56	No, $V_u < V$
SLV 3	4.19	-8218	12410	-8502.9		185059	0.1586	16250	722			0.06	No, $V_u < V$
SLV 4	3.39	-9991	12567	965.32		16405	2.175	11614	7073			0.56	No, $V_u < V$
SLV 4	4.19	-8218	12410	-8502.9		185059	0.1586	16250	722			0.06	No, $V_u < V$
SLV 14	3.39	-14389	-16055	-8047.16		32428	1.5848	14819	6576			0.41	No, $V_u < V$
SLV 14	4.19	-14520	-15899	4226.77		23842	2.175	13102	7979			0.5	No, $V_u < V$
SLV 6	3.39	-7324	-437	-9336.88		0	0	8333	0			0	No, $V_u < V$



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scor.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 6	4.19	-9853	122	-10717.47		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 5	143750	0.31	5372	-3271	196.83	437.87	2.22	Si
SLV 6	143750	0.31	5372	-3271	196.83	437.87	2.22	Si
SLV 10	143750	0.31	6390	-3891	196.83	516.31	2.62	Si
SLV 9	143750	0.31	6390	-3891	196.83	516.31	2.62	Si
SLV 2	143750	0.31	11740	-7149	196.83	904.75	4.6	Si
SLV 1	143750	0.31	11740	-7149	196.83	904.75	4.6	Si
SLV 13	143750	0.31	15133	-9216	196.83	1130.42	5.74	Si
SLV 14	143750	0.31	15133	-9216	196.83	1130.42	5.74	Si
SLV 4	143750	0.31	18215	-11093	196.83	1321.53	6.71	Si
SLV 3	143750	0.31	18215	-11093	196.83	1321.53	6.71	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 3.23 Wa = 0.05 Ta = 0.0808

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 14	-13020	-4440	21	0.042	1643	0.945	0.64223	8.20395	No
SLV 13	-13020	-4440	21	0.042	1643	0.945	0.64223	8.20395	No
SLV 1	-11093	-7112	17	0.043	1447.7	0.939	0.65993	8.20395	No
SLV 2	-11093	-7112	17	0.043	1447.7	0.939	0.65993	8.20395	No
SLV 15	-9217	-7542	-24	0.043	1258.1	0.931	0.66654	8.20395	No
SLV 16	-9217	-7542	-24	0.043	1258.1	0.931	0.66654	8.20395	No
SLV 3	-7289	-10214	-28	0.043	1064	0.922	0.68163	8.20395	No
SLV 4	-7289	-10214	-28	0.043	1064	0.922	0.68163	8.20395	No
SLV 10	-16782	-1756	72	0.038	2025	0.954	0.58335	6.97355	No
SLV 9	-16782	-1756	72	0.038	2025	0.954	0.58335	6.97355	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.619	SLU 2	Si
V_SLU	1.49	SLU 2	Si
PF_SLV	0	SLV 1	No
V_SLV	0	SLV 1	No
PFFP_SLV	2.225	SLV 5	Si
R_SLV	0.078	SLV 13	No

Maschio 59

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.313	-3.359	-18.868	-3.359	L3	L4	0.555	0.28	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 77	3.39	-10680	-246.08	68729	463.16	1.882	Si
SLU 77	4.19	-11708	373.43	75343	243.91	0.653	No, M>Mu
SLU 83	3.39	-10890	-253.81	70077	422.24	1.664	Si
SLU 83	4.19	-11962	381.18	76978	182.57	0.479	No, M>Mu
SLU 78	3.39	-10949	-308.35	70456	410.38	1.331	Si
SLU 78	4.19	-11964	439.71	76987	182.23	0.414	No, M>Mu
SLU 73	3.39	-10726	-350.29	69022	454.41	1.297	Si
SLU 73	4.19	-11703	479.06	75307	245.23	0.512	No, M>Mu
SLU 84	3.39	-11158	-316.09	71803	367	1.161	Si
SLU 84	4.19	-12218	447.46	78622	118.04	0.264	No, M>Mu
SLU 81	3.39	-10724	-255.69	69011	454.74	1.778	Si
SLU 81	4.19	-11787	381.73	75848	225.27	0.59	No, M>Mu
SLU 75	3.39	-10783	-310.23	69391	443.3	1.429	Si
SLU 75	4.19	-11788	440.25	75857	224.94	0.511	No, M>Mu
SLU 82	3.39	-10993	-317.96	70738	401.45	1.263	Si
SLU 82	4.19	-12042	448.01	77492	162.71	0.363	No, M>Mu
SLU 76	3.39	-10892	-348.41	70087	421.9	1.211	Si
SLU 76	4.19	-11878	478.51	76437	203.17	0.425	No, M>Mu
SLU 80	3.39	-10878	-305.02	70001	424.58	1.392	Si
SLU 80	4.19	-11884	433.78	76472	201.88	0.465	No, M>Mu

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 15	3.39	-3952	-1193.75	0	0	0	No, e>l/2
SLV 15	4.19	-5794	1660.24	0	0	0	No, e>l/2
SLV 10	3.39	-9822	-621.04	63207	1315.71	2.119	Si
SLV 10	4.19	-9927	1147.31	63883	1314.54	1.146	Si
SLV 9	3.39	-9822	-621.04	63207	1315.71	2.119	Si
SLV 9	4.19	-9927	1147.31	63883	1314.54	1.146	Si
SLV 3	3.39	-8448	921.72	54361	1301.29	1.412	Si
SLV 3	4.19	-8444	-1393.85	54339	1301.19	0.934	No, M>Mu



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 4	3.39	-8448	921.72	54361	1301.29	1.412	Si
SLV 4	4.19	-8444	-1393.85	54339	1301.19	0.934	No, M>Mu
SLV 13	3.39	-5935	-1271.15	38193	1132.2	0.891	No, M>Mu
SLV 13	4.19	-7274	1916.85	46806	1245.25	0.65	No, M>Mu
SLV 1	3.39	-10431	844.32	67123	1304.46	1.545	Si
SLV 1	4.19	-9924	-1137.23	63860	1314.59	1.156	Si
SLV 2	3.39	-10431	844.32	67123	1304.46	1.545	Si
SLV 2	4.19	-9924	-1137.23	63860	1314.59	1.156	Si
SLV 14	3.39	-5935	-1271.15	38193	1132.2	0.891	No, M>Mu
SLV 14	4.19	-7274	1916.85	46806	1245.25	0.65	No, M>Mu
SLV 16	3.39	-3952	-1193.75	0	0	0	No, e>l/2
SLV 16	4.19	-5794	1660.24	0	0	0	No, e>l/2

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 75	3.39	-10783	-1171	-310.23		69391	0.555	10833	1684			1.44	Si
SLU 75	4.19	-11788	-1168	440.25		75857	0.555	10833	1684			1.44	Si
SLU 55	3.39	-9924	-1175	-327.76		63862	0.555	10833	1684			1.43	Si
SLU 55	4.19	-10785	-1170	445.75		69401	0.555	10833	1684			1.44	Si
SLU 78	3.39	-10949	-1170	-308.35		70456	0.555	10833	1684			1.44	Si
SLU 78	4.19	-11964	-1167	439.71		76987	0.555	10833	1684			1.44	Si
SLU 84	3.39	-11158	-1197	-316.09		71803	0.555	10833	1684			1.41	Si
SLU 84	4.19	-12218	-1194	447.46		78622	0.555	10833	1684			1.41	Si
SLU 68	3.39	-9852	-1172	-326.98		63397	0.555	10833	1684			1.44	Si
SLU 68	4.19	-10689	-1168	447.85		68782	0.555	10833	1684			1.44	Si
SLU 73	3.39	-10726	-1265	-350.29		69022	0.555	10833	1684			1.33	Si
SLU 73	4.19	-11703	-1261	479.06		75307	0.555	10833	1684			1.34	Si
SLU 65	3.39	-9686	-1173	-328.86		62332	0.555	10833	1684			1.43	Si
SLU 65	4.19	-10513	-1169	448.39		67652	0.555	10833	1684			1.44	Si
SLU 82	3.39	-10993	-1198	-317.96		70738	0.555	10833	1684			1.4	Si
SLU 82	4.19	-12042	-1195	448.01		77492	0.555	10833	1684			1.41	Si
SLU 76	3.39	-10892	-1264	-348.41		70087	0.555	10833	1684			1.33	Si
SLU 76	4.19	-11878	-1260	478.51		76437	0.555	10833	1684			1.34	Si
SLU 52	3.39	-9759	-1176	-329.64		62797	0.555	10833	1684			1.43	Si
SLU 52	4.19	-10609	-1171	446.3		68271	0.555	10833	1684			1.44	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 2	3.39	-10431	2413	844.32		67123	0.555	16250	2525			1.05	Si
SLV 2	4.19	-9924	2605	-1137.23		72522	0.4887	16250	2224			0.85	No, Vu<V
SLV 3	3.39	-8448	2961	921.72		59723	0.5052	16250	2299			0.78	No, Vu<V
SLV 3	4.19	-8444	2777	-1393.85		89408	0.3373	16250	1535			0.55	No, Vu<V
SLV 13	3.39	-5935	-4370	-1271.15		111570	0.19	16250	864			0.2	No, Vu<V
SLV 13	4.19	-7274	-4186	1916.85		619915	0.0419	16250	191			0.05	No, Vu<V
SLV 9	3.39	-9822	-2635	-621.04		63207	0.555	16250	2525			0.96	No, Vu<V
SLV 9	4.19	-9927	-2009	1147.31		72984	0.4858	16250	2210			1.1	Si
SLV 14	3.39	-5935	-4370	-1271.15		111570	0.19	16250	864			0.2	No, Vu<V
SLV 14	4.19	-7274	-4186	1916.85		619915	0.0419	16250	191			0.05	No, Vu<V
SLV 4	3.39	-8448	2961	921.72		59723	0.5052	16250	2299			0.78	No, Vu<V
SLV 4	4.19	-8444	2777	-1393.85		89408	0.3373	16250	1535			0.55	No, Vu<V
SLV 15	3.39	-3952	-3823	-1193.75		0	0	8333	0			0	No, Vu<V
SLV 15	4.19	-5794	-4014	1660.24		0	0	8333	0			0	No, Vu<V
SLV 16	3.39	-3952	-3823	-1193.75		0	0	8333	0			0	No, Vu<V
SLV 16	4.19	-5794	-4014	1660.24		0	0	8333	0			0	No, Vu<V
SLV 1	3.39	-10431	2413	844.32		67123	0.555	16250	2525			1.05	Si
SLV 1	4.19	-9924	2605	-1137.23		72522	0.4887	16250	2224			0.85	No, Vu<V
SLV 10	3.39	-9822	-2635	-621.04		63207	0.555	16250	2525			0.96	No, Vu<V
SLV 10	4.19	-9927	-2009	1147.31		72984	0.4858	16250	2210			1.1	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 11	143750	0.31	14928	-2320	50.23	285.1	5.68	Si
SLV 12	143750	0.31	14928	-2320	50.23	285.1	5.68	Si
SLV 7	143750	0.31	16759	-2604	50.23	314.6	6.26	Si
SLV 8	143750	0.31	16759	-2604	50.23	314.6	6.26	Si
SLV 15	143750	0.31	28005	-4352	50.23	469.63	9.35	Si
SLV 16	143750	0.31	28005	-4352	50.23	469.63	9.35	Si
SLV 4	143750	0.31	34106	-5300	50.23	534.89	10.65	Si
SLV 3	143750	0.31	34106	-5300	50.23	534.89	10.65	Si
SLV 13	143750	0.31	41044	-6378	50.23	593	11.81	Si
SLV 14	143750	0.31	41044	-6378	50.23	593	11.81	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 3.23 Wa = 0.05 Ta = 0.0808

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 14	-3311	-7619	-11	0.04	418.1	0.945	0.62038	8.20395	No
SLV 13	-3311	-7619	-11	0.04	418.1	0.945	0.62038	8.20395	No
SLV 1	-4134	-5339	4	0.041	501.6	0.953	0.63181	8.20395	No
SLV 2	-4134	-5339	4	0.041	501.6	0.953	0.63181	8.20395	No
SLV 15	-2672	-5346	-10	0.041	353.4	0.937	0.6354	8.20395	No
SLV 16	-2672	-5346	-10	0.041	353.4	0.937	0.6354	8.20395	No
SLV 4	-3495	-3066	4	0.042	436.8	0.947	0.6423	8.20395	No
SLV 3	-3495	-3066	4	0.042	436.8	0.947	0.6423	8.20395	No
SLV 9	-4344	-9472	-6	0.041	522.9	0.955	0.62088	6.97355	No
SLV 10	-4344	-9472	-6	0.041	522.9	0.955	0.62088	6.97355	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
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Sismicad 12.19 - Licenza assegnata a Sidel ingegneria Srl - Via Isonzo, 13 - Villanova di Castenaso (BO)



Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0.264	SLU 84	No
V_SLU	1.331	SLU 73	Si
PF_SLV	0	SLV 15	No
V_SLV	0	SLV 15	No
PFFP_SLV	5.676	SLV 11	Si
R_SLV	0.076	SLV 13	No

Maschio 60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.618	1.046	-19.618	5.811	L3	L4	4.765	0.14	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{med}	τ ₀	f _{v0}	μ	φ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLU 74	1.39	-49655	16473.69	74432	10204.66	0.619	No, M>Mu
SLU 74	5.07	-33732	-1417.61	50563	30481.88	21.502	Si
SLU 77	1.39	-50277	16586.79	75364	8962.37	0.54	No, M>Mu
SLU 77	5.07	-34345	-1566.01	51482	30112.86	19.229	Si
SLU 80	1.39	-49548	16630.7	74271	10416.11	0.626	No, M>Mu
SLU 80	5.07	-33835	-1414.54	50718	30421.99	21.507	Si
SLU 75	1.39	-49377	16647.8	74015	10750.13	0.646	No, M>Mu
SLU 75	5.07	-33599	-1312.68	50363	30557.68	23.279	Si
SLU 79	1.39	-49826	16456.6	74688	9866.48	0.6	No, M>Mu
SLU 79	5.07	-33968	-1519.47	50917	30343.43	19.97	Si
SLU 83	1.39	-51326	16814.78	76937	6788.03	0.404	No, M>Mu
SLU 83	5.07	-34814	-1576.63	52186	29807.65	18.906	Si
SLU 84	1.39	-51048	16988.88	76519	7374.29	0.434	No, M>Mu
SLU 84	5.07	-34681	-1471.7	51986	29896.09	20.314	Si
SLU 78	1.39	-49998	16760.89	74946	9523.01	0.568	No, M>Mu
SLU 78	5.07	-34211	-1461.08	51282	30195.81	20.667	Si
SLU 82	1.39	-50426	16875.79	75588	8658.6	0.513	No, M>Mu
SLU 82	5.07	-34068	-1323.3	51068	30283.21	22.885	Si
SLU 81	1.39	-50705	16701.68	76005	8087.52	0.484	No, M>Mu
SLU 81	5.07	-34201	-1428.23	51267	30201.93	21.146	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLV 12	1.39	-40688	16083.01	60990	48553.1	3.019	Si
SLV 12	5.07	-26553	768.41	39803	42656.56	55.513	Si
SLV 16	1.39	-30575	15488.26	45831	45522.8	2.939	Si
SLV 16	5.07	-21145	5590.87	31696	37311.27	6.674	Si
SLV 14	1.39	-25444	13346.43	38141	41699.76	3.124	Si
SLV 14	5.07	-18338	5907.95	27488	33862.5	5.732	Si
SLV 7	1.39	-44226	14450.96	66294	48201.43	3.336	Si
SLV 7	5.07	-28382	-3048.06	42543	44076.87	14.461	Si
SLV 8	1.39	-44226	14450.96	66294	48201.43	3.336	Si
SLV 8	5.07	-28382	-3048.06	42543	44076.87	14.461	Si
SLV 10	1.39	-23587	8943.57	35357	39936.39	4.465	Si
SLV 10	5.07	-17196	1825.33	25776	32327.43	17.71	Si
SLV 15	1.39	-30575	15488.26	45831	45522.8	2.939	Si
SLV 15	5.07	-21145	5590.87	31696	37311.27	6.674	Si
SLV 11	1.39	-40688	16083.01	60990	48553.1	3.019	Si
SLV 11	5.07	-26553	768.41	39803	42656.56	55.513	Si
SLV 9	1.39	-23587	8943.57	35357	39936.39	4.465	Si
SLV 9	5.07	-17196	1825.33	25776	32327.43	17.71	Si
SLV 13	1.39	-25444	13346.43	38141	41699.76	3.124	Si
SLV 13	5.07	-18338	5907.95	27488	33862.5	5.732	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 77	1.39	-50277	771	16586.79		75364	4.7652	10833	7227			9.37	Si
SLU 77	5.07	-34345	1300	-1566.01		51482	4.7652	10833	7227			5.56	Si
SLU 79	1.39	-49826	758	16456.6		74688	4.7652	10833	7227			9.53	Si
SLU 79	5.07	-33968	1283	-1519.47		50917	4.7652	10833	7227			5.63	Si
SLU 78	1.39	-49998	804	16760.89		74946	4.7652	10833	7227			8.99	Si
SLU 78	5.07	-34211	1325	-1461.08		51282	4.7652	10833	7227			5.46	Si
SLU 80	1.39	-49548	791	16630.7		74271	4.7652	10833	7227			9.14	Si
SLU 80	5.07	-33835	1308	-1414.54		50718	4.7652	10833	7227			5.53	Si
SLU 82	1.39	-50426	829	16875.79		75588	4.7652	10833	7227			8.72	Si
SLU 82	5.07	-34068	1341	-1323.3		51068	4.7652	10833	7227			5.39	Si
SLU 84	1.39	-51048	840	16988.88		76519	4.7652	10833	7227			8.6	Si
SLU 84	5.07	-34681	1375	-1471.7		51986	4.7652	10833	7227			5.26	Si
SLU 81	1.39	-50705	797	16701.68		76005	4.7652	10833	7227			9.07	Si
SLU 81	5.07	-34201	1316	-1428.23		51267	4.7652	10833	7227			5.49	Si
SLU 75	1.39	-49377	793	16647.8		74015	4.7652	10833	7227			9.12	Si
SLU 75	5.07	-33599	1291	-1312.68		50363	4.7652	10833	7227			5.6	Si
SLU 83	1.39	-51326	808	16814.78		76937	4.7652	10833	7227			8.95	Si
SLU 83	5.07	-34814	1350	-1576.63		52186	4.7652	10833	7227			5.35	Si
SLU 76	1.39	-48741	802	16633.68		73061	4.7652	10833	7227			9.02	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 76	5.07	-33133	1290	-1196.18		49666	4.7652	10833	7227			5.6	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 12	1.39	-40688	13106	16083.01		60990	4.7652	16250	10841			0.83	No, Vu<V
SLV 12	5.07	-26553	12139	768.41		39803	4.7652	16250	10841			0.89	No, Vu<V
SLV 11	1.39	-40688	13106	16083.01		60990	4.7652	16250	10841			0.83	No, Vu<V
SLV 11	5.07	-26553	12139	768.41		39803	4.7652	16250	10841			0.89	No, Vu<V
SLV 6	1.39	-27125	-12161	7311.53		40660	4.7652	16250	10841			0.89	No, Vu<V
SLV 6	5.07	-19024	-10584	-1991.14		28517	4.7652	14037	9364			0.88	No, Vu<V
SLV 10	1.39	-23587	-13866	8943.57		35357	4.7652	15405	10277			0.74	No, Vu<V
SLV 10	5.07	-17196	-12960	1825.33		25776	4.7652	13489	8999			0.69	No, Vu<V
SLV 9	1.39	-23587	-13866	8943.57		35357	4.7652	15405	10277			0.74	No, Vu<V
SLV 9	5.07	-17196	-12960	1825.33		25776	4.7652	13489	8999			0.69	No, Vu<V
SLV 8	1.39	-44226	14812	14450.96		66294	4.7652	16250	10841			0.73	No, Vu<V
SLV 8	5.07	-28382	14514	-3048.06		42543	4.7652	16250	10841			0.75	No, Vu<V
SLV 3	1.39	-42369	7361	10048.1		63510	4.7652	16250	10841			1.47	Si
SLV 3	5.07	-27239	8501	-7130.69		40831	4.7652	16250	10841			1.28	Si
SLV 5	1.39	-27125	-12161	7311.53		40660	4.7652	16250	10841			0.89	No, Vu<V
SLV 5	5.07	-19024	-10584	-1991.14		28517	4.7652	14037	9364			0.88	No, Vu<V
SLV 7	1.39	-44226	14812	14450.96		66294	4.7652	16250	10841			0.73	No, Vu<V
SLV 7	5.07	-28382	14514	-3048.06		42543	4.7652	16250	10841			0.75	No, Vu<V
SLV 4	1.39	-42369	7361	10048.1		63510	4.7652	16250	10841			1.47	Si
SLV 4	5.07	-27239	8501	-7130.69		40831	4.7652	16250	10841			1.28	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	f _d	S _a	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 10	143750	0.31	30804	-20550	230.66	1075.85	4.66	Si
SLV 9	143750	0.31	30804	-20550	230.66	1075.85	4.66	Si
SLV 6	143750	0.31	33436	-22306	230.66	1134.15	4.92	Si
SLV 5	143750	0.31	33436	-22306	230.66	1134.15	4.92	Si
SLV 14	143750	0.31	34605	-23086	230.66	1158.32	5.02	Si
SLV 13	143750	0.31	34605	-23086	230.66	1158.32	5.02	Si
SLV 16	143750	0.31	40494	-27015	230.66	1264.32	5.48	Si
SLV 15	143750	0.31	40494	-27015	230.66	1264.32	5.48	Si
SLV 1	143750	0.31	43379	-28939	230.66	1306.55	5.66	Si
SLV 2	143750	0.31	43379	-28939	230.66	1306.55	5.66	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 3.23 Wa = 0.03 Ta = 0.1615

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 7	-28382	-44226	41	0.019	3235.2	0.968	0.28598	14.1455	No
SLV 8	-28382	-44226	41	0.019	3235.2	0.968	0.28598	14.1455	No
SLV 3	-27239	-42369	35	0.019	3118.9	0.966	0.2896	14.15828	No
SLV 4	-27239	-42369	35	0.019	3118.9	0.966	0.2896	14.15828	No
SLV 9	-17196	-23587	-43	0.019	2097.5	0.952	0.28987	14.1455	No
SLV 10	-17196	-23587	-43	0.019	2097.5	0.952	0.28987	14.1455	No
SLV 13	-18338	-25444	-36	0.019	2213.6	0.954	0.29397	14.15828	No
SLV 14	-18338	-25444	-36	0.019	2213.6	0.954	0.29397	14.15828	No
SLV 12	-26553	-40688	26	0.02	3049.1	0.966	0.29449	14.1455	No
SLV 11	-26553	-40688	26	0.02	3049.1	0.966	0.29449	14.1455	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0.404	SLU 83	No
V_SLU	5.257	SLU 84	Si
PF_SLV	2.939	SLV 15	Si
V_SLV	0.694	SLV 9	No
PFFP_SLV	4.664	SLV 9	Si
R_SLV	0.02	SLV 7	No

Maschio 61

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.618	5.951	-19.618	6.661	L3	L4	0.71	0.28	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ_0	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 56	1.39	-20606	452.83	103650	0	0	No, Rottura per schiacciamento
SLU 56	5.07	-6544	168.28	32916	1384.32	8.226	Si
SLU 53	1.39	-20374	452.81	102483	0	0	No, Rottura per schiacciamento
SLU 53	5.07	-6484	157.05	32617	1380.2	8.788	Si
SLU 55	1.39	-20205	453.23	101635	0	0	No, Rottura per schiacciamento
SLU 55	5.07	-6422	155.7	32303	1375.69	8.835	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 42	1.39	-19446	412.18	97817	0	0	No, Rottura per schiacciamento
SLU 42	5.07	-6092	187.1	30643	1349.08	7.21	Si
SLU 61	1.39	-20832	464.81	104788	0	0	No, Rottura per schiacciamento
SLU 61	5.07	-6605	160.55	33223	1388.4	8.648	Si
SLU 59	1.39	-20426	451.13	102747	0	0	No, Rottura per schiacciamento
SLU 59	5.07	-6475	167.18	32568	1379.51	8.252	Si
SLU 57	1.39	-20622	456.02	103732	0	0	No, Rottura per schiacciamento
SLU 57	5.07	-6554	167.9	32965	1384.99	8.249	Si
SLU 54	1.39	-20390	456	102566	0	0	No, Rottura per schiacciamento
SLU 54	5.07	-6494	156.67	32667	1380.89	8.814	Si
SLU 58	1.39	-20410	447.94	102665	0	0	No, Rottura per schiacciamento
SLU 58	5.07	-6465	167.56	32519	1378.81	8.229	Si
SLU 60	1.39	-20816	461.62	104706	0	0	No, Rottura per schiacciamento
SLU 60	5.07	-6595	160.93	33174	1387.75	8.623	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 7	1.39	-23752	514.89	119476	187.11	0.363	No, $M > M_u$
SLV 7	5.07	-7381	99.29	37130	1824.12	18.372	Si
SLV 11	1.39	-22959	736.86	115488	446.9	0.606	No, $M > M_u$
SLV 11	5.07	-9192	-212.49	46235	2028.3	9.545	Si
SLV 4	1.39	-19147	61.33	96314	1439.32	23.47	Si
SLV 4	5.07	-2920	580.55	14689	912.03	1.571	Si
SLV 8	1.39	-23752	514.89	119476	187.11	0.363	No, $M > M_u$
SLV 8	5.07	-7381	99.29	37130	1824.12	18.372	Si
SLV 6	1.39	-7953	-41.07	40006	1898.96	46.232	Si
SLV 6	5.07	-669	435.07	0	0	0	No, $e > l/2$
SLV 3	1.39	-19147	61.33	96314	1439.32	23.47	Si
SLV 3	5.07	-2920	580.55	14689	912.03	1.571	Si
SLV 12	1.39	-22959	736.86	115488	446.9	0.606	No, $M > M_u$
SLV 12	5.07	-9192	-212.49	46235	2028.3	9.545	Si
SLV 2	1.39	-14408	-105.46	72473	2081.02	19.732	Si
SLV 2	5.07	-906	681.29	0	0	0	No, $e > l/2$
SLV 1	1.39	-14408	-105.46	72473	2081.02	19.732	Si
SLV 1	5.07	-906	681.29	0	0	0	No, $e > l/2$
SLV 5	1.39	-7953	-41.07	40006	1898.96	46.232	Si
SLV 5	5.07	-669	435.07	0	0	0	No, $e > l/2$

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 83	1.39	-23039	-244	495.92		115890	0.71	10833	2154			8.83	Si
SLU 83	5.07	-7254	-1415	204.04		36490	0.71	10421	2072			1.46	Si
SLU 77	1.39	-22597	-249	487.11		113668	0.71	10833	2154			8.66	Si
SLU 77	5.07	-7144	-1396	200.16		35934	0.71	10347	2057			1.47	Si
SLU 37	1.39	-18792	-250	395.29		94527	0.71	10833	2154			8.61	Si
SLU 37	5.07	-5893	-1241	182.89		29640	0.71	9508	1890			1.52	Si
SLU 78	1.39	-22614	-247	490.3		113750	0.71	10833	2154			8.71	Si
SLU 78	5.07	-7153	-1392	199.78		35983	0.71	10353	2058			1.48	Si
SLU 42	1.39	-19446	-243	412.18		97817	0.71	10833	2154			8.86	Si
SLU 42	5.07	-6092	-1266	187.1		30643	0.71	9641	1917			1.51	Si
SLU 79	1.39	-22401	-250	482.22		112682	0.71	10833	2154			8.62	Si
SLU 79	5.07	-7065	-1387	199.45		35537	0.71	10294	2046			1.48	Si
SLU 35	1.39	-18988	-249	400.18		95512	0.71	10833	2154			8.65	Si
SLU 35	5.07	-5971	-1249	183.6		30037	0.71	9561	1901			1.52	Si
SLU 84	1.39	-23055	-243	499.11		115973	0.71	10833	2154			8.88	Si
SLU 84	5.07	-7264	-1412	203.66		36540	0.71	10428	2073			1.47	Si
SLU 41	1.39	-19430	-244	408.99		97735	0.71	10833	2154			8.81	Si
SLU 41	5.07	-6082	-1269	187.48		30594	0.71	9635	1915			1.51	Si
SLU 80	1.39	-22418	-248	485.41		112765	0.71	10833	2154			8.67	Si
SLU 80	5.07	-7075	-1384	199.07		35586	0.71	10300	2048			1.48	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 3	1.39	-19147	-1915	61.33		96314	0.71	16250	3231			1.69	Si
SLV 3	5.07	-2920	-3340	580.55		22257	0.4686	12785	1677			0.5	No, $V_u < V$
SLV 9	1.39	-7160	-783	180.9		36017	0.71	15537	3089			3.95	Si
SLV 9	5.07	-2479	-1517	123.3		12471	0.71	10828	2153			1.42	Si
SLV 2	1.39	-14408	-2728	-105.46		72473	0.71	16250	3231			1.18	Si
SLV 2	5.07	-906	-4295	681.29		0	0	8333	0			0	No, $V_u < V$
SLV 6	1.39	-7953	-2118	-41.07		40006	0.71	16250	3231			1.53	Si
SLV 6	5.07	-669	-3314	435.07		0	0	8333	0			0	No, $V_u < V$
SLV 4	1.39	-19147	-1915	61.33		96314	0.71	16250	3231			1.69	Si
SLV 4	5.07	-2920	-3340	580.55		22257	0.4686	12785	1677			0.5	No, $V_u < V$
SLV 15	1.39	-16504	2535	801.25		83020	0.71	16250	3231			1.27	Si
SLV 15	5.07	-8954	2649	-458.7		45041	0.71	16250	3231			1.22	Si
SLV 16	1.39	-16504	2535	801.25		83020	0.71	16250	3231			1.27	Si
SLV 16	5.07	-8954	2649	-458.7		45041	0.71	16250	3231			1.22	Si
SLV 1	1.39	-14408	-2728	-105.46		72473	0.71	16250	3231			1.18	Si
SLV 1	5.07	-906	-4295	681.29		0	0	8333	0			0	No, $V_u < V$
SLV 10	1.39	-7160	-783	180.9		36017	0.71	15537	3089			3.95	Si
SLV 10	5.07	-2479	-1517	123.3		12471	0.71	10828	2153			1.42	Si
SLV 5	1.39	-7953	-2118	-41.07		40006	0.71	16250	3231			1.53	Si
SLV 5	5.07	-669	-3314	435.07		0	0	8333	0			0	No, $V_u < V$



Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 9	143750	0.31	16052	-3191	65.75	388.06	5.9	Si
SLV 10	143750	0.31	16052	-3191	65.75	388.06	5.9	Si
SLV 6	143750	0.31	16891	-3358	65.75	405.13	6.16	Si
SLV 5	143750	0.31	16891	-3358	65.75	405.13	6.16	Si
SLV 14	143750	0.31	32681	-6497	65.75	666.3	10.13	Si
SLV 13	143750	0.31	32681	-6497	65.75	666.3	10.13	Si
SLV 1	143750	0.31	35480	-7053	65.75	700.74	10.66	Si
SLV 2	143750	0.31	35480	-7053	65.75	700.74	10.66	Si
SLV 16	143750	0.31	47774	-9498	65.75	809.77	12.32	Si
SLV 15	143750	0.31	47774	-9498	65.75	809.77	12.32	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 3.23 Wa = 0.05 Ta = 0.0808

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 10	-2479	-7160	-152	0	357.3	0.923	0	6.97355	No
SLV 9	-2479	-7160	-152	0	357.3	0.923	0	6.97355	No
SLV 6	-669	-7953	-155	0	179.9	0.889	0	6.97355	No
SLV 5	-669	-7953	-155	0	179.9	0.889	0	6.97355	No
SLV 1	-906	-14408	-54	0.02	202	0.891	0.32032	8.20395	No
SLV 2	-906	-14408	-54	0.02	202	0.891	0.32032	8.20395	No
SLV 8	-7381	-23752	145	0.023	854.5	0.964	0.34921	6.97355	No
SLV 7	-7381	-23752	145	0.023	854.5	0.964	0.34921	6.97355	No
SLV 11	-9192	-22959	148	0.026	1038.8	0.97	0.38341	6.97355	No
SLV 12	-9192	-22959	148	0.026	1038.8	0.97	0.38341	6.97355	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0	SLU 10	No
V_SLU	1.464	SLU 83	Si
PF_SLV	0	SLV 1	No
V_SLV	0	SLV 1	No
PFFP_SLV	5.902	SLV 9	Si
R_SLV	0	SLV 5	No

Maschio 62

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.383	-3.359	-17.313	-3.359	L3	L4	0.93	0.28	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.l) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 77	2.29	-16070	1867.28	61713	1811.31	0.97	No, M>Mu
SLU 77	4.19	-11418	622.58	43847	2451.41	3.938	Si
SLU 81	2.29	-16144	1872.41	61998	1793.45	0.958	No, M>Mu
SLU 81	4.19	-11497	619.56	44152	2448.45	3.952	Si
SLU 84	2.29	-16699	1977.11	64129	1651.95	0.836	No, M>Mu
SLU 84	4.19	-12046	690.5	46261	2420.38	3.505	Si
SLU 80	2.29	-16306	1934.25	62620	1753.56	0.907	No, M>Mu
SLU 80	4.19	-11720	679.02	45006	2438.68	3.591	Si
SLU 73	2.29	-16052	1918.34	61644	1815.63	0.946	No, M>Mu
SLU 73	4.19	-11641	710.95	44705	2442.36	3.435	Si
SLU 78	2.29	-16391	1939.84	62946	1732.16	0.893	No, M>Mu
SLU 78	4.19	-11800	687.75	45316	2434.59	3.54	Si
SLU 82	2.29	-16465	1944.97	63230	1713.26	0.881	No, M>Mu
SLU 82	4.19	-11880	684.74	45621	2430.29	3.549	Si
SLU 76	2.29	-16286	1950.48	62543	1758.55	0.902	No, M>Mu
SLU 76	4.19	-11808	716.71	45345	2434.19	3.396	Si
SLU 75	2.29	-16157	1907.7	62047	1790.31	0.938	No, M>Mu
SLU 75	4.19	-11634	681.99	44676	2442.71	3.582	Si
SLU 83	2.29	-16378	1904.55	62896	1735.44	0.911	No, M>Mu
SLU 83	4.19	-11664	625.32	44792	2441.33	3.904	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 8	2.29	-7720	1914.18	29646	2718.76	1.42	Si
SLV 8	4.19	-3564	-590.09	13685	1471.48	2.494	Si
SLV 15	2.29	-4350	-1476.86	16703	1746.05	1.182	Si
SLV 15	4.19	-8219	1969.87	31563	2834.58	1.439	Si
SLV 13	2.29	-7208	-1381.59	27682	2592.51	1.876	Si
SLV 13	4.19	-10392	2279.37	39906	3253.93	1.428	Si
SLV 14	2.29	-7208	-1381.59	27682	2592.51	1.876	Si
SLV 14	4.19	-10392	2279.37	39906	3253.93	1.428	Si
SLV 2	2.29	-17525	4006.38	67299	3660.64	0.914	No, M>Mu
SLV 2	4.19	-7129	-1103.52	27377	2572.24	2.331	Si
SLV 1	2.29	-17525	4006.38	67299	3660.64	0.914	No, M>Mu



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 1	4.19	-7129	-1103.52	27377	2572.24	2.331	Si
SLV 16	2.29	-4350	-1476.86	16703	1746.05	1.182	Si
SLV 16	4.19	-8219	1969.87	31563	2834.58	1.439	Si
SLV 3	2.29	-14666	3911.11	56320	3676.22	0.94	No, M>Mu
SLV 3	4.19	-4956	-1413.02	19034	1945.71	1.377	Si
SLV 4	2.29	-14666	3911.11	56320	3676.22	0.94	No, M>Mu
SLV 4	4.19	-4956	-1413.02	19034	1945.71	1.377	Si
SLV 7	2.29	-7720	1914.18	29646	2718.76	1.42	Si
SLV 7	4.19	-3564	-590.09	13685	1471.48	2.494	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 80	2.29	-16306	1870	1934.25		62620	0.93	10833	2821			1.51	Si
SLU 80	4.19	-11720	480	679.02		45006	0.93	10833	2821			5.88	Si
SLU 77	2.29	-16070	1867	1867.28		61713	0.93	10833	2821			1.51	Si
SLU 77	4.19	-11418	555	622.58		43847	0.93	10833	2821			5.08	Si
SLU 82	2.29	-16465	1857	1944.97		63230	0.93	10833	2821			1.52	Si
SLU 82	4.19	-11880	515	684.74		45621	0.93	10833	2821			5.48	Si
SLU 75	2.29	-16157	1828	1907.7		62047	0.93	10833	2821			1.54	Si
SLU 75	4.19	-11634	468	681.99		44676	0.93	10833	2821			6.03	Si
SLU 84	2.29	-16699	1897	1977.11		64129	0.93	10833	2821			1.49	Si
SLU 84	4.19	-12046	524	690.5		46261	0.93	10833	2821			5.38	Si
SLU 76	2.29	-16286	1830	1950.48		62543	0.93	10833	2821			1.54	Si
SLU 76	4.19	-11808	418	716.71		45345	0.93	10833	2821			6.74	Si
SLU 81	2.29	-16144	1855	1872.41		61998	0.93	10833	2821			1.52	Si
SLU 81	4.19	-11497	592	619.56		44152	0.93	10833	2821			4.76	Si
SLU 83	2.29	-16378	1896	1904.55		62896	0.93	10833	2821			1.49	Si
SLU 83	4.19	-11664	602	625.32		44792	0.93	10833	2821			4.69	Si
SLU 79	2.29	-15985	1868	1861.68		61387	0.93	10833	2821			1.51	Si
SLU 79	4.19	-11337	557	613.85		43537	0.93	10833	2821			5.06	Si
SLU 78	2.29	-16391	1869	1939.84		62946	0.93	10833	2821			1.51	Si
SLU 78	4.19	-11800	477	687.75		45316	0.93	10833	2821			5.91	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 15	2.29	-4350	-3965	-1476.86		41274	0.3764	16250	1712			0.43	No, Vu<V
SLV 15	4.19	-8219	-1358	1969.87		43424	0.676	16250	3076			2.26	Si
SLV 3	2.29	-14666	6830	3911.11		88037	0.595	16250	2707			0.4	No, Vu<V
SLV 3	4.19	-4956	2649	-1413.02		32797	0.5397	14893	2251			0.85	No, Vu<V
SLV 2	2.29	-17525	6505	4006.38		88257	0.7092	16250	3227			0.5	No, Vu<V
SLV 2	4.19	-7129	2022	-1103.52		27377	0.93	13809	3596			1.78	Si
SLV 16	2.29	-4350	-3965	-1476.86		41274	0.3764	16250	1712			0.43	No, Vu<V
SLV 16	4.19	-8219	-1358	1969.87		43424	0.676	16250	3076			2.26	Si
SLV 4	2.29	-14666	6830	3911.11		88037	0.595	16250	2707			0.4	No, Vu<V
SLV 4	4.19	-4956	2649	-1413.02		32797	0.5397	14893	2251			0.85	No, Vu<V
SLV 1	2.29	-17525	6505	4006.38		88257	0.7092	16250	3227			0.5	No, Vu<V
SLV 1	4.19	-7129	2022	-1103.52		27377	0.93	13809	3596			1.78	Si
SLV 14	2.29	-7208	-4291	-1381.59		31395	0.82	14612	3355			0.78	No, Vu<V
SLV 14	4.19	-10392	-1985	2279.37		50360	0.737	16250	3353			1.69	Si
SLV 8	2.29	-7720	3432	1914.18		42343	0.6511	16250	2963			0.86	No, Vu<V
SLV 8	4.19	-3564	1978	-590.09		14169	0.8982	11167	2809			1.42	Si
SLV 13	2.29	-7208	-4291	-1381.59		31395	0.82	14612	3355			0.78	No, Vu<V
SLV 13	4.19	-10392	-1985	2279.37		50360	0.737	16250	3353			1.69	Si
SLV 7	2.29	-7720	3432	1914.18		42343	0.6511	16250	2963			0.86	No, Vu<V
SLV 7	4.19	-3564	1978	-590.09		14169	0.8982	11167	2809			1.42	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 15	143750	0.31	15565	-4053	84.16	495.15	5.88	Si
SLV 16	143750	0.31	15565	-4053	84.16	495.15	5.88	Si
SLV 11	143750	0.31	17768	-4627	84.16	553.57	6.58	Si
SLV 12	143750	0.31	17768	-4627	84.16	553.57	6.58	Si
SLV 14	143750	0.31	25416	-6618	84.16	733.84	8.72	Si
SLV 13	143750	0.31	25416	-6618	84.16	733.84	8.72	Si
SLV 8	143750	0.31	29509	-7684	84.16	815.97	9.7	Si
SLV 7	143750	0.31	29509	-7684	84.16	815.97	9.7	Si
SLV 10	143750	0.31	50607	-13178	84.16	1080.8	12.84	Si
SLV 9	143750	0.31	50607	-13178	84.16	1080.8	12.84	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 3.23 Wa = 0.05 Ta = 0.0808

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 13	-9409	-10416	5	0.041	1092.9	0.963	0.61508	8.20395	No
SLV 14	-9409	-10416	5	0.041	1092.9	0.963	0.61508	8.20395	No
SLV 16	-7599	-7592	2	0.042	908.9	0.956	0.63319	8.20395	No
SLV 15	-7599	-7592	2	0.042	908.9	0.956	0.63319	8.20395	No
SLV 2	-3947	-10068	7	0.044	538.6	0.931	0.67883	8.20395	No
SLV 1	-3947	-10068	7	0.044	538.6	0.931	0.67883	8.20395	No
SLV 9	-9608	-13588	9	0.04	1113.2	0.964	0.60847	6.97355	No
SLV 10	-9608	-13588	9	0.04	1113.2	0.964	0.60847	6.97355	No
SLV 5	-7970	-13484	9	0.041	946.6	0.958	0.61781	6.97355	No
SLV 6	-7970	-13484	9	0.041	946.6	0.958	0.61781	6.97355	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF SLU	0.836	SLU 84	No
V SLU	1.487	SLU 84	Si
PF SLV	0.914	SLV 1	No



Stato limite	Coeff.s.	Comb.	Verifica
V_SLV	0.396	SLV 3	No
PFFP_SLV	5.883	SLV 15	Si
R_SLV	0.075	SLV 13	No

Maschio 63

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.448	-3.359	-18.448	1.046	L3	L4	4.406	0.14	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	t0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 75	1.39	-52698	-9510.54	85439	0	0	No, Rottura per schiacciamento
SLU 75	5.07	-32130	3142.77	52092	25515.96	8.119	Si
SLU 73	1.39	-52191	-10727.09	84616	0	0	No, Rottura per schiacciamento
SLU 73	5.07	-31356	2960.82	50836	25965.72	8.77	Si
SLU 76	1.39	-52941	-10754.38	85832	0	0	No, Rottura per schiacciamento
SLU 76	5.07	-31987	3075.91	51860	25603.1	8.324	Si
SLU 79	1.39	-52073	-7664.4	84425	0	0	No, Rottura per schiacciamento
SLU 79	5.07	-32146	3173.58	52117	25506.29	8.037	Si
SLU 74	1.39	-51728	-7640.18	83866	0	0	No, Rottura per schiacciamento
SLU 74	5.07	-31847	3132.31	51632	25686.63	8.201	Si
SLU 77	1.39	-52478	-7667.47	85081	0	0	No, Rottura per schiacciamento
SLU 77	5.07	-32478	3247.41	52656	25296.82	7.79	Si
SLU 80	1.39	-53043	-9534.76	85998	0	0	No, Rottura per schiacciamento
SLU 80	5.07	-32429	3184.04	52577	25328.18	7.955	Si
SLU 84	1.39	-54510	-9598.78	88375	0	0	No, Rottura per schiacciamento
SLU 84	5.07	-33215	3317.24	53851	24797.39	7.475	Si
SLU 83	1.39	-53539	-7728.42	86802	0	0	No, Rottura per schiacciamento
SLU 83	5.07	-32932	3306.78	53392	24995.04	7.559	Si
SLU 81	1.39	-52790	-7701.13	85587	0	0	No, Rottura per schiacciamento
SLU 81	5.07	-32301	3191.68	52368	25409.98	7.961	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 12	1.39	-27271	7014.67	44213	38335.7	5.465	Si
SLV 12	5.07	-17727	1525.63	28740	29864.29	19.575	Si
SLV 7	1.39	-25757	10699.32	41759	37347.13	3.491	Si
SLV 7	5.07	-18442	2359.66	29900	30684.18	13.004	Si
SLV 5	1.39	-43346	-18427.91	70276	40566.83	2.201	Si
SLV 5	5.07	-25170	2185.83	40808	36928.43	16.894	Si
SLV 9	1.39	-44860	-22112.56	72730	39998.56	1.809	Si
SLV 9	5.07	-24455	1351.81	39648	36390.02	26.919	Si
SLV 11	1.39	-27271	7014.67	44213	38335.7	5.465	Si
SLV 11	5.07	-17727	1525.63	28740	29864.29	19.575	Si
SLV 10	1.39	-44860	-22112.56	72730	39998.56	1.809	Si
SLV 10	5.07	-24455	1351.81	39648	36390.02	26.919	Si
SLV 6	1.39	-43346	-18427.91	70276	40566.83	2.201	Si
SLV 6	5.07	-25170	2185.83	40808	36928.43	16.894	Si
SLV 8	1.39	-25757	10699.32	41759	37347.13	3.491	Si
SLV 8	5.07	-18442	2359.66	29900	30684.18	13.004	Si
SLV 13	1.39	-40470	-16216.79	65613	41277.17	2.545	Si
SLV 13	5.07	-21265	439.62	34476	33626.1	76.489	Si
SLV 14	1.39	-40470	-16216.79	65613	41277.17	2.545	Si
SLV 14	5.07	-21265	439.62	34476	33626.1	76.489	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 47	1.39	-42788	-2819	-10340.82		69372	4.4057	10833	6682			2.37	Si
SLU 47	5.07	-25456	-1966	1912.88		41271	4.4057	10833	6682			3.4	Si
SLU 65	1.39	-47021	-2827	-10514.03		76234	4.4057	10833	6682			2.36	Si
SLU 65	5.07	-28048	-1940	2381.46		45474	4.4057	10833	6682			3.44	Si
SLU 76	1.39	-52941	-2861	-10754.38		85832	4.4057	10833	6682			2.34	Si
SLU 76	5.07	-31987	-1925	3075.91		51860	4.4057	10833	6682			3.47	Si
SLU 55	1.39	-47958	-2836	-10553.88		77754	4.4057	10833	6682			2.36	Si
SLU 55	5.07	-28763	-1941	2492.23		46633	4.4057	10833	6682			3.44	Si
SLU 52	1.39	-47209	-2818	-10526.59		76538	4.4057	10833	6682			2.37	Si
SLU 52	5.07	-28132	-1930	2377.14		45609	4.4057	10833	6682			3.46	Si
SLU 26	1.39	-39757	-2823	-8933.52		64457	4.4057	10833	6682			2.37	Si
SLU 26	5.07	-23910	-2012	2239.64		38765	4.4057	10724	6615			3.29	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 73	1.39	-52191	-2843	-10727.09		84616	4.4057	10833	6682			2.35	Si
SLU 73	5.07	-31356	-1914	2960.82		50836	4.4057	10833	6682			3.49	Si
SLU 31	1.39	-44177	-2823	-9119.29		71623	4.4057	10833	6682			2.37	Si
SLU 31	5.07	-26586	-1976	2703.9		43103	4.4057	10833	6682			3.38	Si
SLU 34	1.39	-44927	-2840	-9146.58		72839	4.4057	10833	6682			2.35	Si
SLU 34	5.07	-27218	-1987	2819		44127	4.4057	10833	6682			3.36	Si
SLU 68	1.39	-47771	-2844	-10541.32		77450	4.4057	10833	6682			2.35	Si
SLU 68	5.07	-28680	-1950	2496.55		46497	4.4057	10833	6682			3.43	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 6	1.39	-43346	-14858	-18427.91		70276	4.4057	16250	10023			0.67	No, Vu<V
SLV 6	5.07	-25170	-12396	2185.83		40808	4.4057	16250	10023			0.81	No, Vu<V
SLV 9	1.39	-44860	-14750	-22112.56		72730	4.4057	16250	10023			0.68	No, Vu<V
SLV 9	5.07	-24455	-13526	1351.81		39648	4.4057	16250	10023			0.74	No, Vu<V
SLV 8	1.39	-25757	14529	10699.32		41759	4.4057	16250	10023			0.69	No, Vu<V
SLV 8	5.07	-18442	13998	2359.66		29900	4.4057	14313	8828			0.63	No, Vu<V
SLV 5	1.39	-43346	-14858	-18427.91		70276	4.4057	16250	10023			0.67	No, Vu<V
SLV 5	5.07	-25170	-12396	2185.83		40808	4.4057	16250	10023			0.81	No, Vu<V
SLV 12	1.39	-27271	14637	7014.67		44213	4.4057	16250	10023			0.68	No, Vu<V
SLV 12	5.07	-17727	12868	1525.63		28740	4.4057	14081	8685			0.67	No, Vu<V
SLV 3	1.39	-30146	4119	4803.55		48876	4.4057	16250	10023			2.43	Si
SLV 3	5.07	-21632	6079	3271.85		35072	4.4057	15348	9466			1.56	Si
SLV 4	1.39	-30146	4119	4803.55		48876	4.4057	16250	10023			2.43	Si
SLV 4	5.07	-21632	6079	3271.85		35072	4.4057	15348	9466			1.56	Si
SLV 7	1.39	-25757	14529	10699.32		41759	4.4057	16250	10023			0.69	No, Vu<V
SLV 7	5.07	-18442	13998	2359.66		29900	4.4057	14313	8828			0.63	No, Vu<V
SLV 11	1.39	-27271	14637	7014.67		44213	4.4057	16250	10023			0.68	No, Vu<V
SLV 11	5.07	-17727	12868	1525.63		28740	4.4057	14081	8685			0.67	No, Vu<V
SLV 10	1.39	-44860	-14750	-22112.56		72730	4.4057	16250	10023			0.68	No, Vu<V
SLV 10	5.07	-24455	-13526	1351.81		39648	4.4057	16250	10023			0.74	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 8	143750	0.31	35296	-21770	213.26	1083.71	5.08	Si
SLV 7	143750	0.31	35296	-21770	213.26	1083.71	5.08	Si
SLV 11	143750	0.31	36180	-22316	213.26	1099.56	5.16	Si
SLV 12	143750	0.31	36180	-22316	213.26	1099.56	5.16	Si
SLV 4	143750	0.31	40967	-25268	213.26	1175.75	5.51	Si
SLV 3	143750	0.31	40967	-25268	213.26	1175.75	5.51	Si
SLV 15	143750	0.31	43915	-27087	213.26	1214.6	5.7	Si
SLV 16	143750	0.31	43915	-27087	213.26	1214.6	5.7	Si
SLV 2	143750	0.31	46713	-28812	213.26	1245.81	5.84	Si
SLV 1	143750	0.31	46713	-28812	213.26	1245.81	5.84	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 3.23 Wa = 0.03 Ta = 0.1615

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 1	-23650	-35423	25	0.02	2727.5	0.965	0.29474	14.15828	No
SLV 2	-23650	-35423	25	0.02	2727.5	0.965	0.29474	14.15828	No
SLV 15	-19247	-35193	-25	0.02	2279.5	0.958	0.29804	14.15828	No
SLV 16	-19247	-35193	-25	0.02	2279.5	0.958	0.29804	14.15828	No
SLV 5	-25170	-43346	16	0.02	2882.2	0.966	0.2985	14.1455	No
SLV 6	-25170	-43346	16	0.02	2882.2	0.966	0.2985	14.1455	No
SLV 4	-21632	-30146	19	0.02	2522.2	0.962	0.30004	14.15828	No
SLV 3	-21632	-30146	19	0.02	2522.2	0.962	0.30004	14.15828	No
SLV 13	-21265	-40470	-19	0.02	2484.8	0.962	0.30009	14.15828	No
SLV 14	-21265	-40470	-19	0.02	2484.8	0.962	0.30009	14.15828	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0	SLU 73	No
V_SLV	2.336	SLU 76	Si
PF_SLV	1.809	SLV 9	Si
V_SLV	0.631	SLV 7	No
PFFP_SLV	5.082	SLV 7	Si
R_SLV	0.021	SLV 1	No

Maschio 64

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.sx	a.s.dx
-17.053	-4.934	-17.053	-4.589	L3	L4	0.344	0.3	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ_0	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 68	1.39	-4960	417.23	48015	350.54	0.84	No, M>Mu



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 68	4.5	-3695	-109.92	35775	356.77	3.246	Si
SLU 34	1.39	-4380	382.17	42399	361.52	0.946	No, M>Mu
SLU 34	4.5	-3228	-95.39	31250	342.51	3.591	Si
SLU 73	1.39	-5242	427.63	50751	340.2	0.796	No, M>Mu
SLU 73	4.5	-3874	-103.63	37509	359.86	3.473	Si
SLU 65	1.39	-4906	415.57	47496	352.13	0.847	No, M>Mu
SLU 65	4.5	-3654	-110.34	35372	355.86	3.225	Si
SLU 52	1.39	-4954	418.64	47959	350.71	0.838	No, M>Mu
SLU 52	4.5	-3681	-110.42	35639	356.47	3.228	Si
SLU 55	1.39	-5007	420.3	48478	349.02	0.83	No, M>Mu
SLU 55	4.5	-3723	-110.01	36042	357.33	3.248	Si
SLU 44	1.39	-4618	406.58	44704	358.68	0.882	No, M>Mu
SLU 44	4.5	-3461	-117.13	33503	350.73	2.994	Si
SLU 84	1.39	-5313	357.63	51434	337.11	0.943	No, M>Mu
SLU 84	4.5	-3907	-63.95	37827	360.29	5.634	Si
SLU 47	1.39	-4671	408.24	45223	357.72	0.876	No, M>Mu
SLU 47	4.5	-3502	-116.71	33906	351.96	3.016	Si
SLU 76	1.39	-5296	429.29	51270	337.87	0.787	No, M>Mu
SLU 76	4.5	-3916	-103.21	37912	360.39	3.492	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 11	1.39	-5968	3349.49	0	0	0	No, e>l/2
SLV 11	4.5	-4870	-1280.05	0	0	0	No, e>l/2
SLV 13	1.39	2955	-1299.67	0	0	0	No, Trazione
SLV 13	4.5	-1633	579.94	0	0	0	No, e>l/2
SLV 9	1.39	2034	-3289.08	0	0	0	No, Trazione
SLV 9	4.5	-214	1369.32	0	0	0	No, e>l/2
SLV 12	1.39	-5968	3349.49	0	0	0	No, e>l/2
SLV 12	4.5	-4870	-1280.05	0	0	0	No, e>l/2
SLV 8	1.39	-9159	3635.85	0	0	0	No, e>l/2
SLV 8	4.5	-5051	-1398.25	0	0	0	No, e>l/2
SLV 14	1.39	2955	-1299.67	0	0	0	No, Trazione
SLV 14	4.5	-1633	579.94	0	0	0	No, e>l/2
SLV 7	1.39	-9159	3635.85	0	0	0	No, e>l/2
SLV 7	4.5	-5051	-1398.25	0	0	0	No, e>l/2
SLV 5	1.39	-1156	-3002.72	0	0	0	No, e>l/2
SLV 5	4.5	-395	1251.12	0	0	0	No, e>l/2
SLV 10	1.39	2034	-3289.08	0	0	0	No, Trazione
SLV 10	4.5	-214	1369.32	0	0	0	No, e>l/2
SLV 6	1.39	-1156	-3002.72	0	0	0	No, e>l/2
SLV 6	4.5	-395	1251.12	0	0	0	No, e>l/2

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 35	1.39	-4121	-67	190.12		39898	0.3443	10833	1119			16.67	Si
SLU 35	4.5	-3014	496	-2.5		29180	0.3443	9446	976			1.97	Si
SLU 79	1.39	-5032	-72	238.87		48713	0.3443	10833	1119			15.5	Si
SLU 79	4.5	-3699	570	-11.81		35814	0.3443	10331	1067			1.87	Si
SLU 41	1.39	-4206	-68	195.25		40719	0.3443	10833	1119			16.39	Si
SLU 41	4.5	-3064	509	-1.53		29666	0.3443	9511	982			1.93	Si
SLU 74	1.39	-4984	-73	235.59		48249	0.3443	10833	1119			15.4	Si
SLU 74	4.5	-3660	568	-10.75		35438	0.3443	10281	1062			1.87	Si
SLU 39	1.39	-4152	-67	193.59		40200	0.3443	10833	1119			16.81	Si
SLU 39	4.5	-3023	499	-1.95		29263	0.3443	9457	977			1.96	Si
SLU 32	1.39	-4068	-65	188.46		39979	0.3443	10806	1116			17.06	Si
SLU 32	4.5	-2972	487	-2.92		28777	0.3443	9392	970			1.99	Si
SLU 77	1.39	-5037	-74	237.25		48768	0.3443	10833	1119			15.04	Si
SLU 77	4.5	-3702	577	-10.33		35841	0.3443	10334	1067			1.85	Si
SLU 81	1.39	-5069	-74	240.72		49070	0.3443	10833	1119			15.15	Si
SLU 81	4.5	-3711	580	-9.78		35924	0.3443	10345	1069			1.84	Si
SLU 83	1.39	-5122	-76	242.38		49589	0.3443	10833	1119			14.81	Si
SLU 83	4.5	-3752	589	-9.36		36327	0.3443	10399	1074			1.82	Si
SLU 62	1.39	-4834	-64	233.38		46797	0.3443	10833	1119			17.58	Si
SLU 62	4.5	-3559	527	-16.15		34458	0.3443	10150	1048			1.99	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 14	1.39	2955	-1263	-1299.67		0	0	8333	0			0	No, Vu<V
SLV 14	4.5	-1633	2592	579.94		0	0	8333	0			0	No, Vu<V
SLV 8	1.39	-9159	2540	3635.85		0	0	8333	0			0	No, Vu<V
SLV 8	4.5	-5051	-4274	-1398.25		0	0	8333	0			0	No, Vu<V
SLV 7	1.39	-9159	2540	3635.85		0	0	8333	0			0	No, Vu<V
SLV 7	4.5	-5051	-4274	-1398.25		0	0	8333	0			0	No, Vu<V
SLV 5	1.39	-1156	-2338	-3002.72		0	0	8333	0			0	No, Vu<V
SLV 5	4.5	-395	4490	1251.12		0	0	8333	0			0	No, Vu<V
SLV 6	1.39	-1156	-2338	-3002.72		0	0	8333	0			0	No, Vu<V
SLV 6	4.5	-395	4490	1251.12		0	0	8333	0			0	No, Vu<V
SLV 12	1.39	-5968	2248	3349.49		0	0	8333	0			0	No, Vu<V
SLV 12	4.5	-4870	-3734	-1280.05		0	0	8333	0			0	No, Vu<V
SLV 13	1.39	2955	-1263	-1299.67		0	0	8333	0			0	No, Vu<V
SLV 13	4.5	-1633	2592	579.94		0	0	8333	0			0	No, Vu<V
SLV 11	1.39	-5968	2248	3349.49		0	0	8333	0			0	No, Vu<V
SLV 11	4.5	-4870	-3734	-1280.05		0	0	8333	0			0	No, Vu<V
SLV 9	1.39	2034	-2629	-3289.08		0	0	8333	0			0	No, Vu<V
SLV 9	4.5	-214	5030	1369.32		0	0	8333	0			0	No, Vu<V
SLV 10	1.39	2034	-2629	-3289.08		0	0	8333	0			0	No, Vu<V
SLV 10	4.5	-214	5030	1369.32		0	0	8333	0			0	No, Vu<V



Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.05 denominatore 8 $\gamma M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 15	143750	0.31	24874	-2569	32.61	306.93	9.41	Si
SLV 16	143750	0.31	24874	-2569	32.61	306.93	9.41	Si
SLV 13	143750	0.31	26844	-2773	32.61	324.54	9.95	Si
SLV 14	143750	0.31	26844	-2773	32.61	324.54	9.95	Si
SLV 11	143750	0.31	28693	-2964	32.61	340.16	10.43	Si
SLV 12	143750	0.31	28693	-2964	32.61	340.16	10.43	Si
SLV 8	143750	0.31	33936	-3505	32.61	379.77	11.65	Si
SLV 7	143750	0.31	33936	-3505	32.61	379.77	11.65	Si
SLV 10	143750	0.31	35261	-3642	32.61	388.67	11.92	Si
SLV 9	143750	0.31	35261	-3642	32.61	388.67	11.92	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 3.23 Wa = 0.05 Ta = 0.0754

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 15	-2567	555	10	0	0	0	0	7.60357	No, Trazione
SLV 7	-1021	-9159	-80	0	158.9	0.914	0	6.53088	No
SLV 16	-2567	555	10	0	0	0	0	7.60357	No, Trazione
SLV 10	-4331	2034	80	0	0	0	0	6.53088	No, Trazione
SLV 14	-3496	2955	52	0	0	0	0	7.60357	No, Trazione
SLV 9	-4331	2034	80	0	0	0	0	6.53088	No, Trazione
SLV 13	-3496	2955	52	0	0	0	0	7.60357	No, Trazione
SLV 8	-1021	-9159	-80	0	158.9	0.914	0	6.53088	No
SLV 12	-1235	-5968	-62	0.01	180.3	0.922	0.16547	6.53088	No
SLV 11	-1235	-5968	-62	0.01	180.3	0.922	0.16547	6.53088	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0.787	SLU 76	No
V_SLU	1.822	SLU 83	Si
PF_SLV	0	SLV 16	No
V_SLV	0	SLV 5	No
PFFP_SLV	9.413	SLV 15	Si
R_SLV	0	SLV 16	No

Maschio 65

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-13.753	-3.359	-15.483	-3.359	L3	L4	1.73	0.28	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 75	1.39	-10465	-5497.4	21605	6651.57	1.21	Si
SLU 75	3.49	-15290	-856.47	31564	8100.81	9.458	Si
SLU 40	1.39	-8682	-4783.44	17923	5857.54	1.225	Si
SLU 40	3.49	-13144	-561.02	27134	7582.18	13.515	Si
SLU 80	1.39	-10558	-5514.44	21796	6688.96	1.213	Si
SLU 80	3.49	-15398	-899.11	31789	8121.72	9.033	Si
SLU 81	1.39	-10422	-5530.5	21515	6633.81	1.199	Si
SLU 81	3.49	-15282	-973.08	31549	8099.38	8.323	Si
SLU 83	1.39	-10575	-5577.29	21831	6695.78	1.201	Si
SLU 83	3.49	-15494	-1009.43	31985	8139.63	8.064	Si
SLU 78	1.39	-10618	-5544.19	21921	6713.24	1.211	Si
SLU 78	3.49	-15501	-892.81	32001	8140.99	9.118	Si
SLU 84	1.39	-10695	-5696.98	22079	6743.76	1.184	Si
SLU 84	3.49	-15783	-850.24	32583	8191.57	9.634	Si
SLU 73	1.39	-10332	-5500.66	21329	6596.96	1.199	Si
SLU 73	3.49	-15169	-720.29	31314	8076.92	11.213	Si
SLU 76	1.39	-10485	-5547.45	21645	6659.53	1.2	Si
SLU 76	3.49	-15380	-756.64	31751	8118.22	10.729	Si
SLU 82	1.39	-10542	-5650.19	21763	6682.6	1.183	Si
SLU 82	3.49	-15572	-813.9	32147	8154.01	10.018	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 4	1.39	-6189	614.04	12778	4794.03	7.807	Si
SLV 4	3.49	-1177	-6921.06	0	0	0	No, e>l/2
SLV 2	1.39	-6595	-900.87	13615	5068.95	5.627	Si
SLV 2	3.49	-5020	-6164.26	0	0	0	No, e>l/2
SLV 9	1.39	-8277	-7311.97	0	0	0	No, e>l/2
SLV 9	3.49	-18917	2209.38	39052	11133.35	5.039	Si
SLV 8	1.39	-6368	-119.02	13146	4915.62	41.301	Si
SLV 8	3.49	-1762	-3770.55	0	0	0	No, e>l/2
SLV 14	1.39	-8456	-8045.03	0	0	0	No, e>l/2
SLV 14	3.49	-19502	5359.89	40261	11311.05	2.11	Si
SLV 7	1.39	-6368	-119.02	13146	4915.62	41.301	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 7	3.49	-1762	-3770.55	0	0	0	No, e>l/2
SLV 13	1.39	-8456	-8045.03	0	0	0	No, e>l/2
SLV 13	3.49	-19502	5359.89	40261	11311.05	2.11	Si
SLV 10	1.39	-8277	-7311.97	0	0	0	No, e>l/2
SLV 10	3.49	-18917	2209.38	39052	11133.35	5.039	Si
SLV 3	1.39	-6189	614.04	12778	4794.03	7.807	Si
SLV 3	3.49	-1177	-6921.06	0	0	0	No, e>l/2
SLV 1	1.39	-6595	-900.87	13615	5068.95	5.627	Si
SLV 1	3.49	-5020	-6164.26	0	0	0	No, e>l/2

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 84	1.39	-10695	-5454	-5696.98		38312	0.997	10664	2977			0.55	No, Vu<V
SLU 84	3.49	-15783	-5450	-850.24		32583	1.73	9900	4796			0.88	No, Vu<V
SLU 83	1.39	-10575	-5264	-5577.29		37291	1.0128	10528	2985			0.57	No, Vu<V
SLU 83	3.49	-15494	-5219	-1009.43		31985	1.73	9820	4757			0.91	No, Vu<V
SLU 81	1.39	-10422	-5232	-5530.5		37110	1.003	10503	2950			0.56	No, Vu<V
SLU 81	3.49	-15282	-5191	-973.08		31549	1.73	9762	4729			0.91	No, Vu<V
SLU 82	1.39	-10542	-5423	-5650.19		38142	0.9871	10641	2941			0.54	No, Vu<V
SLU 82	3.49	-15572	-5422	-813.9		32147	1.73	9842	4767			0.88	No, Vu<V
SLU 76	1.39	-10485	-5348	-5547.45		37159	1.0077	10510	2966			0.55	No, Vu<V
SLU 76	3.49	-15380	-5370	-756.64		31751	1.73	9789	4742			0.88	No, Vu<V
SLU 42	1.39	-8835	-4681	-4830.22		33045	0.9549	9962	2663			0.57	No, Vu<V
SLU 42	3.49	-13355	-4692	-597.37		27571	1.73	9232	4472			0.95	No, Vu<V
SLU 73	1.39	-10332	-5316	-5500.66		36981	0.9978	10486	2930			0.55	No, Vu<V
SLU 73	3.49	-15169	-5343	-720.29		31314	1.73	9731	4714			0.88	No, Vu<V
SLU 75	1.39	-10465	-5256	-5497.4		36675	1.0191	10446	2981			0.57	No, Vu<V
SLU 75	3.49	-15290	-5252	-856.47		31564	1.73	9764	4730			0.9	No, Vu<V
SLU 78	1.39	-10618	-5287	-5544.19		36868	1.0286	10471	3016			0.57	No, Vu<V
SLU 78	3.49	-15501	-5280	-892.81		32001	1.73	9822	4758			0.9	No, Vu<V
SLU 40	1.39	-8682	-4650	-4783.44		32912	0.9421	9944	2623			0.56	No, Vu<V
SLU 40	3.49	-13144	-4664	-561.02		27134	1.73	9173	4444			0.95	No, Vu<V

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 3	1.39	-6189	5748	614.04		12778	1.73	10889	5275			0.92	No, Vu<V
SLV 3	3.49	-1177	3917	-6921.06		0	0	8333	0			0	No, Vu<V
SLV 2	1.39	-6595	4002	-900.87		13615	1.73	11056	5356			1.34	Si
SLV 2	3.49	-5020	2641	-6164.26		0	0	8333	0			0	No, Vu<V
SLV 1	1.39	-6595	4002	-900.87		13615	1.73	11056	5356			1.34	Si
SLV 1	3.49	-5020	2641	-6164.26		0	0	8333	0			0	No, Vu<V
SLV 13	1.39	-8456	-12686	-8045.03		0	0	8333	0			0	No, Vu<V
SLV 13	3.49	-19502	-10785	5359.89		40261	1.73	16250	7871			0.73	No, Vu<V
SLV 8	1.39	-6368	1943	-119.02		13146	1.73	10963	5310			2.73	Si
SLV 8	3.49	-1762	707	-3770.55		0	0	8333	0			0	No, Vu<V
SLV 7	1.39	-6368	1943	-119.02		13146	1.73	10963	5310			2.73	Si
SLV 7	3.49	-1762	707	-3770.55		0	0	8333	0			0	No, Vu<V
SLV 14	1.39	-8456	-12686	-8045.03		0	0	8333	0			0	No, Vu<V
SLV 14	3.49	-19502	-10785	5359.89		40261	1.73	16250	7871			0.73	No, Vu<V
SLV 10	1.39	-8277	-8882	-7311.97		0	0	8333	0			0	No, Vu<V
SLV 10	3.49	-18917	-7575	2209.38		39052	1.73	16144	7820			1.03	Si
SLV 9	1.39	-8277	-8882	-7311.97		0	0	8333	0			0	No, Vu<V
SLV 9	3.49	-18917	-7575	2209.38		39052	1.73	16144	7820			1.03	Si
SLV 4	1.39	-6189	5748	614.04		12778	1.73	10889	5275			0.92	No, Vu<V
SLV 4	3.49	-1177	3917	-6921.06		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 3	143750	0.31	3173	-1537	156.56	209.61	1.34	Si
SLV 4	143750	0.31	3173	-1537	156.56	209.61	1.34	Si
SLV 8	143750	0.31	4339	-2102	156.56	283.78	1.81	Si
SLV 7	143750	0.31	4339	-2102	156.56	283.78	1.81	Si
SLV 1	143750	0.31	11125	-5389	156.56	685.79	4.38	Si
SLV 2	143750	0.31	11125	-5389	156.56	685.79	4.38	Si
SLV 12	143750	0.31	13290	-6438	156.56	803.23	5.13	Si
SLV 11	143750	0.31	13290	-6438	156.56	803.23	5.13	Si
SLV 6	143750	0.31	30846	-14942	156.56	1563.77	9.99	Si
SLV 5	143750	0.31	30846	-14942	156.56	1563.77	9.99	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 3.23 Wa = 0.05 Ta = 0.0808

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 11	-6183	-6926	-196	0.021	885	0.924	0.32649	6.97355	No
SLV 12	-6183	-6926	-196	0.021	885	0.924	0.32649	6.97355	No
SLV 8	-6682	-6368	-163	0.026	935.2	0.928	0.40356	6.97355	No
SLV 7	-6682	-6368	-163	0.026	935.2	0.928	0.40356	6.97355	No
SLV 16	-8723	-8050	-107	0.034	1141.4	0.938	0.52094	8.20395	No
SLV 15	-8723	-8050	-107	0.034	1141.4	0.938	0.52094	8.20395	No
SLV 1	-13060	-6595	112	0.035	1581.4	0.954	0.52722	8.20395	No
SLV 2	-13060	-6595	112	0.035	1581.4	0.954	0.52722	8.20395	No
SLV 5	-15600	-7719	201	0.03	1839.5	0.959	0.4533	6.97355	No
SLV 6	-15600	-7719	201	0.03	1839.5	0.959	0.4533	6.97355	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.183	SLU 82	Si
V_SLU	0.542	SLU 82	No
PF_SLV	0	SLV 1	No



Stato limite	Coeff.s.	Comb.	Verifica
V_SLV	0	SLV 1	No
PFFP_SLV	1.339	SLV 3	Si
R_SLV	0.047	SLV 11	No

Maschio 66

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-16.45	-4.784	-17.053	-4.784	L3	L4	0.602	0.3	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	t0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 62	1.39	-10699	-123.19	59203	880.38	7.146	Si
SLU 62	4.5	-6897	96.4	38167	1104.02	11.453	Si
SLU 56	1.39	-10544	-125.87	58348	900.99	7.158	Si
SLU 56	4.5	-6772	98.67	37472	1101.32	11.162	Si
SLU 81	1.39	-11173	-120.94	61825	811.06	6.706	Si
SLU 81	4.5	-7259	93.91	40167	1108.2	11.8	Si
SLU 71	1.39	-10443	-128.14	57791	913.91	7.132	Si
SLU 71	4.5	-6692	100.37	37034	1099.29	10.953	Si
SLU 83	1.39	-11284	-120.81	62444	793.33	6.567	Si
SLU 83	4.5	-7343	94.6	40632	1108.41	11.717	Si
SLU 77	1.39	-11130	-123.48	61590	817.65	6.621	Si
SLU 77	4.5	-7217	96.87	39937	1107.99	11.438	Si
SLU 69	1.39	-10463	-128.71	57898	911.45	7.082	Si
SLU 69	4.5	-6703	100.43	37093	1099.58	10.949	Si
SLU 79	1.39	-11111	-122.92	61482	820.65	6.676	Si
SLU 79	4.5	-7206	96.81	39878	1107.93	11.444	Si
SLU 74	1.39	-11018	-123.62	60970	834.66	6.752	Si
SLU 74	4.5	-7133	96.18	39472	1107.36	11.513	Si
SLU 66	1.39	-10351	-128.84	57279	925.41	7.183	Si
SLU 66	4.5	-6619	99.74	36628	1097.18	11.001	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 3	1.39	-5590	1338.25	30930	1257.34	0.94	No, M>Mu
SLV 3	4.5	-6110	-505.54	33812	1331.06	2.633	Si
SLV 13	1.39	-10257	-1533.86	56756	1654.24	1.078	Si
SLV 13	4.5	-4025	656.59	22275	991.36	1.51	Si
SLV 8	1.39	-1581	497.7	0	0	0	No, e>l/2
SLV 8	4.5	-3122	-166.82	17278	807.44	4.84	Si
SLV 16	1.39	-6536	-1425.28	36170	1385.9	0.972	No, M>Mu
SLV 16	4.5	-2536	611.74	14036	676.19	1.105	Si
SLV 2	1.39	-9310	1229.67	51517	1621.77	1.319	Si
SLV 2	4.5	-7599	-460.68	42050	1501.08	3.258	Si
SLV 1	1.39	-9310	1229.67	51517	1621.77	1.319	Si
SLV 1	4.5	-7599	-460.68	42050	1501.08	3.258	Si
SLV 4	1.39	-5590	1338.25	30930	1257.34	0.94	No, M>Mu
SLV 4	4.5	-6110	-505.54	33812	1331.06	2.633	Si
SLV 14	1.39	-10257	-1533.86	56756	1654.24	1.078	Si
SLV 14	4.5	-4025	656.59	22275	991.36	1.51	Si
SLV 15	1.39	-6536	-1425.28	36170	1385.9	0.972	No, M>Mu
SLV 15	4.5	-2536	611.74	14036	676.19	1.105	Si
SLV 7	1.39	-1581	497.7	0	0	0	No, e>l/2
SLV 7	4.5	-3122	-166.82	17278	807.44	4.84	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 74	1.39	-11018	-50	-123.62		60970	0.6024	10833	1958			39.26	Si
SLU 74	4.5	-7133	-382	96.18		39472	0.6024	10819	1955			5.11	Si
SLU 79	1.39	-11111	-49	-122.92		61482	0.6024	10833	1958			40.19	Si
SLU 79	4.5	-7206	-387	96.81		39878	0.6024	10833	1958			5.06	Si
SLU 81	1.39	-11173	-44	-120.94		61825	0.6024	10833	1958			44.38	Si
SLU 81	4.5	-7259	-389	93.91		40167	0.6024	10833	1958			5.04	Si
SLU 82	1.39	-11105	-20	-108.32		61451	0.6024	10833	1958			97.26	Si
SLU 82	4.5	-7390	-383	95.96		40895	0.6024	10833	1958			5.11	Si
SLU 77	1.39	-11130	-49	-123.48		61590	0.6024	10833	1958			39.75	Si
SLU 77	4.5	-7217	-389	96.87		39937	0.6024	10833	1958			5.04	Si
SLU 84	1.39	-11217	-20	-108.18		62070	0.6024	10833	1958			100.31	Si
SLU 84	4.5	-7474	-390	96.65		41360	0.6024	10833	1958			5.02	Si
SLU 80	1.39	-11043	-25	-110.29		61108	0.6024	10833	1958			79.14	Si
SLU 80	4.5	-7338	-381	98.86		40606	0.6024	10833	1958			5.13	Si
SLU 78	1.39	-11062	-25	-110.86		61215	0.6024	10833	1958			77.48	Si
SLU 78	4.5	-7349	-383	98.92		40665	0.6024	10833	1958			5.11	Si
SLU 75	1.39	-10950	-26	-110.99		60596	0.6024	10833	1958			75.65	Si
SLU 75	4.5	-7265	-377	98.23		40200	0.6024	10833	1958			5.19	Si
SLU 83	1.39	-11284	-43	-120.81		62444	0.6024	10833	1958			45.01	Si
SLU 83	4.5	-7343	-395	94.6		40632	0.6024	10833	1958			4.96	Si



Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 13	1.39	-10257	-1776	-1533.86		75154	0.4549	16250	2218			1.25	Si
SLV 13	4.5	-4025	838	656.59		32393	0.4142	14812	1841			2.2	Si
SLV 15	1.39	-6536	-1218	-1425.28		87363	0.2494	16250	1216			1	No, Vu<V
SLV 15	4.5	-2536	1112	611.74		46964	0.18	16250	878			0.79	No, Vu<V
SLV 2	1.39	-9310	1124	1229.67		61171	0.5073	16250	2473			2.2	Si
SLV 2	4.5	-7599	-1643	-460.68		42050	0.6024	16250	2937			1.79	Si
SLV 7	1.39	-1581	1319	497.7		0	0	8333	0			0	No, Vu<V
SLV 7	4.5	-3122	-182	-166.82		17278	0.6024	11789	2130			11.69	Si
SLV 8	1.39	-1581	1319	497.7		0	0	8333	0			0	No, Vu<V
SLV 8	4.5	-3122	-182	-166.82		17278	0.6024	11789	2130			11.69	Si
SLV 4	1.39	-5590	1682	1338.25		100551	0.1853	16250	903			0.54	No, Vu<V
SLV 4	4.5	-6110	-1369	-505.54		33812	0.6024	15096	2728			1.99	Si
SLV 14	1.39	-10257	-1776	-1533.86		75154	0.4549	16250	2218			1.25	Si
SLV 14	4.5	-4025	838	656.59		32393	0.4142	14812	1841			2.2	Si
SLV 16	1.39	-6536	-1218	-1425.28		87363	0.2494	16250	1216			1	No, Vu<V
SLV 16	4.5	-2536	1112	611.74		46964	0.18	16250	878			0.79	No, Vu<V
SLV 3	1.39	-5590	1682	1338.25		100551	0.1853	16250	903			0.54	No, Vu<V
SLV 3	4.5	-6110	-1369	-505.54		33812	0.6024	15096	2728			1.99	Si
SLV 1	1.39	-9310	1124	1229.67		61171	0.5073	16250	2473			2.2	Si
SLV 1	4.5	-7599	-1643	-460.68		42050	0.6024	16250	2937			1.79	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 11	143750	0.31	16471	-2976	57.05	386.29	6.77	Si
SLV 12	143750	0.31	16471	-2976	57.05	386.29	6.77	Si
SLV 16	143750	0.31	18365	-3319	57.05	423	7.41	Si
SLV 15	143750	0.31	18365	-3319	57.05	423	7.41	Si
SLV 8	143750	0.31	25640	-4633	57.05	549.17	9.63	Si
SLV 7	143750	0.31	25640	-4633	57.05	549.17	9.63	Si
SLV 13	143750	0.31	29158	-5269	57.05	601.77	10.55	Si
SLV 14	143750	0.31	29158	-5269	57.05	601.77	10.55	Si
SLV 4	143750	0.31	48928	-8842	57.05	795.2	13.94	Si
SLV 3	143750	0.31	48928	-8842	57.05	795.2	13.94	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 3.23 Wa = 0.05 Ta = 0.0754

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 1	-5973	-9310	-4	0.044	701.8	0.96	0.66396	7.60357	No
SLV 2	-5973	-9310	-4	0.044	701.8	0.96	0.66396	7.60357	No
SLV 3	-5061	-5590	-7	0.044	609.2	0.955	0.66717	7.60357	No
SLV 4	-5061	-5590	-7	0.044	609.2	0.955	0.66717	7.60357	No
SLV 13	-4772	-10257	4	0.044	579.8	0.953	0.67855	7.60357	No
SLV 14	-4772	-10257	4	0.044	579.8	0.953	0.67855	7.60357	No
SLV 15	-3861	-6536	1	0.046	487.3	0.945	0.70629	7.60357	No
SLV 16	-3861	-6536	1	0.046	487.3	0.945	0.70629	7.60357	No
SLV 9	-6256	-14266	5	0.044	730.6	0.962	0.65875	6.53088	No
SLV 10	-6256	-14266	5	0.044	730.6	0.962	0.65875	6.53088	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.567	SLU 83	Si
V_SLU	4.958	SLU 83	Si
PF_SLV	0	SLV 7	No
V_SLV	0	SLV 7	No
PFFP_SLV	6.771	SLV 11	Si
R_SLV	0.087	SLV 1	No

Maschio 67

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-4.784	-14.61	-4.784	L3	L4	0.848	0.3	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 75	1.39	-19083	1264.16	75045	636.75	0.504	No, M>Mu
SLU 75	4.5	-10678	-163.26	41994	2192.58	13.43	Si
SLU 83	1.39	-19410	1295.47	76330	517.88	0.4	No, M>Mu
SLU 83	4.5	-10833	-157.52	42603	2190.05	13.904	Si
SLU 76	1.39	-19140	1263.78	75268	616.44	0.488	No, M>Mu
SLU 76	4.5	-10730	-165.85	42196	2191.85	13.216	Si
SLU 79	1.39	-19086	1276.94	75057	635.62	0.498	No, M>Mu
SLU 79	4.5	-10653	-161.86	41894	2192.9	13.548	Si
SLU 78	1.39	-19309	1284.19	75932	555.13	0.432	No, M>Mu
SLU 78	4.5	-10816	-167.84	42533	2190.39	13.05	Si
SLU 81	1.39	-19184	1275.44	75443	600.43	0.471	No, M>Mu



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 81	4.5	-10696	-152.93	42064	2192.34	14.335	Si
SLU 80	1.39	-19254	1281.06	75716	575.21	0.449	No, M>Mu
SLU 80	4.5	-10781	-167.01	42399	2191.01	13.119	Si
SLU 84	1.39	-19577	1299.59	76989	455.26	0.35	No, M>Mu
SLU 84	4.5	-10962	-162.66	43108	2187.21	13.446	Si
SLU 82	1.39	-19352	1279.56	76101	539.35	0.422	No, M>Mu
SLU 82	4.5	-10825	-158.08	42569	2190.21	13.855	Si
SLU 77	1.39	-19141	1280.06	75274	615.92	0.481	No, M>Mu
SLU 77	4.5	-10687	-162.7	42028	2192.46	13.476	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 2	1.39	-29675	4945.03	116698	565	0.114	No, M>Mu
SLV 2	4.5	-9777	-937.03	38450	2839.82	3.031	Si
SLV 6	1.39	-29765	2950.14	117053	530.13	0.18	No, M>Mu
SLV 6	4.5	-13205	-536.28	51931	3217.99	6.001	Si
SLV 12	1.39	2815	-1166.82	0	0	0	No, Trazione
SLV 12	4.5	-1754	302.61	6896	701.25	2.317	Si
SLV 15	1.39	2725	-3161.7	0	0	0	No, Trazione
SLV 15	4.5	-5182	703.36	20377	1829.78	2.601	Si
SLV 11	1.39	2815	-1166.82	0	0	0	No, Trazione
SLV 11	4.5	-1754	302.61	6896	701.25	2.317	Si
SLV 5	1.39	-29765	2950.14	117053	530.13	0.18	No, M>Mu
SLV 5	4.5	-13205	-536.28	51931	3217.99	6.001	Si
SLV 14	1.39	-4812	-2606.22	0	0	0	No, e>l/2
SLV 14	4.5	-8502	589.04	33436	2617.34	4.443	Si
SLV 1	1.39	-29675	4945.03	116698	565	0.114	No, M>Mu
SLV 1	4.5	-9777	-937.03	38450	2839.82	3.031	Si
SLV 16	1.39	2725	-3161.7	0	0	0	No, Trazione
SLV 16	4.5	-5182	703.36	20377	1829.78	2.601	Si
SLV 13	1.39	-4812	-2606.22	0	0	0	No, e>l/2
SLV 13	4.5	-8502	589.04	33436	2617.34	4.443	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 76	1.39	-19140	2410	1263.78		75268	0.8476	10833	2755			1.14	Si
SLU 76	4.5	-10730	424	-165.85		42196	0.8476	10833	2755			6.49	Si
SLU 75	1.39	-19083	2413	1264.16		75045	0.8476	10833	2755			1.14	Si
SLU 75	4.5	-10678	420	-163.26		41994	0.8476	10833	2755			6.57	Si
SLU 79	1.39	-19086	2437	1276.94		75057	0.8476	10833	2755			1.13	Si
SLU 79	4.5	-10653	418	-161.86		41894	0.8476	10833	2755			6.6	Si
SLU 77	1.39	-19141	2443	1280.06		75274	0.8476	10833	2755			1.13	Si
SLU 77	4.5	-10687	419	-162.7		42028	0.8476	10833	2755			6.58	Si
SLU 80	1.39	-19254	2443	1281.06		75716	0.8476	10833	2755			1.13	Si
SLU 80	4.5	-10781	427	-167.01		42399	0.8476	10833	2755			6.46	Si
SLU 81	1.39	-19184	2440	1275.44		75443	0.8476	10833	2755			1.13	Si
SLU 81	4.5	-10696	406	-152.93		42064	0.8476	10833	2755			6.79	Si
SLU 83	1.39	-19410	2477	1295.47		76330	0.8476	10833	2755			1.11	Si
SLU 83	4.5	-10833	414	-157.52		42603	0.8476	10833	2755			6.65	Si
SLU 82	1.39	-19352	2447	1279.56		76101	0.8476	10833	2755			1.13	Si
SLU 82	4.5	-10825	415	-158.08		42569	0.8476	10833	2755			6.64	Si
SLU 84	1.39	-19577	2483	1299.59		76989	0.8476	10833	2755			1.11	Si
SLU 84	4.5	-10962	424	-162.66		43108	0.8476	10833	2755			6.5	Si
SLU 78	1.39	-19309	2449	1284.19		75932	0.8476	10833	2755			1.12	Si
SLU 78	4.5	-10816	428	-167.84		42533	0.8476	10833	2755			6.43	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 4	1.39	-22139	7029	4389.55		109066	0.6766	16250	3298			0.47	No, Vu<V
SLV 4	4.5	-6457	2052	-822.71		25391	0.8476	13412	3410			1.66	Si
SLV 13	1.39	-4812	-3629	-2606.22		0	0	8333	0			0	No, Vu<V
SLV 13	4.5	-8502	-1454	589.04		33436	0.8476	15021	3820			2.63	Si
SLV 15	1.39	2725	-4810	-3161.7		0	0	8333	0			0	No, Vu<V
SLV 15	4.5	-5182	-1918	703.36		20377	0.8476	12409	3155			1.65	Si
SLV 3	1.39	-22139	7029	4389.55		109066	0.6766	16250	3298			0.47	No, Vu<V
SLV 3	4.5	-6457	2052	-822.71		25391	0.8476	13412	3410			1.66	Si
SLV 1	1.39	-29675	8209	4945.03		128210	0.7715	16250	3761			0.46	No, Vu<V
SLV 1	4.5	-9777	2517	-937.03		38450	0.8476	16023	4075			1.62	Si
SLV 14	1.39	-4812	-3629	-2606.22		0	0	8333	0			0	No, Vu<V
SLV 14	4.5	-8502	-1454	589.04		33436	0.8476	15021	3820			2.63	Si
SLV 2	1.39	-29675	8209	4945.03		128210	0.7715	16250	3761			0.46	No, Vu<V
SLV 2	4.5	-9777	2517	-937.03		38450	0.8476	16023	4075			1.62	Si
SLV 12	1.39	2815	-2043	-1166.82		0	0	8333	0			0	No, Vu<V
SLV 12	4.5	-1754	-1070	302.61		7755	0.7537	9884	2235			2.09	Si
SLV 16	1.39	2725	-4810	-3161.7		0	0	8333	0			0	No, Vu<V
SLV 16	4.5	-5182	-1918	703.36		20377	0.8476	12409	3155			1.65	Si
SLV 11	1.39	2815	-2043	-1166.82		0	0	8333	0			0	No, Vu<V
SLV 11	4.5	-1754	-1070	302.61		7755	0.7537	9884	2235			2.09	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.05 denominatore 8 $\gamma_M = 2$

Quota 3.23 va 0.05 denominatore 8 n° 1/2									
Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica	
SLV 12	143750	0.31	4917	-1250	80.28	179.99	2.24	Si	
SLV 11	143750	0.31	4917	-1250	80.28	179.99	2.24	Si	
SLV 7	143750	0.31	9915	-2521	80.28	347.51	4.33	Si	
SLV 8	143750	0.31	9915	-2521	80.28	347.51	4.33	Si	
SLV 15	143750	0.31	20773	-5282	80.28	657.63	8.19	Si	
SLV 16	143750	0.31	20773	-5282	80.28	657.63	8.19	Si	
SLV 3	143750	0.31	37436	-9519	80.28	990.43	12.34	Si	



Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 4	143750	0.31	37436	-9519	80.28	990.43	12.34	Si
SLV 13	143750	0.31	39363	-10009	80.28	1017.73	12.68	Si
SLV 14	143750	0.31	39363	-10009	80.28	1017.73	12.68	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 3.23 $W_a = 0.05$ $T_a = 0.0754$

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 16	-5338	2725	-3	0	0	0	0	7.60357	No, Trazione
SLV 12	-1628	2815	-20	0	0	0	0	6.53088	No, Trazione
SLV 11	-1628	2815	-20	0	0	0	0	6.53088	No, Trazione
SLV 15	-5338	2725	-3	0	0	0	0	7.60357	No, Trazione
SLV 13	-8375	-4812	9	0.044	984.6	0.96	0.65844	7.60357	No
SLV 14	-8375	-4812	9	0.044	984.6	0.96	0.65844	7.60357	No
SLV 1	-7897	-29675	4	0.044	936	0.958	0.67039	7.60357	No
SLV 2	-7897	-29675	4	0.044	936	0.958	0.67039	7.60357	No
SLV 4	-4861	-22139	-8	0.045	627.7	0.941	0.70018	7.60357	No
SLV 3	-4861	-22139	-8	0.045	627.7	0.941	0.70018	7.60357	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.35	SLV 84	No
V_SLV	1.109	SLV 84	Si
PF_SLV	0	SLV 16	No
V_SLV	0	SLV 11	No
PFFP_SLV	2.242	SLV 11	Si
R_SLV	0	SLV 16	No

Maschio 68

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota s.	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.058	1.046	-15.058	1.406	L3	L4	0.36	0.14	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ_0	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 79	1.39	-968	-149.76	19197	133.11	0.889	No, M>Mu
SLV 79	3.49	-1695	-54.76	33621	179.12	3.271	Si
SLV 84	1.39	-986	-152.58	19568	134.88	0.884	No, M>Mu
SLV 84	3.49	-1733	-56.21	34384	180.26	3.207	Si
SLV 82	1.39	-968	-149.74	19205	133.15	0.889	No, M>Mu
SLV 82	3.49	-1697	-55.07	33674	179.2	3.254	Si
SLV 80	1.39	-962	-148.79	19081	132.55	0.891	No, M>Mu
SLV 80	3.49	-1681	-54.82	33348	178.68	3.26	Si
SLV 78	1.39	-972	-150.38	19287	133.54	0.888	No, M>Mu
SLV 78	3.49	-1703	-55.24	33781	179.37	3.247	Si
SLV 74	1.39	-960	-148.51	19040	132.36	0.891	No, M>Mu
SLV 74	3.49	-1681	-54.04	33345	178.67	3.307	Si
SLV 83	1.39	-992	-153.55	19685	135.42	0.882	No, M>Mu
SLV 83	3.49	-1747	-56.16	34658	180.64	3.217	Si
SLV 75	1.39	-954	-147.54	18924	131.79	0.893	No, M>Mu
SLV 75	3.49	-1667	-54.09	33071	178.22	3.295	Si
SLV 81	1.39	-974	-150.71	19322	133.71	0.887	No, M>Mu
SLV 81	3.49	-1711	-55.01	33948	179.63	3.265	Si
SLV 77	1.39	-978	-151.35	19403	134.1	0.886	No, M>Mu
SLV 77	3.49	-1716	-55.18	34055	179.79	3.258	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 9	1.39	-1105	-137.1	21931	163.25	1.191	Si
SLV 9	3.49	-10557	630.55	209456	0	0	No, Rottura per schiacciamento
SLV 1	1.39	-953	-130.39	18908	144.99	1.112	Si
SLV 1	3.49	-6299	358.13	124972	0	0	No, Rottura per schiacciamento
SLV 2	1.39	-953	-130.39	18908	144.99	1.112	Si
SLV 2	3.49	-6299	358.13	124972	0	0	No, Rottura per schiacciamento
SLV 7	1.39	-188	-63.01	0	0	0	No, e>l/2
SLV 7	3.49	8343	-703.02	0	0	0	No, Trazione
SLV 5	1.39	-1198	-147.68	23773	173.71	1.176	Si
SLV 5	3.49	-11854	737.52	235198	0	0	No, Rottura per schiacciamento
SLV 3	1.39	-650	-104.99	12895	104.63	0.997	No, M>Mu
SLV 3	3.49	-239	-74.04	0	0	0	No, e>l/2
SLV 10	1.39	-1105	-137.1	21931	163.25	1.191	Si
SLV 10	3.49	-10557	630.55	209456	0	0	No, Rottura per schiacciamento
SLV 6	1.39	-1198	-147.68	23773	173.71	1.176	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 6	3.49	-11854	737.52	235198	0	0	No, Rottura per schiacciamento
SLV 4	1.39	-650	-104.99	12895	104.63	0.997	No, $M > \mu$
SLV 4	3.49	-239	-74.04	0	0	0	No, $e \geq l/2$
SLV 8	1.39	-188	-63.01	0	0	0	No, $e \geq l/2$
SLV 8	3.49	8343	-703.02	0	0	0	No, Trazione

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 77	1.39	-978	-189	-151.35		92279	0.0757	10833	115			0.61	No, $V_u < V$
SLU 77	3.49	-1716	-105	-55.18		34055	0.36	10096	509			4.86	Si
SLU 84	1.39	-986	-191	-152.58		92862	0.0759	10833	115			0.6	No, $V_u < V$
SLU 84	3.49	-1733	-105	-56.21		34384	0.36	10140	511			4.86	Si
SLU 80	1.39	-962	-186	-148.79		90588	0.0758	10833	115			0.62	No, $V_u < V$
SLU 80	3.49	-1681	-102	-54.82		33348	0.36	10002	504			4.94	Si
SLU 83	1.39	-992	-192	-153.55		93643	0.0757	10833	115			0.6	No, $V_u < V$
SLU 83	3.49	-1747	-107	-56.16		34658	0.36	10177	513			4.81	Si
SLU 81	1.39	-974	-189	-150.71		91867	0.0757	10833	115			0.61	No, $V_u < V$
SLU 81	3.49	-1711	-105	-55.01		33948	0.36	10082	508			4.85	Si
SLU 79	1.39	-968	-187	-149.76		91369	0.0756	10833	115			0.61	No, $V_u < V$
SLU 79	3.49	-1695	-104	-54.76		33621	0.36	10038	506			4.89	Si
SLU 75	1.39	-954	-185	-147.54		89724	0.0759	10833	115			0.62	No, $V_u < V$
SLU 75	3.49	-1667	-102	-54.09		33071	0.36	9965	502			4.95	Si
SLU 74	1.39	-960	-186	-148.51		90504	0.0757	10833	115			0.62	No, $V_u < V$
SLU 74	3.49	-1681	-103	-54.04		33345	0.36	10002	504			4.89	Si
SLU 78	1.39	-972	-188	-150.38		91499	0.0759	10833	115			0.61	No, $V_u < V$
SLU 78	3.49	-1703	-103	-55.24		33781	0.36	10060	507			4.91	Si
SLU 82	1.39	-968	-188	-149.74		91087	0.0759	10833	115			0.61	No, $V_u < V$
SLU 82	3.49	-1697	-103	-55.07		33674	0.36	10045	506			4.9	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 9	1.39	-1105	-751	-137.1		47028	0.1679	16250	382			0.51	No, $V_u < V$
SLV 9	3.49	-10557	1905	630.55		209456	0.36	16250	819			0.43	No, $V_u < V$
SLV 16	1.39	-340	247	-69.72		0	0	8333	0			0	No, $V_u < V$
SLV 16	3.49	4085	-105	-430.6		0	0	8333	0			0	No, $V_u < V$
SLV 3	1.39	-650	-92	-104.99		83849	0.0554	16250	126			1.37	Si
SLV 3	3.49	-239	-1126	-74.04		0	0	8333	0			0	No, $V_u < V$
SLV 10	1.39	-1105	-751	-137.1		47028	0.1679	16250	382			0.51	No, $V_u < V$
SLV 10	3.49	-10557	1905	630.55		209456	0.36	16250	819			0.43	No, $V_u < V$
SLV 12	1.39	-95	602	-52.43		0	0	8333	0			0	No, $V_u < V$
SLV 12	3.49	9641	-1737	-809.99		0	0	8333	0			0	No, $V_u < V$
SLV 11	1.39	-95	602	-52.43		0	0	8333	0			0	No, $V_u < V$
SLV 11	3.49	9641	-1737	-809.99		0	0	8333	0			0	No, $V_u < V$
SLV 7	1.39	-188	500	-63.01		0	0	8333	0			0	No, $V_u < V$
SLV 7	3.49	8343	-2043	-703.02		0	0	8333	0			0	No, $V_u < V$
SLV 8	1.39	-188	500	-63.01		0	0	8333	0			0	No, $V_u < V$
SLV 8	3.49	8343	-2043	-703.02		0	0	8333	0			0	No, $V_u < V$
SLV 4	1.39	-650	-92	-104.99		83849	0.0554	16250	126			1.37	Si
SLV 4	3.49	-239	-1126	-74.04		0	0	8333	0			0	No, $V_u < V$
SLV 15	1.39	-340	247	-69.72		0	0	8333	0			0	No, $V_u < V$
SLV 15	3.49	4085	-105	-430.6		0	0	8333	0			0	No, $V_u < V$

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 W_a 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 11	143750	0.31	0	9607	17.43	0	0	No, Trazione
SLV 6	143750	0.31	235795	-11884	17.43	0	0	No, Rottura per schiacciamento
SLV 10	143750	0.31	210042	-10586	17.43	0	0	No, Rottura per schiacciamento
SLV 12	143750	0.31	0	9607	17.43	0	0	No, Trazione
SLV 1	143750	0.31	125609	-6331	17.43	0	0	No, Rottura per schiacciamento
SLV 9	143750	0.31	210042	-10586	17.43	0	0	No, Rottura per schiacciamento
SLV 7	143750	0.31	0	8309	17.43	0	0	No, Trazione
SLV 2	143750	0.31	125609	-6331	17.43	0	0	No, Rottura per schiacciamento
SLV 8	143750	0.31	0	8309	17.43	0	0	No, Trazione
SLV 5	143750	0.31	235795	-11884	17.43	0	0	No, Rottura per schiacciamento

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 3.23 $W_a = 0.03$ $T_a = 0.1615$

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 5	398	-1198	2	0	0	0	0	14.1455	No, Trazione
SLV 6	398	-1198	2	0	0	0	0	14.1455	No, Trazione
SLV 2	-473	-953	4	0.017	75	0.912	0.27101	14.15828	No
SLV 1	-473	-953	4	0.017	75	0.912	0.27101	14.15828	No
SLV 15	-2967	-340	-4	0.019	328.2	0.975	0.27771	14.15828	No
SLV 16	-2967	-340	-4	0.019	328.2	0.975	0.27771	14.15828	No
SLV 4	-1622	-650	4	0.019	191.3	0.959	0.28322	14.15828	No
SLV 3	-1622	-650	4	0.019	191.3	0.959	0.28322	14.15828	No
SLV 14	-1818	-643	-4	0.019	211.2	0.963	0.28334	14.15828	No
SLV 13	-1818	-643	-4	0.019	211.2	0.963	0.28334	14.15828	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
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Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0.882	SLU 83	No
V_SLU	0.598	SLU 83	No
PF_SLV	0	SLV 16	No
V_SLV	0	SLV 3	No
PFFP_SLV	0	SLV 16	No
R_SLV	0	SLV 6	No

Maschio 69

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.058	2.206	-15.058	6.661	L3	L4	4.455	0.14	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	t0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 42	1.39	-55521	20059.35	89019	0	0	No, Rottura per schiacciamento
SLU 42	3.49	-38818	-2620.49	62239	20401.32	7.785	Si
SLU 60	1.39	-58294	21651.8	93465	0	0	No, Rottura per schiacciamento
SLU 60	3.49	-40446	-2435.51	64849	18370.03	7.543	Si
SLU 63	1.39	-59104	22006.73	94763	0	0	No, Rottura per schiacciamento
SLU 63	3.49	-41061	-2421.44	65835	17542.44	7.245	Si
SLU 59	1.39	-57250	21480.29	91791	0	0	No, Rottura per schiacciamento
SLU 59	3.49	-39790	-2259.26	63797	19216.97	8.506	Si
SLU 61	1.39	-58250	21718.44	93394	0	0	No, Rottura per schiacciamento
SLU 61	3.49	-40390	-2344.8	64759	18444.4	7.866	Si
SLU 58	1.39	-57294	21413.65	91862	0	0	No, Rottura per schiacciamento
SLU 58	3.49	-39847	-2349.98	63887	19145.57	8.147	Si
SLU 56	1.39	-57884	21587.55	92807	0	0	No, Rottura per schiacciamento
SLU 56	3.49	-40308	-2396.04	64626	18552.41	7.743	Si
SLU 55	1.39	-56367	21236.43	90375	0	0	No, Rottura per schiacciamento
SLU 55	3.49	-39081	-2122.14	62660	20089.33	9.467	Si
SLU 57	1.39	-57839	21654.19	92736	0	0	No, Rottura per schiacciamento
SLU 57	3.49	-40251	-2305.32	64536	18626.1	8.08	Si
SLU 62	1.39	-59148	21940.09	94834	0	0	No, Rottura per schiacciamento
SLU 62	3.49	-41118	-2512.16	65925	17464.75	6.952	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 12	1.39	-47109	41131.15	75532	40068.24	0.974	No, M>Mu
SLV 12	3.49	-37853	-2192.42	60691	42436.67	19.356	Si
SLV 11	1.39	-47109	41131.15	75532	40068.24	0.974	No, M>Mu
SLV 11	3.49	-37853	-2192.42	60691	42436.67	19.356	Si
SLV 3	1.39	-56305	21728.62	90276	32755.49	1.507	Si
SLV 3	3.49	-37781	1536.34	60576	42435.47	27.621	Si
SLV 8	1.39	-53720	40071.77	86131	35310.8	0.881	No, M>Mu
SLV 8	3.49	-40893	-340.67	65565	42211.18	123.907	Si
SLV 16	1.39	-34269	25259.86	54945	42008.72	1.663	Si
SLV 16	3.49	-27647	-4636.16	44327	39242.25	8.464	Si
SLV 13	1.39	-29875	10596.53	47899	40458.98	3.818	Si
SLV 13	3.49	-21939	-4879.04	35176	34801.02	7.133	Si
SLV 7	1.39	-53720	40071.77	86131	35310.8	0.881	No, M>Mu
SLV 7	3.49	-40893	-340.67	65565	42211.18	123.907	Si
SLV 14	1.39	-29875	10596.53	47899	40458.98	3.818	Si
SLV 14	3.49	-21939	-4879.04	35176	34801.02	7.133	Si
SLV 15	1.39	-34269	25259.86	54945	42008.72	1.663	Si
SLV 15	3.49	-27647	-4636.16	44327	39242.25	8.464	Si
SLV 4	1.39	-56305	21728.62	90276	32755.49	1.507	Si
SLV 4	3.49	-37781	1536.34	60576	42435.47	27.621	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	l'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 83	1.39	-65310	1218	23857		104714	4.455	10833	6757			5.55	Si
SLU 83	3.49	-45547	137	-2969.04		73026	4.455	10833	6757			49.3	Si
SLU 84	1.39	-65266	1193	23923.64		104643	4.455	10833	6757			5.66	Si
SLU 84	3.49	-45490	112	-2878.32		72936	4.455	10833	6757			60.32	Si
SLU 74	1.39	-63192	1174	23216.17		101318	4.455	10833	6757			5.76	Si
SLU 74	3.49	-44065	126	-2776.28		70651	4.455	10833	6757			53.65	Si
SLU 77	1.39	-64046	1184	23504.46		102687	4.455	10833	6757			5.71	Si
SLU 77	3.49	-44736	122	-2852.92		71727	4.455	10833	6757			55.39	Si
SLU 80	1.39	-63412	1144	23397.2		101671	4.455	10833	6757			5.91	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 80	3.49	-44219	91	-2716.14		70898	4.455	10833	6757			74.51	Si
SLU 75	1.39	-63148	1149	23282.81		101247	4.455	10833	6757			5.88	Si
SLU 75	3.49	-44009	101	-2685.56		70560	4.455	10833	6757			66.97	Si
SLU 79	1.39	-63456	1169	23330.56		101742	4.455	10833	6757			5.78	Si
SLU 79	3.49	-44275	116	-2806.86		70988	4.455	10833	6757			58.39	Si
SLU 81	1.39	-64456	1208	23568.71		103345	4.455	10833	6757			5.59	Si
SLU 81	3.49	-44875	141	-2892.4		71950	4.455	10833	6757			47.92	Si
SLU 78	1.39	-64002	1159	23571.1		102616	4.455	10833	6757			5.83	Si
SLU 78	3.49	-44680	97	-2762.21		71637	4.455	10833	6757			69.7	Si
SLU 82	1.39	-64412	1183	23635.35		103274	4.455	10833	6757			5.71	Si
SLU 82	3.49	-44819	116	-2801.68		71859	4.455	10833	6757			58.27	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 10	1.39	-32460	-14495	-7746.62		52044	4.455	16250	10135			0.7	No, Vu<V
SLV 10	3.49	-18828	-15133	-3002.03		30187	4.455	14371	8963			0.59	No, Vu<V
SLV 5	1.39	-39071	-13987	-8805.99		62643	4.455	16250	10135			0.72	No, Vu<V
SLV 5	3.49	-21868	-14680	-1150.28		35062	4.455	15346	9571			0.65	No, Vu<V
SLV 6	1.39	-39071	-13987	-8805.99		62643	4.455	16250	10135			0.72	No, Vu<V
SLV 6	3.49	-21868	-14680	-1150.28		35062	4.455	15346	9571			0.65	No, Vu<V
SLV 4	1.39	-56305	6146	21728.62		90276	4.455	16250	10135			1.65	Si
SLV 4	3.49	-37781	5316	1536.34		60576	4.455	16250	10135			1.91	Si
SLV 8	1.39	-53720	16073	40071.77		86331	4.4447	16250	10112			0.63	No, Vu<V
SLV 8	3.49	-40893	15271	-340.67		65565	4.455	16250	10135			0.66	No, Vu<V
SLV 9	1.39	-32460	-14495	-7746.62		52044	4.455	16250	10135			0.7	No, Vu<V
SLV 9	3.49	-18828	-15133	-3002.03		30187	4.455	14371	8963			0.59	No, Vu<V
SLV 12	1.39	-47109	15564	41131.15		82815	4.0632	16250	9244			0.59	No, Vu<V
SLV 12	3.49	-37853	14818	-2192.42		60691	4.455	16250	10135			0.68	No, Vu<V
SLV 3	1.39	-56305	6146	21728.62		90276	4.455	16250	10135			1.65	Si
SLV 3	3.49	-37781	5316	1536.34		60576	4.455	16250	10135			1.91	Si
SLV 11	1.39	-47109	15564	41131.15		82815	4.0632	16250	9244			0.59	No, Vu<V
SLV 11	3.49	-37853	14818	-2192.42		60691	4.455	16250	10135			0.68	No, Vu<V
SLV 7	1.39	-53720	16073	40071.77		86331	4.4447	16250	10112			0.63	No, Vu<V
SLV 7	3.49	-40893	15271	-340.67		65565	4.455	16250	10135			0.66	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 10	143750	0.31	30913	-19280	215.65	1008.18	4.68	Si
SLV 9	143750	0.31	30913	-19280	215.65	1008.18	4.68	Si
SLV 6	143750	0.31	35711	-22273	215.65	1103.44	5.12	Si
SLV 5	143750	0.31	35711	-22273	215.65	1103.44	5.12	Si
SLV 14	143750	0.31	35973	-22436	215.65	1108.16	5.14	Si
SLV 13	143750	0.31	35973	-22436	215.65	1108.16	5.14	Si
SLV 15	143750	0.31	45108	-28134	215.65	1242.33	5.76	Si
SLV 16	143750	0.31	45108	-28134	215.65	1242.33	5.76	Si
SLV 2	143750	0.31	51966	-32411	215.65	1303.88	6.05	Si
SLV 1	143750	0.31	51966	-32411	215.65	1303.88	6.05	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 3.23 Wa = 0.03 Ta = 0.1615

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 3	-27624	-56305	-31	0.019	3135.6	0.969	0.28964	14.15828	No
SLV 4	-27624	-56305	-31	0.019	3135.6	0.969	0.28964	14.15828	No
SLV 7	-29042	-53720	-20	0.02	3279.9	0.97	0.29433	14.1455	No
SLV 8	-29042	-53720	-20	0.02	3279.9	0.97	0.29433	14.1455	No
SLV 1	-23915	-51910	-24	0.02	2758.1	0.965	0.29556	14.15828	No
SLV 2	-23915	-51910	-24	0.02	2758.1	0.965	0.29556	14.15828	No
SLV 14	-15604	-29875	31	0.019	1913	0.951	0.29777	14.15828	No
SLV 13	-15604	-29875	31	0.019	1913	0.951	0.29777	14.15828	No
SLV 16	-19313	-34269	24	0.02	2289.9	0.958	0.29934	14.15828	No
SLV 15	-19313	-34269	24	0.02	2289.9	0.958	0.29934	14.15828	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0	SLU 31	No
V_SLU	5.548	SLU 83	Si
PF_SLV	0.881	SLV 7	No
V_SLV	0.592	SLV 9	No
PFFP_SLV	4.675	SLV 9	Si
R_SLV	0.02	SLV 3	No

Maschio 70

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-13.763	-4.784	-13.763	-3.509	L3	Z medio 278 cm	1.275	0.28	1.39	1.36	1.42			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{med}	τ_0	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2



Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 78	1.39	-21621	-689.83	60564	3535.44	5.125	Si
SLU 78	2.75	-19844	333.7	55585	4018.02	12.041	Si
SLU 76	1.39	-21428	-691.54	60024	3594.43	5.198	Si
SLU 76	2.75	-19629	317.78	54985	4066.83	12.798	Si
SLU 83	1.39	-21748	-712.27	60919	3495.77	4.908	Si
SLU 83	2.75	-19954	359.2	55894	3992.07	11.114	Si
SLU 82	1.39	-21710	-714.18	60813	3507.69	4.911	Si
SLU 82	2.75	-19876	347.28	55675	4010.49	11.548	Si
SLU 75	1.39	-21373	-688.1	59869	3611.17	5.248	Si
SLU 75	2.75	-19595	327.92	54888	4074.52	12.425	Si
SLU 81	1.39	-21499	-710.53	60223	3572.88	5.028	Si
SLU 81	2.75	-19705	353.41	55197	4049.77	11.459	Si
SLU 84	1.39	-21958	-715.91	61508	3428.28	4.789	Si
SLU 84	2.75	-20125	353.06	56372	3950.93	11.19	Si
SLU 79	1.39	-21326	-687.19	59737	3625.16	5.275	Si
SLU 79	2.75	-19594	333.78	54885	4074.74	12.208	Si
SLU 80	1.39	-21536	-690.84	60327	3561.57	5.155	Si
SLU 80	2.75	-19764	327.65	55363	4036.3	12.319	Si
SLU 77	1.39	-21411	-686.18	59974	3599.82	5.246	Si
SLU 77	2.75	-19673	339.83	55107	4057.06	11.938	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 7	1.39	-4603	1740.15	12895	2624.93	1.508	Si
SLV 7	2.75	-4981	-29.78	13952	2812.6	94.459	Si
SLV 5	1.39	-24584	-2462.28	68864	6839.45	2.778	Si
SLV 5	2.75	-22879	105.09	64086	6935.23	65.992	Si
SLV 13	1.39	-19212	-1542.22	53816	6853.25	4.444	Si
SLV 13	2.75	-15733	762.28	44070	6412.15	8.412	Si
SLV 11	1.39	-5352	1485.94	14991	2993.04	2.014	Si
SLV 11	2.75	-4574	295.33	12812	2610.08	8.838	Si
SLV 6	1.39	-24584	-2462.28	68864	6839.45	2.778	Si
SLV 6	2.75	-22879	105.09	64086	6935.23	65.992	Si
SLV 12	1.39	-5352	1485.94	14991	2993.04	2.014	Si
SLV 12	2.75	-4574	295.33	12812	2610.08	8.838	Si
SLV 10	1.39	-25332	-2716.49	70960	6770.61	2.492	Si
SLV 10	2.75	-22472	430.2	62947	6945.51	16.145	Si
SLV 8	1.39	-4603	1740.15	12895	2624.93	1.508	Si
SLV 8	2.75	-4981	-29.78	13952	2812.6	94.459	Si
SLV 14	1.39	-19212	-1542.22	53816	6853.25	4.444	Si
SLV 14	2.75	-15733	762.28	44070	6412.15	8.412	Si
SLV 9	1.39	-25332	-2716.49	70960	6770.61	2.492	Si
SLV 9	2.75	-22472	430.2	62947	6945.51	16.145	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 80	1.39	-21536	-3410	-690.84		60327	1.275	10833	3867			1.13	Si
SLU 80	2.75	-19764	-2660	327.65		55363	1.275	10833	3867			1.45	Si
SLU 83	1.39	-21748	-3524	-712.27		60919	1.275	10833	3867			1.1	Si
SLU 83	2.75	-19954	-2754	359.2		55894	1.275	10833	3867			1.4	Si
SLU 82	1.39	-21710	-3515	-714.18		60813	1.275	10833	3867			1.1	Si
SLU 82	2.75	-19876	-2769	347.28		55675	1.275	10833	3867			1.4	Si
SLU 75	1.39	-21373	-3396	-688.1		59869	1.275	10833	3867			1.14	Si
SLU 75	2.75	-19595	-2655	327.92		54888	1.275	10833	3867			1.46	Si
SLU 79	1.39	-21326	-3388	-687.19		59737	1.275	10833	3867			1.14	Si
SLU 79	2.75	-19594	-2626	333.78		54885	1.275	10833	3867			1.47	Si
SLU 76	1.39	-21428	-3393	-691.54		60024	1.275	10833	3867			1.14	Si
SLU 76	2.75	-19629	-2664	317.78		54985	1.275	10833	3867			1.45	Si
SLU 81	1.39	-21499	-3493	-710.53		60223	1.275	10833	3867			1.11	Si
SLU 81	2.75	-19705	-2735	353.41		55197	1.275	10833	3867			1.41	Si
SLU 84	1.39	-21958	-3546	-715.91		61508	1.275	10833	3867			1.09	Si
SLU 84	2.75	-20125	-2788	353.06		56372	1.275	10833	3867			1.39	Si
SLU 78	1.39	-21621	-3427	-689.83		60564	1.275	10833	3867			1.13	Si
SLU 78	2.75	-19844	-2674	333.7		55585	1.275	10833	3867			1.45	Si
SLU 77	1.39	-21411	-3406	-686.18		59974	1.275	10833	3867			1.14	Si
SLU 77	2.75	-19673	-2640	339.83		55107	1.275	10833	3867			1.47	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 13	1.39	-19212	-5814	-1542.22		53816	1.275	16250	5801			1	No, Vu<V
SLV 13	2.75	-15733	-5049	762.28		44070	1.275	16250	5801			1.15	Si
SLV 10	1.39	-25332	-8156	-2716.49		70960	1.275	16250	5801			0.71	No, Vu<V
SLV 10	2.75	-22472	-7390	430.2		62947	1.275	16250	5801			0.79	No, Vu<V
SLV 5	1.39	-24584	-7001	-2462.28		68864	1.275	16250	5801			0.83	No, Vu<V
SLV 5	2.75	-22879	-6341	105.09		64086	1.275	16250	5801			0.91	No, Vu<V
SLV 12	1.39	-5352	2385	1485.94		17706	1.0795	11874	3589			1.51	Si
SLV 12	2.75	-4574	2793	295.33		12812	1.275	10896	3890			1.39	Si
SLV 11	1.39	-5352	2385	1485.94		17706	1.0795	11874	3589			1.51	Si
SLV 11	2.75	-4574	2793	295.33		12812	1.275	10896	3890			1.39	Si
SLV 8	1.39	-4603	3540	1740.15		21120	0.7784	12557	2737			0.77	No, Vu<V
SLV 8	2.75	-4981	3841	-29.78		13952	1.275	11124	3971			1.03	Si
SLV 7	1.39	-4603	3540	1740.15		21120	0.7784	12557	2737			0.77	No, Vu<V
SLV 7	2.75	-4981	3841	-29.78		13952	1.275	11124	3971			1.03	Si
SLV 9	1.39	-25332	-8156	-2716.49		70960	1.275	16250	5801			0.71	No, Vu<V
SLV 9	2.75	-22472	-7390	430.2		62947	1.275	16250	5801			0.79	No, Vu<V
SLV 6	1.39	-24584	-7001	-2462.28		68864	1.275	16250	5801			0.83	No, Vu<V
SLV 6	2.75	-22879	-6341	105.09		64086	1.275	16250	5801			0.91	No, Vu<V
SLV 14	1.39	-19212	-5814	-1542.22		53816	1.275	16250	5801			1	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scor.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 14	2.75	-15733	-5049	762.28		44070	1.275	16250	5801			1.15	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 2.07 Wa 0.05 denominatore $8 \gamma M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 7	143750	0.29	13372	-4774	15.55	595.2	38.28	Si
SLV 8	143750	0.29	13372	-4774	15.55	595.2	38.28	Si
SLV 12	143750	0.29	13920	-4970	15.55	616.47	39.64	Si
SLV 11	143750	0.29	13920	-4970	15.55	616.47	39.64	Si
SLV 4	143750	0.29	31813	-11357	15.55	1176.02	75.63	Si
SLV 3	143750	0.29	31813	-11357	15.55	1176.02	75.63	Si
SLV 16	143750	0.29	33640	-12009	15.55	1218.41	78.35	Si
SLV 15	143750	0.29	33640	-12009	15.55	1218.41	78.35	Si
SLV 1	143750	0.29	48167	-17195	15.55	1458.36	93.78	Si
SLV 2	143750	0.29	48167	-17195	15.55	1458.36	93.78	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 2.07 Wa = 0.05 Ta = 0.0115

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 14	-15733	-19212	70	0.099	1672.4	0.987	1.46043	3.06002	No
SLV 13	-15733	-19212	70	0.099	1672.4	0.987	1.46043	3.06002	No
SLV 4	-11720	-10724	-53	0.1	1263.4	0.983	1.4802	3.06002	No
SLV 3	-11720	-10724	-53	0.1	1263.4	0.983	1.4802	3.06002	No
SLV 15	-10364	-13218	53	0.1	1125.2	0.981	1.48137	3.06002	No
SLV 16	-10364	-13218	53	0.1	1125.2	0.981	1.48137	3.06002	No
SLV 2	-17089	-16718	-36	0.101	1810.6	0.988	1.48964	3.06002	No
SLV 1	-17089	-16718	-36	0.101	1810.6	0.988	1.48964	3.06002	No
SLV 9	-22472	-25332	53	0.1	2359.2	0.991	1.4727	3.00098	No
SLV 10	-22472	-25332	53	0.1	2359.2	0.991	1.4727	3.00098	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.789	SLU 84	Si
V_SLU	1.091	SLU 84	Si
PF_SLV	1.508	SLV 7	Si
V_SLV	0.711	SLV 9	No
PFFP_SLV	38.276	SLV 7	Si
R_SLV	0.477	SLV 13	No

Maschio 71

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-4.784	-13.763	-3.509	Z medio 278 cm	L4	1.275	0.28	2.29	2.32	2.26			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 75	2.81	-19084	-541.51	53457	4182.02	7.723	Si
SLU 75	5.07	-15076	416.01	42231	4628.3	11.126	Si
SLU 76	2.81	-19113	-553.21	53537	4176.27	7.549	Si
SLU 76	5.07	-15108	417.26	42321	4627.53	11.09	Si
SLU 82	2.81	-19339	-557.07	54173	4129.67	7.413	Si
SLU 82	5.07	-15244	432.76	42700	4623.76	10.684	Si
SLU 84	2.81	-19585	-557.37	54861	4076.68	7.314	Si
SLU 84	5.07	-15472	439.04	43340	4615.57	10.513	Si
SLU 78	2.81	-19329	-541.8	54145	4131.78	7.626	Si
SLU 78	5.07	-15305	422.29	42872	4621.78	10.945	Si
SLU 80	2.81	-19253	-542.94	53930	4147.77	7.639	Si
SLU 80	5.07	-15235	414.83	42675	4624.03	11.147	Si
SLU 81	2.81	-19181	-541.23	53730	4162.42	7.691	Si
SLU 81	5.07	-15090	419.69	42270	4627.98	11.027	Si
SLU 73	2.81	-18867	-552.91	52850	4224.17	7.64	Si
SLU 73	5.07	-14880	410.98	41681	4632.08	11.271	Si
SLU 83	2.81	-19427	-541.53	54417	4111.14	7.592	Si
SLU 83	5.07	-15319	425.97	42910	4621.32	10.849	Si
SLU 77	2.81	-19171	-525.96	53701	4164.46	7.918	Si
SLU 77	5.07	-15151	409.22	42442	4626.41	11.306	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 5	2.81	-22140	-1790.29	62016	6950.32	3.882	Si
SLV 5	5.07	-17388	451.09	48706	6666.11	14.778	Si
SLV 16	2.81	-10108	-313.19	28313	4950.45	15.807	Si
SLV 16	5.07	-7663	1048.03	21465	4026.93	3.842	Si
SLV 11	2.81	-4646	1022.67	13013	2646.08	2.587	Si
SLV 11	5.07	-3618	49.17	10135	2115.22	43.018	Si
SLV 8	2.81	-5081	1254.31	14233	2861.9	2.282	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 8	5.07	-4129	-516.67	11566	2382.97	4.612	Si
SLV 6	2.81	-22140	-1790.29	62016	6950.32	3.882	Si
SLV 6	5.07	-17388	451.09	48706	6666.11	14.778	Si
SLV 10	2.81	-21704	-2021.93	60796	6951.74	3.438	Si
SLV 10	5.07	-16877	1016.92	47276	6596.29	6.487	Si
SLV 9	2.81	-21704	-2021.93	60796	6951.74	3.438	Si
SLV 9	5.07	-16877	1016.92	47276	6596.29	6.487	Si
SLV 15	2.81	-10108	-313.19	28313	4950.45	15.807	Si
SLV 15	5.07	-7663	1048.03	21465	4026.93	3.842	Si
SLV 7	2.81	-5081	1254.31	14233	2861.9	2.282	Si
SLV 7	5.07	-4129	-516.67	11566	2382.97	4.612	Si
SLV 12	2.81	-4646	1022.67	13013	2646.08	2.587	Si
SLV 12	5.07	-3618	49.17	10135	2115.22	43.018	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 82	2.81	-19339	-2498	-557.07		54173	1.275	10833	3867			1.55	Si
SLU 82	5.07	-15244	-1757	432.76		42700	1.275	10833	3867			2.2	Si
SLU 81	2.81	-19181	-2485	-541.23		53730	1.275	10833	3867			1.56	Si
SLU 81	5.07	-15090	-1663	419.69		42270	1.275	10833	3867			2.33	Si
SLU 77	2.81	-19171	-2400	-525.96		53701	1.275	10833	3867			1.61	Si
SLU 77	5.07	-15151	-1610	409.22		42442	1.275	10833	3867			2.4	Si
SLU 84	2.81	-19585	-2516	-557.37		54861	1.275	10833	3867			1.54	Si
SLU 84	5.07	-15472	-1766	439.04		43340	1.275	10833	3867			2.19	Si
SLU 80	2.81	-19253	-2401	-542.94		53930	1.275	10833	3867			1.61	Si
SLU 80	5.07	-15235	-1691	414.83		42675	1.275	10833	3867			2.29	Si
SLU 78	2.81	-19329	-2413	-541.8		54145	1.275	10833	3867			1.6	Si
SLU 78	5.07	-15305	-1704	422.29		42872	1.275	10833	3867			2.27	Si
SLU 76	2.81	-19113	-2392	-553.21		53537	1.275	10833	3867			1.62	Si
SLU 76	5.07	-15108	-1746	417.26		42321	1.275	10833	3867			2.22	Si
SLU 79	2.81	-19094	-2387	-527.1		53486	1.275	10833	3867			1.62	Si
SLU 79	5.07	-15081	-1597	401.76		42245	1.275	10833	3867			2.42	Si
SLU 75	2.81	-19084	-2396	-541.51		53457	1.275	10833	3867			1.61	Si
SLU 75	5.07	-15076	-1696	416.01		42231	1.275	10833	3867			2.28	Si
SLU 83	2.81	-19427	-2502	-541.53		54417	1.275	10833	3867			1.55	Si
SLU 83	5.07	-15319	-1671	425.97		42910	1.275	10833	3867			2.31	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 7	2.81	-5081	3835	1254.31		15485	1.1719	11430	3751			0.98	No, Vu<V
SLV 7	5.07	-4129	3956	-516.67		11566	1.275	10646	3801			0.96	No, Vu<V
SLV 8	2.81	-5081	3835	1254.31		15485	1.1719	11430	3751			0.98	No, Vu<V
SLV 8	5.07	-4129	3956	-516.67		11566	1.275	10646	3801			0.96	No, Vu<V
SLV 9	2.81	-21704	-7061	-2021.93		60796	1.275	16250	5801			0.82	No, Vu<V
SLV 9	5.07	-16877	-6124	1016.92		47276	1.275	16250	5801			0.95	No, Vu<V
SLV 10	2.81	-21704	-7061	-2021.93		60796	1.275	16250	5801			0.82	No, Vu<V
SLV 10	5.07	-16877	-6124	1016.92		47276	1.275	16250	5801			0.95	No, Vu<V
SLV 12	2.81	-4646	2688	1022.67		13251	1.2521	10984	3851			1.43	Si
SLV 12	5.07	-3618	2441	49.17		10135	1.275	10360	3699			1.52	Si
SLV 13	2.81	-15225	-4987	-1226.57		42648	1.275	16250	5801			1.16	Si
SLV 13	5.07	-11641	-4894	1338.35		32608	1.275	14855	5303			1.08	Si
SLV 11	2.81	-4646	2688	1022.67		13251	1.2521	10984	3851			1.43	Si
SLV 11	5.07	-3618	2441	49.17		10135	1.275	10360	3699			1.52	Si
SLV 5	2.81	-22140	-5914	-1790.29		62016	1.275	16250	5801			0.98	No, Vu<V
SLV 5	5.07	-17388	-4609	451.09		48706	1.275	16250	5801			1.26	Si
SLV 6	2.81	-22140	-5914	-1790.29		62016	1.275	16250	5801			0.98	No, Vu<V
SLV 6	5.07	-17388	-4609	451.09		48706	1.275	16250	5801			1.26	Si
SLV 14	2.81	-15225	-4987	-1226.57		42648	1.275	16250	5801			1.16	Si
SLV 14	5.07	-11641	-4894	1338.35		32608	1.275	14855	5303			1.08	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.94 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 12	143750	0.33	11285	-4029	47.87	511.91	10.69	Si
SLV 11	143750	0.33	11285	-4029	47.87	511.91	10.69	Si
SLV 7	143750	0.33	14580	-5205	47.87	641.76	13.41	Si
SLV 8	143750	0.33	14580	-5205	47.87	641.76	13.41	Si
SLV 16	143750	0.33	21316	-7610	47.87	879.5	18.37	Si
SLV 15	143750	0.33	21316	-7610	47.87	879.5	18.37	Si
SLV 4	143750	0.33	32302	-11532	47.87	1187.64	24.81	Si
SLV 3	143750	0.33	32302	-11532	47.87	1187.64	24.81	Si
SLV 14	143750	0.33	33210	-11856	47.87	1208.69	25.25	Si
SLV 13	143750	0.33	33210	-11856	47.87	1208.69	25.25	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 3.94 Wa = 0.05 Ta = 0.0313

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	α_{lim}	Verifica
SLV 2	-13343	-16677	-6	0.064	1473.7	0.976	0.95154	4.28043	No
SLV 1	-13343	-16677	-6	0.064	1473.7	0.976	0.95154	4.28043	No
SLV 14	-11641	-15225	-7	0.064	1300.3	0.973	0.95909	4.28043	No
SLV 13	-11641	-15225	-7	0.064	1300.3	0.973	0.95909	4.28043	No
SLV 3	-9365	-11560	-8	0.065	1068.6	0.967	0.97283	4.28043	No
SLV 4	-9365	-11560	-8	0.065	1068.6	0.967	0.97283	4.28043	No
SLV 15	-7663	-10108	-9	0.065	895.4	0.962	0.98814	4.28043	No
SLV 16	-7663	-10108	-9	0.065	895.4	0.962	0.98814	4.28043	No
SLV 5	-17388	-22140	-4	0.063	1885.8	0.981	0.93942	4.04338	No
SLV 6	-17388	-22140	-4	0.063	1885.8	0.981	0.93942	4.04338	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.314	SLU 84	Si
V_SLU	1.537	SLU 84	Si
PF_SLV	2.282	SLV 7	Si
V_SLV	0.822	SLV 9	No
PFFP_SLV	10.694	SLV 11	Si
R_SLV	0.222	SLV 1	No

Maschio 72

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.753	-3.509	-13.753	-3.314	L3	Z medio 281 cm	0.195	0.28	1.42	1.42	1.42			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 84	1.39	-3539	343.24	64816	70.5	0.205	No, M>Mu
SLU 84	2.81	-4213	178.52	77169	21.63	0.121	No, M>Mu
SLU 82	1.39	-3496	339.09	64023	72.95	0.215	No, M>Mu
SLU 82	2.81	-4160	176.89	76186	26.25	0.148	No, M>Mu
SLU 79	1.39	-3433	332.55	62877	76.35	0.23	No, M>Mu
SLU 79	2.81	-4072	167.61	74581	33.52	0.2	No, M>Mu
SLU 81	1.39	-3466	336.03	63478	74.59	0.222	No, M>Mu
SLU 81	2.81	-4133	176.16	75705	28.46	0.162	No, M>Mu
SLU 83	1.39	-3509	340.18	64270	72.19	0.212	No, M>Mu
SLU 83	2.81	-4187	177.79	76688	23.91	0.134	No, M>Mu
SLU 80	1.39	-3463	335.62	63423	74.75	0.223	No, M>Mu
SLU 80	2.81	-4098	168.35	75063	31.37	0.186	No, M>Mu
SLU 75	1.39	-3437	333.1	62952	76.14	0.229	No, M>Mu
SLU 75	2.81	-4065	167.48	74447	34.11	0.204	No, M>Mu
SLU 77	1.39	-3451	334.19	63199	75.42	0.226	No, M>Mu
SLU 77	2.81	-4092	168.38	74949	31.89	0.189	No, M>Mu
SLU 76	1.39	-3439	333.51	62994	76.01	0.228	No, M>Mu
SLU 76	2.81	-4062	167.2	74401	34.32	0.205	No, M>Mu
SLU 78	1.39	-3480	337.26	63744	73.79	0.219	No, M>Mu
SLU 78	2.81	-4118	169.11	75430	29.72	0.176	No, M>Mu

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 7	1.39	-1009	239.9	0	0	0	No, e>l/2
SLV 7	2.81	-1784	-134.84	32673	127.43	0.945	No, M>Mu
SLV 16	1.39	-2545	286.4	0	0	0	No, e>l/2
SLV 16	2.81	-2482	55.75	45455	151.96	2.726	Si
SLV 12	1.39	-1324	269.04	0	0	0	No, e>l/2
SLV 12	2.81	-1779	-124.29	32582	127.2	1.023	Si
SLV 11	1.39	-1324	269.04	0	0	0	No, e>l/2
SLV 11	2.81	-1779	-124.29	32582	127.2	1.023	Si
SLV 10	1.39	-3764	221.51	68929	159.94	0.722	No, M>Mu
SLV 10	2.81	-3804	354.97	69667	159.41	0.449	No, M>Mu
SLV 4	1.39	-1496	189.27	0	0	0	No, e>l/2
SLV 4	2.81	-2499	20.6	45760	152.37	7.396	Si
SLV 15	1.39	-2545	286.4	0	0	0	No, e>l/2
SLV 15	2.81	-2482	55.75	45455	151.96	2.726	Si
SLV 3	1.39	-1496	189.27	0	0	0	No, e>l/2
SLV 3	2.81	-2499	20.6	45760	152.37	7.396	Si
SLV 9	1.39	-3764	221.51	68929	159.94	0.722	No, M>Mu
SLV 9	2.81	-3804	354.97	69667	159.41	0.449	No, M>Mu
SLV 8	1.39	-1009	239.9	0	0	0	No, e>l/2
SLV 8	2.81	-1784	-134.84	32673	127.43	0.945	No, M>Mu

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	l'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 61	1.39	-3253	31	314.39	0	0	0	5556	0			0	No, Vu<V
SLU 61	2.81	-3861	-224	163.11	83186	0.1658	10833	503				2.25	Si
SLU 64	1.39	-3068	33	296.77	0	0	0	5556	0			0	No, Vu<V
SLU 64	2.81	-3571	-153	136.79	71817	0.1776	10833	539				3.51	Si
SLU 62	1.39	-3267	28	315.48	0	0	0	5556	0			0	No, Vu<V
SLU 62	2.81	-3889	-226	164.01	83677	0.166	10833	503				2.23	Si
SLU 57	1.39	-3238	31	312.55	0	0	0	5556	0			0	No, Vu<V
SLU 57	2.81	-3820	-199	155.33	80011	0.1705	10833	517				2.59	Si
SLU 63	1.39	-3296	31	318.54	0	0	0	5556	0			0	No, Vu<V
SLU 63	2.81	-3915	-225	164.74	84096	0.1663	10833	504				2.24	Si
SLU 59	1.39	-3220	31	310.91	0	0	0	5556	0			0	No, Vu<V
SLU 59	2.81	-3800	-199	154.56	79608	0.1705	10833	517				2.6	Si
SLU 60	1.39	-3223	28	311.33	0	0	0	5556	0			0	No, Vu<V
SLU 60	2.81	-3835	-225	162.37	82767	0.1655	10833	502				2.23	Si
SLU 54	1.39	-3195	31	308.4	0	0	0	5556	0			0	No, Vu<V
SLU 54	2.81	-3766	-199	153.7	79089	0.1701	10833	516				2.6	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 65	1.39	-3118	38	301.87		0	0	5556	0			0	No, Vu<V
SLU 65	2.81	-3615	-152	138.01		72544	0.178	10833	540			3.56	Si
SLU 42	1.39	-2951	32	286.98		0	0	5556	0			0	No, Vu<V
SLU 42	2.81	-3537	-217	153.77		77941	0.1621	10833	492			2.26	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 15	1.39	-2545	249	286.4		0	0	8333	0			0	No, Vu<V
SLV 15	2.81	-2482	189	55.75		45455	0.195	16250	887			4.7	Si
SLV 9	1.39	-3764	-821	221.51		115941	0.1159	16250	527			0.64	No, Vu<V
SLV 9	2.81	-3804	-1252	354.97		1082994	0.0125	16250	57			0.05	No, Vu<V
SLV 3	1.39	-1496	302	189.27		0	0	8333	0			0	No, Vu<V
SLV 3	2.81	-2499	217	20.6		45760	0.195	16250	887			4.09	Si
SLV 11	1.39	-1324	853	269.04		0	0	8333	0			0	No, Vu<V
SLV 11	2.81	-1779	980	-124.29		76645	0.0829	16250	377			0.39	No, Vu<V
SLV 12	1.39	-1324	853	269.04		0	0	8333	0			0	No, Vu<V
SLV 12	2.81	-1779	980	-124.29		76645	0.0829	16250	377			0.39	No, Vu<V
SLV 4	1.39	-1496	302	189.27		0	0	8333	0			0	No, Vu<V
SLV 4	2.81	-2499	217	20.6		45760	0.195	16250	887			4.09	Si
SLV 10	1.39	-3764	-821	221.51		115941	0.1159	16250	527			0.64	No, Vu<V
SLV 10	2.81	-3804	-1252	354.97		1082994	0.0125	16250	57			0.05	No, Vu<V
SLV 8	1.39	-1009	869	239.9		0	0	8333	0			0	No, Vu<V
SLV 8	2.81	-1784	988	-134.84		96902	0.0657	16250	299			0.3	No, Vu<V
SLV 16	1.39	-2545	249	286.4		0	0	8333	0			0	No, Vu<V
SLV 16	2.81	-2482	189	55.75		45455	0.195	16250	887			4.7	Si
SLV 7	1.39	-1009	869	239.9		0	0	8333	0			0	No, Vu<V
SLV 7	2.81	-1784	988	-134.84		96902	0.0657	16250	299			0.3	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 2.1 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 7	143750	0.29	16408	-896	2.49	108.58	43.65	Si
SLV 8	143750	0.29	16408	-896	2.49	108.58	43.65	Si
SLV 12	143750	0.29	22559	-1232	2.49	140.6	56.53	Si
SLV 11	143750	0.29	22559	-1232	2.49	140.6	56.53	Si
SLV 4	143750	0.29	25148	-1373	2.49	152.67	61.37	Si
SLV 3	143750	0.29	25148	-1373	2.49	152.67	61.37	Si
SLV 2	143750	0.29	38789	-2118	2.49	202.38	81.36	Si
SLV 1	143750	0.29	38789	-2118	2.49	202.38	81.36	Si
SLV 16	143750	0.29	45649	-2492	2.49	218.58	87.87	Si
SLV 15	143750	0.29	45649	-2492	2.49	218.58	87.87	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 2.1 Wa = 0.05 Ta = 0.012

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 14	-3089	-3277	55	0.083	325.6	0.989	1.22319	3.08311	No
SLV 13	-3089	-3277	55	0.083	325.6	0.989	1.22319	3.08311	No
SLV 15	-2482	-2545	44	0.084	263.7	0.987	1.2396	3.08311	No
SLV 16	-2482	-2545	44	0.084	263.7	0.987	1.2396	3.08311	No
SLV 10	-3804	-3764	65	0.084	398.5	0.991	1.22433	3.02094	No
SLV 9	-3804	-3764	65	0.084	398.5	0.991	1.22433	3.02094	No
SLV 5	-3809	-3449	62	0.084	399	0.991	1.23609	3.02094	No
SLV 6	-3809	-3449	62	0.084	399	0.991	1.23609	3.02094	No
SLV 1	-3106	-2227	45	0.087	327.3	0.989	1.27114	3.08311	No
SLV 2	-3106	-2227	45	0.087	327.3	0.989	1.27114	3.08311	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0.121	SLU 84	No
V_SLU	0	SLU 2	No
PF_SLV	0	SLV 3	No
V_SLV	0	SLV 3	No
PFFP_SLV	43.652	SLV 7	Si
R_SLV	0.397	SLV 13	No

Maschio 73

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.753	-3.509	-13.753	-3.314	Z medio 281 cm	L4	0.195	0.28	2.26	2.26	2.26			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ_0	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 80	2.81	-3446	40.14	63108	75.68	1.886	Si
SLU 80	5.07	-2367	216.3	43354	107.96	0.499	No, M>Mu
SLU 78	2.81	-3464	40.52	63448	74.68	1.843	Si
SLU 78	5.07	-2382	217.81	43627	107.86	0.495	No, M>Mu



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 81	2.81	-3403	33.37	62325	77.93	2.336	Si
SLU 81	5.07	-2355	213.21	43123	108.04	0.507	No, M>Mu
SLU 79	2.81	-3428	39.86	62785	76.62	1.922	Si
SLU 79	5.07	-2349	214.6	43024	108.07	0.504	No, M>Mu
SLU 84	2.81	-3472	34.83	63595	74.24	2.131	Si
SLU 84	5.07	-2411	218.64	44157	107.64	0.492	No, M>Mu
SLU 75	2.81	-3413	39.32	62502	77.43	1.969	Si
SLU 75	5.07	-2344	214.07	42923	108.1	0.505	No, M>Mu
SLU 82	2.81	-3421	33.64	62649	77.01	2.289	Si
SLU 82	5.07	-2373	214.9	43453	107.93	0.502	No, M>Mu
SLU 77	2.81	-3447	40.24	63125	75.63	1.879	Si
SLU 77	5.07	-2364	216.11	43297	107.98	0.5	No, M>Mu
SLU 76	2.81	-3406	39.13	62377	77.78	1.988	Si
SLU 76	5.07	-2341	213.69	42869	108.11	0.506	No, M>Mu
SLU 83	2.81	-3455	34.56	63272	75.2	2.176	Si
SLU 83	5.07	-2393	216.94	43827	107.78	0.497	No, M>Mu

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 5	2.81	-3885	-70.85	71152	158.21	2.233	Si
SLV 5	5.07	-2288	311.77	0	0	0	No, e>l/2
SLV 2	2.81	-3000	9.39	54940	160.97	17.14	Si
SLV 2	5.07	-1499	148.08	0	0	0	No, e>l/2
SLV 12	2.81	-954	137.08	0	0	0	No, e>l/2
SLV 12	5.07	-943	-12.94	17267	78.93	6.101	Si
SLV 1	2.81	-3000	9.39	54940	160.97	17.14	Si
SLV 1	5.07	-1499	148.08	0	0	0	No, e>l/2
SLV 9	2.81	-3792	-75.77	69455	159.57	2.106	Si
SLV 9	5.07	-2498	344.77	0	0	0	No, e>l/2
SLV 11	2.81	-954	137.08	0	0	0	No, e>l/2
SLV 11	5.07	-943	-12.94	17267	78.93	6.101	Si
SLV 8	2.81	-1047	142	0	0	0	No, e>l/2
SLV 8	5.07	-733	-45.93	13422	63.6	1.385	Si
SLV 7	2.81	-1047	142	0	0	0	No, e>l/2
SLV 7	5.07	-733	-45.93	13422	63.6	1.385	Si
SLV 10	2.81	-3792	-75.77	69455	159.57	2.106	Si
SLV 10	5.07	-2498	344.77	0	0	0	No, e>l/2
SLV 6	2.81	-3885	-70.85	71152	158.21	2.233	Si
SLV 6	5.07	-2288	311.77	0	0	0	No, e>l/2

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 75	2.81	-3413	-115	39.32		62502	0.195	10833	592			5.13	Si
SLU 75	5.07	-2344	66	214.07		453286	0.0185	10833	56			0.85	No, Vu<V
SLU 83	2.81	-3455	-139	34.56		63272	0.195	10833	592			4.26	Si
SLU 83	5.07	-2393	74	216.94		416371	0.0205	10833	62			0.84	No, Vu<V
SLU 78	2.81	-3464	-115	40.52		63448	0.195	10833	592			5.14	Si
SLU 78	5.07	-2382	66	217.81		467853	0.0182	10833	55			0.84	No, Vu<V
SLU 84	2.81	-3472	-138	34.83		63595	0.195	10833	592			4.29	Si
SLU 84	5.07	-2411	74	218.64		421080	0.0204	10833	62			0.84	No, Vu<V
SLU 80	2.81	-3446	-115	40.14		63108	0.195	10833	592			5.15	Si
SLU 80	5.07	-2367	66	216.3		460209	0.0184	10833	56			0.84	No, Vu<V
SLU 74	2.81	-3395	-117	39.05		62179	0.195	10833	592			5.08	Si
SLU 74	5.07	-2326	66	212.38		448258	0.0185	10833	56			0.85	No, Vu<V
SLU 79	2.81	-3428	-116	39.86		62785	0.195	10833	592			5.09	Si
SLU 79	5.07	-2349	66	214.6		455165	0.0184	10833	56			0.84	No, Vu<V
SLU 81	2.81	-3403	-139	33.37		62325	0.195	10833	592			4.25	Si
SLU 81	5.07	-2355	74	213.21		403424	0.0208	10833	63			0.86	No, Vu<V
SLU 82	2.81	-3421	-138	33.64		62649	0.195	10833	592			4.28	Si
SLU 82	5.07	-2373	74	214.9		408085	0.0208	10833	63			0.86	No, Vu<V
SLU 77	2.81	-3447	-116	40.24		63125	0.195	10833	592			5.09	Si
SLU 77	5.07	-2364	66	216.11		462777	0.0182	10833	55			0.83	No, Vu<V

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 12	2.81	-954	1054	137.08		0	0	8333	0			0	No, Vu<V
SLV 12	5.07	-943	675	-12.94		17267	0.195	11787	644			0.95	No, Vu<V
SLV 5	2.81	-3885	-1179	-70.85		71152	0.195	16250	887			0.75	No, Vu<V
SLV 5	5.07	-2288	-601	311.77		0	0	8333	0			0	No, Vu<V
SLV 10	2.81	-3792	-1141	-75.77		69455	0.195	16250	887			0.78	No, Vu<V
SLV 10	5.07	-2498	-784	344.77		0	0	8333	0			0	No, Vu<V
SLV 9	2.81	-3792	-1141	-75.77		69455	0.195	16250	887			0.78	No, Vu<V
SLV 9	5.07	-2498	-784	344.77		0	0	8333	0			0	No, Vu<V
SLV 11	2.81	-954	1054	137.08		0	0	8333	0			0	No, Vu<V
SLV 11	5.07	-943	675	-12.94		17267	0.195	11787	644			0.95	No, Vu<V
SLV 7	2.81	-1047	1016	142		0	0	8333	0			0	No, Vu<V
SLV 7	5.07	-733	859	-45.93		25053	0.1045	13344	390			0.45	No, Vu<V
SLV 6	2.81	-3885	-1179	-70.85		71152	0.195	16250	887			0.75	No, Vu<V
SLV 6	5.07	-2288	-601	311.77		0	0	8333	0			0	No, Vu<V
SLV 2	2.81	-3000	-455	9.39		54940	0.195	16250	887			1.95	Si
SLV 2	5.07	-1499	124	148.08		0	0	8333	0			0	No, Vu<V
SLV 8	2.81	-1047	1016	142		0	0	8333	0			0	No, Vu<V
SLV 8	5.07	-733	859	-45.93		25053	0.1045	13344	390			0.45	No, Vu<V
SLV 1	2.81	-3000	-455	9.39		54940	0.195	16250	887			1.95	Si
SLV 1	5.07	-1499	124	148.08		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.94 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
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Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 7	143750	0.33	15323	-837	7.13	102.44	14.37	Si
SLV 8	143750	0.33	15323	-837	7.13	102.44	14.37	Si
SLV 11	143750	0.33	18214	-994	7.13	118.47	16.61	Si
SLV 12	143750	0.33	18214	-994	7.13	118.47	16.61	Si
SLV 4	143750	0.33	22832	-1247	7.13	141.91	19.9	Si
SLV 3	143750	0.33	22832	-1247	7.13	141.91	19.9	Si
SLV 1	143750	0.33	32159	-1756	7.13	181.12	25.4	Si
SLV 2	143750	0.33	32159	-1756	7.13	181.12	25.4	Si
SLV 16	143750	0.33	32468	-1773	7.13	182.24	25.56	Si
SLV 15	143750	0.33	32468	-1773	7.13	182.24	25.56	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 3.94 Wa = 0.05 Ta = 0.0305

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 5	-2288	-3885	-63	0.039	250.3	0.978	0.57411	4.00769	No
SLV 6	-2288	-3885	-63	0.039	250.3	0.978	0.57411	4.00769	No
SLV 1	-1499	-3000	-40	0.042	170	0.969	0.62266	4.23567	No
SLV 2	-1499	-3000	-40	0.042	170	0.969	0.62266	4.23567	No
SLV 10	-2498	-3792	-59	0.042	271.7	0.98	0.62275	4.00769	No
SLV 9	-2498	-3792	-59	0.042	271.7	0.98	0.62275	4.00769	No
SLV 14	-2198	-2691	-27	0.053	241.2	0.978	0.79141	4.23567	No
SLV 13	-2198	-2691	-27	0.053	241.2	0.978	0.79141	4.23567	No
SLV 11	-943	-954	20	0.05	113.4	0.955	0.76	4.00769	No
SLV 12	-943	-954	20	0.05	113.4	0.955	0.76	4.00769	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0.492	SLU 84	No
V_SLU	0.834	SLU 77	No
PF_SLV	0	SLV 1	No
V_SLV	0	SLV 1	No
PFFP_SLV	14.366	SLV 7	Si
R_SLV	0.143	SLV 5	No

Maschio 75

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota l.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.753	-3.314	-13.753	-0.354	Z medio 210 cm	L4	2.96	0.28	2.97	2.26	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 83	2.81	-45873	6112.01	55348	21761.38	3.56	Si
SLU 83	5.07	-36422	587.41	43946	24823.81	42.26	Si
SLU 79	2.81	-44818	5671.35	54076	22297.03	3.932	Si
SLU 79	5.07	-35570	319.48	42917	24907.5	77.962	Si
SLU 77	2.81	-45141	5741.63	54466	22138.19	3.856	Si
SLU 77	5.07	-35864	348.65	43273	24882.2	71.367	Si
SLU 78	2.81	-45261	5705.33	54610	22078.16	3.87	Si
SLU 78	5.07	-35998	292.52	43434	24869.46	85.019	Si
SLU 80	2.81	-44938	5635.05	54221	22238.69	3.946	Si
SLU 80	5.07	-35704	263.35	43079	24896.49	94.538	Si
SLU 74	2.81	-44430	5632.27	53607	22482.31	3.992	Si
SLU 74	5.07	-35212	326.61	42486	24933.14	76.339	Si
SLU 82	2.81	-45281	5966.34	54634	22068.18	3.699	Si
SLU 82	5.07	-35904	509.24	43320	24878.51	48.855	Si
SLU 81	2.81	-45161	6002.65	54490	22128.32	3.686	Si
SLU 81	5.07	-35770	565.37	43159	24890.7	44.025	Si
SLU 84	2.81	-45992	6075.71	55493	21697.51	3.571	Si
SLU 84	5.07	-36556	531.27	44107	24807.8	46.695	Si
SLU 75	2.81	-44549	5595.96	53752	22426.01	4.008	Si
SLU 75	5.07	-35346	270.48	42647	24924.22	92.149	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 15	2.81	-38255	8021.27	46157	35229.77	4.392	Si
SLV 15	5.07	-30500	1395.57	36801	31544.92	22.604	Si
SLV 10	2.81	-33612	-1108.64	40556	33234.9	29.978	Si
SLV 10	5.07	-27798	-4414.19	33541	29848.19	6.762	Si
SLV 7	2.81	-27560	7916.14	33253	29688.05	3.75	Si
SLV 7	5.07	-20207	4095.95	24382	23939.22	5.845	Si
SLV 5	2.81	-28891	-2905.23	34859	30560.17	10.519	Si
SLV 5	5.07	-23595	-4567.31	28469	26784.37	5.864	Si
SLV 9	2.81	-33612	-1108.64	40556	33234.9	29.978	Si
SLV 9	5.07	-27798	-4414.19	33541	29848.19	6.762	Si
SLV 6	2.81	-28891	-2905.23	34859	30560.17	10.519	Si
SLV 6	5.07	-23595	-4567.31	28469	26784.37	5.864	Si
SLV 16	2.81	-38255	8021.27	46157	35229.77	4.392	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 16	5.07	-30500	1395.57	36801	31544.92	22.604	Si
SLV 12	2.81	-32281	9712.73	38949	32546.53	3.351	Si
SLV 12	5.07	-24411	4249.07	29453	27419.25	6.453	Si
SLV 8	2.81	-27560	7916.14	33253	29688.05	3.75	Si
SLV 8	5.07	-20207	4095.95	24382	23939.22	5.845	Si
SLV 11	2.81	-32281	9712.73	38949	32546.53	3.351	Si
SLV 11	5.07	-24411	4249.07	29453	27419.25	6.453	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 83	2.81	-45873	2586	6112.01		55348	2.96	10833	8979			3.47	Si
SLU 83	5.07	-36422	162	587.41		43946	2.96	10833	8979			55.47	Si
SLU 73	2.81	-43595	2509	5392.11		52600	2.96	10833	8979			3.58	Si
SLU 73	5.07	-34488	378	181.85		41613	2.96	10833	8979			23.73	Si
SLU 75	2.81	-44549	2501	5595.96		53752	2.96	10833	8979			3.59	Si
SLU 75	5.07	-35346	315	270.48		42647	2.96	10833	8979			28.52	Si
SLU 77	2.81	-45141	2464	5741.63		54466	2.96	10833	8979			3.64	Si
SLU 77	5.07	-35864	215	348.65		43273	2.96	10833	8979			41.68	Si
SLU 80	2.81	-44938	2505	5635.05		54221	2.96	10833	8979			3.58	Si
SLU 80	5.07	-35704	311	263.35		43079	2.96	10833	8979			28.91	Si
SLU 78	2.81	-45261	2516	5705.33		54610	2.96	10833	8979			3.57	Si
SLU 78	5.07	-35998	314	292.52		43434	2.96	10833	8979			28.63	Si
SLU 76	2.81	-44306	2524	5501.48		53458	2.96	10833	8979			3.56	Si
SLU 76	5.07	-35141	377	203.89		42399	2.96	10833	8979			23.8	Si
SLU 82	2.81	-45281	2622	5966.34		54634	2.96	10833	8979			3.42	Si
SLU 82	5.07	-35904	261	509.24		43320	2.96	10833	8979			34.37	Si
SLU 84	2.81	-45992	2638	6075.71		55493	2.96	10833	8979			3.4	Si
SLU 84	5.07	-36556	260	531.27		44107	2.96	10833	8979			34.53	Si
SLU 81	2.81	-45161	2570	6002.65		54490	2.96	10833	8979			3.49	Si
SLU 81	5.07	-35770	163	565.37		43159	2.96	10833	8979			55.07	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 7	2.81	-27560	14062	7916.14		33253	2.96	14984	12419			0.88	No, Vu<V
SLV 7	5.07	-20207	10154	4095.95		24382	2.96	13210	10948			1.08	Si
SLV 4	2.81	-22518	3645	2032.64		27169	2.96	13767	11410			3.13	Si
SLV 4	5.07	-16489	5772	885.17		19895	2.96	12312	10205			1.77	Si
SLV 6	2.81	-28891	-11911	-2905.23		34859	2.96	15305	12685			1.06	Si
SLV 6	5.07	-23595	-8047	-4567.31		28469	2.96	14027	11626			1.44	Si
SLV 3	2.81	-22518	3645	2032.64		27169	2.96	13767	11410			3.13	Si
SLV 3	5.07	-16489	5772	885.17		19895	2.96	12312	10205			1.77	Si
SLV 10	2.81	-33612	-10774	-1108.64		40556	2.96	16250	13468			1.25	Si
SLV 10	5.07	-27798	-9751	-4414.19		33541	2.96	15041	12466			1.28	Si
SLV 12	2.81	-32281	15199	9712.73		38949	2.96	16123	13363			0.88	No, Vu<V
SLV 12	5.07	-24411	8450	4249.07		29453	2.96	14224	11789			1.4	Si
SLV 8	2.81	-27560	14062	7916.14		33253	2.96	14984	12419			0.88	No, Vu<V
SLV 8	5.07	-20207	10154	4095.95		24382	2.96	13210	10948			1.08	Si
SLV 5	2.81	-28891	-11911	-2905.23		34859	2.96	15305	12685			1.06	Si
SLV 5	5.07	-23595	-8047	-4567.31		28469	2.96	14027	11626			1.44	Si
SLV 11	2.81	-32281	15199	9712.73		38949	2.96	16123	13363			0.88	No, Vu<V
SLV 11	5.07	-24411	8450	4249.07		29453	2.96	14224	11789			1.4	Si
SLV 9	2.81	-33612	-10774	-1108.64		40556	2.96	16250	13468			1.25	Si
SLV 9	5.07	-27798	-9751	-4414.19		33541	2.96	15041	12466			1.28	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.94 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 3	143750	0.33	23615	-19572	186.94	2210.49	11.82	Si
SLV 4	143750	0.33	23615	-19572	186.94	2210.49	11.82	Si
SLV 1	143750	0.33	25086	-20791	186.94	2313.17	12.37	Si
SLV 2	143750	0.33	25086	-20791	186.94	2313.17	12.37	Si
SLV 7	143750	0.33	27411	-22718	186.94	2467.02	13.2	Si
SLV 8	143750	0.33	27411	-22718	186.94	2467.02	13.2	Si
SLV 12	143750	0.33	32136	-26634	186.94	2748.1	14.7	Si
SLV 11	143750	0.33	32136	-26634	186.94	2748.1	14.7	Si
SLV 6	143750	0.33	32315	-26783	186.94	2757.93	14.75	Si
SLV 5	143750	0.33	32315	-26783	186.94	2757.93	14.75	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 3.94 Wa = 0.05 Ta = 0.0526

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	α_{lim}	Verifica
SLV 5	-23595	-28891	-315	0.039	2749	0.962	0.58892	5.14394	No
SLV 6	-23595	-28891	-315	0.039	2749	0.962	0.58892	5.14394	No
SLV 9	-27798	-33612	-312	0.04	3176.8	0.967	0.60438	5.14394	No
SLV 10	-27798	-33612	-312	0.04	3176.8	0.967	0.60438	5.14394	No
SLV 2	-17506	-22917	-155	0.045	2129.9	0.953	0.67993	5.69947	No
SLV 1	-17506	-22917	-155	0.045	2129.9	0.953	0.67993	5.69947	No
SLV 14	-31517	-38655	-147	0.046	3555.3	0.97	0.68699	5.69947	No
SLV 13	-31517	-38655	-147	0.046	3555.3	0.97	0.68699	5.69947	No
SLV 15	-30500	-38255	-8	0.05	3451.8	0.969	0.75069	5.69947	No
SLV 16	-30500	-38255	-8	0.05	3451.8	0.969	0.75069	5.69947	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF SLU	3.56	SLU 83	Si
V SLU	3.403	SLU 84	Si
PF SLV	3.351	SLV 11	Si
V SLV	0.879	SLV 11	No
PFFP SLV	11.825	SLV 3	Si



Stato limite	Coeff.s.	Comb.	Verifica
R_SLV	0.114	SLV 5	No

Maschio 76

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.753	-0.354	-13.753	-0.228	L3	L4	0.126	0.28	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 54	1.39	-4368	-25.68	124105	0	0	No, Rottura per schiacciamento
SLU 54	3.49	-2176	-121.53	61834	32.95	0.271	No, M>Mu
SLU 60	1.39	-4445	-26.23	126288	0	0	No, Rottura per schiacciamento
SLU 60	3.49	-2241	-125.22	63687	30.73	0.245	No, M>Mu
SLU 55	1.39	-4336	-25.07	123211	0	0	No, Rottura per schiacciamento
SLU 55	3.49	-2149	-120.42	61073	33.81	0.281	No, M>Mu
SLU 61	1.39	-4456	-25.73	126622	0	0	No, Rottura per schiacciamento
SLU 61	3.49	-2234	-125.24	63470	31	0.248	No, M>Mu
SLU 57	1.39	-4446	-26.33	126314	0	0	No, Rottura per schiacciamento
SLU 57	3.49	-2221	-123.82	63117	31.44	0.254	No, M>Mu
SLU 53	1.39	-4356	-26.18	123771	0	0	No, Rottura per schiacciamento
SLU 53	3.49	-2184	-121.52	62051	32.7	0.269	No, M>Mu
SLU 59	1.39	-4406	-26.05	125198	0	0	No, Rottura per schiacciamento
SLU 59	3.49	-2200	-122.7	62500	32.18	0.262	No, M>Mu
SLU 1	1.39	-3001	-18.64	85274	0	0	No, Rottura per schiacciamento
SLU 1	3.49	-1470	-81.34	41770	45.02	0.553	No, M>Mu
SLU 58	1.39	-4395	-26.55	124864	0	0	No, Rottura per schiacciamento
SLU 58	3.49	-2207	-122.68	62717	31.92	0.26	No, M>Mu
SLU 56	1.39	-4434	-26.83	125980	0	0	No, Rottura per schiacciamento
SLU 56	3.49	-2229	-123.81	63334	31.17	0.252	No, M>Mu

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 3	1.39	-2805	18.88	79704	61.3	3.246	Si
SLV 3	3.49	-689	-64.39	0	0	0	No, e>l/2
SLV 9	1.39	-443	-132.34	0	0	0	No, e>l/2
SLV 9	3.49	-3020	-112.75	85808	56.51	0.501	No, M>Mu
SLV 11	1.39	-6925	87.93	196772	0	0	No, Rottura per schiacciamento
SLV 11	3.49	-567	-78.57	0	0	0	No, e>l/2
SLV 5	1.39	412	-128.63	0	0	0	No, Trazione
SLV 5	3.49	-2680	-100.69	76151	63.46	0.63	No, M>Mu
SLV 10	1.39	-443	-132.34	0	0	0	No, e>l/2
SLV 10	3.49	-3020	-112.75	85808	56.51	0.501	No, M>Mu
SLV 6	1.39	412	-128.63	0	0	0	No, Trazione
SLV 6	3.49	-2680	-100.69	76151	63.46	0.63	No, M>Mu
SLV 8	1.39	-6071	91.65	172494	0	0	No, Rottura per schiacciamento
SLV 8	3.49	-227	-66.51	0	0	0	No, e>l/2
SLV 7	1.39	-6071	91.65	172494	0	0	No, Rottura per schiacciamento
SLV 7	3.49	-227	-66.51	0	0	0	No, e>l/2
SLV 12	1.39	-6925	87.93	196772	0	0	No, Rottura per schiacciamento
SLV 12	3.49	-567	-78.57	0	0	0	No, e>l/2
SLV 4	1.39	-2805	18.88	79704	61.3	3.246	Si
SLV 4	3.49	-689	-64.39	0	0	0	No, e>l/2

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 74	1.39	-4771	364	-29.86		135568	0.1257	10833	381			1.05	Si
SLU 74	3.49	-2430	-266	-133.92		373667	0.0232	10833	70			0.26	No, Vu<V
SLU 78	1.39	-4861	373	-30.02		138111	0.1257	10833	381			1.02	Si
SLU 78	3.49	-2468	-260	-136.22		384201	0.0229	10833	70			0.27	No, Vu<V
SLU 83	1.39	-4938	378	-30.56		140295	0.1257	10833	381			1.01	Si
SLU 83	3.49	-2533	-273	-139.91		396316	0.0228	10833	69			0.25	No, Vu<V
SLU 81	1.39	-4860	373	-29.91		138085	0.1257	10833	381			1.02	Si
SLU 81	3.49	-2488	-264	-137.62		393488	0.0226	10833	68			0.26	No, Vu<V
SLU 75	1.39	-4783	368	-29.37		135902	0.1257	10833	381			1.03	Si
SLU 75	3.49	-2422	-252	-133.93		381331	0.0227	10833	69			0.27	No, Vu<V
SLU 84	1.39	-4949	382	-30.06		140629	0.1257	10833	381			1	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 84	3.49	-2525	-258	-139.93		404290	0.0223	10833	68			0.26	No, Vu<V
SLU 77	1.39	-4849	369	-30.51		137778	0.1257	10833	381			1.03	Si
SLU 77	3.49	-2475	-275	-136.21		376723	0.0235	10833	71			0.26	No, Vu<V
SLU 79	1.39	-4810	367	-30.23		136661	0.1257	10833	381			1.04	Si
SLU 79	3.49	-2454	-272	-135.08		374864	0.0234	10833	71			0.26	No, Vu<V
SLU 80	1.39	-4822	371	-29.74		136995	0.1257	10833	381			1.03	Si
SLU 80	3.49	-2446	-257	-135.1		382412	0.0228	10833	69			0.27	No, Vu<V
SLU 82	1.39	-4872	377	-29.42		138419	0.1257	10833	381			1.01	Si
SLU 82	3.49	-2480	-250	-137.64		401670	0.0221	10833	67			0.27	No, Vu<V

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 8	1.39	-6071	1355	91.65		172494	0.1257	16250	572			0.42	No, Vu<V
SLV 8	3.49	-227	1843	-66.51		0	0	8333	0			0	No, Vu<V
SLV 5	1.39	412	-595	-128.63		0	0	8333	0			0	No, Vu<V
SLV 5	3.49	-2680	-1996	-100.69		126210	0.0758	16250	345			0.17	No, Vu<V
SLV 6	1.39	412	-595	-128.63		0	0	8333	0			0	No, Vu<V
SLV 6	3.49	-2680	-1996	-100.69		126210	0.0758	16250	345			0.17	No, Vu<V
SLV 12	1.39	-6925	1095	87.93		196772	0.1257	16250	572			0.52	No, Vu<V
SLV 12	3.49	-567	1646	-78.57		0	0	8333	0			0	No, Vu<V
SLV 3	1.39	-2805	975	18.88		79704	0.1257	16250	572			0.59	No, Vu<V
SLV 3	3.49	-689	729	-64.39		0	0	8333	0			0	No, Vu<V
SLV 4	1.39	-2805	975	18.88		79704	0.1257	16250	572			0.59	No, Vu<V
SLV 4	3.49	-689	729	-64.39		0	0	8333	0			0	No, Vu<V
SLV 10	1.39	-443	-855	-132.34		0	0	8333	0			0	No, Vu<V
SLV 10	3.49	-3020	-2192	-112.75		140920	0.0765	16250	348			0.16	No, Vu<V
SLV 7	1.39	-6071	1355	91.65		172494	0.1257	16250	572			0.42	No, Vu<V
SLV 7	3.49	-227	1843	-66.51		0	0	8333	0			0	No, Vu<V
SLV 11	1.39	-6925	1095	87.93		196772	0.1257	16250	572			0.52	No, Vu<V
SLV 11	3.49	-567	1646	-78.57		0	0	8333	0			0	No, Vu<V
SLV 9	1.39	-443	-855	-132.34		0	0	8333	0			0	No, Vu<V
SLV 9	3.49	-3020	-2192	-112.75		140920	0.0765	16250	348			0.16	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 W_a 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 8	143750	0.31	22054	-776	11.64	89.05	7.65	Si
SLV 7	143750	0.31	22054	-776	11.64	89.05	7.65	Si
SLV 4	143750	0.31	24755	-871	11.64	97.26	8.36	Si
SLV 3	143750	0.31	24755	-871	11.64	97.26	8.36	Si
SLV 12	143750	0.31	32398	-1140	11.64	117.31	10.08	Si
SLV 11	143750	0.31	32398	-1140	11.64	117.31	10.08	Si
SLV 1	143750	0.31	37414	-1317	11.64	127.9	10.99	Si
SLV 2	143750	0.31	37414	-1317	11.64	127.9	10.99	Si
SLV 10	143750	0.31	74595	-2625	11.64	143.16	12.3	Si
SLV 9	143750	0.31	74595	-2625	11.64	143.16	12.3	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeraia = 3.23 $W_a = 0.05$ $T_a = 0.0808$

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 2	-424	-860	130	0	61.7	0.922	0	8.20395	No
SLV 9	-245	-443	-82	0	43.9	0.902	0	6.97355	No
SLV 3	-1572	-2805	175	0	178.2	0.969	0	8.20395	No
SLV 6	291	412	-9	0	0	0	0	6.97355	No, Trazione
SLV 4	-1572	-2805	175	0	178.2	0.969	0	8.20395	No
SLV 5	291	412	-9	0	0	0	0	6.97355	No, Trazione
SLV 10	-245	-443	-82	0	43.9	0.902	0	6.97355	No
SLV 13	-2209	-3709	-116	0	243.2	0.977	0	8.20395	No
SLV 14	-2209	-3709	-116	0	243.2	0.977	0	8.20395	No
SLV 1	-424	-860	130	0	61.7	0.922	0	8.20395	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0	SLU 1	No
V_SLU	0.254	SLU 83	No
PF_SLV	0	SLV 6	No
V_SLV	0	SLV 3	No
PFFP_SLV	7.651	SLV 7	Si
R_SLV	0	SLV 6	No

Maschio 77

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.753	0.672	-13.753	1.046	L3	L4	0.374	0.28	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
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Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 75	1.39	-7985	-147.23	76185	96.73	0.657	No, M>Mu
SLU 75	3.49	-6679	-25.82	63731	272.05	10.537	Si
SLU 84	1.39	-8293	-153.73	79127	44.42	0.289	No, M>Mu
SLU 84	3.49	-6941	-26.77	66229	242.87	9.071	Si
SLU 80	1.39	-8060	-148.75	76906	84.3	0.567	No, M>Mu
SLU 80	3.49	-6744	-25.59	64351	265.08	10.358	Si
SLU 81	1.39	-8189	-153.85	78132	62.59	0.407	No, M>Mu
SLU 81	3.49	-6806	-23.76	64940	258.3	10.869	Si
SLU 78	1.39	-8134	-149.76	77611	71.89	0.48	No, M>Mu
SLU 78	3.49	-6816	-25.93	65034	257.2	9.92	Si
SLU 79	1.39	-8105	-151.4	77337	76.74	0.507	No, M>Mu
SLU 79	3.49	-6746	-22.69	64366	264.91	11.674	Si
SLU 83	1.39	-8338	-156.38	79558	36.41	0.233	No, M>Mu
SLU 83	3.49	-6943	-23.87	66244	242.69	10.165	Si
SLU 77	1.39	-8179	-152.41	78042	64.2	0.421	No, M>Mu
SLU 77	3.49	-6818	-23.03	65049	257.03	11.161	Si
SLU 74	1.39	-8030	-149.88	76616	89.33	0.596	No, M>Mu
SLU 74	3.49	-6681	-22.92	63746	271.88	11.863	Si
SLU 82	1.39	-8144	-151.2	77701	70.3	0.465	No, M>Mu
SLU 82	3.49	-6805	-26.66	64925	258.47	9.694	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 9	1.39	-8362	-523.36	79781	543.11	1.038	Si
SLV 9	3.49	-576	423.76	0	0	0	No, e>l/2
SLV 6	1.39	-6912	-463.58	65949	595.39	1.284	Si
SLV 6	3.49	394	416.69	0	0	0	No, Trazione
SLV 10	1.39	-8362	-523.36	79781	543.11	1.038	Si
SLV 10	3.49	-576	423.76	0	0	0	No, e>l/2
SLV 8	1.39	-2412	324.11	23016	366.42	1.131	Si
SLV 8	3.49	-8342	-457.36	79594	544.23	1.19	Si
SLV 13	1.39	-8478	-317.4	80893	536.24	1.689	Si
SLV 13	3.49	-4765	126.09	45468	559.97	4.441	Si
SLV 14	1.39	-8478	-317.4	80893	536.24	1.689	Si
SLV 14	3.49	-4765	126.09	45468	559.97	4.441	Si
SLV 11	1.39	-3862	264.34	36849	504.81	1.91	Si
SLV 11	3.49	-9312	-450.29	88848	475.51	1.056	Si
SLV 5	1.39	-6912	-463.58	65949	595.39	1.284	Si
SLV 5	3.49	394	416.69	0	0	0	No, Trazione
SLV 12	1.39	-3862	264.34	36849	504.81	1.91	Si
SLV 12	3.49	-9312	-450.29	88848	475.51	1.056	Si
SLV 7	1.39	-2412	324.11	23016	366.42	1.131	Si
SLV 7	3.49	-8342	-457.36	79594	544.23	1.19	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 83	1.39	-8338	-154	-156.38		79558	0.3743	10833	1135			7.35	Si
SLU 83	3.49	-6943	-137	-23.87		66244	0.3743	10833	1135			8.27	Si
SLU 77	1.39	-8179	-150	-152.41		78042	0.3743	10833	1135			7.59	Si
SLU 77	3.49	-6818	-133	-23.03		65049	0.3743	10833	1135			8.53	Si
SLU 80	1.39	-8060	-142	-148.75		76906	0.3743	10833	1135			7.98	Si
SLU 80	3.49	-6744	-126	-25.59		64351	0.3743	10833	1135			8.99	Si
SLU 79	1.39	-8105	-149	-151.4		77337	0.3743	10833	1135			7.62	Si
SLU 79	3.49	-6746	-133	-22.69		64366	0.3743	10833	1135			8.56	Si
SLU 78	1.39	-8134	-143	-149.76		77611	0.3743	10833	1135			7.95	Si
SLU 78	3.49	-6816	-127	-25.93		65034	0.3743	10833	1135			8.96	Si
SLU 74	1.39	-8030	-147	-149.88		76616	0.3743	10833	1135			7.72	Si
SLU 74	3.49	-6681	-131	-22.92		63746	0.3743	10833	1135			8.68	Si
SLU 82	1.39	-8144	-145	-151.2		77701	0.3743	10833	1135			7.82	Si
SLU 82	3.49	-6805	-129	-26.66		64925	0.3743	10833	1135			8.83	Si
SLU 81	1.39	-8189	-152	-153.85		78132	0.3743	10833	1135			7.47	Si
SLU 81	3.49	-6806	-135	-23.76		64940	0.3743	10833	1135			8.41	Si
SLU 41	1.39	-7163	-140	-136.75		68345	0.3743	10833	1135			8.08	Si
SLU 41	3.49	-5952	-125	-17.19		56792	0.3743	10833	1135			9.06	Si
SLU 84	1.39	-8293	-148	-153.73		79127	0.3743	10833	1135			7.68	Si
SLU 84	3.49	-6941	-131	-26.77		66229	0.3743	10833	1135			8.67	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 14	1.39	-8478	-869	-317.4		80893	0.3743	16250	1703			1.96	Si
SLV 14	3.49	-4765	-647	126.09		45468	0.3743	16250	1703			2.63	Si
SLV 8	1.39	-2412	1199	324.11		54395	0.1584	16250	721			0.6	No, Vu<V
SLV 8	3.49	-8342	967	-457.36		79594	0.3743	16250	1703			1.76	Si
SLV 10	1.39	-8362	-1389	-523.36		79913	0.3737	16250	1700			1.22	Si
SLV 10	3.49	-576	-1136	423.76		0	0	8333	0			0	No, Vu<V
SLV 11	1.39	-3862	944	264.34		38730	0.3561	16079	1603			1.7	Si
SLV 11	3.49	-9312	805	-450.29		88848	0.3743	16250	1703			2.12	Si
SLV 5	1.39	-6912	-1134	-463.58		68523	0.3602	16250	1639			1.45	Si
SLV 5	3.49	394	-974	416.69		0	0	8333	0			0	No, Vu<V
SLV 12	1.39	-3862	944	264.34		38730	0.3561	16079	1603			1.7	Si
SLV 12	3.49	-9312	805	-450.29		88848	0.3743	16250	1703			2.12	Si
SLV 9	1.39	-8362	-1389	-523.36		79913	0.3737	16250	1700			1.22	Si
SLV 9	3.49	-576	-1136	423.76		0	0	8333	0			0	No, Vu<V
SLV 6	1.39	-6912	-1134	-463.58		68523	0.3602	16250	1639			1.45	Si
SLV 6	3.49	394	-974	416.69		0	0	8333	0			0	No, Vu<V
SLV 7	1.39	-2412	1199	324.11		54395	0.1584	16250	721			0.6	No, Vu<V
SLV 7	3.49	-8342	967	-457.36		79594	0.3743	16250	1703			1.76	Si
SLV 13	1.39	-8478	-869	-317.4		80893	0.3743	16250	1703			1.96	Si
SLV 13	3.49	-4765	-647	126.09		45468	0.3743	16250	1703			2.63	Si



Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	143750	0.31	0	309	34.66	0	0	No, Trazione
SLV 6	143750	0.31	0	309	34.66	0	0	No, Trazione
SLV 9	143750	0.31	5949	-623	34.66	83.03	2.4	Si
SLV 10	143750	0.31	5949	-623	34.66	83.03	2.4	Si
SLV 2	143750	0.31	15848	-1661	34.66	202.38	5.84	Si
SLV 1	143750	0.31	15848	-1661	34.66	202.38	5.84	Si
SLV 11	143750	0.31	89298	-9359	34.66	352.68	10.17	Si
SLV 12	143750	0.31	89298	-9359	34.66	352.68	10.17	Si
SLV 4	143750	0.31	40853	-4282	34.66	399.01	11.51	Si
SLV 3	143750	0.31	40853	-4282	34.66	399.01	11.51	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 3.23 Wa = 0.05 Ta = 0.0808

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 16	-2357	-7128	-86	0.011	294.6	0.947	0.16956	8.20395	No
SLV 15	-2357	-7128	-86	0.011	294.6	0.947	0.16956	8.20395	No
SLV 14	-3234	-8478	-87	0.017	383.7	0.958	0.26476	8.20395	No
SLV 13	-3234	-8478	-87	0.017	383.7	0.958	0.26476	8.20395	No
SLV 4	-2477	-2296	54	0.024	306.7	0.949	0.36294	8.20395	No
SLV 3	-2477	-2296	54	0.024	306.7	0.949	0.36294	8.20395	No
SLV 1	-3354	-3646	53	0.027	395.8	0.959	0.41352	8.20395	No
SLV 2	-3354	-3646	53	0.027	395.8	0.959	0.41352	8.20395	No
SLV 11	-1376	-3862	-36	0.025	195.3	0.926	0.38621	6.97355	No
SLV 12	-1376	-3862	-36	0.025	195.3	0.926	0.38621	6.97355	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0.233	SLU 83	No
V_SLU	7.35	SLU 83	Si
PF_SLV	0	SLV 6	No
V_SLV	0	SLV 5	No
PFFP_SLV	0	SLV 6	No
R_SLV	0.021	SLV 15	No

Maschio 78

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-20.668	1.046	-24.603	1.046	L3	L4	3.935	0.28	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fν0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 84	1.39	-71659	3899.48	65038	28420.6	7.288	Si
SLU 84	3.49	-65818	-9620.78	59737	34531.05	3.589	Si
SLU 78	1.39	-70106	3620.58	63629	30190.94	8.339	Si
SLU 78	3.49	-64266	-9202.7	58328	35903.83	3.901	Si
SLU 75	1.39	-69178	3635.8	62786	31198.98	8.581	Si
SLU 75	3.49	-63337	-9009.35	57485	36674.16	4.071	Si
SLU 79	1.39	-69787	3670.23	63339	30541.78	8.321	Si
SLU 79	3.49	-63947	-9345.63	58038	36172.95	3.871	Si
SLU 80	1.39	-69440	3504.91	63024	30917.75	8.821	Si
SLU 80	3.49	-63600	-9075.88	57724	36460.15	4.017	Si
SLU 82	1.39	-70730	3914.7	64195	29491.83	7.534	Si
SLU 82	3.49	-64890	-9427.42	58895	35364.57	3.751	Si
SLU 74	1.39	-69524	3801.12	63101	30827.01	8.11	Si
SLU 74	3.49	-63684	-9279.1	57800	36390.95	3.922	Si
SLU 77	1.39	-70453	3785.9	63943	29804.86	7.873	Si
SLU 77	3.49	-64612	-9472.45	58643	35606.51	3.759	Si
SLU 81	1.39	-71077	4080.03	64510	29096.26	7.131	Si
SLU 81	3.49	-65237	-9697.17	59209	35057.76	3.615	Si
SLU 83	1.39	-72005	4064.81	65353	28010.92	6.891	Si
SLU 83	3.49	-66165	-9890.53	60052	34210.13	3.459	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 14	1.39	-29456	-32319.82	26734	45274.09	1.401	Si
SLV 14	3.49	-23416	-2913.61	21252	38057.6	13.062	Si
SLV 3	1.39	-64817	36832.65	58828	66128.2	1.795	Si
SLV 3	3.49	-61925	-8509.68	56204	65795.02	7.732	Si
SLV 2	1.39	-66262	37959.87	60140	66203.12	1.744	Si
SLV 2	3.49	-63082	-10582.73	57254	65957.66	6.233	Si
SLV 13	1.39	-29456	-32319.82	26734	45274.09	1.401	Si
SLV 13	3.49	-23416	-2913.61	21252	38057.6	13.062	Si
SLV 16	1.39	-28010	-33447.04	25422	43644.18	1.305	Si
SLV 16	3.49	-22259	-840.55	20202	36553.56	43.488	Si
SLV 1	1.39	-66262	37959.87	60140	66203.12	1.744	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 1	3.49	-63082	-10582.73	57254	65957.66	6.233	Si
SLV 6	1.39	-55066	14677.07	49979	64027.34	4.362	Si
SLV 6	3.49	-50549	-10317.1	45878	62111.99	6.02	Si
SLV 4	1.39	-64817	36832.65	58828	66128.2	1.795	Si
SLV 4	3.49	-61925	-8509.68	56204	65795.02	7.732	Si
SLV 15	1.39	-28010	-33447.04	25422	43644.18	1.305	Si
SLV 15	3.49	-22259	-840.55	20202	36553.56	43.488	Si
SLV 5	1.39	-55066	14677.07	49979	64027.34	4.362	Si
SLV 5	3.49	-50549	-10317.1	45878	62111.99	6.02	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 82	1.39	-70730	6410	3914.7		64195	3.935	10833	11936			1.86	Si
SLU 82	3.49	-64890	6410	-9427.42		58895	3.935	10833	11936			1.86	Si
SLU 79	1.39	-69787	6255	3670.23		63339	3.935	10833	11936			1.91	Si
SLU 79	3.49	-63947	6255	-9345.63		58038	3.935	10833	11936			1.91	Si
SLU 83	1.39	-72005	6702	4064.81		65353	3.935	10833	11936			1.78	Si
SLU 83	3.49	-66165	6702	-9890.53		60052	3.935	10833	11936			1.78	Si
SLU 77	1.39	-70453	6370	3785.9		63943	3.935	10833	11936			1.87	Si
SLU 77	3.49	-64612	6370	-9472.45		58643	3.935	10833	11936			1.87	Si
SLU 74	1.39	-69524	6285	3801.12		63101	3.935	10833	11936			1.9	Si
SLU 74	3.49	-63684	6285	-9279.1		57800	3.935	10833	11936			1.9	Si
SLU 84	1.39	-71659	6495	3899.48		65038	3.935	10833	11936			1.84	Si
SLU 84	3.49	-65818	6495	-9620.78		59737	3.935	10833	11936			1.84	Si
SLU 75	1.39	-69178	6078	3635.8		62786	3.935	10833	11936			1.96	Si
SLU 75	3.49	-63337	6078	-9009.35		57485	3.935	10833	11936			1.96	Si
SLU 41	1.39	-61550	6129	3780.18		55864	3.935	10833	11936			1.95	Si
SLU 41	3.49	-56998	6129	-9001.21		51731	3.935	10833	11936			1.95	Si
SLU 78	1.39	-70106	6163	3620.58		63629	3.935	10833	11936			1.94	Si
SLU 78	3.49	-64266	6163	-9202.7		58328	3.935	10833	11936			1.94	Si
SLU 81	1.39	-71077	6617	4080.03		64510	3.935	10833	11936			1.8	Si
SLU 81	3.49	-65237	6617	-9697.17		59209	3.935	10833	11936			1.8	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 4	1.39	-64817	22199	36832.65		58828	3.935	16250	17904			0.81	No, Vu<V
SLV 4	3.49	-61925	22592	-8509.68		56204	3.935	16250	17904			0.79	No, Vu<V
SLV 15	1.39	-28010	-15697	-33447.04		43115	2.3202	16250	10557			0.67	No, Vu<V
SLV 15	3.49	-22259	-16016	-840.55		20202	3.935	12374	13633			0.85	No, Vu<V
SLV 6	1.39	-55066	11480	14677.07		49979	3.935	16250	17904			1.56	Si
SLV 6	3.49	-50549	11464	-10317.1		45878	3.935	16250	17904			1.56	Si
SLV 3	1.39	-64817	22199	36832.65		58828	3.935	16250	17904			0.81	No, Vu<V
SLV 3	3.49	-61925	22592	-8509.68		56204	3.935	16250	17904			0.79	No, Vu<V
SLV 13	1.39	-29456	-14522	-32319.82		40294	2.6108	16250	11879			0.82	No, Vu<V
SLV 13	3.49	-23416	-14915	-2913.61		21252	3.935	12584	13865			0.93	No, Vu<V
SLV 1	1.39	-66262	23373	37959.87		60140	3.935	16250	17904			0.77	No, Vu<V
SLV 1	3.49	-63082	23693	-10582.73		57254	3.935	16250	17904			0.76	No, Vu<V
SLV 14	1.39	-29456	-14522	-32319.82		40294	2.6108	16250	11879			0.82	No, Vu<V
SLV 14	3.49	-23416	-14915	-2913.61		21252	3.935	12584	13865			0.93	No, Vu<V
SLV 2	1.39	-66262	23373	37959.87		60140	3.935	16250	17904			0.77	No, Vu<V
SLV 2	3.49	-63082	23693	-10582.73		57254	3.935	16250	17904			0.76	No, Vu<V
SLV 16	1.39	-28010	-15697	-33447.04		43115	2.3202	16250	10557			0.67	No, Vu<V
SLV 16	3.49	-22259	-16016	-840.55		20202	3.935	12374	13633			0.85	No, Vu<V
SLV 5	1.39	-55066	11480	14677.07		49979	3.935	16250	17904			1.56	Si
SLV 5	3.49	-50549	11464	-10317.1		45878	3.935	16250	17904			1.56	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 16	143750	0.31	21301	-23469	364.39	2712.9	7.45	Si
SLV 15	143750	0.31	21301	-23469	364.39	2712.9	7.45	Si
SLV 14	143750	0.31	22342	-24616	364.39	2816.1	7.73	Si
SLV 13	143750	0.31	22342	-24616	364.39	2816.1	7.73	Si
SLV 11	143750	0.31	32313	-35602	364.39	3666.21	10.06	Si
SLV 12	143750	0.31	32313	-35602	364.39	3666.21	10.06	Si
SLV 10	143750	0.31	35782	-39425	364.39	3903.12	10.71	Si
SLV 9	143750	0.31	35782	-39425	364.39	3903.12	10.71	Si
SLV 7	143750	0.31	42793	-47149	364.39	4289.09	11.77	Si
SLV 8	143750	0.31	42793	-47149	364.39	4289.09	11.77	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 3.23 Wa = 0.05 Ta = 0.0808

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 2	-41989	-66262	-154	0.038	4846	0.965	0.56838	8.20395	No
SLV 1	-41989	-66262	-154	0.038	4846	0.965	0.56838	8.20395	No
SLV 16	-28561	-28010	154	0.038	3480.6	0.952	0.57366	8.20395	No
SLV 15	-28561	-28010	154	0.038	3480.6	0.952	0.57366	8.20395	No
SLV 3	-41895	-64817	-117	0.039	4836.4	0.964	0.58062	8.20395	No
SLV 4	-41895	-64817	-117	0.039	4836.4	0.964	0.58062	8.20395	No
SLV 14	-28656	-29456	117	0.039	3490.2	0.952	0.59104	8.20395	No
SLV 13	-28656	-29456	117	0.039	3490.2	0.952	0.59104	8.20395	No
SLV 6	-37432	-55066	-102	0.039	4382.4	0.961	0.58883	6.97355	No
SLV 5	-37432	-55066	-102	0.039	4382.4	0.961	0.58883	6.97355	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF SLU	3.459	SLU 83	Si
V SLU	1.781	SLU 83	Si
PF SLV	1.305	SLV 15	Si



Stato limite	Coeff.s.	Comb.	Verifica
V_SLV	0.673	SLV 15	No
PFFP_SLV	7.445	SLV 15	Si
R_SLV	0.069	SLV 1	No

Maschio 79

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-12.283	1.046	-19.868	1.046	L3	L4	7.585	0.28	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	t0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 75	1.39	-134578	-359.51	63367	113356.23	315.306	Si
SLU 75	3.89	-123406	-9214.77	58106	134168.51	14.56	Si
SLU 74	1.39	-135992	1289.59	64033	110330.87	85.555	Si
SLU 74	3.89	-124175	-8835.73	58468	132911.39	15.042	Si
SLU 76	1.39	-132259	-1578.27	62275	118126.89	74.846	Si
SLU 76	3.89	-121520	-9312.06	57218	137142.72	14.727	Si
SLU 84	1.39	-139418	-541.4	65646	102640.01	189.584	Si
SLU 84	3.89	-128479	-9290.82	60495	125396.6	13.497	Si
SLU 79	1.39	-137175	981.41	64589	107734.24	109.775	Si
SLU 79	3.89	-125337	-9065.37	59015	130963.69	14.447	Si
SLU 82	1.39	-136859	-352.58	64441	108433.04	307.545	Si
SLU 82	3.89	-125944	-8905.78	59301	129921.26	14.588	Si
SLU 77	1.39	-138551	1100.77	65237	104635.11	95.057	Si
SLU 77	3.89	-126710	-9220.77	59662	128583.31	13.945	Si
SLU 80	1.39	-135760	-667.69	63923	110832.93	165.995	Si
SLU 80	3.89	-124568	-9444.41	58653	132259.96	14.004	Si
SLU 83	1.39	-140833	1107.7	66312	99314.49	89.658	Si
SLU 83	3.89	-129248	-8911.79	60857	123968.47	13.911	Si
SLU 78	1.39	-137137	-548.33	64571	107819.15	196.631	Si
SLU 78	3.89	-125941	-9599.81	59300	129925.89	13.534	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 1	1.39	-82182	92267.98	38696	212969.79	2.308	Si
SLV 1	3.89	-79408	13900.5	37390	209001.26	15.036	Si
SLV 2	1.39	-82182	92267.98	38696	212969.79	2.308	Si
SLV 2	3.89	-79408	13900.5	37390	209001.26	15.036	Si
SLV 3	1.39	-80971	70944.93	38125	211264.59	2.978	Si
SLV 3	3.89	-75807	9090.72	35694	203513.15	22.387	Si
SLV 5	1.39	-90530	60710.81	42626	223558.62	3.682	Si
SLV 5	3.89	-86776	7182.86	40859	219048.91	30.496	Si
SLV 13	1.39	-101997	-68972.17	48026	234782.75	3.404	Si
SLV 13	3.89	-88455	-21325.39	41649	221117.11	10.369	Si
SLV 6	1.39	-90530	60710.81	42626	223558.62	3.682	Si
SLV 6	3.89	-86776	7182.86	40859	219048.91	30.496	Si
SLV 15	1.39	-100786	-90295.22	47455	233778.93	2.589	Si
SLV 15	3.89	-84854	-26135.17	39954	216581.17	8.287	Si
SLV 16	1.39	-100786	-90295.22	47455	233778.93	2.589	Si
SLV 16	3.89	-84854	-26135.17	39954	216581.17	8.287	Si
SLV 14	1.39	-101997	-68972.17	48026	234782.75	3.404	Si
SLV 14	3.89	-88455	-21325.39	41649	221117.11	10.369	Si
SLV 4	1.39	-80971	70944.93	38125	211264.59	2.978	Si
SLV 4	3.89	-75807	9090.72	35694	203513.15	22.387	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 76	1.39	-132259	3978	-1578.27		62275	7.585	10833	23008			5.78	Si
SLU 76	3.89	-121520	4549	-9312.06		57218	7.585	10833	23008			5.06	Si
SLU 83	1.39	-140833	4020	1107.7		66312	7.585	10833	23008			5.72	Si
SLU 83	3.89	-129248	4479	-8911.79		60857	7.585	10833	23008			5.14	Si
SLU 84	1.39	-139418	4127	-541.4		65646	7.585	10833	23008			5.57	Si
SLU 84	3.89	-128479	4655	-9290.82		60495	7.585	10833	23008			4.94	Si
SLU 80	1.39	-135760	3928	-667.69		63923	7.585	10833	23008			5.86	Si
SLU 80	3.89	-124568	4447	-9444.41		58653	7.585	10833	23008			5.17	Si
SLU 81	1.39	-138274	3999	1296.52		65107	7.585	10833	23008			5.75	Si
SLU 81	3.89	-126713	4464	-8526.75		59663	7.585	10833	23008			5.15	Si
SLU 78	1.39	-137137	4042	-548.33		64571	7.585	10833	23008			5.69	Si
SLU 78	3.89	-125941	4551	-9599.81		59300	7.585	10833	23008			5.06	Si
SLU 77	1.39	-138551	3935	1100.77		65237	7.585	10833	23008			5.85	Si
SLU 77	3.89	-126710	4375	-9220.77		59662	7.585	10833	23008			5.26	Si
SLU 73	1.39	-129700	3957	-1389.45		61070	7.585	10833	23008			5.82	Si
SLU 73	3.89	-118985	4535	-8927.01		56025	7.585	10833	23008			5.07	Si
SLU 82	1.39	-136859	4106	-352.58		64441	7.585	10833	23008			5.6	Si
SLU 82	3.89	-125944	4640	-8905.78		59301	7.585	10833	23008			4.96	Si
SLU 75	1.39	-134578	4021	-359.51		63367	7.585	10833	23008			5.72	Si
SLU 75	3.89	-123406	4537	-9214.77		58106	7.585	10833	23008			5.07	Si



Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 3	1.39	-80971	42704	70944.93		38125	7.585	15958	33892			0.79	No, Vu<V
SLV 3	3.89	-75807	39653	9090.72		35694	7.585	15472	32860			0.83	No, Vu<V
SLV 2	1.39	-82182	39557	92267.98		38696	7.585	16072	34135			0.86	No, Vu<V
SLV 2	3.89	-79408	37964	13900.5		37390	7.585	15811	33580			0.88	No, Vu<V
SLV 7	1.39	-86493	19398	-10366.01		40726	7.585	16250	34512			1.78	Si
SLV 7	3.89	-74773	16521	-8849.76		35207	7.585	15375	32653			1.98	Si
SLV 14	1.39	-101997	-37523	-68972.17		48026	7.585	16250	34512			0.92	No, Vu<V
SLV 14	3.89	-88455	-33759	-21325.39		41649	7.585	16250	34512			1.02	Si
SLV 1	1.39	-82182	39557	92267.98		38696	7.585	16072	34135			0.86	No, Vu<V
SLV 1	3.89	-79408	37964	13900.5		37390	7.585	15811	33580			0.88	No, Vu<V
SLV 4	1.39	-80971	42704	70944.93		38125	7.585	15958	33892			0.79	No, Vu<V
SLV 4	3.89	-75807	39653	9090.72		35694	7.585	15472	32860			0.83	No, Vu<V
SLV 13	1.39	-101997	-37523	-68972.17		48026	7.585	16250	34512			0.92	No, Vu<V
SLV 13	3.89	-88455	-33759	-21325.39		41649	7.585	16250	34512			1.02	Si
SLV 16	1.39	-100786	-34376	-90295.22		47455	7.585	16250	34512			1	Si
SLV 16	3.89	-84854	-32070	-26135.17		39954	7.585	16250	34512			1.08	Si
SLV 8	1.39	-86493	19398	-10366.01		40726	7.585	16250	34512			1.78	Si
SLV 8	3.89	-74773	16521	-8849.76		35207	7.585	15375	32653			1.98	Si
SLV 15	1.39	-100786	-34376	-90295.22		47455	7.585	16250	34512			1	Si
SLV 15	3.89	-84854	-32070	-26135.17		39954	7.585	16250	34512			1.08	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 8	143750	0.31	34765	-73834	702.39	7395.73	10.53	Si
SLV 7	143750	0.31	34765	-73834	702.39	7395.73	10.53	Si
SLV 4	143750	0.31	34816	-73943	702.39	7402.31	10.54	Si
SLV 3	143750	0.31	34816	-73943	702.39	7402.31	10.54	Si
SLV 12	143750	0.31	37352	-79327	702.39	7710.88	10.98	Si
SLV 11	143750	0.31	37352	-79327	702.39	7710.88	10.98	Si
SLV 2	143750	0.31	37447	-79530	702.39	7721.88	10.99	Si
SLV 1	143750	0.31	37447	-79530	702.39	7721.88	10.99	Si
SLV 16	143750	0.31	43438	-92254	702.39	8324.03	11.85	Si
SLV 15	143750	0.31	43438	-92254	702.39	8324.03	11.85	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 3.23 Wa = 0.05 Ta = 0.0808

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 6	-77265	-90530	1143	0.028	8967.3	0.963	0.41731	6.97355	No
SLV 5	-77265	-90530	1143	0.028	8967.3	0.963	0.41731	6.97355	No
SLV 11	-76515	-92438	-1133	0.028	8891	0.963	0.41796	6.97355	No
SLV 12	-76515	-92438	-1133	0.028	8891	0.963	0.41796	6.97355	No
SLV 8	-74214	-86493	-1085	0.028	8656.9	0.962	0.42282	6.97355	No
SLV 7	-74214	-86493	-1085	0.028	8656.9	0.962	0.42282	6.97355	No
SLV 10	-79566	-96474	1095	0.028	9201.4	0.964	0.42943	6.97355	No
SLV 9	-79566	-96474	1095	0.028	9201.4	0.964	0.42943	6.97355	No
SLV 1	-73512	-82182	419	0.036	8585.5	0.962	0.54648	8.20395	No
SLV 2	-73512	-82182	419	0.036	8585.5	0.962	0.54648	8.20395	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	13.497	SLU 84	Si
V_SLU	4.943	SLU 84	Si
PF_SLV	2.308	SLV 1	Si
V_SLV	0.794	SLV 3	No
PFFP_SLV	10.529	SLV 7	Si
R_SLV	0.06	SLV 5	No

Maschio 80

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-4.968	1.046	-11.163	1.046	L3	L4	6.195	0.28	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 79	1.39	-100877	16652.19	58156	89386.94	5.368	Si
SLU 79	3.89	-92538	15980.34	53348	98913.71	6.19	Si
SLU 75	1.39	-99074	17450.88	57116	91704.9	5.255	Si
SLU 75	3.89	-91366	15774.17	52673	100008.07	6.34	Si
SLU 78	1.39	-100656	17520.93	58028	89678.15	5.118	Si
SLU 78	3.89	-92918	16249.22	53568	98545.7	6.065	Si
SLU 83	1.39	-104142	17757.74	60038	84826.12	4.777	Si
SLU 83	3.89	-96228	16310.14	55475	95074.56	5.829	Si
SLU 77	1.39	-101927	16763.21	58761	87971.35	5.248	Si
SLU 77	3.89	-93576	16129.08	53947	97893.75	6.069	Si
SLU 81	1.39	-102559	17687.69	59126	87094.66	4.924	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 81	3.89	-94676	15835.09	54581	96762.08	6.111	Si
SLU 82	1.39	-101289	18445.41	58393	88836.72	4.816	Si
SLU 82	3.89	-94018	15955.23	54201	97445.75	6.107	Si
SLU 84	1.39	-102871	18515.46	59305	86656.3	4.68	Si
SLU 84	3.89	-95570	16430.28	55096	95802.99	5.831	Si
SLU 80	1.39	-99606	17409.91	57423	91035.26	5.229	Si
SLU 80	3.89	-91880	16100.48	52969	99535.7	6.182	Si
SLU 76	1.39	-97177	17845.01	56023	93989.99	5.267	Si
SLU 76	3.89	-89890	15705.53	51822	101301.71	6.45	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 15	1.39	-60948	-14996.69	35137	134498.61	8.969	Si
SLV 15	3.89	-60560	35044.46	34913	133985.65	3.823	Si
SLV 2	1.39	-73644	36946.89	42456	148851.06	4.029	Si
SLV 2	3.89	-60234	-14290.67	34725	133551.56	9.345	Si
SLV 7	1.39	-60289	26367.67	34757	133624.88	5.068	Si
SLV 7	3.89	-63283	13414.7	36483	137491.85	10.249	Si
SLV 4	1.39	-68739	41130.94	39628	143864.11	3.498	Si
SLV 4	3.89	-61850	-8544.94	35656	135673.24	15.878	Si
SLV 3	1.39	-68739	41130.94	39628	143864.11	3.498	Si
SLV 3	3.89	-61850	-8544.94	35656	135673.24	15.878	Si
SLV 16	1.39	-60948	-14996.69	35137	134498.61	8.969	Si
SLV 16	3.89	-60560	35044.46	34913	133985.65	3.823	Si
SLV 8	1.39	-60289	26367.67	34757	133624.88	5.068	Si
SLV 8	3.89	-63283	13414.7	36483	137491.85	10.249	Si
SLV 13	1.39	-65853	-19180.74	37965	140602.51	7.33	Si
SLV 13	3.89	-58945	29298.73	33982	131803.08	4.499	Si
SLV 1	1.39	-73644	36946.89	42456	148851.06	4.029	Si
SLV 1	3.89	-60234	-14290.67	34725	133551.56	9.345	Si
SLV 14	1.39	-65853	-19180.74	37965	140602.51	7.33	Si
SLV 14	3.89	-58945	29298.73	33982	131803.08	4.499	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 80	1.39	-99606	-4317	17409.91		57423	6.195	10833	18791			4.35	Si
SLU 80	3.89	-91880	-4706	16100.48		52969	6.195	10833	18791			3.99	Si
SLU 59	1.39	-88693	-4092	15589.07		51132	6.195	10833	18791			4.59	Si
SLU 59	3.89	-80572	-4497	14840.97		46450	6.195	10833	18791			4.18	Si
SLU 84	1.39	-102871	-4198	18515.46		59305	6.195	10833	18791			4.48	Si
SLU 84	3.89	-95570	-4617	16430.28		55096	6.195	10833	18791			4.07	Si
SLU 75	1.39	-99074	-4135	17450.88		57116	6.195	10833	18791			4.54	Si
SLU 75	3.89	-91366	-4537	15774.17		52673	6.195	10833	18791			4.14	Si
SLU 76	1.39	-97177	-4154	17845.01		56023	6.195	10833	18791			4.52	Si
SLU 76	3.89	-89890	-4647	15705.53		51822	6.195	10833	18791			4.04	Si
SLU 57	1.39	-89743	-4160	15700.09		51737	6.195	10833	18791			4.52	Si
SLU 57	3.89	-81610	-4548	14989.71		47048	6.195	10833	18791			4.13	Si
SLU 78	1.39	-100656	-4385	17520.93		58028	6.195	10833	18791			4.29	Si
SLU 78	3.89	-92918	-4757	16249.22		53568	6.195	10833	18791			3.95	Si
SLU 77	1.39	-101927	-4256	16763.21		58761	6.195	10833	18791			4.42	Si
SLU 77	3.89	-93576	-4515	16129.08		53947	6.195	10833	18791			4.16	Si
SLU 70	1.39	-89346	-4081	14777.86		51508	6.195	10833	18791			4.6	Si
SLU 70	3.89	-80689	-4453	14371.26		46517	6.195	10833	18791			4.22	Si
SLU 79	1.39	-100877	-4189	16652.19		58156	6.195	10833	18791			4.49	Si
SLU 79	3.89	-92538	-4465	15980.34		53348	6.195	10833	18791			4.21	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 12	1.39	-57952	-17580	9529.38		33409	6.195	15015	26045			1.48	Si
SLV 12	3.89	-62896	-14322	26491.52		36260	6.195	15585	27034			1.89	Si
SLV 14	1.39	-65853	-34385	-19180.74		37965	6.195	15926	27626			0.8	No, Vu<V
SLV 14	3.89	-58945	-31630	29298.73		33982	6.195	15130	26244			0.83	No, Vu<V
SLV 3	1.39	-68739	29102	41130.94		39628	6.195	16250	28187			0.97	No, Vu<V
SLV 3	3.89	-61850	25822	-8544.94		35656	6.195	15465	26825			1.04	Si
SLV 16	1.39	-60948	-37366	-14996.69		35137	6.195	15361	26645			0.71	No, Vu<V
SLV 16	3.89	-60560	-33171	35044.46		34913	6.195	15316	26567			0.8	No, Vu<V
SLV 11	1.39	-57952	-17580	9529.38		33409	6.195	15015	26045			1.48	Si
SLV 11	3.89	-62896	-14322	26491.52		36260	6.195	15585	27034			1.89	Si
SLV 1	1.39	-73644	32083	36946.89		42456	6.195	16250	28187			0.88	No, Vu<V
SLV 1	3.89	-60234	27363	-14290.67		34725	6.195	15278	26502			0.97	No, Vu<V
SLV 13	1.39	-65853	-34385	-19180.74		37965	6.195	15926	27626			0.8	No, Vu<V
SLV 13	3.89	-58945	-31630	29298.73		33982	6.195	15130	26244			0.83	No, Vu<V
SLV 15	1.39	-60948	-37366	-14996.69		35137	6.195	15361	26645			0.71	No, Vu<V
SLV 15	3.89	-60560	-33171	35044.46		34913	6.195	15316	26567			0.8	No, Vu<V
SLV 2	1.39	-73644	32083	36946.89		42456	6.195	16250	28187			0.88	No, Vu<V
SLV 2	3.89	-60234	27363	-14290.67		34725	6.195	15278	26502			0.97	No, Vu<V
SLV 4	1.39	-68739	29102	41130.94		39628	6.195	16250	28187			0.97	No, Vu<V
SLV 4	3.89	-61850	25822	-8544.94		35656	6.195	15465	26825			1.04	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 13	143750	0.31	33358	-57862	573.67	5889.17	10.27	Si
SLV 14	143750	0.31	33358	-57862	573.67	5889.17	10.27	Si
SLV 16	143750	0.31	33714	-58481	573.67	5928.26	10.33	Si
SLV 15	143750	0.31	33714	-58481	573.67	5928.26	10.33	Si
SLV 10	143750	0.31	35008	-60725	573.67	6065.74	10.57	Si
SLV 9	143750	0.31	35008	-60725	573.67	6065.74	10.57	Si
SLV 11	143750	0.31	36198	-62789	573.67	6186.27	10.78	Si



Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 12	143750	0.31	36198	-62789	573.67	6186.27	10.78	Si
SLV 5	143750	0.31	36780	-63799	573.67	6243.21	10.88	Si
SLV 6	143750	0.31	36780	-63799	573.67	6243.21	10.88	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 3.23 $W_a = 0.05$ $T_a = 0.0808$

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 15	-52555	-60948	-397	0.035	6250.9	0.957	0.53103	8.20395	No
SLV 16	-52555	-60948	-397	0.035	6250.9	0.957	0.53103	8.20395	No
SLV 1	-57580	-73644	394	0.035	6761.8	0.96	0.53376	8.20395	No
SLV 2	-57580	-73644	394	0.035	6761.8	0.96	0.53376	8.20395	No
SLV 3	-58373	-68739	209	0.038	6842.5	0.961	0.57772	8.20395	No
SLV 4	-58373	-68739	209	0.038	6842.5	0.961	0.57772	8.20395	No
SLV 13	-51762	-65853	-212	0.038	6170.3	0.957	0.57956	8.20395	No
SLV 14	-51762	-65853	-212	0.038	6170.3	0.957	0.57956	8.20395	No
SLV 12	-55517	-57952	-401	0.035	6552	0.959	0.53131	6.97355	No
SLV 11	-55517	-57952	-401	0.035	6552	0.959	0.53131	6.97355	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.68	SLV 84	Si
V_SLV	3.951	SLV 78	Si
PF_SLV	3.498	SLV 3	Si
V_SLV	0.713	SLV 15	No
PFFP_SLV	10.266	SLV 13	Si
R_SLV	0.065	SLV 15	No

Maschio 81

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota s.	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.123	1.046	-4.168	1.046	L3	L4	4.045	0.28	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ_0	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 84	1.39	-73496	1048.83	64892	30231.22	28.824	Si
SLV 84	3.49	-72628	8780.58	64125	31256.1	3.56	Si
SLV 75	1.39	-71241	798.03	62901	32825.21	41.133	Si
SLV 75	3.49	-69981	8123.27	61788	34177.92	4.207	Si
SLV 78	1.39	-72237	672.74	63780	31707.36	47.132	Si
SLV 78	3.49	-71044	8259.91	62727	33041.31	4	Si
SLV 83	1.39	-73453	1155.6	64853	30283.45	26.206	Si
SLV 83	3.49	-72712	9306.82	64200	31158.17	3.348	Si
SLV 80	1.39	-71615	684.37	63230	32411.1	47.359	Si
SLV 80	3.49	-70361	8133.31	62123	33777.55	4.153	Si
SLV 77	1.39	-72193	779.51	63741	31757.18	40.74	Si
SLV 77	3.49	-71128	8786.15	62801	32949.22	3.75	Si
SLV 81	1.39	-72457	1280.9	63974	31454.37	24.556	Si
SLV 81	3.49	-71649	9170.18	63261	32372.53	3.53	Si
SLV 74	1.39	-71198	904.81	62862	32873.13	36.332	Si
SLV 74	3.49	-70065	8649.51	61862	34089.75	3.941	Si
SLV 82	1.39	-72501	1174.12	64013	31404.04	26.747	Si
SLV 82	3.49	-71565	8643.94	63186	32466.54	3.756	Si
SLV 79	1.39	-71571	791.14	63192	32459.74	41.029	Si
SLV 79	3.49	-70445	8659.54	62198	33687.98	3.89	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 15	1.39	-55577	-23956.21	49070	67263.08	2.808	Si
SLV 15	3.49	-61662	1472.42	54443	69144.02	46.959	Si
SLV 4	1.39	-39816	24780.39	35154	57359.13	2.315	Si
SLV 4	3.49	-30706	7614.28	27111	48323.71	6.346	Si
SLV 1	1.39	-42018	24820.3	37099	59179.55	2.384	Si
SLV 1	3.49	-32624	8921.52	28805	50427.91	5.652	Si
SLV 3	1.39	-39816	24780.39	35154	57359.13	2.315	Si
SLV 3	3.49	-30706	7614.28	27111	48323.71	6.346	Si
SLV 14	1.39	-57780	-23916.29	51015	68068.85	2.846	Si
SLV 14	3.49	-63581	2779.66	56137	69512.57	25.008	Si
SLV 5	1.39	-50104	7809.06	44238	64647.04	8.278	Si
SLV 5	3.49	-45697	8296.98	40347	61903.87	7.461	Si
SLV 2	1.39	-42018	24820.3	37099	59179.55	2.384	Si
SLV 2	3.49	-32624	8921.52	28805	50427.91	5.652	Si
SLV 13	1.39	-57780	-23916.29	51015	68068.85	2.846	Si
SLV 13	3.49	-63581	2779.66	56137	69512.57	25.008	Si
SLV 6	1.39	-50104	7809.06	44238	64647.04	8.278	Si
SLV 6	3.49	-45697	8296.98	40347	61903.87	7.461	Si
SLV 16	1.39	-55577	-23956.21	49070	67263.08	2.808	Si
SLV 16	3.49	-61662	1472.42	54443	69144.02	46.959	Si



Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 74	1.39	-71198	-8451	904.81		62862	4.045	10833	12270			1.45	Si
SLU 74	3.49	-70065	-8474	8649.51		61862	4.045	10833	12270			1.45	Si
SLU 79	1.39	-71571	-8516	791.14		63192	4.045	10833	12270			1.44	Si
SLU 79	3.49	-70445	-8540	8659.54		62198	4.045	10833	12270			1.44	Si
SLU 82	1.39	-72501	-8507	1174.12		64013	4.045	10833	12270			1.44	Si
SLU 82	3.49	-71565	-8540	8643.94		63186	4.045	10833	12270			1.44	Si
SLU 83	1.39	-73453	-9022	1155.6		64853	4.045	10833	12270			1.36	Si
SLU 83	3.49	-72712	-9046	9306.82		64200	4.045	10833	12270			1.36	Si
SLU 81	1.39	-72457	-8833	1280.9		63974	4.045	10833	12270			1.39	Si
SLU 81	3.49	-71649	-8856	9170.18		63261	4.045	10833	12270			1.39	Si
SLU 84	1.39	-73496	-8697	1048.83		64892	4.045	10833	12270			1.41	Si
SLU 84	3.49	-72628	-8730	8780.58		64125	4.045	10833	12270			1.41	Si
SLU 80	1.39	-71615	-8191	684.37		63230	4.045	10833	12270			1.5	Si
SLU 80	3.49	-70361	-8224	8133.31		62123	4.045	10833	12270			1.49	Si
SLU 77	1.39	-72193	-8641	779.51		63741	4.045	10833	12270			1.42	Si
SLU 77	3.49	-71128	-8664	8786.15		62801	4.045	10833	12270			1.42	Si
SLU 78	1.39	-72237	-8316	672.74		63780	4.045	10833	12270			1.48	Si
SLU 78	3.49	-71044	-8349	8259.91		62727	4.045	10833	12270			1.47	Si
SLU 41	1.39	-62273	-8240	1267.78		54983	4.045	10833	12270			1.49	Si
SLU 41	3.49	-62457	-8260	8625.19		55145	4.045	10833	12270			1.49	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 13	1.39	-57780	-23123	-23916.29		51015	4.045	16250	18405			0.8	No, Vu<V
SLV 13	3.49	-63581	-23149	2779.66		56137	4.045	16250	18405			0.8	No, Vu<V
SLV 9	1.39	-54833	-12658	-6811.91		48413	4.045	16250	18405			1.45	Si
SLV 9	3.49	-54984	-12505	6454.43		48547	4.045	16250	18405			1.47	Si
SLV 14	1.39	-57780	-23123	-23916.29		51015	4.045	16250	18405			0.8	No, Vu<V
SLV 14	3.49	-63581	-23149	2779.66		56137	4.045	16250	18405			0.8	No, Vu<V
SLV 15	1.39	-55577	-21730	-23956.21		49070	4.045	16250	18405			0.85	No, Vu<V
SLV 15	3.49	-61662	-21868	1472.42		54443	4.045	16250	18405			0.84	No, Vu<V
SLV 10	1.39	-54833	-12658	-6811.91		48413	4.045	16250	18405			1.45	Si
SLV 10	3.49	-54984	-12505	6454.43		48547	4.045	16250	18405			1.47	Si
SLV 16	1.39	-55577	-21730	-23956.21		49070	4.045	16250	18405			0.85	No, Vu<V
SLV 16	3.49	-61662	-21868	1472.42		54443	4.045	16250	18405			0.84	No, Vu<V
SLV 4	1.39	-39816	12814	24780.39		35154	4.045	15364	17402			1.36	Si
SLV 4	3.49	-30706	12808	7614.28		27111	4.045	13756	15580			1.22	Si
SLV 3	1.39	-39816	12814	24780.39		35154	4.045	15364	17402			1.36	Si
SLV 3	3.49	-30706	12808	7614.28		27111	4.045	13756	15580			1.22	Si
SLV 2	1.39	-42018	11421	24820.3		37099	4.045	15753	17842			1.56	Si
SLV 2	3.49	-32624	11528	8921.52		28805	4.045	14094	15963			1.38	Si
SLV 1	1.39	-42018	11421	24820.3		37099	4.045	15753	17842			1.56	Si
SLV 1	3.49	-32624	11528	8921.52		28805	4.045	14094	15963			1.38	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 3	143750	0.31	28172	-31907	374.58	3437.1	9.18	Si
SLV 4	143750	0.31	28172	-31907	374.58	3437.1	9.18	Si
SLV 1	143750	0.31	29812	-33765	374.58	3573.75	9.54	Si
SLV 2	143750	0.31	29812	-33765	374.58	3573.75	9.54	Si
SLV 8	143750	0.31	35275	-39952	374.58	3978.56	10.62	Si
SLV 7	143750	0.31	35275	-39952	374.58	3978.56	10.62	Si
SLV 6	143750	0.31	40742	-46144	374.58	4306.13	11.5	Si
SLV 5	143750	0.31	40742	-46144	374.58	4306.13	11.5	Si
SLV 12	143750	0.31	43003	-48706	374.58	4418.95	11.8	Si
SLV 11	143750	0.31	43003	-48706	374.58	4418.95	11.8	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 3.23 Wa = 0.05 Ta = 0.0808

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 13	-50532	-57780	197	0.037	5731.5	0.969	0.55581	8.20395	No
SLV 14	-50532	-57780	197	0.037	5731.5	0.969	0.55581	8.20395	No
SLV 4	-33217	-39816	-197	0.037	3969.8	0.956	0.5559	8.20395	No
SLV 3	-33217	-39816	-197	0.037	3969.8	0.956	0.5559	8.20395	No
SLV 8	-37573	-42763	-362	0.033	4412.7	0.96	0.49558	6.97355	No
SLV 7	-37573	-42763	-362	0.033	4412.7	0.96	0.49558	6.97355	No
SLV 10	-46176	-54833	361	0.034	5288.1	0.966	0.50625	6.97355	No
SLV 9	-46176	-54833	361	0.034	5288.1	0.966	0.50625	6.97355	No
SLV 16	-49408	-55577	-3	0.041	5617.1	0.968	0.61051	8.20395	No
SLV 15	-49408	-55577	-3	0.041	5617.1	0.968	0.61051	8.20395	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.348	SLU 83	Si
V_SLU	1.356	SLU 83	Si
PF_SLV	2.315	SLV 3	Si
V_SLV	0.795	SLV 13	No
PFFP_SLV	9.176	SLV 3	Si
R_SLV	0.068	SLV 13	No

Maschio 82

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.sx	a.s.dx
-15.058	3.311	-11.448	3.311	L3	L4	3.61	0.14	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	t0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 84	1.39	-36764	10624.25	72742	7100.57	0.668	No, M>Mu
SLU 84	2.89	-37890	5630	74970	5447.71	0.968	No, M>Mu
SLU 82	1.39	-36346	10585.24	71916	7685.15	0.726	No, M>Mu
SLU 82	2.89	-37458	5618.27	74115	6094.81	1.085	Si
SLU 79	1.39	-35539	9978.97	70319	8772.25	0.879	No, M>Mu
SLU 79	2.89	-36493	5274.71	72206	7481.81	1.418	Si
SLU 81	1.39	-36412	10598.63	72046	7594.34	0.717	No, M>Mu
SLU 81	2.89	-37524	5629.7	74247	5996.19	1.065	Si
SLU 77	1.39	-35933	10077.7	71099	8248.44	0.818	No, M>Mu
SLU 77	2.89	-36910	5333.61	73031	6892.18	1.292	Si
SLU 74	1.39	-35516	10038.68	70273	8802.62	0.877	No, M>Mu
SLU 74	2.89	-36478	5321.87	72177	7502.18	1.41	Si
SLU 80	1.39	-35474	9965.58	70189	8858.04	0.889	No, M>Mu
SLU 80	2.89	-36426	5263.27	72074	7574.42	1.439	Si
SLU 75	1.39	-35450	10025.3	70143	8888.28	0.887	No, M>Mu
SLU 75	2.89	-36412	5310.44	72045	7594.7	1.43	Si
SLU 83	1.39	-36829	10637.64	72872	7007.36	0.659	No, M>Mu
SLU 83	2.89	-37956	5641.43	75101	5346.57	0.948	No, M>Mu
SLU 78	1.39	-35868	10064.31	70969	8336.49	0.828	No, M>Mu
SLU 78	2.89	-36844	5322.17	72900	6987.21	1.313	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 9	1.39	-29282	10441.98	57939	27791.97	2.662	Si
SLV 9	2.89	-26953	5404.47	53330	27416.27	5.073	Si
SLV 13	1.39	-31689	20059.33	62700	27847.04	1.388	Si
SLV 13	2.89	-27354	6883.09	54124	27503.57	3.996	Si
SLV 16	1.39	-29700	20157.21	58765	27825.8	1.38	Si
SLV 16	2.89	-26239	6272.07	51917	27237.58	4.343	Si
SLV 14	1.39	-31689	20059.33	62700	27847.04	1.388	Si
SLV 14	2.89	-27354	6883.09	54124	27503.57	3.996	Si
SLV 15	1.39	-29700	20157.21	58765	27825.8	1.38	Si
SLV 15	2.89	-26239	6272.07	51917	27237.58	4.343	Si
SLV 12	1.39	-22653	10768.24	44821	25889.4	2.404	Si
SLV 12	2.89	-23236	3367.72	45975	26159.79	7.768	Si
SLV 3	1.39	-16195	-6994.68	32044	21565.84	3.083	Si
SLV 3	2.89	-21376	10.68	42295	25227.85	1000	Si
SLV 4	1.39	-16195	-6994.68	32044	21565.84	3.083	Si
SLV 4	2.89	-21376	10.68	42295	25227.85	1000	Si
SLV 11	1.39	-22653	10768.24	44821	25889.4	2.404	Si
SLV 11	2.89	-23236	3367.72	45975	26159.79	7.768	Si
SLV 10	1.39	-29282	10441.98	57939	27791.97	2.662	Si
SLV 10	2.89	-26953	5404.47	53330	27416.27	5.073	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 42	1.39	-31536	-112	9382.57		62398	3.61	10833	5475			48.71	Si
SLU 42	2.89	-32722	-115	4994.45		64745	3.61	10833	5475			47.71	Si
SLU 75	1.39	-35450	-108	10025.3		70143	3.61	10833	5475			50.72	Si
SLU 75	2.89	-36412	-111	5310.44		72045	3.61	10833	5475			49.51	Si
SLU 39	1.39	-31184	-113	9356.94		61702	3.61	10833	5475			48.39	Si
SLU 39	2.89	-32357	-115	4994.15		64022	3.61	10833	5475			47.42	Si
SLU 82	1.39	-36346	-121	10585.24		71916	3.61	10833	5475			45.43	Si
SLU 82	2.89	-37458	-123	5618.27		74115	3.61	10833	5475			44.42	Si
SLU 40	1.39	-31119	-113	9343.56		61572	3.61	10833	5475			48.33	Si
SLU 40	2.89	-32290	-116	4982.72		63890	3.61	10833	5475			47.36	Si
SLU 81	1.39	-36412	-120	10598.63		72046	3.61	10833	5475			45.48	Si
SLU 81	2.89	-37524	-123	5629.7		74247	3.61	10833	5475			44.47	Si
SLU 83	1.39	-36829	-119	10637.64		72872	3.61	10833	5475			45.82	Si
SLU 83	2.89	-37956	-122	5641.43		75101	3.61	10833	5475			44.78	Si
SLU 84	1.39	-36764	-120	10624.25		72742	3.61	10833	5475			45.76	Si
SLU 84	2.89	-37890	-122	5630		74970	3.61	10833	5475			44.73	Si
SLU 73	1.39	-34595	-108	9878.64		68451	3.61	10833	5475			50.76	Si
SLU 73	2.89	-35518	-110	5232.19		70278	3.61	10833	5475			49.57	Si
SLU 41	1.39	-31602	-112	9395.96		62528	3.61	10833	5475			48.78	Si
SLU 41	2.89	-32788	-115	5005.88		64876	3.61	10833	5475			47.77	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 4	1.39	-16195	-11880	-6994.68		32044	3.61	14742	7451			0.63	No, Vu<V
SLV 4	2.89	-21376	-11931	10.68		42295	3.61	16250	8213			0.69	No, Vu<V
SLV 15	1.39	-29700	11630	20157.21		62784	3.3789	16250	7687			0.66	No, Vu<V
SLV 15	2.89	-26239	11715	6272.07		51917	3.61	16250	8213			0.7	No, Vu<V
SLV 3	1.39	-16195	-11880	-6994.68		32044	3.61	14742	7451			0.63	No, Vu<V
SLV 3	2.89	-21376	-11931	10.68		42295	3.61	16250	8213			0.69	No, Vu<V
SLV 1	1.39	-18184	-11758	-7092.56		35979	3.61	15529	7848			0.67	No, Vu<V
SLV 1	2.89	-22491	-11846	621.71		44501	3.61	16250	8213			0.69	No, Vu<V
SLV 16	1.39	-29700	11630	20157.21		62784	3.3789	16250	7687			0.66	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 16	2.89	-26239	11715	6272.07		51917	3.61	16250	8213			0.7	No, Vu<V
SLV 8	1.39	-18601	-3793	2622.67		36805	3.61	15694	7932			2.09	Si
SLV 8	2.89	-21777	-3755	1489.31		43089	3.61	16250	8213			2.19	Si
SLV 14	1.39	-31689	11752	20059.33		64377	3.516	16250	7999			0.68	No, Vu<V
SLV 14	2.89	-27354	11800	6883.09		54124	3.61	16250	8213			0.7	No, Vu<V
SLV 13	1.39	-31689	11752	20059.33		64377	3.516	16250	7999			0.68	No, Vu<V
SLV 13	2.89	-27354	11800	6883.09		54124	3.61	16250	8213			0.7	No, Vu<V
SLV 7	1.39	-18601	-3793	2622.67		36805	3.61	15694	7932			2.09	Si
SLV 7	2.89	-21777	-3755	1489.31		43089	3.61	16250	8213			2.19	Si
SLV 2	1.39	-18184	-11758	-7092.56		35979	3.61	15529	7848			0.67	No, Vu<V
SLV 2	2.89	-22491	-11846	621.71		44501	3.61	16250	8213			0.69	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.03 denominatore 8 yM = 2

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 3	143750	0.31	39453	-19940	159.55	945.09	5.92	Si
SLV 4	143750	0.31	39453	-19940	159.55	945.09	5.92	Si
SLV 7	143750	0.31	40902	-20672	159.55	962.64	6.03	Si
SLV 8	143750	0.31	40902	-20672	159.55	962.64	6.03	Si
SLV 2	143750	0.31	41321	-20884	159.55	967.49	6.06	Si
SLV 1	143750	0.31	41321	-20884	159.55	967.49	6.06	Si
SLV 11	143750	0.31	44012	-22244	159.55	996.21	6.24	Si
SLV 12	143750	0.31	44012	-22244	159.55	996.21	6.24	Si
SLV 5	143750	0.31	47129	-23819	159.55	1024.22	6.42	Si
SLV 6	143750	0.31	47129	-23819	159.55	1024.22	6.42	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 3.23 Wa = 0.03 Ta = 0.1615

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 5	-20396	-25231	-102	0.016	2338.4	0.966	0.23849	14.1455	No
SLV 6	-20396	-25231	-102	0.016	2338.4	0.966	0.23849	14.1455	No
SLV 11	-22326	-22653	102	0.016	2534.9	0.969	0.24163	14.1455	No
SLV 12	-22326	-22653	102	0.016	2534.9	0.969	0.24163	14.1455	No
SLV 8	-21011	-18601	97	0.016	2401	0.967	0.24265	14.1455	No
SLV 7	-21011	-18601	97	0.016	2401	0.967	0.24265	14.1455	No
SLV 10	-21712	-29282	-97	0.016	2472.3	0.968	0.24381	14.1455	No
SLV 9	-21712	-29282	-97	0.016	2472.3	0.968	0.24381	14.1455	No
SLV 15	-23646	-29700	38	0.019	2669.2	0.97	0.28143	14.15828	No
SLV 16	-23646	-29700	38	0.019	2669.2	0.97	0.28143	14.15828	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.659	SLV 83	No
V_SLV	44.423	SLV 82	Si
PF_SLV	1.38	SLV 15	Si
V_SLV	0.627	SLV 3	No
PFFP_SLV	5.923	SLV 3	Si
R_SLV	0.017	SLV 5	No

Maschio 83

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.948	3.311	-9.728	3.311	L3	L4	0.22	0.14	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, yM = 3

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 62	1.39	-2446	18.88	79402	6.79	0.36	No, M>Mu
SLU 62	2.89	-3065	-53	99500	0	0	No, Rottura per schiacciamento
SLU 42	1.39	-2264	24.22	73502	24.32	1.004	Si
SLU 42	2.89	-3008	-56.98	97675	0	0	No, Rottura per schiacciamento
SLU 63	1.39	-2437	18.97	79125	7.68	0.405	No, M>Mu
SLU 63	2.89	-3058	-53.01	99279	0	0	No, Rottura per schiacciamento
SLU 61	1.39	-2402	19.35	77980	11.28	0.583	No, M>Mu
SLU 61	2.89	-3027	-53	98289	0	0	No, Rottura per schiacciamento
SLU 58	1.39	-2382	15.03	77341	13.25	0.881	No, M>Mu
SLU 58	2.89	-2904	-47.71	94298	0	0	No, Rottura per schiacciamento
SLU 60	1.39	-2410	19.26	78257	10.42	0.541	No, M>Mu
SLU 60	2.89	-3034	-52.98	98510	0	0	No, Rottura per schiacciamento
SLU 59	1.39	-2374	15.13	77064	14.08	0.931	No, M>Mu
SLU 59	2.89	-2898	-47.73	94077	0	0	No, Rottura per schiacciamento
SLU 57	1.39	-2402	15.27	77996	11.23	0.736	No, M>Mu



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 57	2.89	-2933	-48.29	95240	0	0	No, Rottura per schiacciamento
SLU 56	1.39	-2411	15.17	78272	10.37	0.684	No, M>Mu
SLU 56	2.89	-2940	-48.27	95461	0	0	No, Rottura per schiacciamento
SLU 55	1.39	-2333	15.57	75735	18.03	1.158	Si
SLU 55	2.89	-2863	-47.72	92940	0	0	No, Rottura per schiacciamento

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 16	1.39	-670	142.56	0	0	0	No, e>l/2
SLV 16	2.89	-4143	-182.86	134520	0	0	No, Rottura per schiacciamento
SLV 15	1.39	-670	142.56	0	0	0	No, e>l/2
SLV 15	2.89	-4143	-182.86	134520	0	0	No, Rottura per schiacciamento
SLV 3	1.39	-2639	-104.59	85686	86.72	0.829	No, M>Mu
SLV 3	2.89	-312	89.6	0	0	0	No, e>l/2
SLV 13	1.39	-961	127.15	0	0	0	No, e>l/2
SLV 13	2.89	-4070	-161.52	132147	0	0	No, Rottura per schiacciamento
SLV 1	1.39	-2930	-120	95134	71.36	0.595	No, M>Mu
SLV 1	2.89	-239	110.95	0	0	0	No, e>l/2
SLV 4	1.39	-2639	-104.59	85686	86.72	0.829	No, M>Mu
SLV 4	2.89	-312	89.6	0	0	0	No, e>l/2
SLV 14	1.39	-961	127.15	0	0	0	No, e>l/2
SLV 14	2.89	-4070	-161.52	132147	0	0	No, Rottura per schiacciamento
SLV 12	1.39	-1020	74.04	33112	81.78	1.105	Si
SLV 12	2.89	-2888	-112.4	93756	73.91	0.658	No, M>Mu
SLV 11	1.39	-1020	74.04	33112	81.78	1.105	Si
SLV 11	2.89	-2888	-112.4	93756	73.91	0.658	No, M>Mu
SLV 2	1.39	-2930	-120	95134	71.36	0.595	No, M>Mu
SLV 2	2.89	-239	110.95	0	0	0	No, e>l/2

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 42	1.39	-2264	113	24.22		73502	0.22	10833	334			2.95	Si
SLU 42	2.89	-3008	117	-56.98		97675	0.22	10833	334			2.86	Si
SLU 40	1.39	-2229	114	24.6		72357	0.22	10833	334			2.94	Si
SLU 40	2.89	-2978	117	-56.97		96685	0.22	10833	334			2.85	Si
SLU 41	1.39	-2272	113	24.12		73778	0.22	10833	334			2.96	Si
SLU 41	2.89	-3015	116	-56.97		97896	0.22	10833	334			2.87	Si
SLU 84	1.39	-2680	121	24.53		87014	0.22	10833	334			2.76	Si
SLU 84	2.89	-3457	125	-62.6		112229	0.22	10833	334			2.67	Si
SLU 75	1.39	-2610	109	21.2		84739	0.22	10833	334			3.05	Si
SLU 75	2.89	-3302	113	-57.86		107201	0.22	10833	334			2.95	Si
SLU 39	1.39	-2237	113	24.5		72633	0.22	10833	334			2.94	Si
SLU 39	2.89	-2985	117	-56.95		96906	0.22	10833	334			2.85	Si
SLU 82	1.39	-2645	121	24.91		85869	0.22	10833	334			2.75	Si
SLU 82	2.89	-3426	126	-62.58		111240	0.22	10833	334			2.66	Si
SLU 83	1.39	-2689	121	24.43		87290	0.22	10833	334			2.77	Si
SLU 83	2.89	-3463	125	-62.58		112450	0.22	10833	334			2.67	Si
SLU 74	1.39	-2618	109	21.1		85016	0.22	10833	334			3.06	Si
SLU 74	2.89	-3309	113	-57.84		107423	0.22	10833	334			2.95	Si
SLU 81	1.39	-2653	121	24.81		86145	0.22	10833	334			2.75	Si
SLU 81	2.89	-3433	125	-62.57		111461	0.22	10833	334			2.66	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 4	1.39	-2639	-297	-104.59		89293	0.2111	16250	480			1.62	Si
SLV 4	2.89	-312	-295	89.6		0	0	8333	0			0	No, Vu<V
SLV 15	1.39	-670	481	142.56		0	0	8333	0			0	No, Vu<V
SLV 15	2.89	-4143	475	-182.86		149772	0.1976	16250	450			0.95	No, Vu<V
SLV 11	1.39	-1020	271	74.04		64919	0.1122	16250	255			0.94	No, Vu<V
SLV 11	2.89	-2888	257	-112.4		96731	0.2132	16250	485			1.89	Si
SLV 16	1.39	-670	481	142.56		0	0	8333	0			0	No, Vu<V
SLV 16	2.89	-4143	475	-182.86		149772	0.1976	16250	450			0.95	No, Vu<V
SLV 1	1.39	-2930	-351	-120		101040	0.2071	16250	471			1.34	Si
SLV 1	2.89	-239	-340	110.95		0	0	8333	0			0	No, Vu<V
SLV 14	1.39	-961	427	127.15		0	0	8333	0			0	No, Vu<V
SLV 14	2.89	-4070	430	-161.52		137817	0.2109	16250	480			1.11	Si
SLV 12	1.39	-1020	271	74.04		64919	0.1122	16250	255			0.94	No, Vu<V
SLV 12	2.89	-2888	257	-112.4		96731	0.2132	16250	485			1.89	Si
SLV 2	1.39	-2930	-351	-120		101040	0.2071	16250	471			1.34	Si
SLV 2	2.89	-239	-340	110.95		0	0	8333	0			0	No, Vu<V
SLV 3	1.39	-2639	-297	-104.59		89293	0.2111	16250	480			1.62	Si
SLV 3	2.89	-312	-295	89.6		0	0	8333	0			0	No, Vu<V
SLV 13	1.39	-961	427	127.15		0	0	8333	0			0	No, Vu<V
SLV 13	2.89	-4070	430	-161.52		137817	0.2109	16250	480			1.11	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 4	143750	0.31	12436	-383	9.72	24.08	2.48	Si
SLV 3	143750	0.31	12436	-383	9.72	24.08	2.48	Si
SLV 2	143750	0.31	14811	-456	9.72	28.06	2.89	Si
SLV 1	143750	0.31	14811	-456	9.72	28.06	2.89	Si
SLV 8	143750	0.31	26350	-812	9.72	44.56	4.58	Si



Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	143750	0.31	26350	-812	9.72	44.56	4.58	Si
SLV 6	143750	0.31	34267	-1055	9.72	53.16	5.47	Si
SLV 5	143750	0.31	34267	-1055	9.72	53.16	5.47	Si
SLV 11	143750	0.31	40652	-1252	9.72	58.49	6.02	Si
SLV 12	143750	0.31	40652	-1252	9.72	58.49	6.02	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 3.23 Wa = 0.03 Ta = 0.1615

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 15	-671	-670	4	0.016	84.3	0.946	0.24437	14.15828	No
SLV 16	-671	-670	4	0.016	84.3	0.946	0.24437	14.15828	No
SLV 2	-1763	-2930	-4	0.018	195.4	0.975	0.26517	14.15828	No
SLV 1	-1763	-2930	-4	0.018	195.4	0.975	0.26517	14.15828	No
SLV 12	-1203	-1020	3	0.018	138.5	0.965	0.26873	14.1455	No
SLV 11	-1203	-1020	3	0.018	138.5	0.965	0.26873	14.1455	No
SLV 5	-1230	-2581	-3	0.018	141.2	0.966	0.2701	14.1455	No
SLV 6	-1230	-2581	-3	0.018	141.2	0.966	0.2701	14.1455	No
SLV 14	-571	-961	3	0.018	74.3	0.94	0.27115	14.15828	No
SLV 13	-571	-961	3	0.018	74.3	0.94	0.27115	14.15828	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0	SLU 18	No
V_SLU	2.657	SLU 82	Si
PF_SLV	0	SLV 1	No
V_SLV	0	SLV 1	No
PFFP_SLV	2.477	SLV 3	Si
R_SLV	0.017	SLV 15	No

Maschio 84

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.618	6.661	-17.768	6.661	L3	L4	1.85	0.28	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ ₀	f _{v0}	μ	φ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 80	2.29	-20735	-4594.92	40029	9754.81	2.123	Si
SLU 80	4.19	-25098	199.39	48451	9406.95	47.178	Si
SLU 74	2.29	-20633	-4571.98	39832	9752.95	2.133	Si
SLU 74	4.19	-24850	169.37	47973	9449.05	55.791	Si
SLU 84	2.29	-21323	-4710.13	41165	9756.57	2.071	Si
SLU 84	4.19	-25851	225.72	49905	9262.46	41.035	Si
SLU 79	2.29	-20709	-4584.62	39979	9754.38	2.128	Si
SLU 79	4.19	-25068	198.02	48394	9412.09	47.531	Si
SLU 81	2.29	-21032	-4648.39	40602	9757.6	2.099	Si
SLU 81	4.19	-25364	194.03	48965	9358.71	48.234	Si
SLU 75	2.29	-20659	-4582.28	39882	9753.47	2.129	Si
SLU 75	4.19	-24879	170.74	48030	9444.2	55.314	Si
SLU 77	2.29	-20898	-4623.41	40344	9756.82	2.11	Si
SLU 77	4.19	-25307	199.69	48856	9369.22	46.919	Si
SLU 82	2.29	-21058	-4658.69	40652	9757.66	2.095	Si
SLU 82	4.19	-25393	195.4	49022	9353.19	47.867	Si
SLU 78	2.29	-20924	-4633.71	40394	9757.03	2.106	Si
SLU 78	4.19	-25337	201.06	48913	9363.77	46.572	Si
SLU 83	2.29	-21297	-4699.83	41115	9756.82	2.076	Si
SLU 83	4.19	-25821	224.35	49848	9268.57	41.313	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 14	2.29	-10814	27	20877	8294.05	307.169	Si
SLV 14	4.19	-4951	-4429.69	9558	4221.66	0.953	No, M>Mu
SLV 1	2.29	-11280	-6592.5	21776	8574.52	1.301	Si
SLV 1	4.19	-23865	4203.43	46071	13751.49	3.271	Si
SLV 13	2.29	-10814	27	20877	8294.05	307.169	Si
SLV 13	4.19	-4951	-4429.69	9558	4221.66	0.953	No, M>Mu
SLV 15	2.29	-16982	243.58	32784	11493.84	47.186	Si
SLV 15	4.19	-9381	-4167.43	18110	7391.19	1.774	Si
SLV 16	2.29	-16982	243.58	32784	11493.84	47.186	Si
SLV 16	4.19	-9381	-4167.43	18110	7391.19	1.774	Si
SLV 9	2.29	-3781	-2542.5	7300	3288.66	1.293	Si
SLV 9	4.19	-6403	-1714.06	12361	5323.7	3.106	Si
SLV 5	2.29	-3921	-4528.35	0	0	0	No, e>l/2
SLV 5	4.19	-12077	875.87	23315	9039.71	10.321	Si
SLV 10	2.29	-3781	-2542.5	7300	3288.66	1.293	Si
SLV 10	4.19	-6403	-1714.06	12361	5323.7	3.106	Si
SLV 2	2.29	-11280	-6592.5	21776	8574.52	1.301	Si
SLV 2	4.19	-23865	4203.43	46071	13751.49	3.271	Si
SLV 6	2.29	-3921	-4528.35	0	0	0	No, e>l/2



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 6	4.19	-12077	875.87	23315	9039.71	10.321	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 78	2.29	-20924	-5855	-4633.71		40394	1.85	10833	5612			0.96	No, Vu<V
SLU 78	4.19	-25337	-5852	201.06		48913	1.85	10833	5612			0.96	No, Vu<V
SLU 80	2.29	-20735	-5809	-4594.92		40029	1.85	10833	5612			0.97	No, Vu<V
SLU 80	4.19	-25098	-5806	199.39		48451	1.85	10833	5612			0.97	No, Vu<V
SLU 83	2.29	-21297	-5956	-4699.83		41115	1.85	10833	5612			0.94	No, Vu<V
SLU 83	4.19	-25821	-5954	224.35		49848	1.85	10833	5612			0.94	No, Vu<V
SLU 75	2.29	-20659	-5718	-4582.28		39882	1.85	10833	5612			0.98	No, Vu<V
SLU 75	4.19	-24879	-5716	170.74		48030	1.85	10833	5612			0.98	No, Vu<V
SLU 79	2.29	-20709	-5801	-4584.62		39979	1.85	10833	5612			0.97	No, Vu<V
SLU 79	4.19	-25068	-5799	198.02		48394	1.85	10833	5612			0.97	No, Vu<V
SLU 81	2.29	-21032	-5819	-4648.39		40602	1.85	10833	5612			0.96	No, Vu<V
SLU 81	4.19	-25364	-5818	194.03		48965	1.85	10833	5612			0.96	No, Vu<V
SLU 74	2.29	-20633	-5710	-4571.98		39832	1.85	10833	5612			0.98	No, Vu<V
SLU 74	4.19	-24850	-5708	169.37		47973	1.85	10833	5612			0.98	No, Vu<V
SLU 84	2.29	-21323	-5964	-4710.13		41165	1.85	10833	5612			0.94	No, Vu<V
SLU 84	4.19	-25851	-5961	225.72		49905	1.85	10833	5612			0.94	No, Vu<V
SLU 82	2.29	-21058	-5827	-4658.69		40652	1.85	10833	5612			0.96	No, Vu<V
SLU 82	4.19	-25393	-5825	195.4		49022	1.85	10833	5612			0.96	No, Vu<V
SLU 77	2.29	-20898	-5847	-4623.41		40344	1.85	10833	5612			0.96	No, Vu<V
SLU 77	4.19	-25307	-5845	199.69		48856	1.85	10833	5612			0.96	No, Vu<V

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 9	2.29	-3781	-4319	-2542.5		17821	0.7578	11897	2524			0.58	No, Vu<V
SLV 9	4.19	-6403	-1249	-1714.06		12361	1.85	10806	5597			4.48	Si
SLV 4	2.29	-17448	-11223	-6375.92		37120	1.6787	15757	7407			0.66	No, Vu<V
SLV 4	4.19	-28294	-12308	4465.68		54622	1.85	16250	8418			0.68	No, Vu<V
SLV 10	2.29	-3781	-4319	-2542.5		17821	0.7578	11897	2524			0.58	No, Vu<V
SLV 10	4.19	-6403	-1249	-1714.06		12361	1.85	10806	5597			4.48	Si
SLV 1	2.29	-11280	-13047	-6592.5		39431	1.0217	16219	4640			0.36	No, Vu<V
SLV 1	4.19	-23865	-12324	4203.43		46071	1.85	16250	8418			0.68	No, Vu<V
SLV 14	2.29	-10814	3656	27		20877	1.85	12509	6480			1.77	Si
SLV 14	4.19	-4951	4743	-4429.69		194230	0.091	16250	414			0.09	No, Vu<V
SLV 13	2.29	-10814	3656	27		20877	1.85	12509	6480			1.77	Si
SLV 13	4.19	-4951	4743	-4429.69		194230	0.091	16250	414			0.09	No, Vu<V
SLV 2	2.29	-11280	-13047	-6592.5		39431	1.0217	16219	4640			0.36	No, Vu<V
SLV 2	4.19	-23865	-12324	4203.43		46071	1.85	16250	8418			0.68	No, Vu<V
SLV 3	2.29	-17448	-11223	-6375.92		37120	1.6787	15757	7407			0.66	No, Vu<V
SLV 3	4.19	-28294	-12308	4465.68		54622	1.85	16250	8418			0.68	No, Vu<V
SLV 6	2.29	-3921	-9330	-4528.35		0	0	8333	0			0	No, Vu<V
SLV 6	4.19	-12077	-6369	875.87		23315	1.85	12996	6732			1.06	Si
SLV 5	2.29	-3921	-9330	-4528.35		0	0	8333	0			0	No, Vu<V
SLV 5	4.19	-12077	-6369	875.87		23315	1.85	12996	6732			1.06	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 W_a 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 10	143750	0.31	10678	-5531	167.42	706.69	4.22	Si
SLV 9	143750	0.31	10678	-5531	167.42	706.69	4.22	Si
SLV 13	143750	0.31	15216	-7882	167.42	966.07	5.77	Si
SLV 14	143750	0.31	15216	-7882	167.42	966.07	5.77	Si
SLV 6	143750	0.31	17146	-8882	167.42	1068.95	6.38	Si
SLV 5	143750	0.31	17146	-8882	167.42	1068.95	6.38	Si
SLV 16	143750	0.31	25575	-13248	167.42	1466.48	8.76	Si
SLV 15	143750	0.31	25575	-13248	167.42	1466.48	8.76	Si
SLV 1	143750	0.31	36777	-19051	167.42	1864.32	11.14	Si
SLV 2	143750	0.31	36777	-19051	167.42	1864.32	11.14	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 3.23 $W_a = 0.05$ $T_a = 0.0808$

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 15	-7170	-13214	89	0.035	1002.6	0.928	0.55441	8.20395	No
SLV 16	-7170	-13214	89	0.035	1002.6	0.928	0.55441	8.20395	No
SLV 2	-23649	-10648	-89	0.037	2676.1	0.969	0.55645	8.20395	No
SLV 1	-23649	-10648	-89	0.037	2676.1	0.969	0.55645	8.20395	No
SLV 3	-26672	-15878	-61	0.038	2984	0.972	0.57079	8.20395	No
SLV 4	-26672	-15878	-61	0.038	2984	0.972	0.57079	8.20395	No
SLV 14	-4147	-7983	61	0.039	700	0.906	0.62129	8.20395	No
SLV 13	-4147	-7983	61	0.039	700	0.906	0.62129	8.20395	No
SLV 11	-17523	-20248	69	0.038	2052.6	0.961	0.57272	6.97355	No
SLV 12	-17523	-20248	69	0.038	2052.6	0.961	0.57272	6.97355	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.071	SLU 84	Si
V_SLU	0.941	SLU 84	No
PF_SLV	0	SLV 5	No
V_SLV	0	SLV 5	No
PFFP_SLV	4.221	SLV 9	Si
R_SLV	0.068	SLV 15	No



Maschio 85

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s, sx	a.s, dx
-16.768	6.661	-12.888	6.661	L3	L4	3.88	0.28	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 74	2.29	-45843	-3627.61	42198	42864.94	11.816	Si
SLU 74	4.19	-49239	-4637.03	45323	42374.64	9.138	Si
SLU 84	2.29	-47395	-3770.76	43626	42703.62	11.325	Si
SLU 84	4.19	-51131	-4867.42	47064	41882.29	8.605	Si
SLU 83	2.29	-47368	-3750.82	43600	42707.41	11.386	Si
SLU 83	4.19	-51095	-4875.93	47031	41893.05	8.592	Si
SLU 78	2.29	-46560	-3710.38	42857	42803.54	11.536	Si
SLU 78	4.19	-50083	-4731.81	46100	42174.48	8.913	Si
SLU 79	2.29	-46108	-3651.46	42441	42844.93	11.734	Si
SLU 79	4.19	-49556	-4728.72	45615	42303.08	8.946	Si
SLU 80	2.29	-46135	-3671.39	42466	42842.66	11.669	Si
SLU 80	4.19	-49592	-4720.21	45648	42294.73	8.96	Si
SLU 82	2.29	-46706	-3707.92	42992	42788.3	11.54	Si
SLU 82	4.19	-50323	-4764.13	46321	42111.71	8.839	Si
SLU 77	2.29	-46533	-3690.44	42832	42806.32	11.599	Si
SLU 77	4.19	-50047	-4740.32	46067	42183.6	8.899	Si
SLU 81	2.29	-46678	-3687.99	42966	42791.26	11.603	Si
SLU 81	4.19	-50287	-4772.64	46288	42121.21	8.826	Si
SLU 75	2.29	-45871	-3647.54	42223	42862.99	11.751	Si
SLU 75	4.19	-49275	-4628.52	45356	42366.79	9.153	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 1	2.29	-27259	-15196.72	25092	42023.6	2.765	Si
SLV 1	4.19	-32904	9201	30287	48011.07	5.218	Si
SLV 4	2.29	-41233	-15366.01	37954	55145.26	3.589	Si
SLV 4	4.19	-40120	9303.75	36929	54308.76	5.837	Si
SLV 13	2.29	-21231	10472.42	19543	34600.91	3.304	Si
SLV 13	4.19	-26046	-15458.63	23975	40614.97	2.627	Si
SLV 6	2.29	-8847	-6015.02	8143	16018.7	2.663	Si
SLV 6	4.19	-22086	450.25	20329	35717.52	79.328	Si
SLV 14	2.29	-21231	10472.42	19543	34600.91	3.304	Si
SLV 14	4.19	-26046	-15458.63	23975	40614.97	2.627	Si
SLV 5	2.29	-8847	-6015.02	8143	16018.7	2.663	Si
SLV 5	4.19	-22086	450.25	20329	35717.52	79.328	Si
SLV 15	2.29	-35205	10303.14	32405	50184.76	4.871	Si
SLV 15	4.19	-33262	-15355.88	30616	48359.03	3.149	Si
SLV 16	2.29	-35205	10303.14	32405	50184.76	4.871	Si
SLV 16	4.19	-33262	-15355.88	30616	48359.03	3.149	Si
SLV 3	2.29	-41233	-15366.01	37954	55145.26	3.589	Si
SLV 3	4.19	-40120	9303.75	36929	54308.76	5.837	Si
SLV 2	2.29	-27259	-15196.72	25092	42023.6	2.765	Si
SLV 2	4.19	-32904	9201	30287	48011.07	5.218	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 47	2.29	-36477	-513	-2868.62		33576	3.88	10032	10899			21.25	Si
SLU 47	4.19	-38113	-513	-3487.5		35082	3.88	10233	11117			21.69	Si
SLU 65	2.29	-40227	-535	-3180.57		37028	3.88	10493	11399			21.31	Si
SLU 65	4.19	-42525	-535	-3923.46		39143	3.88	10775	11706			21.9	Si
SLU 49	2.29	-37573	-518	-2957.15		34585	3.88	10167	11045			21.34	Si
SLU 49	4.19	-39387	-517	-3608.06		36255	3.88	10390	11287			21.82	Si
SLU 46	2.29	-36884	-525	-2894.31		33950	3.88	10082	10953			20.88	Si
SLU 46	4.19	-38580	-524	-3504.78		35511	3.88	10290	11180			21.32	Si
SLU 67	2.29	-41323	-540	-3269.09		38037	3.88	10627	11545			21.39	Si
SLU 67	4.19	-43800	-539	-4044.02		40316	3.88	10833	11769			21.82	Si
SLU 52	2.29	-40336	-524	-3184.24		37128	3.88	10506	11414			21.8	Si
SLU 52	4.19	-42780	-523	-3968.71		39378	3.88	10806	11740			22.44	Si
SLU 45	2.29	-36856	-509	-2874.38		33925	3.88	10079	10950			21.53	Si
SLU 45	4.19	-38544	-508	-3513.28		35479	3.88	10286	11175			21.98	Si
SLU 44	2.29	-35788	-520	-2805.79		32942	3.88	9948	10807			20.79	Si
SLU 44	4.19	-37305	-519	-3384.21		34338	3.88	10134	11010			21.19	Si
SLU 68	2.29	-40916	-528	-3243.4		37662	3.88	10577	11491			21.76	Si
SLU 68	4.19	-43333	-528	-4026.75		39887	3.88	10833	11769			22.3	Si
SLU 75	2.29	-45871	-544	-3647.54		42223	3.88	10833	11769			21.65	Si
SLU 75	4.19	-49275	-543	-4628.52		45356	3.88	10833	11769			21.67	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, γM = 2

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 4	2.29	-41233	-12271	-15366.01		37954	3.88	15924	17300			1.41	Si
SLV 4	4.19	-40120	-13280	9303.75		36929	3.88	15719	17077			1.29	Si
SLV 2	2.29	-27259	-15193	-15196.72		25092	3.88	13352	14505			0.95	No, Vu<V
SLV 2	4.19	-32904	-13803	9201		30287	3.88	14391	15634			1.13	Si
SLV 5	2.29	-8847	-9262	-6015.02		8358	3.7802	10005	10590			1.14	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 5	4.19	-22086	-5205	450.25		20329	3.88	12399	13470			2.59	Si
SLV 16	2.29	-35205	14415	10303.14		32405	3.88	14814	16094			1.12	Si
SLV 16	4.19	-33262	13026	-15355.88		30616	3.88	14457	15706			1.21	Si
SLV 3	2.29	-41233	-12271	-15366.01		37954	3.88	15924	17300			1.41	Si
SLV 3	4.19	-40120	-13280	9303.75		36929	3.88	15719	17077			1.29	Si
SLV 13	2.29	-21231	11493	10472.42		19543	3.88	12242	13300			1.16	Si
SLV 13	4.19	-26046	12503	-15458.63		23975	3.88	13128	14263			1.14	Si
SLV 14	2.29	-21231	11493	10472.42		19543	3.88	12242	13300			1.16	Si
SLV 14	4.19	-26046	12503	-15458.63		23975	3.88	13128	14263			1.14	Si
SLV 15	2.29	-35205	14415	10303.14		32405	3.88	14814	16094			1.12	Si
SLV 15	4.19	-33262	13026	-15355.88		30616	3.88	14457	15706			1.21	Si
SLV 1	2.29	-27259	-15193	-15196.72		25092	3.88	13352	14505			0.95	No, Vu<V
SLV 1	4.19	-32904	-13803	9201		30287	3.88	14391	15634			1.13	Si
SLV 6	2.29	-8847	-9262	-6015.02		8358	3.7802	10005	10590			1.14	Si
SLV 6	4.19	-22086	-5205	450.25		20329	3.88	12399	13470			2.59	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 10	143750	0.31	15014	-16311	351.13	2002.96	5.7	Si
SLV 9	143750	0.31	15014	-16311	351.13	2002.96	5.7	Si
SLV 5	143750	0.31	16950	-18414	351.13	2220.4	6.32	Si
SLV 6	143750	0.31	16950	-18414	351.13	2220.4	6.32	Si
SLV 13	143750	0.31	23141	-25140	351.13	2853.07	8.13	Si
SLV 14	143750	0.31	23141	-25140	351.13	2853.07	8.13	Si
SLV 2	143750	0.31	29595	-32152	351.13	3411.01	9.71	Si
SLV 1	143750	0.31	29595	-32152	351.13	3411.01	9.71	Si
SLV 16	143750	0.31	32043	-34812	351.13	3595.55	10.24	Si
SLV 15	143750	0.31	32043	-34812	351.13	3595.55	10.24	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 3.23 Wa = 0.05 Ta = 0.0808

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 2	-29366	-22573	45	0.041	3554.2	0.954	0.62249	8.20395	No
SLV 1	-29366	-22573	45	0.041	3554.2	0.954	0.62249	8.20395	No
SLV 3	-34346	-36363	-18	0.041	4060.4	0.959	0.62412	8.20395	No
SLV 4	-34346	-36363	-18	0.041	4060.4	0.959	0.62412	8.20395	No
SLV 16	-29060	-32172	-40	0.041	3523.2	0.953	0.62543	8.20395	No
SLV 15	-29060	-32172	-40	0.041	3523.2	0.953	0.62543	8.20395	No
SLV 13	-24080	-18382	23	0.042	3017.6	0.946	0.64738	8.20395	No
SLV 14	-24080	-18382	23	0.042	3017.6	0.946	0.64738	8.20395	No
SLV 12	-36720	-49726	-105	0.039	4301.9	0.961	0.58735	6.97355	No
SLV 11	-36720	-49726	-105	0.039	4301.9	0.961	0.58735	6.97355	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.592	SLU 83	Si
V_SLU	20.792	SLU 44	Si
PF_SLV	2.627	SLV 13	Si
V_SLV	0.955	SLV 1	No
PFFP_SLV	5.704	SLV 9	Si
R_SLV	0.076	SLV 1	No

Maschio 86

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.888	6.661	-8.008	6.661	L3	L4	3.88	0.28	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 81	2.29	-50489	4689.8	46473	42066.97	8.97	Si
SLU 81	4.19	-53585	4627.77	49324	41009.47	8.862	Si
SLU 78	2.29	-50088	4657.28	46105	42173.02	9.055	Si
SLU 78	4.19	-53087	4313.38	48865	41208.16	9.554	Si
SLU 75	2.29	-49475	4593.32	45540	42321.83	9.214	Si
SLU 75	4.19	-52370	4363.09	48205	41474.83	9.506	Si
SLU 77	2.29	-50094	4669.62	46110	42171.56	9.031	Si
SLU 77	4.19	-53097	4316.53	48874	41204.16	9.546	Si
SLU 79	2.29	-49600	4620.48	45656	42292.79	9.153	Si
SLU 79	4.19	-52540	4262.91	48362	41413.34	9.715	Si
SLU 84	2.29	-51096	4741.41	47033	41892.62	8.835	Si
SLU 84	4.19	-54292	4574.91	49975	40709.12	8.898	Si
SLU 74	2.29	-49481	4605.66	45546	42320.52	9.189	Si
SLU 74	4.19	-52380	4366.24	48214	41471.15	9.498	Si
SLU 80	2.29	-49594	4608.14	45650	42294.13	9.178	Si
SLU 80	4.19	-52530	4259.76	48352	41417.09	9.723	Si
SLU 82	2.29	-50483	4677.46	46468	42068.53	8.994	Si
SLU 82	4.19	-53575	4624.62	49314	41013.69	8.869	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 83	2.29	-51102	4753.75	47038	41890.9	8.812	Si
SLU 83	4.19	-54303	4578.06	49984	40704.57	8.891	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 2	2.29	-22446	-9190.81	20660	36181.51	3.937	Si
SLV 2	4.19	-26209	14878.75	24124	40806.07	2.743	Si
SLV 4	2.29	-37403	-9090.06	34428	52116.36	5.733	Si
SLV 4	4.19	-35103	14791.18	32311	50091.47	3.387	Si
SLV 13	2.29	-30145	15357.18	27748	45200.76	2.943	Si
SLV 13	4.19	-35512	-8908.86	32688	50463.29	5.664	Si
SLV 3	2.29	-37403	-9090.06	34428	52116.36	5.733	Si
SLV 3	4.19	-35103	14791.18	32311	50091.47	3.387	Si
SLV 14	2.29	-30145	15357.18	27748	45200.76	2.943	Si
SLV 14	4.19	-35512	-8908.86	32688	50463.29	5.664	Si
SLV 15	2.29	-45103	15457.93	41516	57769.44	3.737	Si
SLV 15	4.19	-44407	-8996.43	40875	57329.91	6.373	Si
SLV 16	2.29	-45103	15457.93	41516	57769.44	3.737	Si
SLV 16	4.19	-44407	-8996.43	40875	57329.91	6.373	Si
SLV 10	2.29	-10000	6647.85	9204	17938.13	2.698	Si
SLV 10	4.19	-21879	-481.03	20139	35449.81	73.695	Si
SLV 1	2.29	-22446	-9190.81	20660	36181.51	3.937	Si
SLV 1	4.19	-26209	14878.75	24124	40806.07	2.743	Si
SLV 9	2.29	-10000	6647.85	9204	17938.13	2.698	Si
SLV 9	4.19	-21879	-481.03	20139	35449.81	73.695	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 50	2.29	-39888	1089	3706.44		36716	3.88	10451	11354			10.43	Si
SLU 50	4.19	-41262	1088	3120.28		37981	3.88	10620	11537			10.6	Si
SLU 72	2.29	-44659	1136	4147.95		41107	3.88	10833	11769			10.36	Si
SLU 72	4.19	-46745	1136	3640.4		43027	3.88	10833	11769			10.36	Si
SLU 71	2.29	-44664	1142	4160.29		41112	3.88	10833	11769			10.31	Si
SLU 71	4.19	-46755	1141	3643.55		43037	3.88	10833	11769			10.31	Si
SLU 69	2.29	-45158	1146	4209.42		41567	3.88	10833	11769			10.27	Si
SLU 69	4.19	-47312	1146	3697.17		43549	3.88	10833	11769			10.27	Si
SLU 78	2.29	-50088	1156	4657.28		46105	3.88	10833	11769			10.18	Si
SLU 78	4.19	-53087	1156	4313.38		48865	3.88	10833	11769			10.18	Si
SLU 70	2.29	-45153	1141	4197.08		41562	3.88	10833	11769			10.31	Si
SLU 70	4.19	-47301	1141	3694.02		43539	3.88	10833	11769			10.31	Si
SLU 79	2.29	-49600	1156	4620.48		45656	3.88	10833	11769			10.18	Si
SLU 79	4.19	-52540	1156	4262.91		48362	3.88	10833	11769			10.18	Si
SLU 48	2.29	-40382	1093	3755.57		37170	3.88	10512	11420			10.44	Si
SLU 48	4.19	-41819	1093	3173.9		38493	3.88	10688	11611			10.62	Si
SLU 80	2.29	-49594	1151	4608.14		45650	3.88	10833	11769			10.23	Si
SLU 80	4.19	-52530	1151	4259.76		48352	3.88	10833	11769			10.23	Si
SLU 77	2.29	-50094	1161	4669.62		46110	3.88	10833	11769			10.14	Si
SLU 77	4.19	-53097	1161	4316.53		48874	3.88	10833	11769			10.14	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 1	2.29	-22446	-11648	-9190.81		20660	3.88	12465	13542			1.16	Si
SLV 1	4.19	-26209	-11850	14878.75		24124	3.88	13158	14295			1.21	Si
SLV 3	2.29	-37403	-12943	-9090.06		34428	3.88	15219	16534			1.28	Si
SLV 3	4.19	-35103	-12093	14791.18		32311	3.88	14796	16074			1.33	Si
SLV 4	2.29	-37403	-12943	-9090.06		34428	3.88	15219	16534			1.28	Si
SLV 4	4.19	-35103	-12093	14791.18		32311	3.88	14796	16074			1.33	Si
SLV 16	2.29	-45103	13168	15457.93		41516	3.88	16250	17654			1.34	Si
SLV 16	4.19	-44407	13370	-8996.43		40875	3.88	16250	17654			1.32	Si
SLV 14	2.29	-30145	14463	15357.18		27748	3.88	13883	15082			1.04	Si
SLV 14	4.19	-35512	13613	-8908.86		32688	3.88	14871	16156			1.19	Si
SLV 13	2.29	-30145	14463	15357.18		27748	3.88	13883	15082			1.04	Si
SLV 13	4.19	-35512	13613	-8908.86		32688	3.88	14871	16156			1.19	Si
SLV 15	2.29	-45103	13168	15457.93		41516	3.88	16250	17654			1.34	Si
SLV 15	4.19	-44407	13370	-8996.43		40875	3.88	16250	17654			1.32	Si
SLV 10	2.29	-10000	6834	6647.85		9335	3.8256	10200	10926			1.6	Si
SLV 10	4.19	-21879	4984	-481.03		20139	3.88	12361	13429			2.69	Si
SLV 2	2.29	-22446	-11648	-9190.81		20660	3.88	12465	13542			1.16	Si
SLV 2	4.19	-26209	-11850	14878.75		24124	3.88	13158	14295			1.21	Si
SLV 9	2.29	-10000	6834	6647.85		9335	3.8256	10200	10926			1.6	Si
SLV 9	4.19	-21879	4984	-481.03		20139	3.88	12361	13429			2.69	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 5	143750	0.31	14462	-15712	351.13	1939.3	5.52	Si
SLV 6	143750	0.31	14462	-15712	351.13	1939.3	5.52	Si
SLV 10	143750	0.31	17060	-18534	351.13	2232.5	6.36	Si
SLV 9	143750	0.31	17060	-18534	351.13	2232.5	6.36	Si
SLV 2	143750	0.31	23518	-25550	351.13	2888.51	8.23	Si
SLV 1	143750	0.31	23518	-25550	351.13	2888.51	8.23	Si
SLV 13	143750	0.31	32178	-34958	351.13	3605.27	10.27	Si
SLV 14	143750	0.31	32178	-34958	351.13	3605.27	10.27	Si
SLV 3	143750	0.31	33878	-36805	351.13	3724.05	10.61	Si
SLV 4	143750	0.31	33878	-36805	351.13	3724.05	10.61	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 3.23 Wa = 0.05 Ta = 0.0808

Comb.	N top	N base	V orto	σ_0	M*	e*	a0*	aLim	Verifica
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Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 15	-36885	-41188	39	0.04	4318.7	0.961	0.61195	8.20395	No
SLV 16	-36885	-41188	39	0.04	4318.7	0.961	0.61195	8.20395	No
SLV 14	-30432	-25264	-54	0.04	3662.5	0.955	0.61608	8.20395	No
SLV 13	-30432	-25264	-54	0.04	3662.5	0.955	0.61608	8.20395	No
SLV 4	-29168	-34726	52	0.041	3534.2	0.953	0.61931	8.20395	No
SLV 3	-29168	-34726	52	0.041	3534.2	0.953	0.61931	8.20395	No
SLV 2	-22715	-18801	-41	0.042	2879.1	0.944	0.64187	8.20395	No
SLV 1	-22715	-18801	-41	0.042	2879.1	0.944	0.64187	8.20395	No
SLV 8	-39398	-55567	156	0.038	4574.3	0.963	0.56748	6.97355	No
SLV 7	-39398	-55567	156	0.038	4574.3	0.963	0.56748	6.97355	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.812	SLU 83	Si
V_SLU	10.136	SLU 77	Si
PF_SLV	2.698	SLV 9	Si
V_SLV	1.043	SLV 13	Si
PFFP_SLV	5.523	SLV 5	Si
R_SLV	0.075	SLV 15	No

Maschio 87

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.sx	a.s.dx
-7.008	6.661	-5.158	6.661	L3	L4	1.85	0.28	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	$\tau 0$	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	$\alpha 0$	Mu	c.s.	Verifica
SLU 79	2.29	-18410	2218.48	35540	9599.28	4.327	Si
SLU 79	4.19	-24886	698.22	48042	9443.09	13.524	Si
SLU 81	2.29	-18657	2227.17	36018	9627.14	4.323	Si
SLU 81	4.19	-25493	556.86	49214	9334.26	16.762	Si
SLU 74	2.29	-18321	2201.74	35369	9588.68	4.355	Si
SLU 74	4.19	-24857	633.37	47986	9447.91	14.917	Si
SLU 77	2.29	-18583	2235.9	35874	9619.01	4.302	Si
SLU 77	4.19	-25166	686.09	48583	9394.86	13.693	Si
SLU 84	2.29	-18895	2255.78	36476	9651.3	4.278	Si
SLU 84	4.19	-25766	604.19	49740	9280.04	15.359	Si
SLU 78	2.29	-18558	2230.36	35827	9616.34	4.312	Si
SLU 78	4.19	-25130	680.7	48513	9401.3	13.811	Si
SLU 82	2.29	-18633	2221.63	35972	9624.55	4.332	Si
SLU 82	4.19	-25456	551.48	49144	9341.22	16.939	Si
SLU 80	2.29	-18386	2212.94	35493	9596.43	4.337	Si
SLU 80	4.19	-24850	692.84	47972	9449.08	13.638	Si
SLU 83	2.29	-18919	2261.32	36523	9653.61	4.269	Si
SLU 83	4.19	-25802	609.58	49810	9272.59	15.212	Si
SLU 75	2.29	-18297	2196.21	35322	9585.74	4.365	Si
SLU 75	4.19	-24821	627.99	47916	9453.86	15.054	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	$\alpha 0$	Mu	c.s.	Verifica
SLV 1	2.29	-9266	-1465.1	17888	7316.34	4.994	Si
SLV 1	4.19	-5436	5038.34	0	0	0	No, e>l/2
SLV 15	2.29	-15740	4518.62	30386	10938.64	2.421	Si
SLV 15	4.19	-27958	-4030.16	53973	14437.72	3.582	Si
SLV 4	2.29	-14842	-1678.78	28652	10509.28	6.26	Si
SLV 4	4.19	-10014	4997.68	19333	7797.58	1.56	Si
SLV 16	2.29	-15740	4518.62	30386	10938.64	2.421	Si
SLV 16	4.19	-27958	-4030.16	53973	14437.72	3.582	Si
SLV 10	2.29	-3345	2812.5	6458	2930.76	1.042	Si
SLV 10	4.19	-11757	-782.31	22697	8855.26	11.319	Si
SLV 13	2.29	-10164	4732.3	19622	7892.06	1.668	Si
SLV 13	4.19	-23380	-3989.49	45134	13637.72	3.418	Si
SLV 14	2.29	-10164	4732.3	19622	7892.06	1.668	Si
SLV 14	4.19	-23380	-3989.49	45134	13637.72	3.418	Si
SLV 9	2.29	-3345	2812.5	6458	2930.76	1.042	Si
SLV 9	4.19	-11757	-782.31	22697	8855.26	11.319	Si
SLV 3	2.29	-14842	-1678.78	28652	10509.28	6.26	Si
SLV 3	4.19	-10014	4997.68	19333	7797.58	1.56	Si
SLV 2	2.29	-9266	-1465.1	17888	7316.34	4.994	Si
SLV 2	4.19	-5436	5038.34	0	0	0	No, e>l/2

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	$\alpha 0$	αN	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 78	2.29	-18558	5134	2230.36		35827	1.85	10333	5352			1.04	Si
SLU 78	4.19	-25130	5150	680.7		48513	1.85	10833	5612			1.09	Si
SLU 73	2.29	-17847	5037	2140.94		34453	1.85	10149	5257			1.04	Si
SLU 73	4.19	-24207	5050	583.82		46732	1.85	10833	5612			1.11	Si
SLU 76	2.29	-18108	5050	2175.09		34958	1.85	10217	5292			1.05	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 76	4.19	-24516	5064	636.53		47329	1.85	10833	5612			1.11	Si
SLU 82	2.29	-18633	5321	2221.63		35972	1.85	10352	5362			1.01	Si
SLU 82	4.19	-25456	5335	551.48		49144	1.85	10833	5612			1.05	Si
SLU 75	2.29	-18297	5121	2196.21		35322	1.85	10265	5317			1.04	Si
SLU 75	4.19	-24821	5136	627.99		47916	1.85	10833	5612			1.09	Si
SLU 74	2.29	-18321	5126	2201.74		35369	1.85	10271	5321			1.04	Si
SLU 74	4.19	-24857	5142	633.37		47986	1.85	10833	5612			1.09	Si
SLU 84	2.29	-18895	5333	2255.78		36476	1.85	10419	5397			1.01	Si
SLU 84	4.19	-25766	5349	604.19		49740	1.85	10833	5612			1.05	Si
SLU 83	2.29	-18919	5339	2261.32		36523	1.85	10425	5400			1.01	Si
SLU 83	4.19	-25802	5355	609.58		49810	1.85	10833	5612			1.05	Si
SLU 77	2.29	-18583	5139	2235.9		35874	1.85	10339	5355			1.04	Si
SLU 77	4.19	-25166	5156	686.09		48583	1.85	10833	5612			1.09	Si
SLU 81	2.29	-18657	5326	2227.17		36018	1.85	10358	5365			1.01	Si
SLU 81	4.19	-25493	5342	556.86		49214	1.85	10833	5612			1.05	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 13	2.29	-10164	11109	4732.3		26338	1.3782	13601	5249			0.47	No, Vu<V
SLV 13	4.19	-23380	11486	-3989.49		45134	1.85	16250	8417			0.73	No, Vu<V
SLV 16	2.29	-15740	11717	4518.62		30386	1.85	14410	7465			0.64	No, Vu<V
SLV 16	4.19	-27958	11593	-4030.16		53973	1.85	16250	8417			0.73	No, Vu<V
SLV 15	2.29	-15740	11717	4518.62		30386	1.85	14410	7465			0.64	No, Vu<V
SLV 15	4.19	-27958	11593	-4030.16		53973	1.85	16250	8417			0.73	No, Vu<V
SLV 2	2.29	-9266	-4839	-1465.1		17888	1.85	11911	6170			1.27	Si
SLV 2	4.19	-5436	-4693	5038.34		0	0	8333	0			0	No, Vu<V
SLV 10	2.29	-3345	4818	2812.5		47275	0.2527	16250	1150			0.24	No, Vu<V
SLV 10	4.19	-11757	5699	-782.31		22697	1.85	12873	6668			1.17	Si
SLV 1	2.29	-9266	-4839	-1465.1		17888	1.85	11911	6170			1.27	Si
SLV 1	4.19	-5436	-4693	5038.34		0	0	8333	0			0	No, Vu<V
SLV 14	2.29	-10164	11109	4732.3		26338	1.3782	13601	5249			0.47	No, Vu<V
SLV 14	4.19	-23380	11486	-3989.49		45134	1.85	16250	8417			0.73	No, Vu<V
SLV 3	2.29	-14842	-4232	-1678.78		28652	1.85	14064	7285			1.72	Si
SLV 3	4.19	-10014	-4586	4997.68		27989	1.2778	13931	4984			1.09	Si
SLV 4	2.29	-14842	-4232	-1678.78		28652	1.85	14064	7285			1.72	Si
SLV 4	4.19	-10014	-4586	4997.68		27989	1.2778	13931	4984			1.09	Si
SLV 9	2.29	-3345	4818	2812.5		47275	0.2527	16250	1150			0.24	No, Vu<V
SLV 9	4.19	-11757	5699	-782.31		22697	1.85	12873	6668			1.17	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 5	143750	0.31	10577	-5479	167.42	700.67	4.19	Si
SLV 6	143750	0.31	10577	-5479	167.42	700.67	4.19	Si
SLV 2	143750	0.31	15708	-8137	167.42	992.69	5.93	Si
SLV 1	143750	0.31	15708	-8137	167.42	992.69	5.93	Si
SLV 10	143750	0.31	16572	-8584	167.42	1038.8	6.2	Si
SLV 9	143750	0.31	16572	-8584	167.42	1038.8	6.2	Si
SLV 3	143750	0.31	26100	-13520	167.42	1488.46	8.89	Si
SLV 4	143750	0.31	26100	-13520	167.42	1488.46	8.89	Si
SLV 13	143750	0.31	35690	-18487	167.42	1832.23	10.94	Si
SLV 14	143750	0.31	35690	-18487	167.42	1832.23	10.94	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 3.23 Wa = 0.05 Ta = 0.0808

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 16	-25446	-12256	6	0.04	2859	0.971	0.60179	8.20395	No
SLV 15	-25446	-12256	6	0.04	2859	0.971	0.60179	8.20395	No
SLV 14	-22115	-7259	-1	0.041	2520	0.968	0.61189	8.20395	No
SLV 13	-22115	-7259	-1	0.041	2520	0.968	0.61189	8.20395	No
SLV 3	-7507	-10210	12	0.044	1036.5	0.93	0.68472	8.20395	No
SLV 4	-7507	-10210	12	0.044	1036.5	0.93	0.68472	8.20395	No
SLV 12	-23053	-17369	17	0.04	2615.4	0.969	0.60014	6.97355	No
SLV 11	-23053	-17369	17	0.04	2615.4	0.969	0.60014	6.97355	No
SLV 7	-17671	-16755	18	0.04	2067.7	0.961	0.61168	6.97355	No
SLV 8	-17671	-16755	18	0.04	2067.7	0.961	0.61168	6.97355	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.269	SLU 83	Si
V_SLU	1.007	SLU 81	Si
PF_SLV	0	SLV 1	No
V_SLV	0	SLV 1	No
PFFP_SLV	4.185	SLV 5	Si
R_SLV	0.073	SLV 15	No

Maschio 88

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.013	-4.784	-11.013	-3.509	L3	Z medio 278 cm	1.275	0.28	1.39	1.36	1.42			



Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 84	1.39	-21992	-726.19	61601	3417.6	4.706	Si
SLU 84	2.75	-20440	549.76	57254	3871.78	7.043	Si
SLU 83	1.39	-21812	-696.31	61099	3475.49	4.991	Si
SLU 83	2.75	-20257	537.87	56743	3918.24	7.285	Si
SLU 76	1.39	-21405	-731.78	59957	3601.78	4.922	Si
SLU 76	2.75	-19918	512.48	55792	4000.83	7.807	Si
SLU 80	1.39	-21544	-719.38	60348	3559.3	4.948	Si
SLU 80	2.75	-20050	515.54	56163	3969.2	7.699	Si
SLU 82	1.39	-21732	-718.67	60875	3500.83	4.871	Si
SLU 82	2.75	-20186	538.77	56542	3936.09	7.306	Si
SLU 77	1.39	-21448	-689.18	60079	3588.59	5.207	Si
SLU 77	2.75	-19948	511.63	55876	3993.77	7.806	Si
SLU 81	1.39	-21553	-688.79	60372	3556.68	5.164	Si
SLU 81	2.75	-20003	526.88	56031	3980.52	7.555	Si
SLU 73	1.39	-21145	-724.26	59231	3678.34	5.079	Si
SLU 73	2.75	-19664	501.49	55080	4059.32	8.095	Si
SLU 78	1.39	-21628	-719.06	60582	3533.56	4.914	Si
SLU 78	2.75	-20130	523.52	56387	3949.78	7.545	Si
SLU 75	1.39	-21368	-711.54	59856	3612.66	5.077	Si
SLU 75	2.75	-19876	512.53	55675	4010.65	7.825	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 6	1.39	-25233	-1741.49	70680	6780.93	3.894	Si
SLV 6	2.75	-22938	677.61	64252	6933.5	10.232	Si
SLV 4	1.39	-12580	-399.15	35237	5706.77	14.297	Si
SLV 4	2.75	-9440	931.12	26442	4715.61	5.064	Si
SLV 9	1.39	-24828	-1588.95	69547	6819	4.292	Si
SLV 9	2.75	-23888	268.35	66913	6889	25.671	Si
SLV 12	1.39	-4636	750.01	12985	2641.25	3.522	Si
SLV 12	2.75	-4826	-76.17	13520	2736.43	35.925	Si
SLV 8	1.39	-5040	597.46	14119	2841.92	4.757	Si
SLV 8	2.75	-3877	333.08	10859	2251.69	6.76	Si
SLV 7	1.39	-5040	597.46	14119	2841.92	4.757	Si
SLV 7	2.75	-3877	333.08	10859	2251.69	6.76	Si
SLV 5	1.39	-25233	-1741.49	70680	6780.93	3.894	Si
SLV 5	2.75	-22938	677.61	64252	6933.5	10.232	Si
SLV 11	1.39	-4636	750.01	12985	2641.25	3.522	Si
SLV 11	2.75	-4826	-76.17	13520	2736.43	35.925	Si
SLV 3	1.39	-12580	-399.15	35237	5706.77	14.297	Si
SLV 3	2.75	-9440	931.12	26442	4715.61	5.064	Si
SLV 10	1.39	-24828	-1588.95	69547	6819	4.292	Si
SLV 10	2.75	-23888	268.35	66913	6889	25.671	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 73	1.39	-21145	-3457	-724.26		59231	1.275	10833	3867			1.12	Si
SLU 73	2.75	-19664	-3174	501.49		55080	1.275	10833	3867			1.22	Si
SLU 80	1.39	-21544	-3496	-719.38		60348	1.275	10833	3867			1.11	Si
SLU 80	2.75	-20050	-3211	515.54		56163	1.275	10833	3867			1.2	Si
SLU 75	1.39	-21368	-3468	-711.54		59856	1.275	10833	3867			1.12	Si
SLU 75	2.75	-19876	-3185	512.53		55675	1.275	10833	3867			1.21	Si
SLU 81	1.39	-21553	-3472	-688.79		60372	1.275	10833	3867			1.11	Si
SLU 81	2.75	-20003	-3200	526.88		56031	1.275	10833	3867			1.21	Si
SLU 83	1.39	-21812	-3521	-696.31		61099	1.275	10833	3867			1.1	Si
SLU 83	2.75	-20257	-3246	537.87		56743	1.275	10833	3867			1.19	Si
SLU 78	1.39	-21628	-3517	-719.06		60582	1.275	10833	3867			1.1	Si
SLU 78	2.75	-20130	-3231	523.52		56387	1.275	10833	3867			1.2	Si
SLU 76	1.39	-21405	-3506	-731.78		59957	1.275	10833	3867			1.1	Si
SLU 76	2.75	-19918	-3220	512.48		55792	1.275	10833	3867			1.2	Si
SLU 84	1.39	-21992	-3610	-726.19		61601	1.275	10833	3867			1.07	Si
SLU 84	2.75	-20440	-3330	549.76		57254	1.275	10833	3867			1.16	Si
SLU 77	1.39	-21448	-3428	-689.18		60079	1.275	10833	3867			1.13	Si
SLU 77	2.75	-19948	-3147	511.63		55876	1.275	10833	3867			1.23	Si
SLU 82	1.39	-21732	-3561	-718.67		60875	1.275	10833	3867			1.09	Si
SLU 82	2.75	-20186	-3284	538.77		56542	1.275	10833	3867			1.18	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 5	1.39	-25233	-7128	-1741.49		70680	1.275	16250	5801			0.81	No, Vu<V
SLV 5	2.75	-22938	-6525	677.61		64252	1.275	16250	5801			0.89	No, Vu<V
SLV 1	1.39	-18637	-5287	-1100.83		52205	1.275	16250	5801			1.1	Si
SLV 1	2.75	-15158	-5353	1034.48		42460	1.275	16250	5801			1.08	Si
SLV 2	1.39	-18637	-5287	-1100.83		52205	1.275	16250	5801			1.1	Si
SLV 2	2.75	-15158	-5353	1034.48		42460	1.275	16250	5801			1.08	Si
SLV 3	1.39	-12580	-2692	-399.15		35237	1.275	15381	5491			2.04	Si
SLV 3	2.75	-9440	-3070	931.12		26442	1.275	13622	4863			1.58	Si
SLV 11	1.39	-4636	2539	750.01		12985	1.275	10930	3902			1.54	Si
SLV 11	2.75	-4826	2364	-76.17		13520	1.275	11037	3940			1.67	Si
SLV 10	1.39	-24828	-6111	-1588.95		69547	1.275	16250	5801			0.95	No, Vu<V
SLV 10	2.75	-23888	-5247	268.35		66913	1.275	16250	5801			1.11	Si
SLV 9	1.39	-24828	-6111	-1588.95		69547	1.275	16250	5801			0.95	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 9	2.75	-23888	-5247	268.35		66913	1.275	16250	5801			1.11	Si
SLV 12	1.39	-4636	2539	750.01		12985	1.275	10930	3902			1.54	Si
SLV 12	2.75	-4826	2364	-76.17		13520	1.275	11037	3940			1.67	Si
SLV 4	1.39	-12580	-2692	-399.15		35237	1.275	15381	5491			2.04	Si
SLV 4	2.75	-9440	-3070	931.12		26442	1.275	13622	4863			1.58	Si
SLV 6	1.39	-25233	-7128	-1741.49		70680	1.275	16250	5801			0.81	No, Vu<V
SLV 6	2.75	-22938	-6525	677.61		64252	1.275	16250	5801			0.89	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 2.07 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 8	143750	0.29	12829	-4580	15.55	573.86	36.9	Si
SLV 7	143750	0.29	12829	-4580	15.55	573.86	36.9	Si
SLV 11	143750	0.29	13856	-4946	15.55	613.98	39.48	Si
SLV 12	143750	0.29	13856	-4946	15.55	613.98	39.48	Si
SLV 3	143750	0.29	31271	-11164	15.55	1162.93	74.78	Si
SLV 4	143750	0.29	31271	-11164	15.55	1162.93	74.78	Si
SLV 15	143750	0.29	34694	-12386	15.55	1241.65	79.85	Si
SLV 16	143750	0.29	34694	-12386	15.55	1241.65	79.85	Si
SLV 1	143750	0.29	48105	-17174	15.55	1457.73	93.74	Si
SLV 2	143750	0.29	48105	-17174	15.55	1457.73	93.74	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 2.07 Wa = 0.05 Ta = 0.0115

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 2	-15158	-18637	61	0.1	1613.8	0.986	1.46898	3.06002	No
SLV 1	-15158	-18637	61	0.1	1613.8	0.986	1.46898	3.06002	No
SLV 5	-22938	-25233	75	0.099	2406.7	0.991	1.45873	3.00098	No
SLV 6	-22938	-25233	75	0.099	2406.7	0.991	1.45873	3.00098	No
SLV 9	-23888	-24828	56	0.1	2503.6	0.991	1.47044	3.00098	No
SLV 10	-23888	-24828	56	0.1	2503.6	0.991	1.47044	3.00098	No
SLV 15	-12606	-11231	-34	0.102	1353.7	0.984	1.50089	3.06002	No
SLV 16	-12606	-11231	-34	0.102	1353.7	0.984	1.50089	3.06002	No
SLV 14	-18325	-17289	-3	0.103	1936.5	0.989	1.51399	3.06002	No
SLV 13	-18325	-17289	-3	0.103	1936.5	0.989	1.51399	3.06002	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.706	SLV 84	Si
V_SLV	1.071	SLV 84	Si
PF_SLV	3.522	SLV 11	Si
V_SLV	0.814	SLV 5	No
PFFP_SLV	36.903	SLV 7	Si
R_SLV	0.48	SLV 1	No

Maschio 89

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.013	-4.784	-11.013	-3.509	Z medio 278 cm	L4	1.275	0.28	2.29	2.32	2.26			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 75	2.81	-19240	-614.12	53893	4150.56	6.759	Si
SLV 75	5.07	-14130	360.84	39581	4631.04	12.834	Si
SLV 84	2.81	-19756	-632.85	55338	4038.46	6.381	Si
SLV 84	5.07	-14459	382.07	40502	4634.58	12.13	Si
SLV 80	2.81	-19411	-620.08	54372	4114.72	6.636	Si
SLV 80	5.07	-14286	365.28	40016	4633.3	12.684	Si
SLV 83	2.81	-19576	-619.41	54833	4078.93	6.585	Si
SLV 83	5.07	-14329	393.37	40137	4633.74	11.78	Si
SLV 78	2.81	-19487	-619.45	54586	4098.22	6.616	Si
SLV 78	5.07	-14344	373.1	40179	4633.87	12.42	Si
SLV 77	2.81	-19307	-606.01	54082	4136.57	6.826	Si
SLV 77	5.07	-14213	384.4	39813	4632.38	12.051	Si
SLV 81	2.81	-19328	-614.09	54140	4132.23	6.729	Si
SLV 81	5.07	-14115	381.11	39539	4630.76	12.151	Si
SLV 76	2.81	-19283	-623.72	54015	4141.57	6.64	Si
SLV 76	5.07	-14159	345.48	39662	4631.54	13.406	Si
SLV 73	2.81	-19036	-618.4	53321	4191.7	6.778	Si
SLV 73	5.07	-13946	333.22	39064	4626.97	13.886	Si
SLV 82	2.81	-19508	-627.53	54645	4093.71	6.524	Si
SLV 82	5.07	-14246	369.81	39904	4632.82	12.528	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 1	2.81	-14023	-831.04	39279	6065.7	7.299	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 1	5.07	-9365	1242.03	26231	4688.27	3.775	Si
SLV 8	2.81	-3781	430.2	10590	2201.29	5.117	Si
SLV 8	5.07	-2739	376.75	7672	1636.36	4.343	Si
SLV 9	2.81	-23169	-1294.63	64900	6925.09	5.349	Si
SLV 9	5.07	-17148	72.03	48033	6634.35	92.11	Si
SLV 3	2.81	-8596	-290.45	24078	4399.99	15.149	Si
SLV 3	5.07	-5494	1157.85	15390	3061.46	2.644	Si
SLV 4	2.81	-8596	-290.45	24078	4399.99	15.149	Si
SLV 4	5.07	-5494	1157.85	15390	3061.46	2.644	Si
SLV 10	2.81	-23169	-1294.63	64900	6925.09	5.349	Si
SLV 10	5.07	-17148	72.03	48033	6634.35	92.11	Si
SLV 2	2.81	-14023	-831.04	39279	6065.7	7.299	Si
SLV 2	5.07	-9365	1242.03	26231	4688.27	3.775	Si
SLV 6	2.81	-21870	-1371.75	61260	6952.03	5.068	Si
SLV 6	5.07	-15639	657.36	43808	6395.53	9.729	Si
SLV 5	2.81	-21870	-1371.75	61260	6952.03	5.068	Si
SLV 5	5.07	-15639	657.36	43808	6395.53	9.729	Si
SLV 7	2.81	-3781	430.2	10590	2201.29	5.117	Si
SLV 7	5.07	-2739	376.75	7672	1636.36	4.343	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 83	2.81	-19576	-3207	-619.41		54833	1.275	10833	3867			1.21	Si
SLU 83	5.07	-14329	-2369	393.37		40137	1.275	10833	3867			1.63	Si
SLU 80	2.81	-19411	-3158	-620.08		54372	1.275	10833	3867			1.22	Si
SLU 80	5.07	-14286	-2259	365.28		40016	1.275	10833	3867			1.71	Si
SLU 73	2.81	-19036	-3115	-618.4		53321	1.275	10833	3867			1.24	Si
SLU 73	5.07	-13946	-2161	333.22		39064	1.275	10764	3843			1.78	Si
SLU 75	2.81	-19240	-3133	-614.12		53893	1.275	10833	3867			1.23	Si
SLU 75	5.07	-14130	-2237	360.84		39581	1.275	10833	3867			1.73	Si
SLU 76	2.81	-19283	-3161	-623.72		54015	1.275	10833	3867			1.22	Si
SLU 76	5.07	-14159	-2203	345.48		39662	1.275	10833	3867			1.76	Si
SLU 81	2.81	-19328	-3161	-614.09		54140	1.275	10833	3867			1.22	Si
SLU 81	5.07	-14115	-2327	381.11		39539	1.275	10827	3865			1.66	Si
SLU 78	2.81	-19487	-3179	-619.45		54586	1.275	10833	3867			1.22	Si
SLU 78	5.07	-14344	-2279	373.1		40179	1.275	10833	3867			1.7	Si
SLU 82	2.81	-19508	-3235	-627.53		54645	1.275	10833	3867			1.2	Si
SLU 82	5.07	-14246	-2307	369.81		39904	1.275	10833	3867			1.68	Si
SLU 77	2.81	-19307	-3104	-606.01		54082	1.275	10833	3867			1.25	Si
SLU 77	5.07	-14213	-2299	384.4		39813	1.275	10833	3867			1.68	Si
SLU 84	2.81	-19756	-3282	-632.85		55338	1.275	10833	3867			1.18	Si
SLU 84	5.07	-14459	-2349	382.07		40502	1.275	10833	3867			1.65	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 11	2.81	-5080	2318	507.32		14230	1.275	11179	3991			1.72	Si
SLV 11	5.07	-4247	3062	-208.58		11897	1.275	10713	3824			1.25	Si
SLV 6	2.81	-21870	-6398	-1371.75		61260	1.275	16250	5801			0.91	No, Vu<V
SLV 6	5.07	-15639	-6022	657.36		43808	1.275	16250	5801			0.96	No, Vu<V
SLV 1	2.81	-14023	-5405	-831.04		39279	1.275	16189	5780			1.07	Si
SLV 1	5.07	-9365	-6036	1242.03		26231	1.275	13580	4848			0.8	No, Vu<V
SLV 3	2.81	-8596	-3197	-290.45		24078	1.275	13149	4694			1.47	Si
SLV 3	5.07	-5494	-3942	1157.85		15390	1.275	11411	4074			1.03	Si
SLV 4	2.81	-8596	-3197	-290.45		24078	1.275	13149	4694			1.47	Si
SLV 4	5.07	-5494	-3942	1157.85		15390	1.275	11411	4074			1.03	Si
SLV 9	2.81	-23169	-5042	-1294.63		64900	1.275	16250	5801			1.15	Si
SLV 9	5.07	-17148	-3916	72.03		48033	1.275	16250	5801			1.48	Si
SLV 2	2.81	-14023	-5405	-831.04		39279	1.275	16189	5780			1.07	Si
SLV 2	5.07	-9365	-6036	1242.03		26231	1.275	13580	4848			0.8	No, Vu<V
SLV 12	2.81	-5080	2318	507.32		14230	1.275	11179	3991			1.72	Si
SLV 12	5.07	-4247	3062	-208.58		11897	1.275	10713	3824			1.25	Si
SLV 10	2.81	-23169	-5042	-1294.63		64900	1.275	16250	5801			1.15	Si
SLV 10	5.07	-17148	-3916	72.03		48033	1.275	16250	5801			1.48	Si
SLV 5	2.81	-21870	-6398	-1371.75		61260	1.275	16250	5801			0.91	No, Vu<V
SLV 5	5.07	-15639	-6022	657.36		43808	1.275	16250	5801			0.96	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.94 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 8	143750	0.33	7931	-2831	47.87	370.66	7.74	Si
SLV 7	143750	0.33	7931	-2831	47.87	370.66	7.74	Si
SLV 12	143750	0.33	13251	-4731	47.87	590.47	12.33	Si
SLV 11	143750	0.33	13251	-4731	47.87	590.47	12.33	Si
SLV 4	143750	0.33	16995	-6067	47.87	731.25	15.28	Si
SLV 3	143750	0.33	16995	-6067	47.87	731.25	15.28	Si
SLV 2	143750	0.33	30084	-10740	47.87	1133.39	23.68	Si
SLV 1	143750	0.33	30084	-10740	47.87	1133.39	23.68	Si
SLV 16	143750	0.33	34729	-12398	47.87	1242.41	25.95	Si
SLV 15	143750	0.33	34729	-12398	47.87	1242.41	25.95	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 3.94 Wa = 0.05 Ta = 0.0313

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 1	-9365	-14023	143	0.051	1068.5	0.967	0.77201	4.28043	No
SLV 2	-9365	-14023	143	0.051	1068.5	0.967	0.77201	4.28043	No
SLV 16	-10522	-12928	-143	0.052	1186.4	0.97	0.78484	4.28043	No
SLV 15	-10522	-12928	-143	0.052	1186.4	0.97	0.78484	4.28043	No
SLV 4	-5494	-8596	103	0.052	674.9	0.951	0.79353	4.28043	No
SLV 3	-5494	-8596	103	0.052	674.9	0.951	0.79353	4.28043	No



Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 11	-4247	-5080	-105	0.049	548.4	0.941	0.75831	4.04338	No
SLV 12	-4247	-5080	-105	0.049	548.4	0.941	0.75831	4.04338	No
SLV 13	-14392	-18354	-102	0.057	1580.5	0.977	0.85266	4.28043	No
SLV 14	-14392	-18354	-102	0.057	1580.5	0.977	0.85266	4.28043	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.381	SLU 84	Si
V_SLU	1.179	SLU 84	Si
PF_SLV	2.644	SLV 3	Si
V_SLV	0.803	SLV 1	No
PFFP_SLV	7.743	SLV 7	Si
R_SLV	0.18	SLV 1	No

Maschio 90

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-3.509	-11.003	-3.314	L3	Z medio 281 cm	0.195	0.28	1.42	1.42	1.42			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	t0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLU 53	1.39	-3163	341.27	0	0	0	No, e>l/2
SLU 53	2.81	-3933	176.69	72040	44.34	0.251	No, M>Mu
SLU 59	1.39	-3215	346.33	0	0	0	No, e>l/2
SLU 59	2.81	-4000	180.06	73254	39.28	0.218	No, M>Mu
SLU 60	1.39	-3232	350.54	0	0	0	No, e>l/2
SLU 60	2.81	-4068	186.98	74506	33.85	0.181	No, M>Mu
SLU 54	1.39	-3188	343.84	0	0	0	No, e>l/2
SLU 54	2.81	-3966	178.58	72637	41.88	0.234	No, M>Mu
SLU 1	1.39	-2218	238.24	0	0	0	No, e>l/2
SLU 1	2.81	-2679	112.89	49057	103.88	0.92	No, M>Mu
SLU 58	1.39	-3190	343.76	0	0	0	No, e>l/2
SLU 58	2.81	-3967	178.17	72658	41.79	0.235	No, M>Mu
SLU 61	1.39	-3257	353.1	0	0	0	No, e>l/2
SLU 61	2.81	-4101	188.87	75103	31.19	0.165	No, M>Mu
SLU 55	1.39	-3187	343.78	0	0	0	No, e>l/2
SLU 55	2.81	-3967	178.83	72653	41.81	0.234	No, M>Mu
SLU 57	1.39	-3232	348.1	0	0	0	No, e>l/2
SLU 57	2.81	-4021	181.07	73636	37.64	0.208	No, M>Mu
SLU 56	1.39	-3207	345.53	0	0	0	No, e>l/2
SLU 56	2.81	-3988	179.18	73040	40.19	0.224	No, M>Mu

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma M = 2$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLV 7	1.39	-1285	226.27	0	0	0	No, e>l/2
SLV 7	2.81	-1885	-95.69	34515	131.84	1.378	Si
SLV 8	1.39	-1285	226.27	0	0	0	No, e>l/2
SLV 8	2.81	-1885	-95.69	34515	131.84	1.378	Si
SLV 4	1.39	-2253	303.55	0	0	0	No, e>l/2
SLV 4	2.81	-2521	71.69	46179	152.92	2.133	Si
SLV 15	1.39	-1806	180.82	0	0	0	No, e>l/2
SLV 15	2.81	-2705	46.2	49542	156.8	3.394	Si
SLV 3	1.39	-2253	303.55	0	0	0	No, e>l/2
SLV 3	2.81	-2521	71.69	46179	152.92	2.133	Si
SLV 16	1.39	-1806	180.82	0	0	0	No, e>l/2
SLV 16	2.81	-2705	46.2	49542	156.8	3.394	Si
SLV 11	1.39	-1151	189.45	0	0	0	No, e>l/2
SLV 11	2.81	-1940	-103.34	35524	134.13	1.298	Si
SLV 12	1.39	-1151	189.45	0	0	0	No, e>l/2
SLV 12	2.81	-1940	-103.34	35524	134.13	1.298	Si
SLV 1	1.39	-2948	332.97	0	0	0	No, e>l/2
SLV 1	2.81	-3122	207.52	57185	161.95	0.78	No, M>Mu
SLV 2	1.39	-2948	332.97	0	0	0	No, e>l/2
SLV 2	2.81	-3122	207.52	57185	161.95	0.78	No, M>Mu

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	V par	M	$\sigma 0$	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 53	1.39	-3163	132	341.27		0	0	5556	0			0	No, Vu<V
SLU 53	2.81	-3933	-272	176.69		89058	0.1577	10833	478			1.76	Si
SLU 59	1.39	-3215	132	346.33		0	0	5556	0			0	No, Vu<V
SLU 59	2.81	-4000	-277	180.06		90729	0.1574	10833	478			1.72	Si
SLU 54	1.39	-3188	132	343.84		0	0	5556	0			0	No, Vu<V
SLU 54	2.81	-3966	-274	178.58		89979	0.1574	10833	477			1.74	Si
SLU 1	1.39	-2218	91	238.24		0	0	5556	0			0	No, Vu<V
SLU 1	2.81	-2679	-157	112.89		57605	0.1661	10833	504			3.21	Si
SLU 56	1.39	-3207	132	345.53		0	0	5556	0			0	No, Vu<V
SLU 56	2.81	-3988	-276	179.18		90310	0.1577	10833	478			1.73	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 55	1.39	-3187	132	343.78		0	0	5556	0			0	No, Vu<V
SLU 55	2.81	-3967	-274	178.83		90091	0.1573	10833	477			1.74	Si
SLU 58	1.39	-3190	132	343.76		0	0	5556	0			0	No, Vu<V
SLU 58	2.81	-3967	-275	178.17		89807	0.1578	10833	479			1.74	Si
SLU 57	1.39	-3232	132	348.1		0	0	5556	0			0	No, Vu<V
SLU 57	2.81	-4021	-279	181.07		91231	0.1574	10833	477			1.71	Si
SLU 61	1.39	-3257	141	353.1		0	0	5556	0			0	No, Vu<V
SLU 61	2.81	-4101	-298	188.87		94899	0.1543	10833	468			1.57	Si
SLU 60	1.39	-3232	141	350.54		0	0	5556	0			0	No, Vu<V
SLU 60	2.81	-4068	-295	186.98		93971	0.1546	10833	469			1.59	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 7	1.39	-1285	802	226.27		0	0	8333	0			0	No, Vu<V
SLV 7	2.81	-1885	761	-95.69		48017	0.1402	16250	638			0.84	No, Vu<V
SLV 12	1.39	-1151	650	189.45		0	0	8333	0			0	No, Vu<V
SLV 12	2.81	-1940	738	-103.34		52215	0.1327	16250	604			0.82	No, Vu<V
SLV 4	1.39	-2253	542	303.55		0	0	8333	0			0	No, Vu<V
SLV 4	2.81	-2521	134	71.69		46179	0.195	16250	887			6.61	Si
SLV 16	1.39	-1806	35	180.82		0	0	8333	0			0	No, Vu<V
SLV 16	2.81	-2705	58	46.2		49542	0.195	16250	887			15.33	Si
SLV 8	1.39	-1285	802	226.27		0	0	8333	0			0	No, Vu<V
SLV 8	2.81	-1885	761	-95.69		48017	0.1402	16250	638			0.84	No, Vu<V
SLV 1	1.39	-2948	168	332.97		0	0	8333	0			0	No, Vu<V
SLV 1	2.81	-3122	-426	207.52		119761	0.0931	16250	424			0.99	No, Vu<V
SLV 11	1.39	-1151	650	189.45		0	0	8333	0			0	No, Vu<V
SLV 11	2.81	-1940	738	-103.34		52215	0.1327	16250	604			0.82	No, Vu<V
SLV 2	1.39	-2948	168	332.97		0	0	8333	0			0	No, Vu<V
SLV 2	2.81	-3122	-426	207.52		119761	0.0931	16250	424			0.99	No, Vu<V
SLV 3	1.39	-2253	542	303.55		0	0	8333	0			0	No, Vu<V
SLV 3	2.81	-2521	134	71.69		46179	0.195	16250	887			6.61	Si
SLV 15	1.39	-1806	35	180.82		0	0	8333	0			0	No, Vu<V
SLV 15	2.81	-2705	58	46.2		49542	0.195	16250	887			15.33	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 2.1 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 12	143750	0.29	19329	-1055	2.49	124.38	50	Si
SLV 11	143750	0.29	19329	-1055	2.49	124.38	50	Si
SLV 8	143750	0.29	20843	-1138	2.49	132.14	53.13	Si
SLV 7	143750	0.29	20843	-1138	2.49	132.14	53.13	Si
SLV 15	143750	0.29	33004	-1802	2.49	184.14	74.03	Si
SLV 16	143750	0.29	33004	-1802	2.49	184.14	74.03	Si
SLV 4	143750	0.29	38050	-2078	2.49	200.28	80.52	Si
SLV 3	143750	0.29	38050	-2078	2.49	200.28	80.52	Si
SLV 14	143750	0.29	46239	-2525	2.49	219.7	88.32	Si
SLV 13	143750	0.29	46239	-2525	2.49	219.7	88.32	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 2.1 Wa = 0.05 Ta = 0.012

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 1	-3122	-2948	-61	0.082	329	0.989	1.20129	3.08311	No
SLV 2	-3122	-2948	-61	0.082	329	0.989	1.20129	3.08311	No
SLV 4	-2521	-2253	-50	0.082	267.7	0.987	1.20779	3.08311	No
SLV 3	-2521	-2253	-50	0.082	267.7	0.987	1.20779	3.08311	No
SLV 6	-3888	-3603	-71	0.082	407	0.991	1.2066	3.02094	No
SLV 5	-3888	-3603	-71	0.082	407	0.991	1.2066	3.02094	No
SLV 14	-3306	-2501	-56	0.084	347.7	0.99	1.23577	3.08311	No
SLV 13	-3306	-2501	-56	0.084	347.7	0.99	1.23577	3.08311	No
SLV 9	-3943	-3469	-70	0.083	412.6	0.992	1.21521	3.02094	No
SLV 10	-3943	-3469	-70	0.083	412.6	0.992	1.21521	3.02094	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0	SLU 1	No
V_SLU	0	SLU 1	No
PF_SLV	0	SLV 1	No
V_SLV	0	SLV 1	No
PFFP_SLV	50.003	SLV 11	Si
R_SLV	0.39	SLV 1	No

Maschio 91

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-3.509	-11.003	-3.314	Z medio 281 cm	L4	0.195	0.28	2.26	2.26	2.26			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	t0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2



Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 57	2.81	-3193	20.51	58481	87.82	4.282	Si
SLU 57	5.07	-1993	196.03	0	0	0	No, $e \geq l/2$
SLU 61	2.81	-3120	13.23	57151	90.79	6.86	Si
SLU 61	5.07	-1977	192.74	0	0	0	No, $e \geq l/2$
SLU 62	2.81	-3144	13.76	57590	89.83	6.527	Si
SLU 62	5.07	-1993	195.01	0	0	0	No, $e \geq l/2$
SLU 58	2.81	-3145	20.25	57599	89.81	4.436	Si
SLU 58	5.07	-1961	193.12	0	0	0	No, $e \geq l/2$
SLU 60	2.81	-3092	13.19	56629	91.89	6.965	Si
SLU 60	5.07	-1958	191.22	0	0	0	No, $e \geq l/2$
SLU 56	2.81	-3165	20.47	57958	89.01	4.348	Si
SLU 56	5.07	-1974	194.51	0	0	0	No, $e \geq l/2$
SLU 1	2.81	-2303	25.18	42180	108.27	4.3	Si
SLU 1	5.07	-1371	135.45	0	0	0	No, $e \geq l/2$
SLU 27	2.81	-2647	26.04	48482	104.48	4.013	Si
SLU 27	5.07	-1595	155.63	0	0	0	No, $e \geq l/2$
SLU 59	2.81	-3173	20.29	58122	88.64	4.37	Si
SLU 59	5.07	-1980	194.64	0	0	0	No, $e \geq l/2$
SLU 55	2.81	-3140	19.74	57509	90.01	4.559	Si
SLU 55	5.07	-1957	191.86	0	0	0	No, $e \geq l/2$

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 10	2.81	-3868	-66.07	70849	158.47	2.398	Si
SLV 10	5.07	-2481	408.39	0	0	0	No, $e \geq l/2$
SLV 12	2.81	-1090	116.34	0	0	0	No, $e \geq l/2$
SLV 12	5.07	-712	-68.78	13047	62.04	0.902	No, $M > Mu$
SLV 9	2.81	-3868	-66.07	70849	158.47	2.398	Si
SLV 9	5.07	-2481	408.39	0	0	0	No, $e \geq l/2$
SLV 8	2.81	-932	108.26	0	0	0	No, $e \geq l/2$
SLV 8	5.07	-431	-123.51	0	0	0	No, $e \geq l/2$
SLV 6	2.81	-3711	-74.16	67961	160.56	2.165	Si
SLV 6	5.07	-2200	353.67	0	0	0	No, $e \geq l/2$
SLV 2	2.81	-2554	-19.74	46783	153.69	7.786	Si
SLV 2	5.07	-1252	122.81	0	0	0	No, $e \geq l/2$
SLV 11	2.81	-1090	116.34	0	0	0	No, $e \geq l/2$
SLV 11	5.07	-712	-68.78	13047	62.04	0.902	No, $M > Mu$
SLV 5	2.81	-3711	-74.16	67961	160.56	2.165	Si
SLV 5	5.07	-2200	353.67	0	0	0	No, $e \geq l/2$
SLV 1	2.81	-2554	-19.74	46783	153.69	7.786	Si
SLV 1	5.07	-1252	122.81	0	0	0	No, $e \geq l/2$
SLV 7	2.81	-932	108.26	0	0	0	No, $e \geq l/2$
SLV 7	5.07	-431	-123.51	0	0	0	No, $e \geq l/2$

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 74	2.81	-3332	-253	19.39		61018	0.195	10833	591			2.34	Si
SLU 74	5.07	-2080	7	201.91		0	0	5556	0			0	No, $V_u < V$
SLU 44	2.81	-2966	-165	32.97		54326	0.195	10833	591			3.58	Si
SLU 44	5.07	-1765	-10	174.78		0	0	5556	0			0	No, $V_u < V$
SLU 43	2.81	-2919	-162	32.91		53455	0.195	10833	591			3.65	Si
SLU 43	5.07	-1734	-16	172.25		0	0	5556	0			0	No, $V_u < V$
SLU 45	2.81	-2991	-168	33.7		54776	0.195	10833	591			3.52	Si
SLU 45	5.07	-1782	-18	177.43		0	0	5556	0			0	No, $V_u < V$
SLU 73	2.81	-3307	-250	18.67		60568	0.195	10833	591			2.36	Si
SLU 73	5.07	-2063	15	199.26		0	0	5556	0			0	No, $V_u < V$
SLU 83	2.81	-3364	-279	13.26		61611	0.195	10833	591			2.12	Si
SLU 83	5.07	-2134	13	206.21		0	0	5556	0			0	No, $V_u < V$
SLU 72	2.81	-3272	-193	33.58		59921	0.195	10833	591			3.07	Si
SLU 72	5.07	-1964	-2	192.56		0	0	5556	0			0	No, $V_u < V$
SLU 1	2.81	-2303	-130	25.18		42180	0.195	10833	591			4.55	Si
SLU 1	5.07	-1371	-8	135.45		0	0	5556	0			0	No, $V_u < V$
SLU 71	2.81	-3243	-191	33.54		59398	0.195	10833	591			3.1	Si
SLU 71	5.07	-1946	-5	191.03		0	0	5556	0			0	No, $V_u < V$
SLU 70	2.81	-3291	-194	33.8		60280	0.195	10833	591			3.05	Si
SLU 70	5.07	-1977	-3	193.95		0	0	5556	0			0	No, $V_u < V$

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 5	2.81	-3711	-1055	-74.16		67961	0.195	16250	887			0.84	No, $V_u < V$
SLV 5	5.07	-2200	-844	353.67		0	0	8333	0			0	No, $V_u < V$
SLV 9	2.81	-3868	-1049	-66.07		70849	0.195	16250	887			0.85	No, $V_u < V$
SLV 9	5.07	-2481	-979	408.39		0	0	8333	0			0	No, $V_u < V$
SLV 2	2.81	-2554	-433	-19.74		46783	0.195	16250	887			2.05	Si
SLV 2	5.07	-1252	-50	122.81		0	0	8333	0			0	No, $V_u < V$
SLV 11	2.81	-1090	746	116.34		0	0	8333	0			0	No, $V_u < V$
SLV 11	5.07	-712	841	-68.78		0	0	8333	0			0	No, $V_u < V$
SLV 1	2.81	-2554	-433	-19.74		46783	0.195	16250	887			2.05	Si
SLV 1	5.07	-1252	-50	122.81		0	0	8333	0			0	No, $V_u < V$
SLV 6	2.81	-3711	-1055	-74.16		67961	0.195	16250	887			0.84	No, $V_u < V$
SLV 6	5.07	-2200	-844	353.67		0	0	8333	0			0	No, $V_u < V$
SLV 7	2.81	-932	740	108.26		0	0	8333	0			0	No, $V_u < V$
SLV 7	5.07	-431	976	-123.51		0	0	8333	0			0	No, $V_u < V$
SLV 8	2.81	-932	740	108.26		0	0	8333	0			0	No, $V_u < V$
SLV 8	5.07	-431	976	-123.51		0	0	8333	0			0	No, $V_u < V$
SLV 12	2.81	-1090	746	116.34		0	0	8333	0			0	No, $V_u < V$
SLV 12	5.07	-712	841	-68.78		0	0	8333	0			0	No, $V_u < V$
SLV 10	2.81	-3868	-1049	-66.07		70849	0.195	16250	887			0.85	No, $V_u < V$



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scor.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 10	5.07	-2481	-979	408.39		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.94 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 8	143750	0.33	14944	-816	7.13	100.26	14.06	Si
SLV 7	143750	0.33	14944	-816	7.13	100.26	14.06	Si
SLV 11	143750	0.33	17042	-931	7.13	112.1	15.72	Si
SLV 12	143750	0.33	17042	-931	7.13	112.1	15.72	Si
SLV 3	143750	0.33	23639	-1291	7.13	145.74	20.44	Si
SLV 4	143750	0.33	23639	-1291	7.13	145.74	20.44	Si
SLV 16	143750	0.33	30635	-1673	7.13	175.46	24.61	Si
SLV 15	143750	0.33	30635	-1673	7.13	175.46	24.61	Si
SLV 1	143750	0.33	33191	-1812	7.13	184.79	25.91	Si
SLV 2	143750	0.33	33191	-1812	7.13	184.79	25.91	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 3.94 Wa = 0.05 Ta = 0.0305

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 7	-431	-932	-29	0.022	61.6	0.925	0.34407	4.00769	No
SLV 8	-431	-932	-29	0.022	61.6	0.925	0.34407	4.00769	No
SLV 12	-712	-1090	-28	0.036	90	0.945	0.55034	4.00769	No
SLV 11	-712	-1090	-28	0.036	90	0.945	0.55034	4.00769	No
SLV 3	-722	-1721	-21	0.045	91	0.945	0.69144	4.23567	No
SLV 4	-722	-1721	-21	0.045	91	0.945	0.69144	4.23567	No
SLV 16	-1660	-2246	-20	0.054	186.4	0.971	0.81199	4.23567	No
SLV 15	-1660	-2246	-20	0.054	186.4	0.971	0.81199	4.23567	No
SLV 1	-1252	-2554	-14	0.056	144.9	0.964	0.85135	4.23567	No
SLV 2	-1252	-2554	-14	0.056	144.9	0.964	0.85135	4.23567	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0	SLU 1	No
V_SLU	0	SLU 1	No
PF_SLV	0	SLV 1	No
V_SLV	0	SLV 1	No
PFFP_SLV	14.06	SLV 7	Si
R_SLV	0.086	SLV 7	No

Maschio 92

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-3.314	-11.003	-0.354	L3	Z medio 394 cm	2.96	0.28	2.55	1.42	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 84	1.39	-47761	-2163.79	57627	20679.78	9.557	Si
SLU 84	2.81	-42893	360.69	51753	23149.5	64.18	Si
SLU 63	1.39	-43974	-2230.58	53057	22691.08	10.173	Si
SLU 63	2.81	-39416	163.04	47559	24277.29	148.902	Si
SLU 83	1.39	-47569	-2072.3	57395	20797.34	10.036	Si
SLU 83	2.81	-42724	470.55	51549	23216.66	49.34	Si
SLU 76	1.39	-46063	-2211.39	55578	21659.52	9.795	Si
SLU 76	2.81	-41293	271.63	49823	23734.26	87.376	Si
SLU 81	1.39	-46921	-2065.91	56614	21180.12	10.252	Si
SLU 81	2.81	-42090	421.12	50784	23457.14	55.702	Si
SLU 82	1.39	-47114	-2157.4	56846	21068.03	9.765	Si
SLU 82	2.81	-42259	311.27	50988	23394.69	75.159	Si
SLU 73	1.39	-45416	-2205	54797	21999.57	9.977	Si
SLU 73	2.81	-40659	222.21	49058	23934.97	107.714	Si
SLU 75	1.39	-46242	-2126.15	55794	21562.21	10.141	Si
SLU 75	2.81	-41481	391.63	50050	23671.38	60.443	Si
SLU 78	1.39	-46889	-2132.54	56575	21198.72	9.941	Si
SLU 78	2.81	-42115	441.06	50815	23447.82	53.163	Si
SLU 80	1.39	-46582	-2156.78	56204	21373.74	9.91	Si
SLU 80	2.81	-41815	394.29	50452	23556.06	59.743	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 8	1.39	-29072	5975.75	35077	30674.3	5.133	Si
SLV 8	2.81	-25951	4481.35	31312	28565.14	6.374	Si
SLV 12	1.39	-24591	6184.37	29670	27556.83	4.456	Si
SLV 12	2.81	-23198	3334.84	27990	26468.17	7.937	Si
SLV 13	1.39	-25815	-3528.26	31147	28466.8	8.068	Si
SLV 13	2.81	-24912	-2757.66	30057	27799.5	10.081	Si
SLV 11	1.39	-24591	6184.37	29670	27556.83	4.456	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 11	2.81	-23198	3334.84	27990	26468.17	7.937	Si
SLV 14	1.39	-25815	-3528.26	31147	28466.8	8.068	Si
SLV 14	2.81	-24912	-2757.66	30057	27799.5	10.081	Si
SLV 9	1.39	-34517	-9132.57	41646	33672.77	3.687	Si
SLV 9	2.81	-30776	-3980.41	37133	31705.82	7.965	Si
SLV 6	1.39	-38997	-9341.19	47053	35490.28	3.799	Si
SLV 6	2.81	-33529	-2833.9	40454	33193.04	11.713	Si
SLV 7	1.39	-29072	5975.75	35077	30674.3	5.133	Si
SLV 7	2.81	-25951	4481.35	31312	28565.14	6.374	Si
SLV 5	1.39	-38997	-9341.19	47053	35490.28	3.799	Si
SLV 5	2.81	-33529	-2833.9	40454	33193.04	11.713	Si
SLV 10	1.39	-34517	-9132.57	41646	33672.77	3.687	Si
SLV 10	2.81	-30776	-3980.41	37133	31705.82	7.965	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 76	1.39	-46063	1746	-2211.39		55578	2.96	10833	8979			5.14	Si
SLU 76	2.81	-41293	2449	271.63		49823	2.96	10833	8979			3.67	Si
SLU 78	1.39	-46889	1683	-2132.54		56575	2.96	10833	8979			5.33	Si
SLU 78	2.81	-42115	2398	441.06		50815	2.96	10833	8979			3.74	Si
SLU 84	1.39	-47761	1785	-2163.79		57627	2.96	10833	8979			5.03	Si
SLU 84	2.81	-42893	2557	360.69		51753	2.96	10833	8979			3.51	Si
SLU 77	1.39	-46696	1591	-2041.05		56342	2.96	10833	8979			5.64	Si
SLU 77	2.81	-41946	2302	550.91		50611	2.96	10833	8979			3.9	Si
SLU 73	1.39	-45416	1749	-2205		54797	2.96	10833	8979			5.13	Si
SLU 73	2.81	-40659	2442	222.21		49058	2.96	10833	8979			3.68	Si
SLU 82	1.39	-47114	1787	-2157.4		56846	2.96	10833	8979			5.02	Si
SLU 82	2.81	-42259	2551	311.27		50988	2.96	10833	8979			3.52	Si
SLU 75	1.39	-46242	1686	-2126.15		55794	2.96	10833	8979			5.33	Si
SLU 75	2.81	-41481	2391	391.63		50050	2.96	10833	8979			3.75	Si
SLU 80	1.39	-46582	1682	-2156.78		56204	2.96	10833	8979			5.34	Si
SLU 80	2.81	-41815	2392	394.29		50452	2.96	10833	8979			3.75	Si
SLU 81	1.39	-46921	1695	-2065.91		56614	2.96	10833	8979			5.3	Si
SLU 81	2.81	-42090	2454	421.12		50784	2.96	10833	8979			3.66	Si
SLU 83	1.39	-47569	1692	-2072.3		57395	2.96	10833	8979			5.31	Si
SLU 83	2.81	-42724	2461	470.55		51549	2.96	10833	8979			3.65	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 5	1.39	-38997	-8510	-9341.19		47053	2.96	16250	13468			1.58	Si
SLV 5	2.81	-33529	-8011	-2833.9		40454	2.96	16250	13468			1.68	Si
SLV 6	1.39	-38997	-8510	-9341.19		47053	2.96	16250	13468			1.58	Si
SLV 6	2.81	-33529	-8011	-2833.9		40454	2.96	16250	13468			1.68	Si
SLV 4	1.39	-37773	9433	371.43		45576	2.96	16250	13468			1.43	Si
SLV 4	2.81	-31815	7514	3258.6		38387	2.96	16011	13270			1.77	Si
SLV 11	1.39	-24591	10655	6184.37		29670	2.96	14267	11825			1.11	Si
SLV 11	2.81	-23198	11009	3334.84		27990	2.96	13931	11546			1.05	Si
SLV 10	1.39	-34517	-11530	-9132.57		41646	2.96	16250	13468			1.17	Si
SLV 10	2.81	-30776	-9752	-3980.41		37133	2.96	15760	13062			1.34	Si
SLV 3	1.39	-37773	9433	371.43		45576	2.96	16250	13468			1.43	Si
SLV 3	2.81	-31815	7514	3258.6		38387	2.96	16011	13270			1.77	Si
SLV 7	1.39	-29072	13675	5975.75		35077	2.96	15349	12721			0.93	No, Vu<V
SLV 7	2.81	-25951	12750	4481.35		31312	2.96	14596	12097			0.95	No, Vu<V
SLV 9	1.39	-34517	-11530	-9132.57		41646	2.96	16250	13468			1.17	Si
SLV 9	2.81	-30776	-9752	-3980.41		37133	2.96	15760	13062			1.34	Si
SLV 8	1.39	-29072	13675	5975.75		35077	2.96	15349	12721			0.93	No, Vu<V
SLV 8	2.81	-25951	12750	4481.35		31312	2.96	14596	12097			0.95	No, Vu<V
SLV 12	1.39	-24591	10655	6184.37		29670	2.96	14267	11825			1.11	Si
SLV 12	2.81	-23198	11009	3334.84		27990	2.96	13931	11546			1.05	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 2.1 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	f _d	S _a	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 16	143750	0.29	28191	-23364	121.76	2516.33	20.67	Si
SLV 15	143750	0.29	28191	-23364	121.76	2516.33	20.67	Si
SLV 12	143750	0.29	28441	-23572	121.76	2531.91	20.79	Si
SLV 11	143750	0.29	28441	-23572	121.76	2531.91	20.79	Si
SLV 14	143750	0.29	31767	-26328	121.76	2727.67	22.4	Si
SLV 13	143750	0.29	31767	-26328	121.76	2727.67	22.4	Si
SLV 8	143750	0.29	32232	-26714	121.76	2753.36	22.61	Si
SLV 7	143750	0.29	32232	-26714	121.76	2753.36	22.61	Si
SLV 9	143750	0.29	40362	-33452	121.76	3136.26	25.76	Si
SLV 10	143750	0.29	40362	-33452	121.76	3136.26	25.76	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 2.1 Wa = 0.05 Ta = 0.0388

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 4	-31815	-37773	44	0.057	3536.8	0.974	0.84593	4.32336	No
SLV 3	-31815	-37773	44	0.057	3536.8	0.974	0.84593	4.32336	No
SLV 2	-34088	-40751	24	0.057	3768.3	0.976	0.85127	4.32336	No
SLV 1	-34088	-40751	24	0.057	3768.3	0.976	0.85127	4.32336	No
SLV 13	-24912	-25815	-45	0.057	2833.8	0.968	0.8572	4.32336	No
SLV 14	-24912	-25815	-45	0.057	2833.8	0.968	0.8572	4.32336	No
SLV 16	-22638	-22837	-25	0.058	2602.4	0.965	0.87494	4.32336	No
SLV 15	-22638	-22837	-25	0.058	2602.4	0.965	0.87494	4.32336	No
SLV 9	-30776	-34517	-45	0.057	3430.9	0.973	0.84706	4.02098	No
SLV 10	-30776	-34517	-45	0.057	3430.9	0.973	0.84706	4.02098	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.557	SLU 84	Si
V_SLU	3.511	SLU 84	Si
PF_SLV	3.687	SLV 9	Si
V_SLV	0.93	SLV 7	No
PFFP_SLV	20.666	SLV 15	Si
R_SLV	0.196	SLV 3	No

Maschio 94

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-0.354	-11.003	1.046	L3	L4	1.4	0.28	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLU 77	1.39	-22998	576.14	58669	4503.98	7.818	Si
SLU 77	5.07	-20398	-20.33	52035	5157.47	253.711	Si
SLU 82	1.39	-23087	571.5	58895	4476.4	7.833	Si
SLU 82	5.07	-20271	-22.13	51710	5181.87	234.173	Si
SLU 83	1.39	-23501	592.07	59952	4343.31	7.336	Si
SLU 83	5.07	-20763	-14.63	52966	5083.64	347.47	Si
SLU 79	1.39	-22790	566.14	58138	4567.13	8.067	Si
SLU 79	5.07	-20164	-24.88	51438	5201.79	209.055	Si
SLU 80	1.39	-22731	559.81	57987	4584.83	8.19	Si
SLU 80	5.07	-20085	-32.23	51237	5216.14	161.824	Si
SLU 74	1.39	-22643	561.91	57763	4610.62	8.205	Si
SLU 74	5.07	-19984	-20.48	50980	5234.1	255.632	Si
SLU 78	1.39	-22939	569.8	58517	4522.22	7.937	Si
SLU 78	5.07	-20319	-27.68	51835	5172.63	186.878	Si
SLU 81	1.39	-23146	577.84	59047	4457.77	7.715	Si
SLU 81	5.07	-20349	-14.78	51911	5166.88	349.647	Si
SLU 75	1.39	-22584	555.57	57612	4627.93	8.33	Si
SLU 75	5.07	-19906	-27.83	50779	5247.83	188.593	Si
SLU 84	1.39	-23442	585.73	59800	4362.86	7.449	Si
SLU 84	5.07	-20684	-21.98	52766	5100.05	232.016	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLV 1	1.39	-16770	-1175.7	42781	7628.97	6.489	Si
SLV 1	5.07	-12367	240.94	31548	6421.75	26.653	Si
SLV 5	1.39	-12835	-1528.57	32743	6577.1	4.303	Si
SLV 5	5.07	-11138	772.08	28413	5983.58	7.75	Si
SLV 12	1.39	-17745	2233.44	45267	7819.61	3.501	Si
SLV 12	5.07	-15424	-856.46	39346	7319.93	8.547	Si
SLV 8	1.39	-19206	1597.94	48995	8053.4	5.04	Si
SLV 8	5.07	-15245	-830.84	38890	7274.97	8.756	Si
SLV 7	1.39	-19206	1597.94	48995	8053.4	5.04	Si
SLV 7	5.07	-15245	-830.84	38890	7274.97	8.756	Si
SLV 2	1.39	-16770	-1175.7	42781	7628.97	6.489	Si
SLV 2	5.07	-12367	240.94	31548	6421.75	26.653	Si
SLV 6	1.39	-12835	-1528.57	32743	6577.1	4.303	Si
SLV 6	5.07	-11138	772.08	28413	5983.58	7.75	Si
SLV 11	1.39	-17745	2233.44	45267	7819.61	3.501	Si
SLV 11	5.07	-15424	-856.46	39346	7319.93	8.547	Si
SLV 16	1.39	-13810	1880.56	35230	6879.83	3.658	Si
SLV 16	5.07	-14194	-325.31	36210	6991.57	21.492	Si
SLV 15	1.39	-13810	1880.56	35230	6879.83	3.658	Si
SLV 15	5.07	-14194	-325.31	36210	6991.57	21.492	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	$\sigma 0$	σN	l'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 76	1.39	-22336	1240	541.35		56981	1.4	10833	4247			3.42	Si
SLU 76	5.07	-19619	656	-37.28		50048	1.4	10833	4247			6.47	Si
SLU 77	1.39	-22998	1246	576.14		58669	1.4	10833	4247			3.41	Si
SLU 77	5.07	-20398	685	-20.33		52035	1.4	10833	4247			6.2	Si
SLU 84	1.39	-23442	1251	585.73		59800	1.4	10833	4247			3.4	Si
SLU 84	5.07	-20684	660	-21.98		52766	1.4	10833	4247			6.43	Si
SLU 83	1.39	-23501	1227	592.07		59952	1.4	10833	4247			3.46	Si
SLU 83	5.07	-20763	659	-14.63		52966	1.4	10833	4247			6.44	Si
SLU 79	1.39	-22790	1233	566.14		58138	1.4	10833	4247			3.44	Si
SLU 79	5.07	-20164	675	-24.88		51438	1.4	10833	4247			6.29	Si
SLU 78	1.39	-22939	1270	569.8		58517	1.4	10833	4247			3.34	Si
SLU 78	5.07	-20319	686	-27.68		51835	1.4	10833	4247			6.19	Si
SLU 80	1.39	-22731	1257	559.81		57987	1.4	10833	4247			3.38	Si
SLU 80	5.07	-20085	676	-32.23		51237	1.4	10833	4247			6.28	Si
SLU 82	1.39	-23087	1218	571.5		58895	1.4	10833	4247			3.49	Si
SLU 82	5.07	-20271	639	-22.13		51710	1.4	10833	4247			6.64	Si
SLU 75	1.39	-22584	1237	555.57		57612	1.4	10833	4247			3.43	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 75	5.07	-19906	665	-27.83		50779	1.4	10833	4247			6.38	Si
SLU 57	1.39	-20698	1224	497.58		52800	1.4	10833	4247			3.47	Si
SLU 57	5.07	-18269	724	-78.13		46604	1.4	10833	4247			5.87	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 11	1.39	-17745	5966	2233.44		45267	1.4	16250	6370			1.07	Si
SLV 11	5.07	-15424	6544	-856.46		39346	1.4	16202	6351			0.97	No, Vu<V
SLV 2	1.39	-16770	-1440	-1175.7		42781	1.4	16250	6370			4.42	Si
SLV 2	5.07	-12367	-4063	240.94		31548	1.4	14643	5740			1.41	Si
SLV 6	1.39	-12835	-4251	-1528.57		32743	1.4	14882	5834			1.37	Si
SLV 6	5.07	-11138	-5564	772.08		28413	1.4	14016	5494			0.99	No, Vu<V
SLV 5	1.39	-12835	-4251	-1528.57		32743	1.4	14882	5834			1.37	Si
SLV 5	5.07	-11138	-5564	772.08		28413	1.4	14016	5494			0.99	No, Vu<V
SLV 16	1.39	-13810	3156	1880.56		35230	1.4	15379	6029			1.91	Si
SLV 16	5.07	-14194	5044	-325.31		36210	1.4	15575	6106			1.21	Si
SLV 8	1.39	-19206	5462	1597.94		48995	1.4	16250	6370			1.17	Si
SLV 8	5.07	-15245	4740	-830.84		38890	1.4	16111	6316			1.33	Si
SLV 1	1.39	-16770	-1440	-1175.7		42781	1.4	16250	6370			4.42	Si
SLV 1	5.07	-12367	-4063	240.94		31548	1.4	14643	5740			1.41	Si
SLV 15	1.39	-13810	3156	1880.56		35230	1.4	15379	6029			1.91	Si
SLV 15	5.07	-14194	5044	-325.31		36210	1.4	15575	6106			1.21	Si
SLV 12	1.39	-17745	5966	2233.44		45267	1.4	16250	6370			1.07	Si
SLV 12	5.07	-15424	6544	-856.46		39346	1.4	16202	6351			0.97	No, Vu<V
SLV 7	1.39	-19206	5462	1597.94		48995	1.4	16250	6370			1.17	Si
SLV 7	5.07	-15245	4740	-830.84		38890	1.4	16111	6316			1.33	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 1	143750	0.31	28977	-11359	129.64	1213.12	9.36	Si
SLV 2	143750	0.31	28977	-11359	129.64	1213.12	9.36	Si
SLV 6	143750	0.31	29236	-11461	129.64	1220.58	9.41	Si
SLV 5	143750	0.31	29236	-11461	129.64	1220.58	9.41	Si
SLV 3	143750	0.31	32968	-12924	129.64	1321.12	10.19	Si
SLV 4	143750	0.31	32968	-12924	129.64	1321.12	10.19	Si
SLV 10	143750	0.31	33451	-13113	129.64	1333.2	10.28	Si
SLV 9	143750	0.31	33451	-13113	129.64	1333.2	10.28	Si
SLV 7	143750	0.31	42541	-16676	129.64	1521.82	11.74	Si
SLV 8	143750	0.31	42541	-16676	129.64	1521.82	11.74	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 3.23 Wa = 0.05 Ta = 0.0808

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 15	-14194	-13810	-295	0.022	1648.3	0.963	0.33445	8.20395	No
SLV 16	-14194	-13810	-295	0.022	1648.3	0.963	0.33445	8.20395	No
SLV 14	-12962	-11899	-243	0.024	1523	0.96	0.37016	8.20395	No
SLV 13	-12962	-11899	-243	0.024	1523	0.96	0.37016	8.20395	No
SLV 2	-12367	-16770	170	0.029	1462.5	0.959	0.44303	8.20395	No
SLV 1	-12367	-16770	170	0.029	1462.5	0.959	0.44303	8.20395	No
SLV 11	-15424	-17745	-212	0.028	1773.4	0.965	0.4264	6.97355	No
SLV 12	-15424	-17745	-212	0.028	1773.4	0.965	0.4264	6.97355	No
SLV 4	-13599	-18681	118	0.033	1587.8	0.962	0.50574	8.20395	No
SLV 3	-13599	-18681	118	0.033	1587.8	0.962	0.50574	8.20395	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.336	SLU 83	Si
V_SLU	3.344	SLU 78	Si
PF_SLV	3.501	SLV 11	Si
V_SLV	0.97	SLV 11	No
PFFP_SLV	9.357	SLV 1	Si
R_SLV	0.041	SLV 15	No

Maschio 95

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-9.728	1.046	-9.728	1.406	L3	L4	0.36	0.14	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 84	1.39	-3192	142.38	63335	127.83	0.898	No, M>Mu
SLU 84	3.49	-2366	-59.42	46939	180.45	3.037	Si
SLU 83	1.39	-3215	143.4	63782	125.56	0.876	No, M>Mu
SLU 83	3.49	-2381	-60.38	47246	180.02	2.982	Si
SLU 75	1.39	-3058	134.51	60666	140.48	1.044	Si
SLU 75	3.49	-2267	-55.24	44984	182.73	3.308	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 77	1.39	-3127	137.72	62045	134.14	0.974	No, M>Mu
SLU 77	3.49	-2314	-57.89	45913	181.75	3.139	Si
SLU 81	1.39	-3168	141.21	62850	130.25	0.922	No, M>Mu
SLU 81	3.49	-2350	-58.68	46624	180.88	3.083	Si
SLU 74	1.39	-3080	135.53	61113	138.47	1.022	Si
SLU 74	3.49	-2283	-56.19	45291	182.43	3.246	Si
SLU 80	1.39	-3077	136.45	61042	138.79	1.017	Si
SLU 80	3.49	-2267	-57.8	44971	182.74	3.161	Si
SLU 78	1.39	-3105	136.7	61598	136.24	0.997	No, M>Mu
SLU 78	3.49	-2299	-56.94	45606	182.1	3.198	Si
SLU 82	1.39	-3145	140.19	62403	132.43	0.945	No, M>Mu
SLU 82	3.49	-2334	-57.72	46317	181.27	3.14	Si
SLU 79	1.39	-3099	137.46	61489	136.75	0.995	No, M>Mu
SLU 79	3.49	-2282	-58.76	45278	182.44	3.105	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 8	1.39	-4269	694.15	84708	235.72	0.34	No, M>Mu
SLV 8	3.49	645	-602.15	0	0	0	No, Trazione
SLV 4	1.39	-3310	373.92	65682	275.56	0.737	No, M>Mu
SLV 4	3.49	-575	-341.45	0	0	0	No, e>l/2
SLV 5	1.39	-228	-446.41	0	0	0	No, e>l/2
SLV 5	3.49	-3454	437.72	68527	273.02	0.624	No, M>Mu
SLV 7	1.39	-4269	694.15	84708	235.72	0.34	No, M>Mu
SLV 7	3.49	645	-602.15	0	0	0	No, Trazione
SLV 6	1.39	-228	-446.41	0	0	0	No, e>l/2
SLV 6	3.49	-3454	437.72	68527	273.02	0.624	No, M>Mu
SLV 9	1.39	163	-514.09	0	0	0	No, Trazione
SLV 9	3.49	-3637	526.22	72165	268.02	0.509	No, M>Mu
SLV 12	1.39	-3879	626.47	76960	258.43	0.413	No, M>Mu
SLV 12	3.49	462	-513.64	0	0	0	No, Trazione
SLV 11	1.39	-3879	626.47	76960	258.43	0.413	No, M>Mu
SLV 11	3.49	462	-513.64	0	0	0	No, Trazione
SLV 3	1.39	-3310	373.92	65682	275.56	0.737	No, M>Mu
SLV 3	3.49	-575	-341.45	0	0	0	No, e>l/2
SLV 10	1.39	163	-514.09	0	0	0	No, Trazione
SLV 10	3.49	-3637	526.22	72165	268.02	0.509	No, M>Mu

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 74	1.39	-3080	154	135.53		61113	0.36	10833	546			3.55	Si
SLU 74	3.49	-2283	118	-56.19		45291	0.36	10833	546			4.63	Si
SLU 81	1.39	-3168	160	141.21		62850	0.36	10833	546			3.41	Si
SLU 81	3.49	-2350	123	-58.68		46624	0.36	10833	546			4.45	Si
SLU 79	1.39	-3099	158	137.46		61489	0.36	10833	546			3.46	Si
SLU 79	3.49	-2282	122	-58.76		45278	0.36	10833	546			4.49	Si
SLU 78	1.39	-3105	155	136.7		61598	0.36	10833	546			3.52	Si
SLU 78	3.49	-2299	120	-56.94		45606	0.36	10833	546			4.56	Si
SLU 75	1.39	-3058	152	134.51		60666	0.36	10833	546			3.59	Si
SLU 75	3.49	-2267	117	-55.24		44984	0.36	10833	546			4.67	Si
SLU 82	1.39	-3145	158	140.19		62403	0.36	10833	546			3.45	Si
SLU 82	3.49	-2334	122	-57.72		46317	0.36	10833	546			4.49	Si
SLU 84	1.39	-3192	162	142.38		63335	0.36	10833	546			3.38	Si
SLU 84	3.49	-2366	125	-59.42		46939	0.36	10833	546			4.38	Si
SLU 83	1.39	-3215	164	143.4		63782	0.36	10833	546			3.34	Si
SLU 83	3.49	-2381	126	-60.38		47246	0.36	10833	546			4.34	Si
SLU 77	1.39	-3127	157	137.72		62045	0.36	10833	546			3.47	Si
SLU 77	3.49	-2314	121	-57.89		45913	0.36	10833	546			4.52	Si
SLU 80	1.39	-3077	156	136.45		61042	0.36	10833	546			3.5	Si
SLU 80	3.49	-2267	121	-57.8		44971	0.36	10833	546			4.53	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 12	1.39	-3879	1118	626.47		499496	0.0555	16250	126			0.11	No, Vu<V
SLV 12	3.49	462	681	-513.64		0	0	8333	0			0	No, Vu<V
SLV 10	1.39	163	-966	-514.09		0	0	8333	0			0	No, Vu<V
SLV 10	3.49	-3637	-629	526.22		245196	0.106	16250	241			0.38	No, Vu<V
SLV 6	1.39	-228	-913	-446.41		0	0	8333	0			0	No, Vu<V
SLV 6	3.49	-3454	-522	437.72		154389	0.1598	16250	364			0.7	No, Vu<V
SLV 11	1.39	-3879	1118	626.47		499496	0.0555	16250	126			0.11	No, Vu<V
SLV 11	3.49	462	681	-513.64		0	0	8333	0			0	No, Vu<V
SLV 9	1.39	163	-966	-514.09		0	0	8333	0			0	No, Vu<V
SLV 9	3.49	-3637	-629	526.22		245196	0.106	16250	241			0.38	No, Vu<V
SLV 3	1.39	-3310	503	373.92		117560	0.2011	16250	458			0.91	No, Vu<V
SLV 3	3.49	-575	453	-341.45		0	0	8333	0			0	No, Vu<V
SLV 4	1.39	-3310	503	373.92		117560	0.2011	16250	458			0.91	No, Vu<V
SLV 4	3.49	-575	453	-341.45		0	0	8333	0			0	No, Vu<V
SLV 7	1.39	-4269	1171	694.15		583946	0.0522	16250	119			0.1	No, Vu<V
SLV 7	3.49	645	787	-602.15		0	0	8333	0			0	No, Vu<V
SLV 8	1.39	-4269	1171	694.15		583946	0.0522	16250	119			0.1	No, Vu<V
SLV 8	3.49	645	787	-602.15		0	0	8333	0			0	No, Vu<V
SLV 5	1.39	-228	-913	-446.41		0	0	8333	0			0	No, Vu<V
SLV 5	3.49	-3454	-522	437.72		154389	0.1598	16250	364			0.7	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 11	143750	0.31	0	619	17.43	0	0	No, Trazione
SLV 7	143750	0.31	0	706	17.43	0	0	No, Trazione



Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 8	143750	0.31	0	706	17.43	0	0	No, Trazione
SLV 12	143750	0.31	0	619	17.43	0	0	No, Trazione
SLV 3	143750	0.31	14403	-726	17.43	44.83	2.57	Si
SLV 4	143750	0.31	14403	-726	17.43	44.83	2.57	Si
SLV 16	143750	0.31	20142	-1015	17.43	59.35	3.41	Si
SLV 15	143750	0.31	20142	-1015	17.43	59.35	3.41	Si
SLV 1	143750	0.31	40477	-2040	17.43	95.5	5.48	Si
SLV 2	143750	0.31	40477	-2040	17.43	95.5	5.48	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 3.23 $W_a = 0.03$ $T_a = 0.1615$

Comb.	N top	N base	V orto	α_0	M*	e*	a_0^*	aLim	Verifica
SLV 13	-803	-796	43	0	108.2	0.934	0	14.15828	No
SLV 14	-803	-796	43	0	108.2	0.934	0	14.15828	No
SLV 9	-867	163	32	0	0	0	0	14.1455	No, Trazione
SLV 10	-867	163	32	0	0	0	0	14.1455	No, Trazione
SLV 3	-1608	-3310	-43	0	189.9	0.959	0	14.15828	No
SLV 16	-947	-2009	31	0	122.7	0.94	0	14.15828	No
SLV 15	-947	-2009	31	0	122.7	0.94	0	14.15828	No
SLV 4	-1608	-3310	-43	0	189.9	0.959	0	14.15828	No
SLV 1	-1465	-2098	-31	0.002	175.3	0.956	0.03412	14.15828	No
SLV 2	-1465	-2098	-31	0.002	175.3	0.956	0.03412	14.15828	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0.876	SLU 83	No
V_SLU	3.338	SLU 83	Si
PF_SLV	0	SLV 12	No
V_SLV	0	SLV 3	No
PFFP_SLV	0	SLV 12	No
R_SLV	0	SLV 10	No

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Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.728	2.206	-9.728	6.661	L3	L4	4.455	0.14	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 42	1.39	-57061	21508.04	91488	0	0	No, Rottura per schiacciamento
SLU 42	3.49	-41698	-1679.4	66856	16650.33	9.914	Si
SLU 55	1.39	-57511	23048.4	92210	0	0	No, Rottura per schiacciamento
SLU 55	3.49	-41597	-918.95	66693	16794.85	18.276	Si
SLU 62	1.39	-60545	23784.55	97074	0	0	No, Rottura per schiacciamento
SLU 62	3.49	-43934	-1295.96	70441	13236.15	10.213	Si
SLU 56	1.39	-59034	23475.06	94652	0	0	No, Rottura per schiacciamento
SLU 56	3.49	-42839	-1109.54	68685	14963.39	13.486	Si
SLU 60	1.39	-59812	23470.36	95899	0	0	No, Rottura per schiacciamento
SLU 60	3.49	-43357	-1278.98	69515	14159.59	11.071	Si
SLU 58	1.39	-58397	23275.93	93630	0	0	No, Rottura per schiacciamento
SLU 58	3.49	-42323	-1072.39	67858	15740.19	14.678	Si
SLU 59	1.39	-58306	23327.93	93483	0	0	No, Rottura per schiacciamento
SLU 59	3.49	-42234	-990.52	67714	15872.61	16.025	Si
SLU 61	1.39	-59720	23522.36	95752	0	0	No, Rottura per schiacciamento
SLU 61	3.49	-43267	-1197.1	69372	14300.12	11.946	Si
SLU 54	1.39	-58210	23212.86	93330	0	0	No, Rottura per schiacciamento
SLU 54	3.49	-42172	-1010.68	67616	15963.32	15.795	Si
SLU 57	1.39	-58943	23527.06	94505	0	0	No, Rottura per schiacciamento
SLU 57	3.49	-42749	-1027.67	68541	15099.85	14.693	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 11	1.39	-53410	40847.88	85634	35591.2	0.871	No, $M > \mu$
SLV 11	3.49	-41148	1466.44	65974	42167.67	28.755	Si
SLV 13	1.39	-52144	10349.8	83604	36676.96	3.544	Si
SLV 13	3.49	-35082	152.53	56249	42171.63	276.472	Si
SLV 12	1.39	-53410	40847.88	85634	35591.2	0.871	No, $M > \mu$
SLV 12	3.49	-41148	1466.44	65974	42167.67	28.755	Si
SLV 3	1.39	-36068	24770.57	57829	42317.34	1.708	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 3	3.49	-28686	-1707.69	45993	39845.86	23.333	Si
SLV 16	1.39	-55938	24359.42	89687	33142.32	1.361	Si
SLV 16	3.49	-39654	1234.18	63578	42368.34	34.329	Si
SLV 8	1.39	-47449	40971.22	76076	39886.15	0.974	No, M>Mu
SLV 8	3.49	-37858	583.88	60699	42436.75	72.681	Si
SLV 4	1.39	-36068	24770.57	57829	42317.34	1.708	Si
SLV 4	3.49	-28686	-1707.69	45993	39845.86	23.333	Si
SLV 14	1.39	-52144	10349.8	83604	36676.96	3.544	Si
SLV 14	3.49	-35082	152.53	56249	42171.63	276.472	Si
SLV 15	1.39	-55938	24359.42	89687	33142.32	1.361	Si
SLV 15	3.49	-39654	1234.18	63578	42368.34	34.329	Si
SLV 7	1.39	-47449	40971.22	76076	39886.15	0.974	No, M>Mu
SLV 7	3.49	-37858	583.88	60699	42436.75	72.681	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 80	1.39	-64790	943	25270.42		103880	4.455	10833	6757			7.17	Si
SLU 80	3.49	-47120	-162	-1445.85		75550	4.455	10833	6757			41.69	Si
SLU 77	1.39	-65519	967	25417.54		105049	4.455	10833	6757			6.99	Si
SLU 77	3.49	-47725	-148	-1564.87		76520	4.455	10833	6757			45.7	Si
SLU 75	1.39	-64694	957	25155.35		103726	4.455	10833	6757			7.06	Si
SLU 75	3.49	-47059	-144	-1466.02		75451	4.455	10833	6757			46.86	Si
SLU 79	1.39	-64882	952	25218.42		104027	4.455	10833	6757			7.1	Si
SLU 79	3.49	-47210	-153	-1527.72		75693	4.455	10833	6757			44.22	Si
SLU 81	1.39	-66297	998	25412.84		106296	4.455	10833	6757			6.77	Si
SLU 81	3.49	-48244	-125	-1734.31		77351	4.455	10833	6757			53.99	Si
SLU 83	1.39	-67030	998	25727.04		107471	4.455	10833	6757			6.77	Si
SLU 83	3.49	-48821	-138	-1751.29		78276	4.455	10833	6757			48.93	Si
SLU 78	1.39	-65427	958	25469.55		104901	4.455	10833	6757			7.06	Si
SLU 78	3.49	-47636	-157	-1483		76376	4.455	10833	6757			43	Si
SLU 82	1.39	-66205	988	25464.84		106149	4.455	10833	6757			6.84	Si
SLU 82	3.49	-48154	-134	-1652.44		77207	4.455	10833	6757			50.26	Si
SLU 84	1.39	-66938	988	25779.04		107324	4.455	10833	6757			6.84	Si
SLU 84	3.49	-48731	-147	-1669.42		78133	4.455	10833	6757			45.85	Si
SLU 74	1.39	-64786	967	25103.35		103873	4.455	10833	6757			6.99	Si
SLU 74	3.49	-47148	-135	-1547.89		75594	4.455	10833	6757			50.08	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 11	1.39	-53410	13636	40847.88		86939	4.3881	16250	9983			0.73	No, Vu<V
SLV 11	3.49	-41148	11621	1466.44		65974	4.455	16250	10135			0.87	No, Vu<V
SLV 15	1.39	-55938	5934	24359.42		89687	4.455	16250	10135			1.71	Si
SLV 15	3.49	-39654	4201	1234.18		63578	4.455	16250	10135			2.41	Si
SLV 10	1.39	-40763	-11410	-5850.85		65357	4.455	16250	10135			0.89	No, Vu<V
SLV 10	3.49	-25910	-11303	-2139.03		41543	4.455	16250	10135			0.9	No, Vu<V
SLV 7	1.39	-47449	12725	40971.22		82824	4.0921	16250	9309			0.73	No, Vu<V
SLV 7	3.49	-37858	11103	583.88		60699	4.455	16250	10135			0.91	No, Vu<V
SLV 6	1.39	-34802	-12322	-5727.51		55800	4.455	16250	10135			0.82	No, Vu<V
SLV 6	3.49	-22620	-11821	-3021.59		36268	4.455	15587	9722			0.82	No, Vu<V
SLV 5	1.39	-34802	-12322	-5727.51		55800	4.455	16250	10135			0.82	No, Vu<V
SLV 5	3.49	-22620	-11821	-3021.59		36268	4.455	15587	9722			0.82	No, Vu<V
SLV 8	1.39	-47449	12725	40971.22		82824	4.0921	16250	9309			0.73	No, Vu<V
SLV 8	3.49	-37858	11103	583.88		60699	4.455	16250	10135			0.91	No, Vu<V
SLV 9	1.39	-40763	-11410	-5850.85		65357	4.455	16250	10135			0.89	No, Vu<V
SLV 9	3.49	-25910	-11303	-2139.03		41543	4.455	16250	10135			0.9	No, Vu<V
SLV 16	1.39	-55938	5934	24359.42		89687	4.455	16250	10135			1.71	Si
SLV 16	3.49	-39654	4201	1234.18		63578	4.455	16250	10135			2.41	Si
SLV 12	1.39	-53410	13636	40847.88		86939	4.3881	16250	9983			0.73	No, Vu<V
SLV 12	3.49	-41148	11621	1466.44		65974	4.455	16250	10135			0.87	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 6	143750	0.31	37707	-23518	215.65	1138.21	5.28	Si
SLV 5	143750	0.31	37707	-23518	215.65	1138.21	5.28	Si
SLV 2	143750	0.31	39081	-24375	215.65	1160.5	5.38	Si
SLV 1	143750	0.31	39081	-24375	215.65	1160.5	5.38	Si
SLV 9	143750	0.31	43617	-27204	215.65	1224.51	5.68	Si
SLV 10	143750	0.31	43617	-27204	215.65	1224.51	5.68	Si
SLV 3	143750	0.31	46169	-28796	215.65	1254.06	5.82	Si
SLV 4	143750	0.31	46169	-28796	215.65	1254.06	5.82	Si
SLV 12	143750	0.31	67244	-41940	215.65	1320.13	6.12	Si
SLV 11	143750	0.31	67244	-41940	215.65	1320.13	6.12	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 3.23 Wa = 0.03 Ta = 0.1615

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 11	-27483	-53410	44	0.019	3121.2	0.969	0.28311	14.1455	No
SLV 12	-27483	-53410	44	0.019	3121.2	0.969	0.28311	14.1455	No
SLV 6	-21788	-34802	-44	0.019	2541.6	0.962	0.28468	14.1455	No
SLV 5	-21788	-34802	-44	0.019	2541.6	0.962	0.28468	14.1455	No
SLV 7	-24430	-47449	37	0.019	2810.4	0.965	0.28766	14.1455	No
SLV 8	-24430	-47449	37	0.019	2810.4	0.965	0.28766	14.1455	No
SLV 10	-24841	-40763	-37	0.019	2852.2	0.966	0.28768	14.1455	No
SLV 9	-24841	-40763	-37	0.019	2852.2	0.966	0.28768	14.1455	No
SLV 15	-30120	-55938	24	0.02	3389.7	0.971	0.29204	14.15828	No
SLV 16	-30120	-55938	24	0.02	3389.7	0.971	0.29204	14.15828	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0	SLU 31	No
V_SLU	6.77	SLU 83	Si
PF_SLV	0.871	SLV 11	No
V_SLV	0.732	SLV 7	No
PFFP_SLV	5.278	SLV 5	Si
R_SLV	0.02	SLV 11	No

Maschio 97

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-10.12	-4.784	-11.013	-4.784	L3	L4	0.892	0.3	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 83	1.39	-20402	-1427.35	76207	586.8	0.411	No, M>Mu
SLU 83	4.5	-11216	186.52	41896	2430.56	13.031	Si
SLU 82	1.39	-20440	-1444.85	76349	572.04	0.396	No, M>Mu
SLU 82	4.5	-11173	192.8	41735	2431.07	12.609	Si
SLU 84	1.39	-20660	-1456.83	77172	485.09	0.333	No, M>Mu
SLU 84	4.5	-11316	195.85	42268	2429.08	12.403	Si
SLU 81	1.39	-20181	-1415.37	75385	671.42	0.474	No, M>Mu
SLU 81	4.5	-11073	183.47	41363	2431.97	13.255	Si
SLU 78	1.39	-20381	-1434.11	76129	594.99	0.415	No, M>Mu
SLU 78	4.5	-11173	200.85	41733	2431.08	12.104	Si
SLU 73	1.39	-20046	-1422.89	74878	722.54	0.508	No, M>Mu
SLU 73	4.5	-10926	199.17	40812	2432.55	12.214	Si
SLU 77	1.39	-20122	-1404.63	75164	693.75	0.494	No, M>Mu
SLU 77	4.5	-11073	191.52	41361	2431.97	12.698	Si
SLU 75	1.39	-20160	-1422.13	75306	679.42	0.478	No, M>Mu
SLU 75	4.5	-11030	197.8	41201	2432.23	12.297	Si
SLU 76	1.39	-20266	-1434.87	75701	639.14	0.445	No, M>Mu
SLU 76	4.5	-11068	202.22	41344	2432	12.027	Si
SLU 80	1.39	-20314	-1427.19	75881	620.64	0.435	No, M>Mu
SLU 80	4.5	-11145	199.05	41629	2431.37	12.215	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 14	1.39	-31225	-5470.71	116635	633.1	0.116	No, M>Mu
SLV 14	4.5	-10581	1092.04	39522	3193.91	2.925	Si
SLV 13	1.39	-31225	-5470.71	116635	633.1	0.116	No, M>Mu
SLV 13	4.5	-10581	1092.04	39522	3193.91	2.925	Si
SLV 8	1.39	1995	1316.01	0	0	0	No, Trazione
SLV 8	4.5	-1497	-376.23	5592	637.45	1.694	Si
SLV 2	1.39	-4494	2850.62	0	0	0	No, e>l/2
SLV 2	4.5	-8572	-656.56	32018	2822.4	4.299	Si
SLV 3	1.39	2819	3486.55	0	0	0	No, Trazione
SLV 3	4.5	-4982	-809.64	18610	1884.38	2.327	Si
SLV 9	1.39	-30401	-3300.17	113557	958.05	0.29	No, M>Mu
SLV 9	4.5	-14065	658.63	52539	3577.29	5.431	Si
SLV 7	1.39	1995	1316.01	0	0	0	No, Trazione
SLV 7	4.5	-1497	-376.23	5592	637.45	1.694	Si
SLV 10	1.39	-30401	-3300.17	113557	958.05	0.29	No, M>Mu
SLV 10	4.5	-14065	658.63	52539	3577.29	5.431	Si
SLV 1	1.39	-4494	2850.62	0	0	0	No, e>l/2
SLV 1	4.5	-8572	-656.56	32018	2822.4	4.299	Si
SLV 4	1.39	2819	3486.55	0	0	0	No, Trazione
SLV 4	4.5	-4982	-809.64	18610	1884.38	2.327	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	l'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 78	1.39	-20381	-2724	-1434.11		76129	0.8924	10833	2900			1.06	Si
SLU 78	4.5	-11173	-536	200.85		41733	0.8924	10833	2900			5.41	Si
SLU 75	1.39	-20160	-2700	-1422.13		75306	0.8924	10833	2900			1.07	Si
SLU 75	4.5	-11030	-530	197.8		41201	0.8924	10833	2900			5.48	Si
SLU 82	1.39	-20440	-2745	-1444.85		76349	0.8924	10833	2900			1.06	Si
SLU 82	4.5	-11173	-531	192.8		41735	0.8924	10833	2900			5.47	Si
SLU 81	1.39	-20181	-2689	-1415.37		75385	0.8924	10833	2900			1.08	Si
SLU 81	4.5	-11073	-510	183.47		41363	0.8924	10833	2900			5.69	Si
SLU 80	1.39	-20314	-2711	-1427.19		75881	0.8924	10833	2900			1.07	Si
SLU 80	4.5	-11145	-531	199.05		41629	0.8924	10833	2900			5.46	Si
SLU 83	1.39	-20402	-2713	-1427.35		76207	0.8924	10833	2900			1.07	Si
SLU 83	4.5	-11216	-516	186.52		41896	0.8924	10833	2900			5.62	Si
SLU 84	1.39	-20660	-2769	-1456.83		77172	0.8924	10833	2900			1.05	Si
SLU 84	4.5	-11316	-537	195.85		42268	0.8924	10833	2900			5.4	Si
SLU 73	1.39	-20046	-2699	-1422.89		74878	0.8924	10833	2900			1.07	Si
SLU 73	4.5	-10926	-532	199.17		40812	0.8924	10833	2900			5.45	Si
SLU 77	1.39	-20122	-2669	-1404.63		75164	0.8924	10833	2900			1.09	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 77	4.5	-11073	-515	191.52		41361	0.8924	10833	2900			5.63	Si
SLU 76	1.39	-20266	-2723	-1434.87		75701	0.8924	10833	2900			1.06	Si
SLU 76	4.5	-11068	-539	202.22		41344	0.8924	10833	2900			5.38	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 3	1.39	2819	5256	3486.55		0	0	8333	0			0	No, Vu<V
SLV 3	4.5	-4982	2362	-809.64		19514	0.851	12236	3124			1.32	Si
SLV 16	1.39	-23912	-7771	-4834.78		108890	0.732	16250	3568			0.46	No, Vu<V
SLV 16	4.5	-6991	-2583	938.95		26113	0.8924	13556	3629			1.41	Si
SLV 2	1.39	-4494	4017	2850.62		0	0	8333	0			0	No, Vu<V
SLV 2	4.5	-8572	1854	-656.56		32018	0.8924	14737	3945			2.13	Si
SLV 13	1.39	-31225	-9010	-5470.71		128030	0.813	16250	3963			0.44	No, Vu<V
SLV 13	4.5	-10581	-3091	1092.04		39522	0.8924	16238	4347			1.41	Si
SLV 1	1.39	-4494	4017	2850.62		0	0	8333	0			0	No, Vu<V
SLV 1	4.5	-8572	1854	-656.56		32018	0.8924	14737	3945			2.13	Si
SLV 8	1.39	1995	2143	1316.01		0	0	8333	0			0	No, Vu<V
SLV 8	4.5	-1497	1224	-376.23		8536	0.5847	10040	1761			1.44	Si
SLV 4	1.39	2819	5256	3486.55		0	0	8333	0			0	No, Vu<V
SLV 4	4.5	-4982	2362	-809.64		19514	0.851	12236	3124			1.32	Si
SLV 7	1.39	1995	2143	1316.01		0	0	8333	0			0	No, Vu<V
SLV 7	4.5	-1497	1224	-376.23		8536	0.5847	10040	1761			1.44	Si
SLV 14	1.39	-31225	-9010	-5470.71		128030	0.813	16250	3963			0.44	No, Vu<V
SLV 14	4.5	-10581	-3091	1092.04		39522	0.8924	16238	4347			1.41	Si
SLV 15	1.39	-23912	-7771	-4834.78		108890	0.732	16250	3568			0.46	No, Vu<V
SLV 15	4.5	-6991	-2583	938.95		26113	0.8924	13556	3629			1.41	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 8	143750	0.31	5682	-1521	84.51	217.56	2.57	Si
SLV 7	143750	0.31	5682	-1521	84.51	217.56	2.57	Si
SLV 11	143750	0.31	12008	-3215	84.51	434.81	5.14	Si
SLV 12	143750	0.31	12008	-3215	84.51	434.81	5.14	Si
SLV 3	143750	0.31	19321	-5173	84.51	653.19	7.73	Si
SLV 4	143750	0.31	19321	-5173	84.51	653.19	7.73	Si
SLV 2	143750	0.31	37338	-9996	84.51	1041.2	12.32	Si
SLV 1	143750	0.31	37338	-9996	84.51	1041.2	12.32	Si
SLV 16	143750	0.31	40407	-10818	84.51	1086.03	12.85	Si
SLV 15	143750	0.31	40407	-10818	84.51	1086.03	12.85	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 3.23 Wa = 0.05 Ta = 0.0754

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 12	-1504	-6024	-160	0	299.1	0.896	0	6.53088	No
SLV 3	-4979	2819	19	0	0	0	0	7.60357	No, Trazione
SLV 11	-1504	-6024	-160	0	299.1	0.896	0	6.53088	No
SLV 7	-1327	1995	-123	0	0	0	0	6.53088	No, Trazione
SLV 8	-1327	1995	-123	0	0	0	0	6.53088	No, Trazione
SLV 4	-4979	2819	19	0	0	0	0	7.60357	No, Trazione
SLV 15	-5568	-23912	-103	0.03	706.5	0.944	0.46685	7.60357	No
SLV 16	-5568	-23912	-103	0.03	706.5	0.944	0.46685	7.60357	No
SLV 1	-8286	-4494	105	0.033	982.5	0.958	0.50479	7.60357	No
SLV 2	-8286	-4494	105	0.033	982.5	0.958	0.50479	7.60357	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0.333	SLU 84	No
V_SLU	1.047	SLU 84	Si
PF_SLV	0	SLV 8	No
V_SLV	0	SLV 1	No
PFFP_SLV	2.574	SLV 7	Si
R_SLV	0	SLV 8	No

Maschio 98

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-7.723	-4.784	-8.28	-4.784	L3	L4	0.558	0.3	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 75	1.39	-10598	-142.12	63353	656.76	4.621	Si
SLU 75	4.5	-7561	-181.63	45199	938.4	5.167	Si
SLU 77	1.39	-10752	-131.03	64272	632.48	4.827	Si
SLU 77	4.5	-7454	-175.55	44560	941.44	5.363	Si
SLU 81	1.39	-10827	-138.02	64723	620.21	4.494	Si
SLU 81	4.5	-7507	-173.46	44874	940	5.419	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 73	1.39	-10450	-147.93	62468	679.25	4.592	Si
SLU 73	4.5	-7599	-185.18	45422	937.23	5.061	Si
SLU 80	1.39	-10696	-140.39	63938	641.41	4.569	Si
SLU 80	4.5	-7642	-184.81	45685	935.78	5.064	Si
SLU 84	1.39	-10889	-148.89	65091	610.02	4.097	Si
SLU 84	4.5	-7786	-185.05	46544	930.48	5.028	Si
SLU 83	1.39	-10935	-137.91	65366	602.3	4.367	Si
SLU 83	4.5	-7593	-176.22	45390	937.4	5.32	Si
SLU 78	1.39	-10706	-142.01	63997	639.86	4.506	Si
SLU 78	4.5	-7647	-184.39	45715	935.61	5.074	Si
SLU 76	1.39	-10558	-147.82	63111	663	4.485	Si
SLU 76	4.5	-7685	-187.94	45938	934.3	4.971	Si
SLU 82	1.39	-10781	-149	64447	627.73	4.213	Si
SLU 82	4.5	-7700	-182.3	46029	933.76	5.122	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 4	1.39	-2742	1210.75	0	0	0	No, $e \geq l/2$
SLV 4	4.5	-3715	-686.87	22207	847.51	1.234	Si
SLV 2	1.39	-5409	1061.35	32331	1108.96	1.045	Si
SLV 2	4.5	-1779	-364.16	10634	452.84	1.244	Si
SLV 3	1.39	-2742	1210.75	0	0	0	No, $e \geq l/2$
SLV 3	4.5	-3715	-686.87	22207	847.51	1.234	Si
SLV 13	1.39	-12514	-1384.17	74807	1352.97	0.977	No, $M > M_u$
SLV 13	4.5	-6760	434.18	40411	1261.47	2.905	Si
SLV 8	1.39	-2117	529.11	12656	529.15	1	Si
SLV 8	4.5	-7717	-783.94	46129	1339.28	1.708	Si
SLV 5	1.39	-11007	31.12	65797	1416.32	45.508	Si
SLV 5	4.5	-1264	291.75	7555	330.61	1.133	Si
SLV 1	1.39	-5409	1061.35	32331	1108.96	1.045	Si
SLV 1	4.5	-1779	-364.16	10634	452.84	1.244	Si
SLV 7	1.39	-2117	529.11	12656	529.15	1	Si
SLV 7	4.5	-7717	-783.94	46129	1339.28	1.708	Si
SLV 14	1.39	-12514	-1384.17	74807	1352.97	0.977	No, $M > M_u$
SLV 14	4.5	-6760	434.18	40411	1261.47	2.905	Si
SLV 6	1.39	-11007	31.12	65797	1416.32	45.508	Si
SLV 6	4.5	-1264	291.75	7555	330.61	1.133	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 80	1.39	-10696	-160	-140.39		63938	0.5576	10833	1812			11.35	Si
SLU 80	4.5	-7642	313	-184.81		45685	0.5576	10833	1812			5.79	Si
SLU 84	1.39	-10889	-166	-148.89		65091	0.5576	10833	1812			10.89	Si
SLU 84	4.5	-7786	321	-185.05		46544	0.5576	10833	1812			5.65	Si
SLU 82	1.39	-10781	-166	-149		64447	0.5576	10833	1812			10.9	Si
SLU 82	4.5	-7700	319	-182.3		46029	0.5576	10833	1812			5.68	Si
SLU 55	1.39	-9963	-169	-131.76		59556	0.5576	10833	1812			10.71	Si
SLU 55	4.5	-7229	304	-181.66		43213	0.5576	10833	1812			5.96	Si
SLU 52	1.39	-9855	-169	-131.87		58913	0.5576	10833	1812			10.72	Si
SLU 52	4.5	-7143	302	-178.9		42697	0.5576	10833	1812			6	Si
SLU 75	1.39	-10598	-161	-142.12		63353	0.5576	10833	1812			11.29	Si
SLU 75	4.5	-7561	313	-181.63		45199	0.5576	10833	1812			5.8	Si
SLU 78	1.39	-10706	-161	-142.01		63997	0.5576	10833	1812			11.28	Si
SLU 78	4.5	-7647	315	-184.39		45715	0.5576	10833	1812			5.76	Si
SLU 83	1.39	-10935	-132	-137.91		65366	0.5576	10833	1812			13.69	Si
SLU 83	4.5	-7593	302	-176.22		45390	0.5576	10833	1812			6	Si
SLU 76	1.39	-10558	-182	-147.82		63111	0.5576	10833	1812			9.95	Si
SLU 76	4.5	-7685	323	-187.94		45938	0.5576	10833	1812			5.6	Si
SLU 73	1.39	-10450	-182	-147.93		62468	0.5576	10833	1812			9.95	Si
SLU 73	4.5	-7599	321	-185.18		45422	0.5576	10833	1812			5.64	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 8	1.39	-2117	-301	529.11		81404	0.0867	16250	423			1.41	Si
SLV 8	4.5	-7717	-516	-783.94		48381	0.5317	16250	2592			5.02	Si
SLV 13	1.39	-12514	-804	-1384.17		82666	0.5046	16250	2460			3.06	Si
SLV 13	4.5	-6760	1429	434.18		40411	0.5576	16250	2718			1.9	Si
SLV 2	1.39	-5409	917	1061.35		72775	0.2477	16250	1208			1.32	Si
SLV 2	4.5	-1779	-779	-364.16		26672	0.2223	13668	912			1.17	Si
SLV 1	1.39	-5409	917	1061.35		72775	0.2477	16250	1208			1.32	Si
SLV 1	4.5	-1779	-779	-364.16		26672	0.2223	13668	912			1.17	Si
SLV 9	1.39	-13139	129	-702.53		78540	0.5576	16250	2718			21.03	Si
SLV 9	4.5	-2758	931	531.25		35549	0.2586	15443	1198			1.29	Si
SLV 10	1.39	-13139	129	-702.53		78540	0.5576	16250	2718			21.03	Si
SLV 10	4.5	-2758	931	531.25		35549	0.2586	15443	1198			1.29	Si
SLV 14	1.39	-12514	-804	-1384.17		82666	0.5046	16250	2460			3.06	Si
SLV 14	4.5	-6760	1429	434.18		40411	0.5576	16250	2718			1.9	Si
SLV 7	1.39	-2117	-301	529.11		81404	0.0867	16250	423			1.41	Si
SLV 7	4.5	-7717	-516	-783.94		48381	0.5317	16250	2592			5.02	Si
SLV 4	1.39	-2742	633	1210.75		0	0	8333	0			0	No, $V_u < V$
SLV 4	4.5	-3715	-1015	-686.87		43951	0.2817	16250	1374			1.35	Si
SLV 3	1.39	-2742	633	1210.75		0	0	8333	0			0	No, $V_u < V$
SLV 3	4.5	-3715	-1015	-686.87		43951	0.2817	16250	1374			1.35	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 W_a 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 3	143750	0.31	15868	-2655	52.81	346.48	6.56	Si
SLV 4	143750	0.31	15868	-2655	52.81	346.48	6.56	Si



Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 1	143750	0.31	19543	-3269	52.81	411.96	7.8	Si
SLV 2	143750	0.31	19543	-3269	52.81	411.96	7.8	Si
SLV 7	143750	0.31	28638	-4791	52.81	550.19	10.42	Si
SLV 8	143750	0.31	28638	-4791	52.81	550.19	10.42	Si
SLV 5	143750	0.31	40886	-6840	52.81	682.66	12.93	Si
SLV 6	143750	0.31	40886	-6840	52.81	682.66	12.93	Si
SLV 11	143750	0.31	43258	-7236	52.81	701.18	13.28	Si
SLV 12	143750	0.31	43258	-7236	52.81	701.18	13.28	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 3.23 $W_a = 0.05$ $T_a = 0.0754$

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 3	-1778	-2742	-86	0.013	269.8	0.917	0.21326	7.60357	No
SLV 4	-1778	-2742	-86	0.013	269.8	0.917	0.21326	7.60357	No
SLV 2	-3247	-5409	-114	0.017	417.9	0.941	0.25763	7.60357	No
SLV 1	-3247	-5409	-114	0.017	417.9	0.941	0.25763	7.60357	No
SLV 15	-6741	-9847	97	0.031	772.9	0.966	0.45908	7.60357	No
SLV 16	-6741	-9847	97	0.031	772.9	0.966	0.45908	7.60357	No
SLV 13	-8209	-12514	69	0.035	922.5	0.971	0.52984	7.60357	No
SLV 14	-8209	-12514	69	0.035	922.5	0.971	0.52984	7.60357	No
SLV 11	-3290	-4249	66	0.03	422.3	0.942	0.45666	6.53088	No
SLV 12	-3290	-4249	66	0.03	422.3	0.942	0.45666	6.53088	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.097	SLU 84	Si
V_SLU	5.605	SLU 76	Si
PF_SLV	0	SLV 3	No
V_SLV	0	SLV 3	No
PFFP_SLV	6.561	SLV 3	Si
R_SLV	0.028	SLV 3	No

Maschio 99

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.448	-3.359	-11.003	-3.359	L3	L4	1.555	0.28	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	t0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 76	1.39	-10252	4511.76	23546	5666.91	1.256	Si
SLU 76	3.49	-15479	272.51	35552	6782.5	24.889	Si
SLU 82	1.39	-10335	4619.67	23738	5694.1	1.233	Si
SLU 82	3.49	-15685	287	36024	6801.88	23.7	Si
SLU 75	1.39	-10216	4479.94	23463	5654.94	1.262	Si
SLU 75	3.49	-15368	339.72	35295	6771.17	19.931	Si
SLU 81	1.39	-10190	4537.96	23403	5646.32	1.244	Si
SLU 81	3.49	-15358	395.18	35273	6770.17	17.132	Si
SLU 84	1.39	-10484	4669.31	24079	5741.82	1.23	Si
SLU 84	3.49	-15923	293.99	36570	6822.01	23.205	Si
SLU 78	1.39	-10364	4529.57	23804	5703.44	1.259	Si
SLU 78	3.49	-15605	346.72	35841	6794.6	19.597	Si
SLU 77	1.39	-10218	4447.85	23469	5655.84	1.272	Si
SLU 77	3.49	-15278	454.91	35090	6761.75	14.864	Si
SLU 73	1.39	-10103	4462.13	23205	5617.67	1.259	Si
SLU 73	3.49	-15242	265.52	35006	6757.76	25.451	Si
SLU 83	1.39	-10338	4587.59	23744	5694.99	1.241	Si
SLU 83	3.49	-15596	402.18	35819	6793.7	16.892	Si
SLU 80	1.39	-10303	4506.92	23664	5683.7	1.261	Si
SLU 80	3.49	-15499	351.64	35598	6784.46	19.294	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 1	1.39	-8126	6672.67	0	0	0	No, e>l/2
SLV 1	3.49	-21268	-5464.11	48848	9925.34	1.816	Si
SLV 15	1.39	-5994	-679.24	13766	4134.99	6.088	Si
SLV 15	3.49	792	6308.26	0	0	0	No, Trazione
SLV 4	1.39	-7650	5660.04	17571	5092.79	0.9	No, M>Mu
SLV 4	3.49	-17231	-4692.92	39576	9058	1.93	Si
SLV 13	1.39	-6469	333.4	14859	4418.32	13.252	Si
SLV 13	3.49	-3245	5537.07	0	0	0	No, e>l/2
SLV 11	1.39	-6018	358.1	13822	4149.85	11.589	Si
SLV 11	3.49	-806	3357.58	0	0	0	No, e>l/2
SLV 16	1.39	-5994	-679.24	13766	4134.99	6.088	Si
SLV 16	3.49	792	6308.26	0	0	0	No, Trazione
SLV 2	1.39	-8126	6672.67	0	0	0	No, e>l/2
SLV 2	3.49	-21268	-5464.11	48848	9925.34	1.816	Si
SLV 12	1.39	-6018	358.1	13822	4149.85	11.589	Si
SLV 12	3.49	-806	3357.58	0	0	0	No, e>l/2



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 14	1.39	-6469	333.4	14859	4418.32	13.252	Si
SLV 14	3.49	-3245	5537.07	0	0	0	No, $e \geq l/2$
SLV 3	1.39	-7650	5660.04	17571	5092.79	0.9	No, $M > \mu$
SLV 3	3.49	-17231	-4692.92	39576	9058	1.93	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 82	1.39	-10335	4506	4619.67		37226	0.9916	10519	2921			0.65	No, $V_u < V$
SLU 82	3.49	-15685	5152	287		36024	1.555	10359	4510			0.88	No, $V_u < V$
SLU 73	1.39	-10103	4375	4462.13		35813	1.0076	10331	2914			0.67	No, $V_u < V$
SLU 73	3.49	-15242	5028	265.52		35006	1.555	10223	4451			0.89	No, $V_u < V$
SLU 81	1.39	-10190	4364	4537.96		36521	0.9964	10425	2909			0.67	No, $V_u < V$
SLU 81	3.49	-15358	4964	395.18		35273	1.555	10259	4467			0.9	No, $V_u < V$
SLU 42	1.39	-8731	3973	3991.56		32447	0.9611	9882	2659			0.67	No, $V_u < V$
SLU 42	3.49	-13610	4534	114.35		31258	1.555	9723	4233			0.93	No, $V_u < V$
SLU 78	1.39	-10364	4410	4529.57		36240	1.0214	10388	2971			0.67	No, $V_u < V$
SLU 78	3.49	-15605	5047	346.72		35841	1.555	10334	4500			0.89	No, $V_u < V$
SLU 83	1.39	-10338	4415	4587.59		36876	1.0012	10472	2936			0.67	No, $V_u < V$
SLU 83	3.49	-15596	5020	402.18		35819	1.555	10331	4498			0.9	No, $V_u < V$
SLU 76	1.39	-10252	4426	4511.76		36171	1.0123	10378	2942			0.66	No, $V_u < V$
SLU 76	3.49	-15479	5083	272.51		35552	1.555	10296	4483			0.88	No, $V_u < V$
SLU 75	1.39	-10216	4359	4479.94		35878	1.0169	10339	2944			0.68	No, $V_u < V$
SLU 75	3.49	-15368	4991	339.72		35295	1.555	10262	4468			0.9	No, $V_u < V$
SLU 40	1.39	-8583	3922	3941.93		32109	0.9547	9837	2629			0.67	No, $V_u < V$
SLU 40	3.49	-13372	4478	107.35		30711	1.555	9650	4202			0.94	No, $V_u < V$
SLU 84	1.39	-10484	4557	4669.31		37579	0.9964	10566	2948			0.65	No, $V_u < V$
SLU 84	3.49	-15923	5208	293.99		36570	1.555	10432	4542			0.87	No, $V_u < V$

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 2	1.39	-8126	12741	6672.67		0	0	8333	0			0	No, $V_u < V$
SLV 2	3.49	-21268	10606	-5464.11		48848	1.555	16250	7075			0.67	No, $V_u < V$
SLV 15	1.39	-5994	-7104	-679.24		13766	1.555	11086	4827			0.68	No, $V_u < V$
SLV 15	3.49	792	-4165	6308.26		0	0	8333	0			0	No, $V_u < V$
SLV 3	1.39	-7650	10842	5660.04		241842	0.113	16250	514			0.05	No, $V_u < V$
SLV 3	3.49	-17231	9333	-4692.92		40608	1.5155	16250	6895			0.74	No, $V_u < V$
SLV 14	1.39	-6469	-5205	333.4		14859	1.555	11305	4922			0.95	No, $V_u < V$
SLV 14	3.49	-3245	-2893	5537.07		0	0	8333	0			0	No, $V_u < V$
SLV 11	1.39	-6018	-3038	358.1		13822	1.555	11098	4832			1.59	Si
SLV 11	3.49	-806	-926	3357.58		0	0	8333	0			0	No, $V_u < V$
SLV 4	1.39	-7650	10842	5660.04		241842	0.113	16250	514			0.05	No, $V_u < V$
SLV 4	3.49	-17231	9333	-4692.92		40608	1.5155	16250	6895			0.74	No, $V_u < V$
SLV 13	1.39	-6469	-5205	333.4		14859	1.555	11305	4922			0.95	No, $V_u < V$
SLV 13	3.49	-3245	-2893	5537.07		0	0	8333	0			0	No, $V_u < V$
SLV 16	1.39	-5994	-7104	-679.24		13766	1.555	11086	4827			0.68	No, $V_u < V$
SLV 16	3.49	792	-4165	6308.26		0	0	8333	0			0	No, $V_u < V$
SLV 12	1.39	-6018	-3038	358.1		13822	1.555	11098	4832			1.59	Si
SLV 12	3.49	-806	-926	3357.58		0	0	8333	0			0	No, $V_u < V$
SLV 1	1.39	-8126	12741	6672.67		0	0	8333	0			0	No, $V_u < V$
SLV 1	3.49	-21268	10606	-5464.11		48848	1.555	16250	7075			0.67	No, $V_u < V$

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 W_a 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 15	143750	0.31	0	509	140.72	0	0	No, Trazione
SLV 16	143750	0.31	0	509	140.72	0	0	No, Trazione
SLV 12	143750	0.31	2568	-1118	140.72	153.23	1.09	Si
SLV 11	143750	0.31	2568	-1118	140.72	153.23	1.09	Si
SLV 14	143750	0.31	8025	-3494	140.72	457.03	3.25	Si
SLV 13	143750	0.31	8025	-3494	140.72	457.03	3.25	Si
SLV 8	143750	0.31	14963	-6515	140.72	800.37	5.69	Si
SLV 7	143750	0.31	14963	-6515	140.72	800.37	5.69	Si
SLV 10	143750	0.31	33210	-14460	140.72	1474.15	10.48	Si
SLV 9	143750	0.31	33210	-14460	140.72	1474.15	10.48	Si

Verifica dei meccanismi locali di colla con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 3.23 $W_a = 0.05$ $T_a = 0.0808$

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 16	-5874	-5994	134	0.027	827.3	0.927	0.42769	8.20395	No
SLV 15	-5874	-5994	134	0.027	827.3	0.927	0.42769	8.20395	No
SLV 13	-8247	-6469	103	0.033	1067.1	0.94	0.51074	8.20395	No
SLV 14	-8247	-6469	103	0.033	1067.1	0.94	0.51074	8.20395	No
SLV 1	-19632	-8126	-119	0.035	2224.4	0.969	0.52468	8.20395	No
SLV 2	-19632	-8126	-119	0.035	2224.4	0.969	0.52468	8.20395	No
SLV 3	-17259	-7650	-89	0.036	1982.8	0.966	0.54521	8.20395	No
SLV 4	-17259	-7650	-89	0.036	1982.8	0.966	0.54521	8.20395	No
SLV 12	-7089	-6018	91	0.034	949.9	0.934	0.52532	6.97355	No
SLV 11	-7089	-6018	91	0.034	949.9	0.934	0.52532	6.97355	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.23	SLU 84	Si
V_SLV	0.647	SLU 84	No
PF_SLV	0	SLV 16	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 16	No
R_SLV	0.052	SLV 15	No



Maschio 100

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-6.268	-3.359	-6.268	1.046	L3	L4	4.405	0.14	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ ₀	f _{v0}	μ	φ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLU 58	1.39	-50289	-12732.64	81545	0	0	No, Rottura per schiacciamento
SLU 58	5.07	-30382	470.4	49266	26445.71	56.22	Si
SLU 61	1.39	-52430	-14795.75	85017	0	0	No, Rottura per schiacciamento
SLU 61	5.07	-31144	397.48	50501	26068.56	65.584	Si
SLU 55	1.39	-51516	-16017.66	83535	0	0	No, Rottura per schiacciamento
SLU 55	5.07	-30456	145.82	49385	26411.6	181.128	Si
SLU 60	1.39	-51241	-12724.8	83089	0	0	No, Rottura per schiacciamento
SLU 60	5.07	-30749	584.15	49861	26270.34	44.972	Si
SLU 84	1.39	-58708	-15711.54	95197	0	0	No, Rottura per schiacciamento
SLU 84	5.07	-35228	765.62	57123	23179.57	30.276	Si
SLU 56	1.39	-50734	-12787.24	82267	0	0	No, Rottura per schiacciamento
SLU 56	5.07	-30753	536.63	49867	26268.46	48.951	Si
SLU 59	1.39	-51477	-14803.59	83472	0	0	No, Rottura per schiacciamento
SLU 59	5.07	-30777	283.74	49906	26256.64	92.539	Si
SLU 54	1.39	-51169	-14691.63	82972	0	0	No, Rottura per schiacciamento
SLU 54	5.07	-30563	336.49	49559	26360.67	78.34	Si
SLU 57	1.39	-51923	-14858.19	84195	0	0	No, Rottura per schiacciamento
SLU 57	5.07	-31148	349.97	50507	26066.54	74.483	Si
SLU 62	1.39	-51995	-12891.36	84311	0	0	No, Rottura per schiacciamento
SLU 62	5.07	-31334	597.62	50809	25966.68	43.45	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLV 5	1.39	-50640	-25530.83	82114	36579.38	1.433	Si
SLV 5	5.07	-28462	-59.71	46152	39009.49	653.29	Si
SLV 4	1.39	-39818	-8201.33	64566	41357.22	5.043	Si
SLV 4	5.07	-25609	3672.13	41526	37234.74	10.14	Si
SLV 9	1.39	-47397	-23657.62	76856	38729.48	1.637	Si
SLV 9	5.07	-25881	-1801.25	41967	37424.6	20.777	Si
SLV 3	1.39	-39818	-8201.33	64566	41357.22	5.043	Si
SLV 3	5.07	-25609	3672.13	41526	37234.74	10.14	Si
SLV 14	1.39	-35749	-10964.19	57969	41382.71	3.774	Si
SLV 14	5.07	-19713	-2917.63	31965	32059.03	10.988	Si
SLV 1	1.39	-46559	-17208.21	75497	39185.2	2.277	Si
SLV 1	5.07	-28315	2887.49	45914	38929.91	13.482	Si
SLV 13	1.39	-35749	-10964.19	57969	41382.71	3.774	Si
SLV 13	5.07	-19713	-2917.63	31965	32059.03	10.988	Si
SLV 10	1.39	-47397	-23657.62	76856	38729.48	1.637	Si
SLV 10	5.07	-25881	-1801.25	41967	37424.6	20.777	Si
SLV 2	1.39	-46559	-17208.21	75497	39185.2	2.277	Si
SLV 2	5.07	-28315	2887.49	45914	38929.91	13.482	Si
SLV 6	1.39	-50640	-25530.83	82114	36579.38	1.433	Si
SLV 6	5.07	-28462	-59.71	46152	39009.49	653.29	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 52	1.39	-50762	-3133	-15851.1		82313	4.405	10833	6681			2.13	Si
SLU 52	5.07	-29871	-1943	132.34		48437	4.405	10833	6681			3.44	Si
SLU 65	1.39	-50546	-3134	-15841.32		81963	4.405	10833	6681			2.13	Si
SLU 65	5.07	-29785	-1947	158.71		48298	4.405	10833	6681			3.43	Si
SLU 47	1.39	-45776	-3090	-15258.66		74227	4.405	10833	6681			2.16	Si
SLU 47	5.07	-26871	-1963	-182.48		43572	4.405	10833	6681			3.4	Si
SLU 44	1.39	-45022	-3084	-15092.1		73005	4.405	10833	6681			2.17	Si
SLU 44	5.07	-26286	-1968	-195.95		42624	4.405	10833	6681			3.39	Si
SLU 55	1.39	-51516	-3138	-16017.66		83535	4.405	10833	6681			2.13	Si
SLU 55	5.07	-30456	-1938	145.82		49385	4.405	10833	6681			3.45	Si
SLU 31	1.39	-47811	-3096	-14111.65		77527	4.405	10833	6681			2.16	Si
SLU 31	5.07	-28378	-1967	553.97		46017	4.405	10833	6681			3.4	Si
SLU 34	1.39	-48565	-3101	-14278.21		78749	4.405	10833	6681			2.15	Si
SLU 34	5.07	-28963	-1962	567.44		46965	4.405	10833	6681			3.41	Si
SLU 68	1.39	-51300	-3139	-16007.88		83185	4.405	10833	6681			2.13	Si
SLU 68	5.07	-30370	-1941	172.19		49246	4.405	10833	6681			3.44	Si
SLU 73	1.39	-56287	-3182	-16600.33		91271	4.405	10833	6681			2.1	Si
SLU 73	5.07	-33370	-1922	487.01		54110	4.405	10833	6681			3.48	Si
SLU 76	1.39	-57040	-3187	-16766.89		92493	4.405	10833	6681			2.1	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 76	5.07	-33955	-1916	500.48		55058	4.405	10833	6681			3.49	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 7	1.39	-28170	12680	4492.11		45679	4.405	16250	10021			0.79	No, Vu<V
SLV 7	5.07	-19440	11936	2555.75		31523	4.405	14638	9027			0.76	No, Vu<V
SLV 11	1.39	-24928	13603	6365.31		40421	4.405	16250	10021			0.74	No, Vu<V
SLV 11	5.07	-16860	12088	814.21		27338	4.405	13801	8511			0.7	No, Vu<V
SLV 6	1.39	-50640	-14344	-25530.83		82114	4.405	16250	10021			0.7	No, Vu<V
SLV 6	5.07	-28462	-11709	-59.71		46152	4.405	16250	10021			0.86	No, Vu<V
SLV 9	1.39	-47397	-13421	-23657.62		76856	4.405	16250	10021			0.75	No, Vu<V
SLV 9	5.07	-25881	-11557	-1801.25		41967	4.405	16250	10021			0.87	No, Vu<V
SLV 12	1.39	-24928	13603	6365.31		40421	4.405	16250	10021			0.74	No, Vu<V
SLV 12	5.07	-16860	12088	814.21		27338	4.405	13801	8511			0.7	No, Vu<V
SLV 10	1.39	-47397	-13421	-23657.62		76856	4.405	16250	10021			0.75	No, Vu<V
SLV 10	5.07	-25881	-11557	-1801.25		41967	4.405	16250	10021			0.87	No, Vu<V
SLV 5	1.39	-50640	-14344	-25530.83		82114	4.405	16250	10021			0.7	No, Vu<V
SLV 5	5.07	-28462	-11709	-59.71		46152	4.405	16250	10021			0.86	No, Vu<V
SLV 2	1.39	-46559	-5962	-17208.21		75497	4.405	16250	10021			1.68	Si
SLV 2	5.07	-28315	-3611	2887.49		45914	4.405	16250	10021			2.78	Si
SLV 1	1.39	-46559	-5962	-17208.21		75497	4.405	16250	10021			1.68	Si
SLV 1	5.07	-28315	-3611	2887.49		45914	4.405	16250	10021			2.78	Si
SLV 8	1.39	-28170	12680	4492.11		45679	4.405	16250	10021			0.79	No, Vu<V
SLV 8	5.07	-19440	11936	2555.75		31523	4.405	14638	9027			0.76	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 12	143750	0.31	32156	-19831	213.23	1022.83	4.8	Si
SLV 11	143750	0.31	32156	-19831	213.23	1022.83	4.8	Si
SLV 8	143750	0.31	35956	-22174	213.23	1095.43	5.14	Si
SLV 7	143750	0.31	35956	-22174	213.23	1095.43	5.14	Si
SLV 16	143750	0.31	36938	-22779	213.23	1112.52	5.22	Si
SLV 15	143750	0.31	36938	-22779	213.23	1112.52	5.22	Si
SLV 14	143750	0.31	44836	-27650	213.23	1225.3	5.75	Si
SLV 13	143750	0.31	44836	-27650	213.23	1225.3	5.75	Si
SLV 3	143750	0.31	49605	-30591	213.23	1272.04	5.97	Si
SLV 4	143750	0.31	49605	-30591	213.23	1272.04	5.97	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 3.23 Wa = 0.03 Ta = 0.1615

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 10	-25881	-47397	-36	0.019	2954.5	0.967	0.2871	14.1455	No
SLV 9	-25881	-47397	-36	0.019	2954.5	0.967	0.2871	14.1455	No
SLV 4	-25609	-39818	32	0.019	2926.8	0.967	0.28977	14.15828	No
SLV 3	-25609	-39818	32	0.019	2926.8	0.967	0.28977	14.15828	No
SLV 8	-19440	-28170	37	0.019	2299.2	0.959	0.28956	14.1455	No
SLV 7	-19440	-28170	37	0.019	2299.2	0.959	0.28956	14.1455	No
SLV 6	-28462	-50640	-23	0.02	3217.2	0.97	0.29286	14.1455	No
SLV 5	-28462	-50640	-23	0.02	3217.2	0.97	0.29286	14.1455	No
SLV 13	-19713	-35749	-31	0.019	2326.9	0.959	0.29361	14.15828	No
SLV 14	-19713	-35749	-31	0.019	2326.9	0.959	0.29361	14.15828	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0	SLU 52	No
V_SLU	2.096	SLU 76	Si
PF_SLV	1.433	SLV 5	Si
V_SLV	0.699	SLV 5	No
PFFP_SLV	4.797	SLV 11	Si
R_SLV	0.02	SLV 9	No

Maschio 101

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.463	-3.359	-8.548	-3.359	L3	L4	1.085	0.28	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ_0	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 77	2.29	-19621	-3532.52	64584	2204.98	0.624	No, M>Mu
SLU 77	4.19	-14354	-518.09	47247	3270.36	6.312	Si
SLU 82	2.29	-20289	-3722.32	66784	1982.87	0.533	No, M>Mu
SLU 82	4.19	-14950	-569.17	49211	3210.75	5.641	Si
SLU 81	2.29	-19775	-3576.55	65091	2155.52	0.603	No, M>Mu
SLU 81	4.19	-14449	-494	47562	3261.86	6.603	Si
SLU 78	2.29	-20135	-3678.29	66276	2035.8	0.553	No, M>Mu
SLU 78	4.19	-14855	-593.26	48897	3221.35	5.43	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 84	2.29	-20558	-3766.58	67668	1888.03	0.501	No, M>Mu
SLU 84	4.19	-15173	-581.6	49943	3184.57	5.476	Si
SLU 75	2.29	-19866	-3634.02	65392	2125.66	0.585	No, M>Mu
SLU 75	4.19	-14633	-580.83	48165	3244.43	5.586	Si
SLU 76	2.29	-20086	-3711.79	66114	2052.51	0.553	No, M>Mu
SLU 76	4.19	-14859	-622.67	48909	3220.94	5.173	Si
SLU 83	2.29	-20043	-3620.82	65975	2066.74	0.571	No, M>Mu
SLU 83	4.19	-14671	-506.43	48293	3240.56	6.399	Si
SLU 80	2.29	-20011	-3658.88	65870	2077.44	0.568	No, M>Mu
SLU 80	4.19	-14747	-584.99	48541	3232.86	5.526	Si
SLU 73	2.29	-19817	-3667.52	65230	2141.78	0.584	No, M>Mu
SLU 73	4.19	-14636	-610.24	48178	3244.06	5.316	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 9	2.29	-21559	-3739.43	70963	4903.09	1.311	Si
SLV 9	4.19	-13444	-301.25	44253	4651.95	15.442	Si
SLV 14	2.29	-18685	-5220.61	61504	5034.25	0.964	No, M>Mu
SLV 14	4.19	-8530	1431.09	28078	3564.21	2.491	Si
SLV 16	2.29	-14296	-4892.47	47058	4768.76	0.975	No, M>Mu
SLV 16	4.19	-5773	1749.18	19001	2644.63	1.512	Si
SLV 12	2.29	-6930	-2645.62	22811	3057.7	1.156	Si
SLV 12	4.19	-4252	759.06	13997	2042.58	2.691	Si
SLV 11	2.29	-6930	-2645.62	22811	3057.7	1.156	Si
SLV 11	4.19	-4252	759.06	13997	2042.58	2.691	Si
SLV 2	2.29	-12267	105.14	40379	4455.69	42.377	Si
SLV 2	4.19	-13378	-2458.14	44037	4642.04	1.888	Si
SLV 1	2.29	-12267	105.14	40379	4455.69	42.377	Si
SLV 1	4.19	-13378	-2458.14	44037	4642.04	1.888	Si
SLV 10	2.29	-21559	-3739.43	70963	4903.09	1.311	Si
SLV 10	4.19	-13444	-301.25	44253	4651.95	15.442	Si
SLV 15	2.29	-14296	-4892.47	47058	4768.76	0.975	No, M>Mu
SLV 15	4.19	-5773	1749.18	19001	2644.63	1.512	Si
SLV 13	2.29	-18685	-5220.61	61504	5034.25	0.964	No, M>Mu
SLV 13	4.19	-8530	1431.09	28078	3564.21	2.491	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 83	2.29	-20043	-3371	-3620.82		65975	1.085	10833	3291			0.98	No, Vu<V
SLU 83	4.19	-14671	-1396	-506.43		48293	1.085	10833	3291			2.36	Si
SLU 82	2.29	-20289	-3404	-3722.32		67273	1.0771	10833	3267			0.96	No, Vu<V
SLU 82	4.19	-14950	-1326	-569.17		49211	1.085	10833	3291			2.48	Si
SLU 76	2.29	-20086	-3351	-3711.79		66847	1.0731	10833	3255			0.97	No, Vu<V
SLU 76	4.19	-14859	-1202	-622.67		48909	1.085	10833	3291			2.74	Si
SLU 80	2.29	-20011	-3342	-3658.88		66238	1.079	10833	3273			0.98	No, Vu<V
SLU 80	4.19	-14747	-1253	-584.99		48541	1.085	10833	3291			2.63	Si
SLU 77	2.29	-19621	-3284	-3532.52		64584	1.085	10833	3291			1	Si
SLU 77	4.19	-14354	-1315	-518.09		47247	1.085	10833	3291			2.5	Si
SLU 73	2.29	-19817	-3314	-3667.52		66003	1.0723	10833	3253			0.98	No, Vu<V
SLU 73	4.19	-14636	-1188	-610.24		48178	1.085	10833	3291			2.77	Si
SLU 75	2.29	-19866	-3317	-3634.02		65773	1.0787	10833	3272			0.99	No, Vu<V
SLU 75	4.19	-14633	-1244	-580.83		48165	1.085	10833	3291			2.64	Si
SLU 84	2.29	-20558	-3441	-3766.58		68118	1.0778	10833	3269			0.95	No, Vu<V
SLU 84	4.19	-15173	-1339	-581.6		49943	1.085	10833	3291			2.46	Si
SLU 81	2.29	-19775	-3334	-3576.55		65097	1.0849	10833	3291			0.99	No, Vu<V
SLU 81	4.19	-14449	-1383	-494		47562	1.085	10833	3291			2.38	Si
SLU 78	2.29	-20135	-3354	-3678.29		66617	1.0795	10833	3274			0.98	No, Vu<V
SLU 78	4.19	-14855	-1258	-593.26		48897	1.085	10833	3291			2.62	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 9	2.29	-21559	-4741	-3739.43		70963	1.085	16250	4937			1.04	Si
SLV 9	4.19	-13444	-395	-301.25		44253	1.085	16250	4937			12.51	Si
SLV 15	2.29	-14296	-7272	-4892.47		84978	0.6008	16250	2734			0.38	No, Vu<V
SLV 15	4.19	-5773	-2974	1749.18		28696	0.7185	14072	2831			0.95	No, Vu<V
SLV 12	2.29	-6930	-2934	-2645.62		51325	0.4822	16250	2194			0.75	No, Vu<V
SLV 12	4.19	-4252	-2380	759.06		13997	1.085	11133	3382			1.42	Si
SLV 13	2.29	-18685	-7814	-5220.61		84546	0.7893	16250	3591			0.46	No, Vu<V
SLV 13	4.19	-8530	-2379	1431.09		28078	1.085	13949	4238			1.78	Si
SLV 10	2.29	-21559	-4741	-3739.43		70963	1.085	16250	4937			1.04	Si
SLV 10	4.19	-13444	-395	-301.25		44253	1.085	16250	4937			12.51	Si
SLV 16	2.29	-14296	-7272	-4892.47		84978	0.6008	16250	2734			0.38	No, Vu<V
SLV 16	4.19	-5773	-2974	1749.18		28696	0.7185	14072	2831			0.95	No, Vu<V
SLV 3	2.29	-7879	3316	433.29		25933	1.085	13520	4107			1.24	Si
SLV 3	4.19	-10621	710	-2140.05		37078	1.023	15749	4511			6.35	Si
SLV 14	2.29	-18685	-7814	-5220.61		84546	0.7893	16250	3591			0.46	No, Vu<V
SLV 14	4.19	-8530	-2379	1431.09		28078	1.085	13949	4238			1.78	Si
SLV 11	2.29	-6930	-2934	-2645.62		51325	0.4822	16250	2194			0.75	No, Vu<V
SLV 11	4.19	-4252	-2380	759.06		13997	1.085	11133	3382			1.42	Si
SLV 4	2.29	-7879	3316	433.29		25933	1.085	13520	4107			1.24	Si
SLV 4	4.19	-10621	710	-2140.05		37078	1.023	15749	4511			6.35	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 8	143750	0.31	19428	-5902	98.19	694.93	7.08	Si
SLV 7	143750	0.31	19428	-5902	98.19	694.93	7.08	Si
SLV 4	143750	0.31	25135	-7636	98.19	849.13	8.65	Si
SLV 3	143750	0.31	25135	-7636	98.19	849.13	8.65	Si



Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 12	143750	0.31	26119	-7935	98.19	873.42	8.9	Si
SLV 11	143750	0.31	26119	-7935	98.19	873.42	8.9	Si
SLV 2	143750	0.31	36717	-11155	98.19	1092.37	11.13	Si
SLV 1	143750	0.31	36717	-11155	98.19	1092.37	11.13	Si
SLV 16	143750	0.31	47436	-14411	98.19	1234.29	12.57	Si
SLV 15	143750	0.31	47436	-14411	98.19	1234.29	12.57	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 3.23 Wa = 0.05 Ta = 0.0808

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 12	-3412	-3241	110	0.022	508.3	0.919	0.34383	6.97355	No
SLV 11	-3412	-3241	110	0.022	508.3	0.919	0.34383	6.97355	No
SLV 8	-5606	-3945	105	0.028	729.5	0.939	0.4335	6.97355	No
SLV 7	-5606	-3945	105	0.028	729.5	0.939	0.4335	6.97355	No
SLV 2	-12081	-12727	-39	0.038	1387.4	0.966	0.57198	8.20395	No
SLV 1	-12081	-12727	-39	0.038	1387.4	0.966	0.57198	8.20395	No
SLV 10	-9438	-15487	-100	0.032	1118.5	0.958	0.48755	6.97355	No
SLV 9	-9438	-15487	-100	0.032	1118.5	0.958	0.48755	6.97355	No
SLV 6	-11631	-16191	-106	0.033	1341.6	0.965	0.4929	6.97355	No
SLV 5	-11631	-16191	-106	0.033	1341.6	0.965	0.4929	6.97355	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0.501	SLU 84	No
V_SLU	0.95	SLU 84	No
PF_SLV	0.964	SLV 13	No
V_SLV	0.376	SLV 15	No
PFFP_SLV	7.077	SLV 7	Si
R_SLV	0.049	SLV 11	No

Maschio 102

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.sx	a.s.dx
-5.158	1.046	-5.158	5.811	L3	L4	4.765	0.14	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 80	1.39	-55615	19760.38	83368	0	0	No, Rottura per schiacciamento
SLU 80	5.07	-36824	134.81	55200	28280.92	209.78	Si
SLU 76	1.39	-54431	19514.54	81594	0	0	No, Rottura per schiacciamento
SLU 76	5.07	-35810	55.69	53680	29094.49	522.434	Si
SLU 77	1.39	-56468	19745.31	84647	0	0	No, Rottura per schiacciamento
SLU 77	5.07	-37338	-14.87	55971	27834.09	1000	Si
SLU 81	1.39	-56541	19524.95	84757	0	0	No, Rottura per schiacciamento
SLU 81	5.07	-36722	-304.31	55047	28366.89	93.217	Si
SLU 75	1.39	-55147	19541.34	82667	0	0	No, Rottura per schiacciamento
SLU 75	5.07	-36266	-77.35	54364	28739.48	371.553	Si
SLU 84	1.39	-57041	19980.1	85505	0	0	No, Rottura per schiacciamento
SLU 84	5.07	-37448	-142	56136	27735.33	195.321	Si
SLU 79	1.39	-56026	19634.79	83984	0	0	No, Rottura per schiacciamento
SLU 79	5.07	-36997	84.9	55459	28133.36	331.374	Si
SLU 74	1.39	-55558	19415.75	83283	0	0	No, Rottura per schiacciamento
SLU 74	5.07	-36439	-127.26	54623	28600.36	224.735	Si
SLU 83	1.39	-57451	19854.51	86121	0	0	No, Rottura per schiacciamento
SLU 83	5.07	-37621	-191.91	56395	27578.31	143.703	Si
SLU 82	1.39	-56131	19650.54	84141	0	0	No, Rottura per schiacciamento
SLU 82	5.07	-36549	-254.4	54788	28510.29	112.07	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 2	1.39	-33477	16016.96	50183	47001.59	2.934	Si
SLV 2	5.07	-21230	4832.22	31825	37406.96	7.741	Si
SLV 1	1.39	-33477	16016.96	50183	47001.59	2.934	Si
SLV 1	5.07	-21230	4832.22	31825	37406.96	7.741	Si
SLV 7	1.39	-49281	25306.36	73873	46425.83	1.835	Si
SLV 7	5.07	-30662	4335.96	45963	45572.04	10.51	Si
SLV 8	1.39	-49281	25306.36	73873	46425.83	1.835	Si
SLV 8	5.07	-30662	4335.96	45963	45572.04	10.51	Si
SLV 15	1.39	-42244	11319.8	63325	48485.42	4.283	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 15	5.07	-27867	-4550.57	41774	43695.01	9.602	Si
SLV 12	1.39	-49808	22091.7	74663	46155.07	2.089	Si
SLV 12	5.07	-31479	1060.77	47188	46034.77	43.398	Si
SLV 16	1.39	-42244	11319.8	63325	48485.42	4.283	Si
SLV 16	5.07	-27867	-4550.57	41774	43695.01	9.602	Si
SLV 11	1.39	-49808	22091.7	74663	46155.07	2.089	Si
SLV 11	5.07	-31479	1060.77	47188	46034.77	43.398	Si
SLV 3	1.39	-40487	22035.35	60691	48548.05	2.203	Si
SLV 3	5.07	-25143	6366.74	37690	41425.62	6.507	Si
SLV 4	1.39	-40487	22035.35	60691	48548.05	2.203	Si
SLV 4	5.07	-25143	6366.74	37690	41425.62	6.507	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 76	1.39	-54431	2635	19514.54		81594	4.765	10833	7227			2.74	Si
SLU 76	5.07	-35810	1517	55.69		53680	4.765	10833	7227			4.76	Si
SLU 81	1.39	-56541	2694	19524.95		84757	4.765	10833	7227			2.68	Si
SLU 81	5.07	-36722	1637	-304.31		55047	4.765	10833	7227			4.42	Si
SLU 83	1.39	-57451	2736	19854.51		86121	4.765	10833	7227			2.64	Si
SLU 83	5.07	-37621	1613	-191.91		56395	4.765	10833	7227			4.48	Si
SLU 75	1.39	-55147	2648	19541.34		82667	4.765	10833	7227			2.73	Si
SLU 75	5.07	-36266	1541	-77.35		54364	4.765	10833	7227			4.69	Si
SLU 79	1.39	-56026	2640	19634.79		83984	4.765	10833	7227			2.74	Si
SLU 79	5.07	-36997	1460	84.9		55459	4.765	10833	7227			4.95	Si
SLU 77	1.39	-56468	2668	19745.31		84647	4.765	10833	7227			2.71	Si
SLU 77	5.07	-37338	1497	-14.87		55971	4.765	10833	7227			4.83	Si
SLU 78	1.39	-56057	2690	19870.89		84031	4.765	10833	7227			2.69	Si
SLU 78	5.07	-37165	1517	35.05		55712	4.765	10833	7227			4.76	Si
SLU 84	1.39	-57041	2758	19980.1		85505	4.765	10833	7227			2.62	Si
SLU 84	5.07	-37448	1633	-142		56136	4.765	10833	7227			4.43	Si
SLU 82	1.39	-56131	2716	19650.54		84141	4.765	10833	7227			2.66	Si
SLU 82	5.07	-36549	1657	-254.4		54788	4.765	10833	7227			4.36	Si
SLU 80	1.39	-55615	2663	19760.38		83368	4.765	10833	7227			2.71	Si
SLU 80	5.07	-36824	1480	134.81		55200	4.765	10833	7227			4.88	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 15	1.39	-42244	9414	11319.8		63325	4.765	16250	10840			1.15	Si
SLV 15	5.07	-27867	9810	-4550.57		41774	4.765	16250	10840			1.11	Si
SLV 9	1.39	-26440	-10088	2030.4		39634	4.765	16250	10840			1.07	Si
SLV 9	5.07	-18436	-9189	-4054.31		27636	4.765	13861	9246			1.01	Si
SLV 8	1.39	-49281	13580	25306.36		73873	4.765	16250	10840			0.8	No, Vu<V
SLV 8	5.07	-30662	11117	4335.96		45963	4.765	16250	10840			0.98	No, Vu<V
SLV 5	1.39	-25913	-12355	5245.07		38844	4.765	16102	10742			0.87	No, Vu<V
SLV 5	5.07	-17619	-12382	-779.12		26411	4.765	13616	9083			0.73	No, Vu<V
SLV 11	1.39	-49808	15847	22091.7		74663	4.765	16250	10840			0.68	No, Vu<V
SLV 11	5.07	-31479	14310	1060.77		47188	4.765	16250	10840			0.76	No, Vu<V
SLV 12	1.39	-49808	15847	22091.7		74663	4.765	16250	10840			0.68	No, Vu<V
SLV 12	5.07	-31479	14310	1060.77		47188	4.765	16250	10840			0.76	No, Vu<V
SLV 16	1.39	-42244	9414	11319.8		63325	4.765	16250	10840			1.15	Si
SLV 16	5.07	-27867	9810	-4550.57		41774	4.765	16250	10840			1.11	Si
SLV 6	1.39	-25913	-12355	5245.07		38844	4.765	16102	10742			0.87	No, Vu<V
SLV 6	5.07	-17619	-12382	-779.12		26411	4.765	13616	9083			0.73	No, Vu<V
SLV 10	1.39	-26440	-10088	2030.4		39634	4.765	16250	10840			1.07	Si
SLV 10	5.07	-18436	-9189	-4054.31		27636	4.765	13861	9246			1.01	Si
SLV 7	1.39	-49281	13580	25306.36		73873	4.765	16250	10840			0.8	No, Vu<V
SLV 7	5.07	-30662	11117	4335.96		45963	4.765	16250	10840			0.98	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 6	143750	0.31	33198	-22146	230.65	1129.05	4.89	Si
SLV 5	143750	0.31	33198	-22146	230.65	1129.05	4.89	Si
SLV 10	143750	0.31	33366	-22258	230.65	1132.61	4.91	Si
SLV 9	143750	0.31	33366	-22258	230.65	1132.61	4.91	Si
SLV 2	143750	0.31	42328	-28237	230.65	1291.86	5.6	Si
SLV 1	143750	0.31	42328	-28237	230.65	1291.86	5.6	Si
SLV 13	143750	0.31	42887	-28610	230.65	1299.76	5.64	Si
SLV 14	143750	0.31	42887	-28610	230.65	1299.76	5.64	Si
SLV 4	143750	0.31	50321	-33569	230.65	1382.1	5.99	Si
SLV 3	143750	0.31	50321	-33569	230.65	1382.1	5.99	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 3.23 Wa = 0.03 Ta = 0.1615

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	α_{lim}	Verifica
SLV 11	-31479	-49808	-37	0.019	3550.5	0.97	0.28694	14.1455	No
SLV 12	-31479	-49808	-37	0.019	3550.5	0.97	0.28694	14.1455	No
SLV 16	-27867	-42244	-38	0.019	3182.8	0.967	0.28771	14.15828	No
SLV 15	-27867	-42244	-38	0.019	3182.8	0.967	0.28771	14.15828	No
SLV 2	-21230	-33477	41	0.019	2507.6	0.959	0.28894	14.15828	No
SLV 1	-21230	-33477	41	0.019	2507.6	0.959	0.28894	14.15828	No
SLV 5	-17619	-25913	40	0.019	2140.5	0.953	0.2916	14.1455	No
SLV 6	-17619	-25913	40	0.019	2140.5	0.953	0.2916	14.1455	No
SLV 8	-30662	-49281	-19	0.02	3467.3	0.97	0.29561	14.1455	No
SLV 7	-30662	-49281	-19	0.02	3467.3	0.97	0.29561	14.1455	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF SLU	0	SLU 74	No



Stato limite	Coeff.s.	Comb.	Verifica
V_SLU	2.62	SLU 84	Si
PF_SLV	1.835	SLV 7	Si
V_SLV	0.684	SLV 11	No
PFFP_SLV	4.895	SLV 5	Si
R_SLV	0.02	SLV 11	No

Maschio 103

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.158	5.951	-5.158	6.006	L3	L4	0.055	0.28	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 60	3.39	-1106	20.8	71810	3.6	0.173	No, M>Mu
SLU 60	4.19	-1351	39.97	0	0	0	No, e>l/2
SLU 54	3.39	-1102	20.91	71557	3.68	0.176	No, M>Mu
SLU 54	4.19	-1328	38.75	0	0	0	No, e>l/2
SLU 56	3.39	-1138	21.66	73928	2.89	0.134	No, M>Mu
SLU 56	4.19	-1358	39.32	0	0	0	No, e>l/2
SLU 53	3.39	-1105	20.97	71785	3.61	0.172	No, M>Mu
SLU 53	4.19	-1329	38.84	0	0	0	No, e>l/2
SLU 57	3.39	-1135	21.59	73700	2.97	0.138	No, M>Mu
SLU 57	4.19	-1356	39.23	0	0	0	No, e>l/2
SLU 55	3.39	-1094	20.75	71009	3.86	0.186	No, M>Mu
SLU 55	4.19	-1313	38.2	0	0	0	No, e>l/2
SLU 59	3.39	-1129	21.48	73304	3.11	0.145	No, M>Mu
SLU 59	4.19	-1343	38.74	0	0	0	No, e>l/2
SLU 1	3.39	-776	14.87	50420	8.14	0.547	No, M>Mu
SLU 1	4.19	-916	26.57	0	0	0	No, e>l/2
SLU 61	3.39	-1102	20.74	71582	3.68	0.177	No, M>Mu
SLU 61	4.19	-1349	39.88	0	0	0	No, e>l/2
SLU 58	3.39	-1132	21.55	73532	3.03	0.141	No, M>Mu
SLU 58	4.19	-1345	38.83	0	0	0	No, e>l/2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 6	3.39	-343	0.11	22292	7.72	69.929	Si
SLV 6	4.19	-474	20.49	0	0	0	No, e>l/2
SLV 14	3.39	-150	-12.04	0	0	0	No, e>l/2
SLV 14	4.19	-1284	49.31	0	0	0	No, e>l/2
SLV 9	3.39	-49	-12.62	0	0	0	No, e>l/2
SLV 9	4.19	-717	32.98	0	0	0	No, e>l/2
SLV 16	3.39	-532	1.19	34549	10.49	8.805	Si
SLV 16	4.19	-1527	50.82	0	0	0	No, e>l/2
SLV 5	3.39	-343	0.11	22292	7.72	69.929	Si
SLV 5	4.19	-474	20.49	0	0	0	No, e>l/2
SLV 4	3.39	-1514	43.64	0	0	0	No, e>l/2
SLV 4	4.19	-715	9.21	46403	12.19	1.323	Si
SLV 15	3.39	-532	1.19	34549	10.49	8.805	Si
SLV 15	4.19	-1527	50.82	0	0	0	No, e>l/2
SLV 10	3.39	-49	-12.62	0	0	0	No, e>l/2
SLV 10	4.19	-717	32.98	0	0	0	No, e>l/2
SLV 13	3.39	-150	-12.04	0	0	0	No, e>l/2
SLV 13	4.19	-1284	49.31	0	0	0	No, e>l/2
SLV 3	3.39	-1514	43.64	0	0	0	No, e>l/2
SLV 3	4.19	-715	9.21	46403	12.19	1.323	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 59	3.39	-1129	109	21.48		158655	0.0254	10833	77			0.71	No, Vu<V
SLU 59	4.19	-1343	-185	38.74		0	0	5556	0			0	No, Vu<V
SLU 53	3.39	-1105	106	20.97		154283	0.0256	10833	78			0.73	No, Vu<V
SLU 53	4.19	-1329	-185	38.84		0	0	5556	0			0	No, Vu<V
SLU 61	3.39	-1102	106	20.74		151028	0.0261	10833	79			0.75	No, Vu<V
SLU 61	4.19	-1349	-190	39.88		0	0	5556	0			0	No, Vu<V
SLU 54	3.39	-1102	106	20.91		153839	0.0256	10833	78			0.73	No, Vu<V
SLU 54	4.19	-1328	-185	38.75		0	0	5556	0			0	No, Vu<V
SLU 56	3.39	-1138	110	21.66		159849	0.0254	10833	77			0.7	No, Vu<V
SLU 56	4.19	-1358	-188	39.32		0	0	5556	0			0	No, Vu<V
SLU 60	3.39	-1106	106	20.8		151473	0.0261	10833	79			0.75	No, Vu<V
SLU 60	4.19	-1351	-191	39.97		0	0	5556	0			0	No, Vu<V
SLU 1	3.39	-776	75	14.87		110761	0.025	10833	76			1.01	Si
SLU 1	4.19	-916	-127	26.57		0	0	5556	0			0	No, Vu<V
SLU 57	3.39	-1135	109	21.59		159406	0.0254	10833	77			0.7	No, Vu<V
SLU 57	4.19	-1356	-187	39.23		0	0	5556	0			0	No, Vu<V
SLU 58	3.39	-1132	109	21.55		159099	0.0254	10833	77			0.71	No, Vu<V
SLU 58	4.19	-1345	-186	38.83		0	0	5556	0			0	No, Vu<V
SLU 55	3.39	-1094	105	20.75		152791	0.0256	10833	78			0.74	No, Vu<V
SLU 55	4.19	-1313	-182	38.2		0	0	5556	0			0	No, Vu<V



Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 7	3.39	-1615	191	44.22		0	0	8333	0			0	No, Vu<V
SLV 7	4.19	-1282	-93	25.54		201610	0.0227	16250	103			1.1	Si
SLV 5	3.39	-343	24	0.11		22292	0.055	12792	197			8.28	Si
SLV 5	4.19	-474	-134	20.49		0	0	8333	0			0	No, Vu<V
SLV 9	3.39	-49	-30	-12.62		0	0	8333	0			0	No, Vu<V
SLV 9	4.19	-717	-186	32.98		0	0	8333	0			0	No, Vu<V
SLV 4	3.39	-1514	195	43.64		0	0	8333	0			0	No, Vu<V
SLV 4	4.19	-715	-47	9.21		58240	0.0438	16250	199			4.28	Si
SLV 10	3.39	-49	-30	-12.62		0	0	8333	0			0	No, Vu<V
SLV 10	4.19	-717	-186	32.98		0	0	8333	0			0	No, Vu<V
SLV 2	3.39	-1132	145	30.4		0	0	8333	0			0	No, Vu<V
SLV 2	4.19	-472	-59	7.7		50199	0.0336	16250	153			2.61	Si
SLV 6	3.39	-343	24	0.11		22292	0.055	12792	197			8.28	Si
SLV 6	4.19	-474	-134	20.49		0	0	8333	0			0	No, Vu<V
SLV 1	3.39	-1132	145	30.4		0	0	8333	0			0	No, Vu<V
SLV 1	4.19	-472	-59	7.7		50199	0.0336	16250	153			2.61	Si
SLV 3	3.39	-1514	195	43.64		0	0	8333	0			0	No, Vu<V
SLV 3	4.19	-715	-47	9.21		58240	0.0438	16250	199			4.28	Si
SLV 8	3.39	-1615	191	44.22		0	0	8333	0			0	No, Vu<V
SLV 8	4.19	-1282	-93	25.54		201610	0.0227	16250	103			1.1	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 13	143750	0.31	0	-30	5.09	0	0	No, e>t/2
SLV 14	143750	0.31	0	-30	5.09	0	0	No, e>t/2
SLV 9	143750	0.31	3658	-56	5.09	7.65	1.5	Si
SLV 10	143750	0.31	3658	-56	5.09	7.65	1.5	Si
SLV 15	143750	0.31	12542	-193	5.09	24.26	4.76	Si
SLV 16	143750	0.31	12542	-193	5.09	24.26	4.76	Si
SLV 6	143750	0.31	15694	-242	5.09	29.49	5.79	Si
SLV 5	143750	0.31	15694	-242	5.09	29.49	5.79	Si
SLV 11	143750	0.31	38929	-600	5.09	57.19	11.23	Si
SLV 12	143750	0.31	38929	-600	5.09	57.19	11.23	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 3.23 Wa = 0.05 Ta = 0.0808

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 12	-456	-2308	-27	0	54.4	0.957	0	6.97355	No
SLV 9	-117	-927	24	0	20.2	0.904	0	6.97355	No
SLV 10	-117	-927	24	0	20.2	0.904	0	6.97355	No
SLV 11	-456	-2308	-27	0	54.4	0.957	0	6.97355	No
SLV 7	-521	-2326	-25	0	61.1	0.961	0	6.97355	No
SLV 5	-182	-945	26	0	26.7	0.921	0	6.97355	No
SLV 8	-521	-2326	-25	0	61.1	0.961	0	6.97355	No
SLV 6	-182	-945	26	0	26.7	0.921	0	6.97355	No
SLV 15	-262	-1804	-11	0.009	34.7	0.936	0.13735	8.20395	No
SLV 16	-262	-1804	-11	0.009	34.7	0.936	0.13735	8.20395	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0	SLU 1	No
V_SLU	0	SLU 1	No
PF_SLV	0	SLV 3	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 13	No
R_SLV	0	SLV 5	No

Maschio 104

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.158	6.506	-5.158	6.661	L3	L4	0.155	0.28	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ_0	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 55	3.39	-3886	-118.85	89544	0	0	No, Rottura per schiacciamento
SLU 55	4.19	-2377	83.72	54776	60.35	0.721	No, M>Mu
SLU 59	3.39	-3953	-118.53	91080	0	0	No, Rottura per schiacciamento
SLU 59	4.19	-2454	82.42	56549	58.16	0.706	No, M>Mu
SLU 56	3.39	-4003	-120.78	92228	0	0	No, Rottura per schiacciamento
SLU 56	4.19	-2475	84.33	57032	57.52	0.682	No, M>Mu
SLU 60	3.39	-4028	-127.62	92814	0	0	No, Rottura per schiacciamento



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 60	4.19	-2403	91.81	55360	59.66	0.65	No, M>Mu
SLU 42	3.39	-3839	-124.16	88459	0	0	No, Rottura per schiacciamento
SLU 42	4.19	-2269	90.16	52283	62.98	0.699	No, M>Mu
SLU 61	3.39	-4020	-127.48	92638	0	0	No, Rottura per schiacciamento
SLU 61	4.19	-2396	91.76	55218	59.83	0.652	No, M>Mu
SLU 62	3.39	-4090	-127.2	94233	0	0	No, Rottura per schiacciamento
SLU 62	4.19	-2475	90.48	57038	57.51	0.636	No, M>Mu
SLU 54	3.39	-3933	-121.06	90633	0	0	No, Rottura per schiacciamento
SLU 54	4.19	-2396	85.61	55212	59.84	0.699	No, M>Mu
SLU 57	3.39	-3995	-120.64	92052	0	0	No, Rottura per schiacciamento
SLU 57	4.19	-2469	84.27	56890	57.71	0.685	No, M>Mu
SLU 58	3.39	-3960	-118.66	91256	0	0	No, Rottura per schiacciamento
SLU 58	4.19	-2460	82.47	56691	57.98	0.703	No, M>Mu

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 2	3.39	-1223	99.94	0	0	0	No, e>l/2
SLV 2	4.19	-2672	-119.92	61573	102.74	0.857	No, M>Mu
SLV 14	3.39	-3835	-277.56	88354	82.29	0.296	No, M>Mu
SLV 14	4.19	-51	263.32	0	0	0	No, e>l/2
SLV 16	3.39	-4719	-283.08	108742	40.25	0.142	No, M>Mu
SLV 16	4.19	-940	249.6	0	0	0	No, e>l/2
SLV 15	3.39	-4719	-283.08	108742	40.25	0.142	No, M>Mu
SLV 15	4.19	-940	249.6	0	0	0	No, e>l/2
SLV 9	3.39	-1888	-139	43509	94.23	0.678	No, M>Mu
SLV 9	4.19	69	145.2	0	0	0	No, Trazione
SLV 13	3.39	-3835	-277.56	88354	82.29	0.296	No, M>Mu
SLV 13	4.19	-51	263.32	0	0	0	No, e>l/2
SLV 1	3.39	-1223	99.94	0	0	0	No, e>l/2
SLV 1	4.19	-2672	-119.92	61573	102.74	0.857	No, M>Mu
SLV 11	3.39	-4838	-157.39	111467	32.89	0.209	No, M>Mu
SLV 11	4.19	-2895	99.45	66709	101.88	1.024	Si
SLV 10	3.39	-1888	-139	43509	94.23	0.678	No, M>Mu
SLV 10	4.19	69	145.2	0	0	0	No, Trazione
SLV 12	3.39	-4838	-157.39	111467	32.89	0.209	No, M>Mu
SLV 12	4.19	-2895	99.45	66709	101.88	1.024	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 73	3.39	-4252	-453	-135.32		110822	0.137	10833	416			0.92	No, Vu<V
SLU 73	4.19	-2531	-445	97.56		77347	0.1169	10833	355			0.8	No, Vu<V
SLU 75	3.39	-4361	-458	-137.11		112713	0.1382	10833	419			0.92	No, Vu<V
SLU 75	4.19	-2623	-449	98.11		77877	0.1203	10833	365			0.81	No, Vu<V
SLU 83	3.39	-4517	-479	-143.26		117448	0.1374	10833	417			0.87	No, Vu<V
SLU 83	4.19	-2702	-470	102.98		81664	0.1182	10833	358			0.76	No, Vu<V
SLU 39	3.39	-3785	-421	-124.7		101138	0.1337	10833	405			0.96	No, Vu<V
SLU 39	4.19	-2202	-413	91.55		72969	0.1078	10833	327			0.79	No, Vu<V
SLU 76	3.39	-4313	-450	-134.91		111089	0.1387	10833	421			0.93	No, Vu<V
SLU 76	4.19	-2604	-441	96.22		76451	0.1217	10833	369			0.84	No, Vu<V
SLU 40	3.39	-3778	-420	-124.57		101004	0.1336	10833	405			0.96	No, Vu<V
SLU 40	4.19	-2196	-413	91.5		72953	0.1075	10833	326			0.79	No, Vu<V
SLU 82	3.39	-4448	-482	-143.53		117070	0.1357	10833	412			0.85	No, Vu<V
SLU 82	4.19	-2623	-473	104.26		82714	0.1133	10833	344			0.73	No, Vu<V
SLU 74	3.39	-4368	-458	-137.25		112852	0.1382	10833	419			0.91	No, Vu<V
SLU 74	4.19	-2629	-449	98.16		77928	0.1205	10833	366			0.81	No, Vu<V
SLU 84	3.39	-4509	-479	-143.12		117310	0.1373	10833	416			0.87	No, Vu<V
SLU 84	4.19	-2696	-470	102.92		81619	0.118	10833	358			0.76	No, Vu<V
SLU 81	3.39	-4455	-483	-143.67		117206	0.1358	10833	412			0.85	No, Vu<V
SLU 81	4.19	-2630	-474	104.31		82747	0.1135	10833	344			0.73	No, Vu<V

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 10	3.39	-1888	-699	-139		577935	0.0117	16250	53			0.08	No, Vu<V
SLV 10	4.19	69	-707	145.2		0	0	8333	0			0	No, Vu<V
SLV 15	3.39	-4719	-980	-283.08		320723	0.0526	16250	239			0.24	No, Vu<V
SLV 15	4.19	-940	-974	249.6		0	0	8333	0			0	No, Vu<V
SLV 1	3.39	-1223	370	99.94		0	0	8333	0			0	No, Vu<V
SLV 1	4.19	-2672	377	-119.92		97512	0.0979	16250	445			1.18	Si
SLV 9	3.39	-1888	-699	-139		577935	0.0117	16250	53			0.08	No, Vu<V
SLV 9	4.19	69	-707	145.2		0	0	8333	0			0	No, Vu<V
SLV 4	3.39	-2108	476	94.42		76726	0.0981	16250	446			0.94	No, Vu<V
SLV 4	4.19	-3562	490	-133.64		106063	0.1199	16250	546			1.11	Si
SLV 3	3.39	-2108	476	94.42		76726	0.0981	16250	446			0.94	No, Vu<V
SLV 3	4.19	-3562	490	-133.64		106063	0.1199	16250	546			1.11	Si
SLV 16	3.39	-4719	-980	-283.08		320723	0.0526	16250	239			0.24	No, Vu<V
SLV 16	4.19	-940	-974	249.6		0	0	8333	0			0	No, Vu<V
SLV 13	3.39	-3835	-1085	-277.56		892268	0.0153	16250	70			0.06	No, Vu<V
SLV 13	4.19	-51	-1087	263.32		0	0	8333	0			0	No, Vu<V
SLV 2	3.39	-1223	370	99.94		0	0	8333	0			0	No, Vu<V
SLV 2	4.19	-2672	377	-119.92		97512	0.0979	16250	445			1.18	Si
SLV 14	3.39	-3835	-1085	-277.56		892268	0.0153	16250	70			0.06	No, Vu<V
SLV 14	4.19	-51	-1087	263.32		0	0	8333	0			0	No, Vu<V



Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.05 denominatore 8 yM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	143750	0.31	17403	-755	14.35	90.68	6.32	Si
SLV 6	143750	0.31	17403	-755	14.35	90.68	6.32	Si
SLV 1	143750	0.31	17814	-773	14.35	92.46	6.44	Si
SLV 2	143750	0.31	17814	-773	14.35	92.46	6.44	Si
SLV 10	143750	0.31	31519	-1368	14.35	142.11	9.9	Si
SLV 9	143750	0.31	31519	-1368	14.35	142.11	9.9	Si
SLV 4	143750	0.31	32283	-1401	14.35	144.33	10.06	Si
SLV 3	143750	0.31	32283	-1401	14.35	144.33	10.06	Si
SLV 11	143750	0.31	79750	-3461	14.35	168.3	11.73	Si
SLV 12	143750	0.31	79750	-3461	14.35	168.3	11.73	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 3.23 Wa = 0.05 Ta = 0.0808

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 14	268	-3657	6	0	0	0	0	8.20395	No, Trazione
SLV 10	146	-1811	-9	0	0	0	0	6.97355	No, Trazione
SLV 13	268	-3657	6	0	0	0	0	8.20395	No, Trazione
SLV 9	146	-1811	-9	0	0	0	0	6.97355	No, Trazione
SLV 15	-129	-4654	13	0.01	37.8	0.889	0.16333	8.20395	No
SLV 16	-129	-4654	13	0.01	37.8	0.889	0.16333	8.20395	No
SLV 5	-355	-1226	-14	0.021	59.4	0.907	0.3376	6.97355	No
SLV 6	-355	-1226	-14	0.021	59.4	0.907	0.3376	6.97355	No
SLV 1	-1402	-1707	-11	0.034	165.3	0.96	0.5218	8.20395	No
SLV 2	-1402	-1707	-11	0.034	165.3	0.96	0.5218	8.20395	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0	SLU 31	No
V_SLU	0.726	SLU 82	No
PF_SLV	0	SLV 10	No
V_SLV	0	SLV 1	No
PFFP_SLV	6.318	SLV 5	Si
R_SLV	0	SLV 14	No

Maschio 105

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-6.008	-3.359	-6.463	-3.359	L3	L4	0.455	0.28	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, yM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 55	3.39	-10629	223.85	83434	0	0	No, Rottura per schiacciamento
SLU 55	4.19	-11310	-147.92	88776	0	0	No, Rottura per schiacciamento
SLU 63	3.39	-10876	199.17	85369	0	0	No, Rottura per schiacciamento
SLU 63	4.19	-11633	-106.68	91309	0	0	No, Rottura per schiacciamento
SLU 42	3.39	-10222	184	80234	34.96	0.19	No, M>Mu
SLU 42	4.19	-10984	-91.47	86213	0	0	No, Rottura per schiacciamento
SLU 61	3.39	-10710	197.35	84062	0	0	No, Rottura per schiacciamento
SLU 61	4.19	-11454	-105.06	89902	0	0	No, Rottura per schiacciamento
SLU 62	3.39	-10507	154.66	82475	0	0	No, Rottura per schiacciamento
SLU 62	4.19	-11294	-50.64	88646	0	0	No, Rottura per schiacciamento
SLU 58	3.39	-10182	151.49	79918	43.81	0.289	No, M>Mu
SLU 58	4.19	-10924	-56.13	85745	0	0	No, Rottura per schiacciamento
SLU 59	3.39	-10550	196	82811	0	0	No, Rottura per schiacciamento
SLU 59	4.19	-11263	-112.18	88407	0	0	No, Rottura per schiacciamento
SLU 57	3.39	-10632	197.62	83454	0	0	No, Rottura per schiacciamento
SLU 57	4.19	-11351	-114.47	89101	0	0	No, Rottura per schiacciamento
SLU 60	3.39	-10341	152.84	81169	8.37	0.055	No, M>Mu
SLU 60	4.19	-11114	-49.02	87240	0	0	No, Rottura per schiacciamento
SLU 56	3.39	-10263	153.11	80560	25.75	0.168	No, M>Mu



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 56	4.19	-11012	-58.42	86438	0	0	No, Rottura per schiacciamento

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 1	3.39	-7201	756.88	56521	880.4	1.163	Si
SLV 1	4.19	-8040	-1252.28	63110	884.39	0.706	No, M>Mu
SLV 14	3.39	-10228	-470.51	80283	798.01	1.696	Si
SLV 14	4.19	-10370	1070.79	81398	787.57	0.736	No, M>Mu
SLV 5	3.39	-10840	392.66	85089	748.78	1.907	Si
SLV 5	4.19	-11300	-546.74	88700	704.58	1.289	Si
SLV 16	3.39	-8017	-526.54	62925	884.56	1.68	Si
SLV 16	4.19	-8275	1162.96	64949	881.83	0.758	No, M>Mu
SLV 13	3.39	-10228	-470.51	80283	798.01	1.696	Si
SLV 13	4.19	-10370	1070.79	81398	787.57	0.736	No, M>Mu
SLV 3	3.39	-4989	700.86	39164	771.28	1.1	Si
SLV 3	4.19	-5945	-1160.1	46662	835.95	0.721	No, M>Mu
SLV 2	3.39	-7201	756.88	56521	880.4	1.163	Si
SLV 2	4.19	-8040	-1252.28	63110	884.39	0.706	No, M>Mu
SLV 6	3.39	-10840	392.66	85089	748.78	1.907	Si
SLV 6	4.19	-11300	-546.74	88700	704.58	1.289	Si
SLV 15	3.39	-8017	-526.54	62925	884.56	1.68	Si
SLV 15	4.19	-8275	1162.96	64949	881.83	0.758	No, M>Mu
SLV 4	3.39	-4989	700.86	39164	771.28	1.1	Si
SLV 4	4.19	-5945	-1160.1	46662	835.95	0.721	No, M>Mu

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 44	3.39	-9314	490	210.39		73110	0.455	10833	1380			2.82	Si
SLU 44	4.19	-9850	488	-155.34		77317	0.455	10833	1380			2.83	Si
SLU 47	3.39	-9481	495	212.2		74417	0.455	10833	1380			2.79	Si
SLU 47	4.19	-10029	493	-156.96		78724	0.455	10833	1380			2.8	Si
SLU 34	3.39	-9975	463	208.68		78298	0.455	10833	1380			2.98	Si
SLU 34	4.19	-10661	461	-132.71		83680	0.455	10833	1380			2.99	Si
SLU 65	3.39	-10385	510	223.26		81516	0.455	10833	1380			2.71	Si
SLU 65	4.19	-11032	508	-154.61		86593	0.455	10833	1380			2.72	Si
SLU 55	3.39	-10629	503	223.85		83434	0.455	10833	1380			2.74	Si
SLU 55	4.19	-11310	502	-147.92		88776	0.455	10833	1380			2.75	Si
SLU 31	3.39	-9809	459	206.87		76991	0.455	10833	1380			3.01	Si
SLU 31	4.19	-10482	457	-131.09		82273	0.455	10833	1380			3.02	Si
SLU 73	3.39	-11534	518	234.9		90533	0.455	10833	1380			2.66	Si
SLU 73	4.19	-12313	516	-145.57		96645	0.455	10833	1380			2.67	Si
SLU 52	3.39	-10463	499	222.03		82127	0.455	10833	1380			2.77	Si
SLU 52	4.19	-11131	497	-146.3		87370	0.455	10833	1380			2.78	Si
SLU 68	3.39	-10552	514	225.07		82823	0.455	10833	1380			2.68	Si
SLU 68	4.19	-11211	513	-156.23		88000	0.455	10833	1380			2.69	Si
SLU 76	3.39	-11700	523	236.72		91840	0.455	10833	1380			2.64	Si
SLU 76	4.19	-12492	521	-147.19		98052	0.455	10833	1380			2.65	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 5	3.39	-10840	1430	392.66		85089	0.455	16250	2070			1.45	Si
SLV 5	4.19	-11300	833	-546.74		88700	0.455	16250	2070			2.48	Si
SLV 1	3.39	-7201	2617	756.88		70042	0.3672	16250	1671			0.64	No, Vu<V
SLV 1	4.19	-8040	2440	-1252.28		133406	0.2152	16250	979			0.4	No, Vu<V
SLV 2	3.39	-7201	2617	756.88		70042	0.3672	16250	1671			0.64	No, Vu<V
SLV 2	4.19	-8040	2440	-1252.28		133406	0.2152	16250	979			0.4	No, Vu<V
SLV 6	3.39	-10840	1430	392.66		85089	0.455	16250	2070			1.45	Si
SLV 6	4.19	-11300	833	-546.74		88700	0.455	16250	2070			2.48	Si
SLV 16	3.39	-8017	-2157	-526.54		62925	0.455	16250	2070			0.96	No, Vu<V
SLV 16	4.19	-8275	-1980	1162.96		113287	0.2609	16250	1187			0.6	No, Vu<V
SLV 15	3.39	-8017	-2157	-526.54		62925	0.455	16250	2070			0.96	No, Vu<V
SLV 15	4.19	-8275	-1980	1162.96		113287	0.2609	16250	1187			0.6	No, Vu<V
SLV 4	3.39	-4989	2298	700.86		68248	0.2611	16250	1188			0.52	No, Vu<V
SLV 4	4.19	-5945	2479	-1160.1		218756	0.0971	16250	442			0.18	No, Vu<V
SLV 13	3.39	-10228	-1838	-470.51		80283	0.455	16250	2070			1.13	Si
SLV 13	4.19	-10370	-2019	1070.79		99365	0.3727	16250	1696			0.84	No, Vu<V
SLV 14	3.39	-10228	-1838	-470.51		80283	0.455	16250	2070			1.13	Si
SLV 14	4.19	-10370	-2019	1070.79		99365	0.3727	16250	1696			0.84	No, Vu<V
SLV 3	3.39	-4989	2298	700.86		68248	0.2611	16250	1188			0.52	No, Vu<V
SLV 3	4.19	-5945	2479	-1160.1		218756	0.0971	16250	442			0.18	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 8	143750	0.31	21194	-2700	41.18	312.45	7.59	Si
SLV 7	143750	0.31	21194	-2700	41.18	312.45	7.59	Si
SLV 11	143750	0.31	22066	-2811	41.18	322.49	7.83	Si
SLV 12	143750	0.31	22066	-2811	41.18	322.49	7.83	Si
SLV 3	143750	0.31	39783	-5068	41.18	478.54	11.62	Si
SLV 4	143750	0.31	39783	-5068	41.18	478.54	11.62	Si
SLV 16	143750	0.31	42689	-5439	41.18	495.39	12.03	Si
SLV 15	143750	0.31	42689	-5439	41.18	495.39	12.03	Si
SLV 10	143750	0.31	78084	-9948	41.18	502.7	12.21	Si
SLV 9	143750	0.31	78084	-9948	41.18	502.7	12.21	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 3.23 Wa = 0.05 Ta = 0.0808

Comb.	N top	N base	V orto	σ_0	M*	e*	a0*	aLim	Verifica
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Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 8	-1590	-2240	-60	0.016	229.2	0.923	0.25196	6.97355	No
SLV 7	-1590	-2240	-60	0.016	229.2	0.923	0.25196	6.97355	No
SLV 3	-2189	-5512	-47	0.026	289.5	0.937	0.40453	8.20395	No
SLV 4	-2189	-5512	-47	0.026	289.5	0.937	0.40453	8.20395	No
SLV 13	-2841	-6207	44	0.03	355.6	0.947	0.45474	8.20395	No
SLV 14	-2841	-6207	44	0.03	355.6	0.947	0.45474	8.20395	No
SLV 11	-1623	-1753	-42	0.025	232.4	0.924	0.39852	6.97355	No
SLV 12	-1623	-1753	-42	0.025	232.4	0.924	0.39852	6.97355	No
SLV 10	-3439	-9479	57	0.028	416.3	0.954	0.41971	6.97355	No
SLV 9	-3439	-9479	57	0.028	416.3	0.954	0.41971	6.97355	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0	SLU 31	No
V_SLU	2.638	SLU 76	Si
PF_SLV	0.706	SLV 1	No
V_SLV	0.178	SLV 3	No
PFFP_SLV	7.588	SLV 7	Si
R_SLV	0.036	SLV 7	No

Maschio 106

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-3.233	-3.359	-5.508	-3.359	L3	L4	2.275	0.28	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	$\tau 0$	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLU 73	3.39	-18560	8478.94	29137	13560.54	1.599	Si
SLU 73	4.19	-17449	4649.02	27392	13173.6	2.834	Si
SLU 52	3.39	-16385	7861.09	25721	12752.46	1.622	Si
SLU 52	4.19	-15289	4289.57	24002	12267.08	2.86	Si
SLU 68	3.39	-16598	7934.14	26057	12841.09	1.618	Si
SLU 68	4.19	-15487	4334.88	24312	12358.57	2.851	Si
SLU 65	3.39	-16254	7834.96	25517	12697.37	1.621	Si
SLU 65	4.19	-15143	4262.24	23772	12198.06	2.862	Si
SLU 47	3.39	-14423	7316.29	22642	11845.91	1.619	Si
SLU 47	4.19	-13328	3975.43	20923	11266.34	2.834	Si
SLU 2	3.39	-10838	6100.67	17013	9752.93	1.599	Si
SLU 2	4.19	-9991	3307.25	15684	9176.33	2.775	Si
SLU 5	3.39	-11182	6199.85	17554	9978.43	1.609	Si
SLU 5	4.19	-10335	3379.89	16225	9414.63	2.785	Si
SLU 76	3.39	-18904	8578.12	29677	13669.44	1.594	Si
SLU 76	4.19	-17793	4721.66	27932	13299.28	2.817	Si
SLU 55	3.39	-16729	7960.27	26262	12894.21	1.62	Si
SLU 55	4.19	-15634	4362.21	24543	12425.37	2.848	Si
SLU 44	3.39	-14079	7217.11	22101	11669.34	1.617	Si
SLU 44	4.19	-12983	3902.79	20382	11073.23	2.837	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLV 5	3.39	-19482	11623.71	30584	16613.69	1.429	Si
SLV 5	4.19	-25793	-1015.81	40492	19616.86	19.312	Si
SLV 6	3.39	-19482	11623.71	30584	16613.69	1.429	Si
SLV 6	4.19	-25793	-1015.81	40492	19616.86	19.312	Si
SLV 16	3.39	-10533	743.99	16536	10360.27	13.925	Si
SLV 16	4.19	-7648	9849.47	0	0	0	No, e>l/2
SLV 12	3.39	-9659	-2047.52	15163	9623.36	4.7	Si
SLV 12	4.19	-1644	6234.08	0	0	0	No, e>l/2
SLV 10	3.39	-17792	10309.36	27930	15611.87	1.514	Si
SLV 10	4.19	-24179	3041.02	37957	18959.53	6.235	Si
SLV 13	3.39	-12973	4451.06	20366	12297.44	2.763	Si
SLV 13	4.19	-14408	8891.55	22619	13355.53	1.502	Si
SLV 11	3.39	-9659	-2047.52	15163	9623.36	4.7	Si
SLV 11	4.19	-1644	6234.08	0	0	0	No, e>l/2
SLV 15	3.39	-10533	743.99	16536	10360.27	13.925	Si
SLV 15	4.19	-7648	9849.47	0	0	0	No, e>l/2
SLV 9	3.39	-17792	10309.36	27930	15611.87	1.514	Si
SLV 9	4.19	-24179	3041.02	37957	18959.53	6.235	Si
SLV 14	3.39	-12973	4451.06	20366	12297.44	2.763	Si
SLV 14	4.19	-14408	8891.55	22619	13355.53	1.502	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	$\sigma 0$	σN	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 76	3.39	-18904	4826	8578.12		32915	2.0512	9944	5711			1.18	Si
SLU 76	4.19	-17793	4826	4721.66		27932	2.275	9280	5911			1.22	Si
SLU 47	3.39	-14423	4181	7316.29		27244	1.8907	9188	4864			1.16	Si
SLU 47	4.19	-13328	4181	3975.43		20923	2.275	8345	5316			1.27	Si
SLU 68	3.39	-16598	4505	7934.14		29962	1.9785	9551	5291			1.17	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 68	4.19	-15487	4505	4334.88		24312	2.275	8797	5604			1.24	Si
SLU 65	3.39	-16254	4471	7834.96		29521	1.9664	9492	5226			1.17	Si
SLU 65	4.19	-15143	4471	4262.24		23772	2.275	8725	5558			1.24	Si
SLU 52	3.39	-16385	4469	7861.09		29656	1.9731	9510	5254			1.18	Si
SLU 52	4.19	-15289	4469	4289.57		24002	2.275	8756	5577			1.25	Si
SLU 44	3.39	-14079	4148	7217.11		26822	1.8746	9132	4793			1.16	Si
SLU 44	4.19	-12983	4148	3902.79		20382	2.275	8273	5270			1.27	Si
SLU 2	3.39	-10838	3496	6100.67		22454	1.7237	8549	4126			1.18	Si
SLU 2	4.19	-9991	3496	3307.25		15684	2.275	7647	4871			1.39	Si
SLU 5	3.39	-11182	3529	6199.85		22831	1.7491	8600	4212			1.19	Si
SLU 5	4.19	-10335	3529	3379.89		16225	2.275	7719	4917			1.39	Si
SLU 55	3.39	-16729	4503	7960.27		30099	1.985	9569	5318			1.18	Si
SLU 55	4.19	-15634	4503	4362.21		24543	2.275	8828	5623			1.25	Si
SLU 73	3.39	-18560	4793	8478.94		32462	2.042	9884	5651			1.18	Si
SLU 73	4.19	-17449	4793	4649.02		27392	2.275	9208	5865			1.22	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 5	3.39	-19482	9294	11623.71		42881	1.6226	16250	7383			0.79	No, Vu<V
SLV 5	4.19	-25793	11073	-1015.81		40492	2.275	16250	10351			0.93	No, Vu<V
SLV 1	3.39	-18607	15018	8832.2		33419	1.9885	15017	8361			0.56	No, Vu<V
SLV 1	4.19	-19790	15595	-4631.19		31067	2.275	14547	9266			0.59	No, Vu<V
SLV 11	3.39	-9659	-3838	-2047.52		15163	2.275	11366	7240			1.89	Si
SLV 11	4.19	-1644	-5618	6234.08		0	0	8333	0			0	No, Vu<V
SLV 12	3.39	-9659	-3838	-2047.52		15163	2.275	11366	7240			1.89	Si
SLV 12	4.19	-1644	-5618	6234.08		0	0	8333	0			0	No, Vu<V
SLV 6	3.39	-19482	9294	11623.71		42881	1.6226	16250	7383			0.79	No, Vu<V
SLV 6	4.19	-25793	11073	-1015.81		40492	2.275	16250	10351			0.93	No, Vu<V
SLV 3	3.39	-16167	13119	5125.13		25380	2.275	13409	8542			0.65	No, Vu<V
SLV 3	4.19	-13029	12638	-3673.27		20454	2.275	12424	7914			0.63	No, Vu<V
SLV 16	3.39	-10533	-9562	743.99		16536	2.275	11641	7415			0.78	No, Vu<V
SLV 16	4.19	-7648	-10139	9849.47		0	0	8333	0			0	No, Vu<V
SLV 2	3.39	-18607	15018	8832.2		33419	1.9885	15017	8361			0.56	No, Vu<V
SLV 2	4.19	-19790	15595	-4631.19		31067	2.275	14547	9266			0.59	No, Vu<V
SLV 4	3.39	-16167	13119	5125.13		25380	2.275	13409	8542			0.65	No, Vu<V
SLV 4	4.19	-13029	12638	-3673.27		20454	2.275	12424	7914			0.63	No, Vu<V
SLV 15	3.39	-10533	-9562	743.99		16536	2.275	11641	7415			0.78	No, Vu<V
SLV 15	4.19	-7648	-10139	9849.47		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 15	143750	0.31	18197	-11592	205.88	1381.14	6.71	Si
SLV 16	143750	0.31	18197	-11592	205.88	1381.14	6.71	Si
SLV 11	143750	0.31	18624	-11863	205.88	1407.71	6.84	Si
SLV 12	143750	0.31	18624	-11863	205.88	1407.71	6.84	Si
SLV 14	143750	0.31	19288	-12286	205.88	1448.56	7.04	Si
SLV 13	143750	0.31	19288	-12286	205.88	1448.56	7.04	Si
SLV 8	143750	0.31	20080	-12791	205.88	1496.44	7.27	Si
SLV 7	143750	0.31	20080	-12791	205.88	1496.44	7.27	Si
SLV 10	143750	0.31	22259	-14179	205.88	1623.45	7.89	Si
SLV 9	143750	0.31	22259	-14179	205.88	1623.45	7.89	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 3.23 Wa = 0.05 Ta = 0.0808

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 1	-14807	-9808	22	0.041	1839.1	0.948	0.63601	8.20395	No
SLV 2	-14807	-9808	22	0.041	1839.1	0.948	0.63601	8.20395	No
SLV 13	-14038	-13570	25	0.041	1761.1	0.946	0.63687	8.20395	No
SLV 14	-14038	-13570	25	0.041	1761.1	0.946	0.63687	8.20395	No
SLV 3	-10456	-5219	-31	0.042	1398.3	0.935	0.65296	8.20395	No
SLV 4	-10456	-5219	-31	0.042	1398.3	0.935	0.65296	8.20395	No
SLV 16	-9687	-8981	-27	0.043	1320.6	0.932	0.66333	8.20395	No
SLV 15	-9687	-8981	-27	0.043	1320.6	0.932	0.66333	8.20395	No
SLV 9	-19384	-17608	85	0.038	2304.1	0.958	0.57398	6.97355	No
SLV 10	-19384	-17608	85	0.038	2304.1	0.958	0.57398	6.97355	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.594	SLU 76	Si
V_SLU	1.156	SLU 44	Si
PF_SLV	0	SLV 11	No
V_SLV	0	SLV 11	No
PFFP_SLV	6.708	SLV 15	Si
R_SLV	0.078	SLV 1	No

Maschio 107

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.123	-3.359	-2.233	-3.359	L3	L4	2.11	0.28	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

Sismicad 12.19 - Licenza assegnata a Sidel ingegneria Srl - Via Isonzo, 13 - Villanova di Castenaso (BO)



fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 76	2.29	-15579	-8466.45	26369	11115.25	1.313	Si
SLU 76	4.19	-23371	-663.4	39559	12682.64	19.118	Si
SLU 13	2.29	-11305	-6930.26	19134	9124.86	1.317	Si
SLU 13	4.19	-17342	-730.13	29353	11702.9	16.028	Si
SLU 10	2.29	-11075	-6847.07	18745	8995.18	1.314	Si
SLU 10	4.19	-16971	-746.97	28725	11590.6	15.517	Si
SLU 5	2.29	-9781	-6396.02	16555	8221.58	1.285	Si
SLU 5	4.19	-14878	-884.98	25182	10843.65	12.253	Si
SLU 26	2.29	-11276	-6911.48	19087	9109.11	1.318	Si
SLU 26	4.19	-17220	-769.29	29146	11666.58	15.165	Si
SLU 2	2.29	-9551	-6312.84	16166	8076.56	1.279	Si
SLU 2	4.19	-14507	-901.81	24555	10691.29	11.855	Si
SLU 47	2.29	-12559	-7416.76	21258	9792.22	1.32	Si
SLU 47	4.19	-18565	-933.94	31423	12030.5	12.881	Si
SLU 44	2.29	-12330	-7333.58	20869	9675.19	1.319	Si
SLU 44	4.19	-18194	-950.78	30796	11938.1	12.556	Si
SLU 23	2.29	-11047	-6828.29	18698	8979.15	1.315	Si
SLU 23	4.19	-16849	-786.12	28519	11552.3	14.695	Si
SLU 73	2.29	-15349	-8383.27	25980	11028.63	1.316	Si
SLU 73	4.19	-23000	-680.24	38931	12668.38	18.623	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 3	2.29	-6014	3584.69	10179	5815.89	1.622	Si
SLV 3	4.19	-1541	-3359.35	0	0	0	No, $e > l/2$
SLV 15	2.29	-14108	-8976.01	23880	11975.33	1.334	Si
SLV 15	4.19	-24806	3545.42	41987	17177.49	4.845	Si
SLV 7	2.29	-4710	2911.99	7972	4644.52	1.595	Si
SLV 7	4.19	-2293	-833.64	3882	2342.67	2.81	Si
SLV 4	2.29	-6014	3584.69	10179	5815.89	1.622	Si
SLV 4	4.19	-1541	-3359.35	0	0	0	No, $e > l/2$
SLV 13	2.29	-17654	-12167.62	29882	14070.38	1.156	Si
SLV 13	4.19	-31141	3451.97	52709	18681.08	5.412	Si
SLV 9	2.29	-18958	-11494.92	32089	14748.36	1.283	Si
SLV 9	4.19	-30388	926.26	51436	18563.85	20.042	Si
SLV 10	2.29	-18958	-11494.92	32089	14748.36	1.283	Si
SLV 10	4.19	-30388	926.26	51436	18563.85	20.042	Si
SLV 16	2.29	-14108	-8976.01	23880	11975.33	1.334	Si
SLV 16	4.19	-24806	3545.42	41987	17177.49	4.845	Si
SLV 14	2.29	-17654	-12167.62	29882	14070.38	1.156	Si
SLV 14	4.19	-31141	3451.97	52709	18681.08	5.412	Si
SLV 8	2.29	-4710	2911.99	7972	4644.52	1.595	Si
SLV 8	4.19	-2293	-833.64	3882	2342.67	2.81	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 73	2.29	-15349	-9765	-8383.27		35912	1.5265	10344	4421			0.45	No, $V_u < V$
SLU 73	4.19	-23000	-9704	-680.24		38931	2.11	10746	6349			0.65	No, $V_u < V$
SLU 55	2.29	-14083	-9074	-7951		34186	1.4713	10114	4166			0.46	No, $V_u < V$
SLU 55	4.19	-21029	-9015	-779.09		35594	2.11	10301	6086			0.68	No, $V_u < V$
SLU 76	2.29	-15579	-9896	-8466.45		36256	1.5346	10390	4464			0.45	No, $V_u < V$
SLU 76	4.19	-23371	-9834	-663.4		39559	2.11	10830	6398			0.65	No, $V_u < V$
SLU 13	2.29	-11305	-7739	-6930.26		30451	1.3259	9616	3570			0.46	No, $V_u < V$
SLU 13	4.19	-17342	-7684	-730.13		29353	2.11	9469	5594			0.73	No, $V_u < V$
SLU 34	2.29	-12800	-8561	-7445.72		32195	1.4199	9848	3916			0.46	No, $V_u < V$
SLU 34	4.19	-19684	-8504	-614.44		33317	2.11	9998	5907			0.69	No, $V_u < V$
SLU 2	2.29	-9551	-6722	-6312.84		28856	1.1821	9403	3112			0.46	No, $V_u < V$
SLU 2	4.19	-14507	-6670	-901.81		24555	2.11	8829	5216			0.78	No, $V_u < V$
SLU 68	2.29	-14055	-9010	-7932.22		34103	1.4719	10103	4164			0.46	No, $V_u < V$
SLU 68	4.19	-20907	-8951	-818.25		35388	2.11	10274	6070			0.68	No, $V_u < V$
SLU 10	2.29	-11075	-7608	-6847.07		30188	1.3102	9581	3515			0.46	No, $V_u < V$
SLU 10	4.19	-16971	-7553	-746.97		28725	2.11	9386	5545			0.73	No, $V_u < V$
SLU 52	2.29	-13853	-8943	-7867.81		33860	1.4612	10070	4120			0.46	No, $V_u < V$
SLU 52	4.19	-20658	-8884	-795.93		34967	2.11	10218	6037			0.68	No, $V_u < V$
SLU 31	2.29	-12570	-8430	-7362.53		31888	1.4079	9807	3866			0.46	No, $V_u < V$
SLU 31	4.19	-19313	-8373	-631.28		32690	2.11	9914	5857			0.7	No, $V_u < V$

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 3	2.29	-6014	5069	3584.69		15600	1.3767	11453	4415			0.87	No, $V_u < V$
SLV 3	4.19	-1541	4694	-3359.35		0	0	8333	0			0	No, $V_u < V$
SLV 6	2.29	-16530	-8302	-7726.71		33492	1.7627	15032	7419			0.89	No, $V_u < V$
SLV 6	4.19	-23409	-6734	-1145.17		39622	2.11	16250	9601			1.43	Si
SLV 4	2.29	-6014	5069	3584.69		15600	1.3767	11453	4415			0.87	No, $V_u < V$
SLV 4	4.19	-1541	4694	-3359.35		0	0	8333	0			0	No, $V_u < V$
SLV 14	2.29	-17654	-16825	-12167.62		57457	1.0974	16250	4993			0.3	No, $V_u < V$
SLV 14	4.19	-31141	-16414	3451.97		52709	2.11	16250	9601			0.58	No, $V_u < V$
SLV 15	2.29	-14108	-13683	-8976.01		40106	1.2563	16250	5716			0.42	No, $V_u < V$
SLV 15	4.19	-24806	-14190	3545.42		41987	2.11	16250	9601			0.68	No, $V_u < V$
SLV 9	2.29	-18958	-13927	-11494.92		50302	1.346	16250	6124			0.44	No, $V_u < V$
SLV 9	4.19	-30388	-12399	926.26		51436	2.11	16250	9601			0.77	No, $V_u < V$
SLV 13	2.29	-17654	-16825	-12167.62		57457	1.0974	16250	4993			0.3	No, $V_u < V$
SLV 13	4.19	-31141	-16414	3451.97		52709	2.11	16250	9601			0.58	No, $V_u < V$
SLV 16	2.29	-14108	-13683	-8976.01		40106	1.2563	16250	5716			0.42	No, $V_u < V$
SLV 16	4.19	-24806	-14190	3545.42		41987	2.11	16250	9601			0.68	No, $V_u < V$



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 10	2.29	-18958	-13927	-11494.92		50302	1.346	16250	6124			0.44	No, Vu<V
SLV 10	4.19	-30388	-12399	926.26		51436	2.11	16250	9601			0.77	No, Vu<V
SLV 5	2.29	-16530	-8302	-7726.71		33492	1.7627	15032	7419			0.89	No, Vu<V
SLV 5	4.19	-23409	-6734	-1145.17		39622	2.11	16250	9601			1.43	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 7	143750	0.31	2991	-1767	190.95	241.34	1.26	Si
SLV 8	143750	0.31	2991	-1767	190.95	241.34	1.26	Si
SLV 3	143750	0.31	6806	-4021	190.95	531.6	2.78	Si
SLV 4	143750	0.31	6806	-4021	190.95	531.6	2.78	Si
SLV 12	143750	0.31	10335	-6106	190.95	782.55	4.1	Si
SLV 11	143750	0.31	10335	-6106	190.95	782.55	4.1	Si
SLV 2	143750	0.31	17421	-10292	190.95	1235.47	6.47	Si
SLV 1	143750	0.31	17421	-10292	190.95	1235.47	6.47	Si
SLV 15	143750	0.31	31287	-18484	190.95	1925.19	10.08	Si
SLV 16	143750	0.31	31287	-18484	190.95	1925.19	10.08	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 3.23 Wa = 0.05 Ta = 0.0808

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 8	-3522	627	-93	0	0	0	0	6.97355	No, Trazione
SLV 7	-3522	627	-93	0	0	0	0	6.97355	No, Trazione
SLV 15	-19241	-13495	-103	0.037	2265.4	0.96	0.55595	8.20395	No
SLV 16	-19241	-13495	-103	0.037	2265.4	0.96	0.55595	8.20395	No
SLV 1	-9256	-7716	86	0.037	1252.3	0.933	0.57728	8.20395	No
SLV 2	-9256	-7716	86	0.037	1252.3	0.933	0.57728	8.20395	No
SLV 14	-24322	-19201	-40	0.039	2782.3	0.967	0.59144	8.20395	No
SLV 13	-24322	-19201	-40	0.039	2782.3	0.967	0.59144	8.20395	No
SLV 12	-8041	-2818	-131	0.032	1129.7	0.927	0.50757	6.97355	No
SLV 11	-8041	-2818	-131	0.032	1129.7	0.927	0.50757	6.97355	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.279	SLU 2	Si
V_SLU	0.451	SLU 76	No
PF_SLV	0	SLV 3	No
V_SLV	0	SLV 3	No
PFFP_SLV	1.264	SLV 7	Si
R_SLV	0	SLV 8	No

Maschio 108

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-3.013	5.951	-5.158	5.951	L3	L4	2.145	0.28	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 75	2.29	-20980	3693.22	34933	12852.01	3.48	Si
SLU 75	4.19	-24684	4449.99	41099	13116.63	2.948	Si
SLU 78	2.29	-21453	3687.92	35718	12919.17	3.503	Si
SLU 78	4.19	-25251	4610.02	42044	13104.05	2.843	Si
SLU 82	2.29	-21178	3795.08	35262	12881.33	3.394	Si
SLU 82	4.19	-24999	4399.11	41623	13111.4	2.98	Si
SLU 74	2.29	-21043	3741.66	35037	12861.52	3.437	Si
SLU 74	4.19	-24834	4372.92	41348	13114.69	2.999	Si
SLU 77	2.29	-21515	3736.36	35823	12927.38	3.46	Si
SLU 77	4.19	-25401	4532.96	42293	13098.38	2.89	Si
SLU 80	2.29	-21301	3654.63	35466	12898.68	3.529	Si
SLU 80	4.19	-25071	4581.62	41743	13109.58	2.861	Si
SLU 84	2.29	-21650	3789.78	36048	12944.41	3.416	Si
SLU 84	4.19	-25566	4559.14	42568	13090.98	2.871	Si
SLU 79	2.29	-21364	3703.07	35571	12907.31	3.486	Si
SLU 79	4.19	-25221	4504.56	41993	13105.09	2.909	Si
SLU 83	2.29	-21713	3838.22	36152	12952.07	3.374	Si
SLU 83	4.19	-25716	4482.08	42817	13083.25	2.919	Si
SLU 76	2.29	-20787	3627.64	34611	12821.67	3.534	Si
SLU 76	4.19	-24404	4472.97	40633	13117.64	2.933	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 6	2.29	-891	5393.72	0	0	0	No, e>l/2
SLV 6	4.19	-7319	2233.81	12186	7066.51	3.163	Si
SLV 14	2.29	-14261	-678.05	23745	12322.89	18.174	Si
SLV 14	4.19	-10486	7762.82	17459	9639.06	1.242	Si
SLV 5	2.29	-891	5393.72	0	0	0	No, e>l/2



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 5	4.19	-7319	2233.81	12186	7066.51	3.163	Si
SLV 10	2.29	-3066	3110.45	5105	3150.84	1.013	Si
SLV 10	4.19	-5415	4989.29	9017	5379.49	1.078	Si
SLV 16	2.29	-21682	-1642.05	36101	16383.72	9.978	Si
SLV 16	4.19	-16735	7384.65	27864	13855.26	1.876	Si
SLV 2	2.29	-7012	6932.86	11674	6801.46	0.981	No, M>Mu
SLV 2	4.19	-16830	-1422.1	28022	13910.52	9.782	Si
SLV 15	2.29	-21682	-1642.05	36101	16383.72	9.978	Si
SLV 15	4.19	-16735	7384.65	27864	13855.26	1.876	Si
SLV 1	2.29	-7012	6932.86	11674	6801.46	0.981	No, M>Mu
SLV 1	4.19	-16830	-1422.1	28022	13910.52	9.782	Si
SLV 9	2.29	-3066	3110.45	5105	3150.84	1.013	Si
SLV 9	4.19	-5415	4989.29	9017	5379.49	1.078	Si
SLV 13	2.29	-14261	-678.05	23745	12322.89	18.174	Si
SLV 13	4.19	-10486	7762.82	17459	9639.06	1.242	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 61	2.29	-19204	3022	3500.34		31974	2.145	9819	5897			1.95	Si
SLU 61	4.19	-22512	3018	4024.33		37483	2.145	10553	6338			2.1	Si
SLU 74	2.29	-21043	3257	3741.66		35037	2.145	10227	6142			1.89	Si
SLU 74	4.19	-24834	3254	4372.92		41348	2.145	10833	6507			2	Si
SLU 60	2.29	-19267	3136	3548.78		32079	2.145	9833	5906			1.88	Si
SLU 60	4.19	-22662	3133	3947.26		37732	2.145	10586	6358			2.03	Si
SLU 82	2.29	-21178	3289	3795.08		35262	2.145	10257	6160			1.87	Si
SLU 82	4.19	-24999	3285	4399.11		41623	2.145	10833	6507			1.98	Si
SLU 81	2.29	-21241	3403	3843.53		35366	2.145	10271	6169			1.81	Si
SLU 81	4.19	-25148	3400	4322.04		41872	2.145	10833	6507			1.91	Si
SLU 79	2.29	-21364	3204	3703.07		35571	2.145	10298	6185			1.93	Si
SLU 79	4.19	-25221	3202	4504.56		41993	2.145	10833	6507			2.03	Si
SLU 83	2.29	-21713	3370	3838.22		36152	2.145	10376	6232			1.85	Si
SLU 83	4.19	-25716	3367	4482.08		42817	2.145	10833	6507			1.93	Si
SLU 84	2.29	-21650	3256	3789.78		36048	2.145	10362	6223			1.91	Si
SLU 84	4.19	-25566	3252	4559.14		42568	2.145	10833	6507			2	Si
SLU 62	2.29	-19739	3103	3543.48		32865	2.145	9938	5968			1.92	Si
SLU 62	4.19	-23229	3100	4107.29		38677	2.145	10712	6434			2.08	Si
SLU 77	2.29	-21515	3223	3736.36		35823	2.145	10332	6205			1.93	Si
SLU 77	4.19	-25401	3221	4532.96		42293	2.145	10833	6507			2.02	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 10	2.29	-3066	-1806	3110.45		62949	0.1739	16250	791			0.44	No, Vu<V
SLV 10	4.19	-5415	-472	4989.29		42639	0.4536	16250	2064			4.37	Si
SLV 2	2.29	-7012	10349	6932.86		99690	0.2512	16250	1143			0.11	No, Vu<V
SLV 2	4.19	-16830	10527	-1422.1		28022	2.145	13938	8371			0.8	No, Vu<V
SLV 14	2.29	-14261	-6669	-678.05		23745	2.145	13082	7857			1.18	Si
SLV 14	4.19	-10486	-6086	7762.82		37579	0.9965	15849	4422			0.73	No, Vu<V
SLV 6	2.29	-891	3300	5393.72		0	0	8333	0			0	No, Vu<V
SLV 6	4.19	-7319	4511	2233.81		12186	2.145	10770	6469			1.43	Si
SLV 3	2.29	-14433	11286	5968.85		26075	1.9768	13548	7499			0.66	No, Vu<V
SLV 3	4.19	-23079	10699	-1800.27		38427	2.145	16019	9621			0.9	No, Vu<V
SLV 1	2.29	-7012	10349	6932.86		99690	0.2512	16250	1143			0.11	No, Vu<V
SLV 1	4.19	-16830	10527	-1422.1		28022	2.145	13938	8371			0.8	No, Vu<V
SLV 9	2.29	-3066	-1806	3110.45		62949	0.1739	16250	791			0.44	No, Vu<V
SLV 9	4.19	-5415	-472	4989.29		42639	0.4536	16250	2064			4.37	Si
SLV 13	2.29	-14261	-6669	-678.05		23745	2.145	13082	7857			1.18	Si
SLV 13	4.19	-10486	-6086	7762.82		37579	0.9965	15849	4422			0.73	No, Vu<V
SLV 4	2.29	-14433	11286	5968.85		26075	1.9768	13548	7499			0.66	No, Vu<V
SLV 4	4.19	-23079	10699	-1800.27		38427	2.145	16019	9621			0.9	No, Vu<V
SLV 5	2.29	-891	3300	5393.72		0	0	8333	0			0	No, Vu<V
SLV 5	4.19	-7319	4511	2233.81		12186	2.145	10770	6469			1.43	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 9	143750	0.31	5831	-3502	194.12	466.93	2.41	Si
SLV 10	143750	0.31	5831	-3502	194.12	466.93	2.41	Si
SLV 5	143750	0.31	7298	-4383	194.12	577.01	2.97	Si
SLV 6	143750	0.31	7298	-4383	194.12	577.01	2.97	Si
SLV 13	143750	0.31	18342	-11016	194.12	1310.77	6.75	Si
SLV 14	143750	0.31	18342	-11016	194.12	1310.77	6.75	Si
SLV 2	143750	0.31	23232	-13953	194.12	1582.01	8.15	Si
SLV 1	143750	0.31	23232	-13953	194.12	1582.01	8.15	Si
SLV 15	143750	0.31	30533	-18338	194.12	1925.78	9.92	Si
SLV 16	143750	0.31	30533	-18338	194.12	1925.78	9.92	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 3.23 Wa = 0.05 Ta = 0.0808

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 9	-6673	872	95	0	0	0	0	6.97355	No, Trazione
SLV 5	-7951	2015	129	0	0	0	0	6.97355	No, Trazione
SLV 10	-6673	872	95	0	0	0	0	6.97355	No, Trazione
SLV 6	-7951	2015	129	0	0	0	0	6.97355	No, Trazione
SLV 2	-14250	-5370	93	0.037	1763.4	0.949	0.56673	8.20395	No
SLV 1	-14250	-5370	93	0.037	1763.4	0.949	0.56673	8.20395	No
SLV 16	-14113	-16654	-87	0.037	1749.5	0.949	0.57196	8.20395	No
SLV 15	-14113	-16654	-87	0.037	1749.5	0.949	0.57196	8.20395	No
SLV 3	-18372	-12843	27	0.04	2182.1	0.958	0.61355	8.20395	No
SLV 4	-18372	-12843	27	0.04	2182.1	0.958	0.61355	8.20395	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.843	SLU 78	Si
V_SLU	1.813	SLU 81	Si
PF_SLV	0	SLV 5	No
V_SLV	0	SLV 5	No
PFFP_SLV	2.405	SLV 9	Si
R_SLV	0	SLV 10	No

Maschio 109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.123	5.951	-2.013	5.951	L3	L4	1.89	0.28	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 79	2.29	-15514	-5048.19	29316	9384.47	1.859	Si
SLU 79	4.19	-22427	1227.51	42379	10167.5	8.283	Si
SLU 78	2.29	-15220	-4982.96	28760	9304.7	1.867	Si
SLU 78	4.19	-22223	1316.47	41994	10174.38	7.729	Si
SLU 74	2.29	-15305	-4920.13	28922	9328.32	1.896	Si
SLU 74	4.19	-22011	1140.88	41593	10179.63	8.923	Si
SLU 83	2.29	-15740	-5058.75	29742	9443.12	1.867	Si
SLU 83	4.19	-22775	1224.1	43037	10151.51	8.293	Si
SLU 84	2.29	-15331	-4967.94	28970	9335.35	1.879	Si
SLU 84	4.19	-22417	1315.14	42360	10167.89	7.731	Si
SLU 81	2.29	-15417	-4905.11	29132	9358.55	1.908	Si
SLU 81	4.19	-22204	1139.55	41958	10174.93	8.929	Si
SLU 76	2.29	-14510	-4743.21	27419	9096.63	1.918	Si
SLU 76	4.19	-21259	1294.7	40171	10182.3	7.865	Si
SLU 75	2.29	-14897	-4829.32	28150	9212.77	1.908	Si
SLU 75	4.19	-21653	1231.93	40916	10183.99	8.267	Si
SLU 80	2.29	-15105	-4957.38	28544	9272.65	1.87	Si
SLU 80	4.19	-22068	1318.56	41702	10178.4	7.719	Si
SLU 77	2.29	-15628	-5073.77	29532	9414.47	1.856	Si
SLU 77	4.19	-22582	1225.43	42672	10161.04	8.292	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 2	2.29	-4467	3118.3	8441	3929.48	1.26	Si
SLV 2	4.19	-1070	-2177.61	0	0	0	No, e>l/2
SLV 16	2.29	-16586	-9859.62	31342	11653.44	1.182	Si
SLV 16	4.19	-28654	3539.64	54147	15078.79	4.26	Si
SLV 13	2.29	-12313	-6809.02	23268	9420.21	1.383	Si
SLV 13	4.19	-22391	3133.04	42311	13832.39	4.415	Si
SLV 6	2.29	-2228	3202.77	0	0	0	No, e>l/2
SLV 6	4.19	-1225	-793.25	2315	1135.68	1.432	Si
SLV 1	2.29	-4467	3118.3	8441	3929.48	1.26	Si
SLV 1	4.19	-1070	-2177.61	0	0	0	No, e>l/2
SLV 11	2.29	-18825	-9944.09	35572	12610.48	1.268	Si
SLV 11	4.19	-28500	2155.28	53854	15061.79	6.988	Si
SLV 12	2.29	-18825	-9944.09	35572	12610.48	1.268	Si
SLV 12	4.19	-28500	2155.28	53854	15061.79	6.988	Si
SLV 5	2.29	-2228	3202.77	0	0	0	No, e>l/2
SLV 5	4.19	-1225	-793.25	2315	1135.68	1.432	Si
SLV 15	2.29	-16586	-9859.62	31342	11653.44	1.182	Si
SLV 15	4.19	-28654	3539.64	54147	15078.79	4.26	Si
SLV 14	2.29	-12313	-6809.02	23268	9420.21	1.383	Si
SLV 14	4.19	-22391	3133.04	42311	13832.39	4.415	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 76	2.29	-14510	-7656	-4743.21		27947	1.8543	9282	4819			0.63	No, Vu<V
SLU 76	4.19	-21259	-7637	1294.7		40171	1.89	10833	5733			0.75	No, Vu<V
SLU 79	2.29	-15514	-7862	-5048.19		29808	1.8588	9530	4960			0.63	No, Vu<V
SLU 79	4.19	-22427	-7846	1227.51		42379	1.89	10833	5733			0.73	No, Vu<V
SLU 83	2.29	-15740	-7927	-5058.75		30048	1.8708	9562	5009			0.63	No, Vu<V
SLU 83	4.19	-22775	-7910	1224.1		43037	1.89	10833	5733			0.72	No, Vu<V
SLU 73	2.29	-14188	-7407	-4589.57		27176	1.8645	9179	4792			0.65	No, Vu<V
SLU 73	4.19	-20688	-7388	1210.16		39093	1.89	10768	5698			0.77	No, Vu<V
SLU 84	2.29	-15331	-7952	-4967.94		29392	1.8629	9475	4942			0.62	No, Vu<V
SLU 84	4.19	-22417	-7934	1315.14		42360	1.89	10833	5733			0.72	No, Vu<V
SLU 77	2.29	-15628	-7895	-5073.77		29991	1.861	9554	4979			0.63	No, Vu<V
SLU 77	4.19	-22582	-7878	1225.43		42672	1.89	10833	5733			0.73	No, Vu<V
SLU 78	2.29	-15220	-7920	-4982.96		29337	1.8528	9467	4911			0.62	No, Vu<V
SLU 78	4.19	-22223	-7902	1316.47		41994	1.89	10833	5733			0.73	No, Vu<V
SLU 82	2.29	-15008	-7704	-4814.3		28623	1.8727	9372	4914			0.64	No, Vu<V
SLU 82	4.19	-21846	-7686	1230.59		41281	1.89	10833	5733			0.75	No, Vu<V
SLU 75	2.29	-14897	-7671	-4829.32		28566	1.8625	9364	4883			0.64	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 75	4.19	-21653	-7654	1231.93		40916	1.89	10833	5733			0.75	No, Vu<V
SLU 80	2.29	-15105	-7888	-4957.38		29154	1.8504	9443	4893			0.62	No, Vu<V
SLU 80	4.19	-22068	-7870	1318.56		41702	1.89	10833	5733			0.73	No, Vu<V

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 1	2.29	-4467	4250	3118.3		21539	0.7407	12641	2622			0.62	No, Vu<V
SLV 1	4.19	-1070	3263	-2177.61		0	0	8333	0			0	No, Vu<V
SLV 13	2.29	-12313	-10514	-6809.02		37393	1.176	15812	5207			0.5	No, Vu<V
SLV 13	4.19	-22391	-11081	3133.04		42311	1.89	16250	8600			0.78	No, Vu<V
SLV 12	2.29	-18825	-14080	-9944.09		53774	1.2503	16250	5689			0.4	No, Vu<V
SLV 12	4.19	-28500	-11377	2155.28		53854	1.89	16250	8600			0.76	No, Vu<V
SLV 14	2.29	-12313	-10514	-6809.02		37393	1.176	15812	5207			0.5	No, Vu<V
SLV 14	4.19	-22391	-11081	3133.04		42311	1.89	16250	8600			0.78	No, Vu<V
SLV 16	2.29	-16586	-14544	-9859.62		56327	1.0517	16250	4785			0.33	No, Vu<V
SLV 16	4.19	-28654	-13535	3539.64		54147	1.89	16250	8600			0.64	No, Vu<V
SLV 5	2.29	-2228	3785	3202.77		0	0	8333	0			0	No, Vu<V
SLV 5	4.19	-1225	1106	-793.25		4903	0.8923	9314	2327			2.1	Si
SLV 2	2.29	-4467	4250	3118.3		21539	0.7407	12641	2622			0.62	No, Vu<V
SLV 2	4.19	-1070	3263	-2177.61		0	0	8333	0			0	No, Vu<V
SLV 15	2.29	-16586	-14544	-9859.62		56327	1.0517	16250	4785			0.33	No, Vu<V
SLV 15	4.19	-28654	-13535	3539.64		54147	1.89	16250	8600			0.64	No, Vu<V
SLV 6	2.29	-2228	3785	3202.77		0	0	8333	0			0	No, Vu<V
SLV 6	4.19	-1225	1106	-793.25		4903	0.8923	9314	2327			2.1	Si
SLV 11	2.29	-18825	-14080	-9944.09		53774	1.2503	16250	5689			0.4	No, Vu<V
SLV 11	4.19	-28500	-11377	2155.28		53854	1.89	16250	8600			0.76	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 W_a 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 6	143750	0.31	0	1133	171.04	0	0	No, Trazione
SLV 5	143750	0.31	0	1133	171.04	0	0	No, Trazione
SLV 1	143750	0.31	4695	-2485	171.04	334.49	1.96	Si
SLV 2	143750	0.31	4695	-2485	171.04	334.49	1.96	Si
SLV 10	143750	0.31	5780	-3059	171.04	407.95	2.39	Si
SLV 9	143750	0.31	5780	-3059	171.04	407.95	2.39	Si
SLV 3	143750	0.31	18475	-9777	171.04	1161.79	6.79	Si
SLV 4	143750	0.31	18475	-9777	171.04	1161.79	6.79	Si
SLV 13	143750	0.31	31096	-16456	171.04	1717.52	10.04	Si
SLV 14	143750	0.31	31096	-16456	171.04	1717.52	10.04	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 3.23 $W_a = 0.05$ $T_a = 0.0808$

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 6	-2598	3030	80	0	0	0	0	6.97355	No, Trazione
SLV 10	-6641	346	87	0	0	0	0	6.97355	No, Trazione
SLV 5	-2598	3030	80	0	0	0	0	6.97355	No, Trazione
SLV 9	-6641	346	87	0	0	0	0	6.97355	No, Trazione
SLV 13	-16759	-10835	40	0.039	1980.8	0.959	0.5986	8.20395	No
SLV 14	-16759	-10835	40	0.039	1980.8	0.959	0.5986	8.20395	No
SLV 16	-21389	-17735	-8	0.041	2451.8	0.966	0.61009	8.20395	No
SLV 15	-21389	-17735	-8	0.041	2451.8	0.966	0.61009	8.20395	No
SLV 4	-7911	-8789	-34	0.041	1083.4	0.931	0.64717	8.20395	No
SLV 3	-7911	-8789	-34	0.041	1083.4	0.931	0.64717	8.20395	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.856	SLU 77	Si
V_SLU	0.62	SLU 78	No
PF_SLV	0	SLV 1	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 6	No
R_SLV	0	SLV 10	No

Maschio 110

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-0.123	-3.284	-0.123	5.951	L3	L4	9.235	0.28	3.68	3.68	3.68			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 68	1.39	-169218	-37896.79	65441	153637.8	4.054	Si
SLU 68	5.07	-112019	-15118.02	43321	242167.24	16.018	Si
SLU 52	1.39	-166074	-40135.03	64225	162230.68	4.042	Si
SLU 52	5.07	-109496	-16130.14	42345	242768.9	15.051	Si
SLU 78	1.39	-187695	-31077.95	72587	94389.71	3.037	Si
SLU 78	5.07	-125170	-11775.2	48407	234511.98	19.916	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 73	1.39	-181294	-41899.3	70111	116609.78	2.783	Si
SLU 73	5.07	-120026	-16729.46	46417	238409.09	14.251	Si
SLU 80	1.39	-186288	-30655.34	72043	99425.66	3.243	Si
SLU 80	5.07	-124037	-11595.8	47969	235469.5	20.306	Si
SLU 55	1.39	-169105	-38792.22	65397	153956.18	3.969	Si
SLU 55	5.07	-111797	-15506.4	43235	242231.49	15.621	Si
SLU 84	1.39	-189732	-33138.03	73375	86941.45	2.624	Si
SLU 84	5.07	-126155	-12642.83	48788	233633.48	18.48	Si
SLU 82	1.39	-186701	-34480.85	72202	97956.84	2.841	Si
SLU 82	5.07	-123855	-13266.57	47898	235618.89	17.76	Si
SLU 75	1.39	-184664	-32420.76	71415	105134.42	3.243	Si
SLU 75	5.07	-122870	-12398.93	47517	236398.06	19.066	Si
SLU 76	1.39	-184325	-40556.49	71283	106312.89	2.621	Si
SLU 76	5.07	-122326	-16105.73	47307	236809.77	14.703	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 9	1.39	-151352	-180360.62	58532	364086.24	2.019	Si
SLV 9	5.07	-98427	-88661.65	38065	312903.19	3.529	Si
SLV 6	1.39	-100679	-176367.63	38935	316748.18	1.796	Si
SLV 6	5.07	-67691	-88751.42	26178	245599.26	2.767	Si
SLV 12	1.39	-152833	148171.34	59105	364341.04	2.459	Si
SLV 12	5.07	-100103	79179.26	38713	315778.71	3.988	Si
SLV 5	1.39	-100679	-176367.63	38935	316748.18	1.796	Si
SLV 5	5.07	-67691	-88751.42	26178	245599.26	2.767	Si
SLV 1	1.39	-42079	-56722.96	16273	168423.03	2.969	Si
SLV 1	5.07	-32419	-30111.83	12537	134336.21	4.461	Si
SLV 7	1.39	-102160	152164.33	39508	319197.48	2.098	Si
SLV 7	5.07	-69367	79089.49	26826	249980.14	3.161	Si
SLV 2	1.39	-42079	-56722.96	16273	168423.03	2.969	Si
SLV 2	5.07	-32419	-30111.83	12537	134336.21	4.461	Si
SLV 10	1.39	-151352	-180360.62	58532	364086.24	2.019	Si
SLV 10	5.07	-98427	-88661.65	38065	312903.19	3.529	Si
SLV 11	1.39	-152833	148171.34	59105	364341.04	2.459	Si
SLV 11	5.07	-100103	79179.26	38713	315778.71	3.988	Si
SLV 8	1.39	-102160	152164.33	39508	319197.48	2.098	Si
SLV 8	5.07	-69367	79089.49	26826	249980.14	3.161	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 10	1.39	-135865	-1670	-36889.68		52543	9.235	10833	28013			16.78	Si
SLU 10	5.07	-89723	-1373	-15035.83		34699	9.235	10182	26329			19.17	Si
SLU 31	1.39	-151085	-1679	-38653.95		58429	9.235	10833	28013			16.68	Si
SLU 31	5.07	-100253	-1378	-15635.15		38771	9.235	10725	27733			20.13	Si
SLU 65	1.39	-166188	-1661	-39239.6		64269	9.235	10833	28013			16.86	Si
SLU 65	5.07	-109719	-1357	-15741.76		42431	9.235	10833	28013			20.65	Si
SLU 23	1.39	-135979	-1660	-35994.25		52587	9.235	10833	28013			16.88	Si
SLU 23	5.07	-89946	-1365	-14647.45		34785	9.235	10193	26358			19.31	Si
SLU 34	1.39	-154115	-1657	-37311.13		59601	9.235	10833	28013			16.9	Si
SLU 34	5.07	-102553	-1357	-15011.42		39660	9.235	10833	28013			20.64	Si
SLU 52	1.39	-166074	-1671	-40135.03		64225	9.235	10833	28013			16.76	Si
SLU 52	5.07	-109496	-1365	-16130.14		42345	9.235	10833	28013			20.52	Si
SLU 73	1.39	-181294	-1681	-41899.3		70111	9.235	10833	28013			16.66	Si
SLU 73	5.07	-120026	-1369	-16729.46		46417	9.235	10833	28013			20.46	Si
SLU 76	1.39	-184325	-1659	-40556.49		71283	9.235	10833	28013			16.88	Si
SLU 76	5.07	-122326	-1349	-16105.73		47307	9.235	10833	28013			20.77	Si
SLU 44	1.39	-150968	-1652	-37475.33		58383	9.235	10833	28013			16.96	Si
SLU 44	5.07	-99189	-1352	-15142.44		38359	9.235	10670	27591			20.4	Si
SLU 2	1.39	-120759	-1650	-34229.98		46701	9.235	10833	28013			16.98	Si
SLU 2	5.07	-79416	-1361	-14048.13		30712	9.235	9651	24954			18.34	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 5	1.39	-100679	-28236	-176367.63		41824	8.5971	16250	39117			1.39	Si
SLV 5	5.07	-67691	-19825	-88751.42		26178	9.235	13569	35087			1.77	Si
SLV 2	1.39	-42079	-10058	-56722.96		16273	9.235	11588	29964			2.98	Si
SLV 2	5.07	-32419	-7505	-30111.83		12537	9.235	10841	28032			3.74	Si
SLV 6	1.39	-100679	-28236	-176367.63		41824	8.5971	16250	39117			1.39	Si
SLV 6	5.07	-67691	-19825	-88751.42		26178	9.235	13569	35087			1.77	Si
SLV 7	1.39	-102160	27149	152164.33		39508	9.235	16235	41980			1.55	Si
SLV 7	5.07	-69367	18826	79089.49		26826	9.235	13699	35422			1.88	Si
SLV 12	1.39	-152833	28184	148171.34		59105	9.235	16250	42019			1.49	Si
SLV 12	5.07	-100103	19861	79179.26		38713	9.235	16076	41569			2.09	Si
SLV 1	1.39	-42079	-10058	-56722.96		16273	9.235	11588	29964			2.98	Si
SLV 1	5.07	-32419	-7505	-30111.83		12537	9.235	10841	28032			3.74	Si
SLV 10	1.39	-151352	-27201	-180360.62		58532	9.235	16250	42019			1.54	Si
SLV 10	5.07	-98427	-18790	-88661.65		38065	9.235	15946	41234			2.19	Si
SLV 9	1.39	-151352	-27201	-180360.62		58532	9.235	16250	42019			1.54	Si
SLV 9	5.07	-98427	-18790	-88661.65		38065	9.235	15946	41234			2.19	Si
SLV 8	1.39	-102160	27149	152164.33		39508	9.235	16235	41980			1.55	Si
SLV 8	5.07	-69367	18826	79089.49		26826	9.235	13699	35422			1.88	Si
SLV 11	1.39	-152833	28184	148171.34		59105	9.235	16250	42019			1.49	Si
SLV 11	5.07	-100103	19861	79179.26		38713	9.235	16076	41569			2.09	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.23 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 2	143750	0.31	14601	-37756	835.75	4654.24	5.57	Si
SLV 1	143750	0.31	14601	-37756	835.75	4654.24	5.57	Si



Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 3	143750	0.31	14844	-38384	835.75	4720.9	5.65	Si
SLV 4	143750	0.31	14844	-38384	835.75	4720.9	5.65	Si
SLV 5	143750	0.31	32250	-83392	835.75	8593.45	10.28	Si
SLV 6	143750	0.31	32250	-83392	835.75	8593.45	10.28	Si
SLV 8	143750	0.31	33059	-85483	835.75	8729.73	10.45	Si
SLV 7	143750	0.31	33059	-85483	835.75	8729.73	10.45	Si
SLV 9	143750	0.31	47620	-123136	835.75	10520.48	12.59	Si
SLV 10	143750	0.31	47620	-123136	835.75	10520.48	12.59	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 3.23 $W_a = 0.05$ $T_a = 0.0808$

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 16	-135375	-211433	-118	0.039	15122.6	0.973	0.58998	8.20395	No
SLV 15	-135375	-211433	-118	0.039	15122.6	0.973	0.58998	8.20395	No
SLV 13	-134872	-210989	-65	0.04	15071.4	0.973	0.59559	8.20395	No
SLV 14	-134872	-210989	-65	0.04	15071.4	0.973	0.59559	8.20395	No
SLV 1	-32419	-42079	90	0.044	4665.2	0.924	0.68926	8.20395	No
SLV 2	-32419	-42079	90	0.044	4665.2	0.924	0.68926	8.20395	No
SLV 12	-100103	-152833	-125	0.04	11531.6	0.965	0.60081	6.97355	No
SLV 11	-100103	-152833	-125	0.04	11531.6	0.965	0.60081	6.97355	No
SLV 3	-32922	-42524	37	0.045	4715.7	0.924	0.70765	8.20395	No
SLV 4	-32922	-42524	37	0.045	4715.7	0.924	0.70765	8.20395	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.621	SLU 76	Si
V_SLU	16.663	SLU 73	Si
PF_SLV	1.796	SLV 5	Si
V_SLV	1.385	SLV 5	Si
PFFP_SLV	5.569	SLV 1	Si
R_SLV	0.072	SLV 15	No

Maschio 111

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.678	-3.359	-24.678	1.266	L4	L5	4.626	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	t0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 77	5.07	-56015	-35584.39	43248	60770.42	1.708	Si
SLU 77	7.17	-46448	-16829.57	35862	60132.69	3.573	Si
SLU 73	5.07	-55739	-37272.11	43035	60808.3	1.631	Si
SLU 73	7.17	-45816	-16948.06	35374	59949.25	3.537	Si
SLU 75	5.07	-56367	-36816.51	43520	60717.36	1.649	Si
SLU 75	7.17	-46546	-17010.16	35937	60159.43	3.537	Si
SLU 76	5.07	-56590	-37822.08	43692	60681	1.604	Si
SLU 76	7.17	-46630	-17239.73	36002	60182.2	3.491	Si
SLU 84	5.07	-58014	-37559.67	44792	60396.93	1.608	Si
SLU 84	7.17	-47736	-17575.43	36857	60452.31	3.44	Si
SLU 78	5.07	-57218	-37366.47	44177	60566.62	1.621	Si
SLU 78	7.17	-47360	-17301.83	36566	60366.35	3.489	Si
SLU 68	5.07	-51395	-35662.23	39682	60963.48	1.709	Si
SLU 68	7.17	-42631	-15721.81	32915	58758.3	3.737	Si
SLU 83	5.07	-56811	-35777.59	43863	60642.7	1.695	Si
SLU 83	7.17	-46825	-17103.17	36153	60233.71	3.522	Si
SLU 82	5.07	-57163	-37009.71	44135	60577.36	1.637	Si
SLU 82	7.17	-46923	-17283.76	36228	60258.84	3.486	Si
SLU 80	5.07	-56639	-37183.99	43730	60672.7	1.632	Si
SLU 80	7.17	-46836	-17216.56	36162	60236.63	3.499	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 14	5.07	-14128	-19973.22	10908	29759.58	1.49	Si
SLV 14	7.17	-16987	-3767.28	13116	35071.93	9.31	Si
SLV 16	5.07	-8565	-7090.57	6613	18738.07	2.643	Si
SLV 16	7.17	-11360	414.87	8771	24388.69	58.786	Si
SLV 5	5.07	-54886	-49714.14	42377	82916.91	1.668	Si
SLV 5	7.17	-45763	-21257.51	35333	75236.23	3.539	Si
SLV 13	5.07	-14128	-19973.22	10908	29759.58	1.49	Si
SLV 13	7.17	-16987	-3767.28	13116	35071.93	9.31	Si
SLV 6	5.07	-54886	-49714.14	42377	82916.91	1.668	Si
SLV 6	7.17	-45763	-21257.51	35333	75236.23	3.539	Si
SLV 9	5.07	-39070	-42924.37	30166	68054.62	1.585	Si
SLV 9	7.17	-35512	-15437.02	27418	63703.23	4.127	Si
SLV 2	5.07	-66847	-42605.77	51612	89301.54	2.096	Si
SLV 2	7.17	-51158	-23168.9	39498	80072.04	3.456	Si
SLV 15	5.07	-8565	-7090.57	6613	18738.07	2.643	Si
SLV 15	7.17	-11360	414.87	8771	24388.69	58.786	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 1	5.07	-66847	-42605.77	51612	89301.54	2.096	Si
SLV 1	7.17	-51158	-23168.9	39498	80072.04	3.456	Si
SLV 10	5.07	-39070	-42924.37	30166	68054.62	1.585	Si
SLV 10	7.17	-35512	-15437.02	27418	63703.23	4.127	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 75	5.07	-56367	-10241	-36816.51		43520	4.6257	10833	14031			1.37	Si
SLU 75	7.17	-46546	-10094	-17010.16		35937	4.6257	10347	13402			1.33	Si
SLU 80	5.07	-56639	-10154	-37183.99		43730	4.6257	10833	14031			1.38	Si
SLU 80	7.17	-46836	-10008	-17216.56		36162	4.6257	10377	13440			1.34	Si
SLU 78	5.07	-57218	-10275	-37366.47		44177	4.6257	10833	14031			1.37	Si
SLU 78	7.17	-47360	-10129	-17301.83		36566	4.6257	10431	13510			1.33	Si
SLU 73	5.07	-55739	-10325	-37272.11		43035	4.6257	10833	14031			1.36	Si
SLU 73	7.17	-45816	-10081	-16948.06		35374	4.6257	10272	13304			1.32	Si
SLU 82	5.07	-57163	-10473	-37009.71		44135	4.6257	10833	14031			1.34	Si
SLU 82	7.17	-46923	-10327	-17283.76		36228	4.6257	10386	13452			1.3	Si
SLU 76	5.07	-56590	-10359	-37822.08		43692	4.6257	10833	14031			1.35	Si
SLU 76	7.17	-46630	-10115	-17239.73		36002	4.6257	10356	13413			1.33	Si
SLU 74	5.07	-55164	-9881	-35034.43		42591	4.6257	10833	14031			1.42	Si
SLU 74	7.17	-45635	-9882	-16537.9		35234	4.6257	10253	13280			1.34	Si
SLU 83	5.07	-56811	-10148	-35777.59		43863	4.6257	10833	14031			1.38	Si
SLU 83	7.17	-46825	-10149	-17103.17		36153	4.6257	10376	13439			1.32	Si
SLU 84	5.07	-58014	-10508	-37559.67		44792	4.6257	10833	14031			1.34	Si
SLU 84	7.17	-47736	-10361	-17575.43		36857	4.6257	10470	13560			1.31	Si
SLU 81	5.07	-55960	-10114	-35227.63		43206	4.6257	10833	14031			1.39	Si
SLU 81	7.17	-46011	-10115	-16811.49		35525	4.6257	10292	13330			1.32	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 10	5.07	-39070	-16182	-42924.37		38307	3.6426	15995	16313			1.01	Si
SLV 10	7.17	-35512	-14484	-15437.02		27418	4.6257	13817	17896			1.24	Si
SLV 13	5.07	-14128	-5818	-19973.22		18706	2.6975	12075	9120			1.57	Si
SLV 13	7.17	-16987	-4882	-3767.28		13116	4.6257	10956	14191			2.91	Si
SLV 3	5.07	-61284	-7887	-29723.12		47317	4.6257	16250	21047			2.67	Si
SLV 3	7.17	-45531	-8824	-18986.75		35154	4.6257	15364	19899			2.26	Si
SLV 4	5.07	-61284	-7887	-29723.12		47317	4.6257	16250	21047			2.67	Si
SLV 4	7.17	-45531	-8824	-18986.75		35154	4.6257	15364	19899			2.26	Si
SLV 9	5.07	-39070	-16182	-42924.37		38307	3.6426	15995	16313			1.01	Si
SLV 9	7.17	-35512	-14484	-15437.02		27418	4.6257	13817	17896			1.24	Si
SLV 2	5.07	-66847	-14243	-42605.77		51612	4.6257	16250	21047			1.48	Si
SLV 2	7.17	-51158	-14246	-23168.9		39498	4.6257	16233	21025			1.48	Si
SLV 5	5.07	-54886	-18710	-49714.14		46437	4.2212	16250	19207			1.03	Si
SLV 5	7.17	-45763	-17293	-21257.51		35333	4.6257	15400	19946			1.15	Si
SLV 1	5.07	-66847	-14243	-42605.77		51612	4.6257	16250	21047			1.48	Si
SLV 1	7.17	-51158	-14246	-23168.9		39498	4.6257	16233	21025			1.48	Si
SLV 6	5.07	-54886	-18710	-49714.14		46437	4.2212	16250	19207			1.03	Si
SLV 6	7.17	-45763	-17293	-21257.51		35333	4.6257	15400	19946			1.15	Si
SLV 14	5.07	-14128	-5818	-19973.22		18706	2.6975	12075	9120			1.57	Si
SLV 14	7.17	-16987	-4882	-3767.28		13116	4.6257	10956	14191			2.91	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 15	143750	0.39	9588	-12418	482.85	1602.15	3.32	Si
SLV 16	143750	0.39	9588	-12418	482.85	1602.15	3.32	Si
SLV 14	143750	0.39	13766	-17830	482.85	2214.94	4.59	Si
SLV 13	143750	0.39	13766	-17830	482.85	2214.94	4.59	Si
SLV 11	143750	0.39	13880	-17978	482.85	2230.98	4.62	Si
SLV 12	143750	0.39	13880	-17978	482.85	2230.98	4.62	Si
SLV 7	143750	0.39	21738	-28154	482.85	3240.39	6.71	Si
SLV 8	143750	0.39	21738	-28154	482.85	3240.39	6.71	Si
SLV 9	143750	0.39	27807	-36016	482.85	3894.72	8.07	Si
SLV 10	143750	0.39	27807	-36016	482.85	3894.72	8.07	Si

Verifica dei meccanismi locali di colla con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzzeria = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 3	-35934	-61284	60	0.042	4307.2	0.956	0.63889	8.88274	No
SLV 4	-35934	-61284	60	0.042	4307.2	0.956	0.63889	8.88274	No
SLV 2	-39728	-66847	21	0.043	4692.9	0.959	0.64661	8.88274	No
SLV 1	-39728	-66847	21	0.043	4692.9	0.959	0.64661	8.88274	No
SLV 13	-15733	-14128	-54	0.045	2261.1	0.924	0.70654	8.88274	No
SLV 14	-15733	-14128	-54	0.045	2261.1	0.924	0.70654	8.88274	No
SLV 6	-35756	-54886	-50	0.042	4289.2	0.956	0.64294	7.63299	No
SLV 5	-35756	-54886	-50	0.042	4289.2	0.956	0.64294	7.63299	No
SLV 9	-28558	-39070	-73	0.042	3558.1	0.948	0.64726	7.63299	No
SLV 10	-28558	-39070	-73	0.042	3558.1	0.948	0.64726	7.63299	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.604	SLU 76	Si
V_SLV	1.303	SLU 82	Si
PF_SLV	1.49	SLV 13	Si
V_SLV	1.008	SLV 9	Si
PFFP_SLV	3.318	SLV 15	Si
R_SLV	0.072	SLV 3	No



Maschio 112

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota s.	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.678	2.066	-24.678	5.951	L4	L5	3.885	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ ₀	f _{v0}	μ	φ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLU 79	5.07	-44806	30729.98	41189	43025.92	1.4	Si
SLU 79	7.17	-39725	10439.48	36519	42571.63	4.078	Si
SLU 75	5.07	-43915	29579.31	40371	43028.08	1.455	Si
SLU 75	7.17	-38783	10058.35	35653	42363.01	4.212	Si
SLU 74	5.07	-44222	30384.65	40653	43031.26	1.416	Si
SLU 74	7.17	-39205	10112.8	36041	42461.15	4.199	Si
SLU 77	5.07	-45171	30951.72	41525	43014.98	1.39	Si
SLU 77	7.17	-40105	10448.41	36868	42644.63	4.081	Si
SLU 78	5.07	-44864	30146.38	41243	43024.57	1.427	Si
SLU 78	7.17	-39683	10393.96	36480	42563.11	4.095	Si
SLU 81	5.07	-44390	30737.36	40807	43031.26	1.4	Si
SLU 81	7.17	-39314	9924.46	36141	42485.26	4.281	Si
SLU 80	5.07	-44499	29924.63	40907	43030.59	1.438	Si
SLU 80	7.17	-39304	10385.03	36132	42483.11	4.091	Si
SLU 84	5.07	-45032	30499.09	41397	43019.84	1.411	Si
SLU 84	7.17	-39792	10205.62	36580	42584.93	4.173	Si
SLU 83	5.07	-45339	31304.43	41679	43008	1.374	Si
SLU 83	7.17	-40214	10260.07	36968	42664.43	4.158	Si
SLU 82	5.07	-44083	29932.02	40525	43030.33	1.438	Si
SLU 82	7.17	-38892	9870.01	35753	42389.13	4.295	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLV 4	5.07	-52153	41486.79	47944	61556.72	1.484	Si
SLV 4	7.17	-46731	11165.19	42959	58859.68	5.272	Si
SLV 3	5.07	-52153	41486.79	47944	61556.72	1.484	Si
SLV 3	7.17	-46731	11165.19	42959	58859.68	5.272	Si
SLV 11	5.07	-32725	34029.42	30083	47916.79	1.408	Si
SLV 11	7.17	-31463	10736.88	28924	46649.84	4.345	Si
SLV 8	5.07	-44257	43194.71	40685	57344.29	1.328	Si
SLV 8	7.17	-41636	12324.16	38275	55542.44	4.507	Si
SLV 7	5.07	-44257	43194.71	40685	57344.29	1.328	Si
SLV 7	7.17	-41636	12324.16	38275	55542.44	4.507	Si
SLV 16	5.07	-13710	10935.8	12604	23885.06	2.184	Si
SLV 16	7.17	-12823	5874.25	11788	22505.38	3.831	Si
SLV 15	5.07	-13710	10935.8	12604	23885.06	2.184	Si
SLV 15	7.17	-12823	5874.25	11788	22505.38	3.831	Si
SLV 1	5.07	-47388	30857.57	43563	59232.58	1.92	Si
SLV 1	7.17	-40925	8584.5	37622	55019.9	6.409	Si
SLV 2	5.07	-47388	30857.57	43563	59232.58	1.92	Si
SLV 2	7.17	-40925	8584.5	37622	55019.9	6.409	Si
SLV 12	5.07	-32725	34029.42	30083	47916.79	1.408	Si
SLV 12	7.17	-31463	10736.88	28924	46649.84	4.345	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 77	5.07	-45171	9965	30951.72	42771	3.7719	10833	11441				1.15	Si
SLU 77	7.17	-40105	9969	10448.41	36868	3.885	10471	11391				1.14	Si
SLU 79	5.07	-44806	9851	30729.98	42446	3.7699	10833	11436				1.16	Si
SLU 79	7.17	-39725	9855	10439.48	36519	3.885	10425	11340				1.15	Si
SLU 84	5.07	-45032	9705	30499.09	42371	3.7957	10833	11513				1.19	Si
SLU 84	7.17	-39792	9708	10205.62	36580	3.885	10433	11349				1.17	Si
SLU 74	5.07	-44222	9900	30384.65	41935	3.7662	10833	11424				1.15	Si
SLU 74	7.17	-39205	9904	10112.8	36041	3.885	10361	11271				1.14	Si
SLU 82	5.07	-44083	9641	29932.02	41535	3.7905	10833	11498				1.19	Si
SLU 82	7.17	-38892	9644	9870.01	35753	3.885	10323	11229				1.16	Si
SLU 83	5.07	-45339	10168	31304.43	43109	3.7561	10833	11394				1.12	Si
SLU 83	7.17	-40214	10172	10260.07	36968	3.885	10485	11405				1.12	Si
SLU 75	5.07	-43915	9437	29579.31	41200	3.8068	10833	11547				1.22	Si
SLU 75	7.17	-38783	9440	10058.35	35653	3.885	10309	11214				1.19	Si
SLU 60	5.07	-40819	9235	28091.71	38742	3.7629	10721	11296				1.22	Si
SLU 60	7.17	-35976	9238	9431.05	33072	3.885	9965	10840				1.17	Si
SLU 62	5.07	-41768	9299	28658.78	39578	3.7691	10833	11432				1.23	Si
SLU 62	7.17	-36876	9303	9766.66	33900	3.885	10076	10960				1.18	Si
SLU 81	5.07	-44390	10104	30737.36	42274	3.7502	10833	11376				1.13	Si
SLU 81	7.17	-39314	10108	9924.46	36141	3.885	10374	11285				1.12	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 4	5.07	-52153	14798	41486.79	54129	3.4411	16250	15657				1.06	Si
SLV 4	7.17	-46731	13871	11165.19	42959	3.885	16250	17677				1.27	Si
SLV 12	5.07	-32725	13698	34029.42	43161	2.7079	16250	12321				0.9	No, Vu<V
SLV 12	7.17	-31463	12435	10736.88	28924	3.885	14118	15358				1.23	Si
SLV 7	5.07	-44257	16940	43194.71	54513	2.8995	16250	13193				0.78	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 7	7.17	-41636	15374	12324.16		38275	3.885	15988	17392			1.13	Si
SLV 11	5.07	-32725	13698	34029.42		43161	2.7079	16250	12321			0.9	No, Vu<V
SLV 11	7.17	-31463	12435	10736.88		28924	3.885	14118	15358			1.23	Si
SLV 8	5.07	-44257	16940	43194.71		54513	2.8995	16250	13193			0.78	No, Vu<V
SLV 8	7.17	-41636	15374	12324.16		38275	3.885	15988	17392			1.13	Si
SLV 16	5.07	-13710	3992	10935.8		14256	3.4346	11185	10756			2.69	Si
SLV 16	7.17	-12823	4074	5874.25		11788	3.885	10691	11630			2.85	Si
SLV 2	5.07	-47388	9720	30857.57		43687	3.874	16250	17627			1.81	Si
SLV 2	7.17	-40925	9643	8584.5		37622	3.885	15858	17250			1.79	Si
SLV 1	5.07	-47388	9720	30857.57		43687	3.874	16250	17627			1.81	Si
SLV 1	7.17	-40925	9643	8584.5		37622	3.885	15858	17250			1.79	Si
SLV 15	5.07	-13710	3992	10935.8		14256	3.4346	11185	10756			2.69	Si
SLV 15	7.17	-12823	4074	5874.25		11788	3.885	10691	11630			2.85	Si
SLV 3	5.07	-52153	14798	41486.79		54129	3.4411	16250	15657			1.06	Si
SLV 3	7.17	-46731	13871	11165.19		42959	3.885	16250	17677			1.27	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 14	143750	0.39	6618	-7199	405.53	953.33	2.35	Si
SLV 13	143750	0.39	6618	-7199	405.53	953.33	2.35	Si
SLV 10	143750	0.39	11786	-12820	405.53	1621.73	4	Si
SLV 9	143750	0.39	11786	-12820	405.53	1621.73	4	Si
SLV 16	143750	0.39	11900	-12945	405.53	1635.77	4.03	Si
SLV 15	143750	0.39	11900	-12945	405.53	1635.77	4.03	Si
SLV 5	143750	0.39	21496	-23384	405.53	2697.76	6.65	Si
SLV 6	143750	0.39	21496	-23384	405.53	2697.76	6.65	Si
SLV 12	143750	0.39	29391	-31971	405.53	3399.33	8.38	Si
SLV 11	143750	0.39	29391	-31971	405.53	3399.33	8.38	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 3	-35336	-52153	63	0.041	4141.8	0.961	0.62548	8.88274	No
SLV 4	-35336	-52153	63	0.041	4141.8	0.961	0.62548	8.88274	No
SLV 2	-31033	-47388	48	0.042	3704.2	0.957	0.63836	8.88274	No
SLV 1	-31033	-47388	48	0.042	3704.2	0.957	0.63836	8.88274	No
SLV 16	-11780	-13710	-47	0.045	1755	0.919	0.71654	8.88274	No
SLV 15	-11780	-13710	-47	0.045	1755	0.919	0.71654	8.88274	No
SLV 8	-32111	-44257	42	0.042	3813.8	0.958	0.63914	7.63299	No
SLV 7	-32111	-44257	42	0.042	3813.8	0.958	0.63914	7.63299	No
SLV 13	-7477	-8945	-62	0.046	1327	0.902	0.74534	8.88274	No
SLV 14	-7477	-8945	-62	0.046	1327	0.902	0.74534	8.88274	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.374	SLU 83	Si
V_SLU	1.116	SLU 81	Si
PF_SLV	1.328	SLV 7	Si
V_SLV	0.779	SLV 7	No
PFFP_SLV	2.351	SLV 13	Si
R_SLV	0.07	SLV 3	No

Maschio 113

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.713	5.951	-24.678	5.951	L4	L5	1.965	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 78	5.97	-28132	7826.78	51130	10290.66	1.315	Si
SLU 78	7.77	-25974	-1354.97	47208	10729.98	7.919	Si
SLU 84	5.97	-28196	7877.36	51247	10274.33	1.304	Si
SLU 84	7.77	-26081	-1399.39	47403	10712.92	7.655	Si
SLU 82	5.97	-27627	7668.11	50213	10411.68	1.358	Si
SLU 82	7.77	-25460	-1362.77	46274	10804.52	7.928	Si
SLU 81	5.97	-27971	7752.24	50838	10330.42	1.333	Si
SLU 81	7.77	-25710	-1325.29	46729	10769.61	8.126	Si
SLU 83	5.97	-28540	7961.49	51872	10184.49	1.279	Si
SLU 83	7.77	-26332	-1361.9	47859	10671.19	7.836	Si
SLU 77	5.97	-28475	7910.91	51755	10201.8	1.29	Si
SLU 77	7.77	-26224	-1317.49	47663	10689.43	8.113	Si
SLU 80	5.97	-27874	7789.84	50661	10353.85	1.329	Si
SLU 80	7.77	-25725	-1335.12	46756	10767.49	8.065	Si
SLU 74	5.97	-27906	7701.65	50720	10346.11	1.343	Si
SLU 74	7.77	-25603	-1280.87	46534	10784.93	8.42	Si
SLU 79	5.97	-28218	7873.97	51286	10268.87	1.304	Si
SLU 79	7.77	-25976	-1297.63	47211	10729.67	8.269	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 75	5.97	-27562	7617.52	50095	10426.4	1.369	Si
SLU 75	7.77	-25352	-1318.36	46078	10818.65	8.206	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 5	5.97	-12968	5169.31	23570	10283.48	1.989	Si
SLV 5	7.77	-13187	-1496.45	23968	10414.79	6.96	Si
SLV 7	5.97	-30757	9625.93	55901	16393.46	1.703	Si
SLV 7	7.77	-27948	-1384.87	50796	16043.64	11.585	Si
SLV 3	5.97	-30404	13084.31	55259	16362.16	1.251	Si
SLV 3	7.77	-30140	-2960.96	54779	16336.38	5.517	Si
SLV 14	5.97	-8287	-2590.38	15062	7138.55	2.756	Si
SLV 14	7.77	-4689	1397.1	8522	4285.28	3.067	Si
SLV 4	5.97	-30404	13084.31	55259	16362.16	1.251	Si
SLV 4	7.77	-30140	-2960.96	54779	16336.38	5.517	Si
SLV 8	5.97	-30757	9625.93	55901	16393.46	1.703	Si
SLV 8	7.77	-27948	-1384.87	50796	16043.64	11.585	Si
SLV 6	5.97	-12968	5169.31	23570	10283.48	1.989	Si
SLV 6	7.77	-13187	-1496.45	23968	10414.79	6.96	Si
SLV 1	5.97	-25067	11747.33	45560	15445.23	1.315	Si
SLV 1	7.77	-25711	-2994.43	46731	15600.11	5.21	Si
SLV 2	5.97	-25067	11747.33	45560	15445.23	1.315	Si
SLV 2	7.77	-25711	-2994.43	46731	15600.11	5.21	Si
SLV 13	5.97	-8287	-2590.38	15062	7138.55	2.756	Si
SLV 13	7.77	-4689	1397.1	8522	4285.28	3.067	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 80	5.97	-27874	5170	7789.84		50661	1.965	10833	5960			1.15	Si
SLU 80	7.77	-25725	5167	-1335.12		46756	1.965	10833	5960			1.15	Si
SLU 78	5.97	-28132	5197	7826.78		51130	1.965	10833	5960			1.15	Si
SLU 78	7.77	-25974	5194	-1354.97		47208	1.965	10833	5960			1.15	Si
SLU 81	5.97	-27971	5082	7752.24		50838	1.965	10833	5960			1.17	Si
SLU 81	7.77	-25710	5081	-1325.29		46729	1.965	10833	5960			1.17	Si
SLU 82	5.97	-27627	5108	7668.11		50213	1.965	10833	5960			1.17	Si
SLU 82	7.77	-25460	5105	-1362.77		46274	1.965	10833	5960			1.17	Si
SLU 75	5.97	-27562	5032	7617.52		50095	1.965	10833	5960			1.18	Si
SLU 75	7.77	-25352	5029	-1318.36		46078	1.965	10833	5960			1.19	Si
SLU 76	5.97	-27075	5023	7524.5		49210	1.965	10833	5960			1.19	Si
SLU 76	7.77	-24936	5018	-1323.49		45322	1.965	10833	5960			1.19	Si
SLU 77	5.97	-28475	5171	7910.91		51755	1.965	10833	5960			1.15	Si
SLU 77	7.77	-26224	5170	-1317.49		47663	1.965	10833	5960			1.15	Si
SLU 79	5.97	-28218	5144	7873.97		51286	1.965	10833	5960			1.16	Si
SLU 79	7.77	-25976	5143	-1297.63		47211	1.965	10833	5960			1.16	Si
SLU 84	5.97	-28196	5273	7877.36		51247	1.965	10833	5960			1.13	Si
SLU 84	7.77	-26081	5270	-1399.39		47403	1.965	10833	5960			1.13	Si
SLU 83	5.97	-28540	5247	7961.49		51872	1.965	10833	5960			1.14	Si
SLU 83	7.77	-26332	5246	-1361.9		47859	1.965	10833	5960			1.14	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 8	5.97	-30757	5721	9625.93		55901	1.965	16250	8941			1.56	Si
SLV 8	7.77	-27948	6259	-1384.87		50796	1.965	16250	8941			1.43	Si
SLV 5	5.97	-12968	4729	5169.31		26441	1.7517	13621	6681			1.41	Si
SLV 5	7.77	-13187	3958	-1496.45		23968	1.965	13127	7222			1.82	Si
SLV 4	5.97	-30404	9934	13084.31		65553	1.6564	16250	7537			0.76	No, Vu<V
SLV 4	7.77	-30140	9743	-2960.96		54779	1.965	16250	8941			0.92	No, Vu<V
SLV 7	5.97	-30757	5721	9625.93		55901	1.965	16250	8941			1.56	Si
SLV 7	7.77	-27948	6259	-1384.87		50796	1.965	16250	8941			1.43	Si
SLV 14	5.97	-8287	-3393	-2590.38		15062	1.965	11346	6242			1.84	Si
SLV 14	7.77	-4689	-3203	1397.1		8522	1.965	10038	5523			1.72	Si
SLV 6	5.97	-12968	4729	5169.31		26441	1.7517	13621	6681			1.41	Si
SLV 6	7.77	-13187	3958	-1496.45		23968	1.965	13127	7222			1.82	Si
SLV 1	5.97	-25067	9636	11747.33		58073	1.5416	16250	7014			0.73	No, Vu<V
SLV 1	7.77	-25711	9053	-2994.43		46731	1.965	16250	8941			0.99	No, Vu<V
SLV 13	5.97	-8287	-3393	-2590.38		15062	1.965	11346	6242			1.84	Si
SLV 13	7.77	-4689	-3203	1397.1		8522	1.965	10038	5523			1.72	Si
SLV 2	5.97	-25067	9636	11747.33		58073	1.5416	16250	7014			0.73	No, Vu<V
SLV 2	7.77	-25711	9053	-2994.43		46731	1.965	16250	8941			0.99	No, Vu<V
SLV 3	5.97	-30404	9934	13084.31		65553	1.6564	16250	7537			0.76	No, Vu<V
SLV 3	7.77	-30140	9743	-2960.96		54779	1.965	16250	8941			0.92	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 13	143750	0.39	11932	-6565	205.11	829.38	4.04	Si
SLV 14	143750	0.39	11932	-6565	205.11	829.38	4.04	Si
SLV 10	143750	0.39	13565	-7463	205.11	928.88	4.53	Si
SLV 9	143750	0.39	13565	-7463	205.11	928.88	4.53	Si
SLV 16	143750	0.39	20622	-11346	205.11	1320.36	6.44	Si
SLV 15	143750	0.39	20622	-11346	205.11	1320.36	6.44	Si
SLV 5	143750	0.39	23653	-13014	205.11	1469.28	7.16	Si
SLV 6	143750	0.39	23653	-13014	205.11	1469.28	7.16	Si
SLV 11	143750	0.39	42529	-23399	205.11	2135.69	10.41	Si
SLV 12	143750	0.39	42529	-23399	205.11	2135.69	10.41	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	σ_0	M*	e*	a0*	aLim	Verifica
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Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 2	-19431	-29052	62	0.04	2253.4	0.963	0.60037	8.88274	No
SLV 1	-19431	-29052	62	0.04	2253.4	0.963	0.60037	8.88274	No
SLV 3	-22841	-34647	34	0.041	2600.4	0.968	0.61346	8.88274	No
SLV 4	-22841	-34647	34	0.041	2600.4	0.968	0.61346	8.88274	No
SLV 16	-8322	-10626	-61	0.04	1125.7	0.933	0.62692	8.88274	No
SLV 15	-8322	-10626	-61	0.04	1125.7	0.933	0.62692	8.88274	No
SLV 12	-17382	-25560	-60	0.04	2045	0.96	0.60476	7.63299	No
SLV 11	-17382	-25560	-60	0.04	2045	0.96	0.60476	7.63299	No
SLV 13	-4912	-5031	-34	0.045	783.1	0.912	0.71336	8.88274	No
SLV 14	-4912	-5031	-34	0.045	783.1	0.912	0.71336	8.88274	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.279	SLU 83	Si
V_SLU	1.13	SLU 84	Si
PF_SLV	1.251	SLV 3	Si
V_SLV	0.728	SLV 1	No
PFFP_SLV	4.043	SLV 13	Si
R_SLV	0.068	SLV 1	No

Maschio 114

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-19.618	5.951	-21.813	5.951	L4	L5	2.195	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	M	$\alpha 0$	Mu	c.s.	Verifica
SLU 77	5.97	-18352	900.59	29860	12758.04	14.166	Si
SLU 77	7.77	-15507	504.11	25230	11747.31	23.303	Si
SLU 37	5.97	-15093	790	24557	11570.72	14.646	Si
SLU 37	7.77	-12867	410.88	20936	10492.35	25.537	Si
SLU 69	5.97	-16985	818.77	27635	12316.65	15.043	Si
SLU 69	7.77	-13914	395.6	22639	11026.63	27.873	Si
SLU 35	5.97	-15339	799.54	24957	11676.6	14.604	Si
SLU 35	7.77	-13145	423.44	21388	10638.86	25.125	Si
SLU 38	5.97	-15071	780.47	24521	11561.03	14.813	Si
SLU 38	7.77	-12823	372.35	20864	10468.63	28.115	Si
SLU 79	5.97	-18106	891.04	29459	12684.66	14.236	Si
SLU 79	7.77	-15229	491.55	24778	11629.56	23.659	Si
SLU 36	5.97	-15317	790.01	24921	11667.15	14.768	Si
SLU 36	7.77	-13101	384.92	21316	10615.68	27.579	Si
SLU 78	5.97	-18329	891.05	29823	12751.53	14.311	Si
SLU 78	7.77	-15462	465.59	25158	11728.72	25.191	Si
SLU 80	5.97	-18083	881.51	29423	12677.91	14.382	Si
SLU 80	7.77	-15184	453.02	24706	11610.44	25.629	Si
SLU 71	5.97	-16739	809.23	27235	12228.53	15.111	Si
SLU 71	7.77	-13636	383.03	22187	10889.48	28.43	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma M = 2$

Comb.	Quota	N	M	$\alpha 0$	Mu	c.s.	Verifica
SLV 5	5.97	-6716	1653.83	10928	6711.95	4.058	Si
SLV 5	7.77	-5890	-580.12	9584	5957.7	10.27	Si
SLV 14	5.97	-11924	-4105.03	19402	11008.93	2.682	Si
SLV 14	7.77	-17434	3053.51	28366	14691.8	4.811	Si
SLV 15	5.97	-15213	-3984.18	24753	13314.04	3.342	Si
SLV 15	7.77	-18807	3148.34	30601	15471.74	4.914	Si
SLV 4	5.97	-13104	5092.51	21321	11871.97	2.331	Si
SLV 4	7.77	-3514	-2271.63	5717	3675.67	1.618	Si
SLV 3	5.97	-13104	5092.51	21321	11871.97	2.331	Si
SLV 3	7.77	-3514	-2271.63	5717	3675.67	1.618	Si
SLV 6	5.97	-6716	1653.83	10928	6711.95	4.058	Si
SLV 6	7.77	-5890	-580.12	9584	5957.7	10.27	Si
SLV 2	5.97	-9815	4971.66	15970	9364.1	1.883	Si
SLV 2	7.77	-2140	-2366.47	0	0	0	No, $e \geq l/2$
SLV 13	5.97	-11924	-4105.03	19402	11008.93	2.682	Si
SLV 13	7.77	-17434	3053.51	28366	14691.8	4.811	Si
SLV 16	5.97	-15213	-3984.18	24753	13314.04	3.342	Si
SLV 16	7.77	-18807	3148.34	30601	15471.74	4.914	Si
SLV 1	5.97	-9815	4971.66	15970	9364.1	1.883	Si
SLV 1	7.77	-2140	-2366.47	0	0	0	No, $e \geq l/2$

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	V par	M	$\alpha 0$	αN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 9	5.97	-12247	550	605.16		19927	2.195	8212	5047			9.18	Si
SLU 9	7.77	-9727	550	200.12		15827	2.195	7666	4711			8.57	Si
SLU 51	5.97	-15260	602	706.2		24829	2.195	8866	5449			9.06	Si
SLU 51	7.77	-12089	602	280.79		19669	2.195	8178	5026			8.36	Si
SLU 72	5.97	-16716	570	799.7		27199	2.195	9182	5643			9.9	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 72	7.77	-13592	570	344.51		22115	2.195	8504	5227			9.17	Si
SLU 6	5.97	-12515	499	624.24		20363	2.195	8271	5083			10.19	Si
SLU 6	7.77	-10050	499	251.21		16351	2.195	7736	4754			9.53	Si
SLU 7	5.97	-12493	529	614.7		20327	2.195	8266	5080			9.61	Si
SLU 7	7.77	-10005	529	212.68		16279	2.195	7726	4748			8.98	Si
SLU 49	5.97	-15506	581	715.74		25229	2.195	8919	5482			9.44	Si
SLU 49	7.77	-12367	580	293.35		20121	2.195	8238	5063			8.72	Si
SLU 30	5.97	-13703	518	698.66		22297	2.195	8528	5242			10.12	Si
SLU 30	7.77	-11230	518	263.84		18273	2.195	7992	4912			9.48	Si
SLU 50	5.97	-15282	572	715.74		24865	2.195	8871	5452			9.53	Si
SLU 50	7.77	-12133	572	319.31		19741	2.195	8188	5032			8.8	Si
SLU 48	5.97	-15528	551	725.28		25265	2.195	8924	5485			9.96	Si
SLU 48	7.77	-12411	551	331.88		20194	2.195	8248	5069			9.2	Si
SLU 8	5.97	-12269	520	614.7		19963	2.195	8217	5050			9.71	Si
SLU 8	7.77	-9772	520	238.64		15899	2.195	7675	4717			9.07	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 10	5.97	-7349	-4579	-1069.18		11958	2.195	10725	6591			1.44	Si
SLV 10	7.77	-10479	-4808	1045.88		17050	2.195	11743	7217			1.5	Si
SLV 4	5.97	-13104	9161	5092.51		22006	2.1266	12735	7583			0.83	No, Vu<V
SLV 4	7.77	-3514	8711	-2271.63		9275	1.3529	10188	3859			0.44	No, Vu<V
SLV 9	5.97	-7349	-4579	-1069.18		11958	2.195	10725	6591			1.44	Si
SLV 9	7.77	-10479	-4808	1045.88		17050	2.195	11743	7217			1.5	Si
SLV 2	5.97	-9815	7882	4971.66		19772	1.7729	12288	6100			0.77	No, Vu<V
SLV 2	7.77	-2140	7191	-2366.47		0	0	8333	0			0	No, Vu<V
SLV 15	5.97	-15213	-7714	-3984.18		24753	2.195	13284	8164			1.06	Si
SLV 15	7.77	-18807	-7023	3148.34		30601	2.195	14454	8883			1.26	Si
SLV 13	5.97	-11924	-8993	-4105.03		19402	2.195	12214	7507			0.83	No, Vu<V
SLV 13	7.77	-17434	-8542	3053.51		28366	2.195	14007	8608			1.01	Si
SLV 3	5.97	-13104	9161	5092.51		22006	2.1266	12735	7583			0.83	No, Vu<V
SLV 3	7.77	-3514	8711	-2271.63		9275	1.3529	10188	3859			0.44	No, Vu<V
SLV 16	5.97	-15213	-7714	-3984.18		24753	2.195	13284	8164			1.06	Si
SLV 16	7.77	-18807	-7023	3148.34		30601	2.195	14454	8883			1.26	Si
SLV 1	5.97	-9815	7882	4971.66		19772	1.7729	12288	6100			0.77	No, Vu<V
SLV 1	7.77	-2140	7191	-2366.47		0	0	8333	0			0	No, Vu<V
SLV 14	5.97	-11924	-8993	-4105.03		19402	2.195	12214	7507			0.83	No, Vu<V
SLV 14	7.77	-17434	-8542	3053.51		28366	2.195	14007	8608			1.01	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 1	143750	0.39	9231	-5673	229.12	734.26	3.2	Si
SLV 2	143750	0.39	9231	-5673	229.12	734.26	3.2	Si
SLV 5	143750	0.39	10303	-6332	229.12	811.78	3.54	Si
SLV 6	143750	0.39	10303	-6332	229.12	811.78	3.54	Si
SLV 3	143750	0.39	13001	-7990	229.12	999.62	4.36	Si
SLV 4	143750	0.39	13001	-7990	229.12	999.62	4.36	Si
SLV 9	143750	0.39	14992	-9214	229.12	1131.72	4.94	Si
SLV 10	143750	0.39	14992	-9214	229.12	1131.72	4.94	Si
SLV 7	143750	0.39	22869	-14056	229.12	1599.48	6.98	Si
SLV 8	143750	0.39	22869	-14056	229.12	1599.48	6.98	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 8	-6307	-16628	437	0	956.6	0.917	0	7.63299	No
SLV 5	-6841	-5078	-510	0	1010.2	0.92	0	7.63299	No
SLV 7	-6307	-16628	437	0	956.6	0.917	0	7.63299	No
SLV 6	-6841	-5078	-510	0	1010.2	0.92	0	7.63299	No
SLV 2	-2658	-6878	-250	0.002	598.2	0.891	0.03463	8.88274	No
SLV 1	-2658	-6878	-250	0.002	598.2	0.891	0.03463	8.88274	No
SLV 12	-9733	-18550	498	0.003	1301.5	0.935	0.05354	7.63299	No
SLV 11	-9733	-18550	498	0.003	1301.5	0.935	0.05354	7.63299	No
SLV 9	-10267	-7000	-448	0.009	1355.5	0.937	0.1416	7.63299	No
SLV 10	-10267	-7000	-448	0.009	1355.5	0.937	0.1416	7.63299	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	14.166	SLU 77	Si
V_SLU	8.355	SLU 51	Si
PF_SLV	0	SLV 1	No
V_SLV	0	SLV 1	No
PFFP_SLV	3.205	SLV 1	Si
R_SLV	0	SLV 5	No

Maschio 115

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.493	-3.359	-24.678	-3.359	L4	L5	2.185	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

Sismicad 12.19 - Licenza assegnata a Sidel ingegneria Srl - Via Isonzo, 13 - Villanova di Castenaso (BO)



fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 84	5.97	-30458	12258.62	49784	12938.72	1.055	Si
SLU 84	7.77	-29391	-1955.34	48041	13172.87	6.737	Si
SLU 78	5.97	-30278	12069.53	49490	12981.81	1.076	Si
SLU 78	7.77	-29140	-1929.85	47630	13220.79	6.851	Si
SLU 73	5.97	-28936	12101.89	47296	13257.65	1.096	Si
SLU 73	7.77	-27842	-1783.82	45508	13424.11	7.525	Si
SLU 75	5.97	-29760	11893.74	48643	13097.67	1.101	Si
SLU 75	7.77	-28548	-1860.06	46662	13322.66	7.162	Si
SLU 77	5.97	-30302	11377.84	49530	12976.01	1.14	Si
SLU 77	7.77	-28884	-1917.36	47212	13266.71	6.919	Si
SLU 81	5.97	-29965	11391.15	48978	13053.25	1.146	Si
SLU 81	7.77	-28544	-1873.06	46655	13323.36	7.113	Si
SLU 76	5.97	-29454	12277.68	48143	13160.49	1.072	Si
SLU 76	7.77	-28434	-1853.61	46475	13340.57	7.197	Si
SLU 80	5.97	-29989	11992.35	49017	13047.93	1.088	Si
SLU 80	7.77	-28855	-1915.07	47164	13271.75	6.93	Si
SLU 82	5.97	-29940	12082.83	48937	13058.68	1.081	Si
SLU 82	7.77	-28799	-1885.55	47073	13281.26	7.044	Si
SLU 83	5.97	-30483	11566.94	49824	12932.73	1.118	Si
SLU 83	7.77	-29135	-1942.85	47623	13221.6	6.805	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 8	5.97	-13182	8739	21547	11862.17	1.357	Si
SLV 8	7.77	-15114	-2373.32	24705	13173.9	5.551	Si
SLV 1	5.97	-33551	17765.82	54839	20203.3	1.137	Si
SLV 1	7.77	-34997	-5660.06	57204	20334.49	3.593	Si
SLV 7	5.97	-13182	8739	21547	11862.17	1.357	Si
SLV 7	7.77	-15114	-2373.32	24705	13173.9	5.551	Si
SLV 3	5.97	-27306	16673.99	44632	18934.93	1.136	Si
SLV 3	7.77	-30122	-5577.31	49235	19648.03	3.523	Si
SLV 4	5.97	-27306	16673.99	44632	18934.93	1.136	Si
SLV 4	7.77	-30122	-5577.31	49235	19648.03	3.523	Si
SLV 2	5.97	-33551	17765.82	54839	20203.3	1.137	Si
SLV 2	7.77	-34997	-5660.06	57204	20334.49	3.593	Si
SLV 5	5.97	-33998	12378.44	55571	20250.44	1.636	Si
SLV 5	7.77	-31365	-2649.16	51266	19888.98	7.508	Si
SLV 6	5.97	-33998	12378.44	55571	20250.44	1.636	Si
SLV 6	7.77	-31365	-2649.16	51266	19888.98	7.508	Si
SLV 16	5.97	-7769	-2357.97	12699	7605.62	3.225	Si
SLV 16	7.77	-3493	3301.1	5710	3638.2	1.102	Si
SLV 15	5.97	-7769	-2357.97	12699	7605.62	3.225	Si
SLV 15	7.77	-3493	3301.1	5710	3638.2	1.102	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 68	5.97	-27149	8043	11246.21		47652	2.0348	10833	6172			0.77	No, Vu<V
SLU 68	7.77	-25801	7989	-1596.79		42173	2.185	10833	6628			0.83	No, Vu<V
SLU 84	5.97	-30458	8965	12258.62		52548	2.0701	10833	6279			0.7	No, Vu<V
SLU 84	7.77	-29391	8931	-1955.34		48041	2.185	10833	6628			0.74	No, Vu<V
SLU 82	5.97	-29940	8783	12082.83		51736	2.0668	10833	6269			0.71	No, Vu<V
SLU 82	7.77	-28799	8750	-1885.55		47073	2.185	10833	6628			0.76	No, Vu<V
SLU 73	5.97	-28936	8776	12101.89		51089	2.0228	10833	6136			0.7	No, Vu<V
SLU 73	7.77	-27842	8722	-1783.82		45508	2.185	10833	6628			0.76	No, Vu<V
SLU 75	5.97	-29760	8621	11893.74		51135	2.0785	10833	6305			0.73	No, Vu<V
SLU 75	7.77	-28548	8588	-1860.06		46662	2.185	10833	6628			0.77	No, Vu<V
SLU 78	5.97	-30278	8802	12069.53		51947	2.0816	10833	6314			0.72	No, Vu<V
SLU 78	7.77	-29140	8769	-1929.85		47630	2.185	10833	6628			0.76	No, Vu<V
SLU 80	5.97	-29989	8754	11992.35		51546	2.0778	10833	6303			0.72	No, Vu<V
SLU 80	7.77	-28855	8720	-1915.07		47164	2.185	10833	6628			0.76	No, Vu<V
SLU 55	5.97	-27108	8098	11277.94		47706	2.0294	10833	6156			0.76	No, Vu<V
SLU 55	7.77	-25836	8044	-1614.76		42230	2.185	10833	6628			0.82	No, Vu<V
SLU 83	5.97	-30483	8387	11566.94		50893	2.1391	10833	6489			0.77	No, Vu<V
SLU 83	7.77	-29135	8385	-1942.85		47623	2.185	10833	6628			0.79	No, Vu<V
SLU 76	5.97	-29454	8957	12277.68		51897	2.027	10833	6148			0.69	No, Vu<V
SLU 76	7.77	-28434	8903	-1853.61		46475	2.185	10833	6628			0.74	No, Vu<V

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 7	5.97	-13182	7481	8739		36532	1.2887	15640	5644			0.75	No, Vu<V
SLV 7	7.77	-15114	6163	-2373.32		24705	2.185	13274	8121			1.32	Si
SLV 6	5.97	-33998	9338	12378.44		55571	2.185	16250	9942			1.06	Si
SLV 6	7.77	-31365	10412	-2649.16		51266	2.185	16250	9942			0.95	No, Vu<V
SLV 1	5.97	-33551	15757	17765.82		70946	1.6889	16250	7685			0.49	No, Vu<V
SLV 1	7.77	-34997	15712	-5660.06		57204	2.185	16250	9942			0.63	No, Vu<V
SLV 3	5.97	-27306	15200	16673.99		67461	1.4456	16250	6577			0.43	No, Vu<V
SLV 3	7.77	-30122	14438	-5577.31		49235	2.185	16250	9942			0.69	No, Vu<V
SLV 15	5.97	-7769	-4998	-2357.97		12699	2.185	10873	6652			1.33	Si
SLV 15	7.77	-3493	-4956	3301.1		28186	0.4427	13970	1732			0.35	No, Vu<V
SLV 2	5.97	-33551	15757	17765.82		70946	1.6889	16250	7685			0.49	No, Vu<V
SLV 2	7.77	-34997	15712	-5660.06		57204	2.185	16250	9942			0.63	No, Vu<V
SLV 16	5.97	-7769	-4998	-2357.97		12699	2.185	10873	6652			1.33	Si
SLV 16	7.77	-3493	-4956	3301.1		28186	0.4427	13970	1732			0.35	No, Vu<V
SLV 4	5.97	-27306	15200	16673.99		67461	1.4456	16250	6577			0.43	No, Vu<V
SLV 4	7.77	-30122	14438	-5577.31		49235	2.185	16250	9942			0.69	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 5	5.97	-33998	9338	12378.44		55571	2.185	16250	9942			1.06	Si
SLV 5	7.77	-31365	10412	-2649.16		51266	2.185	16250	9942			0.95	No, Vu<V
SLV 8	5.97	-13182	7481	8739		36532	1.2887	15640	5644			0.75	No, Vu<V
SLV 8	7.77	-15114	6163	-2373.32		24705	2.185	13274	8121			1.32	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 16	143750	0.39	9098	-5566	228.08	721.23	3.16	Si
SLV 15	143750	0.39	9098	-5566	228.08	721.23	3.16	Si
SLV 11	143750	0.39	11955	-7314	228.08	923.8	4.05	Si
SLV 12	143750	0.39	11955	-7314	228.08	923.8	4.05	Si
SLV 13	143750	0.39	17994	-11009	228.08	1314.27	5.76	Si
SLV 14	143750	0.39	17994	-11009	228.08	1314.27	5.76	Si
SLV 7	143750	0.39	23301	-14255	228.08	1615.16	7.08	Si
SLV 8	143750	0.39	23301	-14255	228.08	1615.16	7.08	Si
SLV 9	143750	0.39	41609	-25457	228.08	2350.28	10.3	Si
SLV 10	143750	0.39	41609	-25457	228.08	2350.28	10.3	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 3	-21387	-33257	-65	0.04	2483.3	0.963	0.60319	8.88274	No
SLV 4	-21387	-33257	-65	0.04	2483.3	0.963	0.60319	8.88274	No
SLV 1	-24986	-39339	-32	0.041	2849.7	0.967	0.61757	8.88274	No
SLV 2	-24986	-39339	-32	0.041	2849.7	0.967	0.61757	8.88274	No
SLV 13	-8434	-10484	64	0.041	1169	0.929	0.63615	8.88274	No
SLV 14	-8434	-10484	64	0.041	1169	0.929	0.63615	8.88274	No
SLV 9	-18427	-27678	69	0.04	2182.3	0.958	0.60426	7.63299	No
SLV 10	-18427	-27678	69	0.04	2182.3	0.958	0.60426	7.63299	No
SLV 5	-23393	-36334	40	0.041	2687.5	0.966	0.6157	7.63299	No
SLV 6	-23393	-36334	40	0.041	2687.5	0.966	0.6157	7.63299	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.055	SLU 84	Si
V_SLU	0.686	SLU 76	No
PF_SLV	1.102	SLV 15	Si
V_SLV	0.349	SLV 15	No
PFFP_SLV	3.162	SLV 15	Si
R_SLV	0.068	SLV 3	No

Maschio 116

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.368	-3.359	-21.593	-3.359	L4	L5	2.225	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	f ν_0	μ	ϕ	f ν_{lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 73	7.07	-15135	-1943.97	24293	11815.88	6.078	Si
SLU 73	7.87	-13883	-2099.05	22284	11219.51	5.345	Si
SLU 70	7.07	-15167	-1750.54	24346	11830.56	6.758	Si
SLU 70	7.87	-13875	-2070.23	22271	11215.63	5.418	Si
SLU 75	7.07	-16282	-1885.46	26135	12302.33	6.525	Si
SLU 75	7.87	-14966	-2188.1	24023	11739.67	5.365	Si
SLU 84	7.07	-16713	-1934.51	26826	12469.79	6.446	Si
SLU 84	7.87	-15397	-2250.24	24714	11932.06	5.303	Si
SLU 76	7.07	-15562	-1971.79	24980	12003.99	6.088	Si
SLU 76	7.87	-14316	-2175.43	22980	11433.95	5.256	Si
SLU 78	7.07	-16710	-1913.28	26822	12468.9	6.517	Si
SLU 78	7.87	-15400	-2264.47	24719	11933.5	5.27	Si
SLU 80	7.07	-16479	-1892.58	26452	12379.97	6.541	Si
SLU 80	7.87	-15177	-2243.37	24361	11834.86	5.275	Si
SLU 82	7.07	-16285	-1906.7	26139	12303.26	6.453	Si
SLU 82	7.87	-14963	-2173.87	24017	11738.18	5.4	Si
SLU 55	7.07	-14013	-1815.68	22493	11284.92	6.215	Si
SLU 55	7.87	-12797	-1973.9	20541	10646.63	5.394	Si
SLU 68	7.07	-14019	-1809.05	22503	11287.99	6.24	Si
SLU 68	7.87	-12791	-1981.18	20532	10643.64	5.372	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 15	7.07	-12154	-3352.73	19509	11362.54	3.389	Si
SLV 15	7.87	-8850	3052.45	14205	8700.87	2.85	Si
SLV 16	7.07	-12154	-3352.73	19509	11362.54	3.389	Si
SLV 16	7.87	-8850	3052.45	14205	8700.87	2.85	Si
SLV 3	7.07	-7779	671.71	12487	7770.01	11.567	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 3	7.87	-9264	-5602.33	14871	9052.31	1.616	Si
SLV 1	7.07	-10837	999.61	17395	10339.77	10.344	Si
SLV 1	7.87	-12006	-5972.91	19272	11250.38	1.884	Si
SLV 12	7.07	-7056	-2326.72	11325	7121.84	3.061	Si
SLV 12	7.87	-5796	455.61	9303	5957.1	13.075	Si
SLV 7	7.07	-5743	-1119.39	9219	5907.23	5.277	Si
SLV 7	7.87	-5920	-2140.83	9503	6074.16	2.837	Si
SLV 8	7.07	-5743	-1119.39	9219	5907.23	5.277	Si
SLV 8	7.87	-5920	-2140.83	9503	6074.16	2.837	Si
SLV 4	7.07	-7779	671.71	12487	7770.01	11.567	Si
SLV 4	7.87	-9264	-5602.33	14871	9052.31	1.616	Si
SLV 11	7.07	-7056	-2326.72	11325	7121.84	3.061	Si
SLV 11	7.87	-5796	455.61	9303	5957.1	13.075	Si
SLV 2	7.07	-10837	999.61	17395	10339.77	10.344	Si
SLV 2	7.87	-12006	-5972.91	19272	11250.38	1.884	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 2	7.07	-9390	-78	-1353.01		15072	2.225	7565	4713			60.75	Si
SLU 2	7.87	-8492	-181	-1368.23		13630	2.225	7373	4593			25.33	Si
SLU 31	7.07	-12482	-17	-1671.85		20035	2.225	8227	5125			304.24	Si
SLU 31	7.87	-11536	-210	-1764		18517	2.225	8025	4999			23.86	Si
SLU 44	7.07	-12042	-89	-1625.12		19329	2.225	8133	5067			56.72	Si
SLU 44	7.87	-10838	-196	-1703.28		17397	2.225	7875	4906			25.04	Si
SLU 65	7.07	-13591	-48	-1781.23		21816	2.225	8464	5273			109.33	Si
SLU 65	7.87	-12358	-201	-1904.81		19836	2.225	8200	5109			25.42	Si
SLU 37	7.07	-14560	214	-1459.94		23371	2.225	8672	5402			25.27	Si
SLU 37	7.87	-13470	5	-1895.67		21622	2.225	8438	5257			1000	Si
SLU 35	7.07	-14791	204	-1480.64		23742	2.225	8721	5433			26.69	Si
SLU 35	7.87	-13693	-9	-1916.77		21980	2.225	8486	5287			592.42	Si
SLU 23	7.07	-10939	-36	-1509.12		17559	2.225	7897	4920			134.82	Si
SLU 23	7.87	-10011	-186	-1569.76		16069	2.225	7698	4796			25.73	Si
SLU 10	7.07	-10933	-58	-1515.74		17549	2.225	7895	4919			84.9	Si
SLU 10	7.87	-10017	-204	-1562.48		16078	2.225	7699	4797			23.46	Si
SLU 73	7.07	-15135	-29	-1943.97		24293	2.225	8795	5479			191.65	Si
SLU 73	7.87	-13883	-224	-2099.05		22284	2.225	8527	5312			23.7	Si
SLU 52	7.07	-13585	-70	-1787.86		21806	2.225	8463	5272			75.67	Si
SLU 52	7.87	-12363	-219	-1897.53		19845	2.225	8201	5110			23.32	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 16	7.07	-12154	-12217	-3352.73		19509	2.225	12235	7622			0.62	No, Vu<V
SLV 16	7.87	-8850	-9915	3052.45		14205	2.225	11174	6962			0.7	No, Vu<V
SLV 1	7.07	-10837	12268	999.61		17395	2.225	11812	7359			0.6	No, Vu<V
SLV 1	7.87	-12006	9790	-5972.91		23240	1.8451	12981	6706			0.69	No, Vu<V
SLV 12	7.07	-7056	-5409	-2326.72		11325	2.225	10598	6603			1.22	Si
SLV 12	7.87	-5796	-5132	455.61		9303	2.225	10194	6351			1.24	Si
SLV 14	7.07	-15212	-11056	-3024.84		24417	2.225	13217	8234			0.74	No, Vu<V
SLV 14	7.87	-11592	-8521	2681.88		18606	2.225	12055	7510			0.88	No, Vu<V
SLV 11	7.07	-7056	-5409	-2326.72		11325	2.225	10598	6603			1.22	Si
SLV 11	7.87	-5796	-5132	455.61		9303	2.225	10194	6351			1.24	Si
SLV 2	7.07	-10837	12268	999.61		17395	2.225	11812	7359			0.6	No, Vu<V
SLV 2	7.87	-12006	9790	-5972.91		23240	1.8451	12981	6706			0.69	No, Vu<V
SLV 4	7.07	-7779	11106	671.71		12487	2.225	10831	6748			0.61	No, Vu<V
SLV 4	7.87	-9264	8396	-5602.33		21720	1.5234	12677	5407			0.64	No, Vu<V
SLV 15	7.07	-12154	-12217	-3352.73		19509	2.225	12235	7622			0.62	No, Vu<V
SLV 15	7.87	-8850	-9915	3052.45		14205	2.225	11174	6962			0.7	No, Vu<V
SLV 3	7.07	-7779	11106	671.71		12487	2.225	10831	6748			0.61	No, Vu<V
SLV 3	7.87	-9264	8396	-5602.33		21720	1.5234	12677	5407			0.64	No, Vu<V
SLV 13	7.07	-15212	-11056	-3024.84		24417	2.225	13217	8234			0.74	No, Vu<V
SLV 13	7.87	-11592	-8521	2681.88		18606	2.225	12055	7510			0.88	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 8	143750	0.39	9164	-5709	232.25	739.35	3.18	Si
SLV 7	143750	0.39	9164	-5709	232.25	739.35	3.18	Si
SLV 11	143750	0.39	9498	-5917	232.25	764	3.29	Si
SLV 12	143750	0.39	9498	-5917	232.25	764	3.29	Si
SLV 3	143750	0.39	14307	-8913	232.25	1101.74	4.74	Si
SLV 4	143750	0.39	14307	-8913	232.25	1101.74	4.74	Si
SLV 15	143750	0.39	15419	-9606	232.25	1175.13	5.06	Si
SLV 16	143750	0.39	15419	-9606	232.25	1175.13	5.06	Si
SLV 1	143750	0.39	19049	-11867	232.25	1402.41	6.04	Si
SLV 2	143750	0.39	19049	-11867	232.25	1402.41	6.04	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 1	-9771	-11184	71	0.04	1309.7	0.934	0.62315	8.88274	No
SLV 2	-9771	-11184	71	0.04	1309.7	0.934	0.62315	8.88274	No
SLV 16	-8356	-7144	-69	0.04	1166.9	0.928	0.63217	8.88274	No
SLV 15	-8356	-7144	-69	0.04	1166.9	0.928	0.63217	8.88274	No
SLV 12	-6448	-3083	-109	0.036	975.3	0.917	0.56807	7.63299	No
SLV 11	-6448	-3083	-109	0.036	975.3	0.917	0.56807	7.63299	No
SLV 5	-11678	-15244	111	0.037	1502.7	0.941	0.57215	7.63299	No
SLV 6	-11678	-15244	111	0.037	1502.7	0.941	0.57215	7.63299	No
SLV 10	-11729	-15115	86	0.039	1507.9	0.942	0.59969	7.63299	No
SLV 9	-11729	-15115	86	0.039	1507.9	0.942	0.59969	7.63299	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.256	SLU 76	Si
V_SLU	23.325	SLU 52	Si
PF_SLV	1.616	SLV 3	Si
V_SLV	0.6	SLV 1	No
PFFP_SLV	3.183	SLV 7	Si
R_SLV	0.07	SLV 1	No

Maschio 117

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.263	-3.359	-18.868	-3.359	L4	L5	0.605	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLU 73	7.07	-5831	67.4	34423	1018.53	15.112	Si
SLU 73	7.87	-5212	325.23	30768	981.13	3.017	Si
SLU 82	7.07	-6234	86.67	36798	1033.83	11.928	Si
SLU 82	7.87	-5611	323.61	33120	1007.13	3.112	Si
SLU 68	7.07	-5405	67.67	31905	994.57	14.698	Si
SLU 68	7.87	-4759	300.47	28094	943.12	3.139	Si
SLU 52	7.07	-5256	59.26	31029	984.36	16.611	Si
SLU 52	7.87	-4653	296.48	27465	932.87	3.147	Si
SLU 84	7.07	-6399	93.92	37776	1038.07	11.053	Si
SLU 84	7.87	-5751	327.31	33951	1014.65	3.1	Si
SLU 75	7.07	-6217	90.72	36700	1033.34	11.39	Si
SLU 75	7.87	-5568	321.22	32866	1004.66	3.128	Si
SLU 55	7.07	-5422	66.51	32007	995.7	14.971	Si
SLU 55	7.87	-4793	300.17	28296	946.3	3.153	Si
SLU 78	7.07	-6383	97.97	37678	1037.7	10.592	Si
SLU 78	7.87	-5708	324.91	33697	1012.44	3.116	Si
SLU 65	7.07	-5239	60.42	30926	983.1	16.272	Si
SLU 65	7.87	-4618	296.77	27263	929.48	3.132	Si
SLU 76	7.07	-5997	74.65	35401	1025.69	13.74	Si
SLU 76	7.87	-5353	328.92	31599	991.11	3.013	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma M = 2$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLV 11	7.07	-2217	-409.98	13086	598.78	1.46	Si
SLV 11	7.87	-4395	509.57	25942	1047.13	2.055	Si
SLV 12	7.07	-2217	-409.98	13086	598.78	1.46	Si
SLV 12	7.87	-4395	509.57	25942	1047.13	2.055	Si
SLV 13	7.07	-1632	-805.51	0	0	0	No, $e>l/2$
SLV 13	7.87	-3387	1229.47	0	0	0	No, $e>l/2$
SLV 14	7.07	-1632	-805.51	0	0	0	No, $e>l/2$
SLV 14	7.87	-3387	1229.47	0	0	0	No, $e>l/2$
SLV 4	7.07	-7084	961.48	41820	1409.54	1.466	Si
SLV 4	7.87	-4365	-822.39	25768	1041.99	1.267	Si
SLV 2	7.07	-7813	1084.18	46122	1471.32	1.357	Si
SLV 2	7.87	-3999	-821.42	23607	975.99	1.188	Si
SLV 15	7.07	-904	-928.22	0	0	0	No, $e>l/2$
SLV 15	7.87	-3753	1228.51	0	0	0	No, $e>l/2$
SLV 16	7.07	-904	-928.22	0	0	0	No, $e>l/2$
SLV 16	7.87	-3753	1228.51	0	0	0	No, $e>l/2$
SLV 1	7.07	-7813	1084.18	46122	1471.32	1.357	Si
SLV 1	7.87	-3999	-821.42	23607	975.99	1.188	Si
SLV 3	7.07	-7084	961.48	41820	1409.54	1.466	Si
SLV 3	7.87	-4365	-822.39	25768	1041.99	1.267	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	V par	M	$\sigma 0$	σN	l'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 77	7.07	-6605	89	122.39		38993	0.605	10755	1822			20.5	Si
SLU 77	7.87	-5924	-262	304.2		34972	0.605	10218	1731			6.6	Si
SLU 39	7.07	-5446	54	91.78		32148	0.605	9842	1667			30.75	Si
SLU 39	7.87	-4954	-259	256.6		29247	0.605	9455	1602			6.19	Si
SLU 82	7.07	-6234	-30	86.67		36798	0.605	10462	1772			58.73	Si
SLU 82	7.87	-5611	-270	323.61		33120	0.605	9972	1689			6.26	Si
SLU 74	7.07	-6440	73	115.14		38015	0.605	10624	1800			24.52	Si
SLU 74	7.87	-5784	-267	300.51		34141	0.605	10108	1712			6.4	Si
SLU 83	7.07	-6622	83	118.33		39091	0.605	10768	1824			22.09	Si
SLU 83	7.87	-5967	-287	306.6		35226	0.605	10252	1737			6.06	Si
SLU 62	7.07	-6047	81	110.19		35698	0.605	10315	1747			21.64	Si
SLU 62	7.87	-5408	-252	277.85		31923	0.605	9812	1662			6.6	Si
SLU 60	7.07	-5881	65	102.94		34719	0.605	10185	1725			26.42	Si
SLU 60	7.87	-5267	-257	274.15		31092	0.605	9701	1643			6.4	Si
SLU 84	7.07	-6399	-15	93.92		37776	0.605	10592	1794			121.87	Si
SLU 84	7.87	-5751	-265	327.31		33951	0.605	10082	1708			6.45	Si
SLU 41	7.07	-5612	70	99.03		33127	0.605	9972	1689			24.25	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 41	7.87	-5095	-254	260.29		30077	0.605	9566	1620			6.38	Si
SLU 81	7.07	-6456	67	111.09		38113	0.605	10637	1802			26.85	Si
SLU 81	7.87	-5827	-292	302.9		34395	0.605	10142	1718			5.89	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 2	7.07	-7813	3573	1084.18		56807	0.4912	16250	2235			0.63	No, Vu<V
SLV 2	7.87	-3999	1221	-821.42		49032	0.2913	16250	1325			1.09	Si
SLV 14	7.07	-1632	-3716	-805.51		0	0	8333	0			0	No, Vu<V
SLV 14	7.87	-3387	-1155	1229.47		0	0	8333	0			0	No, Vu<V
SLV 7	7.07	-4071	1535	156.93		24032	0.605	13140	2226			1.45	Si
SLV 7	7.87	-4578	-511	-105.7		27026	0.605	13739	2327			4.55	Si
SLV 15	7.07	-904	-3479	-928.22		0	0	8333	0			0	No, Vu<V
SLV 15	7.87	-3753	-1570	1228.51		0	0	8333	0			0	No, Vu<V
SLV 3	7.07	-7084	3810	961.48		50568	0.5003	16250	2277			0.6	No, Vu<V
SLV 3	7.87	-4365	805	-822.39		45544	0.3423	16250	1558			1.93	Si
SLV 13	7.07	-1632	-3716	-805.51		0	0	8333	0			0	No, Vu<V
SLV 13	7.87	-3387	-1155	1229.47		0	0	8333	0			0	No, Vu<V
SLV 4	7.07	-7084	3810	961.48		50568	0.5003	16250	2277			0.6	No, Vu<V
SLV 4	7.87	-4365	805	-822.39		45544	0.3423	16250	1558			1.93	Si
SLV 16	7.07	-904	-3479	-928.22		0	0	8333	0			0	No, Vu<V
SLV 16	7.87	-3753	-1570	1228.51		0	0	8333	0			0	No, Vu<V
SLV 1	7.07	-7813	3573	1084.18		56807	0.4912	16250	2235			0.63	No, Vu<V
SLV 1	7.87	-3999	1221	-821.42		49032	0.2913	16250	1325			1.09	Si
SLV 8	7.07	-4071	1535	156.93		24032	0.605	13140	2226			1.45	Si
SLV 8	7.87	-4578	-511	-105.7		27026	0.605	13739	2327			4.55	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 12	143750	0.39	11020	-1867	63.15	237.79	3.77	Si
SLV 11	143750	0.39	11020	-1867	63.15	237.79	3.77	Si
SLV 16	143750	0.39	12741	-2158	63.15	270.66	4.29	Si
SLV 15	143750	0.39	12741	-2158	63.15	270.66	4.29	Si
SLV 8	143750	0.39	14313	-2425	63.15	299.69	4.75	Si
SLV 7	143750	0.39	14313	-2425	63.15	299.69	4.75	Si
SLV 13	143750	0.39	17509	-2966	63.15	355.73	5.63	Si
SLV 14	143750	0.39	17509	-2966	63.15	355.73	5.63	Si
SLV 3	143750	0.39	23717	-4018	63.15	453.29	7.18	Si
SLV 4	143750	0.39	23717	-4018	63.15	453.29	7.18	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 14	-1645	-4154	-147	0	254.3	0.915	0	8.88274	No
SLV 16	-1680	-3246	-146	0	257.9	0.916	0	8.88274	No
SLV 13	-1645	-4154	-147	0	254.3	0.915	0	8.88274	No
SLV 15	-1680	-3246	-146	0	257.9	0.916	0	8.88274	No
SLV 2	-2578	-3011	143	0	348.2	0.933	0.00441	8.88274	No
SLV 1	-2578	-3011	143	0	348.2	0.933	0.00441	8.88274	No
SLV 4	-2614	-2103	144	0.001	351.8	0.934	0.00799	8.88274	No
SLV 3	-2614	-2103	144	0.001	351.8	0.934	0.00799	8.88274	No
SLV 10	-1930	-4814	-46	0.029	282.9	0.921	0.465	7.63299	No
SLV 9	-1930	-4814	-46	0.029	282.9	0.921	0.465	7.63299	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.013	SLU 76	Si
V_SLU	5.888	SLU 81	Si
PF_SLV	0	SLV 13	No
V_SLV	0	SLV 13	No
PFFP_SLV	3.765	SLV 11	Si
R_SLV	0	SLV 13	No

Maschio 118

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-19.618	1.046	-19.618	5.811	L4	L5	4.765	0.14	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 41	5.07	-28576	-2268.79	42835	32282.27	14.229	Si
SLU 41	8.62	-19049	-1913.89	28555	29476.62	15.401	Si
SLU 74	5.07	-32615	-2219.77	48889	31069.46	13.997	Si
SLU 74	8.62	-21987	-1822.97	32957	31190.24	17.11	Si
SLU 78	5.07	-33118	-2270.59	49643	30818.32	13.573	Si
SLU 78	8.62	-22777	-1785.35	34143	31522.35	17.656	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 81	5.07	-32957	-2217.35	49403	30900.95	13.936	Si
SLU 81	8.62	-21661	-1986.63	32469	31037.47	15.623	Si
SLU 80	5.07	-32746	-2213.28	49085	31006.45	14.009	Si
SLU 80	8.62	-22493	-1649.43	33717	31409.31	19.043	Si
SLU 79	5.07	-32866	-2322.4	49265	30947.07	13.325	Si
SLU 79	8.62	-22503	-1646.95	33731	31413.2	19.074	Si
SLU 83	5.07	-33581	-2377.3	50337	30567.79	12.858	Si
SLU 83	8.62	-22461	-1946.52	33669	31396.1	16.129	Si
SLU 35	5.07	-28234	-2271.21	42322	32319.3	14.23	Si
SLU 35	8.62	-19375	-1750.24	29043	29703.99	16.971	Si
SLU 84	5.07	-33460	-2268.18	50156	30634.71	13.506	Si
SLU 84	8.62	-22452	-1949.01	33654	31392.18	16.107	Si
SLU 77	5.07	-33238	-2379.72	49823	30755	12.924	Si
SLU 77	8.62	-22787	-1782.87	34157	31526	17.683	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 5	5.07	-18492	-6918.59	27719	34063.07	4.923	Si
SLV 5	8.62	-11341	-2429.14	17001	23262.14	9.576	Si
SLV 9	5.07	-16772	-3681.26	25141	31738.67	8.622	Si
SLV 9	8.62	-9352	-2464.7	14019	19725.67	8.003	Si
SLV 2	5.07	-23636	-7820.1	35429	39985	5.113	Si
SLV 2	8.62	-16763	-1329.5	25128	31726.09	23.863	Si
SLV 3	5.07	-26325	-5355.49	39461	42465.62	7.929	Si
SLV 3	8.62	-19421	-422.53	29112	35247.66	83.421	Si
SLV 6	5.07	-18492	-6918.59	27719	34063.07	4.923	Si
SLV 6	8.62	-11341	-2429.14	17001	23262.14	9.576	Si
SLV 1	5.07	-23636	-7820.1	35429	39985	5.113	Si
SLV 1	8.62	-16763	-1329.5	25128	31726.09	23.863	Si
SLV 16	5.07	-20594	5435.6	30870	36670.16	6.746	Si
SLV 16	8.62	-12790	-541.08	19172	25691.78	47.482	Si
SLV 10	5.07	-16772	-3681.26	25141	31738.67	8.622	Si
SLV 10	8.62	-9352	-2464.7	14019	19725.67	8.003	Si
SLV 4	5.07	-26325	-5355.49	39461	42465.62	7.929	Si
SLV 4	8.62	-19421	-422.53	29112	35247.66	83.421	Si
SLV 15	5.07	-20594	5435.6	30870	36670.16	6.746	Si
SLV 15	8.62	-12790	-541.08	19172	25691.78	47.482	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 78	5.07	-33118	1021	-2270.59		49643	4.7652	10833	7227			7.08	Si
SLU 78	8.62	-22777	618	-1785.35		34143	4.7652	10108	6743			10.91	Si
SLU 84	5.07	-33460	1065	-2268.18		50156	4.7652	10833	7227			6.78	Si
SLU 84	8.62	-22452	626	-1949.01		33654	4.7652	10043	6700			10.69	Si
SLU 76	5.07	-32042	998	-1980.58		48031	4.7652	10833	7227			7.24	Si
SLU 76	8.62	-21687	586	-1691.18		32508	4.7652	9890	6598			11.26	Si
SLU 82	5.07	-32837	1042	-2108.23		49222	4.7652	10833	7227			6.94	Si
SLU 82	8.62	-21651	596	-1989.11		32455	4.7652	9883	6593			11.05	Si
SLU 81	5.07	-32957	1020	-2217.35		49403	4.7652	10833	7227			7.09	Si
SLU 81	8.62	-21661	590	-1986.63		32469	4.7652	9885	6594			11.18	Si
SLU 83	5.07	-33581	1043	-2377.3		50337	4.7652	10833	7227			6.93	Si
SLU 83	8.62	-22461	620	-1946.52		33669	4.7652	10045	6701			10.81	Si
SLU 79	5.07	-32866	984	-2322.4		49265	4.7652	10833	7227			7.35	Si
SLU 79	8.62	-22503	605	-1646.95		33731	4.7652	10053	6707			11.09	Si
SLU 75	5.07	-32495	998	-2110.64		48709	4.7652	10833	7227			7.24	Si
SLU 75	8.62	-21977	588	-1825.45		32943	4.7652	9948	6637			11.29	Si
SLU 80	5.07	-32746	1006	-2213.28		49085	4.7652	10833	7227			7.18	Si
SLU 80	8.62	-22493	612	-1649.43		33717	4.7652	10051	6705			10.97	Si
SLU 77	5.07	-33238	999	-2379.72		49823	4.7652	10833	7227			7.24	Si
SLU 77	8.62	-22787	611	-1782.87		34157	4.7652	10110	6744			11.03	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 14	5.07	-17904	-6506	2971		26838	4.7652	13701	9140			1.4	Si
SLV 14	8.62	-10132	-5268	-1448.06		15188	4.7652	11371	7586			1.44	Si
SLV 11	5.07	-25738	11810	4534.1		38580	4.7652	16049	10707			0.91	No, Vu<V
SLV 11	8.62	-18212	10977	558.55		27299	4.7652	13793	9202			0.84	No, Vu<V
SLV 6	5.07	-18492	-10625	-6918.59		27719	4.7652	13877	9258			0.87	No, Vu<V
SLV 6	8.62	-11341	-10282	-2429.14		17001	4.7652	11733	7828			0.76	No, Vu<V
SLV 12	5.07	-25738	11810	4534.1		38580	4.7652	16049	10707			0.91	No, Vu<V
SLV 12	8.62	-18212	10977	558.55		27299	4.7652	13793	9202			0.84	No, Vu<V
SLV 5	5.07	-18492	-10625	-6918.59		27719	4.7652	13877	9258			0.87	No, Vu<V
SLV 5	8.62	-11341	-10282	-2429.14		17001	4.7652	11733	7828			0.76	No, Vu<V
SLV 8	5.07	-27457	13865	1296.77		41158	4.7652	16250	10841			0.78	No, Vu<V
SLV 8	8.62	-20201	12312	594.12		30281	4.7652	14390	9600			0.78	No, Vu<V
SLV 10	5.07	-16772	-12680	-3681.26		25141	4.7652	13362	8914			0.7	No, Vu<V
SLV 10	8.62	-9352	-11618	-2464.7		14019	4.7652	11137	7430			0.64	No, Vu<V
SLV 7	5.07	-27457	13865	1296.77		41158	4.7652	16250	10841			0.78	No, Vu<V
SLV 7	8.62	-20201	12312	594.12		30281	4.7652	14390	9600			0.78	No, Vu<V
SLV 13	5.07	-17904	-6506	2971		26838	4.7652	13701	9140			1.4	Si
SLV 13	8.62	-10132	-5268	-1448.06		15188	4.7652	11371	7586			1.44	Si
SLV 9	5.07	-16772	-12680	-3681.26		25141	4.7652	13362	8914			0.7	No, Vu<V
SLV 9	8.62	-9352	-11618	-2464.7		14019	4.7652	11137	7430			0.64	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 10	143750	0.39	20000	-13343	266.05	781.1	2.94	Si
SLV 9	143750	0.39	20000	-13343	266.05	781.1	2.94	Si



Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 6	143750	0.39	20642	-13771	266.05	801.09	3.01	Si
SLV 5	143750	0.39	20642	-13771	266.05	801.09	3.01	Si
SLV 14	143750	0.39	23621	-15758	266.05	889.83	3.34	Si
SLV 13	143750	0.39	23621	-15758	266.05	889.83	3.34	Si
SLV 2	143750	0.39	25760	-17185	266.05	949.33	3.57	Si
SLV 1	143750	0.39	25760	-17185	266.05	949.33	3.57	Si
SLV 15	143750	0.39	27367	-18257	266.05	991.74	3.73	Si
SLV 16	143750	0.39	27367	-18257	266.05	991.74	3.73	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.03 Ta = 0.1503

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 1	-16763	-23636	-39	0.02	2041.2	0.952	0.30352	16.59208	No
SLV 2	-16763	-23636	-39	0.02	2041.2	0.952	0.30352	16.59208	No
SLV 11	-18212	-25738	43	0.02	2188.4	0.955	0.29934	16.14305	No
SLV 12	-18212	-25738	43	0.02	2188.4	0.955	0.29934	16.14305	No
SLV 16	-12790	-20594	37	0.02	1638	0.942	0.30913	16.59208	No
SLV 15	-12790	-20594	37	0.02	1638	0.942	0.30913	16.59208	No
SLV 6	-11341	-18492	-45	0.02	1491.4	0.938	0.30275	16.14305	No
SLV 5	-11341	-18492	-45	0.02	1491.4	0.938	0.30275	16.14305	No
SLV 3	-19421	-26325	-17	0.021	2311.3	0.957	0.31663	16.59208	No
SLV 4	-19421	-26325	-17	0.021	2311.3	0.957	0.31663	16.59208	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	12.858	SLU 83	Si
V_SLU	6.784	SLU 84	Si
PF_SLV	4.923	SLV 5	Si
V_SLV	0.64	SLV 9	No
PFFP_SLV	2.936	SLV 9	Si
R_SLV	0.018	SLV 1	No

Maschio 119

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.618	5.951	-19.618	6.661	L4	L5	0.71	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	t0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 41	5.07	-4272	-555.41	21487	1116.42	2.01	Si
SLU 41	8.62	-4692	480.22	23600	1183	2.463	Si
SLU 35	5.07	-4217	-544.26	21214	1107.24	2.034	Si
SLU 35	8.62	-4816	485.15	24225	1201.23	2.476	Si
SLU 37	5.07	-4151	-540.26	20879	1095.84	2.028	Si
SLU 37	8.62	-4772	484.25	24004	1194.86	2.467	Si
SLU 77	5.07	-5209	-602.99	26203	1254.39	2.08	Si
SLU 77	8.62	-5686	535.15	28601	1309.77	2.447	Si
SLU 36	5.07	-4229	-542.9	21271	1109.18	2.043	Si
SLU 36	8.62	-4818	484.07	24238	1201.58	2.482	Si
SLU 42	5.07	-4283	-554.05	21544	1118.33	2.018	Si
SLU 42	8.62	-4694	479.13	23612	1183.37	2.47	Si
SLU 79	5.07	-5143	-598.99	25868	1245.88	2.08	Si
SLU 79	8.62	-5642	534.24	28380	1305.08	2.443	Si
SLU 38	5.07	-4162	-538.9	20937	1097.81	2.037	Si
SLU 38	8.62	-4775	483.16	24017	1195.22	2.474	Si
SLU 83	5.07	-5263	-614.14	26476	1261.2	2.054	Si
SLU 83	8.62	-5562	530.21	27975	1296.29	2.445	Si
SLU 84	5.07	-5275	-612.78	26533	1262.62	2.06	Si
SLU 84	8.62	-5564	529.13	27988	1296.56	2.45	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 4	5.07	1520	-1539.03	0	0	0	No, Trazione
SLV 4	8.62	-6936	1498.02	34889	1759.19	1.174	Si
SLV 2	5.07	3716	-1754.26	0	0	0	No, Trazione
SLV 2	8.62	-6094	2017.28	30655	1620.67	0.803	No, M>Mu
SLV 5	5.07	1784	-1098.17	0	0	0	No, Trazione
SLV 5	8.62	-3127	1600.8	0	0	0	No, e>l/2
SLV 14	5.07	-9124	837.71	45896	2022.41	2.414	Si
SLV 14	8.62	-423	-903.51	0	0	0	No, e>l/2
SLV 9	5.07	-2068	-320.57	10403	671.65	2.095	Si
SLV 9	8.62	-1426	724.56	0	0	0	No, e>l/2
SLV 10	5.07	-2068	-320.57	10403	671.65	2.095	Si
SLV 10	8.62	-1426	724.56	0	0	0	No, e>l/2
SLV 3	5.07	1520	-1539.03	0	0	0	No, Trazione
SLV 3	8.62	-6936	1498.02	34889	1759.19	1.174	Si
SLV 13	5.07	-9124	837.71	45896	2022.41	2.414	Si
SLV 13	8.62	-423	-903.51	0	0	0	No, e>l/2



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 1	5.07	3716	-1754.26	0	0	0	No, Trazione
SLV 1	8.62	-6094	2017.28	30655	1620.67	0.803	No, M>Mu
SLV 6	5.07	1784	-1098.17	0	0	0	No, Trazione
SLV 6	8.62	-3127	1600.8	0	0	0	No, e>1/2

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 41	5.07	-4272	-995	-555.41		22603	0.6749	8569	1619			1.63	Si
SLU 41	8.62	-4692	-614	480.22		23600	0.71	8702	1730			2.82	Si
SLU 35	5.07	-4217	-981	-544.26		22220	0.6778	8518	1617			1.65	Si
SLU 35	8.62	-4816	-636	485.15		24225	0.71	8786	1747			2.75	Si
SLU 38	5.07	-4162	-972	-538.9		21971	0.6766	8485	1607			1.65	Si
SLU 38	8.62	-4775	-635	483.16		24017	0.71	8758	1741			2.74	Si
SLU 37	5.07	-4151	-975	-540.26		21977	0.6745	8486	1603			1.64	Si
SLU 37	8.62	-4772	-638	484.25		24004	0.71	8756	1741			2.73	Si
SLU 79	5.07	-5143	-1086	-598.99		25868	0.71	9005	1790			1.65	Si
SLU 79	8.62	-5642	-711	534.24		28380	0.71	9340	1857			2.61	Si
SLU 83	5.07	-5263	-1106	-614.14		26476	0.71	9086	1806			1.63	Si
SLU 83	8.62	-5562	-686	530.21		27975	0.71	9286	1846			2.69	Si
SLU 42	5.07	-4283	-992	-554.05		22597	0.6769	8569	1624			1.64	Si
SLU 42	8.62	-4694	-611	479.13		23612	0.71	8704	1730			2.83	Si
SLU 84	5.07	-5275	-1102	-612.78		26533	0.71	9093	1808			1.64	Si
SLU 84	8.62	-5564	-684	529.13		27988	0.71	9287	1846			2.7	Si
SLU 77	5.07	-5209	-1092	-602.99		26203	0.71	9049	1799			1.65	Si
SLU 77	8.62	-5686	-709	535.15		28601	0.71	9369	1863			2.63	Si
SLU 78	5.07	-5221	-1088	-601.62		26260	0.71	9057	1801			1.65	Si
SLU 78	8.62	-5688	-706	534.06		28613	0.71	9371	1863			2.64	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 10	5.07	-2068	-1444	-320.57		12311	0.6	10795	1814			1.26	Si
SLV 10	8.62	-1426	-597	724.56		0	0	8333	0			0	No, Vu<V
SLV 1	5.07	3716	-3618	-1754.26		0	0	8333	0			0	No, Vu<V
SLV 1	8.62	-6094	-2700	2017.28		302488	0.072	16250	327			0.12	No, Vu<V
SLV 9	5.07	-2068	-1444	-320.57		12311	0.6	10795	1814			1.26	Si
SLV 9	8.62	-1426	-597	724.56		0	0	8333	0			0	No, Vu<V
SLV 13	5.07	-9124	1409	837.71		45896	0.71	16250	3231			2.29	Si
SLV 13	8.62	-423	1422	-903.51		0	0	8333	0			0	No, Vu<V
SLV 2	5.07	3716	-3618	-1754.26		0	0	8333	0			0	No, Vu<V
SLV 2	8.62	-6094	-2700	2017.28		302488	0.072	16250	327			0.12	No, Vu<V
SLV 6	5.07	1784	-2952	-1098.17		0	0	8333	0			0	No, Vu<V
SLV 6	8.62	-3127	-1833	1600.8		0	0	8333	0			0	No, Vu<V
SLV 5	5.07	1784	-2952	-1098.17		0	0	8333	0			0	No, Vu<V
SLV 5	8.62	-3127	-1833	1600.8		0	0	8333	0			0	No, Vu<V
SLV 14	5.07	-9124	1409	837.71		45896	0.71	16250	3231			2.29	Si
SLV 14	8.62	-423	1422	-903.51		0	0	8333	0			0	No, Vu<V
SLV 4	5.07	1520	-2682	-1539.03		0	0	8333	0			0	No, Vu<V
SLV 4	8.62	-6936	-2207	1498.02		59395	0.4171	16250	1898			0.86	No, Vu<V
SLV 3	5.07	1520	-2682	-1539.03		0	0	8333	0			0	No, Vu<V
SLV 3	8.62	-6936	-2207	1498.02		59395	0.4171	16250	1898			0.86	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 5	143750	0.39	8100	-1610	75.84	210.5	2.78	Si
SLV 6	143750	0.39	8100	-1610	75.84	210.5	2.78	Si
SLV 1	143750	0.39	10228	-2033	75.84	260.84	3.44	Si
SLV 2	143750	0.39	10228	-2033	75.84	260.84	3.44	Si
SLV 9	143750	0.39	11665	-2319	75.84	293.67	3.87	Si
SLV 10	143750	0.39	11665	-2319	75.84	293.67	3.87	Si
SLV 3	143750	0.39	15617	-3105	75.84	379.11	5	Si
SLV 4	143750	0.39	15617	-3105	75.84	379.11	5	Si
SLV 13	143750	0.39	22112	-4396	75.84	504.05	6.65	Si
SLV 14	143750	0.39	22112	-4396	75.84	504.05	6.65	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 4	-6936	1520	-233	0	0	0	0	8.88274	No, Trazione
SLV 11	-4231	-9388	338	0	530.7	0.946	0	7.63299	No
SLV 9	-1426	-2068	-153	0	248.3	0.904	0	7.63299	No
SLV 6	-3127	1784	-337	0	0	0	0	7.63299	No, Trazione
SLV 2	-6094	3716	-380	0	0	0	0	8.88274	No, Trazione
SLV 5	-3127	1784	-337	0	0	0	0	7.63299	No, Trazione
SLV 10	-1426	-2068	-153	0	248.3	0.904	0	7.63299	No
SLV 12	-4231	-9388	338	0	530.7	0.946	0	7.63299	No
SLV 1	-6094	3716	-380	0	0	0	0	8.88274	No, Trazione
SLV 3	-6936	1520	-233	0	0	0	0	8.88274	No, Trazione

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.01	SLU 41	Si
V_SLU	1.627	SLU 41	Si
PF_SLV	0	SLV 6	No
V_SLV	0	SLV 1	No
PFFP_SLV	2.776	SLV 5	Si
R_SLV	0	SLV 6	No



Maschio 120

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.333	-3.359	-17.363	-3.359	L4	L5	1.03	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ ₀	f _{v0}	μ	φ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLU 44	5.97	-8047	-400.68	27904	2724.74	6.8	Si
SLU 44	7.77	-6794	788.98	23558	2487.05	3.152	Si
SLU 55	5.97	-9058	-388.47	31406	2866.19	7.378	Si
SLU 55	7.77	-7749	843.49	26868	2674.35	3.171	Si
SLU 47	5.97	-8278	-392.79	28703	2760.97	7.029	Si
SLU 47	7.77	-6989	803.6	24233	2528.48	3.146	Si
SLU 65	5.97	-8806	-418.6	30532	2835.09	6.773	Si
SLU 65	7.77	-7553	845.01	26190	2639.23	3.123	Si
SLU 78	5.97	-10219	-284.07	35434	2973.54	10.468	Si
SLU 78	7.77	-8708	868.96	30193	2822.26	3.248	Si
SLU 70	5.97	-9439	-288.38	32731	2908.02	10.084	Si
SLU 70	7.77	-7948	829.07	27558	2708.34	3.267	Si
SLU 68	5.97	-9036	-410.71	31332	2863.65	6.972	Si
SLU 68	7.77	-7748	859.63	26865	2674.18	3.111	Si
SLU 76	5.97	-9816	-406.39	34035	2942.96	7.242	Si
SLU 76	7.77	-8508	899.52	29500	2794.76	3.107	Si
SLU 73	5.97	-9585	-414.29	33236	2922.28	7.054	Si
SLU 73	7.77	-8313	884.9	28825	2766.29	3.126	Si
SLU 52	5.97	-8827	-396.37	30607	2837.85	7.16	Si
SLU 52	7.77	-7554	828.88	26193	2639.41	3.184	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLV 3	5.97	-9693	4058.04	33610	3618.8	0.892	No, M>Mu
SLV 3	7.77	-1136	-1571.17	0	0	0	No, e>l/2
SLV 8	5.97	-6249	2359.72	21667	2647.48	1.122	Si
SLV 8	7.77	-1089	-798.27	0	0	0	No, e>l/2
SLV 4	5.97	-9693	4058.04	33610	3618.8	0.892	No, M>Mu
SLV 4	7.77	-1136	-1571.17	0	0	0	No, e>l/2
SLV 7	5.97	-6249	2359.72	21667	2647.48	1.122	Si
SLV 7	7.77	-1089	-798.27	0	0	0	No, e>l/2
SLV 16	5.97	-3253	-3424.06	0	0	0	No, e>l/2
SLV 16	7.77	-8076	2179.86	28004	3206.03	1.471	Si
SLV 13	5.97	-4273	-4212.98	0	0	0	No, e>l/2
SLV 13	7.77	-10198	2642.69	35362	3732.13	1.412	Si
SLV 15	5.97	-3253	-3424.06	0	0	0	No, e>l/2
SLV 15	7.77	-8076	2179.86	28004	3206.03	1.471	Si
SLV 1	5.97	-10713	3269.12	37147	3839.94	1.175	Si
SLV 1	7.77	-3258	-1108.34	11296	1522.7	1.374	Si
SLV 14	5.97	-4273	-4212.98	0	0	0	No, e>l/2
SLV 14	7.77	-10198	2642.69	35362	3732.13	1.412	Si
SLV 2	5.97	-10713	3269.12	37147	3839.94	1.175	Si
SLV 2	7.77	-3258	-1108.34	11296	1522.7	1.374	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 52	5.97	-8827	-869	-396.37	30607	1.03	9636	2779				3.2	Si
SLU 52	7.77	-7554	-480	828.88	26193	1.03	9048	2609				5.43	Si
SLU 34	5.97	-8113	-881	-390.46	28129	1.03	9306	2684				3.04	Si
SLU 34	7.77	-7198	-369	766.22	24959	1.03	8883	2562				6.94	Si
SLU 31	5.97	-7882	-890	-398.36	27330	1.03	9200	2653				2.98	Si
SLU 31	7.77	-7004	-374	751.61	24284	1.03	8793	2536				6.78	Si
SLU 26	5.97	-7333	-834	-394.78	25426	1.03	8946	2580				3.09	Si
SLU 26	7.77	-6438	-428	726.33	22323	1.03	8532	2461				5.75	Si
SLU 76	5.97	-9816	-941	-406.39	34035	1.03	10094	2911				3.09	Si
SLU 76	7.77	-8508	-446	899.52	29500	1.03	9489	2737				6.14	Si
SLU 68	5.97	-9036	-894	-410.71	31332	1.03	9733	2807				3.14	Si
SLU 68	7.77	-7748	-504	859.63	26865	1.03	9137	2635				5.22	Si
SLU 23	5.97	-7102	-842	-402.67	24627	1.03	8839	2549				3.03	Si
SLU 23	7.77	-6243	-433	711.71	21649	1.03	8442	2435				5.62	Si
SLU 73	5.97	-9585	-949	-414.29	33236	1.03	9987	2880				3.03	Si
SLU 73	7.77	-8313	-451	884.9	28825	1.03	9399	2711				6.01	Si
SLU 65	5.97	-8806	-902	-418.6	30532	1.03	9627	2776				3.08	Si
SLU 65	7.77	-7553	-510	845.01	26190	1.03	9048	2609				5.12	Si
SLU 10	5.97	-7124	-809	-380.44	24701	1.03	8849	2552				3.15	Si
SLU 10	7.77	-6244	-404	695.58	21652	1.03	8442	2435				6.03	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 13	5.97	-4273	-7368	-4212.98		0	0	8333	0			0	No, Vu<V
SLV 13	7.77	-10198	-2638	2642.69		47449	0.7676	16250	3493			1.32	Si
SLV 8	5.97	-6249	3407	2359.72		54152	0.4121	16250	1875			0.55	No, Vu<V
SLV 8	7.77	-1089	1351	-798.27		0	0	8333	0			0	No, Vu<V
SLV 15	5.97	-3253	-6298	-3424.06		0	0	8333	0			0	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 15	7.77	-8076	-2101	2179.86		39229	0.7353	16179	3331			1.59	Si
SLV 4	5.97	-9693	6713	4058.04		119773	0.289	16250	1315			0.2	No, Vu<V
SLV 4	7.77	-1136	2247	-1571.17		0	0	8333	0			0	No, Vu<V
SLV 1	5.97	-10713	5643	3269.12		60776	0.6296	16250	2864			0.51	No, Vu<V
SLV 1	7.77	-3258	1710	-1108.34		22188	0.5244	12771	1875			1.1	Si
SLV 14	5.97	-4273	-7368	-4212.98		0	0	8333	0			0	No, Vu<V
SLV 14	7.77	-10198	-2638	2642.69		47449	0.7676	16250	3493			1.32	Si
SLV 16	5.97	-3253	-6298	-3424.06		0	0	8333	0			0	No, Vu<V
SLV 16	7.77	-8076	-2101	2179.86		39229	0.7353	16179	3331			1.59	Si
SLV 2	5.97	-10713	5643	3269.12		60776	0.6296	16250	2864			0.51	No, Vu<V
SLV 2	7.77	-3258	1710	-1108.34		22188	0.5244	12771	1875			1.1	Si
SLV 7	5.97	-6249	3407	2359.72		54152	0.4121	16250	1875			0.55	No, Vu<V
SLV 7	7.77	-1089	1351	-798.27		0	0	8333	0			0.07	No, Vu<V
SLV 3	5.97	-9693	6713	4058.04		119773	0.289	16250	1315			0.2	No, Vu<V
SLV 3	7.77	-1136	2247	-1571.17		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 15	143750	0.39	9085	-2620	107.52	339.55	3.16	Si
SLV 16	143750	0.39	9085	-2620	107.52	339.55	3.16	Si
SLV 12	143750	0.39	12211	-3522	107.52	443.75	4.13	Si
SLV 11	143750	0.39	12211	-3522	107.52	443.75	4.13	Si
SLV 14	143750	0.39	13349	-3850	107.52	480.09	4.47	Si
SLV 13	143750	0.39	13349	-3850	107.52	480.09	4.47	Si
SLV 7	143750	0.39	19153	-5524	107.52	652.11	6.07	Si
SLV 8	143750	0.39	19153	-5524	107.52	652.11	6.07	Si
SLV 10	143750	0.39	26423	-7620	107.52	836.15	7.78	Si
SLV 9	143750	0.39	26423	-7620	107.52	836.15	7.78	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 8	-1381	-1427	-91	0.016	293.5	0.893	0.2563	7.63299	No
SLV 7	-1381	-1427	-91	0.016	293.5	0.893	0.2563	7.63299	No
SLV 12	-2998	-3366	-110	0.021	452.7	0.917	0.32721	7.63299	No
SLV 11	-2998	-3366	-110	0.021	452.7	0.917	0.32721	7.63299	No
SLV 1	-2626	-4568	62	0.032	415.6	0.912	0.5143	8.88274	No
SLV 2	-2626	-4568	62	0.032	415.6	0.912	0.5143	8.88274	No
SLV 6	-6197	-9740	110	0.029	775.8	0.947	0.44721	7.63299	No
SLV 5	-6197	-9740	110	0.029	775.8	0.947	0.44721	7.63299	No
SLV 15	-6569	-8537	-62	0.036	813.6	0.949	0.5517	8.88274	No
SLV 16	-6569	-8537	-62	0.036	813.6	0.949	0.5517	8.88274	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.107	SLU 76	Si
V_SLU	2.983	SLU 31	Si
PF_SLV	0	SLV 3	No
V_SLV	0	SLV 3	No
PFFP_SLV	3.158	SLV 15	Si
R_SLV	0.034	SLV 7	No

Maschio 121

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.448	-3.359	-18.448	1.046	L4	L5	4.406	0.14	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 84	5.07	-31581	3322.56	51201	25840.28	7.777	Si
SLU 84	8.62	-19862	4576.07	32202	26456.69	5.782	Si
SLU 31	5.07	-25191	2328.29	40842	27669.33	11.884	Si
SLU 31	8.62	-15446	3988.22	25042	23564.99	5.909	Si
SLU 80	5.07	-30914	3202.2	50121	26198.31	8.181	Si
SLU 80	8.62	-19707	4532.7	31951	26384.33	5.821	Si
SLU 82	5.07	-30956	3202.65	50188	26177.15	8.174	Si
SLU 82	8.62	-19239	4415.01	31191	26152.07	5.923	Si
SLU 73	5.07	-29818	2694.59	48344	26702.34	9.91	Si
SLU 73	8.62	-18378	4496.77	29795	25675.52	5.71	Si
SLU 76	5.07	-30443	2814.5	49357	26427.81	9.39	Si
SLU 76	8.62	-19001	4657.83	30806	26027.21	5.588	Si
SLU 68	5.07	-27430	2253.89	44472	27435.93	12.173	Si
SLU 68	8.62	-17186	4180.81	27863	24908.22	5.958	Si
SLU 78	5.07	-31244	3278.45	50655	26026.34	7.939	Si
SLU 78	8.62	-20022	4615.78	32462	26529.48	5.748	Si
SLU 34	5.07	-25816	2448.2	41855	27648.39	11.293	Si
SLU 34	8.62	-16070	4149.29	26053	24076.96	5.803	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 75	5.07	-30619	3158.55	49641	26344.73	8.341	Si
SLU 75	8.62	-19399	4454.71	31451	26233.63	5.889	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 5	5.07	-24054	-1995.72	38998	36075.1	18.076	Si
SLV 5	8.62	-14572	4259.94	23625	25893.3	6.078	Si
SLV 4	5.07	-20367	6518	33020	32740.4	5.023	Si
SLV 4	8.62	-14856	2193.89	24085	26274.37	11.976	Si
SLV 10	5.07	-23562	-3685.49	38201	35676.52	9.68	Si
SLV 10	8.62	-13291	4184.43	21549	24115.37	5.763	Si
SLV 12	5.07	-17008	6379.63	27575	29010.84	4.547	Si
SLV 12	8.62	-11430	870.35	18531	21359.43	24.541	Si
SLV 8	5.07	-17499	8069.4	28371	29597.71	3.668	Si
SLV 8	8.62	-12710	945.86	20607	23276.74	24.609	Si
SLV 11	5.07	-17008	6379.63	27575	29010.84	4.547	Si
SLV 11	8.62	-11430	870.35	18531	21359.43	24.541	Si
SLV 7	5.07	-17499	8069.4	28371	29597.71	3.668	Si
SLV 7	8.62	-12710	945.86	20607	23276.74	24.609	Si
SLV 9	5.07	-23562	-3685.49	38201	35676.52	9.68	Si
SLV 9	8.62	-13291	4184.43	21549	24115.37	5.763	Si
SLV 6	5.07	-24054	-1995.72	38998	36075.1	18.076	Si
SLV 6	8.62	-14572	4259.94	23625	25893.3	6.078	Si
SLV 3	5.07	-20367	6518	33020	32740.4	5.023	Si
SLV 3	8.62	-14856	2193.89	24085	26274.37	11.976	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 10	5.07	-22219	-1838	1760.75		36024	4.4057	10359	6389			3.48	Si
SLU 10	8.62	-13549	-1152	3474.63		21967	4.4057	8485	5233			4.54	Si
SLU 47	5.07	-24458	-1811	1686.34		39653	4.4057	10833	6682			3.69	Si
SLU 47	8.62	-15289	-1128	3667.22		24787	4.4057	8861	5465			4.84	Si
SLU 26	5.07	-22803	-1858	1887.58		36969	4.4057	10485	6467			3.48	Si
SLU 26	8.62	-14254	-1172	3672.27		23109	4.4057	8637	5327			4.55	Si
SLU 31	5.07	-25191	-1821	2328.29		40842	4.4057	10833	6682			3.67	Si
SLU 31	8.62	-15446	-1133	3988.22		25042	4.4057	8895	5486			4.84	Si
SLU 34	5.07	-25816	-1831	2448.2		41855	4.4057	10833	6682			3.65	Si
SLU 34	8.62	-16070	-1143	4149.29		26053	4.4057	9029	5569			4.87	Si
SLU 13	5.07	-22844	-1848	1880.65		37037	4.4057	10494	6473			3.5	Si
SLU 13	8.62	-14173	-1161	3635.69		22978	4.4057	8619	5316			4.58	Si
SLU 44	5.07	-23833	-1800	1566.43		38640	4.4057	10708	6604			3.67	Si
SLU 44	8.62	-14665	-1119	3506.15		23777	4.4057	8726	5382			4.81	Si
SLU 23	5.07	-22178	-1847	1767.68		35956	4.4057	10350	6384			3.46	Si
SLU 23	8.62	-13630	-1162	3511.2		22099	4.4057	8502	5244			4.51	Si
SLU 2	5.07	-19206	-1864	1200.13		31138	4.4057	9707	5987			3.21	Si
SLU 2	8.62	-11734	-1180	2997.61		19023	4.4057	8092	4991			4.23	Si
SLU 5	5.07	-19831	-1875	1320.04		32151	4.4057	9842	6071			3.24	Si
SLU 5	8.62	-12357	-1190	3158.67		20034	4.4057	8227	5074			4.26	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 12	5.07	-17008	12637	6379.63		27575	4.4057	13848	8542			0.68	No, Vu<V
SLV 12	8.62	-11430	10899	870.35		18531	4.4057	12039	7426			0.68	No, Vu<V
SLV 8	5.07	-17499	13677	8069.4		28371	4.4057	14008	8640			0.63	No, Vu<V
SLV 8	8.62	-12710	12022	945.86		20607	4.4057	12455	7682			0.64	No, Vu<V
SLV 5	5.07	-24054	-12147	-1995.72		38998	4.4057	16133	9951			0.82	No, Vu<V
SLV 5	8.62	-14572	-10419	4259.94		23625	4.4057	13058	8054			0.77	No, Vu<V
SLV 9	5.07	-23562	-13186	-3685.49		38201	4.4057	15973	9852			0.75	No, Vu<V
SLV 9	8.62	-13291	-11542	4184.43		21549	4.4057	12643	7798			0.68	No, Vu<V
SLV 7	5.07	-17499	13677	8069.4		28371	4.4057	14008	8640			0.63	No, Vu<V
SLV 7	8.62	-12710	12022	945.86		20607	4.4057	12455	7682			0.64	No, Vu<V
SLV 14	5.07	-20695	-5362	-2134.09		33552	4.4057	15044	9279			1.73	Si
SLV 14	8.62	-11146	-4997	2936.4		18071	4.4057	11947	7369			1.47	Si
SLV 13	5.07	-20695	-5362	-2134.09		33552	4.4057	15044	9279			1.73	Si
SLV 13	8.62	-11146	-4997	2936.4		18071	4.4057	11947	7369			1.47	Si
SLV 6	5.07	-24054	-12147	-1995.72		38998	4.4057	16133	9951			0.82	No, Vu<V
SLV 6	8.62	-14572	-10419	4259.94		23625	4.4057	13058	8054			0.77	No, Vu<V
SLV 10	5.07	-23562	-13186	-3685.49		38201	4.4057	15973	9852			0.75	No, Vu<V
SLV 10	8.62	-13291	-11542	4184.43		21549	4.4057	12643	7798			0.68	No, Vu<V
SLV 11	5.07	-17008	12637	6379.63		27575	4.4057	13848	8542			0.68	No, Vu<V
SLV 11	8.62	-11430	10899	870.35		18531	4.4057	12039	7426			0.68	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 12	143750	0.39	23652	-14589	245.98	823.53	3.35	Si
SLV 11	143750	0.39	23652	-14589	245.98	823.53	3.35	Si
SLV 15	143750	0.39	23915	-14751	245.98	830.46	3.38	Si
SLV 16	143750	0.39	23915	-14751	245.98	830.46	3.38	Si
SLV 7	143750	0.39	25014	-15429	245.98	858.9	3.49	Si
SLV 8	143750	0.39	25014	-15429	245.98	858.9	3.49	Si
SLV 14	143750	0.39	25503	-15730	245.98	871.28	3.54	Si
SLV 13	143750	0.39	25503	-15730	245.98	871.28	3.54	Si
SLV 3	143750	0.39	28454	-17551	245.98	942.45	3.83	Si
SLV 4	143750	0.39	28454	-17551	245.98	942.45	3.83	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.03 Ta = 0.1503

Comb.	N top	N base	V orto	σ_0	M*	e*	a0*	aLim	Verifica
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Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 1	-15414	-22333	23	0.021	1878.7	0.952	0.31509	16.59208	No
SLV 2	-15414	-22333	23	0.021	1878.7	0.952	0.31509	16.59208	No
SLV 3	-14856	-20367	21	0.021	1821.9	0.951	0.31799	16.59208	No
SLV 4	-14856	-20367	21	0.021	1821.9	0.951	0.31799	16.59208	No
SLV 16	-10587	-18729	-23	0.021	1389.1	0.938	0.32561	16.59208	No
SLV 15	-10587	-18729	-23	0.021	1389.1	0.938	0.32561	16.59208	No
SLV 14	-11146	-20695	-20	0.021	1445.7	0.94	0.32665	16.59208	No
SLV 13	-11146	-20695	-20	0.021	1445.7	0.94	0.32665	16.59208	No
SLV 5	-14572	-24054	10	0.021	1793.1	0.95	0.32806	16.14305	No
SLV 6	-14572	-24054	10	0.021	1793.1	0.95	0.32806	16.14305	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.588	SLV 76	Si
V_SLV	3.212	SLV 2	Si
PF_SLV	3.668	SLV 7	Si
V_SLV	0.632	SLV 7	No
PFFP_SLV	3.348	SLV 11	Si
R_SLV	0.019	SLV 1	No

Maschio 122

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.sx	a.s.dx
-17.053	-4.934	-17.053	-4.589	L4	L5	0.344	0.3	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	$\tau 0$	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLV 55	5.07	-4551	-35.48	44064	359.7	10.137	Si
SLV 55	8.18	-2676	-111.2	25903	314.14	2.825	Si
SLV 81	5.07	-4691	-127.12	45416	357.33	2.811	Si
SLV 81	8.18	-2512	-51.8	24319	303.34	5.856	Si
SLV 52	5.07	-4493	-32.89	43500	360.45	10.959	Si
SLV 52	8.18	-2635	-110.63	25511	311.57	2.816	Si
SLV 65	5.07	-4455	-32.82	43129	360.87	10.996	Si
SLV 65	8.18	-2623	-110.04	25391	310.77	2.824	Si
SLV 44	5.07	-4186	-13.79	40530	362.12	26.262	Si
SLV 44	8.18	-2498	-111.59	24183	302.36	2.71	Si
SLV 47	5.07	-4245	-16.38	41093	362.1	22.105	Si
SLV 47	8.18	-2538	-112.17	24576	305.16	2.721	Si
SLV 77	5.07	-4682	-127.33	45329	357.51	2.808	Si
SLV 77	8.18	-2534	-52.28	24533	304.86	5.832	Si
SLV 5	5.07	-3396	-2.75	32877	348.67	126.686	Si
SLV 5	8.18	-2066	-99.13	19998	268.31	2.707	Si
SLV 83	5.07	-4749	-129.71	45980	356.11	2.745	Si
SLV 83	8.18	-2553	-52.38	24712	306.12	5.844	Si
SLV 2	5.07	-3338	-0.16	32314	346.67	1000	Si
SLV 2	8.18	-2025	-98.55	19606	264.72	2.686	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLV 6	5.07	-1445	-1473.79	0	0	0	No, e>l/2
SLV 6	8.18	1440	619.4	0	0	0	No, Trazione
SLV 11	5.07	-5155	1317.65	0	0	0	No, e>l/2
SLV 11	8.18	-5027	-701.35	48664	520.7	0.742	No, M>Mu
SLV 10	5.07	-923	-1733.56	0	0	0	No, e>l/2
SLV 10	8.18	1955	765.17	0	0	0	No, Trazione
SLV 5	5.07	-1445	-1473.79	0	0	0	No, e>l/2
SLV 5	8.18	1440	619.4	0	0	0	No, Trazione
SLV 14	5.07	-1795	-968.71	0	0	0	No, e>l/2
SLV 14	8.18	113	421.94	0	0	0	No, Trazione
SLV 8	5.07	-5677	1577.43	0	0	0	No, e>l/2
SLV 8	8.18	-5542	-847.11	53654	535.13	0.632	No, M>Mu
SLV 9	5.07	-923	-1733.56	0	0	0	No, e>l/2
SLV 9	8.18	1955	765.17	0	0	0	No, Trazione
SLV 13	5.07	-1795	-968.71	0	0	0	No, e>l/2
SLV 13	8.18	113	421.94	0	0	0	No, Trazione
SLV 12	5.07	-5155	1317.65	0	0	0	No, e>l/2
SLV 12	8.18	-5027	-701.35	48664	520.7	0.742	No, M>Mu
SLV 7	5.07	-5677	1577.43	0	0	0	No, e>l/2
SLV 7	8.18	-5542	-847.11	53654	535.13	0.632	No, M>Mu

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	$\sigma 0$	σN	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 74	5.07	-4624	-84	-124.74		44765	0.3443	10833	1119			13.31	Si
SLV 74	8.18	-2494	304	-51.7		24140	0.3443	8774	906			2.98	Si
SLV 39	5.07	-3843	-76	-113.49		37200	0.3443	10516	1086			14.33	Si
SLV 39	8.18	-2039	282	-38.76		19742	0.3443	8188	846			3	Si
SLV 37	5.07	-3827	-74	-110.49		37054	0.3443	10496	1084			14.59	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 37	8.18	-2061	274	-40.33		19958	0.3443	8217	849			3.1	Si
SLU 81	5.07	-4691	-85	-127.12		45416	0.3443	10833	1119			13.13	Si
SLU 81	8.18	-2512	311	-51.8		24319	0.3443	8798	909			2.93	Si
SLU 83	5.07	-4749	-87	-129.71		45980	0.3443	10833	1119			12.85	Si
SLU 83	8.18	-2553	318	-52.38		24712	0.3443	8850	914			2.88	Si
SLU 79	5.07	-4676	-84	-124.12		45270	0.3443	10833	1119			13.37	Si
SLU 79	8.18	-2534	303	-53.37		24535	0.3443	8827	912			3.01	Si
SLU 77	5.07	-4682	-86	-127.33		45329	0.3443	10833	1119			13.02	Si
SLU 77	8.18	-2534	311	-52.28		24533	0.3443	8827	912			2.93	Si
SLU 41	5.07	-3901	-78	-116.08		37764	0.3443	10591	1094			14.08	Si
SLU 41	8.18	-2080	289	-39.34		20134	0.3443	8240	851			2.94	Si
SLU 32	5.07	-3775	-75	-111.11		36549	0.3443	10429	1077			14.43	Si
SLU 32	8.18	-2021	275	-38.66		19563	0.3443	8164	843			3.06	Si
SLU 35	5.07	-3833	-77	-113.71		37113	0.3443	10504	1085			14.17	Si
SLU 35	8.18	-2061	282	-39.24		19955	0.3443	8216	849			3	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 13	5.07	-1795	-696	-968.71		0	0	8333	0			0	No, Vu<V
SLV 13	8.18	113	1338	421.94		0	0	8333	0			0	No, Vu<V
SLV 10	5.07	-923	-1400	-1733.56		0	0	8333	0			0	No, Vu<V
SLV 10	8.18	1955	2129	765.17		0	0	8333	0			0	No, Vu<V
SLV 11	5.07	-5155	1137	1317.65		0	0	8333	0			0	No, Vu<V
SLV 11	8.18	-5027	-1384	-701.35		171188	0.0979	16250	477			0.34	No, Vu<V
SLV 7	5.07	-5677	1295	1577.43		0	0	8333	0			0	No, Vu<V
SLV 7	8.18	-5542	-1759	-847.11		319038	0.0579	16250	282			0.16	No, Vu<V
SLV 8	5.07	-5677	1295	1577.43		0	0	8333	0			0	No, Vu<V
SLV 8	8.18	-5542	-1759	-847.11		319038	0.0579	16250	282			0.16	No, Vu<V
SLV 12	5.07	-5155	1137	1317.65		0	0	8333	0			0	No, Vu<V
SLV 12	8.18	-5027	-1384	-701.35		171188	0.0979	16250	477			0.34	No, Vu<V
SLV 9	5.07	-923	-1400	-1733.56		0	0	8333	0			0	No, Vu<V
SLV 9	8.18	1955	2129	765.17		0	0	8333	0			0	No, Vu<V
SLV 14	5.07	-1795	-696	-968.71		0	0	8333	0			0	No, Vu<V
SLV 14	8.18	113	1338	421.94		0	0	8333	0			0	No, Vu<V
SLV 6	5.07	-1445	-1242	-1473.79		0	0	8333	0			0	No, Vu<V
SLV 6	8.18	1440	1753	619.4		0	0	8333	0			0	No, Vu<V
SLV 5	5.07	-1445	-1242	-1473.79		0	0	8333	0			0	No, Vu<V
SLV 5	8.18	1440	1753	619.4		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 6	143750	0.39	16633	-1718	37.61	222.63	5.92	Si
SLV 5	143750	0.39	16633	-1718	37.61	222.63	5.92	Si
SLV 9	143750	0.39	18772	-1939	37.61	246.16	6.54	Si
SLV 10	143750	0.39	18772	-1939	37.61	246.16	6.54	Si
SLV 2	143750	0.39	19803	-2045	37.61	257.09	6.84	Si
SLV 1	143750	0.39	19803	-2045	37.61	257.09	6.84	Si
SLV 3	143750	0.39	24657	-2547	37.61	304.94	8.11	Si
SLV 4	143750	0.39	24657	-2547	37.61	304.94	8.11	Si
SLV 13	143750	0.39	26930	-2782	37.61	325.29	8.65	Si
SLV 14	143750	0.39	26930	-2782	37.61	325.29	8.65	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0702

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 3	-2203	-4806	20	0.04	276.1	0.946	0.61447	8.27253	No
SLV 4	-2203	-4806	20	0.04	276.1	0.946	0.61447	8.27253	No
SLV 14	-1958	-1795	-18	0.04	251.4	0.942	0.62288	8.27253	No
SLV 13	-1958	-1795	-18	0.04	251.4	0.942	0.62288	8.27253	No
SLV 9	-1783	-923	-29	0.035	233.6	0.938	0.54385	7.18311	No
SLV 10	-1783	-923	-29	0.035	233.6	0.938	0.54385	7.18311	No
SLV 7	-2378	-5677	30	0.036	294	0.949	0.5539	7.18311	No
SLV 8	-2378	-5677	30	0.036	294	0.949	0.5539	7.18311	No
SLV 12	-2357	-5155	24	0.039	291.8	0.949	0.59103	7.18311	No
SLV 11	-2357	-5155	24	0.039	291.8	0.949	0.59103	7.18311	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.686	SLU 2	Si
V_SLU	2.876	SLU 83	Si
PF_SLV	0	SLV 14	No
V_SLV	0	SLV 5	No
PFFP_SLV	5.919	SLV 5	Si
R_SLV	0.074	SLV 3	No

Maschio 123

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-3.359	-15.433	-3.359	L4	L5	1.67	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

Sismicad 12.19 - Licenza assegnata a Sidel ingegneria Srl - Via Isonzo, 13 - Villanova di Castenaso (BO)



fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 75	5.07	-14279	-1769.35	30536	7453.24	4.212	Si
SLU 75	7.17	-16667	1820.25	35644	7827.31	4.3	Si
SLU 84	5.07	-14473	-1868.84	30951	7492.96	4.009	Si
SLU 84	7.17	-17120	1899.24	36612	7870.02	4.144	Si
SLU 81	5.07	-14073	-1763.45	30096	7409.31	4.202	Si
SLU 81	7.17	-16500	1747.84	35287	7809.33	4.468	Si
SLU 40	5.07	-11512	-1673.46	24620	6707.39	4.008	Si
SLU 40	7.17	-14128	1672	30214	7421.25	4.439	Si
SLU 34	5.07	-11581	-1628.61	24768	6730.11	4.132	Si
SLU 34	7.17	-14052	1675.41	30050	7404.68	4.42	Si
SLU 73	5.07	-13942	-1827.21	29815	7380.33	4.039	Si
SLU 73	7.17	-16407	1875.38	35088	7798.72	4.158	Si
SLU 76	5.07	-14242	-1825.6	30457	7445.49	4.078	Si
SLU 76	7.17	-16725	1889.02	35768	7833.3	4.147	Si
SLU 82	5.07	-14173	-1870.45	30309	7430.83	3.973	Si
SLU 82	7.17	-16801	1885.6	35931	7840.93	4.158	Si
SLU 31	5.07	-11281	-1630.22	24126	6629.95	4.067	Si
SLU 31	7.17	-13733	1661.78	29370	7332.79	4.413	Si
SLU 42	5.07	-11812	-1671.85	25262	6804.51	4.07	Si
SLU 42	7.17	-14446	1685.64	30894	7487.64	4.442	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 1	5.07	-14214	3239.72	30398	8915.96	2.752	Si
SLV 1	7.17	-7362	-2301.14	15745	5355.29	2.327	Si
SLV 16	5.07	-5989	-5409.62	0	0	0	No, $e \geq l/2$
SLV 16	7.17	-15163	4503.92	32427	9300.98	2.065	Si
SLV 4	5.07	-11295	3189.26	24156	7566.91	2.373	Si
SLV 4	7.17	-4658	-2691.96	9961	3572.31	1.327	Si
SLV 3	5.07	-11295	3189.26	24156	7566.91	2.373	Si
SLV 3	7.17	-4658	-2691.96	9961	3572.31	1.327	Si
SLV 13	5.07	-8908	-5359.17	19050	6278.46	1.172	Si
SLV 13	7.17	-17867	4894.74	38210	10253.61	2.095	Si
SLV 2	5.07	-14214	3239.72	30398	8915.96	2.752	Si
SLV 2	7.17	-7362	-2301.14	15745	5355.29	2.327	Si
SLV 11	5.07	-4441	-2458.87	9497	3420.02	1.391	Si
SLV 11	7.17	-8331	1529.41	17817	5942.24	3.885	Si
SLV 12	5.07	-4441	-2458.87	9497	3420.02	1.391	Si
SLV 12	7.17	-8331	1529.41	17817	5942.24	3.885	Si
SLV 14	5.07	-8908	-5359.17	19050	6278.46	1.172	Si
SLV 14	7.17	-17867	4894.74	38210	10253.61	2.095	Si
SLV 15	5.07	-5989	-5409.62	0	0	0	No, $e \geq l/2$
SLV 15	7.17	-15163	4503.92	32427	9300.98	2.065	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 81	5.07	-14073	-3405	-1763.45		30096	1.67	9568	4474			1.31	Si
SLU 81	7.17	-16500	-3745	1747.84		35287	1.67	10261	4798			1.28	Si
SLU 40	5.07	-11512	-3202	-1673.46		24620	1.67	8838	4133			1.29	Si
SLU 40	7.17	-14128	-3503	1672		30214	1.67	9584	4481			1.28	Si
SLU 78	5.07	-14579	-3435	-1767.74		31178	1.67	9713	4542			1.32	Si
SLU 78	7.17	-16985	-3790	1833.89		36324	1.67	10399	4862			1.28	Si
SLU 83	5.07	-14373	-3415	-1761.84		30737	1.67	9654	4514			1.32	Si
SLU 83	7.17	-16819	-3760	1761.48		35968	1.67	10351	4840			1.29	Si
SLU 76	5.07	-14242	-3519	-1825.6		30457	1.67	9616	4497			1.28	Si
SLU 76	7.17	-16725	-3875	1889.02		35768	1.67	10325	4828			1.25	Si
SLU 82	5.07	-14173	-3594	-1870.45		30309	1.67	9597	4487			1.25	Si
SLU 82	7.17	-16801	-3948	1885.6		35931	1.67	10346	4838			1.23	Si
SLU 84	5.07	-14473	-3604	-1868.84		30951	1.67	9682	4527			1.26	Si
SLU 84	7.17	-17120	-3964	1899.24		36612	1.67	10437	4880			1.23	Si
SLU 75	5.07	-14279	-3425	-1769.35		30536	1.67	9627	4502			1.31	Si
SLU 75	7.17	-16667	-3775	1820.25		35644	1.67	10308	4820			1.28	Si
SLU 42	5.07	-11812	-3212	-1671.85		25262	1.67	8924	4173			1.3	Si
SLU 42	7.17	-14446	-3519	1685.64		30894	1.67	9675	4524			1.29	Si
SLU 73	5.07	-13942	-3509	-1827.21		29815	1.67	9531	4457			1.27	Si
SLU 73	7.17	-16407	-3860	1875.38		35088	1.67	10234	4785			1.24	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 9	5.07	-14170	-6010	-2290.7		30304	1.67	14394	6731			1.12	Si
SLV 9	7.17	-17345	-5833	2832.14		37094	1.67	15752	7366			1.26	Si
SLV 16	5.07	-5989	-8971	-5409.62		0	0	8333	0			0	No, $V_u < V$
SLV 16	7.17	-15163	-7843	4503.92		33554	1.6139	15044	6798			0.87	No, $V_u < V$
SLV 11	5.07	-4441	-2639	-2458.87		18793	0.844	12092	2858			1.08	Si
SLV 11	7.17	-8331	-2460	1529.41		17817	1.67	11897	5563			2.26	Si
SLV 4	5.07	-11295	5748	3189.26		24331	1.6579	13200	6128			1.07	Si
SLV 4	7.17	-4658	4163	-2691.96		21570	0.7712	12647	2731			0.66	No, $V_u < V$
SLV 13	5.07	-8908	-9982	-5359.17		45439	0.7002	16250	3186			0.32	No, $V_u < V$
SLV 13	7.17	-17867	-8855	4894.74		38210	1.67	15975	7470			0.84	No, $V_u < V$
SLV 15	5.07	-5989	-8971	-5409.62		0	0	8333	0			0	No, $V_u < V$
SLV 15	7.17	-15163	-7843	4503.92		33554	1.6139	15044	6798			0.87	No, $V_u < V$
SLV 12	5.07	-4441	-2639	-2458.87		18793	0.844	12092	2858			1.08	Si
SLV 12	7.17	-8331	-2460	1529.41		17817	1.67	11897	5563			2.26	Si
SLV 10	5.07	-14170	-6010	-2290.7		30304	1.67	14394	6731			1.12	Si
SLV 10	7.17	-17345	-5833	2832.14		37094	1.67	15752	7366			1.26	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 3	5.07	-11295	5748	3189.26		24331	1.6579	13200	6128			1.07	Si
SLV 3	7.17	-4658	4163	-2691.96		21570	0.7712	12647	2731			0.66	No, Vu<V
SLV 14	5.07	-8908	-9982	-5359.17		45439	0.7002	16250	3186			0.32	No, Vu<V
SLV 14	7.17	-17867	-8855	4894.74		38210	1.67	15975	7470			0.84	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 8	143750	0.39	11954	-5590	174.32	706.01	4.05	Si
SLV 7	143750	0.39	11954	-5590	174.32	706.01	4.05	Si
SLV 3	143750	0.39	12379	-5788	174.32	728.28	4.18	Si
SLV 4	143750	0.39	12379	-5788	174.32	728.28	4.18	Si
SLV 12	143750	0.39	17229	-8056	174.32	968.86	5.56	Si
SLV 11	143750	0.39	17229	-8056	174.32	968.86	5.56	Si
SLV 1	143750	0.39	18018	-8425	174.32	1005.6	5.77	Si
SLV 2	143750	0.39	18018	-8425	174.32	1005.6	5.77	Si
SLV 15	143750	0.39	29963	-14010	174.32	1480.48	8.49	Si
SLV 16	143750	0.39	29963	-14010	174.32	1480.48	8.49	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 11	-4996	-4441	-224	0.014	747.6	0.919	0.2217	7.63299	No
SLV 12	-4996	-4441	-224	0.014	747.6	0.919	0.2217	7.63299	No
SLV 8	-5729	-6033	-227	0.016	821.2	0.924	0.2546	7.63299	No
SLV 7	-5729	-6033	-227	0.016	821.2	0.924	0.2546	7.63299	No
SLV 10	-10555	-14170	280	0.021	1309.4	0.948	0.32371	7.63299	No
SLV 9	-10555	-14170	280	0.021	1309.4	0.948	0.32371	7.63299	No
SLV 6	-11288	-15762	277	0.022	1383.8	0.951	0.34239	7.63299	No
SLV 5	-11288	-15762	277	0.022	1383.8	0.951	0.34239	7.63299	No
SLV 14	-7755	-8908	107	0.034	1025.6	0.937	0.53176	8.88274	No
SLV 13	-7755	-8908	107	0.034	1025.6	0.937	0.53176	8.88274	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.973	SLU 82	Si
V_SLU	1.225	SLU 82	Si
PF_SLV	0	SLV 15	No
V_SLV	0	SLV 15	No
PFFP_SLV	4.05	SLV 7	Si
R_SLV	0.029	SLV 11	No

Maschio 124

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.45	-4.784	-17.053	-4.784	L4	L5	0.602	0.3	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	f ν_0	μ	ϕ	f ν_{lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 42	5.07	-5912	173.94	32713	1065.48	6.125	Si
SLU 42	8.18	-4514	49.72	24981	942.71	18.962	Si
SLU 78	5.07	-7191	179.35	39791	1107.82	6.177	Si
SLU 78	8.18	-5363	69.23	29677	1026.8	14.832	Si
SLU 82	5.07	-7149	190.3	39558	1107.5	5.82	Si
SLU 82	8.18	-5344	64.04	29570	1025.21	16.01	Si
SLU 41	5.07	-5757	171.47	31855	1055.8	6.157	Si
SLU 41	8.18	-4284	41.84	23703	914.72	21.864	Si
SLU 39	5.07	-5663	169.89	31339	1049.49	6.178	Si
SLU 39	8.18	-4202	40.24	23253	904.35	22.474	Si
SLU 81	5.07	-6994	187.82	38701	1105.66	5.887	Si
SLU 81	8.18	-5113	56.16	28292	1005.06	17.897	Si
SLU 76	5.07	-7190	178.53	39787	1107.82	6.205	Si
SLU 76	8.18	-5429	72.86	30044	1032.13	14.166	Si
SLU 40	5.07	-5818	172.37	32196	1059.76	6.148	Si
SLU 40	8.18	-4433	48.12	24531	933.1	19.392	Si
SLU 83	5.07	-7087	189.4	39217	1106.88	5.844	Si
SLU 83	8.18	-5194	57.76	28742	1012.4	17.529	Si
SLU 84	5.07	-7242	191.87	40075	1108.13	5.775	Si
SLU 84	8.18	-5425	65.63	30020	1031.78	15.72	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 1	5.07	-5087	998.41	28148	1179.12	1.181	Si
SLV 1	8.18	-4221	81.64	23356	1028.25	12.594	Si
SLV 4	5.07	-4221	729.27	23355	1028.2	1.41	Si
SLV 4	8.18	-4121	-240.89	22803	1009.51	4.191	Si
SLV 2	5.07	-5087	998.41	28148	1179.12	1.181	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 2	8.18	-4221	81.64	23356	1028.25	12.594	Si
SLV 3	5.07	-4221	729.27	23355	1028.2	1.41	Si
SLV 3	8.18	-4121	-240.89	22803	1009.51	4.191	Si
SLV 16	5.07	-4938	-778.71	27323	1154.6	1.483	Si
SLV 16	8.18	-2940	13.53	16270	767.64	56.738	Si
SLV 12	5.07	-3676	-564.91	20342	922.86	1.634	Si
SLV 12	8.18	-3237	-451.81	17911	831.98	1.841	Si
SLV 9	5.07	-6563	332.22	36320	1389.22	4.182	Si
SLV 9	8.18	-3570	623.31	19755	901.4	1.446	Si
SLV 15	5.07	-4938	-778.71	27323	1154.6	1.483	Si
SLV 15	8.18	-2940	13.53	16270	767.64	56.738	Si
SLV 10	5.07	-6563	332.22	36320	1389.22	4.182	Si
SLV 10	8.18	-3570	623.31	19755	901.4	1.446	Si
SLV 11	5.07	-3676	-564.91	20342	922.86	1.634	Si
SLV 11	8.18	-3237	-451.81	17911	831.98	1.841	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 78	5.07	-7191	215	179.35		39791	0.6024	10833	1958			9.11	Si
SLU 78	8.18	-5363	-247	69.23		29677	0.6024	9513	1719			6.95	Si
SLU 84	5.07	-7242	228	191.87		40075	0.6024	10833	1958			8.58	Si
SLU 84	8.18	-5425	-254	65.63		30020	0.6024	9558	1727			6.8	Si
SLU 77	5.07	-7036	205	176.87		38933	0.6024	10747	1942			9.46	Si
SLU 77	8.18	-5132	-251	61.35		28399	0.6024	9342	1688			6.72	Si
SLU 80	5.07	-7180	214	178.45		39732	0.6024	10833	1958			9.13	Si
SLU 80	8.18	-5357	-244	69.21		29643	0.6024	9508	1718			7.03	Si
SLU 83	5.07	-7087	218	189.4		39217	0.6024	10785	1949			8.92	Si
SLU 83	8.18	-5194	-258	57.76		28742	0.6024	9388	1697			6.58	Si
SLU 41	5.07	-5757	195	171.47		31855	0.6024	9803	1772			9.1	Si
SLU 41	8.18	-4284	-226	41.84		23703	0.6024	8716	1575			6.95	Si
SLU 82	5.07	-7149	226	190.3		39558	0.6024	10830	1957			8.65	Si
SLU 82	8.18	-5344	-248	64.04		29570	0.6024	9498	1716			6.91	Si
SLU 74	5.07	-6942	203	175.29		38417	0.6024	10678	1930			9.49	Si
SLU 74	8.18	-5051	-246	59.75		27949	0.6024	9282	1677			6.83	Si
SLU 81	5.07	-6994	217	187.82		38701	0.6024	10716	1936			8.94	Si
SLU 81	8.18	-5113	-252	56.16		28292	0.6024	9328	1686			6.68	Si
SLU 79	5.07	-7025	205	175.97		38875	0.6024	10739	1941			9.48	Si
SLU 79	8.18	-5126	-248	61.33		28365	0.6024	9338	1687			6.8	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 11	5.07	-3676	-365	-564.91		27689	0.4425	13871	1842			5.05	Si
SLV 11	8.18	-3237	870	-451.81		22255	0.4848	12784	1859			2.14	Si
SLV 6	5.07	-6348	626	784.61		39718	0.5328	16250	2597			4.15	Si
SLV 6	8.18	-3924	-1187	546.99		26948	0.4854	13723	1998			1.68	Si
SLV 2	5.07	-5087	1020	998.41		53874	0.3147	16250	1534			1.5	Si
SLV 2	8.18	-4221	-1561	81.64		23356	0.6024	13005	2350			1.51	Si
SLV 12	5.07	-3676	-365	-564.91		27689	0.4425	13871	1842			5.05	Si
SLV 12	8.18	-3237	870	-451.81		22255	0.4848	12784	1859			2.14	Si
SLV 4	5.07	-4221	869	729.27		36523	0.3852	15638	1807			2.08	Si
SLV 4	8.18	-4121	-1160	-240.89		22803	0.6024	12894	2330			2.01	Si
SLV 5	5.07	-6348	626	784.61		39718	0.5328	16250	2597			4.15	Si
SLV 5	8.18	-3924	-1187	546.99		26948	0.4854	13723	1998			1.68	Si
SLV 1	5.07	-5087	1020	998.41		53874	0.3147	16250	1534			1.5	Si
SLV 1	8.18	-4221	-1561	81.64		23356	0.6024	13005	2350			1.51	Si
SLV 15	5.07	-4938	-758	-778.71		38237	0.4304	15981	2064			2.72	Si
SLV 15	8.18	-2940	1244	13.53		16270	0.6024	11587	2094			1.68	Si
SLV 16	5.07	-4938	-758	-778.71		38237	0.4304	15981	2064			2.72	Si
SLV 16	8.18	-2940	1244	13.53		16270	0.6024	11587	2094			1.68	Si
SLV 3	5.07	-4221	869	729.27		36523	0.3852	15638	1807			2.08	Si
SLV 3	8.18	-4121	-1160	-240.89		22803	0.6024	12894	2330			2.01	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 11	143750	0.39	3988	-721	65.8	104.58	1.59	Si
SLV 12	143750	0.39	3988	-721	65.8	104.58	1.59	Si
SLV 8	143750	0.39	7840	-1417	65.8	198.88	3.02	Si
SLV 7	143750	0.39	7840	-1417	65.8	198.88	3.02	Si
SLV 16	143750	0.39	13918	-2515	65.8	334.29	5.08	Si
SLV 15	143750	0.39	13918	-2515	65.8	334.29	5.08	Si
SLV 14	143750	0.39	26280	-4749	65.8	559.15	8.5	Si
SLV 13	143750	0.39	26280	-4749	65.8	559.15	8.5	Si
SLV 3	143750	0.39	26756	-4835	65.8	566.46	8.61	Si
SLV 4	143750	0.39	26756	-4835	65.8	566.46	8.61	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0702

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	α_{lim}	Verifica
SLV 3	-3921	-4221	-18	0.044	490	0.947	0.67	8.27253	No
SLV 4	-3921	-4221	-18	0.044	490	0.947	0.67	8.27253	No
SLV 7	-3248	-3461	-37	0.039	421.7	0.94	0.60158	7.18311	No
SLV 8	-3248	-3461	-37	0.039	421.7	0.94	0.60158	7.18311	No
SLV 12	-2835	-3676	-34	0.039	380	0.934	0.61399	7.18311	No
SLV 11	-2835	-3676	-34	0.039	380	0.934	0.61399	7.18311	No
SLV 14	-2711	-5804	13	0.046	367.5	0.933	0.7135	8.27253	No
SLV 13	-2711	-5804	13	0.046	367.5	0.933	0.7135	8.27253	No
SLV 10	-3384	-6563	32	0.04	435.6	0.941	0.62289	7.18311	No
SLV 9	-3384	-6563	32	0.04	435.6	0.941	0.62289	7.18311	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.775	SLU 84	Si
V_SLU	6.58	SLU 83	Si
PF_SLV	1.181	SLV 1	Si
V_SLV	1.505	SLV 1	Si
PFFP_SLV	1.589	SLV 11	Si
R_SLV	0.081	SLV 3	No

Maschio 125

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-4.784	-14.61	-4.784	L4	L5	0.848	0.3	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 41	5.07	-7868	7.73	30939	2067.9	267.43	Si
SLU 41	8.18	-5876	117.35	23107	1783.83	15.202	Si
SLU 81	5.07	-9519	22.58	37435	2180.33	96.541	Si
SLU 81	8.18	-6971	129.92	27412	1960.07	15.087	Si
SLU 40	5.07	-7862	12.77	30918	2067.33	161.917	Si
SLU 40	8.18	-5822	116.65	22897	1773.98	15.208	Si
SLU 42	5.07	-8007	17.09	31487	2081.69	121.815	Si
SLU 42	8.18	-5960	117.36	23438	1799.13	15.331	Si
SLU 74	5.07	-9488	37.76	37311	2179.24	57.711	Si
SLU 74	8.18	-6936	121.48	27275	1955.22	16.095	Si
SLU 82	5.07	-9658	31.94	37982	2184.71	68.399	Si
SLU 82	8.18	-7055	129.93	27743	1971.59	15.175	Si
SLU 39	5.07	-7723	3.41	30370	2052.72	601.726	Si
SLU 39	8.18	-5738	116.64	22565	1758.2	15.074	Si
SLU 83	5.07	-9664	26.91	38004	2184.87	81.205	Si
SLU 83	8.18	-7108	130.62	27953	1978.75	15.148	Si
SLU 84	5.07	-9803	36.26	38552	2188.42	60.35	Si
SLU 84	8.18	-7192	130.63	28285	1989.8	15.232	Si
SLU 77	5.07	-9633	42.08	37881	2183.96	51.897	Si
SLU 77	8.18	-7073	122.19	27816	1974.09	16.156	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 13	5.07	-8305	-591.62	32658	2578.86	4.359	Si
SLV 13	8.18	-6969	606.51	27405	2291.04	3.777	Si
SLV 3	5.07	-5321	667.42	20924	1868.84	2.8	Si
SLV 3	8.18	-2795	-451.23	10993	1078.16	2.389	Si
SLV 14	5.07	-8305	-591.62	32658	2578.86	4.359	Si
SLV 14	8.18	-6969	606.51	27405	2291.04	3.777	Si
SLV 16	5.07	-5003	-789.1	19673	1778.83	2.254	Si
SLV 16	8.18	-5560	609.77	21865	1934.73	3.173	Si
SLV 12	5.07	-1262	-509.71	4962	513.07	1.007	Si
SLV 12	8.18	-2949	242.22	11596	1131.12	4.67	Si
SLV 11	5.07	-1262	-509.71	4962	513.07	1.007	Si
SLV 11	8.18	-2949	242.22	11596	1131.12	4.67	Si
SLV 4	5.07	-5321	667.42	20924	1868.84	2.8	Si
SLV 4	8.18	-2795	-451.23	10993	1078.16	2.389	Si
SLV 15	5.07	-5003	-789.1	19673	1778.83	2.254	Si
SLV 15	8.18	-5560	609.77	21865	1934.73	3.173	Si
SLV 1	5.07	-8623	864.9	33909	2640.22	3.053	Si
SLV 1	8.18	-4204	-454.48	16534	1540.73	3.39	Si
SLV 2	5.07	-8623	864.9	33909	2640.22	3.053	Si
SLV 2	8.18	-4204	-454.48	16534	1540.73	3.39	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 75	5.07	-9627	1	47.12		37859	0.8476	10603	2696			1000	Si
SLU 75	8.18	-7020	-156	121.49		27606	0.8476	9236	2349			15.01	Si
SLU 82	5.07	-9658	-26	31.94		37982	0.8476	10620	2700			105.05	Si
SLU 82	8.18	-7055	-166	129.93		27743	0.8476	9255	2353			14.18	Si
SLU 42	5.07	-8007	-35	17.09		31487	0.8476	9754	2480			69.89	Si
SLU 42	8.18	-5960	-149	117.36		23438	0.8476	8681	2207			14.8	Si
SLU 41	5.07	-7868	-49	7.73		30939	0.8476	9681	2462			50.5	Si
SLU 41	8.18	-5876	-149	117.35		23107	0.8476	8636	2196			14.75	Si
SLU 39	5.07	-7723	-57	3.41		30370	0.8476	9605	2442			42.62	Si
SLU 39	8.18	-5738	-149	116.64		22565	0.8476	8564	2178			14.61	Si
SLU 84	5.07	-9803	-17	36.26		38552	0.8476	10696	2720			158.69	Si
SLU 84	8.18	-7192	-166	130.63		28285	0.8476	9327	2372			14.3	Si
SLU 83	5.07	-9664	-30	26.91		38004	0.8476	10623	2701			88.87	Si
SLU 83	8.18	-7108	-166	130.62		27953	0.8476	9283	2360			14.25	Si
SLU 40	5.07	-7862	-44	12.77		30918	0.8476	9678	2461			55.86	Si
SLU 40	8.18	-5822	-149	116.65		22897	0.8476	8608	2189			14.67	Si
SLU 74	5.07	-9488	-12	37.76		37311	0.8476	10530	2678			221.45	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 74	8.18	-6936	-156	121.48		27275	0.8476	9192	2337			14.96	Si
SLU 81	5.07	-9519	-39	22.58		37435	0.8476	10547	2682			68.84	Si
SLU 81	8.18	-6971	-166	129.92		27412	0.8476	9211	2342			14.13	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 1	5.07	-8623	3818	864.9		33909	0.8476	15115	3844			1.01	Si
SLV 1	8.18	-4204	1497	-454.48		16534	0.8476	11640	2960			1.98	Si
SLV 15	5.07	-5003	-3802	-789.1		20891	0.7982	12511	2996			0.79	No, Vu<V
SLV 15	8.18	-5560	-1698	609.77		21865	0.8476	12706	3231			1.9	Si
SLV 16	5.07	-5003	-3802	-789.1		20891	0.7982	12511	2996			0.79	No, Vu<V
SLV 16	8.18	-5560	-1698	609.77		21865	0.8476	12706	3231			1.9	Si
SLV 14	5.07	-8305	-3041	-591.62		32658	0.8476	14865	3780			1.24	Si
SLV 14	8.18	-6969	-1683	606.51		27405	0.8476	13814	3513			2.09	Si
SLV 2	5.07	-8623	3818	864.9		33909	0.8476	15115	3844			1.01	Si
SLV 2	8.18	-4204	1497	-454.48		16534	0.8476	11640	2960			1.98	Si
SLV 13	5.07	-8305	-3041	-591.62		32658	0.8476	14865	3780			1.24	Si
SLV 13	8.18	-6969	-1683	606.51		27405	0.8476	13814	3513			2.09	Si
SLV 3	5.07	-5321	3057	667.42		20924	0.8476	12518	3183			1.04	Si
SLV 3	8.18	-2795	1483	-451.23		11837	0.7872	10701	2527			1.7	Si
SLV 4	5.07	-5321	3057	667.42		20924	0.8476	12518	3183			1.04	Si
SLV 4	8.18	-2795	1483	-451.23		11837	0.7872	10701	2527			1.7	Si
SLV 11	5.07	-1262	-2289	-509.71		70539	0.0596	16250	291			0.13	No, Vu<V
SLV 11	8.18	-2949	-601	242.22		11596	0.8476	10653	2709			4.51	Si
SLV 12	5.07	-1262	-2289	-509.71		70539	0.0596	16250	291			0.13	No, Vu<V
SLV 12	8.18	-2949	-601	242.22		11596	0.8476	10653	2709			4.51	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 12	143750	0.39	9877	-2512	92.59	346.29	3.74	Si
SLV 11	143750	0.39	9877	-2512	92.59	346.29	3.74	Si
SLV 8	143750	0.39	10791	-2744	92.59	375.26	4.05	Si
SLV 7	143750	0.39	10791	-2744	92.59	375.26	4.05	Si
SLV 15	143750	0.39	17970	-4569	92.59	584.62	6.31	Si
SLV 16	143750	0.39	17970	-4569	92.59	584.62	6.31	Si
SLV 4	143750	0.39	21017	-5344	92.59	663.76	7.17	Si
SLV 3	143750	0.39	21017	-5344	92.59	663.76	7.17	Si
SLV 14	143750	0.39	25821	-6566	92.59	776.75	8.39	Si
SLV 13	143750	0.39	25821	-6566	92.59	776.75	8.39	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 6.845 Wa = 0.05 Ta = 0.0702

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 8	-1513	-1357	-50	0.035	287.3	0.898	0.5724	7.18311	No
SLV 7	-1513	-1357	-50	0.035	287.3	0.898	0.5724	7.18311	No
SLV 13	-6764	-8305	23	0.044	816.1	0.954	0.66716	8.27253	No
SLV 14	-6764	-8305	23	0.044	816.1	0.954	0.66716	8.27253	No
SLV 10	-6766	-12268	51	0.04	816.2	0.954	0.61066	7.18311	No
SLV 9	-6766	-12268	51	0.04	816.2	0.954	0.61066	7.18311	No
SLV 12	-2725	-1262	-46	0.039	407.3	0.919	0.61813	7.18311	No
SLV 11	-2725	-1262	-46	0.039	407.3	0.919	0.61813	7.18311	No
SLV 6	-5555	-12363	46	0.04	693.3	0.947	0.62043	7.18311	No
SLV 5	-5555	-12363	46	0.04	693.3	0.947	0.62043	7.18311	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	15.074	SLU 39	Si
V_SLU	14.126	SLU 81	Si
PF_SLV	1.007	SLV 11	Si
V_SLV	0.127	SLV 11	No
PFFP_SLV	3.74	SLV 11	Si
R_SLV	0.08	SLV 7	No

Maschio 126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-15.058	1.046	-15.058	1.406	L4	L5	0.36	0.14	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	t0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 84	5.07	-4133	180.5	82010	0	0	No, Rottura per schiacciamento
SLU 84	7.17	-1700	-113.47	33729	179.29	1.58	Si
SLU 79	5.07	-4076	177.34	80876	5.24	0.03	No, M>Mu
SLU 79	7.17	-1675	-112.12	33243	178.51	1.592	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 83	5.07	-4162	182.68	82589	0	0	No, Rottura per schiacciamento
SLU 83	7.17	-1698	-114.93	33696	179.24	1.56	Si
SLU 78	5.07	-4090	175.91	81143	2.85	0.016	No, M>Mu
SLU 78	7.17	-1716	-110.55	34040	179.76	1.626	Si
SLU 77	5.07	-4119	178.09	81722	0	0	No, Rottura per schiacciamento
SLU 77	7.17	-1714	-112.01	34006	179.71	1.604	Si
SLU 75	5.07	-3988	171.34	79126	20.55	0.12	No, M>Mu
SLU 75	7.17	-1673	-107.05	33189	178.42	1.667	Si
SLU 81	5.07	-4061	178.11	80572	7.96	0.045	No, M>Mu
SLU 81	7.17	-1655	-111.43	32845	177.83	1.596	Si
SLU 82	5.07	-4032	175.93	79993	13.06	0.074	No, M>Mu
SLU 82	7.17	-1657	-109.97	32879	177.88	1.618	Si
SLU 74	5.07	-4017	173.52	79705	15.57	0.09	No, M>Mu
SLU 74	7.17	-1671	-108.51	33155	178.36	1.644	Si
SLU 80	5.07	-4047	175.16	80297	10.38	0.059	No, M>Mu
SLU 80	7.17	-1677	-110.66	33277	178.56	1.614	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 2	5.07	-13	-226.48	0	0	0	No, e>l/2
SLV 2	7.17	-3163	207.93	62749	276.92	1.332	Si
SLV 12	5.07	-7057	686.07	140021	0	0	No, Rottura per schiacciamento
SLV 12	7.17	2101	-489.67	0	0	0	No, Trazione
SLV 1	5.07	-13	-226.48	0	0	0	No, e>l/2
SLV 1	7.17	-3163	207.93	62749	276.92	1.332	Si
SLV 6	5.07	1705	-458.27	0	0	0	No, Trazione
SLV 6	7.17	-4322	347.37	85763	231.94	0.668	No, M>Mu
SLV 9	5.07	815	-347.01	0	0	0	No, Trazione
SLV 9	7.17	-3605	246.14	71525	269.04	1.093	Si
SLV 10	5.07	815	-347.01	0	0	0	No, Trazione
SLV 10	7.17	-3605	246.14	71525	269.04	1.093	Si
SLV 8	5.07	-6168	574.82	122377	0	0	No, Rottura per schiacciamento
SLV 8	7.17	1384	-388.44	0	0	0	No, Trazione
SLV 5	5.07	1705	-458.27	0	0	0	No, Trazione
SLV 5	7.17	-4322	347.37	85763	231.94	0.668	No, M>Mu
SLV 11	5.07	-7057	686.07	140021	0	0	No, Rottura per schiacciamento
SLV 11	7.17	2101	-489.67	0	0	0	No, Trazione
SLV 7	5.07	-6168	574.82	122377	0	0	No, Rottura per schiacciamento
SLV 7	7.17	1384	-388.44	0	0	0	No, Trazione

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 82	5.07	-4032	327	175.93		79993	0.36	10833	546			1.67	Si
SLU 82	7.17	-1657	310	-109.97		34720	0.3409	10185	486			1.57	Si
SLU 74	5.07	-4017	324	173.52		79705	0.36	10833	546			1.69	Si
SLU 74	7.17	-1671	305	-108.51		34578	0.3452	10166	491			1.61	Si
SLU 84	5.07	-4133	336	180.5		82010	0.36	10833	546			1.62	Si
SLU 84	7.17	-1700	319	-113.47		35738	0.3398	10321	491			1.54	Si
SLU 62	5.07	-3750	306	163.14		74395	0.36	10833	546			1.79	Si
SLU 62	7.17	-1525	289	-103.08		32300	0.3372	9862	466			1.61	Si
SLU 83	5.07	-4162	342	182.68		82589	0.36	10833	546			1.6	Si
SLU 83	7.17	-1698	322	-114.93		35998	0.337	10355	489			1.52	Si
SLU 77	5.07	-4119	333	178.09		81722	0.36	10833	546			1.64	Si
SLU 77	7.17	-1714	314	-112.01		35594	0.3439	10301	496			1.58	Si
SLU 80	5.07	-4047	327	175.16		80297	0.36	10833	546			1.67	Si
SLU 80	7.17	-1677	310	-110.66		35022	0.3421	10225	490			1.58	Si
SLU 78	5.07	-4090	327	175.91		81143	0.36	10833	546			1.67	Si
SLU 78	7.17	-1716	311	-110.55		35346	0.3467	10268	498			1.6	Si
SLU 79	5.07	-4076	332	177.34		80876	0.36	10833	546			1.64	Si
SLU 79	7.17	-1675	314	-112.12		35278	0.3392	10259	487			1.55	Si
SLU 81	5.07	-4061	333	178.11		80572	0.36	10833	546			1.64	Si
SLU 81	7.17	-1655	314	-111.43		34977	0.3381	10219	484			1.54	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 1	5.07	-13	-674	-226.48		0	0	8333	0			0	No, Vu<V
SLV 1	7.17	-3163	-423	207.93		65906	0.3428	16250	780			1.84	Si
SLV 9	5.07	815	-1068	-347.01		0	0	8333	0			0	No, Vu<V
SLV 9	7.17	-3605	-517	246.14		76826	0.3352	16250	762			1.47	Si
SLV 2	5.07	-13	-674	-226.48		0	0	8333	0			0	No, Vu<V
SLV 2	7.17	-3163	-423	207.93		65906	0.3428	16250	780			1.84	Si
SLV 10	5.07	815	-1068	-347.01		0	0	8333	0			0	No, Vu<V
SLV 10	7.17	-3605	-517	246.14		76826	0.3352	16250	762			1.47	Si
SLV 11	5.07	-7057	1768	686.07		202973	0.2483	16250	565			0.32	No, Vu<V
SLV 11	7.17	2101	1144	-489.67		0	0	8333	0			0	No, Vu<V
SLV 8	5.07	-6168	1492	574.82		169178	0.2604	16250	592			0.4	No, Vu<V
SLV 8	7.17	1384	918	-388.44		0	0	8333	0			0	No, Vu<V
SLV 6	5.07	1705	-1344	-458.27		0	0	8333	0			0	No, Vu<V
SLV 6	7.17	-4322	-742	347.37		103291	0.2989	16250	680			0.92	No, Vu<V
SLV 7	5.07	-6168	1492	574.82		169178	0.2604	16250	592			0.4	No, Vu<V
SLV 7	7.17	1384	918	-388.44		0	0	8333	0			0	No, Vu<V
SLV 12	5.07	-7057	1768	686.07		202973	0.2483	16250	565			0.32	No, Vu<V
SLV 12	7.17	2101	1144	-489.67		0	0	8333	0			0	No, Vu<V
SLV 5	5.07	1705	-1344	-458.27		0	0	8333	0			0	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 5	7.17	-4322	-742	347.37		103291	0.2989	16250	680			0.92	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 7	143750	0.39	0	1333	20.1	0	0	No, Trazione
SLV 15	143750	0.39	0	894	20.1	0	0	No, Trazione
SLV 12	143750	0.39	0	2047	20.1	0	0	No, Trazione
SLV 16	143750	0.39	0	894	20.1	0	0	No, Trazione
SLV 11	143750	0.39	0	2047	20.1	0	0	No, Trazione
SLV 8	143750	0.39	0	1333	20.1	0	0	No, Trazione
SLV 13	143750	0.39	16064	-810	20.1	49.22	2.45	Si
SLV 14	143750	0.39	16064	-810	20.1	49.22	2.45	Si
SLV 3	143750	0.39	29520	-1488	20.1	78.99	3.93	Si
SLV 4	143750	0.39	29520	-1488	20.1	78.99	3.93	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.03 Ta = 0.1503

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 7	485	1705	3	0	0	0	0	16.14305	No, Trazione
SLV 9	115	815	1	0	0	0	0	16.14305	No, Trazione
SLV 6	485	1705	3	0	0	0	0	16.14305	No, Trazione
SLV 10	115	815	1	0	0	0	0	16.14305	No, Trazione
SLV 1	-216	-13	5	0.015	48.9	0.891	0.24194	16.59208	No
SLV 2	-216	-13	5	0.015	48.9	0.891	0.24194	16.59208	No
SLV 15	-2424	-5339	-5	0.019	271.9	0.972	0.28407	16.59208	No
SLV 16	-2424	-5339	-5	0.019	271.9	0.972	0.28407	16.59208	No
SLV 13	-1452	-2977	-4	0.019	173	0.957	0.29297	16.59208	No
SLV 14	-1452	-2977	-4	0.019	173	0.957	0.29297	16.59208	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0	SLU 77	No
V_SLU	1.515	SLU 83	Si
PF_SLV	0	SLV 16	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 16	No
R_SLV	0	SLV 10	No

Maschio 127

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.058	2.206	-15.058	6.661	L4	L5	4.455	0.14	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 82	5.07	-30095	-7759.93	48253	27326.94	3.522	Si
SLU 82	7.17	-26592	-6705.04	42635	28230.39	4.21	Si
SLU 77	5.07	-30303	-7627.47	48585	27239.7	3.571	Si
SLU 77	7.17	-26985	-6778.19	43265	28182.64	4.158	Si
SLU 81	5.07	-30130	-7790.51	48308	27312.7	3.506	Si
SLU 81	7.17	-26634	-6779.48	42704	28225.83	4.163	Si
SLU 78	5.07	-30268	-7596.89	48530	27254.47	3.588	Si
SLU 78	7.17	-26942	-6703.76	43197	28188.51	4.205	Si
SLU 74	5.07	-29806	-7502.97	47789	27442.36	3.658	Si
SLU 74	7.17	-26448	-6641.03	42405	28244.42	4.253	Si
SLU 84	5.07	-30592	-7884.42	49049	27111.67	3.439	Si
SLU 84	7.17	-27128	-6842.21	43495	28161.87	4.116	Si
SLU 79	5.07	-29912	-7533.06	47960	27400.73	3.637	Si
SLU 79	7.17	-26606	-6688.11	42658	28228.91	4.221	Si
SLU 75	5.07	-29771	-7472.39	47733	27455.62	3.674	Si
SLU 75	7.17	-26405	-6566.59	42337	28248.28	4.302	Si
SLU 80	5.07	-29878	-7502.48	47904	27414.32	3.654	Si
SLU 80	7.17	-26563	-6613.67	42589	28233.36	4.269	Si
SLU 83	5.07	-30627	-7915	49105	27095.93	3.423	Si
SLU 83	7.17	-27171	-6916.65	43564	28155.29	4.071	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 9	5.07	-11625	-21456.55	18639	21944.76	1.023	Si
SLV 9	7.17	-10286	1097.25	16492	19819.87	18.063	Si
SLV 12	5.07	-26040	11457.9	41750	38184.12	3.333	Si
SLV 12	7.17	-25566	-12972.77	40990	37843.25	2.917	Si
SLV 13	5.07	-13378	-10357.17	21450	24569	2.372	Si
SLV 13	7.17	-15862	-7520.91	25433	27978.89	3.72	Si
SLV 10	5.07	-11625	-21456.55	18639	21944.76	1.023	Si
SLV 10	7.17	-10286	1097.25	16492	19819.87	18.063	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 5	5.07	-14447	-21095.97	23163	26079.47	1.236	Si
SLV 5	7.17	-10090	4263.23	16178	19500.48	4.574	Si
SLV 16	5.07	-17703	-482.83	28384	30272.93	62.699	Si
SLV 16	7.17	-20446	-11741.91	32782	33324.72	2.838	Si
SLV 15	5.07	-17703	-482.83	28384	30272.93	62.699	Si
SLV 15	7.17	-20446	-11741.91	32782	33324.72	2.838	Si
SLV 6	5.07	-14447	-21095.97	23163	26079.47	1.236	Si
SLV 6	7.17	-10090	4263.23	16178	19500.48	4.574	Si
SLV 14	5.07	-13378	-10357.17	21450	24569	2.372	Si
SLV 14	7.17	-15862	-7520.91	25433	27978.89	3.72	Si
SLV 11	5.07	-26040	11457.9	41750	38184.12	3.333	Si
SLV 11	7.17	-25566	-12972.77	40990	37843.25	2.917	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 79	5.07	-29912	-336	-7533.06		47960	4.455	10833	6757			20.09	Si
SLU 79	7.17	-26606	-336	-6688.11		42658	4.455	10833	6757			20.11	Si
SLU 55	5.07	-26466	-328	-6389.65		42434	4.455	10833	6757			20.57	Si
SLU 55	7.17	-23405	-328	-5670.16		37525	4.455	10559	6586			20.07	Si
SLU 80	5.07	-29878	-353	-7502.48		47904	4.455	10833	6757			19.16	Si
SLU 80	7.17	-26563	-352	-6613.67		42589	4.455	10833	6757			19.17	Si
SLU 72	5.07	-27052	-333	-6320.81		43373	4.455	10833	6757			20.29	Si
SLU 72	7.17	-23992	-333	-5760.35		38468	4.455	10685	6664			20.03	Si
SLU 59	5.07	-26986	-333	-6534.53		43267	4.455	10833	6757			20.31	Si
SLU 59	7.17	-23969	-332	-5856.96		38431	4.455	10680	6661			20.04	Si
SLU 51	5.07	-24160	-313	-5352.85		38736	4.455	10720	6686			21.37	Si
SLU 51	7.17	-21399	-313	-5003.64		34310	4.455	10130	6318			20.21	Si
SLU 78	5.07	-30268	-349	-7596.89		48530	4.455	10833	6757			19.38	Si
SLU 78	7.17	-26942	-348	-6703.76		43197	4.455	10833	6757			19.4	Si
SLU 68	5.07	-26532	-329	-6175.93		42540	4.455	10833	6757			20.55	Si
SLU 68	7.17	-23428	-329	-5573.56		37562	4.455	10564	6589			20.05	Si
SLU 84	5.07	-30592	-346	-7884.42		49049	4.455	10833	6757			19.52	Si
SLU 84	7.17	-27128	-346	-6842.21		43495	4.455	10833	6757			19.54	Si
SLU 76	5.07	-29358	-349	-7357.6		47071	4.455	10833	6757			19.39	Si
SLU 76	7.17	-25998	-348	-6426.88		41683	4.455	10833	6757			19.4	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 11	5.07	-26040	11596	11457.9		41750	4.455	16250	10135			0.87	No, Vu<V
SLV 11	7.17	-25566	10752	-12972.77		40990	4.455	16250	10135			0.94	No, Vu<V
SLV 9	5.07	-11625	-12393	-21456.55		72498	1.1454	16250	2606			0.21	No, Vu<V
SLV 9	7.17	-10286	-11512	1097.25		16492	4.455	11632	7255			0.63	No, Vu<V
SLV 6	5.07	-14447	-12039	-21095.97		44833	2.3017	16250	5236			0.43	No, Vu<V
SLV 6	7.17	-10090	-11195	4263.23		16178	4.455	11569	7216			0.64	No, Vu<V
SLV 5	5.07	-14447	-12039	-21095.97		44833	2.3017	16250	5236			0.43	No, Vu<V
SLV 5	7.17	-10090	-11195	4263.23		16178	4.455	11569	7216			0.64	No, Vu<V
SLV 13	5.07	-13378	-4410	-10357.17		21918	4.36	12717	7762			1.76	Si
SLV 13	7.17	-15862	-4089	-7520.91		25433	4.455	13420	8370			2.05	Si
SLV 8	5.07	-28861	11950	11818.48		46274	4.455	16250	10135			0.85	No, Vu<V
SLV 8	7.17	-25370	11069	-9806.78		40676	4.455	16250	10135			0.92	No, Vu<V
SLV 12	5.07	-26040	11596	11457.9		41750	4.455	16250	10135			0.87	No, Vu<V
SLV 12	7.17	-25566	10752	-12972.77		40990	4.455	16250	10135			0.94	No, Vu<V
SLV 10	5.07	-11625	-12393	-21456.55		72498	1.1454	16250	2606			0.21	No, Vu<V
SLV 10	7.17	-10286	-11512	1097.25		16492	4.455	11632	7255			0.63	No, Vu<V
SLV 14	5.07	-13378	-4410	-10357.17		21918	4.36	12717	7762			1.76	Si
SLV 14	7.17	-15862	-4089	-7520.91		25433	4.455	13420	8370			2.05	Si
SLV 7	5.07	-28861	11950	11818.48		46274	4.455	16250	10135			0.85	No, Vu<V
SLV 7	7.17	-25370	11069	-9806.78		40676	4.455	16250	10135			0.92	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 9	143750	0.39	16438	-10253	248.74	621.13	2.5	Si
SLV 10	143750	0.39	16438	-10253	248.74	621.13	2.5	Si
SLV 5	143750	0.39	16982	-10592	248.74	638.36	2.57	Si
SLV 6	143750	0.39	16982	-10592	248.74	638.36	2.57	Si
SLV 14	143750	0.39	24585	-15334	248.74	857.39	3.45	Si
SLV 13	143750	0.39	24585	-15334	248.74	857.39	3.45	Si
SLV 1	143750	0.39	26396	-16463	248.74	903.47	3.63	Si
SLV 2	143750	0.39	26396	-16463	248.74	903.47	3.63	Si
SLV 15	143750	0.39	32111	-20028	248.74	1033.51	4.16	Si
SLV 16	143750	0.39	32111	-20028	248.74	1033.51	4.16	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.03 Ta = 0.1503

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 14	-14123	-13378	113	0.015	1751.1	0.949	0.23158	16.59208	No
SLV 13	-14123	-13378	113	0.015	1751.1	0.949	0.23158	16.59208	No
SLV 4	-14319	-27108	-114	0.015	1770.9	0.949	0.23226	16.59208	No
SLV 3	-14319	-27108	-114	0.015	1770.9	0.949	0.23226	16.59208	No
SLV 2	-13880	-22783	-87	0.017	1726.4	0.948	0.2561	16.59208	No
SLV 1	-13880	-22783	-87	0.017	1726.4	0.948	0.2561	16.59208	No
SLV 15	-14562	-17703	87	0.017	1795.6	0.95	0.25757	16.59208	No
SLV 16	-14562	-17703	87	0.017	1795.6	0.95	0.25757	16.59208	No
SLV 10	-13527	-11625	74	0.017	1690.5	0.947	0.26825	16.14305	No
SLV 9	-13527	-11625	74	0.017	1690.5	0.947	0.26825	16.14305	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
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Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.423	SLU 83	Si
V_SLU	19.157	SLU 80	Si
PF_SLV	1.023	SLV 9	Si
V_SLV	0.21	SLV 9	No
PFFP_SLV	2.497	SLV 9	Si
R_SLV	0.014	SLV 13	No

Maschio 128

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-4.784	-13.763	-3.314	L4	L5	1.47	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ ₀	f _{v0}	μ	φ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLU 75	5.07	-17126	395.06	41609	6157.94	15.587	Si
SLU 75	8.62	-11004	520	26734	5433.45	10.449	Si
SLU 41	5.07	-14360	365.77	34888	6034.1	16.497	Si
SLU 41	8.62	-9184	469.99	22314	4901.33	10.429	Si
SLU 83	5.07	-17374	419.63	42211	6152.67	14.662	Si
SLU 83	8.62	-11095	527.51	26956	5456.28	10.343	Si
SLU 82	5.07	-17279	388.58	41980	6155.01	15.84	Si
SLU 82	8.62	-10982	528.01	26682	5427.94	10.28	Si
SLU 40	5.07	-14265	334.72	34657	6023.88	17.997	Si
SLU 40	8.62	-9071	470.49	22039	4863.53	10.337	Si
SLU 84	5.07	-17547	405	42631	6147.39	15.179	Si
SLU 84	8.62	-11236	539.47	27299	5490.97	10.178	Si
SLU 42	5.07	-14533	351.14	35308	6051.68	17.234	Si
SLU 42	8.62	-9326	481.95	22657	4947.86	10.266	Si
SLU 81	5.07	-17106	403.21	41559	6158.26	15.273	Si
SLU 81	8.62	-10841	516.05	26338	5391.68	10.448	Si
SLU 36	5.07	-14380	357.62	34938	6036.26	16.879	Si
SLU 36	8.62	-9347	473.94	22710	4954.94	10.455	Si
SLU 78	5.07	-17394	411.48	42261	6152.11	14.951	Si
SLU 78	8.62	-11258	531.46	27352	5496.24	10.342	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLV 9	5.07	-19049	-592.01	46279	8697.83	14.692	Si
SLV 9	8.62	-10350	1253.24	25147	6041.91	4.821	Si
SLV 15	5.07	-9709	488.26	23588	5758.35	11.794	Si
SLV 15	8.62	-7725	772.71	18769	4805.93	6.22	Si
SLV 10	5.07	-19049	-592.01	46279	8697.83	14.692	Si
SLV 10	8.62	-10350	1253.24	25147	6041.91	4.821	Si
SLV 12	5.07	-4797	1100.36	11654	3189.29	2.898	Si
SLV 12	8.62	-5371	-209.8	13048	3525.92	16.806	Si
SLV 16	5.07	-9709	488.26	23588	5758.35	11.794	Si
SLV 16	8.62	-7725	772.71	18769	4805.93	6.22	Si
SLV 11	5.07	-4797	1100.36	11654	3189.29	2.898	Si
SLV 11	8.62	-5371	-209.8	13048	3525.92	16.806	Si
SLV 7	5.07	-4862	1117.31	11812	3228.03	2.889	Si
SLV 7	8.62	-4846	-613.03	11774	3218.82	5.251	Si
SLV 14	5.07	-13984	-19.45	33975	7420.42	381.457	Si
SLV 14	8.62	-9219	1211.62	22399	5534.02	4.567	Si
SLV 13	5.07	-13984	-19.45	33975	7420.42	381.457	Si
SLV 13	8.62	-9219	1211.62	22399	5534.02	4.567	Si
SLV 8	5.07	-4862	1117.31	11812	3228.03	2.889	Si
SLV 8	8.62	-4846	-613.03	11774	3218.82	5.251	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	V par	M	σ ₀	σ _N	l'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 78	5.07	-17394	-1542	411.48		42261	1.47	10833	4459			2.89	Si
SLU 78	8.62	-11258	-873	531.46		27352	1.47	9203	3788			4.34	Si
SLU 83	5.07	-17374	-1493	419.63		42211	1.47	10833	4459			2.99	Si
SLU 83	8.62	-11095	-873	527.51		26956	1.47	9150	3766			4.31	Si
SLU 73	5.07	-16887	-1583	359.48		41029	1.47	10833	4459			2.82	Si
SLU 73	8.62	-10769	-898	504.16		26164	1.47	9044	3723			4.15	Si
SLU 75	5.07	-17126	-1536	395.06		41609	1.47	10833	4459			2.9	Si
SLU 75	8.62	-11004	-878	520		26734	1.47	9120	3754			4.28	Si
SLU 80	5.07	-17308	-1529	402.07		42051	1.47	10833	4459			2.92	Si
SLU 80	8.62	-11183	-861	519.11		27170	1.47	9178	3778			4.39	Si
SLU 31	5.07	-13873	-1368	305.62		33706	1.47	10050	4136			3.02	Si
SLU 31	8.62	-8858	-790	446.64		21522	1.47	8425	3468			4.39	Si
SLU 76	5.07	-17155	-1590	375.9		41680	1.47	10833	4459			2.81	Si
SLU 76	8.62	-11023	-893	515.62		26782	1.47	9126	3756			4.21	Si
SLU 82	5.07	-17279	-1587	388.58		41980	1.47	10833	4459			2.81	Si
SLU 82	8.62	-10982	-919	528.01		26682	1.47	9113	3751			4.08	Si
SLU 81	5.07	-17106	-1487	403.21		41559	1.47	10833	4459			3	Si
SLU 81	8.62	-10841	-877	516.05		26338	1.47	9067	3732			4.25	Si
SLU 84	5.07	-17547	-1594	405		42631	1.47	10833	4459			2.8	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 84	8.62	-11236	-915	539.47		27299	1.47	9195	3785			4.14	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 10	5.07	-19049	-6621	-592.01		46279	1.47	16250	6688			1.01	Si
SLV 10	8.62	-10350	-5331	1253.24		25147	1.47	13363	5500			1.03	Si
SLV 5	5.07	-19114	-5429	-575.06		46438	1.47	16250	6688			1.23	Si
SLV 5	8.62	-9826	-3617	850.01		23873	1.47	13108	5395			1.49	Si
SLV 7	5.07	-4862	4668	1117.31		11812	1.47	10696	4402			0.94	No, Vu<V
SLV 7	8.62	-4846	4218	-613.03		11774	1.47	10688	4399			1.04	Si
SLV 8	5.07	-4862	4668	1117.31		11812	1.47	10696	4402			0.94	No, Vu<V
SLV 8	8.62	-4846	4218	-613.03		11774	1.47	10688	4399			1.04	Si
SLV 13	5.07	-13984	-4478	-19.45		33975	1.47	15128	6227			1.39	Si
SLV 13	8.62	-9219	-4587	1211.62		22399	1.47	12813	5274			1.15	Si
SLV 9	5.07	-19049	-6621	-592.01		46279	1.47	16250	6688			1.01	Si
SLV 9	8.62	-10350	-5331	1253.24		25147	1.47	13363	5500			1.03	Si
SLV 14	5.07	-13984	-4478	-19.45		33975	1.47	15128	6227			1.39	Si
SLV 14	8.62	-9219	-4587	1211.62		22399	1.47	12813	5274			1.15	Si
SLV 11	5.07	-4797	3476	1100.36		11654	1.47	10664	4389			1.26	Si
SLV 11	8.62	-5371	2505	-209.8		13048	1.47	10943	4504			1.8	Si
SLV 6	5.07	-19114	-5429	-575.06		46438	1.47	16250	6688			1.23	Si
SLV 6	8.62	-9826	-3617	850.01		23873	1.47	13108	5395			1.49	Si
SLV 12	5.07	-4797	3476	1100.36		11654	1.47	10664	4389			1.26	Si
SLV 12	8.62	-5371	2505	-209.8		13048	1.47	10943	4504			1.8	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 12	143750	0.39	10632	-4376	157.01	559.35	3.56	Si
SLV 11	143750	0.39	10632	-4376	157.01	559.35	3.56	Si
SLV 8	143750	0.39	12321	-5071	157.01	638.39	4.07	Si
SLV 7	143750	0.39	12321	-5071	157.01	638.39	4.07	Si
SLV 16	143750	0.39	16236	-6683	157.01	811.28	5.17	Si
SLV 15	143750	0.39	16236	-6683	157.01	811.28	5.17	Si
SLV 3	143750	0.39	21866	-9000	157.01	1034.53	6.59	Si
SLV 4	143750	0.39	21866	-9000	157.01	1034.53	6.59	Si
SLV 14	143750	0.39	22729	-9355	157.01	1066.1	6.79	Si
SLV 13	143750	0.39	22729	-9355	157.01	1066.1	6.79	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 13	-9219	-13984	3	0.044	1145.3	0.948	0.67509	8.88274	No
SLV 13	-9219	-13984	3	0.044	1145.3	0.948	0.67509	8.88274	No
SLV 15	-7725	-9709	-9	0.044	993.8	0.941	0.68169	8.88274	No
SLV 16	-7725	-9709	-9	0.044	993.8	0.941	0.68169	8.88274	No
SLV 1	-7471	-14202	9	0.044	968.1	0.94	0.68427	8.88274	No
SLV 2	-7471	-14202	9	0.044	968.1	0.94	0.68427	8.88274	No
SLV 4	-5978	-9926	-3	0.046	817.1	0.931	0.71999	8.88274	No
SLV 3	-5978	-9926	-3	0.046	817.1	0.931	0.71999	8.88274	No
SLV 10	-10350	-19049	20	0.042	1260.2	0.952	0.64348	7.63299	No
SLV 9	-10350	-19049	20	0.042	1260.2	0.952	0.64348	7.63299	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.178	SLU 84	Si
V_SLU	2.798	SLU 84	Si
PF_SLV	2.889	SLV 7	Si
V_SLV	0.943	SLV 7	No
PFFP_SLV	3.562	SLV 11	Si
R_SLV	0.076	SLV 13	No

Maschio 130

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-3.314	-13.763	-0.354	Z medio 563 cm	L5	2.96	0.28	2.989	3.561	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 83	6.19	-33186	2987.65	40041	24972.48	8.359	Si
SLU 83	8.62	-24339	1317.15	29367	23035.48	17.489	Si
SLU 79	6.19	-32621	2873.76	39359	24951.34	8.682	Si
SLU 79	8.62	-23999	1081.16	28956	22892.54	21.174	Si
SLU 81	6.19	-32506	2894.31	39221	24945.36	8.619	Si
SLU 81	8.62	-23731	1303.19	28633	22776.44	17.477	Si
SLU 84	6.19	-33318	2895.78	40200	24975.39	8.625	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 84	8.62	-24459	1247.3	29512	23084.83	18.508	Si
SLU 77	6.19	-32927	2940.49	39729	24964.53	8.49	Si
SLU 77	8.62	-24273	1110.82	29286	23007.96	20.713	Si
SLU 80	6.19	-32752	2781.89	39518	24957.52	8.971	Si
SLU 80	8.62	-24119	1011.32	29101	22943.69	22.687	Si
SLU 41	6.19	-27967	2693.62	33744	24244.93	9.001	Si
SLU 41	8.62	-20575	1294.58	24825	21170.75	16.353	Si
SLU 74	6.19	-32247	2847.15	38909	24929.7	8.756	Si
SLU 74	8.62	-23665	1096.86	28553	22747.14	20.738	Si
SLU 78	6.19	-33059	2848.62	39888	24968.95	8.765	Si
SLU 78	8.62	-24393	1040.97	29432	23057.66	22.15	Si
SLU 82	6.19	-32638	2802.44	39380	24952.2	8.904	Si
SLU 82	8.62	-23852	1233.35	28778	22828.99	18.51	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 7	6.19	-17768	2273	21438	21682.76	9.539	Si
SLV 7	8.62	-12712	2010.54	15338	16451.85	8.183	Si
SLV 13	6.19	-26642	4146.4	32145	29056.75	7.008	Si
SLV 13	8.62	-19421	7.76	23433	23230.91	1000	Si
SLV 8	6.19	-17768	2273	21438	21682.76	9.539	Si
SLV 8	8.62	-12712	2010.54	15338	16451.85	8.183	Si
SLV 15	6.19	-24724	4975.65	29831	27657.65	5.559	Si
SLV 15	8.62	-17913	914.91	21613	21821.96	23.851	Si
SLV 14	6.19	-26642	4146.4	32145	29056.75	7.008	Si
SLV 14	8.62	-19421	7.76	23433	23230.91	1000	Si
SLV 2	6.19	-19384	-1499.93	23388	23197.31	15.466	Si
SLV 2	8.62	-14125	65.13	17043	17989.56	276.192	Si
SLV 11	6.19	-19945	3966.89	24065	23705.12	5.976	Si
SLV 11	8.62	-14300	1993.33	17254	18175.97	9.118	Si
SLV 12	6.19	-19945	3966.89	24065	23705.12	5.976	Si
SLV 12	8.62	-14300	1993.33	17254	18175.97	9.118	Si
SLV 1	6.19	-19384	-1499.93	23388	23197.31	15.466	Si
SLV 1	8.62	-14125	65.13	17043	17989.56	276.192	Si
SLV 16	6.19	-24724	4975.65	29831	27657.65	5.559	Si
SLV 16	8.62	-17913	914.91	21613	21821.96	23.851	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 78	6.19	-33059	1207	2848.62		39888	2.96	10833	8979			7.44	Si
SLU 78	8.62	-24393	433	1040.97		29432	2.96	9480	7857			18.15	Si
SLU 82	6.19	-32638	1270	2802.44		39380	2.96	10806	8956			7.05	Si
SLU 82	8.62	-23852	417	1233.35		28778	2.96	9393	7785			18.67	Si
SLU 31	6.19	-26263	1134	2239.93		31688	2.96	9781	8106			7.15	Si
SLU 31	8.62	-19220	440	914.27		23190	2.96	8648	7167			16.28	Si
SLU 34	6.19	-26942	1132	2333.27		32507	2.96	9890	8197			7.24	Si
SLU 34	8.62	-19828	448	928.23		23923	2.96	8745	7248			16.17	Si
SLU 75	6.19	-32379	1208	2755.28		39068	2.96	10765	8922			7.38	Si
SLU 75	8.62	-23785	425	1027.02		28698	2.96	9382	7776			18.31	Si
SLU 42	6.19	-28099	1134	2601.75		33903	2.96	10076	8351			7.36	Si
SLU 42	8.62	-20695	424	1224.73		24970	2.96	8885	7364			17.38	Si
SLU 73	6.19	-31481	1267	2533.96		37984	2.96	10620	8802			6.94	Si
SLU 73	8.62	-22984	442	936.84		27732	2.96	9253	7669			17.36	Si
SLU 76	6.19	-32161	1266	2627.3		38804	2.96	10729	8893			7.02	Si
SLU 76	8.62	-23592	450	950.8		28465	2.96	9351	7750			17.23	Si
SLU 84	6.19	-33318	1268	2895.78		40200	2.96	10833	8979			7.08	Si
SLU 84	8.62	-24459	425	1247.3		29512	2.96	9490	7866			18.5	Si
SLU 40	6.19	-27420	1136	2508.41		33083	2.96	9967	8260			7.27	Si
SLU 40	8.62	-20087	415	1210.78		24237	2.96	8787	7283			17.53	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 16	6.19	-24724	8302	4975.65		29831	2.96	14299	11851			1.43	Si
SLV 16	8.62	-17913	5034	914.91		21613	2.96	12656	10489			2.08	Si
SLV 6	6.19	-24163	-13624	-491.17		29154	2.96	14164	11739			0.86	No, Vu<V
SLV 6	8.62	-17738	-8606	-1013.29		21402	2.96	12614	10454			1.21	Si
SLV 10	6.19	-26340	-11471	1202.72		31781	2.96	14690	12175			1.06	Si
SLV 10	8.62	-19327	-7182	-1030.5		23319	2.96	12997	10772			1.5	Si
SLV 15	6.19	-24724	8302	4975.65		29831	2.96	14299	11851			1.43	Si
SLV 15	8.62	-17913	5034	914.91		21613	2.96	12656	10489			2.08	Si
SLV 8	6.19	-17768	12932	2273		21438	2.96	12621	10460			0.81	No, Vu<V
SLV 8	8.62	-12712	7632	2010.54		15338	2.96	11401	9449			1.24	Si
SLV 12	6.19	-19945	15085	3966.89		24065	2.96	13146	10896			0.72	No, Vu<V
SLV 12	8.62	-14300	9056	1993.33		17254	2.96	11784	9767			1.08	Si
SLV 9	6.19	-26340	-11471	1202.72		31781	2.96	14690	12175			1.06	Si
SLV 9	8.62	-19327	-7182	-1030.5		23319	2.96	12997	10772			1.5	Si
SLV 11	6.19	-19945	15085	3966.89		24065	2.96	13146	10896			0.72	No, Vu<V
SLV 11	8.62	-14300	9056	1993.33		17254	2.96	11784	9767			1.08	Si
SLV 7	6.19	-17768	12932	2273		21438	2.96	12621	10460			0.81	No, Vu<V
SLV 7	8.62	-12712	7632	2010.54		15338	2.96	11401	9449			1.24	Si
SLV 5	6.19	-24163	-13624	-491.17		29154	2.96	14164	11739			0.86	No, Vu<V
SLV 5	8.62	-17738	-8606	-1013.29		21402	2.96	12614	10454			1.21	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.406 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 7	143750	0.4	15765	-13066	230.89	1593.2	6.9	Si
SLV 8	143750	0.4	15765	-13066	230.89	1593.2	6.9	Si
SLV 12	143750	0.4	17815	-14765	230.89	1765.69	7.65	Si



Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 11	143750	0.4	17815	-14765	230.89	1765.69	7.65	Si
SLV 3	143750	0.4	17920	-14852	230.89	1774.37	7.68	Si
SLV 4	143750	0.4	17920	-14852	230.89	1774.37	7.68	Si
SLV 1	143750	0.4	21818	-18083	230.89	2079.53	9.01	Si
SLV 2	143750	0.4	21818	-18083	230.89	2079.53	9.01	Si
SLV 15	143750	0.4	24753	-20515	230.89	2290.3	9.92	Si
SLV 16	143750	0.4	24753	-20515	230.89	2290.3	9.92	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 7.406 $W_a = 0.05$ $T_a = 0.0533$

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 13	-19421	-26642	-38	0.05	2326.8	0.956	0.75879	6.67113	No
SLV 14	-19421	-26642	-38	0.05	2326.8	0.956	0.75879	6.67113	No
SLV 15	-17913	-24724	16	0.051	2173.6	0.953	0.78087	6.67113	No
SLV 16	-17913	-24724	16	0.051	2173.6	0.953	0.78087	6.67113	No
SLV 3	-12617	-17466	45	0.051	1636.4	0.94	0.78565	6.67113	No
SLV 4	-12617	-17466	45	0.051	1636.4	0.94	0.78565	6.67113	No
SLV 10	-19327	-26340	-91	0.047	2317.3	0.956	0.72164	6.01176	No
SLV 9	-19327	-26340	-91	0.047	2317.3	0.956	0.72164	6.01176	No
SLV 8	-12712	-17768	98	0.047	1645.9	0.94	0.73005	6.01176	No
SLV 7	-12712	-17768	98	0.047	1645.9	0.94	0.73005	6.01176	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.359	SLU 83	Si
V_SLU	6.945	SLU 73	Si
PF_SLV	5.559	SLV 15	Si
V_SLV	0.722	SLV 11	No
PFFP_SLV	6.9	SLV 7	Si
R_SLV	0.114	SLV 13	No

Maschio 131

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-0.354	-13.763	-0.228	L4	L5	0.126	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 82	5.07	-1606	15.86	45633	44.39	2.798	Si
SLU 82	7.17	-1365	-43.36	38770	44.94	1.036	Si
SLU 84	5.07	-1639	15.69	46574	44.12	2.811	Si
SLU 84	7.17	-1401	-44.05	39796	45.02	1.022	Si
SLU 77	5.07	-1618	12.06	45970	44.3	3.672	Si
SLU 77	7.17	-1398	-42.51	39720	45.02	1.059	Si
SLU 79	5.07	-1600	12.09	45467	44.44	3.674	Si
SLU 79	7.17	-1381	-42.07	39239	44.99	1.069	Si
SLU 83	5.07	-1630	15.2	46321	44.2	2.907	Si
SLU 83	7.17	-1413	-43.62	40153	45.04	1.033	Si
SLU 81	5.07	-1597	15.37	45379	44.46	2.892	Si
SLU 81	7.17	-1377	-42.92	39127	44.98	1.048	Si
SLU 78	5.07	-1627	12.55	46224	44.23	3.523	Si
SLU 78	7.17	-1385	-42.94	39362	45	1.048	Si
SLU 75	5.07	-1594	12.73	45282	44.48	3.495	Si
SLU 75	7.17	-1349	-42.25	38336	44.89	1.063	Si
SLU 80	5.07	-1609	12.58	45721	44.37	3.526	Si
SLU 80	7.17	-1368	-42.51	38882	44.95	1.058	Si
SLU 76	5.07	-1582	13.08	44948	44.56	3.406	Si
SLU 76	7.17	-1324	-42.11	37618	44.78	1.064	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 8	5.07	-2320	66.81	65914	67.15	1.005	Si
SLV 8	7.17	513	-96.46	0	0	0	No, Trazione
SLV 3	5.07	-832	-11.68	23640	42.17	3.61	Si
SLV 3	7.17	-207	-52.75	0	0	0	No, e>l/2
SLV 9	5.07	161	-54.71	0	0	0	No, Trazione
SLV 9	7.17	-2309	40.24	65596	67.2	1.67	Si
SLV 1	5.07	35	-55.25	0	0	0	No, Trazione
SLV 1	7.17	-1000	-12.56	28420	48.24	3.842	Si
SLV 4	5.07	-832	-11.68	23640	42.17	3.61	Si
SLV 4	7.17	-207	-52.75	0	0	0	No, e>l/2
SLV 10	5.07	161	-54.71	0	0	0	No, Trazione
SLV 10	7.17	-2309	40.24	65596	67.2	1.67	Si
SLV 2	5.07	35	-55.25	0	0	0	No, Trazione
SLV 2	7.17	-1000	-12.56	28420	48.24	3.842	Si
SLV 7	5.07	-2320	66.81	65914	67.15	1.005	Si
SLV 7	7.17	513	-96.46	0	0	0	No, Trazione
SLV 5	5.07	570	-78.42	0	0	0	No, Trazione



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 5	7.17	-2132	37.51	60579	67.56	1.801	Si
SLV 6	5.07	570	-78.42	0	0	0	No, Trazione
SLV 6	7.17	-2132	37.51	60579	67.56	1.801	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 76	5.07	-1582	277	13.08		44948	0.1257	10833	381			1.38	Si
SLU 76	7.17	-1324	-113	-42.11		50770	0.0931	10833	283			2.51	Si
SLU 63	5.07	-1506	275	14.75		42780	0.1257	10833	381			1.38	Si
SLU 63	7.17	-1255	-99	-41		49510	0.0905	10833	275			2.77	Si
SLU 82	5.07	-1606	293	15.86		45633	0.1257	10833	381			1.3	Si
SLU 82	7.17	-1365	-116	-43.36		52279	0.0932	10833	283			2.43	Si
SLU 81	5.07	-1597	287	15.37		45379	0.1257	10833	381			1.33	Si
SLU 81	7.17	-1377	-123	-42.92		51752	0.095	10833	288			2.34	Si
SLU 84	5.07	-1639	296	15.69		46574	0.1257	10833	381			1.29	Si
SLU 84	7.17	-1401	-122	-44.05		53106	0.0942	10833	286			2.33	Si
SLU 75	5.07	-1594	275	12.73		45282	0.1257	10833	381			1.38	Si
SLU 75	7.17	-1349	-119	-42.25		50935	0.0946	10833	287			2.41	Si
SLU 83	5.07	-1630	291	15.2		46321	0.1257	10833	381			1.31	Si
SLU 83	7.17	-1413	-129	-43.62		52599	0.096	10833	291			2.25	Si
SLU 78	5.07	-1627	279	12.55		46224	0.1257	10833	381			1.37	Si
SLU 78	7.17	-1385	-126	-42.94		51778	0.0956	10833	290			2.31	Si
SLU 80	5.07	-1609	277	12.58		45721	0.1257	10833	381			1.38	Si
SLU 80	7.17	-1368	-123	-42.51		51254	0.0954	10833	289			2.34	Si
SLU 77	5.07	-1618	274	12.06		45970	0.1257	10833	381			1.39	Si
SLU 77	7.17	-1398	-132	-42.51		51298	0.0973	10833	295			2.23	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 7	5.07	-2320	742	66.81		81105	0.1022	16250	465			0.63	No, Vu<V
SLV 7	7.17	513	906	-96.46		0	0	8333	0			0	No, Vu<V
SLV 9	5.07	161	-394	-54.71		0	0	8333	0			0	No, Vu<V
SLV 9	7.17	-2309	-1065	40.24		65596	0.1257	16250	572			0.54	No, Vu<V
SLV 5	5.07	570	-679	-78.42		0	0	8333	0			0	No, Vu<V
SLV 5	7.17	-2132	-959	37.51		60579	0.1257	16250	572			0.6	No, Vu<V
SLV 2	5.07	35	-513	-55.25		0	0	8333	0			0	No, Vu<V
SLV 2	7.17	-1000	-182	-12.56		28420	0.1257	14017	493			2.71	Si
SLV 10	5.07	161	-394	-54.71		0	0	8333	0			0	No, Vu<V
SLV 10	7.17	-2309	-1065	40.24		65596	0.1257	16250	572			0.54	No, Vu<V
SLV 6	5.07	570	-679	-78.42		0	0	8333	0			0	No, Vu<V
SLV 6	7.17	-2132	-959	37.51		60579	0.1257	16250	572			0.6	No, Vu<V
SLV 4	5.07	-832	-87	-11.68		23640	0.1257	13061	460			5.27	Si
SLV 4	7.17	-207	378	-52.75		0	0	8333	0			0	No, Vu<V
SLV 1	5.07	35	-513	-55.25		0	0	8333	0			0	No, Vu<V
SLV 1	7.17	-1000	-182	-12.56		28420	0.1257	14017	493			2.71	Si
SLV 3	5.07	-832	-87	-11.68		23640	0.1257	13061	460			5.27	Si
SLV 3	7.17	-207	378	-52.75		0	0	8333	0			0	No, Vu<V
SLV 8	5.07	-2320	742	66.81		81105	0.1022	16250	465			0.63	No, Vu<V
SLV 8	7.17	513	906	-96.46		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 4	143750	0.39	0	0	13.43	0	0	No, e>t/2
SLV 9	143750	0.39	0	0	13.43	0	0	No, e>t/2
SLV 8	143750	0.39	0	0	13.43	0	0	No, e>t/2
SLV 1	143750	0.39	0	0	13.43	0	0	No, e>t/2
SLV 7	143750	0.39	0	0	13.43	0	0	No, e>t/2
SLV 2	143750	0.39	0	0	13.43	0	0	No, e>t/2
SLV 3	143750	0.39	0	0	13.43	0	0	No, e>t/2
SLV 6	143750	0.39	0	0	13.43	0	0	No, e>t/2
SLV 10	143750	0.39	0	0	13.43	0	0	No, e>t/2
SLV 5	143750	0.39	0	0	13.43	0	0	No, e>t/2

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 8	-2152	-2320	227	0	236.7	0.977	0	7.63299	No
SLV 4	-802	-832	267	0	99.3	0.949	0	8.88274	No
SLV 5	1007	570	-56	0	0	0	0	7.63299	No, Trazione
SLV 9	798	161	-175	0	0	0	0	7.63299	No, Trazione
SLV 7	-2152	-2320	227	0	236.7	0.977	0	7.63299	No
SLV 1	146	35	182	0	0	0	0	8.88274	No, Trazione
SLV 3	-802	-832	267	0	99.3	0.949	0	8.88274	No
SLV 10	798	161	-175	0	0	0	0	7.63299	No, Trazione
SLV 6	1007	570	-56	0	0	0	0	7.63299	No, Trazione
SLV 2	146	35	182	0	0	0	0	8.88274	No, Trazione

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.022	SLU 84	Si
V_SLU	1.288	SLU 84	Si
PF_SLV	0	SLV 12	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 1	No
R_SLV	0	SLV 10	No



Maschio 132

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	0.672	-13.763	1.046	L4	L5	0.374	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ ₀	f _{v0}	μ	φ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLU 76	5.07	-5549	-25.21	52947	363.5	14.419	Si
SLU 76	7.17	-5529	-77.93	52752	364.64	4.679	Si
SLU 57	5.07	-5180	-16.84	49422	381.25	22.638	Si
SLU 57	7.17	-5250	-79.55	50097	378.32	4.756	Si
SLU 83	5.07	-5883	-34.07	56135	342.29	10.047	Si
SLU 83	7.17	-5762	-74.2	54981	350.54	4.724	Si
SLU 78	5.07	-5817	-31.03	55499	346.92	11.179	Si
SLU 78	7.17	-5750	-75.58	54864	351.34	4.649	Si
SLU 84	5.07	-5828	-29.38	55605	346.17	11.781	Si
SLU 84	7.17	-5773	-78.71	55081	349.85	4.445	Si
SLU 82	5.07	-5674	-27.21	54136	356.17	13.091	Si
SLU 82	7.17	-5624	-78.67	53658	359.2	4.566	Si
SLU 80	5.07	-5740	-30.51	54770	351.98	11.536	Si
SLU 80	7.17	-5671	-74.97	54108	356.35	4.753	Si
SLU 55	5.07	-4912	-11.02	46870	390.37	35.429	Si
SLU 55	7.17	-5029	-81.9	47985	386.77	4.722	Si
SLU 61	5.07	-5037	-13.02	48059	386.51	29.696	Si
SLU 61	7.17	-5124	-82.64	48891	383.41	4.639	Si
SLU 63	5.07	-5191	-15.19	49528	380.81	25.068	Si
SLU 63	7.17	-5273	-82.68	50314	377.33	4.564	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLV 1	5.07	-6420	-358.89	61253	599.17	1.67	Si
SLV 1	7.17	-796	218.75	0	0	0	No, e>I/2
SLV 6	5.07	-7913	-686.81	75497	565.87	0.824	No, M>Mu
SLV 6	7.17	1306	573.74	0	0	0	No, Trazione
SLV 9	5.07	-7003	-594.99	66818	593.91	0.998	No, M>Mu
SLV 9	7.17	367	519.58	0	0	0	No, Trazione
SLV 11	5.07	294	647.95	0	0	0	No, Trazione
SLV 11	7.17	-8770	-675.21	83675	517.31	0.766	No, M>Mu
SLV 12	5.07	294	647.95	0	0	0	No, Trazione
SLV 12	7.17	-8770	-675.21	83675	517.31	0.766	No, M>Mu
SLV 7	5.07	-615	556.14	0	0	0	No, e>I/2
SLV 7	7.17	-7830	-621.05	74714	569.39	0.917	No, M>Mu
SLV 2	5.07	-6420	-358.89	61253	599.17	1.67	Si
SLV 2	7.17	-796	218.75	0	0	0	No, e>I/2
SLV 10	5.07	-7003	-594.99	66818	593.91	0.998	No, M>Mu
SLV 10	7.17	367	519.58	0	0	0	No, Trazione
SLV 8	5.07	-615	556.14	0	0	0	No, e>I/2
SLV 8	7.17	-7830	-621.05	74714	569.39	0.917	No, M>Mu
SLV 5	5.07	-7913	-686.81	75497	565.87	0.824	No, M>Mu
SLV 5	7.17	1306	573.74	0	0	0	No, Trazione

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 60	5.07	-5093	69	-17.7		48590	0.3743	10833	1135			16.48	Si
SLU 60	7.17	-5114	86	-78.13		48791	0.3743	10833	1135			13.25	Si
SLU 57	5.07	-5180	75	-16.84		49422	0.3743	10833	1135			15.14	Si
SLU 57	7.17	-5250	90	-79.55		50097	0.3743	10833	1135			12.55	Si
SLU 52	5.07	-4758	86	-8.84		45401	0.3743	10833	1135			13.26	Si
SLU 52	7.17	-4880	99	-81.87		46562	0.3743	10833	1135			11.48	Si
SLU 47	5.07	-4349	81	-8.57		41495	0.3743	10833	1135			14.1	Si
SLU 47	7.17	-4443	91	-73.07		42395	0.3743	10833	1135			12.52	Si
SLU 44	5.07	-4195	82	-6.4		40026	0.3743	10833	1135			13.8	Si
SLU 44	7.17	-4294	92	-73.03		40973	0.3743	10833	1135			12.35	Si
SLU 59	5.07	-5103	75	-16.32		48693	0.3743	10833	1135			15.17	Si
SLU 59	7.17	-5171	90	-78.94		49341	0.3743	10833	1135			12.62	Si
SLU 61	5.07	-5037	80	-13.02		48059	0.3743	10833	1135			14.24	Si
SLU 61	7.17	-5124	95	-82.64		48891	0.3743	10833	1135			11.9	Si
SLU 55	5.07	-4912	84	-11.02		46870	0.3743	10833	1135			13.54	Si
SLU 55	7.17	-5029	98	-81.9		47985	0.3743	10833	1135			11.62	Si
SLU 63	5.07	-5191	78	-15.19		49528	0.3743	10833	1135			14.56	Si
SLU 63	7.17	-5273	94	-82.68		50314	0.3743	10833	1135			12.05	Si
SLU 54	5.07	-5026	77	-14.67		47953	0.3743	10833	1135			14.8	Si
SLU 54	7.17	-5101	92	-79.51		48674	0.3743	10833	1135			12.39	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 1	5.07	-6420	-729	-358.89		61253	0.3743	16250	1703			2.34	Si
SLV 1	7.17	-796	-635	218.75		0	0	8333	0			0	No, Vu<V
SLV 12	5.07	294	1611	647.95		0	0	8333	0			0	No, Vu<V
SLV 12	7.17	-8770	1378	-675.21		94772	0.3305	16250	1504			1.09	Si
SLV 11	5.07	294	1611	647.95		0	0	8333	0			0	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 11	7.17	-8770	1378	-675.21		94772	0.3305	16250	1504			1.09	Si
SLV 10	5.07	-7003	-1338	-594.99		81581	0.3066	16250	1395			1.04	Si
SLV 10	7.17	367	-1090	519.58		0	0	8333	0			0	No, Vu<V
SLV 9	5.07	-7003	-1338	-594.99		81581	0.3066	16250	1395			1.04	Si
SLV 9	7.17	367	-1090	519.58		0	0	8333	0			0	No, Vu<V
SLV 5	5.07	-7913	-1534	-686.81		93865	0.3011	16250	1370			0.89	No, Vu<V
SLV 5	7.17	1306	-1279	573.74		0	0	8333	0			0	No, Vu<V
SLV 2	5.07	-6420	-729	-358.89		61253	0.3743	16250	1703			2.34	Si
SLV 2	7.17	-796	-635	218.75		0	0	8333	0			0	No, Vu<V
SLV 7	5.07	-615	1415	556.14		0	0	8333	0			0	No, Vu<V
SLV 7	7.17	-7830	1189	-621.05		86441	0.3235	16250	1472			1.24	Si
SLV 8	5.07	-615	1415	556.14		0	0	8333	0			0	No, Vu<V
SLV 8	7.17	-7830	1189	-621.05		86441	0.3235	16250	1472			1.24	Si
SLV 6	5.07	-7913	-1534	-686.81		93865	0.3011	16250	1370			0.89	No, Vu<V
SLV 6	7.17	1306	-1279	573.74		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 9	143750	0.39	0	297	39.98	0	0	No, Trazione
SLV 6	143750	0.39	0	1202	39.98	0	0	No, Trazione
SLV 5	143750	0.39	0	1202	39.98	0	0	No, Trazione
SLV 10	143750	0.39	0	297	39.98	0	0	No, Trazione
SLV 1	143750	0.39	8921	-935	39.98	121.34	3.03	Si
SLV 2	143750	0.39	8921	-935	39.98	121.34	3.03	Si
SLV 4	143750	0.39	35027	-3671	39.98	366.61	9.17	Si
SLV 3	143750	0.39	35027	-3671	39.98	366.61	9.17	Si
SLV 14	143750	0.39	37697	-3951	39.98	382.48	9.57	Si
SLV 13	143750	0.39	37697	-3951	39.98	382.48	9.57	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 11	563	294	-30	0	0	0	0	7.63299	No, Trazione
SLV 12	563	294	-30	0	0	0	0	7.63299	No, Trazione
SLV 7	420	-615	-56	0	0	0	0	7.63299	No, Trazione
SLV 8	420	-615	-56	0	0	0	0	7.63299	No, Trazione
SLV 4	-1932	-4230	-60	0.019	249.5	0.941	0.2935	8.88274	No
SLV 3	-1932	-4230	-60	0.019	249.5	0.941	0.2935	8.88274	No
SLV 13	-3327	-3388	53	0.029	391.1	0.96	0.43182	8.88274	No
SLV 14	-3327	-3388	53	0.029	391.1	0.96	0.43182	8.88274	No
SLV 15	-1454	-1199	29	0.03	201.2	0.929	0.47554	8.88274	No
SLV 16	-1454	-1199	29	0.03	201.2	0.929	0.47554	8.88274	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.445	SLU 84	Si
V_SLU	11.478	SLU 52	Si
PF_SLV	0	SLV 12	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 10	No
R_SLV	0	SLV 12	No

Maschio 133

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.058	3.311	-11.448	3.311	L4	L5	3.61	0.14	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 75	5.07	-27542	2351.79	54495	16455.51	6.997	Si
SLU 75	6.57	-25808	2326.38	51064	17381.37	7.471	Si
SLU 74	5.07	-27601	2352.68	54611	16419.3	6.979	Si
SLU 74	6.57	-25862	2335.35	51171	17356.47	7.432	Si
SLU 81	5.07	-27886	2519.2	55176	16240.13	6.447	Si
SLU 81	6.57	-26232	2379.62	51903	17179.2	7.219	Si
SLU 73	5.07	-26663	2314.13	52756	16957.54	7.328	Si
SLU 73	6.57	-24950	2255.53	49366	17742.15	7.866	Si
SLU 79	5.07	-27556	2246.86	54524	16446.53	7.32	Si
SLU 79	6.57	-25789	2273.07	51027	17389.83	7.65	Si
SLU 83	5.07	-28283	2484.83	55962	15978.84	6.431	Si
SLU 83	6.57	-26607	2380.92	52645	16987.43	7.135	Si
SLU 84	5.07	-28224	2483.94	55845	16018.59	6.449	Si
SLU 84	6.57	-26553	2371.94	52538	17015.86	7.174	Si
SLU 77	5.07	-27998	2318.31	55398	16167.95	6.974	Si
SLU 77	6.57	-26237	2336.65	51913	17176.88	7.351	Si
SLU 82	5.07	-27827	2518.31	55059	16277.82	6.464	Si
SLU 82	6.57	-26178	2370.65	51796	17205.85	7.258	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 78	5.07	-27939	2317.42	55281	16206.21	6.993	Si
SLU 78	6.57	-26183	2327.67	51806	17203.55	7.391	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 1	5.07	-15506	-5489.79	30680	20960.26	3.818	Si
SLV 1	6.57	-17012	5850.78	33661	22247.9	3.803	Si
SLV 9	5.07	-19153	5154.36	37897	23848.82	4.627	Si
SLV 9	6.57	-16146	1993.79	31946	21523.33	10.795	Si
SLV 14	5.07	-21673	9306.65	42884	25390.51	2.728	Si
SLV 14	6.57	-16933	-1772.77	33505	22183.59	12.514	Si
SLV 16	5.07	-21983	8426.83	43497	25554.49	3.033	Si
SLV 16	6.57	-17632	-2714.18	34888	22739.05	8.378	Si
SLV 3	5.07	-15816	-6369.61	31293	21236.02	3.334	Si
SLV 3	6.57	-17711	4909.37	35044	22800.13	4.644	Si
SLV 2	5.07	-15506	-5489.79	30680	20960.26	3.818	Si
SLV 2	6.57	-17012	5850.78	33661	22247.9	3.803	Si
SLV 10	5.07	-19153	5154.36	37897	23848.82	4.627	Si
SLV 10	6.57	-16146	1993.79	31946	21523.33	10.795	Si
SLV 15	5.07	-21983	8426.83	43497	25554.49	3.033	Si
SLV 15	6.57	-17632	-2714.18	34888	22739.05	8.378	Si
SLV 4	5.07	-15816	-6369.61	31293	21236.02	3.334	Si
SLV 4	6.57	-17711	4909.37	35044	22800.13	4.644	Si
SLV 13	5.07	-21673	9306.65	42884	25390.51	2.728	Si
SLV 13	6.57	-16933	-1772.77	33505	22183.59	12.514	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 83	5.07	-28283	-113	2484.83		55962	3.61	10833	5475			48.26	Si
SLU 83	6.57	-26607	-114	2380.92		52645	3.61	10833	5475			48.2	Si
SLU 82	5.07	-27827	-117	2518.31		55059	3.61	10833	5475			46.63	Si
SLU 82	6.57	-26178	-118	2370.65		51796	3.61	10833	5475			46.58	Si
SLU 40	5.07	-23545	-120	2280.37		46588	3.61	10833	5475			45.72	Si
SLU 40	6.57	-22377	-120	2029.42		44277	3.61	10833	5475			45.69	Si
SLU 41	5.07	-24002	-116	2246.89		47491	3.61	10833	5475			47.29	Si
SLU 41	6.57	-22806	-116	2039.68		45125	3.61	10833	5475			47.24	Si
SLU 33	5.07	-23260	-99	2113.85		46023	3.61	10833	5475			55.12	Si
SLU 33	6.57	-22007	-99	1985.14		43544	3.61	10833	5475			55.06	Si
SLU 84	5.07	-28224	-114	2483.94		55845	3.61	10833	5475			47.98	Si
SLU 84	6.57	-26553	-114	2371.94		52538	3.61	10833	5475			47.93	Si
SLU 31	5.07	-22382	-102	2076.19		44285	3.61	10833	5475			53.94	Si
SLU 31	6.57	-21149	-102	1914.29		41846	3.61	10833	5475			53.89	Si
SLU 42	5.07	-23943	-116	2246		47374	3.61	10833	5475			47.02	Si
SLU 42	6.57	-22752	-117	2030.71		45018	3.61	10833	5475			46.98	Si
SLU 39	5.07	-23605	-119	2281.26		46705	3.61	10833	5475			45.98	Si
SLU 39	6.57	-22432	-119	2038.39		44384	3.61	10833	5475			45.94	Si
SLU 81	5.07	-27886	-117	2519.2		55176	3.61	10833	5475			46.9	Si
SLU 81	6.57	-26232	-117	2379.62		51903	3.61	10833	5475			46.84	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 14	5.07	-21673	11234	9306.65		42884	3.61	16250	8213			0.73	No, Vu<V
SLV 14	6.57	-16933	11114	-1772.77		33505	3.61	15034	7598			0.68	No, Vu<V
SLV 4	5.07	-15816	-11330	-6369.61		31293	3.61	14592	7375			0.65	No, Vu<V
SLV 4	6.57	-17711	-11210	4909.37		35044	3.61	15342	7754			0.69	No, Vu<V
SLV 3	5.07	-15816	-11330	-6369.61		31293	3.61	14592	7375			0.65	No, Vu<V
SLV 3	6.57	-17711	-11210	4909.37		35044	3.61	15342	7754			0.69	No, Vu<V
SLV 5	5.07	-17303	-3575	715.42		34236	3.61	15180	7672			2.15	Si
SLV 5	6.57	-16169	-3296	4280.86		31993	3.61	14732	7446			2.26	Si
SLV 13	5.07	-21673	11234	9306.65		42884	3.61	16250	8213			0.73	No, Vu<V
SLV 13	6.57	-16933	11114	-1772.77		33505	3.61	15034	7598			0.68	No, Vu<V
SLV 1	5.07	-15506	-11408	-5489.79		30680	3.61	14469	7313			0.64	No, Vu<V
SLV 1	6.57	-17012	-11154	5850.78		33661	3.61	15066	7614			0.68	No, Vu<V
SLV 15	5.07	-21983	11313	8426.83		43497	3.61	16250	8213			0.73	No, Vu<V
SLV 15	6.57	-17632	11059	-2714.18		34888	3.61	15311	7738			0.7	No, Vu<V
SLV 16	5.07	-21983	11313	8426.83		43497	3.61	16250	8213			0.73	No, Vu<V
SLV 16	6.57	-17632	11059	-2714.18		34888	3.61	15311	7738			0.7	No, Vu<V
SLV 2	5.07	-15506	-11408	-5489.79		30680	3.61	14469	7313			0.64	No, Vu<V
SLV 2	6.57	-17012	-11154	5850.78		33661	3.61	15066	7614			0.68	No, Vu<V
SLV 6	5.07	-17303	-3575	715.42		34236	3.61	15180	7672			2.15	Si
SLV 6	6.57	-16169	-3296	4280.86		31993	3.61	14732	7446			2.26	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 5	143750	0.39	29923	-15123	184.03	799.37	4.34	Si
SLV 6	143750	0.39	29923	-15123	184.03	799.37	4.34	Si
SLV 9	143750	0.39	30413	-15371	184.03	808.14	4.39	Si
SLV 10	143750	0.39	30413	-15371	184.03	808.14	4.39	Si
SLV 2	143750	0.39	30706	-15519	184.03	813.33	4.42	Si
SLV 1	143750	0.39	30706	-15519	184.03	813.33	4.42	Si
SLV 3	143750	0.39	31867	-16106	184.03	833.36	4.53	Si
SLV 4	143750	0.39	31867	-16106	184.03	833.36	4.53	Si
SLV 13	143750	0.39	32338	-16344	184.03	841.27	4.57	Si
SLV 14	143750	0.39	32338	-16344	184.03	841.27	4.57	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.03 Ta = 0.1503

Comb.	N top	N base	V orto	σ_0	M*	e*	a0*	aLim	Verifica
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Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 6	-12214	-17303	-76	0.017	1497	0.951	0.25273	16.14305	No
SLV 5	-12214	-17303	-76	0.017	1497	0.951	0.25273	16.14305	No
SLV 12	-16471	-20186	76	0.017	1929.8	0.961	0.26142	16.14305	No
SLV 11	-16471	-20186	76	0.017	1929.8	0.961	0.26142	16.14305	No
SLV 1	-13505	-15506	-54	0.018	1628.2	0.954	0.27772	16.59208	No
SLV 2	-13505	-15506	-54	0.018	1628.2	0.954	0.27772	16.59208	No
SLV 16	-15180	-21983	54	0.018	1798.4	0.958	0.27882	16.59208	No
SLV 15	-15180	-21983	54	0.018	1798.4	0.958	0.27882	16.59208	No
SLV 9	-12345	-19153	-55	0.018	1510.3	0.951	0.27578	16.14305	No
SLV 10	-12345	-19153	-55	0.018	1510.3	0.951	0.27578	16.14305	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.431	SLU 83	Si
V_SLU	45.688	SLU 40	Si
PF_SLV	2.728	SLV 13	Si
V_SLV	0.641	SLV 1	No
PFFP_SLV	4.344	SLV 5	Si
R_SLV	0.016	SLV 5	No

Maschio 134

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-9.948	3.311	-9.728	3.311	L4	L5	0.22	0.14	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	$\tau 0$	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLU 79	5.07	-1942	18.23	63036	48.3	2.649	Si
SLU 79	6.57	-2464	-49.29	79993	4.87	0.099	No, M>Mu
SLU 78	5.07	-1961	18.75	63680	47.09	2.511	Si
SLU 78	6.57	-2500	-50.28	81159	1.01	0.02	No, M>Mu
SLU 75	5.07	-1920	19.98	62326	49.6	2.482	Si
SLU 75	6.57	-2481	-51.1	80557	3.02	0.059	No, M>Mu
SLU 84	5.07	-1923	25.62	62429	49.41	1.928	Si
SLU 84	6.57	-2606	-57.38	84601	0	0	No, Rottura per schiacciamento
SLU 82	5.07	-1881	26.86	61075	51.78	1.928	Si
SLU 82	6.57	-2587	-58.2	83999	0	0	No, Rottura per schiacciamento
SLU 74	5.07	-1929	19.71	62616	49.07	2.489	Si
SLU 74	6.57	-2484	-50.91	80663	2.67	0.052	No, M>Mu
SLU 77	5.07	-1970	18.48	63970	46.53	2.518	Si
SLU 77	6.57	-2503	-50.09	81265	0.65	0.013	No, M>Mu
SLU 81	5.07	-1890	26.59	61365	51.28	1.929	Si
SLU 81	6.57	-2590	-58	84105	0	0	No, Rottura per schiacciamento
SLU 83	5.07	-1932	25.35	62719	48.88	1.928	Si
SLU 83	6.57	-2609	-57.19	84707	0	0	No, Rottura per schiacciamento
SLU 80	5.07	-1933	18.5	62746	48.83	2.639	Si
SLU 80	6.57	-2461	-49.48	79887	5.22	0.106	No, M>Mu

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLV 16	5.07	175	189.77	0	0	0	No, Trazione
SLV 16	6.57	-3624	-193.2	117657	14.78	0.077	No, M>Mu
SLV 2	5.07	-2910	-175.21	94491	72.57	0.414	No, M>Mu
SLV 2	6.57	405	136.12	0	0	0	No, Trazione
SLV 13	5.07	132	170.34	0	0	0	No, Trazione
SLV 13	6.57	-3453	-182.76	112099	31.36	0.172	No, M>Mu
SLV 4	5.07	-2867	-155.78	93094	75.1	0.482	No, M>Mu
SLV 4	6.57	234	125.67	0	0	0	No, Trazione
SLV 15	5.07	175	189.77	0	0	0	No, Trazione
SLV 15	6.57	-3624	-193.2	117657	14.78	0.077	No, M>Mu
SLV 1	5.07	-2910	-175.21	94491	72.57	0.414	No, M>Mu
SLV 1	6.57	405	136.12	0	0	0	No, Trazione
SLV 11	5.07	-839	91.5	27249	71.73	0.784	No, M>Mu
SLV 11	6.57	-2473	-93.78	80308	93.26	0.994	No, M>Mu
SLV 12	5.07	-839	91.5	27249	71.73	0.784	No, M>Mu
SLV 12	6.57	-2473	-93.78	80308	93.26	0.994	No, M>Mu
SLV 14	5.07	132	170.34	0	0	0	No, Trazione
SLV 14	6.57	-3453	-182.76	112099	31.36	0.172	No, M>Mu
SLV 3	5.07	-2867	-155.78	93094	75.1	0.482	No, M>Mu
SLV 3	6.57	234	125.67	0	0	0	No, Trazione

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	$\sigma 0$	σN	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 81	5.07	-1890	115	26.59		61365	0.22	10833	334			2.91	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 81	6.57	-2590	117	-58		84105	0.22	10833	334			2.85	Si
SLU 82	5.07	-1881	116	26.86		61075	0.22	10833	334			2.89	Si
SLU 82	6.57	-2587	118	-58.2		83999	0.22	10833	334			2.83	Si
SLU 39	5.07	-1537	117	29.48		49892	0.22	10833	334			2.85	Si
SLU 39	6.57	-2282	119	-55.99		74077	0.22	10833	334			2.8	Si
SLU 31	5.07	-1490	100	24.05		48372	0.22	10833	334			3.34	Si
SLU 31	6.57	-2112	102	-49.22		68583	0.22	10833	334			3.28	Si
SLU 40	5.07	-1528	118	29.76		49601	0.22	10833	334			2.83	Si
SLU 40	6.57	-2278	120	-56.18		73970	0.22	10833	334			2.79	Si
SLU 84	5.07	-1923	112	25.62		62429	0.22	10833	334			2.97	Si
SLU 84	6.57	-2606	115	-57.38		84601	0.22	10833	334			2.9	Si
SLU 41	5.07	-1578	114	28.25		51246	0.22	10833	334			2.93	Si
SLU 41	6.57	-2300	116	-55.17		74679	0.22	10833	334			2.88	Si
SLU 83	5.07	-1932	112	25.35		62719	0.22	10833	334			2.99	Si
SLU 83	6.57	-2609	114	-57.19		84707	0.22	10833	334			2.92	Si
SLU 73	5.07	-1843	98	21.15		59845	0.22	10833	334			3.41	Si
SLU 73	6.57	-2421	100	-51.24		78612	0.22	10833	334			3.34	Si
SLU 42	5.07	-1569	115	28.52		50955	0.22	10833	334			2.91	Si
SLU 42	6.57	-2297	117	-55.36		74572	0.22	10833	334			2.86	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 4	5.07	-2867	-451	-155.78		122630	0.167	16250	380			0.84	No, Vu<V
SLV 4	6.57	234	-371	125.67		0	0	8333	0			0	No, Vu<V
SLV 15	5.07	175	582	189.77		0	0	8333	0			0	No, Vu<V
SLV 15	6.57	-3624	496	-193.2		152211	0.1701	16250	387			0.78	No, Vu<V
SLV 3	5.07	-2867	-451	-155.78		122630	0.167	16250	380			0.84	No, Vu<V
SLV 3	6.57	234	-371	125.67		0	0	8333	0			0	No, Vu<V
SLV 16	5.07	175	582	189.77		0	0	8333	0			0	No, Vu<V
SLV 16	6.57	-3624	496	-193.2		152211	0.1701	16250	387			0.78	No, Vu<V
SLV 13	5.07	132	545	170.34		0	0	8333	0			0	No, Vu<V
SLV 13	6.57	-3453	468	-182.76		144052	0.1712	16250	389			0.83	No, Vu<V
SLV 2	5.07	-2910	-487	-175.21		139152	0.1494	16250	340			0.7	No, Vu<V
SLV 2	6.57	405	-399	136.12		0	0	8333	0			0	No, Vu<V
SLV 14	5.07	132	545	170.34		0	0	8333	0			0	No, Vu<V
SLV 14	6.57	-3453	468	-182.76		144052	0.1712	16250	389			0.83	No, Vu<V
SLV 11	5.07	-839	263	91.5		0	0	8333	0			0	No, Vu<V
SLV 11	6.57	-2473	226	-93.78		81697	0.2163	16250	492			2.18	Si
SLV 12	5.07	-839	263	91.5		0	0	8333	0			0	No, Vu<V
SLV 12	6.57	-2473	226	-93.78		81697	0.2163	16250	492			2.18	Si
SLV 1	5.07	-2910	-487	-175.21		139152	0.1494	16250	340			0.7	No, Vu<V
SLV 1	6.57	405	-399	136.12		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 3	143750	0.39	0	-96	11.22	0	0	No, e>t/2
SLV 4	143750	0.39	0	-96	11.22	0	0	No, e>t/2
SLV 1	143750	0.39	5414	-167	11.22	11.15	0.99	No, M>Mu
SLV 2	143750	0.39	5414	-167	11.22	11.15	0.99	No, M>Mu
SLV 7	143750	0.39	17229	-531	11.22	31.91	2.85	Si
SLV 8	143750	0.39	17229	-531	11.22	31.91	2.85	Si
SLV 5	143750	0.39	24844	-765	11.22	42.67	3.8	Si
SLV 6	143750	0.39	24844	-765	11.22	42.67	3.8	Si
SLV 12	143750	0.39	31599	-973	11.22	50.51	4.5	Si
SLV 11	143750	0.39	31599	-973	11.22	50.51	4.5	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.03 Ta = 0.1503

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 13	-49	132	1	0	0	0	0	16.59208	No, Trazione
SLV 15	-183	175	4	0	0	0	0	16.59208	No, Trazione
SLV 14	-49	132	1	0	0	0	0	16.59208	No, Trazione
SLV 16	-183	175	4	0	0	0	0	16.59208	No, Trazione
SLV 5	-777	-1896	-4	0.017	94.6	0.953	0.25646	16.14305	No
SLV 6	-777	-1896	-4	0.017	94.6	0.953	0.25646	16.14305	No
SLV 12	-818	-839	5	0.017	98.7	0.954	0.25752	16.14305	No
SLV 11	-818	-839	5	0.017	98.7	0.954	0.25752	16.14305	No
SLV 2	-1412	-2910	-4	0.019	159.1	0.97	0.27905	16.59208	No
SLV 1	-1412	-2910	-4	0.019	159.1	0.97	0.27905	16.59208	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0	SLU 81	No
V_SLU	2.785	SLU 40	Si
PF_SLV	0	SLV 16	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 3	No
R_SLV	0	SLV 16	No

Maschio 135

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
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X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.758	6.661	-17.718	6.661	L4	L5	2.04	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 80	5.97	-21924	163.62	38382	11825.5	72.275	Si
SLU 80	7.77	-19273	2576.79	33742	11515.7	4.469	Si
SLU 82	5.97	-21635	205.85	37877	11806.7	57.355	Si
SLU 82	7.77	-18985	2550.04	33236	11463.34	4.495	Si
SLU 77	5.97	-22173	181.4	38818	11838.77	65.263	Si
SLU 77	7.77	-19522	2592.15	34177	11557.88	4.459	Si
SLU 83	5.97	-22208	169.22	38879	11840.41	69.969	Si
SLU 83	7.77	-19557	2627.04	34239	11563.57	4.402	Si
SLU 74	5.97	-21587	220.97	37792	11803.18	53.415	Si
SLU 74	7.77	-18936	2508.42	33151	11454.17	4.566	Si
SLU 84	5.97	-22221	166.28	38903	11841.04	71.211	Si
SLU 84	7.77	-19571	2633.77	34262	11565.8	4.391	Si
SLU 78	5.97	-22186	178.46	38842	11839.42	66.342	Si
SLU 78	7.77	-19536	2598.87	34201	11560.12	4.448	Si
SLU 79	5.97	-21910	166.56	38358	11824.69	70.994	Si
SLU 79	7.77	-19260	2570.06	33718	11513.3	4.48	Si
SLU 81	5.97	-21621	208.79	37853	11805.72	56.542	Si
SLU 81	7.77	-18971	2543.32	33212	11460.76	4.506	Si
SLU 75	5.97	-21600	218.03	37816	11804.18	54.14	Si
SLU 75	7.77	-18950	2515.15	33175	11456.76	4.555	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 2	5.97	-21323	-5404.61	37330	15104.69	2.795	Si
SLV 2	7.77	-19499	6402.84	34137	14332.31	2.238	Si
SLV 6	5.97	-12864	-1702.26	22521	10702.99	6.288	Si
SLV 6	7.77	-11252	2712.52	19699	9626.86	3.549	Si
SLV 4	5.97	-23750	-5238.26	41579	15981.43	3.051	Si
SLV 4	7.77	-21689	6629.15	37972	15248.07	2.3	Si
SLV 1	5.97	-21323	-5404.61	37330	15104.69	2.795	Si
SLV 1	7.77	-19499	6402.84	34137	14332.31	2.238	Si
SLV 16	5.97	-7671	5894.39	13430	6964.42	1.182	Si
SLV 16	7.77	-5429	-3160.28	9505	5107	1.616	Si
SLV 14	5.97	-5244	5728.04	0	0	0	No, $e > l/2$
SLV 14	7.77	-3239	-3386.59	0	0	0	No, $e > l/2$
SLV 15	5.97	-7671	5894.39	13430	6964.42	1.182	Si
SLV 15	7.77	-5429	-3160.28	9505	5107	1.616	Si
SLV 3	5.97	-23750	-5238.26	41579	15981.43	3.051	Si
SLV 3	7.77	-21689	6629.15	37972	15248.07	2.3	Si
SLV 13	5.97	-5244	5728.04	0	0	0	No, $e > l/2$
SLV 13	7.77	-3239	-3386.59	0	0	0	No, $e > l/2$
SLV 5	5.97	-12864	-1702.26	22521	10702.99	6.288	Si
SLV 5	7.77	-11252	2712.52	19699	9626.86	3.549	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 80	5.97	-21924	-1314	163.62		38382	2.04	10673	6097			4.64	Si
SLU 80	7.77	-19273	-1314	2576.79		33742	2.04	10054	5743			4.37	Si
SLU 82	5.97	-21635	-1275	205.85		37877	2.04	10606	6058			4.75	Si
SLU 82	7.77	-18985	-1275	2550.04		33236	2.04	9987	5705			4.47	Si
SLU 41	5.97	-18929	-1224	60.58		33139	2.04	9974	5697			4.65	Si
SLU 41	7.77	-16877	-1224	2301.68		29546	2.04	9495	5424			4.43	Si
SLU 84	5.97	-22221	-1344	166.28		38903	2.04	10743	6136			4.57	Si
SLU 84	7.77	-19571	-1344	2633.77		34262	2.04	10124	5783			4.3	Si
SLU 78	5.97	-22186	-1318	178.46		38842	2.04	10734	6132			4.65	Si
SLU 78	7.77	-19536	-1318	2598.87		34201	2.04	10116	5778			4.38	Si
SLU 83	5.97	-22208	-1339	169.22		38879	2.04	10739	6134			4.58	Si
SLU 83	7.77	-19557	-1339	2627.04		34239	2.04	10121	5781			4.32	Si
SLU 77	5.97	-22173	-1312	181.4		38818	2.04	10731	6130			4.67	Si
SLU 77	7.77	-19522	-1312	2592.15		34177	2.04	10113	5776			4.4	Si
SLU 42	5.97	-18943	-1230	57.64		33163	2.04	9977	5699			4.63	Si
SLU 42	7.77	-16891	-1230	2308.41		29570	2.04	9498	5425			4.41	Si
SLU 79	5.97	-21910	-1308	166.56		38358	2.04	10670	6095			4.66	Si
SLU 79	7.77	-19260	-1308	2570.06		33718	2.04	10051	5741			4.39	Si
SLU 38	5.97	-18646	-1199	54.98		32643	2.04	9908	5659			4.72	Si
SLU 38	7.77	-16593	-1199	2251.43		29050	2.04	9429	5386			4.49	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 3	5.97	-23750	-6200	-5238.26		41579	2.04	16250	9282			1.5	Si
SLV 3	7.77	-21689	-6349	6629.15		37972	2.04	15928	9098			1.43	Si
SLV 1	5.97	-21323	-7147	-5404.61		37330	2.04	15799	9025			1.26	Si
SLV 1	7.77	-19499	-6539	6402.84		34137	2.04	15161	8660			1.32	Si
SLV 2	5.97	-21323	-7147	-5404.61		37330	2.04	15799	9025			1.26	Si
SLV 2	7.77	-19499	-6539	6402.84		34137	2.04	15161	8660			1.32	Si
SLV 5	5.97	-12864	-4102	-1702.26		22521	2.04	12838	7333			1.79	Si
SLV 5	7.77	-11252	-2770	2712.52		19699	2.04	12273	7010			2.53	Si
SLV 6	5.97	-12864	-4102	-1702.26		22521	2.04	12838	7333			1.79	Si
SLV 6	7.77	-11252	-2770	2712.52		19699	2.04	12273	7010			2.53	Si
SLV 13	5.97	-5244	4712	5728.04		0	0	8333	0			0	No, $V_u < V$



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 13	7.77	-3239	4861	-3386.59		0	0	8333	0			0	No, Vu<V
SLV 4	5.97	-23750	-6200	-5238.26		41579	2.04	16250	9282			1.5	Si
SLV 4	7.77	-21689	-6349	6629.15		37972	2.04	15928	9098			1.43	Si
SLV 14	5.97	-5244	4712	5728.04		0	0	8333	0			0	No, Vu<V
SLV 14	7.77	-3239	4861	-3386.59		0	0	8333	0			0	No, Vu<V
SLV 16	5.97	-7671	5659	5894.39		36296	0.7548	15593	3295			0.58	No, Vu<V
SLV 16	7.77	-5429	5051	-3160.28		14759	1.3137	11285	4151			0.82	No, Vu<V
SLV 15	5.97	-7671	5659	5894.39		36296	0.7548	15593	3295			0.58	No, Vu<V
SLV 15	7.77	-5429	5051	-3160.28		14759	1.3137	11285	4151			0.82	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 14	143750	0.39	7882	-4502	212.94	589.62	2.77	Si
SLV 13	143750	0.39	7882	-4502	212.94	589.62	2.77	Si
SLV 15	143750	0.39	11618	-6636	212.94	840.76	3.95	Si
SLV 16	143750	0.39	11618	-6636	212.94	840.76	3.95	Si
SLV 10	143750	0.39	13389	-7648	212.94	953.37	4.48	Si
SLV 9	143750	0.39	13389	-7648	212.94	953.37	4.48	Si
SLV 5	143750	0.39	21847	-12479	212.94	1434.67	6.74	Si
SLV 6	143750	0.39	21847	-12479	212.94	1434.67	6.74	Si
SLV 12	143750	0.39	25845	-14763	212.94	1629.63	7.65	Si
SLV 11	143750	0.39	25845	-14763	212.94	1629.63	7.65	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 10	-5564	-7720	210	0.021	859.3	0.915	0.33001	7.63299	No
SLV 9	-5564	-7720	210	0.021	859.3	0.915	0.33001	7.63299	No
SLV 6	-7692	-14923	214	0.024	1073	0.928	0.38355	7.63299	No
SLV 5	-7692	-14923	214	0.024	1073	0.928	0.38355	7.63299	No
SLV 11	-12275	-14017	-212	0.029	1536.7	0.947	0.45286	7.63299	No
SLV 12	-12275	-14017	-212	0.029	1536.7	0.947	0.45286	7.63299	No
SLV 8	-14403	-21220	-208	0.031	1752.8	0.952	0.47406	7.63299	No
SLV 7	-14403	-21220	-208	0.031	1752.8	0.952	0.47406	7.63299	No
SLV 2	-12524	-25530	72	0.039	1562	0.947	0.60541	8.88274	No
SLV 1	-12524	-25530	72	0.039	1562	0.947	0.60541	8.88274	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.391	SLU 84	Si
V_SLU	4.303	SLU 84	Si
PF_SLV	0	SLV 13	No
V_SLV	0	SLV 13	No
PFFP_SLV	2.769	SLV 13	Si
R_SLV	0.043	SLV 9	No

Maschio 136

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-16.818	6.661	-12.838	6.661	L4	L5	3.98	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 69	5.97	-39603	-1884.18	35538	44427.92	23.579	Si
SLU 69	7.77	-34490	-356.64	30950	42557.86	119.33	Si
SLU 72	5.97	-39120	-1896.21	35104	44300.28	23.363	Si
SLU 72	7.77	-34007	-349.72	30516	42321.94	121.017	Si
SLU 80	5.97	-42983	-1989.1	38571	45034.81	22.641	Si
SLU 80	7.77	-37870	-531.46	33983	43922.47	82.645	Si
SLU 70	5.97	-39637	-1909.16	35568	44436.51	23.275	Si
SLU 70	7.77	-34524	-338.43	30980	42574.08	125.798	Si
SLU 57	5.97	-39565	-1873.67	35504	44418.25	23.707	Si
SLU 57	7.77	-34505	-373.55	30963	42564.94	113.946	Si
SLU 71	5.97	-39086	-1871.23	35074	44290.91	23.669	Si
SLU 71	7.77	-33973	-367.93	30486	42304.95	114.981	Si
SLU 78	5.97	-43500	-2002.05	39035	45083.48	22.519	Si
SLU 78	7.77	-38387	-520.17	34447	44087.05	84.755	Si
SLU 84	5.97	-43626	-1910.36	39147	45093.52	23.605	Si
SLU 84	7.77	-38513	-581.73	34559	44125.22	75.851	Si
SLU 79	5.97	-42949	-1964.12	38540	45031.2	22.927	Si
SLU 79	7.77	-37836	-549.67	33952	43911.24	79.887	Si
SLU 77	5.97	-43466	-1977.07	39004	45080.64	22.802	Si
SLU 77	7.77	-38353	-538.38	34416	44076.59	81.869	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
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Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 15	5.97	-27428	14171.65	24613	43587.86	3.076	Si
SLV 15	7.77	-23274	-11587.46	20884	38398.4	3.314	Si
SLV 2	5.97	-30065	-16682.33	26978	46618.92	2.795	Si
SLV 2	7.77	-26377	11066.97	23669	42321.62	3.824	Si
SLV 4	5.97	-34507	-16335.27	30964	51266.65	3.138	Si
SLV 4	7.77	-30354	10653.04	27238	46939.45	4.406	Si
SLV 6	5.97	-22405	-6409.8	20105	37249.73	5.811	Si
SLV 6	7.77	-19258	3765.72	17281	32902.67	8.737	Si
SLV 1	5.97	-30065	-16682.33	26978	46618.92	2.795	Si
SLV 1	7.77	-26377	11066.97	23669	42321.62	3.824	Si
SLV 13	5.97	-22987	13824.59	20627	38021.12	2.75	Si
SLV 13	7.77	-19296	-11173.53	17315	32957.33	2.95	Si
SLV 14	5.97	-22987	13824.59	20627	38021.12	2.75	Si
SLV 14	7.77	-19296	-11173.53	17315	32957.33	2.95	Si
SLV 16	5.97	-27428	14171.65	24613	43587.86	3.076	Si
SLV 16	7.77	-23274	-11587.46	20884	38398.4	3.314	Si
SLV 3	5.97	-34507	-16335.27	30964	51266.65	3.138	Si
SLV 3	7.77	-30354	10653.04	27238	46939.45	4.406	Si
SLV 5	5.97	-22405	-6409.8	20105	37249.73	5.811	Si
SLV 5	7.77	-19258	3765.72	17281	32902.67	8.737	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 48	5.97	-35668	-783	-1755.8		32007	3.98	9823	10947			13.97	Si
SLU 48	7.77	-30608	-783	-210.03		27466	3.98	9218	10272			13.11	Si
SLU 51	5.97	-35185	-794	-1767.83		31573	3.98	9765	10882			13.71	Si
SLU 51	7.77	-30125	-794	-203.1		27032	3.98	9160	10208			12.86	Si
SLU 46	5.97	-34689	-757	-1662.22		31128	3.98	9706	10816			14.29	Si
SLU 46	7.77	-29629	-757	-164.21		26587	3.98	9101	10142			13.4	Si
SLU 49	5.97	-35702	-807	-1780.77		32037	3.98	9827	10951			13.56	Si
SLU 49	7.77	-30642	-807	-191.82		27496	3.98	9222	10277			12.73	Si
SLU 50	5.97	-35151	-770	-1742.85		31543	3.98	9761	10878			14.13	Si
SLU 50	7.77	-30091	-770	-221.31		27002	3.98	9156	10203			13.25	Si
SLU 45	5.97	-34655	-733	-1637.24		31098	3.98	9702	10812			14.75	Si
SLU 45	7.77	-29595	-733	-182.41		26557	3.98	9096	10137			13.83	Si
SLU 69	5.97	-39603	-773	-1884.18		35538	3.98	10294	11472			14.83	Si
SLU 69	7.77	-34490	-773	-356.64		30950	3.98	9682	10790			13.95	Si
SLU 72	5.97	-39120	-784	-1896.21		35104	3.98	10236	11407			14.55	Si
SLU 72	7.77	-34007	-784	-349.72		30516	3.98	9624	10725			13.68	Si
SLU 70	5.97	-39637	-797	-1909.16		35568	3.98	10298	11476			14.39	Si
SLU 70	7.77	-34524	-797	-338.43		30980	3.98	9686	10794			13.54	Si
SLU 47	5.97	-34195	-759	-1665.92		30684	3.98	9647	10750			14.16	Si
SLU 47	7.77	-29134	-759	-163.35		26144	3.98	9041	10076			13.27	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 6	5.97	-22405	-5150	-6409.8		20105	3.98	12354	13768			2.67	Si
SLV 6	7.77	-19258	-6638	3765.72		17281	3.98	11789	13138			1.98	Si
SLV 16	5.97	-27428	14431	14171.65		24613	3.98	13256	14772			1.02	Si
SLV 16	7.77	-23274	14470	-11587.46		20884	3.98	12510	13941			0.96	No, Vu<V
SLV 14	5.97	-22987	14315	13824.59		20627	3.98	12459	13884			0.97	No, Vu<V
SLV 14	7.77	-19296	13379	-11173.53		17315	3.98	11796	13146			0.98	No, Vu<V
SLV 2	5.97	-30065	-15421	-16682.33		26978	3.98	13729	15300			0.99	No, Vu<V
SLV 2	7.77	-26377	-15460	11066.97		23669	3.98	13067	14562			0.94	No, Vu<V
SLV 1	5.97	-30065	-15421	-16682.33		26978	3.98	13729	15300			0.99	No, Vu<V
SLV 1	7.77	-26377	-15460	11066.97		23669	3.98	13067	14562			0.94	No, Vu<V
SLV 4	5.97	-34507	-15304	-16335.27		30964	3.98	14526	16188			1.06	Si
SLV 4	7.77	-30354	-14369	10653.04		27238	3.98	13781	15358			1.07	Si
SLV 5	5.97	-22405	-5150	-6409.8		20105	3.98	12354	13768			2.67	Si
SLV 5	7.77	-19258	-6638	3765.72		17281	3.98	11789	13138			1.98	Si
SLV 13	5.97	-22987	14315	13824.59		20627	3.98	12459	13884			0.97	No, Vu<V
SLV 13	7.77	-19296	13379	-11173.53		17315	3.98	11796	13146			0.98	No, Vu<V
SLV 15	5.97	-27428	14431	14171.65		24613	3.98	13256	14772			1.02	Si
SLV 15	7.77	-23274	14470	-11587.46		20884	3.98	12510	13941			0.96	No, Vu<V
SLV 3	5.97	-34507	-15304	-16335.27		30964	3.98	14526	16188			1.06	Si
SLV 3	7.77	-30354	-14369	10653.04		27238	3.98	13781	15358			1.07	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 9	143750	0.39	17157	-19120	415.45	2300.93	5.54	Si
SLV 10	143750	0.39	17157	-19120	415.45	2300.93	5.54	Si
SLV 6	143750	0.39	19070	-21251	415.45	2510.84	6.04	Si
SLV 5	143750	0.39	19070	-21251	415.45	2510.84	6.04	Si
SLV 14	143750	0.39	19112	-21298	415.45	2515.33	6.05	Si
SLV 13	143750	0.39	19112	-21298	415.45	2515.33	6.05	Si
SLV 16	143750	0.39	22699	-25296	415.45	2883.52	6.94	Si
SLV 15	143750	0.39	22699	-25296	415.45	2883.52	6.94	Si
SLV 1	143750	0.39	25486	-28402	415.45	3146.88	7.57	Si
SLV 2	143750	0.39	25486	-28402	415.45	3146.88	7.57	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 10	-13532	-21290	628	0.011	1944.9	0.924	0.17169	7.63299	No
SLV 9	-13532	-21290	628	0.011	1944.9	0.924	0.17169	7.63299	No
SLV 6	-15493	-23016	649	0.013	2142.5	0.929	0.19906	7.63299	No
SLV 5	-15493	-23016	649	0.013	2142.5	0.929	0.19906	7.63299	No
SLV 11	-25157	-31452	-649	0.022	3120.9	0.948	0.33307	7.63299	No



Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 12	-25157	-31452	-649	0.022	3120.9	0.948	0.33307	7.63299	No
SLV 8	-27119	-33178	-627	0.024	3320	0.951	0.36004	7.63299	No
SLV 7	-27119	-33178	-627	0.024	3320	0.951	0.36004	7.63299	No
SLV 15	-18800	-25881	-227	0.036	2476.5	0.937	0.55161	8.88274	No
SLV 16	-18800	-25881	-227	0.036	2476.5	0.937	0.55161	8.88274	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	22.519	SLU 78	Si
V_SLU	12.729	SLU 49	Si
PF_SLV	2.75	SLV 13	Si
V_SLV	0.942	SLV 1	No
PFFP_SLV	5.538	SLV 9	Si
R_SLV	0.022	SLV 9	No

Maschio 137

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X inl.	Y inl.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h inl.	h fin.	a	a.s.,sx	a.s.,dx
-11.938	6.661	-7.958	6.661	L4	L5	3.98	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	t0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLU 75	5.97	-42362	2014.92	38013	44960.81	22.314	Si
SLU 75	7.77	-39267	238.29	35236	44340.16	186.074	Si
SLU 74	5.97	-42361	2042.7	38012	44960.71	22.01	Si
SLU 74	7.77	-39274	251.28	35242	44341.94	176.465	Si
SLU 83	5.97	-43419	2047.01	38961	45076.57	22.021	Si
SLU 83	7.77	-40461	313.91	36308	44629.38	142.175	Si
SLU 60	5.97	-38813	1953.97	34828	44213.67	22.628	Si
SLU 60	7.77	-35626	393.35	31969	43072.35	109.5	Si
SLU 78	5.97	-43091	1978.99	38667	45045.87	22.762	Si
SLU 78	7.77	-40038	23.36	35928	44534.04	1000	Si
SLU 84	5.97	-43419	2019.23	38962	45076.63	22.324	Si
SLU 84	7.77	-40455	300.92	36302	44627.95	148.305	Si
SLU 77	5.97	-43090	2006.76	38666	45045.8	22.447	Si
SLU 77	7.77	-40045	36.34	35934	44535.59	1000	Si
SLU 82	5.97	-42691	2055.17	38308	45002.08	21.897	Si
SLU 82	7.77	-39684	515.85	35610	44448.16	86.164	Si
SLU 81	5.97	-42690	2082.94	38308	45002	21.605	Si
SLU 81	7.77	-39690	528.84	35616	44449.81	84.052	Si
SLU 73	5.97	-41042	1978.9	36829	44747.54	22.612	Si
SLU 73	7.77	-37895	394.06	34004	43930.49	111.483	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma M = 2$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLV 10	5.97	-20215	5073.8	18140	34256.23	6.752	Si
SLV 10	7.77	-20095	-2803.46	18032	34087.62	12.159	Si
SLV 9	5.97	-20215	5073.8	18140	34256.23	6.752	Si
SLV 9	7.77	-20095	-2803.46	18032	34087.62	12.159	Si
SLV 3	5.97	-27376	-12864.04	24565	43524.87	3.383	Si
SLV 3	7.77	-24464	10511.85	21952	39936.41	3.799	Si
SLV 1	5.97	-21384	-13318.35	19189	35871.5	2.693	Si
SLV 1	7.77	-20051	10603.53	17993	34025.83	3.209	Si
SLV 4	5.97	-27376	-12864.04	24565	43524.87	3.383	Si
SLV 4	7.77	-24464	10511.85	21952	39936.41	3.799	Si
SLV 13	5.97	-30340	15792.71	27225	46923.48	2.971	Si
SLV 13	7.77	-28039	-10187.16	25161	44307.92	4.349	Si
SLV 14	5.97	-30340	15792.71	27225	46923.48	2.971	Si
SLV 14	7.77	-28039	-10187.16	25161	44307.92	4.349	Si
SLV 15	5.97	-36331	16247.03	32602	53008.51	3.263	Si
SLV 15	7.77	-32452	-10278.84	29120	49188.2	4.785	Si
SLV 16	5.97	-36331	16247.03	32602	53008.51	3.263	Si
SLV 16	7.77	-32452	-10278.84	29120	49188.2	4.785	Si
SLV 2	5.97	-21384	-13318.35	19189	35871.5	2.693	Si
SLV 2	7.77	-20051	10603.53	17993	34025.83	3.209	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	V par	M	$\sigma 0$	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 45	5.97	-34636	1239	1778.97		31081	3.98	9700	10809			8.73	Si
SLU 45	7.77	-31045	1239	-148.2		27858	3.98	9270	10330			8.34	Si
SLU 58	5.97	-38621	1308	1824.34		34656	3.98	10176	11341			8.67	Si
SLU 58	7.77	-35383	1308	-149.66		31751	3.98	9789	10909			8.34	Si
SLU 51	5.97	-34775	1332	1661.81		31205	3.98	9716	10828			8.13	Si
SLU 51	7.77	-31212	1332	-426.64		28008	3.98	9290	10353			7.77	Si
SLU 50	5.97	-34774	1341	1689.58		31204	3.98	9716	10828			8.07	Si
SLU 50	7.77	-31219	1341	-413.65		28014	3.98	9291	10354			7.72	Si
SLU 71	5.97	-38651	1367	1818.56		34683	3.98	10180	11345			8.3	Si
SLU 71	7.77	-35283	1367	-278.16		31661	3.98	9777	10896			7.97	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 48	5.97	-35365	1343	1743.03		31735	3.98	9787	10906			8.12	Si
SLU 48	7.77	-31816	1343	-363.14		28550	3.98	9362	10433			7.77	Si
SLU 69	5.97	-39242	1369	1872		35214	3.98	10251	11423			8.34	Si
SLU 69	7.77	-35880	1369	-227.65		32197	3.98	9848	10975			8.02	Si
SLU 70	5.97	-39243	1360	1844.23		35215	3.98	10251	11424			8.4	Si
SLU 70	7.77	-35874	1360	-240.64		32191	3.98	9848	10974			8.07	Si
SLU 72	5.97	-38652	1358	1790.78		34684	3.98	10180	11345			8.36	Si
SLU 72	7.77	-35276	1358	-291.15		31655	3.98	9776	10895			8.03	Si
SLU 49	5.97	-35366	1334	1715.26		31735	3.98	9787	10907			8.17	Si
SLU 49	7.77	-31810	1334	-376.12		28544	3.98	9361	10432			7.82	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 16	5.97	-36331	15098	16247.03		32602	3.98	14854	16553			1.1	Si
SLV 16	7.77	-32452	14764	-10278.84		29120	3.98	14157	15777			1.07	Si
SLV 1	5.97	-21384	-13348	-13318.35		19189	3.98	12171	13563			1.02	Si
SLV 1	7.77	-20051	-13013	10603.53		17993	3.98	11932	13297			1.02	Si
SLV 3	5.97	-27376	-13304	-12864.04		24565	3.98	13246	14762			1.11	Si
SLV 3	7.77	-24464	-12574	10511.85		21952	3.98	12724	14179			1.13	Si
SLV 10	5.97	-20215	5063	5073.8		18140	3.98	11961	13330			2.63	Si
SLV 10	7.77	-20095	4244	-2803.46		18032	3.98	11940	13306			3.14	Si
SLV 2	5.97	-21384	-13348	-13318.35		19189	3.98	12171	13563			1.02	Si
SLV 2	7.77	-20051	-13013	10603.53		17993	3.98	11932	13297			1.02	Si
SLV 13	5.97	-30340	15055	15792.71		27225	3.98	13778	15355			1.02	Si
SLV 13	7.77	-28039	14325	-10187.16		25161	3.98	13365	14894			1.04	Si
SLV 4	5.97	-27376	-13304	-12864.04		24565	3.98	13246	14762			1.11	Si
SLV 4	7.77	-24464	-12574	10511.85		21952	3.98	12724	14179			1.13	Si
SLV 14	5.97	-30340	15055	15792.71		27225	3.98	13778	15355			1.02	Si
SLV 14	7.77	-28039	14325	-10187.16		25161	3.98	13365	14894			1.04	Si
SLV 15	5.97	-36331	15098	16247.03		32602	3.98	14854	16553			1.1	Si
SLV 15	7.77	-32452	14764	-10278.84		29120	3.98	14157	15777			1.07	Si
SLV 9	5.97	-20215	5063	5073.8		18140	3.98	11961	13330			2.63	Si
SLV 9	7.77	-20095	4244	-2803.46		18032	3.98	11940	13306			3.14	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 6	143750	0.39	15678	-17472	415.45	2132.18	5.13	Si
SLV 5	143750	0.39	15678	-17472	415.45	2132.18	5.13	Si
SLV 9	143750	0.39	18017	-20078	415.45	2396.47	5.77	Si
SLV 10	143750	0.39	18017	-20078	415.45	2396.47	5.77	Si
SLV 1	143750	0.39	18343	-20442	415.45	2432.19	5.85	Si
SLV 2	143750	0.39	18343	-20442	415.45	2432.19	5.85	Si
SLV 4	143750	0.39	22966	-25594	415.45	2909.64	7	Si
SLV 3	143750	0.39	22966	-25594	415.45	2909.64	7	Si
SLV 13	143750	0.39	26140	-29130	415.45	3205.76	7.72	Si
SLV 14	143750	0.39	26140	-29130	415.45	3205.76	7.72	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 16	-26208	-34321	-55	0.042	3227.6	0.95	0.64709	8.88274	No
SLV 15	-26208	-34321	-55	0.042	3227.6	0.95	0.64709	8.88274	No
SLV 2	-18295	-20224	50	0.044	2425.5	0.936	0.67616	8.88274	No
SLV 1	-18295	-20224	50	0.044	2425.5	0.936	0.67616	8.88274	No
SLV 14	-23554	-28187	14	0.044	2958.2	0.946	0.67731	8.88274	No
SLV 13	-23554	-28187	14	0.044	2958.2	0.946	0.67731	8.88274	No
SLV 3	-20950	-26358	-19	0.044	2694.2	0.942	0.68512	8.88274	No
SLV 4	-20950	-26358	-19	0.044	2694.2	0.942	0.68512	8.88274	No
SLV 11	-27465	-38691	-124	0.04	3355.1	0.952	0.61048	7.63299	No
SLV 12	-27465	-38691	-124	0.04	3355.1	0.952	0.61048	7.63299	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	21.605	SLU 81	Si
V_SLU	7.721	SLU 50	Si
PF_SLV	2.693	SLV 1	Si
V_SLV	1.016	SLV 1	Si
PFFP_SLV	5.132	SLV 5	Si
R_SLV	0.073	SLV 15	No

Maschio 138

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.058	6.661	-5.018	6.661	L4	L5	2.04	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2



Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 82	5.97	-21244	-703.98	37192	11775.43	16.727	Si
SLU 82	7.77	-18648	-2188.94	32648	11397.75	5.207	Si
SLU 78	5.97	-20937	-837.95	36655	11746.15	14.018	Si
SLU 78	7.77	-18341	-2099.53	32110	11333.5	5.398	Si
SLU 81	5.97	-21281	-704.75	37256	11778.61	16.713	Si
SLU 81	7.77	-18685	-2186.04	32711	11405.06	5.217	Si
SLU 74	5.97	-20850	-783.4	36502	11737.09	14.982	Si
SLU 74	7.77	-18254	-2093.37	31957	11314.52	5.405	Si
SLU 75	5.97	-20814	-782.63	36439	11733.22	14.992	Si
SLU 75	7.77	-18218	-2096.27	31894	11306.53	5.394	Si
SLU 77	5.97	-20973	-838.72	36718	11749.82	14.009	Si
SLU 77	7.77	-18377	-2096.63	32173	11341.3	5.409	Si
SLU 83	5.97	-21404	-760.06	37472	11789.01	15.511	Si
SLU 83	7.77	-18808	-2189.3	32927	11429.51	5.221	Si
SLU 84	5.97	-21368	-759.29	37409	11786.03	15.522	Si
SLU 84	7.77	-18772	-2192.2	32864	11422.39	5.21	Si
SLU 73	5.97	-20290	-727.39	35522	11670.98	16.045	Si
SLU 73	7.77	-17694	-2060.16	30977	11184.72	5.429	Si
SLU 76	5.97	-20414	-782.71	35738	11686.74	14.931	Si
SLU 76	7.77	-17818	-2063.42	31193	11214.52	5.435	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 1	5.97	-3938	-5813.84	0	0	0	No, $e > l/2$
SLV 1	7.77	-1860	3268.97	0	0	0	No, $e > l/2$
SLV 5	5.97	-7238	-1853.01	12671	6617.07	3.571	Si
SLV 5	7.77	-5504	327.43	9635	5171.01	15.793	Si
SLV 2	5.97	-3938	-5813.84	0	0	0	No, $e > l/2$
SLV 2	7.77	-1860	3268.97	0	0	0	No, $e > l/2$
SLV 14	5.97	-21841	4836.67	38236	15306.1	3.165	Si
SLV 14	7.77	-20122	-5815.81	35228	14607.08	2.512	Si
SLV 15	5.97	-24383	4636.82	42687	16181.75	3.49	Si
SLV 15	7.77	-22478	-6019.93	39352	15543.3	2.582	Si
SLV 4	5.97	-6480	-6013.69	11344	5995.58	0.997	No, $M > Mu$
SLV 4	7.77	-4216	3064.86	7381	4040.69	1.318	Si
SLV 16	5.97	-24383	4636.82	42687	16181.75	3.49	Si
SLV 16	7.77	-22478	-6019.93	39352	15543.3	2.582	Si
SLV 6	5.97	-7238	-1853.01	12671	6617.07	3.571	Si
SLV 6	7.77	-5504	327.43	9635	5171.01	15.793	Si
SLV 13	5.97	-21841	4836.67	38236	15306.1	3.165	Si
SLV 13	7.77	-20122	-5815.81	35228	14607.08	2.512	Si
SLV 3	5.97	-6480	-6013.69	11344	5995.58	0.997	No, $M > Mu$
SLV 3	7.77	-4216	3064.86	7381	4040.69	1.318	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 81	5.97	-21281	782	-704.75		37256	2.04	10523	6011			7.69	Si
SLU 81	7.77	-18685	782	-2186.04		32711	2.04	9917	5665			7.24	Si
SLU 42	5.97	-18174	715	-576.02		31817	2.04	9798	5597			7.83	Si
SLU 42	7.77	-16164	715	-1918.93		28298	2.04	9329	5328			7.46	Si
SLU 41	5.97	-18210	713	-576.79		31881	2.04	9806	5601			7.86	Si
SLU 41	7.77	-16200	713	-1916.03		28361	2.04	9337	5333			7.49	Si
SLU 84	5.97	-21368	755	-759.29		37409	2.04	10543	6022			7.97	Si
SLU 84	7.77	-18772	755	-2192.2		32864	2.04	9937	5676			7.52	Si
SLU 73	5.97	-20290	700	-727.39		35522	2.04	10292	5879			8.4	Si
SLU 73	7.77	-17694	700	-2060.16		30977	2.04	9686	5533			7.91	Si
SLU 82	5.97	-21244	784	-703.98		37192	2.04	10515	6006			7.66	Si
SLU 82	7.77	-18648	784	-2188.94		32648	2.04	9909	5660			7.22	Si
SLU 39	5.97	-18087	741	-521.48		31665	2.04	9778	5585			7.53	Si
SLU 39	7.77	-16077	741	-1912.78		28145	2.04	9308	5317			7.17	Si
SLU 40	5.97	-18051	743	-520.71		31601	2.04	9769	5580			7.51	Si
SLU 40	7.77	-16040	743	-1915.68		28082	2.04	9300	5312			7.14	Si
SLU 31	5.97	-17097	659	-544.12		29931	2.04	9546	5453			8.28	Si
SLU 31	7.77	-15086	659	-1786.89		26412	2.04	9077	5185			7.87	Si
SLU 83	5.97	-21404	753	-760.06		37472	2.04	10552	6027			8	Si
SLU 83	7.77	-18808	753	-2189.3		32927	2.04	9946	5681			7.54	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 4	5.97	-6480	-5600	-6013.69		83935	0.2757	16250	1254			0.22	No, $Vu < V$
SLV 4	7.77	-4216	-5072	3064.86		17127	0.8792	11759	2895			0.57	No, $Vu < V$
SLV 10	5.97	-12609	3437	1342.15		22074	2.04	12748	7282			2.12	Si
SLV 10	7.77	-10982	2373	-2398.01		19226	2.04	12179	6956			2.93	Si
SLV 3	5.97	-6480	-5600	-6013.69		83935	0.2757	16250	1254			0.22	No, $Vu < V$
SLV 3	7.77	-4216	-5072	3064.86		17127	0.8792	11759	2895			0.57	No, $Vu < V$
SLV 2	5.97	-3938	-4790	-5813.84		0	0	8333	0			0	No, $Vu < V$
SLV 2	7.77	-1860	-4858	3268.97		0	0	8333	0			0	No, $Vu < V$
SLV 13	5.97	-21841	6412	4836.67		38236	2.04	15981	9128			1.42	Si
SLV 13	7.77	-20122	5884	-5815.81		35228	2.04	15379	8784			1.49	Si
SLV 1	5.97	-3938	-4790	-5813.84		0	0	8333	0			0	No, $Vu < V$
SLV 1	7.77	-1860	-4858	3268.97		0	0	8333	0			0	No, $Vu < V$
SLV 14	5.97	-21841	6412	4836.67		38236	2.04	15981	9128			1.42	Si
SLV 14	7.77	-20122	5884	-5815.81		35228	2.04	15379	8784			1.49	Si
SLV 9	5.97	-12609	3437	1342.15		22074	2.04	12748	7282			2.12	Si
SLV 9	7.77	-10982	2373	-2398.01		19226	2.04	12179	6956			2.93	Si
SLV 15	5.97	-24383	5601	4636.82		42687	2.04	16250	9282			1.66	Si
SLV 15	7.77	-22478	5670	-6019.93		39352	2.04	16204	9256			1.63	Si
SLV 16	5.97	-24383	5601	4636.82		42687	2.04	16250	9282			1.66	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 16	7.77	-22478	5670	-6019.93		39352	2.04	16204	9256			1.63	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 1	143750	0.39	5141	-2936	212.94	393.8	1.85	Si
SLV 2	143750	0.39	5141	-2936	212.94	393.8	1.85	Si
SLV 4	143750	0.39	9191	-5250	212.94	679.7	3.19	Si
SLV 3	143750	0.39	9191	-5250	212.94	679.7	3.19	Si
SLV 5	143750	0.39	11375	-6497	212.94	824.93	3.87	Si
SLV 6	143750	0.39	11375	-6497	212.94	824.93	3.87	Si
SLV 9	143750	0.39	20768	-11863	212.94	1378.51	6.47	Si
SLV 10	143750	0.39	20768	-11863	212.94	1378.51	6.47	Si
SLV 8	143750	0.39	24875	-14209	212.94	1584.26	7.44	Si
SLV 7	143750	0.39	24875	-14209	212.94	1584.26	7.44	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 6	-4635	-6868	338	0	766.8	0.908	0	7.63299	No
SLV 5	-4635	-6868	338	0	766.8	0.908	0	7.63299	No
SLV 10	-7596	-14394	329	0.012	1063.4	0.928	0.19088	7.63299	No
SLV 9	-7596	-14394	329	0.012	1063.4	0.928	0.19088	7.63299	No
SLV 7	-11942	-13104	-327	0.021	1502.9	0.946	0.32101	7.63299	No
SLV 8	-11942	-13104	-327	0.021	1502.9	0.946	0.32101	7.63299	No
SLV 12	-14903	-20631	-336	0.024	1803.6	0.954	0.36011	7.63299	No
SLV 11	-14903	-20631	-336	0.024	1803.6	0.954	0.36011	7.63299	No
SLV 1	-3737	-270	116	0.032	678.2	0.901	0.50986	8.88274	No
SLV 2	-3737	-270	116	0.032	678.2	0.901	0.50986	8.88274	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.207	SLU 82	Si
V_SLU	7.145	SLU 40	Si
PF_SLV	0	SLV 1	No
V_SLV	0	SLV 1	No
PFFP_SLV	1.849	SLV 1	Si
R_SLV	0	SLV 5	No

Maschio 139

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-20.668	1.046	-24.678	1.046	L4	L5	4.01	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 84	5.07	-45900	-7644.16	40880	45844.41	5.997	Si
SLU 84	7.17	-42492	-11419.65	37845	45615.08	3.994	Si
SLU 82	5.07	-45075	-7517.59	40146	45835.62	6.097	Si
SLU 82	7.17	-41690	-11102.39	37131	45487.17	4.097	Si
SLU 75	5.07	-45060	-7276.81	40132	45835.17	6.299	Si
SLU 75	7.17	-41325	-10936.34	36806	45419.61	4.153	Si
SLU 80	5.07	-45249	-7305.15	40300	45839.95	6.275	Si
SLU 80	7.17	-41427	-11032.38	36896	45438.98	4.119	Si
SLU 79	5.07	-45324	-7175.67	40367	45841.4	6.388	Si
SLU 79	7.17	-41509	-11378.77	36969	45454.38	3.995	Si
SLU 78	5.07	-45884	-7403.38	40866	45844.52	6.192	Si
SLU 78	7.17	-42127	-11253.6	37520	45560.34	4.049	Si
SLU 81	5.07	-45150	-7388.11	40212	45837.64	6.204	Si
SLU 81	7.17	-41773	-11448.78	37204	45501.62	3.974	Si
SLU 83	5.07	-45974	-7514.68	40946	45843.73	6.101	Si
SLU 83	7.17	-42574	-11766.04	37918	45626.63	3.878	Si
SLU 74	5.07	-45134	-7147.33	40198	45837.24	6.413	Si
SLU 74	7.17	-41408	-11282.73	36879	45435.38	4.027	Si
SLU 77	5.07	-45959	-7273.9	40932	45843.9	6.303	Si
SLU 77	7.17	-42209	-11599.99	37593	45573.21	3.929	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 1	5.07	-36344	7710.04	32369	53565.5	6.948	Si
SLV 1	7.17	-40050	-20688.36	35669	56858.17	2.748	Si
SLV 15	5.07	-25896	-16880.36	23064	42120.84	2.495	Si
SLV 15	7.17	-15227	6454.18	13562	27142.32	4.205	Si
SLV 16	5.07	-25896	-16880.36	23064	42120.84	2.495	Si
SLV 16	7.17	-15227	6454.18	13562	27142.32	4.205	Si
SLV 13	5.07	-25514	-16839.14	22724	41642.3	2.473	Si
SLV 13	7.17	-15944	5737.05	14201	28253.14	4.925	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 5	5.07	-32108	-834.09	28597	49310.26	59.119	Si
SLV 5	7.17	-32449	-12276.11	28900	49672.26	4.046	Si
SLV 6	5.07	-32108	-834.09	28597	49310.26	59.119	Si
SLV 6	7.17	-32449	-12276.11	28900	49672.26	4.046	Si
SLV 3	5.07	-36726	7668.82	32709	53923.21	7.031	Si
SLV 3	7.17	-39333	-19971.23	35031	56252.47	2.817	Si
SLV 4	5.07	-36726	7668.82	32709	53923.21	7.031	Si
SLV 4	7.17	-39333	-19971.23	35031	56252.47	2.817	Si
SLV 14	5.07	-25514	-16839.14	22724	41642.3	2.473	Si
SLV 14	7.17	-15944	5737.05	14201	28253.14	4.925	Si
SLV 2	5.07	-36344	7710.04	32369	53565.5	6.948	Si
SLV 2	7.17	-40050	-20688.36	35669	56858.17	2.748	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 37	5.07	-37866	3773	-6311.72		33725	4.01	10052	11287			2.99	Si
SLU 37	7.17	-35449	3807	-10072.62		31572	4.01	9765	10964			2.88	Si
SLU 39	5.07	-37693	4122	-6524.16		33570	4.01	10032	11263			2.73	Si
SLU 39	7.17	-35712	4156	-10142.64		31806	4.01	9796	10999			2.65	Si
SLU 35	5.07	-38501	3894	-6409.94		34290	4.01	10128	11371			2.92	Si
SLU 35	7.17	-36149	3928	-10293.85		32195	4.01	9848	11058			2.82	Si
SLU 40	5.07	-37618	3882	-6653.64		33504	4.01	10023	11254			2.9	Si
SLU 40	7.17	-35630	3933	-9796.25		31733	4.01	9787	10988			2.79	Si
SLU 32	5.07	-37677	3825	-6283.38		33556	4.01	10030	11261			2.94	Si
SLU 32	7.17	-35347	3859	-9976.59		31481	4.01	9753	10951			2.84	Si
SLU 41	5.07	-38517	4191	-6650.73		34304	4.01	10129	11373			2.71	Si
SLU 41	7.17	-36514	4226	-10459.9		32520	4.01	9892	11106			2.63	Si
SLU 84	5.07	-45900	4045	-7644.16		40880	4.01	10833	12164			3.01	Si
SLU 84	7.17	-42492	4104	-11419.65		37845	4.01	10601	11903			2.9	Si
SLU 81	5.07	-45150	4217	-7388.11		40212	4.01	10833	12164			2.88	Si
SLU 81	7.17	-41773	4258	-11448.78		37204	4.01	10516	11807			2.77	Si
SLU 83	5.07	-45974	4285	-7514.68		40946	4.01	10833	12164			2.84	Si
SLU 83	7.17	-42574	4327	-11766.04		37918	4.01	10611	11914			2.75	Si
SLU 42	5.07	-38442	3950	-6780.2		34238	4.01	10121	11363			2.88	Si
SLU 42	7.17	-36431	4003	-10113.51		32447	4.01	9882	11095			2.77	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 16	5.07	-25896	-17206	-16880.36		23064	4.01	12946	14536			0.84	No, Vu<V
SLV 16	7.17	-15227	-16382	6454.18		13562	4.01	11046	12402			0.76	No, Vu<V
SLV 2	5.07	-36344	21400	7710.04		32369	4.01	14807	16625			0.78	No, Vu<V
SLV 2	7.17	-40050	20631	-20688.36		35669	4.01	15467	17367			0.84	No, Vu<V
SLV 15	5.07	-25896	-17206	-16880.36		23064	4.01	12946	14536			0.84	No, Vu<V
SLV 15	7.17	-15227	-16382	6454.18		13562	4.01	11046	12402			0.76	No, Vu<V
SLV 5	5.07	-32108	9904	-834.09		28597	4.01	14053	15778			1.59	Si
SLV 5	7.17	-32449	9728	-12276.11		28900	4.01	14113	15847			1.63	Si
SLV 4	5.07	-36726	20070	7668.82		32709	4.01	14875	16702			0.83	No, Vu<V
SLV 4	7.17	-39333	19279	-19971.23		35031	4.01	15340	17223			0.89	No, Vu<V
SLV 1	5.07	-36344	21400	7710.04		32369	4.01	14807	16625			0.78	No, Vu<V
SLV 1	7.17	-40050	20631	-20688.36		35669	4.01	15467	17367			0.84	No, Vu<V
SLV 3	5.07	-36726	20070	7668.82		32709	4.01	14875	16702			0.83	No, Vu<V
SLV 3	7.17	-39333	19279	-19971.23		35031	4.01	15340	17223			0.89	No, Vu<V
SLV 13	5.07	-25514	-15876	-16839.14		22724	4.01	12878	14460			0.91	No, Vu<V
SLV 13	7.17	-15944	-15029	5737.05		14201	4.01	11173	12546			0.83	No, Vu<V
SLV 14	5.07	-25514	-15876	-16839.14		22724	4.01	12878	14460			0.91	No, Vu<V
SLV 14	7.17	-15944	-15029	5737.05		14201	4.01	11173	12546			0.83	No, Vu<V
SLV 6	5.07	-32108	9904	-834.09		28597	4.01	14053	15778			1.59	Si
SLV 6	7.17	-32449	9728	-12276.11		28900	4.01	14113	15847			1.63	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 16	143750	0.39	14200	-15944	428.31	1972.75	4.61	Si
SLV 15	143750	0.39	14200	-15944	428.31	1972.75	4.61	Si
SLV 14	143750	0.39	14835	-16657	428.31	2048.82	4.78	Si
SLV 13	143750	0.39	14835	-16657	428.31	2048.82	4.78	Si
SLV 11	143750	0.39	20975	-23551	428.31	2731.11	6.38	Si
SLV 12	143750	0.39	20975	-23551	428.31	2731.11	6.38	Si
SLV 9	143750	0.39	23091	-25926	428.31	2943.76	6.87	Si
SLV 10	143750	0.39	23091	-25926	428.31	2943.76	6.87	Si
SLV 8	143750	0.39	27417	-30783	428.31	3342.66	7.8	Si
SLV 7	143750	0.39	27417	-30783	428.31	3342.66	7.8	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 11	-23208	-30132	-592	0.023	2927.4	0.945	0.34813	7.63299	No
SLV 12	-23208	-30132	-592	0.023	2927.4	0.945	0.34813	7.63299	No
SLV 6	-25675	-32108	592	0.024	3177.7	0.949	0.36816	7.63299	No
SLV 5	-25675	-32108	592	0.024	3177.7	0.949	0.36816	7.63299	No
SLV 10	-22191	-28859	490	0.026	2824.3	0.943	0.39912	7.63299	No
SLV 9	-22191	-28859	490	0.026	2824.3	0.943	0.39912	7.63299	No
SLV 16	-18788	-25896	-332	0.031	2479.6	0.937	0.47979	8.88274	No
SLV 15	-18788	-25896	-332	0.031	2479.6	0.937	0.47979	8.88274	No
SLV 8	-26693	-33381	-490	0.028	3281	0.95	0.42724	7.63299	No
SLV 7	-26693	-33381	-490	0.028	3281	0.95	0.42724	7.63299	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
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Sismicad 12.19 - Licenza assegnata a Sidel ingegneria Srl - Via Isonzo, 13 - Villanova di Castenaso (BO)



Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.878	SLU 83	Si
V_SLU	2.628	SLU 41	Si
PF_SLV	2.473	SLV 13	Si
V_SLV	0.757	SLV 15	No
PFFP_SLV	4.606	SLV 15	Si
R_SLV	0.046	SLV 11	No

Maschio 140

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-12.283	1.046	-19.868	1.046	L4	L5	7.585	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{med}	τ ₀	f _{v0}	μ	φ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLU 84	5.07	-107462	-6125.25	50599	154394.88	25.206	Si
SLU 84	7.57	-98894	-5036.65	46565	160659.57	31.898	Si
SLU 76	5.07	-103004	-5852.76	48500	158055.79	27.005	Si
SLU 76	7.57	-94309	-4630.5	44406	162690.15	35.134	Si
SLU 56	5.07	-98202	-4713.91	46239	161025.18	34.16	Si
SLU 56	7.57	-88328	-6153.26	41589	163953.58	26.645	Si
SLU 48	5.07	-88635	-3469.85	41734	163926.86	47.243	Si
SLU 48	7.57	-77798	-6148.13	36631	162366.4	26.409	Si
SLU 77	5.07	-108106	-5428.09	50902	153793.79	28.333	Si
SLU 77	7.57	-98744	-6035.78	46494	160740.48	26.631	Si
SLU 50	5.07	-87176	-3537.36	41047	164016.78	46.367	Si
SLU 50	7.57	-76332	-6030.56	35941	161759.97	26.823	Si
SLU 80	5.07	-106110	-5886.62	49962	155597.08	26.432	Si
SLU 80	7.57	-97170	-5312.28	45753	161531.18	30.407	Si
SLU 82	5.07	-104714	-5830.71	49305	156754.98	26.884	Si
SLU 82	7.57	-96105	-4758.81	45252	162004.51	34.043	Si
SLU 78	5.07	-107570	-5819.11	50650	154295.45	26.515	Si
SLU 78	7.57	-98636	-5429.85	46443	160798.35	29.614	Si
SLU 83	5.07	-107998	-5734.23	50851	153895.76	26.838	Si
SLU 83	7.57	-99002	-5642.57	46616	160600.48	28.462	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLV 1	5.07	-66733	76080.34	31422	188002.96	2.471	Si
SLV 1	7.57	-65466	-4945.7	30825	185644.27	37.536	Si
SLV 13	5.07	-76096	-76954.43	35830	203967.84	2.651	Si
SLV 13	7.57	-61296	-623.12	28861	177555.2	284.946	Si
SLV 16	5.07	-75277	-82111.86	35445	202673.2	2.468	Si
SLV 16	7.57	-60851	-3351.05	28652	176661.06	52.718	Si
SLV 12	5.07	-71044	-34566.69	33452	195671.72	5.661	Si
SLV 12	7.57	-61790	-8046.53	29094	178540.73	22.189	Si
SLV 15	5.07	-75277	-82111.86	35445	202673.2	2.468	Si
SLV 15	7.57	-60851	-3351.05	28652	176661.06	52.718	Si
SLV 2	5.07	-66733	76080.34	31422	188002.96	2.471	Si
SLV 2	7.57	-65466	-4945.7	30825	185644.27	37.536	Si
SLV 11	5.07	-71044	-34566.69	33452	195671.72	5.661	Si
SLV 11	7.57	-61790	-8046.53	29094	178540.73	22.189	Si
SLV 4	5.07	-65914	70922.91	31036	186484.11	2.629	Si
SLV 4	7.57	-65020	-7673.63	30615	184804.42	24.083	Si
SLV 3	5.07	-65914	70922.91	31036	186484.11	2.629	Si
SLV 3	7.57	-65020	-7673.63	30615	184804.42	24.083	Si
SLV 14	5.07	-76096	-76954.43	35830	203967.84	2.651	Si
SLV 14	7.57	-61296	-623.12	28861	177555.2	284.946	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	V par	M	σ ₀	σ _N	l'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 61	5.07	-94810	1406	-5116.54		44642	7.585	10833	23008			16.37	Si
SLU 61	7.57	-85689	1054	-4876.29		40347	7.585	10833	23008			21.83	Si
SLU 63	5.07	-97558	1333	-5411.07		45936	7.585	10833	23008			17.26	Si
SLU 63	7.57	-88478	923	-5154.13		41660	7.585	10833	23008			24.92	Si
SLU 52	5.07	-90352	1418	-4844.05		42543	7.585	10833	23008			16.23	Si
SLU 52	7.57	-81104	1164	-4470.15		38188	7.585	10647	22613			19.43	Si
SLU 54	5.07	-94918	1372	-4810.39		44692	7.585	10833	23008			16.77	Si
SLU 54	7.57	-85431	970	-5269.5		40225	7.585	10833	23008			23.73	Si
SLU 73	5.07	-100256	1304	-5558.22		47206	7.585	10833	23008			17.64	Si
SLU 73	7.57	-91520	943	-4352.67		43093	7.585	10833	23008			24.41	Si
SLU 55	5.07	-93100	1345	-5138.59		43837	7.585	10833	23008			17.1	Si
SLU 55	7.57	-83892	1033	-4747.98		39501	7.585	10822	22985			22.24	Si
SLU 57	5.07	-97666	1300	-5104.93		45986	7.585	10833	23008			17.7	Si
SLU 57	7.57	-88219	839	-5547.33		41539	7.585	10833	23008			27.42	Si
SLU 44	5.07	-80786	1316	-3599.98		38038	7.585	10627	22570			17.15	Si
SLU 44	7.57	-70573	1133	-4465.03		33230	7.585	9986	21209			18.71	Si
SLU 82	5.07	-104714	1293	-5830.71		49305	7.585	10833	23008			17.8	Si
SLU 82	7.57	-96105	833	-4758.81		45252	7.585	10833	23008			27.63	Si
SLU 60	5.07	-95346	1323	-4725.51		44894	7.585	10833	23008			17.4	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 60	7.57	-85797	869	-5482.22		40398	7.585	10833	23008			26.46	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 3	5.07	-65914	47323	70922.91		31036	7.585	14541	30881			0.65	No, Vu<V
SLV 3	7.57	-65020	40989	-7673.63		30615	7.585	14456	30702			0.75	No, Vu<V
SLV 2	5.07	-66733	45410	76080.34		31422	7.585	14618	31045			0.68	No, Vu<V
SLV 2	7.57	-65466	38632	-4945.7		30825	7.585	14498	30791			0.8	No, Vu<V
SLV 15	5.07	-75277	-43665	-82111.86		35445	7.585	15422	32754			0.75	No, Vu<V
SLV 15	7.57	-60851	-37587	-3351.05		28652	7.585	14064	29868			0.79	No, Vu<V
SLV 16	5.07	-75277	-43665	-82111.86		35445	7.585	15422	32754			0.75	No, Vu<V
SLV 16	7.57	-60851	-37587	-3351.05		28652	7.585	14064	29868			0.79	No, Vu<V
SLV 1	5.07	-66733	45410	76080.34		31422	7.585	14618	31045			0.68	No, Vu<V
SLV 1	7.57	-65466	38632	-4945.7		30825	7.585	14498	30791			0.8	No, Vu<V
SLV 8	5.07	-68235	17709	11343.74		32129	7.585	14759	31345			1.77	Si
SLV 8	7.57	-63041	16236	-9343.31		29683	7.585	14270	30307			1.87	Si
SLV 4	5.07	-65914	47323	70922.91		31036	7.585	14541	30881			0.65	No, Vu<V
SLV 4	7.57	-65020	40989	-7673.63		30615	7.585	14456	30702			0.75	No, Vu<V
SLV 7	5.07	-68235	17709	11343.74		32129	7.585	14759	31345			1.77	Si
SLV 7	7.57	-63041	16236	-9343.31		29683	7.585	14270	30307			1.87	Si
SLV 14	5.07	-76096	-45578	-76954.43		35830	7.585	15499	32918			0.72	No, Vu<V
SLV 14	7.57	-61296	-39943	-623.12		28861	7.585	14106	29958			0.75	No, Vu<V
SLV 13	5.07	-76096	-45578	-76954.43		35830	7.585	15499	32918			0.72	No, Vu<V
SLV 13	7.57	-61296	-39943	-623.12		28861	7.585	14106	29958			0.75	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 2	143750	0.39	29758	-63199	810.16	6693.07	8.26	Si
SLV 1	143750	0.39	29758	-63199	810.16	6693.07	8.26	Si
SLV 3	143750	0.39	29893	-63486	810.16	6713.63	8.29	Si
SLV 4	143750	0.39	29893	-63486	810.16	6713.63	8.29	Si
SLV 6	143750	0.39	30779	-65368	810.16	6846.27	8.45	Si
SLV 5	143750	0.39	30779	-65368	810.16	6846.27	8.45	Si
SLV 8	143750	0.39	31229	-66324	810.16	6912.21	8.53	Si
SLV 7	143750	0.39	31229	-66324	810.16	6912.21	8.53	Si
SLV 10	143750	0.39	31789	-67514	810.16	6992.85	8.63	Si
SLV 9	143750	0.39	31789	-67514	810.16	6992.85	8.63	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 8	-57932	-68235	-901	0.03	6962.1	0.955	0.45102	7.63299	No
SLV 7	-57932	-68235	-901	0.03	6962.1	0.955	0.45102	7.63299	No
SLV 12	-56893	-71044	-892	0.03	6856.5	0.955	0.45119	7.63299	No
SLV 11	-56893	-71044	-892	0.03	6856.5	0.955	0.45119	7.63299	No
SLV 10	-59935	-73775	906	0.03	7165.7	0.956	0.45387	7.63299	No
SLV 9	-59935	-73775	906	0.03	7165.7	0.956	0.45387	7.63299	No
SLV 6	-60974	-70966	897	0.03	7271.3	0.957	0.458	7.63299	No
SLV 5	-60974	-70966	897	0.03	7271.3	0.957	0.458	7.63299	No
SLV 13	-57659	-76096	288	0.039	6934.3	0.955	0.59527	8.88274	No
SLV 14	-57659	-76096	288	0.039	6934.3	0.955	0.59527	8.88274	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	25.206	SLU 84	Si
V_SLU	16.23	SLU 52	Si
PF_SLV	2.468	SLV 15	Si
V_SLV	0.653	SLV 3	No
PFFP_SLV	8.261	SLV 1	Si
R_SLV	0.059	SLV 7	No

Maschio 141

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-10.466	1.046	-11.163	1.046	L4	L5	0.696	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ_0	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 80	5.07	-13509	-348.98	69281	703.12	2.015	Si
SLU 80	7.57	-10945	322.35	56134	1184.77	3.675	Si
SLU 74	5.07	-13384	-309.47	68640	733.3	2.37	Si
SLU 74	7.57	-10917	278.11	55990	1188.46	4.273	Si
SLU 78	5.07	-13686	-350.04	70189	659.22	1.883	Si
SLU 78	7.57	-11111	322.1	56986	1162.3	3.609	Si
SLU 82	5.07	-13423	-290.28	68842	723.84	2.494	Si
SLU 82	7.57	-10992	255.86	56375	1178.55	4.606	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 76	5.07	-13159	-334.27	67487	785.84	2.351	Si
SLU 76	7.57	-10636	306.73	54550	1223.35	3.988	Si
SLU 77	5.07	-13714	-334.52	70336	651.98	1.949	Si
SLU 77	7.57	-11180	305.07	57338	1152.64	3.778	Si
SLU 75	5.07	-13355	-324.98	68493	740.13	2.277	Si
SLU 75	7.57	-10848	295.13	55637	1197.33	4.057	Si
SLU 83	5.07	-13783	-299.82	70686	634.62	2.117	Si
SLU 83	7.57	-11324	265.8	58076	1131.77	4.258	Si
SLU 79	5.07	-13537	-333.46	69428	696.1	2.087	Si
SLU 79	7.57	-11014	305.32	56487	1175.61	3.85	Si
SLU 84	5.07	-13754	-315.34	70539	641.95	2.036	Si
SLU 84	7.57	-11255	282.82	57723	1141.86	4.037	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 2	5.07	-4510	2582.35	0	0	0	No, $e \geq l/2$
SLV 2	7.57	-7879	-2613.08	40408	1836.07	0.703	No, $M > Mu$
SLV 11	5.07	-14050	-1646.86	72057	2007.05	1.219	Si
SLV 11	7.57	-5761	1591.46	29547	1520.88	0.956	No, $M > Mu$
SLV 12	5.07	-14050	-1646.86	72057	2007.05	1.219	Si
SLV 12	7.57	-5761	1591.46	29547	1520.88	0.956	No, $M > Mu$
SLV 16	5.07	-13476	-3047.29	69113	2038.1	0.669	No, $M > Mu$
SLV 16	7.57	-6395	3041.61	0	0	0	No, $e \geq l/2$
SLV 3	5.07	-6958	2206.56	35683	1715.06	0.777	No, $M > Mu$
SLV 3	7.57	-7119	-2264.3	36509	1738	0.768	No, $M > Mu$
SLV 15	5.07	-13476	-3047.29	69113	2038.1	0.669	No, $M > Mu$
SLV 15	7.57	-6395	3041.61	0	0	0	No, $e \geq l/2$
SLV 13	5.07	-11028	-2671.5	56561	2062.41	0.772	No, $M > Mu$
SLV 13	7.57	-7155	2692.83	0	0	0	No, $e \geq l/2$
SLV 1	5.07	-4510	2582.35	0	0	0	No, $e \geq l/2$
SLV 1	7.57	-7879	-2613.08	40408	1836.07	0.703	No, $M > Mu$
SLV 14	5.07	-11028	-2671.5	56561	2062.41	0.772	No, $M > Mu$
SLV 14	7.57	-7155	2692.83	0	0	0	No, $e \geq l/2$
SLV 4	5.07	-6958	2206.56	35683	1715.06	0.777	No, $M > Mu$
SLV 4	7.57	-7119	-2264.3	36509	1738	0.768	No, $M > Mu$

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 49	5.07	-11151	-363	-391.98		57191	0.6964	10833	2112			5.82	Si
SLU 49	7.57	-8479	-459	381.94		43487	0.6964	10833	2112			4.6	Si
SLU 50	5.07	-11003	-346	-375.4		56430	0.6964	10833	2112			6.11	Si
SLU 50	7.57	-8382	-441	365.17		42988	0.6964	10833	2112			4.79	Si
SLU 48	5.07	-11180	-346	-376.46		57338	0.6964	10833	2112			6.1	Si
SLU 48	7.57	-8548	-443	364.92		43840	0.6964	10833	2112			4.77	Si
SLU 51	5.07	-10974	-363	-390.92		56283	0.6964	10833	2112			5.82	Si
SLU 51	7.57	-8313	-457	382.19		42635	0.6964	10833	2112			4.62	Si
SLU 72	5.07	-12165	-322	-369.02		62388	0.6964	10833	2112			6.56	Si
SLU 72	7.57	-9609	-430	351.65		49280	0.6964	10833	2112			4.91	Si
SLU 57	5.07	-12495	-328	-371.94		64084	0.6964	10833	2112			6.44	Si
SLU 57	7.57	-9816	-445	352.64		50341	0.6964	10833	2112			4.75	Si
SLU 46	5.07	-10820	-339	-366.93		55494	0.6964	10833	2112			6.24	Si
SLU 46	7.57	-8216	-432	354.98		42138	0.6964	10833	2112			4.89	Si
SLU 59	5.07	-12318	-327	-370.88		63176	0.6964	10833	2112			6.45	Si
SLU 59	7.57	-9650	-443	352.89		49490	0.6964	10833	2112			4.77	Si
SLU 47	5.07	-10624	-349	-376.21		54488	0.6964	10833	2112			6.05	Si
SLU 47	7.57	-8004	-441	366.58		41052	0.6964	10833	2112			4.79	Si
SLU 70	5.07	-12342	-322	-370.08		63296	0.6964	10833	2112			6.56	Si
SLU 70	7.57	-9775	-432	351.4		50131	0.6964	10833	2112			4.89	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 13	5.07	-11028	-2421	-2671.5		123922	0.3178	16250	1446			0.6	No, $V_u < V$
SLV 13	7.57	-7155	-2223	2692.83		0	0	8333	0			0	No, $V_u < V$
SLV 14	5.07	-11028	-2421	-2671.5		123922	0.3178	16250	1446			0.6	No, $V_u < V$
SLV 14	7.57	-7155	-2223	2692.83		0	0	8333	0			0	No, $V_u < V$
SLV 3	5.07	-6958	2029	2206.56		266845	0.0931	16250	424			0.21	No, $V_u < V$
SLV 3	7.57	-7119	1665	-2264.3		281527	0.0903	16250	411			0.25	No, $V_u < V$
SLV 2	5.07	-4510	2523	2582.35		0	0	8333	0			0	No, $V_u < V$
SLV 2	7.57	-7879	2185	-2613.08		567581	0.0496	16250	226			0.1	No, $V_u < V$
SLV 4	5.07	-6958	2029	2206.56		266845	0.0931	16250	424			0.21	No, $V_u < V$
SLV 4	7.57	-7119	1665	-2264.3		281527	0.0903	16250	411			0.25	No, $V_u < V$
SLV 6	5.07	-3936	1370	1181.92		97811	0.1437	16250	654			0.48	No, $V_u < V$
SLV 6	7.57	-8512	1248	-1162.93		47899	0.6347	16250	2888			2.31	Si
SLV 15	5.07	-13476	-2915	-3047.29		131438	0.3662	16250	1666			0.57	No, $V_u < V$
SLV 15	7.57	-6395	-2743	3041.61		0	0	8333	0			0	No, $V_u < V$
SLV 1	5.07	-4510	2523	2582.35		0	0	8333	0			0	No, $V_u < V$
SLV 1	7.57	-7879	2185	-2613.08		567581	0.0496	16250	226			0.1	No, $V_u < V$
SLV 5	5.07	-3936	1370	1181.92		97811	0.1437	16250	654			0.48	No, $V_u < V$
SLV 5	7.57	-8512	1248	-1162.93		47899	0.6347	16250	2888			2.31	Si
SLV 16	5.07	-13476	-2915	-3047.29		131438	0.3662	16250	1666			0.57	No, $V_u < V$
SLV 16	7.57	-6395	-2743	3041.61		0	0	8333	0			0	No, $V_u < V$

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 15	143750	0.39	34323	-6692	74.38	673.75	9.06	Si
SLV 16	143750	0.39	34323	-6692	74.38	673.75	9.06	Si
SLV 14	143750	0.39	34486	-6724	74.38	675.69	9.08	Si
SLV 13	143750	0.39	34486	-6724	74.38	675.69	9.08	Si



Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	143750	0.39	36212	-7061	74.38	695.55	9.35	Si
SLV 12	143750	0.39	36212	-7061	74.38	695.55	9.35	Si
SLV 9	143750	0.39	36755	-7167	74.38	701.52	9.43	Si
SLV 10	143750	0.39	36755	-7167	74.38	701.52	9.43	Si
SLV 8	143750	0.39	37994	-7408	74.38	714.65	9.61	Si
SLV 7	143750	0.39	37994	-7408	74.38	714.65	9.61	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 15	-6804	-13476	23	0.04	790.3	0.963	0.59841	8.88274	No
SLV 16	-6804	-13476	23	0.04	790.3	0.963	0.59841	8.88274	No
SLV 2	-2957	-4510	-21	0.04	399.7	0.933	0.6283	8.88274	No
SLV 1	-2957	-4510	-21	0.04	399.7	0.933	0.6283	8.88274	No
SLV 6	-2963	-3936	-41	0.035	400.3	0.933	0.542	7.63299	No
SLV 5	-2963	-3936	-41	0.035	400.3	0.933	0.542	7.63299	No
SLV 11	-6798	-14050	43	0.037	789.6	0.963	0.55806	7.63299	No
SLV 12	-6798	-14050	43	0.037	789.6	0.963	0.55806	7.63299	No
SLV 14	-5921	-11028	0	0.043	700.4	0.959	0.65394	8.88274	No
SLV 13	-5921	-11028	0	0.043	700.4	0.959	0.65394	8.88274	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.883	SLU 78	Si
V_SLU	4.604	SLU 49	Si
PF_SLV	0	SLV 1	No
V_SLV	0	SLV 1	No
PFFP_SLV	9.058	SLV 15	Si
R_SLV	0.067	SLV 15	No

Maschio 142

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.sx	a.s.dx
-7.278	1.046	-9.386	1.046	L4	L5	2.109	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 77	5.07	-36718	-313.75	62189	9157.29	29.186	Si
SLU 77	7.57	-30891	2790.7	52321	11649.88	4.175	Si
SLU 83	5.07	-37077	-158.29	62798	8954.81	56.571	Si
SLU 83	7.57	-31189	2753.73	52826	11558.38	4.197	Si
SLU 79	5.07	-36175	-312.41	61270	9452.5	30.256	Si
SLU 79	7.57	-30386	2746.44	51465	11795.81	4.295	Si
SLU 78	5.07	-36528	-558.08	61868	9261.84	16.596	Si
SLU 78	7.57	-30822	2862.82	52203	11670.57	4.077	Si
SLU 76	5.07	-35100	-634.64	59450	9998.51	15.755	Si
SLU 76	7.57	-29529	2773.21	50014	12017.92	4.334	Si
SLU 75	5.07	-35770	-473.09	60584	9664.26	20.428	Si
SLU 75	7.57	-30080	2769.38	50947	11878.8	4.289	Si
SLU 80	5.07	-35985	-556.74	60949	9552.53	17.158	Si
SLU 80	7.57	-30317	2818.56	51348	11814.96	4.192	Si
SLU 82	5.07	-36129	-317.63	61192	9476.72	29.836	Si
SLU 82	7.57	-30379	2732.42	51453	11797.9	4.318	Si
SLU 74	5.07	-35959	-228.76	60905	9566.03	41.816	Si
SLU 74	7.57	-30149	2697.26	51065	11860.36	4.397	Si
SLU 84	5.07	-36887	-402.62	62477	9062.34	22.508	Si
SLU 84	7.57	-31120	2825.85	52709	11579.97	4.098	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 12	5.07	-19630	-4838.47	33247	15064.47	3.113	Si
SLV 12	7.57	-18165	2828.47	30766	14329.34	5.066	Si
SLV 11	5.07	-19630	-4838.47	33247	15064.47	3.113	Si
SLV 11	7.57	-18165	2828.47	30766	14329.34	5.066	Si
SLV 1	5.07	-28552	14414.71	48360	18188.87	1.262	Si
SLV 1	7.57	-18529	-4032.74	31384	14518.12	3.6	Si
SLV 14	5.07	-21250	-14723.33	35991	15804.69	1.073	Si
SLV 14	7.57	-22183	8140.72	37572	16196.22	1.99	Si
SLV 2	5.07	-28552	14414.71	48360	18188.87	1.262	Si
SLV 2	7.57	-18529	-4032.74	31384	14518.12	3.6	Si
SLV 4	5.07	-26625	14270.04	45095	17711.01	1.241	Si
SLV 4	7.57	-17265	-4518.07	29242	13846.58	3.065	Si
SLV 3	5.07	-26625	14270.04	45095	17711.01	1.241	Si
SLV 3	7.57	-17265	-4518.07	29242	13846.58	3.065	Si
SLV 16	5.07	-19322	-14868	32726	14915.43	1.003	Si
SLV 16	7.57	-20919	7655.4	35430	15659.67	2.046	Si
SLV 13	5.07	-21250	-14723.33	35991	15804.69	1.073	Si
SLV 13	7.57	-22183	8140.72	37572	16196.22	1.99	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 15	5.07	-19322	-14868	32726	14915.43	1.003	Si
SLV 15	7.57	-20919	7655.4	35430	15659.67	2.046	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 51	5.07	-28248	-701	-895.89		47845	2.1086	10833	6396			9.12	Si
SLU 51	7.57	-23228	-501	2383.6		39341	2.1086	10801	6377			12.74	Si
SLU 46	5.07	-28033	-636	-812.24		47480	2.1086	10833	6396			10.06	Si
SLU 46	7.57	-22991	-456	2334.42		38940	2.1086	10748	6346			13.91	Si
SLU 5	5.07	-22169	-642	-815.75		37548	2.1086	10562	6236			9.72	Si
SLU 5	7.57	-18325	-437	1900.68		31037	2.1086	9694	5723			13.11	Si
SLU 55	5.07	-31239	-680	-812.47		52910	2.1086	10833	6396			9.4	Si
SLU 55	7.57	-26045	-429	2573.26		44113	2.1086	10833	6396			14.92	Si
SLU 59	5.07	-32124	-623	-734.58		54409	2.1086	10833	6396			10.26	Si
SLU 59	7.57	-26833	-386	2618.61		45447	2.1086	10833	6396			16.57	Si
SLU 68	5.07	-31225	-646	-795.94		52886	2.1086	10833	6396			9.9	Si
SLU 68	7.57	-25924	-414	2538.19		43908	2.1086	10833	6396			15.45	Si
SLU 49	5.07	-28791	-705	-897.22		48764	2.1086	10833	6396			9.08	Si
SLU 49	7.57	-23733	-491	2427.85		40196	2.1086	10833	6396			13.02	Si
SLU 57	5.07	-32667	-627	-735.92		55328	2.1086	10833	6396			10.21	Si
SLU 57	7.57	-27338	-376	2662.87		46302	2.1086	10833	6396			16.99	Si
SLU 44	5.07	-26605	-689	-888.79		45061	2.1086	10833	6396			9.28	Si
SLU 44	7.57	-21698	-509	2244.81		36751	2.1086	10456	6173			12.14	Si
SLU 47	5.07	-27363	-758	-973.78		46346	2.1086	10833	6396			8.44	Si
SLU 47	7.57	-22440	-543	2338.25		38007	2.1086	10623	6272			11.54	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 14	5.07	-21250	-11527	-14723.33		69990	1.0843	16250	4934			0.43	No, Vu<V
SLV 14	7.57	-22183	-6285	8140.72		38421	2.062	16018	9248			1.47	Si
SLV 15	5.07	-19322	-11655	-14868		80756	0.8545	16250	3888			0.33	No, Vu<V
SLV 15	7.57	-20919	-6452	7655.4		36178	2.0651	15569	9002			1.4	Si
SLV 1	5.07	-28552	11244	14414.71		61862	1.6484	16250	7500			0.67	No, Vu<V
SLV 1	7.57	-18529	6176	-4032.74		31384	2.1086	14610	8626			1.4	Si
SLV 12	5.07	-19630	-3835	-4838.47		33247	2.1086	14983	8846			2.31	Si
SLV 12	7.57	-18165	-2286	2828.47		30766	2.1086	14487	8553			3.74	Si
SLV 4	5.07	-26625	11116	14270.04		61149	1.555	16250	7075			0.64	No, Vu<V
SLV 4	7.57	-17265	6009	-4518.07		29242	2.1086	14182	8373			1.39	Si
SLV 16	5.07	-19322	-11655	-14868		80756	0.8545	16250	3888			0.33	No, Vu<V
SLV 16	7.57	-20919	-6452	7655.4		36178	2.0651	15569	9002			1.4	Si
SLV 2	5.07	-28552	11244	14414.71		61862	1.6484	16250	7500			0.67	No, Vu<V
SLV 2	7.57	-18529	6176	-4032.74		31384	2.1086	14610	8626			1.4	Si
SLV 13	5.07	-21250	-11527	-14723.33		69990	1.0843	16250	4934			0.43	No, Vu<V
SLV 13	7.57	-22183	-6285	8140.72		38421	2.062	16018	9248			1.47	Si
SLV 11	5.07	-19630	-3835	-4838.47		33247	2.1086	14983	8846			2.31	Si
SLV 11	7.57	-18165	-2286	2828.47		30766	2.1086	14487	8553			3.74	Si
SLV 3	5.07	-26625	11116	14270.04		61149	1.555	16250	7075			0.64	No, Vu<V
SLV 3	7.57	-17265	6009	-4518.07		29242	2.1086	14182	8373			1.39	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 16	143750	0.39	29916	-17663	225.23	1867.36	8.29	Si
SLV 15	143750	0.39	29916	-17663	225.23	1867.36	8.29	Si
SLV 11	143750	0.39	31185	-18412	225.23	1919.81	8.52	Si
SLV 12	143750	0.39	31185	-18412	225.23	1919.81	8.52	Si
SLV 13	143750	0.39	32540	-19212	225.23	1973.4	8.76	Si
SLV 14	143750	0.39	32540	-19212	225.23	1973.4	8.76	Si
SLV 8	143750	0.39	34897	-20604	225.23	2060.71	9.15	Si
SLV 7	143750	0.39	34897	-20604	225.23	2060.71	9.15	Si
SLV 9	143750	0.39	39933	-23577	225.23	2222.04	9.87	Si
SLV 10	143750	0.39	39933	-23577	225.23	2222.04	9.87	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 11	-17597	-19630	-516	0.017	2087.1	0.958	0.25455	7.63299	No
SLV 12	-17597	-19630	-516	0.017	2087.1	0.958	0.25455	7.63299	No
SLV 7	-16944	-21820	-500	0.017	2020.7	0.957	0.25596	7.63299	No
SLV 8	-16944	-21820	-500	0.017	2020.7	0.957	0.25596	7.63299	No
SLV 6	-18382	-28245	519	0.017	2166.9	0.96	0.26475	7.63299	No
SLV 5	-18382	-28245	519	0.017	2166.9	0.96	0.26475	7.63299	No
SLV 10	-19035	-26054	503	0.019	2233.3	0.961	0.28647	7.63299	No
SLV 9	-19035	-26054	503	0.019	2233.3	0.961	0.28647	7.63299	No
SLV 1	-17117	-28552	182	0.034	2038.3	0.957	0.51315	8.88274	No
SLV 2	-17117	-28552	182	0.034	2038.3	0.957	0.51315	8.88274	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.077	SLU 78	Si
V_SLU	8.437	SLU 47	Si
PF_SLV	1.003	SLV 15	Si
V_SLV	0.334	SLV 15	No
PFFP_SLV	8.291	SLV 15	Si
R_SLV	0.033	SLV 11	No



Maschio 143

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-4.968	1.046	-6.478	1.046	L4	L5	1.51	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 78	5.07	-22852	-706.38	54050	5805.33	8.218	Si
SLU 78	7.17	-23622	1239.37	55871	5602.16	4.52	Si
SLU 79	5.07	-22776	-704.35	53869	5824.04	8.269	Si
SLU 79	7.17	-23115	1228.55	54672	5738.81	4.671	Si
SLU 82	5.07	-22381	-593.99	52936	5916.72	9.961	Si
SLU 82	7.17	-23468	1121.59	55506	5644.94	5.033	Si
SLU 83	5.07	-23142	-669.01	54736	5731.88	8.568	Si
SLU 83	7.17	-23788	1214.32	56264	5554.98	4.575	Si
SLU 84	5.07	-22870	-658.02	54092	5800.94	8.816	Si
SLU 84	7.17	-23933	1201.87	56605	5512.93	4.587	Si
SLU 74	5.07	-22636	-653.34	53538	5857.71	8.966	Si
SLU 74	7.17	-23013	1171.54	54431	5764.99	4.921	Si
SLU 81	5.07	-22654	-604.97	53580	5853.49	9.676	Si
SLU 81	7.17	-23324	1134.04	55165	5684.05	5.012	Si
SLU 77	5.07	-23124	-717.37	54694	5736.48	7.997	Si
SLU 77	7.17	-23478	1251.82	55530	5642.24	4.507	Si
SLU 80	5.07	-22504	-693.37	53225	5888.73	8.493	Si
SLU 80	7.17	-23260	1216.1	55014	5701.02	4.688	Si
SLU 75	5.07	-22364	-642.35	52894	5920.73	9.217	Si
SLU 75	7.17	-23158	1159.09	54772	5727.85	4.942	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 2	5.07	-15676	8048.29	37076	8243.96	1.024	Si
SLV 2	7.17	-15192	-6877.93	35931	8096.9	1.177	Si
SLV 13	5.07	-14838	-8907.23	35095	7985.17	0.896	No, M>Mu
SLV 13	7.17	-15196	8403.91	35941	8098.15	0.964	No, M>Mu
SLV 3	5.07	-15815	8111.85	37406	8285.04	1.021	Si
SLV 3	7.17	-15230	-6972.24	36022	8108.79	1.163	Si
SLV 16	5.07	-14978	-8843.67	35425	8029.66	0.908	No, M>Mu
SLV 16	7.17	-15234	8309.59	36031	8110.03	0.976	No, M>Mu
SLV 14	5.07	-14838	-8907.23	35095	7985.17	0.896	No, M>Mu
SLV 14	7.17	-15196	8403.91	35941	8098.15	0.964	No, M>Mu
SLV 15	5.07	-14978	-8843.67	35425	8029.66	0.908	No, M>Mu
SLV 15	7.17	-15234	8309.59	36031	8110.03	0.976	No, M>Mu
SLV 4	5.07	-15815	8111.85	37406	8285.04	1.021	Si
SLV 4	7.17	-15230	-6972.24	36022	8108.79	1.163	Si
SLV 1	5.07	-15676	8048.29	37076	8243.96	1.024	Si
SLV 1	7.17	-15192	-6877.93	35931	8096.9	1.177	Si
SLV 10	5.07	-14969	-3046.95	35404	8026.84	2.634	Si
SLV 10	7.17	-15150	3165.3	35832	8083.79	2.554	Si
SLV 9	5.07	-14969	-3046.95	35404	8026.84	2.634	Si
SLV 9	7.17	-15150	3165.3	35832	8083.79	2.554	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 83	5.07	-23142	-1142	-669.01		54736	1.51	10833	4580			4.01	Si
SLU 83	7.17	-23788	-1141	1214.32		56264	1.51	10833	4580			4.01	Si
SLU 79	5.07	-22776	-1149	-704.35		53869	1.51	10833	4580			3.99	Si
SLU 79	7.17	-23115	-1149	1228.55		54672	1.51	10833	4580			3.99	Si
SLU 81	5.07	-22654	-1071	-604.97		53580	1.51	10833	4580			4.28	Si
SLU 81	7.17	-23324	-1070	1134.04		55165	1.51	10833	4580			4.28	Si
SLU 78	5.07	-22852	-1025	-706.38		54050	1.51	10833	4580			4.47	Si
SLU 78	7.17	-23622	-1022	1239.37		55871	1.51	10833	4580			4.48	Si
SLU 77	5.07	-23124	-1175	-717.37		54694	1.51	10833	4580			3.9	Si
SLU 77	7.17	-23478	-1175	1251.82		55530	1.51	10833	4580			3.9	Si
SLU 58	5.07	-20605	-1019	-644.08		48734	1.51	10833	4580			4.49	Si
SLU 58	7.17	-20522	-1019	1086.67		48538	1.51	10833	4580			4.5	Si
SLU 69	5.07	-21130	-1027	-650.44		49976	1.51	10833	4580			4.46	Si
SLU 69	7.17	-20824	-1026	1097.71		49252	1.51	10833	4580			4.46	Si
SLU 74	5.07	-22636	-1104	-653.34		53538	1.51	10833	4580			4.15	Si
SLU 74	7.17	-23013	-1104	1171.54		54431	1.51	10833	4580			4.15	Si
SLU 56	5.07	-20953	-1046	-657.1		49558	1.51	10833	4580			4.38	Si
SLU 56	7.17	-20884	-1045	1109.95		49395	1.51	10833	4580			4.38	Si
SLU 35	5.07	-19628	-1042	-629.63		46424	1.51	10833	4580			4.4	Si
SLU 35	7.17	-20253	-1041	1111.09		47902	1.51	10833	4580			4.4	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, γM = 2

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 4	5.07	-15815	8204	8111.85		77773	0.7262	16250	3304			0.4	No, Vu<V
SLV 4	7.17	-15230	7989	-6972.24		61005	0.8916	16250	4057			0.51	No, Vu<V
SLV 3	5.07	-15815	8204	8111.85		77773	0.7262	16250	3304			0.4	No, Vu<V
SLV 3	7.17	-15230	7989	-6972.24		61005	0.8916	16250	4057			0.51	No, Vu<V
SLV 14	5.07	-14838	-9552	-8907.23		114176	0.4641	16250	2112			0.22	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 14	7.17	-15196	-9336	8403.91		89574	0.6059	16250	2757			0.3	No, Vu<V
SLV 2	5.07	-15676	9702	8048.29		77249	0.7247	16250	3298			0.34	No, Vu<V
SLV 2	7.17	-15192	9468	-6877.93		59834	0.9068	16250	4126			0.44	No, Vu<V
SLV 13	5.07	-14838	-9552	-8907.23		114176	0.4641	16250	2112			0.22	No, Vu<V
SLV 13	7.17	-15196	-9336	8403.91		89574	0.6059	16250	2757			0.3	No, Vu<V
SLV 1	5.07	-15676	9702	8048.29		77249	0.7247	16250	3298			0.34	No, Vu<V
SLV 1	7.17	-15192	9468	-6877.93		59834	0.9068	16250	4126			0.44	No, Vu<V
SLV 12	5.07	-15433	-6058	-2835.09		36503	1.51	15634	6610			1.09	Si
SLV 12	7.17	-15277	-5959	2850.91		36134	1.51	15560	6579			1.1	Si
SLV 11	5.07	-15433	-6058	-2835.09		36503	1.51	15634	6610			1.09	Si
SLV 11	7.17	-15277	-5959	2850.91		36134	1.51	15560	6579			1.1	Si
SLV 16	5.07	-14978	-11050	-8843.67		108364	0.4936	16250	2246			0.2	No, Vu<V
SLV 16	7.17	-15234	-10815	8309.59		86551	0.6286	16250	2860			0.26	No, Vu<V
SLV 15	5.07	-14978	-11050	-8843.67		108364	0.4936	16250	2246			0.2	No, Vu<V
SLV 15	7.17	-15234	-10815	8309.59		86551	0.6286	16250	2860			0.26	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 6	143750	0.39	36478	-15423	161.28	1514.59	9.39	Si
SLV 5	143750	0.39	36478	-15423	161.28	1514.59	9.39	Si
SLV 9	143750	0.39	36485	-15426	161.28	1514.76	9.39	Si
SLV 10	143750	0.39	36485	-15426	161.28	1514.76	9.39	Si
SLV 1	143750	0.39	36562	-15458	161.28	1516.6	9.4	Si
SLV 2	143750	0.39	36562	-15458	161.28	1516.6	9.4	Si
SLV 13	143750	0.39	36587	-15469	161.28	1517.19	9.41	Si
SLV 14	143750	0.39	36587	-15469	161.28	1517.19	9.41	Si
SLV 3	143750	0.39	36642	-15492	161.28	1518.49	9.41	Si
SLV 4	143750	0.39	36642	-15492	161.28	1518.49	9.41	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 7	-11442	-15685	-189	0.029	1376.8	0.955	0.43888	7.63299	No
SLV 8	-11442	-15685	-189	0.029	1376.8	0.955	0.43888	7.63299	No
SLV 11	-11755	-15433	-188	0.029	1408.6	0.956	0.44383	7.63299	No
SLV 12	-11755	-15433	-188	0.029	1408.6	0.956	0.44383	7.63299	No
SLV 6	-12355	-15220	188	0.03	1469.6	0.957	0.44919	7.63299	No
SLV 5	-12355	-15220	188	0.03	1469.6	0.957	0.44919	7.63299	No
SLV 9	-12668	-14969	190	0.03	1501.4	0.958	0.45072	7.63299	No
SLV 10	-12668	-14969	190	0.03	1501.4	0.958	0.45072	7.63299	No
SLV 13	-12714	-14838	59	0.039	1506	0.958	0.59179	8.88274	No
SLV 14	-12714	-14838	59	0.039	1506	0.958	0.59179	8.88274	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.507	SLU 77	Si
V_SLU	3.897	SLU 77	Si
PF_SLV	0.896	SLV 13	No
V_SLV	0.203	SLV 15	No
PFFP_SLV	9.391	SLV 5	Si
R_SLV	0.057	SLV 7	No

Maschio 144

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.123	1.046	-4.168	1.046	L4	L5	4.045	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 81	5.07	-52671	2022.6	46504	45710.9	22.6	Si
SLU 81	7.17	-49887	7459.56	44046	46339.41	6.212	Si
SLU 82	5.07	-52838	2031.68	46652	45662.24	22.475	Si
SLU 82	7.17	-49939	7100.93	44092	46330.71	6.525	Si
SLU 41	5.07	-44958	1818.93	39694	46618.69	25.63	Si
SLU 41	7.17	-43465	7010.5	38376	46493.13	6.632	Si
SLU 78	5.07	-53613	1744.37	47337	45421.12	26.039	Si
SLU 78	7.17	-50421	7156.53	44518	46245.1	6.462	Si
SLU 84	5.07	-53767	1953.31	47472	45370.33	23.227	Si
SLU 84	7.17	-50888	7308.66	44930	46152.51	6.315	Si
SLU 74	5.07	-52518	1813.66	46369	45754.33	25.228	Si
SLU 74	7.17	-49420	7307.44	43634	46411.51	6.351	Si
SLU 77	5.07	-53446	1735.28	47189	45475.48	26.206	Si
SLU 77	7.17	-50369	7515.17	44472	46254.91	6.155	Si
SLU 79	5.07	-52777	1675.75	46598	45680.13	27.26	Si
SLU 79	7.17	-49639	7305.28	43827	46378.94	6.349	Si
SLU 83	5.07	-53599	1944.22	47324	45425.82	23.365	Si
SLU 83	7.17	-50835	7667.29	44884	46163.4	6.021	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 80	5.07	-52945	1684.83	46746	45630.68	27.083	Si
SLU 80	7.17	-49691	6946.64	43873	46370.81	6.675	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 16	5.07	-42453	-19462.34	37483	59522.37	3.058	Si
SLV 16	7.17	-45369	12133.79	40058	61677.17	5.083	Si
SLV 7	5.07	-32679	8529.84	28853	50486.62	5.919	Si
SLV 7	7.17	-27189	1075.17	24006	44186.44	41.097	Si
SLV 8	5.07	-32679	8529.84	28853	50486.62	5.919	Si
SLV 8	7.17	-27189	1075.17	24006	44186.44	41.097	Si
SLV 13	5.07	-43382	-20150.55	38303	60235.41	2.989	Si
SLV 13	7.17	-46665	12671.57	41202	62555.16	4.937	Si
SLV 3	5.07	-29083	22367.31	25678	46458.84	2.077	Si
SLV 3	7.17	-19726	-3914.22	17417	34209.47	8.74	Si
SLV 15	5.07	-42453	-19462.34	37483	59522.37	3.058	Si
SLV 15	7.17	-45369	12133.79	40058	61677.17	5.083	Si
SLV 14	5.07	-43382	-20150.55	38303	60235.41	2.989	Si
SLV 14	7.17	-46665	12671.57	41202	62555.16	4.937	Si
SLV 2	5.07	-30011	21679.1	26498	47534.68	2.193	Si
SLV 2	7.17	-21022	-3376.44	18561	36058.83	10.68	Si
SLV 4	5.07	-29083	22367.31	25678	46458.84	2.077	Si
SLV 4	7.17	-19726	-3914.22	17417	34209.47	8.74	Si
SLV 1	5.07	-30011	21679.1	26498	47534.68	2.193	Si
SLV 1	7.17	-21022	-3376.44	18561	36058.83	10.68	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 83	5.07	-53599	-5709	1944.22		47324	4.045	10833	12270			2.15	Si
SLU 83	7.17	-50835	-5718	7667.29		44884	4.045	10833	12270			2.15	Si
SLU 35	5.07	-44804	-5159	1609.99		39559	4.045	10830	12266			2.38	Si
SLU 35	7.17	-42998	-5166	6858.37		37964	4.045	10617	12025			2.33	Si
SLU 74	5.07	-52518	-5278	1813.66		46369	4.045	10833	12270			2.32	Si
SLU 74	7.17	-49420	-5287	7307.44		43634	4.045	10833	12270			2.32	Si
SLU 82	5.07	-52838	-5251	2031.68		46652	4.045	10833	12270			2.34	Si
SLU 82	7.17	-49939	-5293	7100.93		44092	4.045	10833	12270			2.32	Si
SLU 79	5.07	-52777	-5303	1675.75		46598	4.045	10833	12270			2.31	Si
SLU 79	7.17	-49639	-5312	7305.28		43827	4.045	10833	12270			2.31	Si
SLU 39	5.07	-44029	-5277	1897.3		38875	4.045	10739	12163			2.3	Si
SLU 39	7.17	-42516	-5285	6802.76		37538	4.045	10561	11961			2.26	Si
SLU 84	5.07	-53767	-5407	1953.31		47472	4.045	10833	12270			2.27	Si
SLU 84	7.17	-50888	-5449	7308.66		44930	4.045	10833	12270			2.25	Si
SLU 41	5.07	-44958	-5433	1818.93		39694	4.045	10833	12270			2.26	Si
SLU 41	7.17	-43465	-5441	7010.5		38376	4.045	10672	12088			2.22	Si
SLU 77	5.07	-53446	-5434	1735.28		47189	4.045	10833	12270			2.26	Si
SLU 77	7.17	-50369	-5443	7515.17		44472	4.045	10833	12270			2.25	Si
SLU 81	5.07	-52671	-5553	2022.6		46504	4.045	10833	12270			2.21	Si
SLU 81	7.17	-49887	-5562	7459.56		44046	4.045	10833	12270			2.21	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 14	5.07	-43382	-23516	-20150.55		38303	4.045	15994	18115			0.77	No, Vu<V
SLV 14	7.17	-46665	-22731	12671.57		41202	4.045	16250	18405			0.81	No, Vu<V
SLV 2	5.07	-30011	16594	21679.1		27480	3.9004	13829	15103			0.91	No, Vu<V
SLV 2	7.17	-21022	15847	-3376.44		18561	4.045	12046	13643			0.86	No, Vu<V
SLV 3	5.07	-29083	17615	22367.31		27623	3.7602	13858	14590			0.83	No, Vu<V
SLV 3	7.17	-19726	16818	-3914.22		17417	4.045	11817	13384			0.8	No, Vu<V
SLV 15	5.07	-42453	-22495	-19462.34		37483	4.045	15830	17929			0.8	No, Vu<V
SLV 15	7.17	-45369	-21761	12133.79		40058	4.045	16250	18405			0.85	No, Vu<V
SLV 1	5.07	-30011	16594	21679.1		27480	3.9004	13829	15103			0.91	No, Vu<V
SLV 1	7.17	-21022	15847	-3376.44		18561	4.045	12046	13643			0.86	No, Vu<V
SLV 9	5.07	-39785	-10669	-6313.09		35127	4.045	15359	17395			1.63	Si
SLV 9	7.17	-39202	-10361	7682.18		34613	4.045	15256	17279			1.67	Si
SLV 13	5.07	-43382	-23516	-20150.55		38303	4.045	15994	18115			0.77	No, Vu<V
SLV 13	7.17	-46665	-22731	12671.57		41202	4.045	16250	18405			0.81	No, Vu<V
SLV 16	5.07	-42453	-22495	-19462.34		37483	4.045	15830	17929			0.8	No, Vu<V
SLV 16	7.17	-45369	-21761	12133.79		40058	4.045	16250	18405			0.85	No, Vu<V
SLV 4	5.07	-29083	17615	22367.31		27623	3.7602	13858	14590			0.83	No, Vu<V
SLV 4	7.17	-19726	16818	-3914.22		17417	4.045	11817	13384			0.8	No, Vu<V
SLV 10	5.07	-39785	-10669	-6313.09		35127	4.045	15359	17395			1.63	Si
SLV 10	7.17	-39202	-10361	7682.18		34613	4.045	15256	17279			1.67	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 3	143750	0.39	18270	-20693	432.05	2463.85	5.7	Si
SLV 4	143750	0.39	18270	-20693	432.05	2463.85	5.7	Si
SLV 1	143750	0.39	19417	-21992	432.05	2589.57	5.99	Si
SLV 2	143750	0.39	19417	-21992	432.05	2589.57	5.99	Si
SLV 8	143750	0.39	24706	-27982	432.05	3125.35	7.23	Si
SLV 7	143750	0.39	24706	-27982	432.05	3125.35	7.23	Si
SLV 6	143750	0.39	28528	-32310	432.05	3467.34	8.03	Si
SLV 5	143750	0.39	28528	-32310	432.05	3467.34	8.03	Si
SLV 11	143750	0.39	31368	-35528	432.05	3696.97	8.56	Si
SLV 12	143750	0.39	31368	-35528	432.05	3696.97	8.56	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	σ_0	M*	e*	a0*	aLim	Verifica
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Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 7	-25671	-32679	-571	0.025	3182.3	0.949	0.38018	7.63299	No
SLV 8	-25671	-32679	-571	0.025	3182.3	0.949	0.38018	7.63299	No
SLV 10	-31899	-39785	572	0.027	3814.9	0.956	0.41573	7.63299	No
SLV 9	-31899	-39785	572	0.027	3814.9	0.956	0.41573	7.63299	No
SLV 6	-28166	-35774	530	0.027	3435.6	0.952	0.41597	7.63299	No
SLV 5	-28166	-35774	530	0.027	3435.6	0.952	0.41597	7.63299	No
SLV 11	-29404	-36691	-529	0.028	3561.4	0.953	0.4227	7.63299	No
SLV 12	-29404	-36691	-529	0.028	3561.4	0.953	0.4227	7.63299	No
SLV 3	-22189	-29083	-234	0.036	2829.1	0.943	0.55304	8.88274	No
SLV 4	-22189	-29083	-234	0.036	2829.1	0.943	0.55304	8.88274	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.021	SLU 83	Si
V_SLU	2.146	SLU 83	Si
PF_SLV	2.077	SLV 3	Si
V_SLV	0.77	SLV 13	No
PFFP_SLV	5.703	SLV 3	Si
R_SLV	0.05	SLV 7	No

Maschio 145

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.013	-4.784	-11.013	-4.704	L4	L5	0.079	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	$\tau 0$	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLU 54	5.07	-398	-24.38	0	0	0	No, e>l/2
SLU 54	8.62	-255	-11.05	0	0	0	No, e>l/2
SLU 1	5.07	-285	-17.25	0	0	0	No, e>l/2
SLU 1	8.62	-181	-7.81	0	0	0	No, e>l/2
SLU 61	5.07	-401	-24.63	0	0	0	No, e>l/2
SLU 61	8.62	-255	-11.43	0	0	0	No, e>l/2
SLU 59	5.07	-403	-24.75	0	0	0	No, e>l/2
SLU 59	8.62	-260	-11.15	0	0	0	No, e>l/2
SLU 53	5.07	-393	-24.62	0	0	0	No, e>l/2
SLU 53	8.62	-251	-10.95	0	0	0	No, e>l/2
SLU 57	5.07	-404	-24.9	0	0	0	No, e>l/2
SLU 57	8.62	-260	-11.12	0	0	0	No, e>l/2
SLU 56	5.07	-399	-25.14	0	0	0	No, e>l/2
SLU 56	8.62	-256	-11.03	0	0	0	No, e>l/2
SLU 55	5.07	-400	-24.06	0	0	0	No, e>l/2
SLU 55	8.62	-257	-11.14	0	0	0	No, e>l/2
SLU 60	5.07	-396	-24.87	0	0	0	No, e>l/2
SLU 60	8.62	-251	-11.33	0	0	0	No, e>l/2
SLU 58	5.07	-398	-24.99	0	0	0	No, e>l/2
SLU 58	8.62	-256	-11.05	0	0	0	No, e>l/2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLV 10	5.07	-511	-45.85	0	0	0	No, e>l/2
SLV 10	8.62	-195	10.51	0	0	0	No, e>l/2
SLV 4	5.07	-236	-48.01	0	0	0	No, e>l/2
SLV 4	8.62	-203	13.27	0	0	0	No, e>l/2
SLV 2	5.07	-365	-71.94	0	0	0	No, e>l/2
SLV 2	8.62	-209	29.94	0	0	0	No, e>l/2
SLV 1	5.07	-365	-71.94	0	0	0	No, e>l/2
SLV 1	8.62	-209	29.94	0	0	0	No, e>l/2
SLV 7	5.07	-84	8.99	0	0	0	No, e>l/2
SLV 7	8.62	-183	-27.12	0	0	0	No, e>l/2
SLV 5	5.07	-513	-70.78	0	0	0	No, e>l/2
SLV 5	8.62	-206	28.46	0	0	0	No, e>l/2
SLV 6	5.07	-513	-70.78	0	0	0	No, e>l/2
SLV 6	8.62	-206	28.46	0	0	0	No, e>l/2
SLV 9	5.07	-511	-45.85	0	0	0	No, e>l/2
SLV 9	8.62	-195	10.51	0	0	0	No, e>l/2
SLV 3	5.07	-236	-48.01	0	0	0	No, e>l/2
SLV 3	8.62	-203	13.27	0	0	0	No, e>l/2
SLV 8	5.07	-84	8.99	0	0	0	No, e>l/2
SLV 8	8.62	-183	-27.12	0	0	0	No, e>l/2

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	$\sigma 0$	σN	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 1	5.07	-285	-18	-17.25		0	0	5556	0			0	No, Vu<V
SLU 1	8.62	-181	-1	-7.81		0	0	5556	0			0	No, Vu<V
SLU 57	5.07	-404	-27	-24.9		0	0	5556	0			0	No, Vu<V
SLU 57	8.62	-260	-1	-11.12		0	0	5556	0			0	No, Vu<V
SLU 56	5.07	-399	-28	-25.14		0	0	5556	0			0	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 56	8.62	-256	-1	-11.03		0	0	5556	0			0	No, Vu<V
SLU 55	5.07	-400	-25	-24.06		0	0	5556	0			0	No, Vu<V
SLU 55	8.62	-257	0	-11.14		0	0	5556	0			0	No, Vu<V
SLU 53	5.07	-393	-27	-24.62		0	0	5556	0			0	No, Vu<V
SLU 53	8.62	-251	0	-10.95		0	0	5556	0			0	No, Vu<V
SLU 59	5.07	-403	-27	-24.75		0	0	5556	0			0	No, Vu<V
SLU 59	8.62	-260	-1	-11.15		0	0	5556	0			0	No, Vu<V
SLU 54	5.07	-398	-26	-24.38		0	0	5556	0			0	No, Vu<V
SLU 54	8.62	-255	0	-11.05		0	0	5556	0			0	No, Vu<V
SLU 60	5.07	-396	-28	-24.87		0	0	5556	0			0	No, Vu<V
SLU 60	8.62	-251	1	-11.33		0	0	5556	0			0	No, Vu<V
SLU 61	5.07	-401	-26	-24.63		0	0	5556	0			0	No, Vu<V
SLU 61	8.62	-255	0	-11.43		0	0	5556	0			0	No, Vu<V
SLU 58	5.07	-398	-28	-24.99		0	0	5556	0			0	No, Vu<V
SLU 58	8.62	-256	-1	-11.05		0	0	5556	0			0	No, Vu<V

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 2	5.07	-365	-155	-71.94		0	0	8333	0			0	No, Vu<V
SLV 2	8.62	-209	-99	29.94		0	0	8333	0			0	No, Vu<V
SLV 4	5.07	-236	-101	-48.01		0	0	8333	0			0	No, Vu<V
SLV 4	8.62	-203	-58	13.27		0	0	8333	0			0	No, Vu<V
SLV 10	5.07	-511	-79	-45.85		0	0	8333	0			0	No, Vu<V
SLV 10	8.62	-195	-45	10.51		0	0	8333	0			0	No, Vu<V
SLV 1	5.07	-365	-155	-71.94		0	0	8333	0			0	No, Vu<V
SLV 1	8.62	-209	-99	29.94		0	0	8333	0			0	No, Vu<V
SLV 8	5.07	-84	39	8.99		0	0	8333	0			0	No, Vu<V
SLV 8	8.62	-183	45	-27.12		0	0	8333	0			0	No, Vu<V
SLV 6	5.07	-513	-144	-70.78		0	0	8333	0			0	No, Vu<V
SLV 6	8.62	-206	-92	28.46		0	0	8333	0			0	No, Vu<V
SLV 5	5.07	-513	-144	-70.78		0	0	8333	0			0	No, Vu<V
SLV 5	8.62	-206	-92	28.46		0	0	8333	0			0	No, Vu<V
SLV 9	5.07	-511	-79	-45.85		0	0	8333	0			0	No, Vu<V
SLV 9	8.62	-195	-45	10.51		0	0	8333	0			0	No, Vu<V
SLV 3	5.07	-236	-101	-48.01		0	0	8333	0			0	No, Vu<V
SLV 3	8.62	-203	-58	13.27		0	0	8333	0			0	No, Vu<V
SLV 7	5.07	-84	39	8.99		0	0	8333	0			0	No, Vu<V
SLV 7	8.62	-183	45	-27.12		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 12	143750	0.39	0	-55	8.47	0	0	No, $e > t/2$
SLV 8	143750	0.39	0	-22	8.47	0	0	No, $e > t/2$
SLV 7	143750	0.39	0	-22	8.47	0	0	No, $e > t/2$
SLV 11	143750	0.39	0	-55	8.47	0	0	No, $e > t/2$
SLV 4	143750	0.39	8430	-187	8.47	24.41	2.88	Si
SLV 3	143750	0.39	8430	-187	8.47	24.41	2.88	Si
SLV 16	143750	0.39	13347	-297	8.47	36.98	4.36	Si
SLV 15	143750	0.39	13347	-297	8.47	36.98	4.36	Si
SLV 1	143750	0.39	16286	-362	8.47	43.9	5.18	Si
SLV 2	143750	0.39	16286	-362	8.47	43.9	5.18	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzaeria = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 10	-195	-511	7	0.025	31.3	0.911	0.40483	7.63299	No
SLV 9	-195	-511	7	0.025	31.3	0.911	0.40483	7.63299	No
SLV 8	-183	-84	-6	0.026	30.1	0.908	0.41152	7.63299	No
SLV 7	-183	-84	-6	0.026	30.1	0.908	0.41152	7.63299	No
SLV 13	-176	-359	4	0.034	29.4	0.907	0.53874	8.88274	No
SLV 14	-176	-359	4	0.034	29.4	0.907	0.53874	8.88274	No
SLV 4	-203	-236	-4	0.035	32	0.912	0.56018	8.88274	No
SLV 3	-203	-236	-4	0.035	32	0.912	0.56018	8.88274	No
SLV 5	-206	-513	5	0.031	32.3	0.913	0.4948	7.63299	No
SLV 6	-206	-513	5	0.031	32.3	0.913	0.4948	7.63299	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0	SLU 1	No
V_SLU	0	SLU 1	No
PF_SLV	0	SLV 1	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 7	No
R_SLV	0.053	SLV 9	No

Maschio 146

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.013	-4.704	-11.013	-3.314	L4	Z medio 633 cm	1.391	0.28	1.26	1.26	1.26			



Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 77	5.07	-11739	-65.87	30148	5141.57	78.054	Si
SLU 77	6.33	-12124	594.97	31135	5207.78	8.753	Si
SLU 84	5.07	-11811	-129.17	30333	5154.47	39.904	Si
SLU 84	6.33	-12279	599.56	31535	5232.76	8.728	Si
SLU 79	5.07	-11691	-67.12	30025	5132.87	76.47	Si
SLU 79	6.33	-12067	587.89	30990	5198.45	8.843	Si
SLU 78	5.07	-11815	-81.23	30343	5155.19	63.467	Si
SLU 78	6.33	-12230	587.7	31408	5224.94	8.891	Si
SLU 81	5.07	-11545	-119.4	29650	5105.73	42.76	Si
SLU 81	6.33	-11963	593.01	30722	5180.86	8.737	Si
SLU 83	5.07	-11735	-113.82	30138	5140.84	45.167	Si
SLU 83	6.33	-12173	606.83	31262	5215.83	8.595	Si
SLU 82	5.07	-11621	-134.76	29846	5120	37.994	Si
SLU 82	6.33	-12069	585.74	30995	5198.77	8.876	Si
SLU 75	5.07	-11625	-86.81	29856	5120.75	58.985	Si
SLU 75	6.33	-12020	573.87	30868	5190.5	9.045	Si
SLU 74	5.07	-11549	-71.46	29661	5106.49	71.46	Si
SLU 74	6.33	-11913	581.15	30595	5172.35	8.9	Si
SLU 80	5.07	-11767	-82.48	30220	5146.65	62.401	Si
SLU 80	6.33	-12173	580.61	31263	5215.87	8.983	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 2	5.07	-5404	-2120.46	13878	3330.73	1.571	Si
SLV 2	6.33	-7056	214.24	18122	4178.83	19.505	Si
SLV 4	5.07	-2476	-1660.05	6358	1631.84	0.983	No, M>Mu
SLV 4	6.33	-3862	154.56	9918	2467.34	15.964	Si
SLV 11	5.07	-4766	1341.26	12239	2981.72	2.223	Si
SLV 11	6.33	-4033	343.58	10356	2566.31	7.469	Si
SLV 12	5.07	-4766	1341.26	12239	2981.72	2.223	Si
SLV 12	6.33	-4033	343.58	10356	2566.31	7.469	Si
SLV 16	5.07	-11254	2130.98	28903	5974.4	2.804	Si
SLV 16	6.33	-9858	552.48	25317	5434.39	9.836	Si
SLV 3	5.07	-2476	-1660.05	6358	1631.84	0.983	No, M>Mu
SLV 3	6.33	-3862	154.56	9918	2467.34	15.964	Si
SLV 13	5.07	-14183	1670.57	36423	6921.92	4.143	Si
SLV 13	6.33	-13053	612.16	33521	6585.99	10.759	Si
SLV 15	5.07	-11254	2130.98	28903	5974.4	2.804	Si
SLV 15	6.33	-9858	552.48	25317	5434.39	9.836	Si
SLV 1	5.07	-5404	-2120.46	13878	3330.73	1.571	Si
SLV 1	6.33	-7056	214.24	18122	4178.83	19.505	Si
SLV 14	5.07	-14183	1670.57	36423	6921.92	4.143	Si
SLV 14	6.33	-13053	612.16	33521	6585.99	10.759	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 81	5.07	-11545	-1952	-119.4		29650	1.3907	9509	3703			1.9	Si
SLU 81	6.33	-11963	-971	593.01		30722	1.3907	9652	3758			3.87	Si
SLU 83	5.07	-11735	-1989	-113.82		30138	1.3907	9574	3728			1.87	Si
SLU 83	6.33	-12173	-994	606.83		31262	1.3907	9724	3786			3.81	Si
SLU 74	5.07	-11549	-1900	-71.46		29661	1.3907	9510	3703			1.95	Si
SLU 74	6.33	-11913	-953	581.15		30595	1.3907	9635	3752			3.94	Si
SLU 82	5.07	-11621	-1913	-134.76		29846	1.3907	9535	3713			1.94	Si
SLU 82	6.33	-12069	-980	585.74		30995	1.3907	9688	3772			3.85	Si
SLU 84	5.07	-11811	-1951	-129.17		30333	1.3907	9600	3738			1.92	Si
SLU 84	6.33	-12279	-1004	599.56		31535	1.3907	9760	3800			3.79	Si
SLU 79	5.07	-11691	-1920	-67.12		30025	1.3907	9559	3722			1.94	Si
SLU 79	6.33	-12067	-967	587.89		30990	1.3907	9688	3772			3.9	Si
SLU 77	5.07	-11739	-1937	-65.87		30148	1.3907	9575	3728			1.92	Si
SLU 77	6.33	-12124	-977	594.97		31135	1.3907	9707	3780			3.87	Si
SLU 78	5.07	-11815	-1899	-81.23		30343	1.3907	9601	3739			1.97	Si
SLU 78	6.33	-12230	-986	587.7		31408	1.3907	9743	3794			3.85	Si
SLU 80	5.07	-11767	-1882	-82.48		30220	1.3907	9585	3732			1.98	Si
SLU 80	6.33	-12173	-976	580.61		31263	1.3907	9724	3786			3.88	Si
SLU 41	5.07	-9495	-1726	-160.89		24384	1.3907	8807	3429			1.99	Si
SLU 41	6.33	-9981	-855	519.1		25632	1.3907	8973	3494			4.09	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 4	5.07	-2476	-3381	-1660.05		118899	0.0744	16250	338			0.1	No, Vu<V
SLV 4	6.33	-3862	-1838	154.56		9918	1.3907	10317	4017			2.19	Si
SLV 11	5.07	-4766	3378	1341.26		13708	1.2416	11075	3850			1.14	Si
SLV 11	6.33	-4033	3510	343.58		10356	1.3907	10405	4051			1.15	Si
SLV 5	5.07	-11893	-5883	-1330.74		30543	1.3907	14442	5623			0.96	No, Vu<V
SLV 5	6.33	-12882	-4768	423.14		33083	1.3907	14950	5821			1.22	Si
SLV 10	5.07	-14526	-3947	-193.43		37306	1.3907	15795	6150			1.56	Si
SLV 10	6.33	-14681	-3419	542.52		37703	1.3907	15874	6181			1.81	Si
SLV 1	5.07	-5404	-5578	-2120.46		21236	0.9088	12581	3201			0.57	No, Vu<V
SLV 1	6.33	-7056	-3917	214.24		18122	1.3907	11958	4656			1.19	Si
SLV 6	5.07	-11893	-5883	-1330.74		30543	1.3907	14442	5623			0.96	No, Vu<V
SLV 6	6.33	-12882	-4768	423.14		33083	1.3907	14950	5821			1.22	Si
SLV 9	5.07	-14526	-3947	-193.43		37306	1.3907	15795	6150			1.56	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 9	6.33	-14681	-3419	542.52		37703	1.3907	15874	6181			1.81	Si
SLV 2	5.07	-5404	-5578	-2120.46		21236	0.9088	12581	3201			0.57	No, Vu<V
SLV 2	6.33	-7056	-3917	214.24		18122	1.3907	11958	4656			1.19	Si
SLV 3	5.07	-2476	-3381	-1660.05		118899	0.0744	16250	338			0.1	No, Vu<V
SLV 3	6.33	-3862	-1838	154.56		9918	1.3907	10317	4017			2.19	Si
SLV 12	5.07	-4766	3378	1341.26		13708	1.2416	11075	3850			1.14	Si
SLV 12	6.33	-4033	3510	343.58		10356	1.3907	10405	4051			1.15	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 5.7 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 7	143750	0.36	4432	-1726	17.55	232.83	13.26	Si
SLV 8	143750	0.36	4432	-1726	17.55	232.83	13.26	Si
SLV 3	143750	0.36	8280	-3224	17.55	420.78	23.97	Si
SLV 4	143750	0.36	8280	-3224	17.55	420.78	23.97	Si
SLV 11	143750	0.36	11136	-4336	17.55	551.73	31.43	Si
SLV 12	143750	0.36	11136	-4336	17.55	551.73	31.43	Si
SLV 1	143750	0.36	18282	-7119	17.55	847.51	48.28	Si
SLV 2	143750	0.36	18282	-7119	17.55	847.51	48.28	Si
SLV 16	143750	0.36	30627	-11925	17.55	1251.09	71.27	Si
SLV 15	143750	0.36	30627	-11925	17.55	1251.09	71.27	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 5.7 Wa = 0.05 Ta = 0.0095

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 13	-13053	-14183	-27	0.113	1398.4	0.984	1.66498	3.53138	No
SLV 14	-13053	-14183	-27	0.113	1398.4	0.984	1.66498	3.53138	No
SLV 10	-14681	-14526	-31	0.112	1564.4	0.986	1.65596	3.47579	No
SLV 9	-14681	-14526	-31	0.112	1564.4	0.986	1.65596	3.47579	No
SLV 16	-9858	-11254	-22	0.114	1072.9	0.98	1.68715	3.53138	No
SLV 15	-9858	-11254	-22	0.114	1072.9	0.98	1.68715	3.53138	No
SLV 6	-12882	-11893	-29	0.113	1381	0.984	1.66312	3.47579	No
SLV 5	-12882	-11893	-29	0.113	1381	0.984	1.66312	3.47579	No
SLV 1	-7056	-5404	-22	0.115	787.5	0.973	1.71441	3.53138	No
SLV 2	-7056	-5404	-22	0.115	787.5	0.973	1.71441	3.53138	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	8.595	SLV 83	Si
V_SLV	1.874	SLV 83	Si
PF_SLV	0.983	SLV 3	No
V_SLV	0.1	SLV 3	No
PFFP_SLV	13.264	SLV 7	Si
R_SLV	0.471	SLV 13	No

Maschio 147

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-11.013	-4.704	-11.013	-3.314	Z medio 633 cm	L5	1.391	0.28	2.29	2.29	2.29			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 83	6.33	-11718	360.38	30095	5137.81	14.257	Si
SLV 83	8.62	-11874	1058.03	30496	5165.61	4.882	Si
SLV 40	6.33	-9479	275.87	24344	4621.36	16.752	Si
SLV 40	8.62	-9806	983.35	25184	4710.52	4.79	Si
SLV 84	6.33	-11823	352.68	30364	5156.6	14.621	Si
SLV 84	8.62	-12033	1084.32	30902	5192.75	4.789	Si
SLV 39	6.33	-9374	283.57	24075	4591.8	16.193	Si
SLV 39	8.62	-9648	957.06	24777	4667.92	4.877	Si
SLV 41	6.33	-9581	294.85	24605	4649.56	15.769	Si
SLV 41	8.62	-9899	981.3	25423	4735.01	4.825	Si
SLV 36	6.33	-9675	301.38	24847	4675.31	15.513	Si
SLV 36	8.62	-10006	963.97	25697	4762.64	4.941	Si
SLV 81	6.33	-11512	349.09	29564	5099.39	14.608	Si
SLV 81	8.62	-11623	1033.79	29850	5120.3	4.953	Si
SLV 82	6.33	-11617	341.4	29834	5119.13	14.995	Si
SLV 82	8.62	-11781	1060.07	30257	5149.18	4.857	Si
SLV 78	6.33	-11813	366.91	30337	5154.72	14.049	Si
SLV 78	8.62	-11981	1040.7	30770	5184	4.981	Si
SLV 42	6.33	-9686	287.15	24874	4678.18	16.292	Si
SLV 42	8.62	-10058	1007.59	25830	4775.86	4.74	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 5	6.33	-12438	-123.16	31942	6387.43	51.865	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 5	8.62	-11483	1586.35	29490	6057.35	3.818	Si
SLV 1	6.33	-6915	-206.16	17759	4109.36	19.933	Si
SLV 1	8.62	-10579	2411.11	27169	5720.28	2.372	Si
SLV 16	6.33	-9486	720.55	24361	5280.76	7.329	Si
SLV 16	8.62	-5508	-1234.29	14146	3386.55	2.744	Si
SLV 15	6.33	-9486	720.55	24361	5280.76	7.329	Si
SLV 15	8.62	-5508	-1234.29	14146	3386.55	2.744	Si
SLV 6	6.33	-12438	-123.16	31942	6387.43	51.865	Si
SLV 6	8.62	-11483	1586.35	29490	6057.35	3.818	Si
SLV 2	6.33	-6915	-206.16	17759	4109.36	19.933	Si
SLV 2	8.62	-10579	2411.11	27169	5720.28	2.372	Si
SLV 3	6.33	-3867	-47.03	9931	2470.3	52.53	Si
SLV 3	8.62	-8813	2113.66	22633	4992.75	2.362	Si
SLV 8	6.33	-2278	407.28	5849	1507.9	3.702	Si
SLV 8	8.62	-5596	594.86	14370	3433.2	5.771	Si
SLV 4	6.33	-3867	-47.03	9931	2470.3	52.53	Si
SLV 4	8.62	-8813	2113.66	22633	4992.75	2.362	Si
SLV 7	6.33	-2278	407.28	5849	1507.9	3.702	Si
SLV 7	8.62	-5596	594.86	14370	3433.2	5.771	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 76	6.33	-11620	-903	344.55		29843	1.3907	9535	3713			4.11	Si
SLU 76	8.62	-11764	-431	1015.13		30211	1.3907	9584	3732			8.66	Si
SLU 78	6.33	-11813	-927	366.91		30337	1.3907	9600	3738			4.03	Si
SLU 78	8.62	-11981	-429	1040.7		30770	1.3907	9658	3761			8.77	Si
SLU 80	6.33	-11757	-918	360.97		30194	1.3907	9581	3731			4.07	Si
SLU 80	8.62	-11910	-422	1021.85		30586	1.3907	9634	3751			8.88	Si
SLU 75	6.33	-11606	-905	355.62		29806	1.3907	9530	3711			4.1	Si
SLU 75	8.62	-11730	-415	1016.45		30124	1.3907	9572	3727			8.98	Si
SLU 79	6.33	-11652	-905	368.67		29925	1.3907	9545	3717			4.1	Si
SLU 79	8.62	-11751	-389	995.56		30179	1.3907	9579	3730			9.59	Si
SLU 84	6.33	-11823	-944	352.68		30364	1.3907	9604	3740			3.96	Si
SLU 84	8.62	-12033	-431	1084.32		30902	1.3907	9676	3768			8.75	Si
SLU 77	6.33	-11708	-915	374.6		30067	1.3907	9565	3724			4.07	Si
SLU 77	8.62	-11823	-395	1014.41		30363	1.3907	9604	3740			9.46	Si
SLU 81	6.33	-11512	-909	349.09		29564	1.3907	9497	3698			4.07	Si
SLU 81	8.62	-11623	-383	1033.79		29850	1.3907	9536	3713			9.68	Si
SLU 83	6.33	-11718	-932	360.38		30095	1.3907	9568	3726			4	Si
SLU 83	8.62	-11874	-397	1058.03		30496	1.3907	9622	3747			9.43	Si
SLU 82	6.33	-11617	-921	341.4		29834	1.3907	9533	3712			4.03	Si
SLU 82	8.62	-11781	-417	1060.07		30257	1.3907	9590	3734			8.95	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 6	6.33	-12438	-4694	-123.16		31942	1.3907	14722	5732			1.22	Si
SLV 6	8.62	-11483	-4565	1586.35		29490	1.3907	14231	5541			1.21	Si
SLV 16	6.33	-9486	2843	720.55		24361	1.3907	13206	5142			1.81	Si
SLV 16	8.62	-5508	3677	-1234.29		14146	1.3907	11162	4346			1.18	Si
SLV 15	6.33	-9486	2843	720.55		24361	1.3907	13206	5142			1.81	Si
SLV 15	8.62	-5508	3677	-1234.29		14146	1.3907	11162	4346			1.18	Si
SLV 2	6.33	-6915	-4020	-206.16		17759	1.3907	11885	4628			1.15	Si
SLV 2	8.62	-10579	-4161	2411.11		27169	1.3907	13767	5361			1.29	Si
SLV 11	6.33	-3963	3518	637.55		10178	1.3907	10369	4038			1.15	Si
SLV 11	8.62	-4604	4081	-409.53		11824	1.3907	10698	4166			1.02	Si
SLV 8	6.33	-2278	2067	407.28		5849	1.3907	9503	3700			1.79	Si
SLV 8	8.62	-5596	2352	594.86		14370	1.3907	11207	4364			1.86	Si
SLV 7	6.33	-2278	2067	407.28		5849	1.3907	9503	3700			1.79	Si
SLV 7	8.62	-5596	2352	594.86		14370	1.3907	11207	4364			1.86	Si
SLV 12	6.33	-3963	3518	637.55		10178	1.3907	10369	4038			1.15	Si
SLV 12	8.62	-4604	4081	-409.53		11824	1.3907	10698	4166			1.02	Si
SLV 5	6.33	-12438	-4694	-123.16		31942	1.3907	14722	5732			1.22	Si
SLV 5	8.62	-11483	-4565	1586.35		29490	1.3907	14231	5541			1.21	Si
SLV 1	6.33	-6915	-4020	-206.16		17759	1.3907	11885	4628			1.15	Si
SLV 1	8.62	-10579	-4161	2411.11		27169	1.3907	13767	5361			1.29	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.475 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 8	143750	0.4	7704	-3000	63.92	393.49	6.16	Si
SLV 7	143750	0.4	7704	-3000	63.92	393.49	6.16	Si
SLV 12	143750	0.4	8997	-3503	63.92	454.35	7.11	Si
SLV 11	143750	0.4	8997	-3503	63.92	454.35	7.11	Si
SLV 3	143750	0.4	12556	-4889	63.92	614.15	9.61	Si
SLV 4	143750	0.4	12556	-4889	63.92	614.15	9.61	Si
SLV 16	143750	0.4	16866	-6567	63.92	792.53	12.4	Si
SLV 15	143750	0.4	16866	-6567	63.92	792.53	12.4	Si
SLV 2	143750	0.4	18008	-7012	63.92	837.01	13.1	Si
SLV 1	143750	0.4	18008	-7012	63.92	837.01	13.1	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 7.475 Wa = 0.05 Ta = 0.0313

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	α_{lim}	Verifica
SLV 7	-5596	-2278	-342	0.015	695.9	0.948	0.23547	4.70148	No
SLV 8	-5596	-2278	-342	0.015	695.9	0.948	0.23547	4.70148	No
SLV 13	-7274	-12534	388	0.019	866.4	0.957	0.29151	4.97723	No
SLV 14	-7274	-12534	388	0.019	866.4	0.957	0.29151	4.97723	No
SLV 4	-8813	-3867	-378	0.027	1022.9	0.963	0.40654	4.97723	No
SLV 3	-8813	-3867	-378	0.027	1022.9	0.963	0.40654	4.97723	No



Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 15	-5508	-9486	235	0.032	687	0.947	0.48641	4.97723	No
SLV 16	-5508	-9486	235	0.032	687	0.947	0.48641	4.97723	No
SLV 9	-10491	-14123	352	0.034	1193.7	0.968	0.51518	4.70148	No
SLV 10	-10491	-14123	352	0.034	1193.7	0.968	0.51518	4.70148	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.74	SLU 42	Si
V_SLU	3.961	SLU 84	Si
PF_SLV	2.362	SLV 3	Si
V_SLV	1.021	SLV 11	Si
PFFP_SLV	6.156	SLV 7	Si
R_SLV	0.05	SLV 7	No

Maschio 148

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.013	-3.314	-11.013	-0.354	L4	Z medio 741 cm	2.96	0.28	2.342	1.135	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLU 82	5.07	-31537	758.8	38051	24871.6	32.778	Si
SLU 82	6.2	-32387	3393.88	39077	24938.51	7.348	Si
SLU 78	5.07	-31931	853.69	38526	24906.54	29.175	Si
SLU 78	6.2	-32936	3580.88	39740	24964.87	6.972	Si
SLU 77	5.07	-31863	908.82	38444	24901	27.399	Si
SLU 77	6.2	-32909	3612.32	39707	24963.86	6.911	Si
SLU 81	5.07	-31469	813.92	37969	24864.89	30.549	Si
SLU 81	6.2	-32360	3425.32	39044	24936.84	7.28	Si
SLU 80	5.07	-31653	802.41	38192	24882.64	31.01	Si
SLU 80	6.2	-32619	3490.74	39357	24951.24	7.148	Si
SLU 79	5.07	-31585	857.53	38110	24876.28	29.009	Si
SLU 79	6.2	-32591	3522.19	39323	24949.85	7.084	Si
SLU 75	5.07	-31319	800.77	37789	24849.41	31.032	Si
SLU 75	6.2	-32241	3456.81	38901	24929.26	7.212	Si
SLU 74	5.07	-31251	855.9	37707	24842.05	29.024	Si
SLU 74	6.2	-32213	3488.26	38867	24927.41	7.146	Si
SLU 83	5.07	-32080	866.84	38707	24918.02	28.746	Si
SLU 83	6.2	-33055	3549.39	39883	24968.83	7.035	Si
SLU 84	5.07	-32148	811.72	38789	24922.9	30.704	Si
SLU 84	6.2	-33083	3517.94	39916	24969.66	7.098	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma M = 2$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLV 8	5.07	-15553	5249.77	18765	19482.91	3.711	Si
SLV 8	6.2	-15558	4789.87	18771	19487.96	4.069	Si
SLV 11	5.07	-18827	4339.68	22715	22683.28	5.227	Si
SLV 11	6.2	-19660	4616.58	23721	23447.68	5.079	Si
SLV 3	5.07	-14800	3256.12	17857	18702.31	5.744	Si
SLV 3	6.2	-13932	3259.61	16810	17782.59	5.455	Si
SLV 12	5.07	-18827	4339.68	22715	22683.28	5.227	Si
SLV 12	6.2	-19660	4616.58	23721	23447.68	5.079	Si
SLV 9	5.07	-27587	-4390.07	33286	29706.67	6.767	Si
SLV 9	6.2	-28688	-333.23	34614	30430.53	91.321	Si
SLV 4	5.07	-14800	3256.12	17857	18702.31	5.744	Si
SLV 4	6.2	-13932	3259.61	16810	17782.59	5.455	Si
SLV 7	5.07	-15553	5249.77	18765	19482.91	3.711	Si
SLV 7	6.2	-15558	4789.87	18771	19487.96	4.069	Si
SLV 5	5.07	-24314	-3479.99	29336	27344.63	7.858	Si
SLV 5	6.2	-24586	-159.93	29665	27553.31	172.279	Si
SLV 6	5.07	-24314	-3479.99	29336	27344.63	7.858	Si
SLV 6	6.2	-24586	-159.93	29665	27553.31	172.279	Si
SLV 10	5.07	-27587	-4390.07	33286	29706.67	6.767	Si
SLV 10	6.2	-28688	-333.23	34614	30430.53	91.321	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	V par	M	$\sigma 0$	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 74	5.07	-31251	1039	855.9		37707	2.96	10583	8771			8.44	Si
SLU 74	6.2	-32213	21	3488.26		38867	2.96	10738	8900			425.31	Si
SLU 41	5.07	-26879	1033	902.77		32431	2.96	9880	8188			7.92	Si
SLU 41	6.2	-27759	29	3144.23		33493	2.96	10021	8306			284.35	Si
SLU 81	5.07	-31469	1116	813.92		37969	2.96	10618	8800			7.89	Si
SLU 81	6.2	-32360	19	3425.32		39044	2.96	10761	8919			458.11	Si
SLU 83	5.07	-32080	1118	866.84		38707	2.96	10716	8882			7.94	Si
SLU 83	6.2	-33055	8	3549.39		39883	2.96	10833	8979			1000	Si
SLU 32	5.07	-26050	954	891.82		31431	2.96	9746	8078			8.47	Si
SLU 32	6.2	-26917	42	3083.1		32477	2.96	9886	8193			193.85	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 39	5.07	-26267	1031	849.85		31693	2.96	9781	8107			7.87	Si
SLU 39	6.2	-27064	41	3020.16		32654	2.96	9909	8213			201.24	Si
SLU 82	5.07	-31537	1089	758.8		38051	2.96	10629	8809			8.09	Si
SLU 82	6.2	-32387	47	3393.88		39077	2.96	10766	8923			191.58	Si
SLU 84	5.07	-32148	1092	811.72		38789	2.96	10727	8891			8.14	Si
SLU 84	6.2	-33083	35	3517.94		39916	2.96	10833	8979			256.73	Si
SLU 40	5.07	-26335	1004	794.72		31775	2.96	9792	8116			8.08	Si
SLU 40	6.2	-27091	68	2988.72		32687	2.96	9914	8217			120.98	Si
SLU 42	5.07	-26947	1007	847.64		32513	2.96	9891	8197			8.14	Si
SLU 42	6.2	-27787	56	3112.78		33527	2.96	10026	8309			147.55	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 11	5.07	-18827	11827	4339.68		22715	2.96	12876	10672			0.9	No, Vu<V
SLV 11	6.2	-19660	11693	4616.58		23721	2.96	13077	10839			0.93	No, Vu<V
SLV 12	5.07	-18827	11827	4339.68		22715	2.96	12876	10672			0.9	No, Vu<V
SLV 12	6.2	-19660	11693	4616.58		23721	2.96	13077	10839			0.93	No, Vu<V
SLV 7	5.07	-15553	16705	5249.77		18765	2.96	12086	10017			0.6	No, Vu<V
SLV 7	6.2	-15558	11441	4789.87		18771	2.96	12088	10018			0.88	No, Vu<V
SLV 10	5.07	-27587	-15405	-4390.07		33286	2.96	14991	12424			0.81	No, Vu<V
SLV 10	6.2	-28688	-11392	-333.23		34614	2.96	15256	12644			1.11	Si
SLV 8	5.07	-15553	16705	5249.77		18765	2.96	12086	10017			0.6	No, Vu<V
SLV 8	6.2	-15558	11441	4789.87		18771	2.96	12088	10018			0.88	No, Vu<V
SLV 9	5.07	-27587	-15405	-4390.07		33286	2.96	14991	12424			0.81	No, Vu<V
SLV 9	6.2	-28688	-11392	-333.23		34614	2.96	15256	12644			1.11	Si
SLV 3	5.07	-14800	12865	3256.12		17857	2.96	11905	9867			0.77	No, Vu<V
SLV 3	6.2	-13932	3068	3259.61		16810	2.96	11695	9693			3.16	Si
SLV 6	5.07	-24314	-10527	-3479.99		29336	2.96	14201	11769			1.12	Si
SLV 6	6.2	-24586	-11644	-159.93		29665	2.96	14266	11824			1.02	Si
SLV 5	5.07	-24314	-10527	-3479.99		29336	2.96	14201	11769			1.12	Si
SLV 5	6.2	-24586	-11644	-159.93		29665	2.96	14266	11824			1.02	Si
SLV 4	5.07	-14800	12865	3256.12		17857	2.96	11905	9867			0.77	No, Vu<V
SLV 4	6.2	-13932	3068	3259.61		16810	2.96	11695	9693			3.16	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 5.637 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 3	143750	0.36	18051	-14960	128.76	1785.04	13.86	Si
SLV 4	143750	0.36	18051	-14960	128.76	1785.04	13.86	Si
SLV 7	143750	0.36	19030	-15772	128.76	1864.22	14.48	Si
SLV 8	143750	0.36	19030	-15772	128.76	1864.22	14.48	Si
SLV 2	143750	0.36	21143	-17523	128.76	2028.75	15.76	Si
SLV 1	143750	0.36	21143	-17523	128.76	2028.75	15.76	Si
SLV 12	143750	0.36	22962	-19031	128.76	2163.66	16.8	Si
SLV 11	143750	0.36	22962	-19031	128.76	2163.66	16.8	Si
SLV 6	143750	0.36	29338	-24315	128.76	2586.78	20.09	Si
SLV 5	143750	0.36	29338	-24315	128.76	2586.78	20.09	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 5.637 Wa = 0.05 Ta = 0.0327

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 2	-16641	-17428	-483	0.039	1967.9	0.959	0.59388	4.70202	No
SLV 1	-16641	-17428	-483	0.039	1967.9	0.959	0.59388	4.70202	No
SLV 4	-13932	-14800	-364	0.043	1692.6	0.953	0.65926	4.70202	No
SLV 3	-13932	-14800	-364	0.043	1692.6	0.953	0.65926	4.70202	No
SLV 6	-24586	-24314	-384	0.049	2776.5	0.97	0.73621	4.42857	No
SLV 5	-24586	-24314	-384	0.049	2776.5	0.97	0.73621	4.42857	No
SLV 15	-27605	-25712	315	0.053	3083.9	0.973	0.78577	4.70202	No
SLV 16	-27605	-25712	315	0.053	3083.9	0.973	0.78577	4.70202	No
SLV 13	-30314	-28341	196	0.057	3359.8	0.975	0.84851	4.70202	No
SLV 14	-30314	-28341	196	0.057	3359.8	0.975	0.84851	4.70202	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.911	SLU 77	Si
V_SLU	7.865	SLU 39	Si
PF_SLV	3.711	SLV 7	Si
V_SLV	0.6	SLV 7	No
PFFP_SLV	13.863	SLV 3	Si
R_SLV	0.126	SLV 1	No

Maschio 150

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.013	-0.354	-11.013	1.046	L4	L5	1.4	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	t0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2



Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 74	5.07	-18289	1939.42	46656	5469.76	2.82	Si
SLU 74	8.62	-14118	521.58	36016	5513.26	10.57	Si
SLU 77	5.07	-18684	1976.68	47664	5426.08	2.745	Si
SLU 77	8.62	-14524	540.04	37051	5542.51	10.263	Si
SLU 84	5.07	-18805	2030.05	47972	5411.35	2.666	Si
SLU 84	8.62	-14487	489.19	36956	5540.11	11.325	Si
SLU 82	5.07	-18410	1992.78	46964	5457.12	2.738	Si
SLU 82	8.62	-14081	470.73	35921	5510.2	11.706	Si
SLU 75	5.07	-18217	1925.43	46471	5477.01	2.845	Si
SLU 75	8.62	-14060	506.44	35868	5508.49	10.877	Si
SLU 78	5.07	-18612	1962.7	47479	5434.59	2.769	Si
SLU 78	8.62	-14466	524.9	36903	5538.77	10.552	Si
SLU 80	5.07	-18383	1935.46	46894	5460.04	2.821	Si
SLU 80	8.62	-14234	506.34	36311	5522.33	10.906	Si
SLU 83	5.07	-18878	2044.03	48157	5402.23	2.643	Si
SLU 83	8.62	-14545	504.33	37104	5543.8	10.992	Si
SLU 81	5.07	-18482	2006.76	47149	5449.26	2.715	Si
SLU 81	8.62	-14139	485.87	36069	5514.92	11.351	Si
SLU 79	5.07	-18455	1949.44	47079	5452.26	2.797	Si
SLU 79	8.62	-14292	521.48	36459	5526.66	10.598	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 2	5.07	-13388	665.1	34154	6752.27	10.152	Si
SLV 2	8.62	-9161	1223.84	23369	5186.11	4.238	Si
SLV 6	5.07	-10451	-477.13	26659	5719.29	11.987	Si
SLV 6	8.62	-9601	1386.03	24491	5373.4	3.877	Si
SLV 11	5.07	-14084	2977.94	35928	6959.86	2.337	Si
SLV 11	8.62	-9028	-686.55	23031	5128.48	7.47	Si
SLV 12	5.07	-14084	2977.94	35928	6959.86	2.337	Si
SLV 12	8.62	-9028	-686.55	23031	5128.48	7.47	Si
SLV 16	5.07	-11146	1835.7	28433	5986.6	3.261	Si
SLV 16	8.62	-9468	-524.36	24153	5317.48	10.141	Si
SLV 8	5.07	-15182	2933.74	38731	7259	2.474	Si
SLV 8	8.62	-8870	-315.2	22628	5059.26	16.051	Si
SLV 15	5.07	-11146	1835.7	28433	5986.6	3.261	Si
SLV 15	8.62	-9468	-524.36	24153	5317.48	10.141	Si
SLV 7	5.07	-15182	2933.74	38731	7259	2.474	Si
SLV 7	8.62	-8870	-315.2	22628	5059.26	16.051	Si
SLV 5	5.07	-10451	-477.13	26659	5719.29	11.987	Si
SLV 5	8.62	-9601	1386.03	24491	5373.4	3.877	Si
SLV 1	5.07	-13388	665.1	34154	6752.27	10.152	Si
SLV 1	8.62	-9161	1223.84	23369	5186.11	4.238	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 84	5.07	-18805	949	2030.05		47972	1.4	10833	4247			4.47	Si
SLU 84	8.62	-14487	58	489.19		36956	1.4	10483	4109			70.27	Si
SLU 56	5.07	-16873	944	1780.78		43042	1.4	10833	4247			4.5	Si
SLU 56	8.62	-13102	95	442.23		33424	1.4	10012	3925			41.1	Si
SLU 83	5.07	-18878	936	2044.03		48157	1.4	10833	4247			4.54	Si
SLU 83	8.62	-14545	46	504.33		37104	1.4	10503	4117			88.61	Si
SLU 77	5.07	-18684	935	1976.68		47664	1.4	10833	4247			4.54	Si
SLU 77	8.62	-14524	3	540.04		37051	1.4	10496	4114			1000	Si
SLU 80	5.07	-18383	937	1935.46		46894	1.4	10833	4247			4.53	Si
SLU 80	8.62	-14234	18	506.34		36311	1.4	10397	4076			224.88	Si
SLU 57	5.07	-16800	957	1766.8		42858	1.4	10833	4247			4.44	Si
SLU 57	8.62	-13044	108	427.09		33276	1.4	9992	3917			36.43	Si
SLU 78	5.07	-18612	948	1962.7		47479	1.4	10833	4247			4.48	Si
SLU 78	8.62	-14466	15	524.9		36903	1.4	10476	4107			270.24	Si
SLU 62	5.07	-17066	946	1848.13		43535	1.4	10833	4247			4.49	Si
SLU 62	8.62	-13123	139	406.52		33476	1.4	10019	3927			28.3	Si
SLU 63	5.07	-16993	958	1834.15		43351	1.4	10833	4247			4.43	Si
SLU 63	8.62	-13065	151	391.38		33328	1.4	9999	3920			25.99	Si
SLU 59	5.07	-16571	947	1739.55		42272	1.4	10833	4247			4.49	Si
SLU 59	8.62	-12812	110	408.52		32683	1.4	9913	3886			35.19	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 15	5.07	-11146	7891	1835.7		28433	1.4	14020	5496			0.7	No, Vu<V
SLV 15	8.62	-9468	-233	-524.36		24153	1.4	13164	5160			22.13	Si
SLV 1	5.07	-13388	-6616	665.1		34154	1.4	15164	5944			0.9	No, Vu<V
SLV 1	8.62	-9161	221	1223.84		23369	1.4	13007	5099			23.07	Si
SLV 16	5.07	-11146	7891	1835.7		28433	1.4	14020	5496			0.7	No, Vu<V
SLV 16	8.62	-9468	-233	-524.36		24153	1.4	13164	5160			22.13	Si
SLV 12	5.07	-14084	7798	2977.94		35928	1.4	15519	6083			0.78	No, Vu<V
SLV 12	8.62	-9028	3516	-686.55		23031	1.4	12939	5072			1.44	Si
SLV 2	5.07	-13388	-6616	665.1		34154	1.4	15164	5944			0.9	No, Vu<V
SLV 2	8.62	-9161	221	1223.84		23369	1.4	13007	5099			23.07	Si
SLV 14	5.07	-9726	4604	812.44		24812	1.4	13296	5212			1.13	Si
SLV 14	8.62	-9687	-2601	-13.99		24712	1.4	13276	5204			2	Si
SLV 13	5.07	-9726	4604	812.44		24812	1.4	13296	5212			1.13	Si
SLV 13	8.62	-9687	-2601	-13.99		24712	1.4	13276	5204			2	Si
SLV 11	5.07	-14084	7798	2977.94		35928	1.4	15519	6083			0.78	No, Vu<V
SLV 11	8.62	-9028	3516	-686.55		23031	1.4	12939	5072			1.44	Si
SLV 6	5.07	-10451	-6523	-477.13		26659	1.4	13665	5357			0.82	No, Vu<V
SLV 6	8.62	-9601	-3529	1386.03		24491	1.4	13232	5187			1.47	Si
SLV 5	5.07	-10451	-6523	-477.13		26659	1.4	13665	5357			0.82	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 5	8.62	-9601	-3529	1386.03		24491	1.4	13232	5187			1.47	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 2	143750	0.39	17495	-6858	149.54	822.67	5.5	Si
SLV 1	143750	0.39	17495	-6858	149.54	822.67	5.5	Si
SLV 4	143750	0.39	20276	-7948	149.54	928.09	6.21	Si
SLV 3	143750	0.39	20276	-7948	149.54	928.09	6.21	Si
SLV 6	143750	0.39	23594	-9249	149.54	1044.81	6.99	Si
SLV 5	143750	0.39	23594	-9249	149.54	1044.81	6.99	Si
SLV 10	143750	0.39	31602	-12388	149.54	1285.75	8.6	Si
SLV 9	143750	0.39	31602	-12388	149.54	1285.75	8.6	Si
SLV 8	143750	0.39	32862	-12882	149.54	1318.44	8.82	Si
SLV 7	143750	0.39	32862	-12882	149.54	1318.44	8.82	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 2	-9161	-13388	165	0.028	1129.4	0.95	0.43412	8.88274	No
SLV 1	-9161	-13388	165	0.028	1129.4	0.95	0.43412	8.88274	No
SLV 16	-9468	-11146	-159	0.029	1160.6	0.951	0.44639	8.88274	No
SLV 15	-9468	-11146	-159	0.029	1160.6	0.951	0.44639	8.88274	No
SLV 4	-8942	-14808	108	0.034	1107.2	0.949	0.51562	8.88274	No
SLV 3	-8942	-14808	108	0.034	1107.2	0.949	0.51562	8.88274	No
SLV 13	-9687	-9726	-103	0.035	1182.8	0.952	0.52785	8.88274	No
SLV 14	-9687	-9726	-103	0.035	1182.8	0.952	0.52785	8.88274	No
SLV 5	-9601	-10451	137	0.031	1174.1	0.951	0.47927	7.63299	No
SLV 6	-9601	-10451	137	0.031	1174.1	0.951	0.47927	7.63299	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.643	SLU 83	Si
V_SLU	4.431	SLU 63	Si
PF_SLV	2.337	SLV 11	Si
V_SLV	0.697	SLV 15	No
PFFP_SLV	5.501	SLV 1	Si
R_SLV	0.049	SLV 1	No

Maschio 151

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.728	1.406	-9.728	1.046	L4	L5	0.36	0.14	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 75	5.07	-3929	-93.88	77957	30.4	0.324	No, M>Mu
SLU 75	7.17	-3660	56.75	72611	71.55	1.261	Si
SLU 79	5.07	-3967	-98.08	78707	24.12	0.246	No, M>Mu
SLU 79	7.17	-3697	60.77	73361	66.16	1.089	Si
SLU 78	5.07	-4004	-96.28	79453	17.74	0.184	No, M>Mu
SLU 78	7.17	-3735	58.89	74107	60.67	1.03	Si
SLU 84	5.07	-4061	-100.79	80579	7.9	0.078	No, M>Mu
SLU 84	7.17	-3792	61.54	75233	52.16	0.848	No, M>Mu
SLU 77	5.07	-4027	-97.75	79891	13.94	0.143	No, M>Mu
SLU 77	7.17	-3757	60.12	74545	57.39	0.955	No, M>Mu
SLU 80	5.07	-3945	-96.62	78269	27.8	0.288	No, M>Mu
SLU 80	7.17	-3675	59.54	72923	69.32	1.164	Si
SLU 82	5.07	-3986	-98.39	79082	20.93	0.213	No, M>Mu
SLU 82	7.17	-3716	59.4	73736	63.41	1.068	Si
SLU 83	5.07	-4083	-102.26	81017	3.99	0.039	No, M>Mu
SLU 83	7.17	-3814	62.77	75671	48.78	0.777	No, M>Mu
SLU 81	5.07	-4008	-99.85	79520	17.16	0.172	No, M>Mu
SLU 81	7.17	-3738	60.63	74174	60.17	0.992	No, M>Mu
SLU 74	5.07	-3951	-95.34	78395	26.74	0.281	No, M>Mu
SLU 74	7.17	-3682	57.98	73049	68.41	1.18	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 9	5.07	-2846	301.23	56463	275.53	0.915	No, M>Mu
SLV 9	7.17	-2624	-285.21	52071	271.08	0.95	No, M>Mu
SLV 7	5.07	-2401	-424.8	47641	263.68	0.621	No, M>Mu
SLV 7	7.17	-2212	359.81	43897	255.17	0.709	No, M>Mu
SLV 8	5.07	-2401	-424.8	47641	263.68	0.621	No, M>Mu
SLV 8	7.17	-2212	359.81	43897	255.17	0.709	No, M>Mu
SLV 12	5.07	-2333	-345.62	46293	260.86	0.755	No, M>Mu
SLV 12	7.17	-2104	284.61	41753	249.35	0.876	No, M>Mu



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 10	5.07	-2846	301.23	56463	275.53	0.915	No, M>Mu
SLV 10	7.17	-2624	-285.21	52071	271.08	0.95	No, M>Mu
SLV 5	5.07	-2914	222.05	57811	276.32	1.244	Si
SLV 5	7.17	-2732	-210.01	54215	273.61	1.303	Si
SLV 6	5.07	-2914	222.05	57811	276.32	1.244	Si
SLV 6	7.17	-2732	-210.01	54215	273.61	1.303	Si
SLV 3	5.07	-2660	-290.78	52772	271.98	0.935	No, M>Mu
SLV 3	7.17	-2521	248.1	50010	268	1.08	Si
SLV 4	5.07	-2660	-290.78	52772	271.98	0.935	No, M>Mu
SLV 4	7.17	-2521	248.1	50010	268	1.08	Si
SLV 11	5.07	-2333	-345.62	46293	260.86	0.755	No, M>Mu
SLV 11	7.17	-2104	284.61	41753	249.35	0.876	No, M>Mu

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 81	5.07	-4008	-76	-99.85		79520	0.36	10833	546			7.14	Si
SLU 81	7.17	-3738	-76	60.63		74174	0.36	10833	546			7.14	Si
SLU 82	5.07	-3986	-75	-98.39		79082	0.36	10833	546			7.27	Si
SLU 82	7.17	-3716	-75	59.4		73736	0.36	10833	546			7.27	Si
SLU 78	5.07	-4004	-74	-96.28		79453	0.36	10833	546			7.39	Si
SLU 78	7.17	-3735	-74	58.89		74107	0.36	10833	546			7.39	Si
SLU 77	5.07	-4027	-75	-97.75		79891	0.36	10833	546			7.26	Si
SLU 77	7.17	-3757	-75	60.12		74545	0.36	10833	546			7.26	Si
SLU 75	5.07	-3929	-72	-93.88		77957	0.36	10833	546			7.61	Si
SLU 75	7.17	-3660	-72	56.75		72611	0.36	10833	546			7.61	Si
SLU 74	5.07	-3951	-73	-95.34		78395	0.36	10833	546			7.48	Si
SLU 74	7.17	-3682	-73	57.98		73049	0.36	10833	546			7.48	Si
SLU 79	5.07	-3967	-76	-98.08		78707	0.36	10833	546			7.22	Si
SLU 79	7.17	-3697	-76	60.77		73361	0.36	10833	546			7.22	Si
SLU 84	5.07	-4061	-77	-100.79		80579	0.36	10833	546			7.06	Si
SLU 84	7.17	-3792	-77	61.54		75233	0.36	10833	546			7.06	Si
SLU 80	5.07	-3945	-74	-96.62		78269	0.36	10833	546			7.34	Si
SLU 80	7.17	-3675	-74	59.54		72923	0.36	10833	546			7.34	Si
SLU 83	5.07	-4083	-79	-102.26		81017	0.36	10833	546			6.95	Si
SLU 83	7.17	-3814	-79	62.77		75671	0.36	10833	546			6.95	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 5	5.07	-2914	367	222.05		66840	0.3114	16250	708			1.93	Si
SLV 5	7.17	-2732	183	-210.01		63077	0.3094	16250	704			3.84	Si
SLV 3	5.07	-2660	-367	-290.78		89605	0.212	16250	482			1.31	Si
SLV 3	7.17	-2521	-260	248.1		73572	0.2447	16250	557			2.14	Si
SLV 8	5.07	-2401	-569	-424.8		1855841	0.0092	16250	21			0.04	No, Vu<V
SLV 8	7.17	-2212	-357	359.81		303263	0.0521	16250	119			0.33	No, Vu<V
SLV 9	5.07	-2846	475	301.23		91380	0.2224	16250	506			1.07	Si
SLV 9	7.17	-2624	262	-285.21		87608	0.214	16250	487			1.85	Si
SLV 10	5.07	-2846	475	301.23		91380	0.2224	16250	506			1.07	Si
SLV 10	7.17	-2624	262	-285.21		87608	0.214	16250	487			1.85	Si
SLV 4	5.07	-2660	-367	-290.78		89605	0.212	16250	482			1.31	Si
SLV 4	7.17	-2521	-260	248.1		73572	0.2447	16250	557			2.14	Si
SLV 6	5.07	-2914	367	222.05		66840	0.3114	16250	708			1.93	Si
SLV 6	7.17	-2732	183	-210.01		63077	0.3094	16250	704			3.84	Si
SLV 7	5.07	-2401	-569	-424.8		1855841	0.0092	16250	21			0.04	No, Vu<V
SLV 7	7.17	-2212	-357	359.81		303263	0.0521	16250	119			0.33	No, Vu<V
SLV 11	5.07	-2333	-461	-345.62		174316	0.0956	16250	218			0.47	No, Vu<V
SLV 11	7.17	-2104	-278	284.61		111962	0.1343	16250	305			1.1	Si
SLV 12	5.07	-2333	-461	-345.62		174316	0.0956	16250	218			0.47	No, Vu<V
SLV 12	7.17	-2104	-278	284.61		111962	0.1343	16250	305			1.1	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 12	143750	0.39	42960	-2165	20.1	98.27	4.89	Si
SLV 11	143750	0.39	42960	-2165	20.1	98.27	4.89	Si
SLV 16	143750	0.39	44552	-2245	20.1	99.87	4.97	Si
SLV 15	143750	0.39	44552	-2245	20.1	99.87	4.97	Si
SLV 7	143750	0.39	44577	-2247	20.1	99.89	4.97	Si
SLV 8	143750	0.39	44577	-2247	20.1	99.89	4.97	Si
SLV 13	143750	0.39	47535	-2396	20.1	102.46	5.1	Si
SLV 14	143750	0.39	47535	-2396	20.1	102.46	5.1	Si
SLV 4	143750	0.39	49945	-2517	20.1	104.18	5.18	Si
SLV 3	143750	0.39	49945	-2517	20.1	104.18	5.18	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.03 Ta = 0.1503

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 13	-1027	-2587	-29	0	129.9	0.945	0	16.59208	No
SLV 4	-908	-2660	28	0	117.9	0.94	0	16.59208	No
SLV 14	-1027	-2587	-29	0	129.9	0.945	0	16.59208	No
SLV 2	-712	-2813	24	0	98.1	0.93	0	16.59208	No
SLV 3	-908	-2660	28	0	117.9	0.94	0	16.59208	No
SLV 1	-712	-2813	24	0	98.1	0.93	0	16.59208	No
SLV 16	-1223	-2433	-24	0.005	149.8	0.951	0.06984	16.59208	No
SLV 15	-1223	-2433	-24	0.005	149.8	0.951	0.06984	16.59208	No
SLV 10	-688	-2846	-15	0.005	95.7	0.929	0.08456	16.14305	No
SLV 9	-688	-2846	-15	0.005	95.7	0.929	0.08456	16.14305	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
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Sismicad 12.19 - Licenza assegnata a Sidel ingegneria Srl - Via Isonzo, 13 - Villanova di Castenaso (BO)



Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0.039	SLU 83	No
V_SLU	6.948	SLU 83	Si
PF_SLV	0.621	SLV 7	No
V_SLV	0.037	SLV 7	No
PFFP_SLV	4.889	SLV 11	Si
R_SLV	0	SLV 1	No

Maschio 152

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.728	6.661	-9.728	2.206	L4	L5	4.455	0.14	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ ₀	f _{v0}	μ	φ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLU 78	5.07	-36205	3204.54	58048	23176.64	7.232	Si
SLU 78	7.17	-29042	7719.43	46564	27711.6	3.59	Si
SLU 80	5.07	-35724	3106.72	57277	23621.99	7.604	Si
SLU 80	7.17	-28591	7609.61	45840	27846.82	3.659	Si
SLU 84	5.07	-36882	3359.1	59135	22514.63	6.703	Si
SLU 84	7.17	-29420	7949.33	47170	27584.86	3.47	Si
SLU 75	5.07	-35732	3195.34	57290	23614.96	7.39	Si
SLU 75	7.17	-28597	7595.37	45851	27844.89	3.666	Si
SLU 79	5.07	-35788	3145.38	57381	23563.46	7.491	Si
SLU 79	7.17	-28654	7687.1	45941	27829	3.62	Si
SLU 82	5.07	-36409	3349.91	58376	22981.07	6.86	Si
SLU 82	7.17	-28975	7825.27	46457	27732.87	3.544	Si
SLU 81	5.07	-36474	3388.57	58480	22918.66	6.764	Si
SLU 81	7.17	-29038	7902.75	46558	27712.93	3.507	Si
SLU 83	5.07	-36947	3397.77	59238	22449.55	6.607	Si
SLU 83	7.17	-29483	8026.81	47271	27562.45	3.434	Si
SLU 77	5.07	-36269	3243.2	58152	23115.38	7.127	Si
SLU 77	7.17	-29105	7796.92	46666	27691.28	3.552	Si
SLU 74	5.07	-35796	3234	57393	23556.38	7.284	Si
SLU 74	7.17	-28661	7672.86	45952	27827.03	3.627	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLV 6	5.07	-21609	10808.2	34647	34485.89	3.191	Si
SLV 6	7.17	-13889	2023.02	22269	25299.32	12.506	Si
SLV 7	5.07	-23465	-8319.57	37622	36174.38	4.348	Si
SLV 7	7.17	-23553	9244.72	37763	36249.32	3.921	Si
SLV 9	5.07	-24835	12293.02	39818	37291.75	3.034	Si
SLV 9	7.17	-15003	733.95	24055	26840.11	36.57	Si
SLV 1	5.07	-18496	2381.19	29655	31200.58	13.103	Si
SLV 1	7.17	-15971	6054.53	25608	28120.5	4.645	Si
SLV 8	5.07	-23465	-8319.57	37622	36174.38	4.348	Si
SLV 8	7.17	-23553	9244.72	37763	36249.32	3.921	Si
SLV 4	5.07	-19053	-3357.14	30548	31829.56	9.481	Si
SLV 4	7.17	-18871	8221.04	30256	31625.77	3.847	Si
SLV 3	5.07	-19053	-3357.14	30548	31829.56	9.481	Si
SLV 3	7.17	-18871	8221.04	30256	31625.77	3.847	Si
SLV 10	5.07	-24835	12293.02	39818	37291.75	3.034	Si
SLV 10	7.17	-15003	733.95	24055	26840.11	36.57	Si
SLV 5	5.07	-21609	10808.2	34647	34485.89	3.191	Si
SLV 5	7.17	-13889	2023.02	22269	25299.32	12.506	Si
SLV 2	5.07	-18496	2381.19	29655	31200.58	13.103	Si
SLV 2	7.17	-15971	6054.53	25608	28120.5	4.645	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	V par	M	σ ₀	σ _N	l'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 76	5.07	-35208	178	3071.75		56450	4.455	10833	6757			38.05	Si
SLU 76	7.17	-28104	175	7433.9		45059	4.455	10833	6757			38.72	Si
SLU 72	5.07	-31917	184	2496.38		51173	4.455	10833	6757			36.78	Si
SLU 72	7.17	-25617	181	6527.48		41073	4.455	10833	6757			37.36	Si
SLU 49	5.07	-28707	175	2032.07		46027	4.455	10833	6757			38.64	Si
SLU 49	7.17	-23150	172	5683.02		37118	4.455	10505	6552			38.03	Si
SLU 57	5.07	-32514	177	2642.42		52132	4.455	10833	6757			38.15	Si
SLU 57	7.17	-26123	174	6765.16		41884	4.455	10833	6757			38.78	Si
SLU 70	5.07	-32397	180	2594.19		51944	4.455	10833	6757			37.6	Si
SLU 70	7.17	-26069	177	6637.29		41798	4.455	10833	6757			38.21	Si
SLU 80	5.07	-35724	186	3106.72		57277	4.455	10833	6757			36.34	Si
SLU 80	7.17	-28591	183	7609.61		45840	4.455	10833	6757			36.97	Si
SLU 79	5.07	-35788	179	3145.38		57381	4.455	10833	6757			37.78	Si
SLU 79	7.17	-28654	176	7687.1		45941	4.455	10833	6757			38.45	Si
SLU 59	5.07	-32034	181	2544.61		51361	4.455	10833	6757			37.31	Si
SLU 59	7.17	-25672	178	6655.34		41160	4.455	10833	6757			37.91	Si
SLU 51	5.07	-28226	179	1934.26		45256	4.455	10833	6757			37.78	Si
SLU 51	7.17	-22698	176	5573.2		36393	4.455	10408	6491			36.82	Si
SLU 78	5.07	-36205	182	3204.54		58048	4.455	10833	6757			37.14	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 78	7.17	-29042	179	7719.43		46564	4.455	10833	6757			37.79	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 10	5.07	-24835	10344	12293.02		39818	4.455	16250	10135			0.98	No, Vu<V
SLV 10	7.17	-15003	9650	733.95		24055	4.455	13144	8198			0.85	No, Vu<V
SLV 11	5.07	-26690	-10593	-6834.75		42793	4.455	16250	10135			0.96	No, Vu<V
SLV 11	7.17	-24667	-9856	7955.64		39549	4.455	16243	10131			1.03	Si
SLV 9	5.07	-24835	10344	12293.02		39818	4.455	16250	10135			0.98	No, Vu<V
SLV 9	7.17	-15003	9650	733.95		24055	4.455	13144	8198			0.85	No, Vu<V
SLV 12	5.07	-26690	-10593	-6834.75		42793	4.455	16250	10135			0.96	No, Vu<V
SLV 12	7.17	-24667	-9856	7955.64		39549	4.455	16243	10131			1.03	Si
SLV 2	5.07	-18496	4055	2381.19		29655	4.455	14264	8897			2.19	Si
SLV 2	7.17	-15971	3761	6054.53		25608	4.455	13455	8392			2.23	Si
SLV 6	5.07	-21609	10823	10808.2		34647	4.455	15263	9519			0.88	No, Vu<V
SLV 6	7.17	-13889	10083	2023.02		22269	4.455	12787	7975			0.79	No, Vu<V
SLV 5	5.07	-21609	10823	10808.2		34647	4.455	15263	9519			0.88	No, Vu<V
SLV 5	7.17	-13889	10083	2023.02		22269	4.455	12787	7975			0.79	No, Vu<V
SLV 7	5.07	-23465	-10113	-8319.57		37622	4.455	15858	9890			0.98	No, Vu<V
SLV 7	7.17	-23553	-9423	9244.72		37763	4.455	15886	9908			1.05	Si
SLV 8	5.07	-23465	-10113	-8319.57		37622	4.455	15858	9890			0.98	No, Vu<V
SLV 8	7.17	-23553	-9423	9244.72		37763	4.455	15886	9908			1.05	Si
SLV 1	5.07	-18496	4055	2381.19		29655	4.455	14264	8897			2.19	Si
SLV 1	7.17	-15971	3761	6054.53		25608	4.455	13455	8392			2.23	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 5	143750	0.39	24476	-15265	248.74	854.53	3.44	Si
SLV 6	143750	0.39	24476	-15265	248.74	854.53	3.44	Si
SLV 10	143750	0.39	26523	-16543	248.74	906.62	3.64	Si
SLV 9	143750	0.39	26523	-16543	248.74	906.62	3.64	Si
SLV 2	143750	0.39	26700	-16653	248.74	910.98	3.66	Si
SLV 1	143750	0.39	26700	-16653	248.74	910.98	3.66	Si
SLV 3	143750	0.39	30655	-19119	248.74	1002.58	4.03	Si
SLV 4	143750	0.39	30655	-19119	248.74	1002.58	4.03	Si
SLV 13	143750	0.39	33526	-20910	248.74	1062.09	4.27	Si
SLV 14	143750	0.39	33526	-20910	248.74	1062.09	4.27	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.03 Ta = 0.1503

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 1	-10845	-18496	63	0.018	1418.7	0.938	0.27718	16.59208	No
SLV 2	-10845	-18496	63	0.018	1418.7	0.938	0.27718	16.59208	No
SLV 15	-17685	-29803	-63	0.019	2112.9	0.956	0.28121	16.59208	No
SLV 16	-17685	-29803	-63	0.019	2112.9	0.956	0.28121	16.59208	No
SLV 6	-11442	-21609	57	0.018	1479.2	0.941	0.28484	16.14305	No
SLV 5	-11442	-21609	57	0.018	1479.2	0.941	0.28484	16.14305	No
SLV 11	-17088	-26690	-57	0.019	2052.2	0.955	0.28585	16.14305	No
SLV 12	-17088	-26690	-57	0.019	2052.2	0.955	0.28585	16.14305	No
SLV 14	-16500	-29247	-38	0.02	1992.4	0.954	0.3013	16.59208	No
SLV 13	-16500	-29247	-38	0.02	1992.4	0.954	0.3013	16.59208	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.434	SLU 83	Si
V_SLU	36.342	SLU 80	Si
PF_SLV	3.034	SLV 9	Si
V_SLV	0.791	SLV 5	No
PFFP_SLV	3.435	SLV 5	Si
R_SLV	0.017	SLV 1	No

Maschio 153

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-10.12	-4.784	-11.013	-4.784	L4	L5	0.892	0.3	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 57	5.07	-9753	-145.78	36431	2405.46	16.5	Si
SLU 57	8.18	-5886	329.7	21986	1917.4	5.816	Si
SLU 47	5.07	-9202	-173.41	34374	2373.32	13.686	Si
SLU 47	8.18	-5485	314.98	20489	1831.81	5.816	Si
SLU 80	5.07	-10154	-123.31	37928	2421.05	19.634	Si
SLU 80	8.18	-6184	341.21	23100	1976.79	5.793	Si
SLU 68	5.07	-9631	-153.05	35977	2399.43	15.677	Si
SLU 68	8.18	-5799	327.23	21662	1899.46	5.805	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 70	5.07	-9726	-154.05	36330	2404.18	15.606	Si
SLU 70	8.18	-5868	329.96	21919	1913.72	5.8	Si
SLU 72	5.07	-9698	-151.94	36224	2402.79	15.814	Si
SLU 72	8.18	-5852	329.21	21859	1910.4	5.803	Si
SLU 76	5.07	-10088	-124.42	37681	2418.93	19.441	Si
SLU 76	8.18	-6131	339.23	22903	1966.57	5.797	Si
SLU 49	5.07	-9297	-174.41	34727	2379.73	13.644	Si
SLU 49	8.18	-5554	317.71	20746	1846.96	5.813	Si
SLU 51	5.07	-9268	-172.3	34621	2377.84	13.801	Si
SLU 51	8.18	-5538	316.96	20686	1843.43	5.816	Si
SLU 78	5.07	-10182	-125.42	38034	2421.9	19.31	Si
SLU 78	8.18	-6200	341.96	23160	1979.89	5.79	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 15	5.07	-5958	-361.7	22256	2174.23	6.011	Si
SLV 15	8.18	-3526	459.17	13170	1403.64	3.057	Si
SLV 13	5.07	-9629	-611.99	35968	3031.67	4.954	Si
SLV 13	8.18	-5391	593.42	20137	2008.95	3.385	Si
SLV 16	5.07	-5958	-361.7	22256	2174.23	6.011	Si
SLV 16	8.18	-3526	459.17	13170	1403.64	3.057	Si
SLV 12	5.07	-1235	203	4613	530.23	2.612	Si
SLV 12	8.18	-1230	102	4596	528.34	5.18	Si
SLV 11	5.07	-1235	203	4613	530.23	2.612	Si
SLV 11	8.18	-1230	102	4596	528.34	5.18	Si
SLV 14	5.07	-9629	-611.99	35968	3031.67	4.954	Si
SLV 14	8.18	-5391	593.42	20137	2008.95	3.385	Si
SLV 7	5.07	-858	436.75	0	0	0	No, $e > l/2$
SLV 7	8.18	-1128	-69.89	4213	485.88	6.952	Si
SLV 8	5.07	-858	436.75	0	0	0	No, $e > l/2$
SLV 8	8.18	-1128	-69.89	4213	485.88	6.952	Si
SLV 4	5.07	-4700	417.47	17556	1795.75	4.302	Si
SLV 4	8.18	-3184	-113.8	11893	1282.39	11.269	Si
SLV 3	5.07	-4700	417.47	17556	1795.75	4.302	Si
SLV 3	8.18	-3184	-113.8	11893	1282.39	11.269	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 68	5.07	-9631	-251	-153.05		35977	0.8924	10352	2771			11.06	Si
SLU 68	8.18	-5799	-27	327.23		21662	0.8924	8444	2261			84.35	Si
SLU 49	5.07	-9297	-267	-174.41		34727	0.8924	10186	2727			10.2	Si
SLU 49	8.18	-5554	-24	317.71		20746	0.8924	8322	2228			90.94	Si
SLU 45	5.07	-9018	-243	-159.16		33684	0.8924	10047	2690			11.08	Si
SLU 45	8.18	-5354	-19	305.4		19998	0.8924	8222	2201			114.53	Si
SLU 44	5.07	-9051	-265	-167.97		33808	0.8924	10063	2694			10.17	Si
SLU 44	8.18	-5373	-36	308.87		20072	0.8924	8232	2204			60.59	Si
SLU 50	5.07	-9141	-242	-162.48		34143	0.8924	10108	2706			11.19	Si
SLU 50	8.18	-5449	-17	310.76		20355	0.8924	8270	2214			131.47	Si
SLU 47	5.07	-9202	-270	-173.41		34374	0.8924	10139	2714			10.06	Si
SLU 47	8.18	-5485	-33	314.98		20489	0.8924	8287	2219			66.34	Si
SLU 51	5.07	-9268	-262	-172.3		34621	0.8924	10172	2723			10.41	Si
SLU 51	8.18	-5538	-25	316.96		20686	0.8924	8314	2226			88.86	Si
SLU 65	5.07	-9480	-246	-147.62		35411	0.8924	10277	2751			11.2	Si
SLU 65	8.18	-5688	-30	321.13		21245	0.8924	8388	2246			75.54	Si
SLU 48	5.07	-9169	-248	-164.59		34250	0.8924	10122	2710			10.94	Si
SLU 48	8.18	-5465	-16	311.51		20415	0.8924	8278	2216			136.03	Si
SLU 46	5.07	-9145	-263	-168.98		34162	0.8924	10110	2707			10.31	Si
SLU 46	8.18	-5442	-27	311.6		20329	0.8924	8266	2213			80.69	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 8	5.07	-858	1831	436.75		0	0	8333	0			0	No, $V_u < V$
SLV 8	8.18	-1128	208	-69.89		4213	0.8924	9176	2457			11.79	Si
SLV 13	5.07	-9629	-3498	-611.99		35968	0.8924	15527	4157			1.19	Si
SLV 13	8.18	-5391	-1251	593.42		20137	0.8924	12361	3309			2.64	Si
SLV 3	5.07	-4700	3177	417.47		17556	0.8924	11845	3171			1	No, $V_u < V$
SLV 3	8.18	-3184	1226	-113.8		11893	0.8924	10712	2868			2.34	Si
SLV 15	5.07	-5958	-2844	-361.7		22256	0.8924	12784	3423			1.2	Si
SLV 15	8.18	-3526	-1351	459.17		13170	0.8924	10967	2936			2.17	Si
SLV 16	5.07	-5958	-2844	-361.7		22256	0.8924	12784	3423			1.2	Si
SLV 16	8.18	-3526	-1351	459.17		13170	0.8924	10967	2936			2.17	Si
SLV 2	5.07	-8371	2523	167.19		31268	0.8924	14587	3905			1.55	Si
SLV 2	8.18	-5049	1325	20.46		18860	0.8924	12105	3241			2.45	Si
SLV 7	5.07	-858	1831	436.75		0	0	8333	0			0	No, $V_u < V$
SLV 7	8.18	-1128	208	-69.89		4213	0.8924	9176	2457			11.79	Si
SLV 14	5.07	-9629	-3498	-611.99		35968	0.8924	15527	4157			1.19	Si
SLV 14	8.18	-5391	-1251	593.42		20137	0.8924	12361	3309			2.64	Si
SLV 4	5.07	-4700	3177	417.47		17556	0.8924	11845	3171			1	No, $V_u < V$
SLV 4	8.18	-3184	1226	-113.8		11893	0.8924	10712	2868			2.34	Si
SLV 1	5.07	-8371	2523	167.19		31268	0.8924	14587	3905			1.55	Si
SLV 1	8.18	-5049	1325	20.46		18860	0.8924	12105	3241			2.45	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 8	143750	0.39	4757	-1273	97.48	183.58	1.88	Si
SLV 7	143750	0.39	4757	-1273	97.48	183.58	1.88	Si
SLV 12	143750	0.39	7294	-1953	97.48	275.42	2.83	Si
SLV 11	143750	0.39	7294	-1953	97.48	275.42	2.83	Si



Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 3	143750	0.39	13520	-3619	97.48	482.83	4.95	Si
SLV 4	143750	0.39	13520	-3619	97.48	482.83	4.95	Si
SLV 16	143750	0.39	21977	-5884	97.48	723.8	7.42	Si
SLV 15	143750	0.39	21977	-5884	97.48	723.8	7.42	Si
SLV 2	143750	0.39	23568	-6309	97.48	763.87	7.84	Si
SLV 1	143750	0.39	23568	-6309	97.48	763.87	7.84	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 6.845 Wa = 0.05 Ta = 0.0702

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 12	-1171	-1235	-96	0.013	261.8	0.891	0.21037	7.18311	No
SLV 11	-1171	-1235	-96	0.013	261.8	0.891	0.21037	7.18311	No
SLV 8	-1326	-858	-82	0.021	276.6	0.894	0.34541	7.18311	No
SLV 7	-1326	-858	-82	0.021	276.6	0.894	0.34541	7.18311	No
SLV 6	-6394	-13094	96	0.034	785.3	0.951	0.52024	7.18311	No
SLV 5	-6394	-13094	96	0.034	785.3	0.951	0.52024	7.18311	No
SLV 16	-2764	-5958	-49	0.039	418.4	0.917	0.61189	8.27253	No
SLV 15	-2764	-5958	-49	0.039	418.4	0.917	0.61189	8.27253	No
SLV 2	-4801	-8371	49	0.04	623.8	0.94	0.61707	8.27253	No
SLV 1	-4801	-8371	49	0.04	623.8	0.94	0.61707	8.27253	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.79	SLV 78	Si
V_SLV	10.059	SLV 47	Si
PF_SLV	0	SLV 7	No
V_SLV	0	SLV 7	No
PFFP_SLV	1.883	SLV 7	Si
R_SLV	0.029	SLV 11	No

Maschio 154

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.sx	a.s.dx
-7.723	-4.784	-8.28	-4.784	L4	L5	0.558	0.3	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 74	5.07	-7856	-300.84	46959	927.62	3.083	Si
SLV 74	8.18	-4502	-210.21	26912	840.53	3.998	Si
SLV 82	5.07	-7998	-305.68	47810	921.13	3.013	Si
SLV 82	8.18	-4769	-229.95	28509	864.33	3.759	Si
SLV 80	5.07	-8010	-285.81	47880	920.56	3.221	Si
SLV 80	8.18	-4801	-236.96	28702	867.01	3.659	Si
SLV 77	5.07	-7964	-302.3	47608	922.75	3.052	Si
SLV 77	8.18	-4579	-214.65	27372	847.68	3.949	Si
SLV 75	5.07	-7909	-287.87	47280	925.27	3.214	Si
SLV 75	8.18	-4723	-231.2	28233	860.43	3.722	Si
SLV 78	5.07	-8018	-289.32	47929	920.16	3.18	Si
SLV 78	8.18	-4800	-235.64	28693	866.9	3.679	Si
SLV 81	5.07	-7944	-318.65	47489	923.68	2.899	Si
SLV 81	8.18	-4548	-208.96	27188	844.84	4.043	Si
SLV 79	5.07	-7956	-298.79	47559	923.13	3.09	Si
SLV 79	8.18	-4580	-215.97	27380	847.81	3.926	Si
SLV 84	5.07	-8107	-307.13	48459	915.63	2.981	Si
SLV 84	8.18	-4846	-234.39	28969	870.65	3.715	Si
SLV 83	5.07	-8053	-320.11	48138	918.41	2.869	Si
SLV 83	8.18	-4625	-213.4	27648	851.85	3.992	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 3	5.07	-4380	1268.45	0	0	0	No, e>l/2
SLV 3	8.18	-2587	-156.13	15463	629.96	4.035	Si
SLV 14	5.07	-6877	-1653.19	41109	1272.31	0.77	No, M>Mu
SLV 14	8.18	-3838	-156.29	22945	869.23	5.562	Si
SLV 13	5.07	-6877	-1653.19	41109	1272.31	0.77	No, M>Mu
SLV 13	8.18	-3838	-156.29	22945	869.23	5.562	Si
SLV 7	5.07	-4744	1255.53	28360	1015.76	0.809	No, M>Mu
SLV 7	8.18	-6578	-415.34	39322	1243.82	2.995	Si
SLV 5	5.07	-5864	-963.49	35053	1165.9	1.21	Si
SLV 5	8.18	1231	154.23	0	0	0	No, Trazione
SLV 10	5.07	-6512	-1640.27	38929	1237.23	0.754	No, M>Mu
SLV 10	8.18	153	102.92	0	0	0	No, Trazione
SLV 8	5.07	-4744	1255.53	28360	1015.76	0.809	No, M>Mu
SLV 8	8.18	-6578	-415.34	39322	1243.82	2.995	Si
SLV 6	5.07	-5864	-963.49	35053	1165.9	1.21	Si
SLV 6	8.18	1231	154.23	0	0	0	No, Trazione
SLV 9	5.07	-6512	-1640.27	38929	1237.23	0.754	No, M>Mu
SLV 9	8.18	153	102.92	0	0	0	No, Trazione



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 4	5.07	-4380	1268.45	0	0	0	No, $e \geq l/2$
SLV 4	8.18	-2587	-156.13	15463	629.96	4.035	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 76	5.07	-7937	-211	-275.7		47445	0.5576	10833	1812			8.59	Si
SLU 76	8.18	-4872	157	-246.51		29123	0.5576	9439	1579			10.07	Si
SLU 78	5.07	-8018	-201	-289.32		47929	0.5576	10833	1812			9	Si
SLU 78	8.18	-4800	164	-235.64		28693	0.5576	9381	1569			9.57	Si
SLU 82	5.07	-7998	-210	-305.68		47810	0.5576	10833	1812			8.62	Si
SLU 82	8.18	-4769	161	-229.95		28509	0.5576	9357	1565			9.72	Si
SLU 74	5.07	-7856	-183	-300.84		46959	0.5576	10833	1812			9.93	Si
SLU 74	8.18	-4502	166	-210.21		26912	0.5576	9144	1530			9.19	Si
SLU 75	5.07	-7909	-201	-287.87		47280	0.5576	10833	1812			9.03	Si
SLU 75	8.18	-4723	163	-231.2		28233	0.5576	9320	1559			9.55	Si
SLU 73	5.07	-7828	-210	-274.24		46796	0.5576	10833	1812			8.62	Si
SLU 73	8.18	-4795	156	-242.07		28663	0.5576	9377	1569			10.06	Si
SLU 77	5.07	-7964	-183	-302.3		47608	0.5576	10833	1812			9.89	Si
SLU 77	8.18	-4579	167	-214.65		27372	0.5576	9205	1540			9.21	Si
SLU 53	5.07	-7432	-160	-257.51		44427	0.5576	10833	1812			11.34	Si
SLU 53	8.18	-4251	161	-205.78		25413	0.5576	8944	1496			9.28	Si
SLU 84	5.07	-8107	-211	-307.13		48459	0.5576	10833	1812			8.59	Si
SLU 84	8.18	-4846	162	-234.39		28969	0.5576	9418	1576			9.74	Si
SLU 80	5.07	-8010	-200	-285.81		47880	0.5576	10833	1812			9.08	Si
SLU 80	8.18	-4801	160	-236.96		28702	0.5576	9382	1570			9.83	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 7	5.07	-4744	340	1255.53		371909	0.0425	16250	207			0.61	No, $V_u < V$
SLV 7	8.18	-6578	-1205	-415.34		39322	0.5576	16198	2710			2.25	Si
SLV 14	5.07	-6877	-1099	-1653.19		198876	0.1153	16250	562			0.51	No, $V_u < V$
SLV 14	8.18	-3838	1836	-156.29		22945	0.5576	12922	2162			1.18	Si
SLV 13	5.07	-6877	-1099	-1653.19		198876	0.1153	16250	562			0.51	No, $V_u < V$
SLV 13	8.18	-3838	1836	-156.29		22945	0.5576	12922	2162			1.18	Si
SLV 4	5.07	-4380	860	1268.45		0	0	8333	0			0	No, $V_u < V$
SLV 4	8.18	-2587	-1597	-156.13		15463	0.5576	11426	1911			1.2	Si
SLV 10	5.07	-6512	-579	-1640.27		268580	0.0808	16250	394			0.68	No, $V_u < V$
SLV 10	8.18	153	1445	102.92		0	0	8333	0			0	No, $V_u < V$
SLV 3	5.07	-4380	860	1268.45		0	0	8333	0			0	No, $V_u < V$
SLV 3	8.18	-2587	-1597	-156.13		15463	0.5576	11426	1911			1.2	Si
SLV 6	5.07	-5864	-24	-963.49		56902	0.3435	16250	1675			70.13	Si
SLV 6	8.18	1231	575	154.23		0	0	8333	0			0	No, $V_u < V$
SLV 9	5.07	-6512	-579	-1640.27		268580	0.0808	16250	394			0.68	No, $V_u < V$
SLV 9	8.18	153	1445	102.92		0	0	8333	0			0	No, $V_u < V$
SLV 8	5.07	-4744	340	1255.53		371909	0.0425	16250	207			0.61	No, $V_u < V$
SLV 8	8.18	-6578	-1205	-415.34		39322	0.5576	16198	2710			2.25	Si
SLV 5	5.07	-5864	-24	-963.49		56902	0.3435	16250	1675			70.13	Si
SLV 5	8.18	1231	575	154.23		0	0	8333	0			0	No, $V_u < V$

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 4	143750	0.39	18164	-3039	60.91	388.03	6.37	Si
SLV 3	143750	0.39	18164	-3039	60.91	388.03	6.37	Si
SLV 1	143750	0.39	18984	-3176	60.91	402.35	6.61	Si
SLV 2	143750	0.39	18984	-3176	60.91	402.35	6.61	Si
SLV 8	143750	0.39	24949	-4174	60.91	498.22	8.18	Si
SLV 7	143750	0.39	24949	-4174	60.91	498.22	8.18	Si
SLV 5	143750	0.39	27682	-4631	60.91	537.26	8.82	Si
SLV 6	143750	0.39	27682	-4631	60.91	537.26	8.82	Si
SLV 12	143750	0.39	31585	-5284	60.91	587.69	9.65	Si
SLV 11	143750	0.39	31585	-5284	60.91	587.69	9.65	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0702

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 5	2077	-5864	-49	0	0	0	0	7.18311	No, Trazione
SLV 2	-1374	-4715	-112	0	226.2	0.908	0	8.27253	No
SLV 9	1942	-6512	12	0	0	0	0	7.18311	No, Trazione
SLV 1	-1374	-4715	-112	0	226.2	0.908	0	8.27253	No
SLV 6	2077	-5864	-49	0	0	0	0	7.18311	No, Trazione
SLV 10	1942	-6512	12	0	0	0	0	7.18311	No, Trazione
SLV 13	-1824	-6877	92	0.013	271.1	0.919	0.20146	8.27253	No
SLV 14	-1824	-6877	92	0.013	271.1	0.919	0.20146	8.27253	No
SLV 3	-4467	-4380	-105	0.026	538.6	0.954	0.39252	8.27253	No
SLV 4	-4467	-4380	-105	0.026	538.6	0.954	0.39252	8.27253	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.869	SLU 83	Si
V_SLU	8.587	SLU 84	Si
PF_SLV	0	SLV 10	No
V_SLV	0	SLV 3	No
PFFP_SLV	6.37	SLV 3	Si
R_SLV	0	SLV 10	No



Maschio 155

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.448	-3.359	-11.003	-3.359	L4	L5	1.555	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ ₀	f _{v0}	μ	φ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLU 77	5.07	-19966	3048.46	45856	6784.66	2.226	Si
SLU 77	7.17	-17876	-2125.11	41058	6893.44	3.244	Si
SLU 81	5.07	-19859	3181.22	45610	6794.87	2.136	Si
SLU 81	7.17	-17770	-2167.73	40812	6893.86	3.18	Si
SLU 76	5.07	-20081	3168.41	46122	6773.04	2.138	Si
SLU 76	7.17	-17992	-2288.73	41323	6892.42	3.011	Si
SLU 73	5.07	-19719	3130.03	45289	6807.47	2.175	Si
SLU 73	7.17	-17630	-2252.7	40491	6893.65	3.06	Si
SLU 75	5.07	-19989	3120.54	45909	6782.36	2.173	Si
SLU 75	7.17	-17900	-2223.57	41111	6893.28	3.1	Si
SLU 78	5.07	-20351	3158.92	46742	6743.64	2.135	Si
SLU 78	7.17	-18262	-2259.59	41944	6887.76	3.048	Si
SLU 80	5.07	-20187	3133.15	46363	6761.96	2.158	Si
SLU 80	7.17	-18097	-2235.1	41565	6890.98	3.083	Si
SLU 84	5.07	-20607	3330.06	47329	6712.87	2.016	Si
SLU 84	7.17	-18518	-2338.24	42531	6880.4	2.943	Si
SLU 82	5.07	-20245	3291.68	46496	6755.66	2.052	Si
SLU 82	7.17	-18155	-2302.21	41698	6889.98	2.993	Si
SLU 83	5.07	-20221	3219.6	46443	6758.21	2.099	Si
SLU 83	7.17	-18132	-2203.75	41645	6890.4	3.127	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLV 2	5.07	-22667	9079.37	52060	10114.73	1.114	Si
SLV 2	7.17	-20694	-6348.29	47528	9831	1.549	Si
SLV 14	5.07	-6916	-5172.82	15885	4678.23	0.904	No, M>Mu
SLV 14	7.17	-5167	3406.61	11867	3627.03	1.065	Si
SLV 15	5.07	-4133	-5306.09	0	0	0	No, e>l/2
SLV 15	7.17	-2903	3683.14	0	0	0	No, e>l/2
SLV 8	5.07	-11124	3802.36	25548	6840.23	1.799	Si
SLV 8	7.17	-10353	-2334.93	23779	6483.23	2.777	Si
SLV 13	5.07	-6916	-5172.82	15885	4678.23	0.904	No, M>Mu
SLV 13	7.17	-5167	3406.61	11867	3627.03	1.065	Si
SLV 3	5.07	-19884	8946.11	45667	9681.51	1.082	Si
SLV 3	7.17	-18430	-6071.76	42328	9365.18	1.542	Si
SLV 16	5.07	-4133	-5306.09	0	0	0	No, e>l/2
SLV 16	7.17	-2903	3683.14	0	0	0	No, e>l/2
SLV 4	5.07	-19884	8946.11	45667	9681.51	1.082	Si
SLV 4	7.17	-18430	-6071.76	42328	9365.18	1.542	Si
SLV 7	5.07	-11124	3802.36	25548	6840.23	1.799	Si
SLV 7	7.17	-10353	-2334.93	23779	6483.23	2.777	Si
SLV 1	5.07	-22667	9079.37	52060	10114.73	1.114	Si
SLV 1	7.17	-20694	-6348.29	47528	9831	1.549	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 84	5.07	-20607	2711	3330.06		47329	1.555	10833	4717			1.74	Si
SLU 84	7.17	-18518	2711	-2338.24		42531	1.555	10833	4717			1.74	Si
SLU 82	5.07	-20245	2676	3291.68		46496	1.555	10833	4717			1.76	Si
SLU 82	7.17	-18155	2676	-2302.21		41698	1.555	10833	4717			1.76	Si
SLU 83	5.07	-20221	2595	3219.6		46443	1.555	10833	4717			1.82	Si
SLU 83	7.17	-18132	2595	-2203.75		41645	1.555	10833	4717			1.82	Si
SLU 75	5.07	-19989	2557	3120.54		45909	1.555	10833	4717			1.84	Si
SLU 75	7.17	-17900	2557	-2223.57		41111	1.555	10833	4717			1.84	Si
SLU 73	5.07	-19719	2575	3130.03		45289	1.555	10833	4717			1.83	Si
SLU 73	7.17	-17630	2575	-2252.7		40491	1.555	10833	4717			1.83	Si
SLU 42	5.07	-17506	2456	3033.41		40206	1.555	10833	4717			1.92	Si
SLU 42	7.17	-15886	2456	-2104.46		36487	1.555	10420	4537			1.85	Si
SLU 81	5.07	-19859	2559	3181.22		45610	1.555	10833	4717			1.84	Si
SLU 81	7.17	-17770	2559	-2167.73		40812	1.555	10833	4717			1.84	Si
SLU 78	5.07	-20351	2592	3158.92		46742	1.555	10833	4717			1.82	Si
SLU 78	7.17	-18262	2592	-2259.59		41944	1.555	10833	4717			1.82	Si
SLU 80	5.07	-20187	2568	3133.15		46363	1.555	10833	4717			1.84	Si
SLU 80	7.17	-18097	2568	-2235.1		41565	1.555	10833	4717			1.84	Si
SLU 76	5.07	-20081	2611	3168.41		46122	1.555	10833	4717			1.81	Si
SLU 76	7.17	-17992	2611	-2288.73		41323	1.555	10833	4717			1.81	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 6	5.07	-20401	4567	4246.58		46857	1.555	16250	7075			1.55	Si
SLV 6	7.17	-17901	3835	-3256.7		41114	1.555	16250	7075			1.85	Si
SLV 16	5.07	-4133	-4681	-5306.09		0	0	8333	0			0	No, Vu<V
SLV 16	7.17	-2903	-4202	3683.14		0	0	8333	0			0	No, Vu<V
SLV 4	5.07	-19884	7002	8946.11		72261	0.9827	16250	4471			0.64	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 4	7.17	-18430	6911	-6071.76		48969	1.3441	16250	6116			0.88	No, Vu<V
SLV 13	5.07	-6916	-3918	-5172.82		278495	0.0887	16250	404			0.1	No, Vu<V
SLV 13	7.17	-5167	-3826	3406.61		52051	0.3545	16250	1613			0.42	No, Vu<V
SLV 3	5.07	-19884	7002	8946.11		72261	0.9827	16250	4471			0.64	No, Vu<V
SLV 3	7.17	-18430	6911	-6071.76		48969	1.3441	16250	6116			0.88	No, Vu<V
SLV 5	5.07	-20401	4567	4246.58		46857	1.555	16250	7075			1.55	Si
SLV 5	7.17	-17901	3835	-3256.7		41114	1.555	16250	7075			1.85	Si
SLV 14	5.07	-6916	-3918	-5172.82		278495	0.0887	16250	404			0.1	No, Vu<V
SLV 14	7.17	-5167	-3826	3406.61		52051	0.3545	16250	1613			0.42	No, Vu<V
SLV 15	5.07	-4133	-4681	-5306.09		0	0	8333	0			0	No, Vu<V
SLV 15	7.17	-2903	-4202	3683.14		0	0	8333	0			0	No, Vu<V
SLV 1	5.07	-22667	7765	9079.37		71587	1.1308	16250	5145			0.66	No, Vu<V
SLV 1	7.17	-20694	7286	-6348.29		52335	1.4122	16250	6425			0.88	No, Vu<V
SLV 2	5.07	-22667	7765	9079.37		71587	1.1308	16250	5145			0.66	No, Vu<V
SLV 2	7.17	-20694	7286	-6348.29		52335	1.4122	16250	6425			0.88	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 16	143750	0.39	7211	-3139	162.32	413.59	2.55	Si
SLV 15	143750	0.39	7211	-3139	162.32	413.59	2.55	Si
SLV 13	143750	0.39	12434	-5414	162.32	680.78	4.19	Si
SLV 14	143750	0.39	12434	-5414	162.32	680.78	4.19	Si
SLV 11	143750	0.39	13709	-5969	162.32	741.88	4.57	Si
SLV 12	143750	0.39	13709	-5969	162.32	741.88	4.57	Si
SLV 7	143750	0.39	24502	-10668	162.32	1194.03	7.36	Si
SLV 8	143750	0.39	24502	-10668	162.32	1194.03	7.36	Si
SLV 9	143750	0.39	31119	-13549	162.32	1413.77	8.71	Si
SLV 10	143750	0.39	31119	-13549	162.32	1413.77	8.71	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 12	-7297	-6398	1008	0	962.7	0.937	0	7.63299	No
SLV 11	-7297	-6398	1008	0	962.7	0.937	0	7.63299	No
SLV 5	-8983	-20401	-1009	0	1133.5	0.945	0	7.63299	No
SLV 2	-8517	-22667	-697	0	1086.3	0.943	0	8.88274	No
SLV 7	-7379	-11124	749	0	971	0.937	0	7.63299	No
SLV 10	-8902	-15676	-750	0	1125.2	0.945	0	7.63299	No
SLV 9	-8902	-15676	-750	0	1125.2	0.945	0	7.63299	No
SLV 8	-7379	-11124	749	0	971	0.937	0	7.63299	No
SLV 1	-8517	-22667	-697	0	1086.3	0.943	0	8.88274	No
SLV 6	-8983	-20401	-1009	0	1133.5	0.945	0	7.63299	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.016	SLU 84	Si
V_SLU	1.74	SLU 84	Si
PF_SLV	0	SLV 15	No
V_SLV	0	SLV 15	No
PFFP_SLV	2.548	SLV 15	Si
R_SLV	0	SLV 1	No

Maschio 156

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-6.268	-3.359	-6.268	1.046	L4	L5	4.405	0.14	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 42	5.07	-29023	1534.31	47061	26992.25	17.592	Si
SLU 42	8.62	-18620	3319.8	30194	25809.98	7.775	Si
SLU 31	5.07	-27240	953.68	44171	27463.28	28.797	Si
SLU 31	8.62	-17180	3272.36	27858	24898.25	7.609	Si
SLU 82	5.07	-33335	1657.88	54054	24700.22	14.899	Si
SLU 82	8.62	-21226	3670.52	34419	26996.81	7.355	Si
SLU 73	5.07	-32136	1111.72	52110	25501.22	22.939	Si
SLU 73	8.62	-20344	3674.05	32988	26661.7	7.257	Si
SLU 75	5.07	-32866	1596.08	53293	25028.59	15.681	Si
SLU 75	8.62	-21274	3641.09	34497	27013.19	7.419	Si
SLU 84	5.07	-33918	1692.35	55000	24265.09	14.338	Si
SLU 84	8.62	-21785	3721.48	35324	27173.74	7.302	Si
SLU 34	5.07	-27824	988.15	45117	27339.81	27.668	Si
SLU 34	8.62	-17738	3323.33	28763	25273.36	7.605	Si
SLU 78	5.07	-33449	1630.55	54239	24617.45	15.098	Si
SLU 78	8.62	-21833	3692.05	35403	27187.75	7.364	Si
SLU 80	5.07	-33076	1550.55	53634	24883.86	16.048	Si
SLU 80	8.62	-21459	3580.31	34797	27074.02	7.562	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 76	5.07	-32719	1146.19	53055	25127.41	21.923	Si
SLU 76	8.62	-20902	3725.01	33894	26881.83	7.217	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 5	5.07	-27633	-3443.69	44808	38543.05	11.192	Si
SLV 5	8.62	-15910	3766.83	25799	27643.7	7.339	Si
SLV 3	5.07	-24983	5092.03	40510	36781.5	7.223	Si
SLV 3	8.62	-13848	4162.54	22455	24895.42	5.981	Si
SLV 7	5.07	-18882	7310.66	30618	31166.81	4.263	Si
SLV 7	8.62	-12553	1883.57	20355	23042.02	12.233	Si
SLV 11	5.07	-16279	5986.03	26396	28108.09	4.696	Si
SLV 11	8.62	-12450	495.15	20188	22890.39	46.229	Si
SLV 1	5.07	-27608	1865.73	44767	38528.18	20.65	Si
SLV 1	8.62	-14856	4727.52	24089	26268.84	5.557	Si
SLV 6	5.07	-27633	-3443.69	44808	38543.05	11.192	Si
SLV 6	8.62	-15910	3766.83	25799	27643.7	7.339	Si
SLV 4	5.07	-24983	5092.03	40510	36781.5	7.223	Si
SLV 4	8.62	-13848	4162.54	22455	24895.42	5.981	Si
SLV 2	5.07	-27608	1865.73	44767	38528.18	20.65	Si
SLV 2	8.62	-14856	4727.52	24089	26268.84	5.557	Si
SLV 8	5.07	-18882	7310.66	30618	31166.81	4.263	Si
SLV 8	8.62	-12553	1883.57	20355	23042.02	12.233	Si
SLV 12	5.07	-16279	5986.03	26396	28108.09	4.696	Si
SLV 12	8.62	-12450	495.15	20188	22890.39	46.229	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 34	5.07	-27824	-1818	988.15		45117	4.405	10833	6681			3.68	Si
SLU 34	8.62	-17738	-1133	3323.33		28763	4.405	9391	5791			5.11	Si
SLU 47	5.07	-26113	-1820	296.08		42342	4.405	10833	6681			3.67	Si
SLU 47	8.62	-16709	-1139	2811.92		27095	4.405	9168	5654			4.96	Si
SLU 5	5.07	-21217	-1868	138.04		34404	4.405	10143	6255			3.35	Si
SLU 5	8.62	-13545	-1184	2410.24		21964	4.405	8484	5232			4.42	Si
SLU 13	5.07	-24543	-1841	549.35		39797	4.405	10833	6681			3.63	Si
SLU 13	8.62	-15608	-1157	2858.56		25308	4.405	8930	5507			4.76	Si
SLU 26	5.07	-24498	-1844	576.84		39724	4.405	10833	6681			3.62	Si
SLU 26	8.62	-15676	-1161	2875		25419	4.405	8945	5516			4.75	Si
SLU 2	5.07	-20634	-1873	103.57		33458	4.405	10017	6177			3.3	Si
SLU 2	8.62	-12987	-1190	2359.27		21058	4.405	8363	5158			4.33	Si
SLU 44	5.07	-25529	-1825	261.61		41397	4.405	10833	6681			3.66	Si
SLU 44	8.62	-16151	-1145	2760.96		26189	4.405	9047	5580			4.87	Si
SLU 23	5.07	-23915	-1850	542.37		38779	4.405	10726	6615			3.58	Si
SLU 23	8.62	-15117	-1166	2824.04		24513	4.405	8824	5442			4.67	Si
SLU 31	5.07	-27240	-1823	953.68		44171	4.405	10833	6681			3.66	Si
SLU 31	8.62	-17180	-1139	3272.36		27858	4.405	9270	5717			5.02	Si
SLU 10	5.07	-23959	-1847	514.88		38851	4.405	10736	6621			3.59	Si
SLU 10	8.62	-15049	-1163	2807.6		24403	4.405	8809	5433			4.67	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 12	5.07	-16279	11789	5986.03		26396	4.405	13613	8395			0.71	No, Vu<V
SLV 12	8.62	-12450	10439	495.15		20188	4.405	12371	7629			0.73	No, Vu<V
SLV 15	5.07	-16304	3960	676.61		26437	4.405	13621	8400			2.12	Si
SLV 15	8.62	-13505	3785	-465.54		21899	4.405	12713	7840			2.07	Si
SLV 7	5.07	-18882	11603	7310.66		30618	4.405	14457	8916			0.77	No, Vu<V
SLV 7	8.62	-12553	10096	1883.57		20355	4.405	12404	7650			0.76	No, Vu<V
SLV 5	5.07	-27633	-11388	-3443.69		44808	4.405	16250	10021			0.88	No, Vu<V
SLV 5	8.62	-15910	-10056	3766.83		25799	4.405	13493	8321			0.83	No, Vu<V
SLV 9	5.07	-25030	-11202	-4768.31		40586	4.405	16250	10021			0.89	No, Vu<V
SLV 9	8.62	-15807	-9713	2378.41		25632	4.405	13460	8301			0.85	No, Vu<V
SLV 10	5.07	-25030	-11202	-4768.31		40586	4.405	16250	10021			0.89	No, Vu<V
SLV 10	8.62	-15807	-9713	2378.41		25632	4.405	13460	8301			0.85	No, Vu<V
SLV 16	5.07	-16304	3960	676.61		26437	4.405	13621	8400			2.12	Si
SLV 16	8.62	-13505	3785	-465.54		21899	4.405	12713	7840			2.07	Si
SLV 11	5.07	-16279	11789	5986.03		26396	4.405	13613	8395			0.71	No, Vu<V
SLV 11	8.62	-12450	10439	495.15		20188	4.405	12371	7629			0.73	No, Vu<V
SLV 8	5.07	-18882	11603	7310.66		30618	4.405	14457	8916			0.77	No, Vu<V
SLV 8	8.62	-12553	10096	1883.57		20355	4.405	12404	7650			0.76	No, Vu<V
SLV 6	5.07	-27633	-11388	-3443.69		44808	4.405	16250	10021			0.88	No, Vu<V
SLV 6	8.62	-15910	-10056	3766.83		25799	4.405	13493	8321			0.83	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 12	143750	0.39	25654	-15821	245.94	874.94	3.56	Si
SLV 11	143750	0.39	25654	-15821	245.94	874.94	3.56	Si
SLV 7	143750	0.39	25945	-16000	245.94	882.19	3.59	Si
SLV 8	143750	0.39	25945	-16000	245.94	882.19	3.59	Si
SLV 16	143750	0.39	28145	-17357	245.94	935.13	3.8	Si
SLV 15	143750	0.39	28145	-17357	245.94	935.13	3.8	Si
SLV 3	143750	0.39	29115	-17955	245.94	957.38	3.89	Si
SLV 4	143750	0.39	29115	-17955	245.94	957.38	3.89	Si
SLV 13	143750	0.39	30571	-18853	245.94	989.54	4.02	Si
SLV 14	143750	0.39	30571	-18853	245.94	989.54	4.02	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.03 Ta = 0.1503

Comb.	N top	N base	V orto	σ_0	M*	e*	a0*	aLim	Verifica
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Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 14	-14512	-18929	-24	0.021	1787	0.95	0.31575	16.59208	No
SLV 13	-14512	-18929	-24	0.021	1787	0.95	0.31575	16.59208	No
SLV 4	-13848	-24983	23	0.021	1719.6	0.948	0.31721	16.59208	No
SLV 3	-13848	-24983	23	0.021	1719.6	0.948	0.31721	16.59208	No
SLV 10	-15807	-25030	-25	0.02	1918.5	0.953	0.3125	16.14305	No
SLV 9	-15807	-25030	-25	0.02	1918.5	0.953	0.3125	16.14305	No
SLV 2	-14856	-27608	12	0.021	1821.8	0.951	0.32618	16.59208	No
SLV 1	-14856	-27608	12	0.021	1821.8	0.951	0.32618	16.59208	No
SLV 8	-12553	-18882	25	0.021	1588.2	0.945	0.31827	16.14305	No
SLV 7	-12553	-18882	25	0.021	1588.2	0.945	0.31827	16.14305	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.217	SLU 76	Si
V_SLU	3.297	SLU 2	Si
PF_SLV	4.263	SLV 7	Si
V_SLV	0.712	SLV 11	No
PFFP_SLV	3.557	SLV 11	Si
R_SLV	0.019	SLV 13	No

Maschio 157

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-7.413	-3.359	-8.548	-3.359	L4	L5	1.135	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	$\tau 0$	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLU 52	5.97	-11574	153.62	36418	3631.63	23.64	Si
SLU 52	7.77	-9504	-917.15	29904	3413.35	3.722	Si
SLU 73	5.97	-12703	140.58	39971	3671.51	26.118	Si
SLU 73	7.77	-10530	-980.64	31314	3545.07	3.615	Si
SLU 76	5.97	-12979	143.27	40839	3672.76	25.636	Si
SLU 76	7.77	-10789	-1004.67	33947	3570.96	3.554	Si
SLU 68	5.97	-11810	187.21	37163	3644.62	19.468	Si
SLU 68	7.77	-9753	-962.16	30690	3449.63	3.585	Si
SLU 78	5.97	-13326	31.55	41933	3669.57	116.312	Si
SLU 78	7.77	-11003	-974.5	34622	3590.2	3.684	Si
SLU 47	5.97	-10681	200.26	33610	3560.58	17.78	Si
SLU 47	7.77	-8727	-898.67	27460	3282.94	3.653	Si
SLU 44	5.97	-10405	197.57	32742	3531.53	17.875	Si
SLU 44	7.77	-8468	-874.64	26647	3233.7	3.697	Si
SLU 80	5.97	-13198	26.83	41528	3671.37	136.831	Si
SLU 80	7.77	-10876	-961.09	34221	3579.02	3.724	Si
SLU 55	5.97	-11850	156.31	37287	3646.54	23.329	Si
SLU 55	7.77	-9762	-941.18	30718	3450.87	3.667	Si
SLU 65	5.97	-11534	184.52	36294	3629.24	19.669	Si
SLU 65	7.77	-9495	-938.13	29876	3412.01	3.637	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLV 1	5.97	-7794	3615.01	24524	3535.26	0.978	No, M>Mu
SLV 1	7.77	-11678	-2668.84	36745	4634.1	1.736	Si
SLV 4	5.97	-6498	3071.51	20447	3070.51	1	No, M>Mu
SLV 4	7.77	-9834	-2311.01	30946	4167.6	1.803	Si
SLV 16	5.97	-9903	-3808.69	31161	4186.71	1.099	Si
SLV 16	7.77	-2411	1489.23	0	0	0	No, e>1/2
SLV 11	5.97	-7199	-2034.7	22654	3328.16	1.636	Si
SLV 11	7.77	-2859	576.61	8996	1503.01	2.607	Si
SLV 13	5.97	-11199	-3265.19	35239	4522.48	1.385	Si
SLV 13	7.77	-4254	1131.4	13386	2149.68	1.9	Si
SLV 14	5.97	-11199	-3265.19	35239	4522.48	1.385	Si
SLV 14	7.77	-4254	1131.4	13386	2149.68	1.9	Si
SLV 15	5.97	-9903	-3808.69	31161	4186.71	1.099	Si
SLV 15	7.77	-2411	1489.23	0	0	0	No, e>1/2
SLV 2	5.97	-7794	3615.01	24524	3535.26	0.978	No, M>Mu
SLV 2	7.77	-11678	-2668.84	36745	4634.1	1.736	Si
SLV 3	5.97	-6498	3071.51	20447	3070.51	1	No, M>Mu
SLV 3	7.77	-9834	-2311.01	30946	4167.6	1.803	Si
SLV 12	5.97	-7199	-2034.7	22654	3328.16	1.636	Si
SLV 12	7.77	-2859	576.61	8996	1503.01	2.607	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	$\sigma 0$	σN	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 68	5.97	-11810	560	187.21		37163	1.135	10511	3340			5.96	Si
SLU 68	7.77	-9753	187	-962.16		30690	1.135	9648	3066			16.39	Si
SLU 34	5.97	-10908	522	162.96		34324	1.135	10132	3220			6.17	Si
SLU 34	7.77	-9204	83	-858.58		28961	1.135	9417	2993			36.14	Si
SLU 47	5.97	-10681	534	200.26		33610	1.135	10037	3190			5.98	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 47	7.77	-8727	238	-898.67		27460	1.135	9217	2929			12.29	Si
SLU 44	5.97	-10405	521	-197.57		32742	1.135	9921	3153			6.05	Si
SLU 44	7.77	-8468	237	-874.64		26647	1.135	9108	2895			12.24	Si
SLU 2	5.97	-8335	504	-217.26		26226	1.135	9052	2877			5.71	Si
SLU 2	7.77	-6884	221	-728.55		21660	1.135	8444	2683			12.17	Si
SLU 13	5.97	-9779	495	-176.01		30771	1.135	9658	3069			6.2	Si
SLU 13	7.77	-8177	134	-795.1		25731	1.135	8986	2856			21.3	Si
SLU 26	5.97	-9740	543	-206.91		30648	1.135	9642	3064			5.64	Si
SLU 26	7.77	-8169	171	-816.07		25703	1.135	8983	2855			16.69	Si
SLU 23	5.97	-9464	531	-204.22		29779	1.135	9526	3027			5.7	Si
SLU 23	7.77	-7910	169	-792.04		24890	1.135	8874	2820			16.66	Si
SLU 5	5.97	-8611	517	-219.95		27095	1.135	9168	2914			5.64	Si
SLU 5	7.77	-7142	222	-752.58		22474	1.135	8552	2718			12.22	Si
SLU 65	5.97	-11534	548	-184.52		36294	1.135	10395	3303			6.03	Si
SLU 65	7.77	-9495	185	-938.13		29876	1.135	9539	3032			16.36	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 14	5.97	-11199	-5403	-3265.19		48316	0.8278	16250	3767			0.7	No, Vu<V
SLV 14	7.77	-4254	-2292	1131.4		16795	0.9046	11692	2962			1.29	Si
SLV 16	5.97	-9903	-6056	-3808.69		64457	0.5487	16250	2497			0.41	No, Vu<V
SLV 16	7.77	-2411	-2717	1489.23		0	0	8333	0			0	No, Vu<V
SLV 1	5.97	-7794	6234	3615.01		89498	0.311	16250	1415			0.23	No, Vu<V
SLV 1	7.77	-11678	2627	-2668.84		41014	1.0169	16250	4627			1.76	Si
SLV 4	5.97	-6498	5580	3071.51		81590	0.2844	16250	1294			0.23	No, Vu<V
SLV 4	7.77	-9834	2201	-2311.01		35210	0.9975	15375	4294			1.95	Si
SLV 15	5.97	-9903	-6056	-3808.69		64457	0.5487	16250	2497			0.41	No, Vu<V
SLV 15	7.77	-2411	-2717	1489.23		0	0	8333	0			0	No, Vu<V
SLV 12	5.97	-7199	-2746	-2034.7		30085	0.8546	14350	3434			1.25	Si
SLV 12	7.77	-2859	-1493	576.61		9304	1.0974	10194	3132			2.1	Si
SLV 3	5.97	-6498	5580	3071.51		81590	0.2844	16250	1294			0.23	No, Vu<V
SLV 3	7.77	-9834	2201	-2311.01		35210	0.9975	15375	4294			1.95	Si
SLV 2	5.97	-7794	6234	3615.01		89498	0.311	16250	1415			0.23	No, Vu<V
SLV 2	7.77	-11678	2627	-2668.84		41014	1.0169	16250	4627			1.76	Si
SLV 13	5.97	-11199	-5403	-3265.19		48316	0.8278	16250	3767			0.7	No, Vu<V
SLV 13	7.77	-4254	-2292	1131.4		16795	0.9046	11692	2962			1.29	Si
SLV 11	5.97	-7199	-2746	-2034.7		30085	0.8546	14350	3434			1.25	Si
SLV 11	7.77	-2859	-1493	576.61		9304	1.0974	10194	3132			2.1	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 7	143750	0.39	18072	-5743	118.48	685.14	5.78	Si
SLV 8	143750	0.39	18072	-5743	118.48	685.14	5.78	Si
SLV 4	143750	0.39	19129	-6079	118.48	717.86	6.06	Si
SLV 3	143750	0.39	19129	-6079	118.48	717.86	6.06	Si
SLV 11	143750	0.39	21278	-6762	118.48	781.83	6.6	Si
SLV 12	143750	0.39	21278	-6762	118.48	781.83	6.6	Si
SLV 1	143750	0.39	23241	-7386	118.48	837.36	7.07	Si
SLV 2	143750	0.39	23241	-7386	118.48	837.36	7.07	Si
SLV 15	143750	0.39	29815	-9475	118.48	1002.84	8.46	Si
SLV 16	143750	0.39	29815	-9475	118.48	1002.84	8.46	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 16	-2305	-3178	80	0.027	399.6	0.904	0.43825	8.88274	No
SLV 15	-2305	-3178	80	0.027	399.6	0.904	0.43825	8.88274	No
SLV 14	-3523	-5198	88	0.029	520.9	0.92	0.45592	8.88274	No
SLV 13	-3523	-5198	88	0.029	520.9	0.92	0.45592	8.88274	No
SLV 4	-8020	-10751	-92	0.034	975.9	0.952	0.51336	8.88274	No
SLV 3	-8020	-10751	-92	0.034	975.9	0.952	0.51336	8.88274	No
SLV 1	-9238	-12770	-85	0.035	1099.6	0.957	0.53241	8.88274	No
SLV 2	-9238	-12770	-85	0.035	1099.6	0.957	0.53241	8.88274	No
SLV 9	-6944	-10204	36	0.04	866.6	0.947	0.61218	7.63299	No
SLV 10	-6944	-10204	36	0.04	866.6	0.947	0.61218	7.63299	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.554	SLU 76	Si
V_SLU	5.639	SLU 26	Si
PF_SLV	0	SLV 15	No
V_SLV	0	SLV 15	No
PFFP_SLV	5.783	SLV 7	Si
R_SLV	0.049	SLV 15	No

Maschio 158

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.158	1.046	-5.158	5.811	L4	L5	4.765	0.14	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

Sismicad 12.19 - Licenza assegnata a Sidel ingegneria Srl - Via Isonzo, 13 - Villanova di Castenaso (BO)



fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 18	5.07	-26568	-1237	39827	32350.89	26.153	Si
SLU 18	8.62	-17574	-1878.4	26344	28328.98	15.081	Si
SLU 61	5.07	-31800	-1213.71	47669	31427.03	25.893	Si
SLU 61	8.62	-21274	-1978.25	31890	30842.27	15.591	Si
SLU 40	5.07	-29847	-1569.08	44741	32052.71	20.428	Si
SLU 40	8.62	-19777	-2394.16	29646	29970.1	12.518	Si
SLU 42	5.07	-30756	-1485.24	46104	31803.16	21.413	Si
SLU 42	8.62	-20937	-1943.35	31385	30663.34	15.779	Si
SLU 39	5.07	-30005	-1627.29	44978	32014.46	19.674	Si
SLU 39	8.62	-19801	-2361.01	29683	29985.93	12.7	Si
SLU 81	5.07	-35395	-1662.2	53058	29401.01	17.688	Si
SLU 81	8.62	-23526	-2427.71	35266	31784.36	13.092	Si
SLU 73	5.07	-33729	-1362.82	50560	30480.92	22.366	Si
SLU 73	8.62	-22701	-2151.6	34029	31490.93	14.636	Si
SLU 82	5.07	-35237	-1604	52821	29514.06	18.4	Si
SLU 82	8.62	-23501	-2460.86	35229	31776.52	12.913	Si
SLU 19	5.07	-26410	-1178.79	39590	32341.43	27.436	Si
SLU 19	8.62	-17549	-1911.55	26307	28308.37	14.809	Si
SLU 31	5.07	-28339	-1327.91	42481	32306.9	24.329	Si
SLU 31	8.62	-18977	-2084.9	28446	29423.13	14.112	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 3	5.07	-24174	5523.42	36238	40513.73	7.335	Si
SLV 3	8.62	-15540	309.69	23295	29965.48	96.761	Si
SLV 10	5.07	-18513	-7574.09	27751	34089.11	4.501	Si
SLV 10	8.62	-12294	-2513.95	18429	24873.2	9.894	Si
SLV 4	5.07	-24174	5523.42	36238	40513.73	7.335	Si
SLV 4	8.62	-15540	309.69	23295	29965.48	96.761	Si
SLV 6	5.07	-17704	-4737.16	26539	33018.88	6.97	Si
SLV 6	8.62	-11156	-1836.18	16723	22940.74	12.494	Si
SLV 7	5.07	-29109	5956.41	43635	44585.28	7.485	Si
SLV 7	8.62	-19945	248.63	29898	35891.11	144.356	Si
SLV 13	5.07	-23447	-7141.11	35148	39793.83	5.572	Si
SLV 13	8.62	-16699	-2575.01	25032	31634.56	12.285	Si
SLV 9	5.07	-18513	-7574.09	27751	34089.11	4.501	Si
SLV 9	8.62	-12294	-2513.95	18429	24873.2	9.894	Si
SLV 14	5.07	-23447	-7141.11	35148	39793.83	5.572	Si
SLV 14	8.62	-16699	-2575.01	25032	31634.56	12.285	Si
SLV 5	5.07	-17704	-4737.16	26539	33018.88	6.97	Si
SLV 5	8.62	-11156	-1836.18	16723	22940.74	12.494	Si
SLV 8	5.07	-29109	5956.41	43635	44585.28	7.485	Si
SLV 8	8.62	-19945	248.63	29898	35891.11	144.356	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 84	5.07	-36146	1412	-1520.15		54183	4.765	10833	7227			5.12	Si
SLU 84	8.62	-24662	482	-2010.05		36968	4.765	10485	6994			14.52	Si
SLU 74	5.07	-35238	1314	-1489.79		52823	4.765	10833	7227			5.5	Si
SLU 74	8.62	-24127	446	-1908.28		36168	4.765	10378	6923			15.52	Si
SLU 75	5.07	-35080	1331	-1431.58		52585	4.765	10833	7227			5.43	Si
SLU 75	8.62	-24103	452	-1941.43		36131	4.765	10373	6920			15.3	Si
SLU 73	5.07	-33729	1332	-1362.82		50560	4.765	10833	7227			5.43	Si
SLU 73	8.62	-22701	463	-2151.6		34029	4.765	10093	6733			14.54	Si
SLU 83	5.07	-36304	1395	-1578.35		54421	4.765	10833	7227			5.18	Si
SLU 83	8.62	-24686	475	-1976.89		37005	4.765	10490	6998			14.72	Si
SLU 81	5.07	-35395	1417	-1662.2		53058	4.765	10833	7227			5.1	Si
SLU 81	8.62	-23526	503	-2427.71		35266	4.765	10258	6843			13.6	Si
SLU 78	5.07	-35989	1309	-1347.74		53948	4.765	10833	7227			5.52	Si
SLU 78	8.62	-25263	425	-1490.62		37870	4.765	10605	7075			16.66	Si
SLU 76	5.07	-34638	1310	-1278.98		51923	4.765	10833	7227			5.52	Si
SLU 76	8.62	-23861	435	-1700.79		35769	4.765	10325	6888			15.83	Si
SLU 82	5.07	-35237	1434	-1604		52821	4.765	10833	7227			5.04	Si
SLU 82	8.62	-23501	509	-2460.86		35229	4.765	10253	6840			13.43	Si
SLU 40	5.07	-29847	1297	-1569.08		44741	4.765	10833	7227			5.57	Si
SLU 40	8.62	-19777	475	-2394.16		29646	4.765	9508	6343			13.36	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 7	5.07	-29109	10875	5956.41		43635	4.765	16250	10840			1	No, Vu<V
SLV 7	8.62	-19945	10077	248.63		29898	4.765	14313	9548			0.95	No, Vu<V
SLV 10	5.07	-18513	-9218	-7574.09		27751	4.765	13884	9262			1	Si
SLV 10	8.62	-12294	-9533	-2513.95		18429	4.765	12019	8018			0.84	No, Vu<V
SLV 12	5.07	-29917	13744	3119.47		44847	4.765	16250	10840			0.79	No, Vu<V
SLV 12	8.62	-21083	12090	-429.15		31604	4.765	14654	9776			0.81	No, Vu<V
SLV 9	5.07	-18513	-9218	-7574.09		27751	4.765	13884	9262			1	Si
SLV 9	8.62	-12294	-9533	-2513.95		18429	4.765	12019	8018			0.84	No, Vu<V
SLV 6	5.07	-17704	-12088	-4737.16		26539	4.765	13641	9100			0.75	No, Vu<V
SLV 6	8.62	-11156	-11546	-1836.18		16723	4.765	11678	7790			0.67	No, Vu<V
SLV 11	5.07	-29917	13744	3119.47		44847	4.765	16250	10840			0.79	No, Vu<V
SLV 11	8.62	-21083	12090	-429.15		31604	4.765	14654	9776			0.81	No, Vu<V
SLV 15	5.07	-26869	9056	-3933.04		40277	4.765	16250	10840			1.2	Si
SLV 15	8.62	-19336	6870	-1949.57		28985	4.765	14130	9426			1.37	Si
SLV 5	5.07	-17704	-12088	-4737.16		26539	4.765	13641	9100			0.75	No, Vu<V
SLV 5	8.62	-11156	-11546	-1836.18		16723	4.765	11678	7790			0.67	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scor.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 16	5.07	-26869	9056	-3933.04		40277	4.765	16250	10840			1.2	Si
SLV 16	8.62	-19336	6870	-1949.57		28985	4.765	14130	9426			1.37	Si
SLV 8	5.07	-29109	10875	5956.41		43635	4.765	16250	10840			1	No, Vu<V
SLV 8	8.62	-19945	10077	248.63		29898	4.765	14313	9548			0.95	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 9	143750	0.39	21633	-14432	266.04	831.35	3.12	Si
SLV 10	143750	0.39	21633	-14432	266.04	831.35	3.12	Si
SLV 6	143750	0.39	22784	-15199	266.04	865.56	3.25	Si
SLV 5	143750	0.39	22784	-15199	266.04	865.56	3.25	Si
SLV 14	143750	0.39	25071	-16725	266.04	930.53	3.5	Si
SLV 13	143750	0.39	25071	-16725	266.04	930.53	3.5	Si
SLV 1	143750	0.39	28908	-19285	266.04	1030.55	3.87	Si
SLV 2	143750	0.39	28908	-19285	266.04	1030.55	3.87	Si
SLV 15	143750	0.39	29169	-19459	266.04	1036.94	3.9	Si
SLV 16	143750	0.39	29169	-19459	266.04	1036.94	3.9	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.03 Ta = 0.1503

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 13	-16699	-23447	35	0.02	2034.7	0.952	0.3069	16.59208	No
SLV 14	-16699	-23447	35	0.02	2034.7	0.952	0.3069	16.59208	No
SLV 15	-19336	-26869	29	0.02	2302.6	0.957	0.30866	16.59208	No
SLV 16	-19336	-26869	29	0.02	2302.6	0.957	0.30866	16.59208	No
SLV 4	-15540	-24174	-34	0.02	1917	0.95	0.30894	16.59208	No
SLV 3	-15540	-24174	-34	0.02	1917	0.95	0.30894	16.59208	No
SLV 2	-12903	-20753	-28	0.021	1649.5	0.943	0.31841	16.59208	No
SLV 1	-12903	-20753	-28	0.021	1649.5	0.943	0.31841	16.59208	No
SLV 7	-19945	-29109	-19	0.021	2364.5	0.958	0.3152	16.14305	No
SLV 8	-19945	-29109	-19	0.021	2364.5	0.958	0.3152	16.14305	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	12.518	SLU 40	Si
V_SLU	5.039	SLU 82	Si
PF_SLV	4.501	SLV 9	Si
V_SLV	0.675	SLV 5	No
PFFP_SLV	3.125	SLV 9	Si
R_SLV	0.018	SLV 13	No

Maschio 159

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.158	5.951	-5.158	6.006	L4	L5	0.055	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fvd	μ	ϕ	fvl,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 57	7.07	-701	18.64	45513	8.51	0.456	No, M>Mu
SLU 57	7.87	-773	24.1	0	0	0	No, e>l/2
SLU 56	7.07	-703	18.64	45643	8.5	0.456	No, M>Mu
SLU 56	7.87	-775	24.12	0	0	0	No, e>l/2
SLU 54	7.07	-657	17.46	42640	8.61	0.493	No, M>Mu
SLU 54	7.87	-732	23.25	0	0	0	No, e>l/2
SLU 58	7.07	-702	18.61	45580	8.5	0.457	No, M>Mu
SLU 58	7.87	-770	23.86	0	0	0	No, e>l/2
SLU 60	7.07	-631	16.58	40948	8.62	0.52	No, M>Mu
SLU 60	7.87	-713	23.12	0	0	0	No, e>l/2
SLU 59	7.07	-700	18.61	45451	8.51	0.457	No, M>Mu
SLU 59	7.87	-769	23.84	0	0	0	No, e>l/2
SLU 1	7.07	-456	12.25	29620	7.98	0.652	No, M>Mu
SLU 1	7.87	-503	15.98	0	0	0	No, e>l/2
SLU 53	7.07	-659	17.46	42770	8.6	0.493	No, M>Mu
SLU 53	7.87	-734	23.27	0	0	0	No, e>l/2
SLU 55	7.07	-654	17.43	42491	8.61	0.494	No, M>Mu
SLU 55	7.87	-727	22.97	0	0	0	No, e>l/2
SLU 61	7.07	-629	16.59	40818	8.62	0.52	No, M>Mu
SLU 61	7.87	-712	23.09	0	0	0	No, e>l/2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 14	7.07	113	1.66	0	0	0	No, Trazione
SLV 14	7.87	-692	37.92	0	0	0	No, e>l/2
SLV 7	7.07	-965	29.48	0	0	0	No, e>l/2
SLV 7	7.87	-664	14.34	43085	11.81	0.823	No, M>Mu
SLV 9	7.07	-3	-3.74	0	0	0	No, e>l/2



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 9	7.87	-417	20.25	0	0	0	No, e>l/2
SLV 11	7.07	-667	25.37	0	0	0	No, e>l/2
SLV 11	7.87	-788	27.36	0	0	0	No, e>l/2
SLV 10	7.07	-3	-3.74	0	0	0	No, e>l/2
SLV 10	7.87	-417	20.25	0	0	0	No, e>l/2
SLV 16	7.07	-86	10.39	0	0	0	No, e>l/2
SLV 16	7.87	-803	40.05	0	0	0	No, e>l/2
SLV 15	7.07	-86	10.39	0	0	0	No, e>l/2
SLV 15	7.87	-803	40.05	0	0	0	No, e>l/2
SLV 12	7.07	-667	25.37	0	0	0	No, e>l/2
SLV 12	7.87	-788	27.36	0	0	0	No, e>l/2
SLV 13	7.07	113	1.66	0	0	0	No, Trazione
SLV 13	7.87	-692	37.92	0	0	0	No, e>l/2
SLV 8	7.07	-965	29.48	0	0	0	No, e>l/2
SLV 8	7.87	-664	14.34	43085	11.81	0.823	No, M>Mu

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 53	7.07	-659	87	17.46		0	0	5556	0			0	No, Vu<V
SLU 53	7.87	-734	-112	23.27		0	0	5556	0			0	No, Vu<V
SLU 61	7.07	-629	83	16.59		671443	0.0033	10833	10			0.12	No, Vu<V
SLU 61	7.87	-712	-111	23.09		0	0	5556	0			0	No, Vu<V
SLU 1	7.07	-456	61	12.25		0	0	5556	0			0	No, Vu<V
SLU 1	7.87	-503	-77	15.98		0	0	5556	0			0	No, Vu<V
SLU 57	7.07	-701	93	18.64		0	0	5556	0			0	No, Vu<V
SLU 57	7.87	-773	-117	24.1		0	0	5556	0			0	No, Vu<V
SLU 58	7.07	-702	92	18.61		0	0	5556	0			0	No, Vu<V
SLU 58	7.87	-770	-115	23.86		0	0	5556	0			0	No, Vu<V
SLU 56	7.07	-703	93	18.64		0	0	5556	0			0	No, Vu<V
SLU 56	7.87	-775	-117	24.12		0	0	5556	0			0	No, Vu<V
SLU 59	7.07	-700	92	18.61		0	0	5556	0			0	No, Vu<V
SLU 59	7.87	-769	-115	23.84		0	0	5556	0			0	No, Vu<V
SLU 54	7.07	-657	87	17.46		0	0	5556	0			0	No, Vu<V
SLU 54	7.87	-732	-112	23.25		0	0	5556	0			0	No, Vu<V
SLU 60	7.07	-631	83	16.58		625757	0.0036	10833	11			0.13	No, Vu<V
SLU 60	7.87	-713	-112	23.12		0	0	5556	0			0	No, Vu<V
SLU 55	7.07	-654	87	17.43		0	0	5556	0			0	No, Vu<V
SLU 55	7.87	-727	-111	22.97		0	0	5556	0			0	No, Vu<V

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 9	7.07	-3	3	-3.74		0	0	8333	0			0	No, Vu<V
SLV 9	7.87	-417	-93	20.25		0	0	8333	0			0	No, Vu<V
SLV 15	7.07	-86	53	10.39		0	0	8333	0			0	No, Vu<V
SLV 15	7.87	-803	-185	40.05		0	0	8333	0			0	No, Vu<V
SLV 10	7.07	-3	3	-3.74		0	0	8333	0			0	No, Vu<V
SLV 10	7.87	-417	-93	20.25		0	0	8333	0			0	No, Vu<V
SLV 12	7.07	-667	109	25.37		0	0	8333	0			0	No, Vu<V
SLV 12	7.87	-788	-132	27.36		0	0	8333	0			0	No, Vu<V
SLV 14	7.07	113	21	1.66		0	0	8333	0			0	No, Vu<V
SLV 14	7.87	-692	-174	37.92		0	0	8333	0			0	No, Vu<V
SLV 8	7.07	-965	126	29.48		0	0	8333	0			0	No, Vu<V
SLV 8	7.87	-664	-74	14.34		134312	0.0176	16250	80			1.08	Si
SLV 7	7.07	-965	126	29.48		0	0	8333	0			0	No, Vu<V
SLV 7	7.87	-664	-74	14.34		134312	0.0176	16250	80			1.08	Si
SLV 13	7.07	113	21	1.66		0	0	8333	0			0	No, Vu<V
SLV 13	7.87	-692	-174	37.92		0	0	8333	0			0	No, Vu<V
SLV 11	7.07	-667	109	25.37		0	0	8333	0			0	No, Vu<V
SLV 11	7.87	-788	-132	27.36		0	0	8333	0			0	No, Vu<V
SLV 16	7.07	-86	53	10.39		0	0	8333	0			0	No, Vu<V
SLV 16	7.87	-803	-185	40.05		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 10	143750	0.39	0	-40	5.87	0	0	No, e>t/2
SLV 14	143750	0.39	0	115	5.87	0	0	No, Trazione
SLV 13	143750	0.39	0	115	5.87	0	0	No, Trazione
SLV 9	143750	0.39	0	-40	5.87	0	0	No, e>t/2
SLV 15	143750	0.39	0	-13	5.87	0	0	No, e>t/2
SLV 16	143750	0.39	0	-13	5.87	0	0	No, e>t/2
SLV 6	143750	0.39	19612	-302	5.87	35.5	6.04	Si
SLV 5	143750	0.39	19612	-302	5.87	35.5	6.04	Si
SLV 12	143750	0.39	30426	-469	5.87	49.26	8.39	Si
SLV 11	143750	0.39	30426	-469	5.87	49.26	8.39	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 4	-299	-569	-24	0	38.1	0.943	0	8.88274	No
SLV 5	121	-192	-3	0	0	0	0	7.63299	No, Trazione
SLV 10	137	-76	11	0	0	0	0	7.63299	No, Trazione
SLV 9	137	-76	11	0	0	0	0	7.63299	No, Trazione
SLV 1	-113	-457	-22	0	19.5	0.905	0	8.88274	No
SLV 3	-299	-569	-24	0	38.1	0.943	0	8.88274	No
SLV 14	-61	-72	24	0	14.4	0.89	0	8.88274	No
SLV 6	121	-192	-3	0	0	0	0	7.63299	No, Trazione
SLV 2	-113	-457	-22	0	19.5	0.905	0	8.88274	No
SLV 13	-61	-72	24	0	14.4	0.89	0	8.88274	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0	SLU 1	No
V_SLU	0	SLU 1	No
PF_SLV	0	SLV 14	No
V_SLV	0	SLV 7	No
PFFP_SLV	0	SLV 14	No
R_SLV	0	SLV 10	No

Maschio 160

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.158	6.506	-5.158	6.661	L4	L5	0.155	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 83	7.07	-2368	-19.27	54566	60.59	3.145	Si
SLU 83	7.87	-2285	-2.16	52643	62.64	29.015	Si
SLU 79	7.07	-2422	-18.16	55806	59.11	3.255	Si
SLU 79	7.87	-2339	-3.74	53883	61.35	16.386	Si
SLU 74	7.07	-2314	-18.61	53310	61.96	3.329	Si
SLU 74	7.87	-2230	-2.29	51387	63.81	27.806	Si
SLU 84	7.07	-2363	-19.25	54441	60.73	3.154	Si
SLU 84	7.87	-2279	-2.12	52518	62.76	29.658	Si
SLU 77	7.07	-2431	-18.52	56007	58.86	3.179	Si
SLU 77	7.87	-2347	-3.48	54084	61.13	17.555	Si
SLU 75	7.07	-2308	-18.6	53185	62.09	3.338	Si
SLU 75	7.87	-2225	-2.25	51262	63.92	28.382	Si
SLU 81	7.07	-2251	-19.36	51869	63.37	3.274	Si
SLU 81	7.87	-2168	-0.97	49946	64.99	66.925	Si
SLU 78	7.07	-2425	-18.51	55883	59.01	3.189	Si
SLU 78	7.87	-2342	-3.44	53959	61.27	17.813	Si
SLU 82	7.07	-2246	-19.35	51744	63.49	3.281	Si
SLU 82	7.87	-2162	-0.93	49821	65.08	70.104	Si
SLU 80	7.07	-2417	-18.15	55681	59.27	3.265	Si
SLU 80	7.87	-2333	-3.7	53758	61.49	16.611	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 13	7.07	-1667	-59.68	38415	88.59	1.484	Si
SLV 13	7.87	-1597	54.26	36802	86.5	1.594	Si
SLV 9	7.07	-851	-24.08	19612	55.38	2.3	Si
SLV 9	7.87	-775	35.71	17866	51.31	1.437	Si
SLV 16	7.07	-2160	-61.38	49776	99.22	1.616	Si
SLV 16	7.87	-2097	40.74	48315	98.25	2.412	Si
SLV 3	7.07	-1472	34.63	33924	82.42	2.38	Si
SLV 3	7.87	-1414	-57.38	32589	80.38	1.401	Si
SLV 15	7.07	-2160	-61.38	49776	99.22	1.616	Si
SLV 15	7.87	-2097	40.74	48315	98.25	2.412	Si
SLV 10	7.07	-851	-24.08	19612	55.38	2.3	Si
SLV 10	7.87	-775	35.71	17866	51.31	1.437	Si
SLV 14	7.07	-1667	-59.68	38415	88.59	1.484	Si
SLV 14	7.87	-1597	54.26	36802	86.5	1.594	Si
SLV 1	7.07	-979	36.34	22563	61.88	1.703	Si
SLV 1	7.87	-915	-43.85	21076	58.66	1.338	Si
SLV 4	7.07	-1472	34.63	33924	82.42	2.38	Si
SLV 4	7.87	-1414	-57.38	32589	80.38	1.401	Si
SLV 2	7.07	-979	36.34	22563	61.88	1.703	Si
SLV 2	7.87	-915	-43.85	21076	58.66	1.338	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 75	7.07	-2308	-20	-18.6		53185	0.155	10833	470			23.01	Si
SLU 75	7.87	-2225	-20	-2.25		51262	0.155	10833	470			23.01	Si
SLU 73	7.07	-2179	-21	-18.33		50204	0.155	10833	470			22.09	Si
SLU 73	7.87	-2095	-21	-1.3		48280	0.155	10833	470			22.09	Si
SLU 83	7.07	-2368	-21	-19.27		54566	0.155	10833	470			21.99	Si
SLU 83	7.87	-2285	-21	-2.16		52643	0.155	10833	470			21.99	Si
SLU 74	7.07	-2314	-20	-18.61		53310	0.155	10833	470			23.05	Si
SLU 74	7.87	-2230	-20	-2.29		51387	0.155	10833	470			23.05	Si
SLU 84	7.07	-2363	-21	-19.25		54441	0.155	10833	470			21.95	Si
SLU 84	7.87	-2279	-21	-2.12		52518	0.155	10833	470			21.95	Si
SLU 40	7.07	-1869	-21	-16.67		43065	0.155	10833	470			22.93	Si
SLU 40	7.87	-1804	-21	-0.27		41574	0.155	10833	470			22.93	Si
SLU 81	7.07	-2251	-23	-19.36		51869	0.155	10833	470			20.46	Si
SLU 81	7.87	-2168	-23	-0.97		49946	0.155	10833	470			20.46	Si
SLU 82	7.07	-2246	-23	-19.35		51744	0.155	10833	470			20.42	Si
SLU 82	7.87	-2162	-23	-0.93		49821	0.155	10833	470			20.42	Si
SLU 39	7.07	-1874	-20	-16.68		43190	0.155	10833	470			22.98	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 39	7.87	-1810	-20	-0.31		41699	0.155	10833	470			22.98	Si
SLU 61	7.07	-2055	-20	-17.29		47357	0.155	10833	470			23.35	Si
SLU 61	7.87	-1973	-20	-1.19		45457	0.155	10833	470			23.35	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 2	7.07	-979	94	36.34		28865	0.1212	14106	479			5.07	Si
SLV 2	7.87	-915	104	-43.85		36840	0.0887	15701	390			3.75	Si
SLV 10	7.07	-851	-76	-24.08		20590	0.1476	12451	515			6.78	Si
SLV 10	7.87	-775	-64	35.71		29351	0.0943	14204	375			5.83	Si
SLV 3	7.07	-1472	111	34.63		33924	0.155	15118	656			5.92	Si
SLV 3	7.87	-1414	112	-57.38		45594	0.1108	16250	504			4.48	Si
SLV 9	7.07	-851	-76	-24.08		20590	0.1476	12451	515			6.78	Si
SLV 9	7.87	-775	-64	35.71		29351	0.0943	14204	375			5.83	Si
SLV 13	7.07	-1667	-138	-59.68		47590	0.1251	16250	569			4.12	Si
SLV 13	7.87	-1597	-140	54.26		43685	0.1306	16250	594			4.25	Si
SLV 14	7.07	-1667	-138	-59.68		47590	0.1251	16250	569			4.12	Si
SLV 14	7.87	-1597	-140	54.26		43685	0.1306	16250	594			4.25	Si
SLV 1	7.07	-979	94	36.34		28865	0.1212	14106	479			5.07	Si
SLV 1	7.87	-915	104	-43.85		36840	0.0887	15701	390			3.75	Si
SLV 15	7.07	-2160	-122	-61.38		52394	0.1473	16250	670			5.5	Si
SLV 15	7.87	-2097	-131	40.74		48315	0.155	16250	705			5.37	Si
SLV 4	7.07	-1472	111	34.63		33924	0.155	15118	656			5.92	Si
SLV 4	7.87	-1414	112	-57.38		45594	0.1108	16250	504			4.48	Si
SLV 16	7.07	-2160	-122	-61.38		52394	0.1473	16250	670			5.5	Si
SLV 16	7.87	-2097	-131	40.74		48315	0.155	16250	705			5.37	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 10	143750	0.39	8585	-373	16.56	48.49	2.93	Si
SLV 9	143750	0.39	8585	-373	16.56	48.49	2.93	Si
SLV 5	143750	0.39	9016	-391	16.56	50.74	3.06	Si
SLV 6	143750	0.39	9016	-391	16.56	50.74	3.06	Si
SLV 13	143750	0.39	15901	-690	16.56	84.04	5.08	Si
SLV 14	143750	0.39	15901	-690	16.56	84.04	5.08	Si
SLV 2	143750	0.39	17339	-752	16.56	90.4	5.46	Si
SLV 1	143750	0.39	17339	-752	16.56	90.4	5.46	Si
SLV 15	143750	0.39	22603	-981	16.56	111.93	6.76	Si
SLV 16	143750	0.39	22603	-981	16.56	111.93	6.76	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 7	352	-2092	-29	0	0	0	0	7.63299	No, Trazione
SLV 10	-2409	1374	30	0	0	0	0	7.63299	No, Trazione
SLV 3	2228	-3094	490	0	0	0	0	8.88274	No, Trazione
SLV 4	2228	-3094	490	0	0	0	0	8.88274	No, Trazione
SLV 6	-535	-87	359	0	76.6	0.924	0	7.63299	No
SLV 9	-2409	1374	30	0	0	0	0	7.63299	No, Trazione
SLV 8	352	-2092	-29	0	0	0	0	7.63299	No, Trazione
SLV 5	-535	-87	359	0	76.6	0.924	0	7.63299	No
SLV 1	1962	-2493	607	0	0	0	0	8.88274	No, Trazione
SLV 2	1962	-2493	607	0	0	0	0	8.88274	No, Trazione

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.145	SLU 83	Si
V_SLU	20.421	SLU 82	Si
PF_SLV	1.338	SLV 1	Si
V_SLV	3.747	SLV 1	Si
PFFP_SLV	2.929	SLV 9	Si
R_SLV	0	SLV 16	No

Maschio 161

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-6.008	-3.359	-6.513	-3.359	L4	L5	0.505	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 84	7.07	-6704	-111.78	47409	707.53	6.33	Si
SLU 84	7.87	-5960	-298.56	42149	726.2	2.432	Si
SLU 76	7.07	-6346	-93.73	44878	719.54	7.677	Si
SLU 76	7.87	-5598	-296.07	39589	726.52	2.454	Si
SLU 78	7.07	-6650	-110.06	47032	709.67	6.448	Si
SLU 78	7.87	-5895	-298.82	41688	726.68	2.432	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 79	7.07	-6696	-127.68	47353	707.86	5.544	Si
SLU 79	7.87	-5964	-281.89	42181	726.16	2.576	Si
SLU 77	7.07	-6768	-128.61	47866	704.77	5.48	Si
SLU 77	7.87	-6031	-285.99	42654	725.46	2.537	Si
SLU 73	7.07	-6192	-90.69	43791	722.98	7.972	Si
SLU 73	7.87	-5459	-288.87	38605	725.11	2.51	Si
SLU 82	7.07	-6550	-108.74	46322	713.38	6.56	Si
SLU 82	7.87	-5821	-291.36	41166	727	2.495	Si
SLU 83	7.07	-6821	-130.33	48242	702.35	5.389	Si
SLU 83	7.87	-6096	-285.73	43115	724.59	2.536	Si
SLU 80	7.07	-6578	-109.13	46520	712.39	6.528	Si
SLU 80	7.87	-5828	-294.72	41216	726.98	2.467	Si
SLU 75	7.07	-6497	-107.02	45946	715.16	6.682	Si
SLU 75	7.87	-5756	-291.62	40705	727.09	2.493	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 2	7.07	-2738	525.5	19362	581.75	1.107	Si
SLV 2	7.87	-3700	-842.63	26168	734.21	0.871	No, M>Mu
SLV 1	7.07	-2738	525.5	19362	581.75	1.107	Si
SLV 1	7.87	-3700	-842.63	26168	734.21	0.871	No, M>Mu
SLV 13	7.07	-7108	-784.56	50269	1056.39	1.346	Si
SLV 13	7.87	-4442	395.73	31412	833.21	2.106	Si
SLV 14	7.07	-7108	-784.56	50269	1056.39	1.346	Si
SLV 14	7.87	-4442	395.73	31412	833.21	2.106	Si
SLV 16	7.07	-6185	-694.59	43742	1002.66	1.444	Si
SLV 16	7.87	-4175	467.95	29524	799.41	1.708	Si
SLV 4	7.07	-1815	615.46	0	0	0	No, e>l/2
SLV 4	7.87	-3433	-770.41	24280	694.63	0.902	No, M>Mu
SLV 3	7.07	-1815	615.46	0	0	0	No, e>l/2
SLV 3	7.87	-3433	-770.41	24280	694.63	0.902	No, M>Mu
SLV 5	7.07	-5344	-37.99	37794	931.99	24.535	Si
SLV 5	7.87	-4271	-493.47	30207	811.87	1.645	Si
SLV 15	7.07	-6185	-694.59	43742	1002.66	1.444	Si
SLV 15	7.87	-4175	467.95	29524	799.41	1.708	Si
SLV 6	7.07	-5344	-37.99	37794	931.99	24.535	Si
SLV 6	7.87	-4271	-493.47	30207	811.87	1.645	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 79	7.07	-6696	-224	-127.68		47353	0.505	10833	1532			6.84	Si
SLU 79	7.87	-5964	237	-281.89		42181	0.505	10833	1532			6.47	Si
SLU 83	7.07	-6821	-238	-130.33		48242	0.505	10833	1532			6.43	Si
SLU 83	7.87	-6096	253	-285.73		43115	0.505	10833	1532			6.06	Si
SLU 39	7.07	-5653	-207	-108.09		39980	0.505	10833	1532			7.4	Si
SLU 39	7.87	-5085	223	-236.15		35963	0.505	10351	1464			6.56	Si
SLU 74	7.07	-6615	-220	-125.57		46779	0.505	10833	1532			6.95	Si
SLU 74	7.87	-5892	236	-278.79		41670	0.505	10833	1532			6.5	Si
SLU 77	7.07	-6768	-223	-128.61		47866	0.505	10833	1532			6.87	Si
SLU 77	7.87	-6031	238	-285.99		42654	0.505	10833	1532			6.43	Si
SLU 84	7.07	-6704	-158	-111.78		47409	0.505	10833	1532			9.67	Si
SLU 84	7.87	-5960	237	-298.56		42149	0.505	10833	1532			6.47	Si
SLU 78	7.07	-6650	-143	-110.06		47032	0.505	10833	1532			10.7	Si
SLU 78	7.87	-5895	222	-298.82		41688	0.505	10833	1532			6.89	Si
SLU 82	7.07	-6550	-156	-108.74		46322	0.505	10833	1532			9.83	Si
SLU 82	7.87	-5821	234	-291.36		41166	0.505	10833	1532			6.54	Si
SLU 41	7.07	-5807	-210	-111.13		41067	0.505	10833	1532			7.31	Si
SLU 41	7.87	-5224	226	-243.35		36946	0.505	10482	1482			6.57	Si
SLU 81	7.07	-6668	-235	-127.29		47155	0.505	10833	1532			6.5	Si
SLU 81	7.87	-5957	250	-278.53		42131	0.505	10833	1532			6.12	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 16	7.07	-6185	-2462	-694.59		52520	0.4206	16250	1914			0.78	No, Vu<V
SLV 16	7.87	-4175	-366	467.95		35396	0.4212	15413	1818			4.96	Si
SLV 4	7.07	-1815	2321	615.46		0	0	8333	0			0	No, Vu<V
SLV 4	7.87	-3433	927	-770.41		145437	0.0843	16250	384			0.41	No, Vu<V
SLV 7	7.07	-2268	817	261.91		19705	0.411	12274	1413			1.73	Si
SLV 7	7.87	-3381	779	-252.72		23913	0.505	13116	1855			2.38	Si
SLV 14	7.07	-7108	-2608	-784.56		59539	0.4264	16250	1940			0.74	No, Vu<V
SLV 14	7.87	-4442	-627	395.73		32360	0.4902	14805	2032			3.24	Si
SLV 2	7.07	-2738	2175	525.5		53821	0.1817	16250	827			0.38	No, Vu<V
SLV 2	7.87	-3700	667	-842.63		177799	0.0743	16250	338			0.51	No, Vu<V
SLV 1	7.07	-2738	2175	525.5		53821	0.1817	16250	827			0.38	No, Vu<V
SLV 1	7.87	-3700	667	-842.63		177799	0.0743	16250	338			0.51	No, Vu<V
SLV 3	7.07	-1815	2321	615.46		0	0	8333	0			0	No, Vu<V
SLV 3	7.87	-3433	927	-770.41		145437	0.0843	16250	384			0.41	No, Vu<V
SLV 15	7.07	-6185	-2462	-694.59		52520	0.4206	16250	1914			0.78	No, Vu<V
SLV 15	7.87	-4175	-366	467.95		35396	0.4212	15413	1818			4.96	Si
SLV 8	7.07	-2268	817	261.91		19705	0.411	12274	1413			1.73	Si
SLV 8	7.87	-3381	779	-252.72		23913	0.505	13116	1855			2.38	Si
SLV 13	7.07	-7108	-2608	-784.56		59539	0.4264	16250	1940			0.74	No, Vu<V
SLV 13	7.87	-4442	-627	395.73		32360	0.4902	14805	2032			3.24	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 7	143750	0.39	13727	-1941	52.71	241.21	4.58	Si
SLV 8	143750	0.39	13727	-1941	52.71	241.21	4.58	Si



Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 12	143750	0.39	16301	-2305	52.71	279.65	5.31	Si
SLV 11	143750	0.39	16301	-2305	52.71	279.65	5.31	Si
SLV 3	143750	0.39	17309	-2448	52.71	294.11	5.58	Si
SLV 4	143750	0.39	17309	-2448	52.71	294.11	5.58	Si
SLV 2	143750	0.39	22955	-3246	52.71	369.04	7	Si
SLV 1	143750	0.39	22955	-3246	52.71	369.04	7	Si
SLV 15	143750	0.39	25891	-3661	52.71	403.94	7.66	Si
SLV 16	143750	0.39	25891	-3661	52.71	403.94	7.66	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 $W_a = 0.05$ $T_a = 0.0752$

Comb.	N top	N base	V orto	α_0	M*	e*	a_0^*	aLim	Verifica
SLV 8	-1749	-1615	-32	0.033	250	0.925	0.51524	7.63299	No
SLV 7	-1749	-1615	-32	0.033	250	0.925	0.51524	7.63299	No
SLV 12	-2045	-1246	-31	0.034	279.8	0.931	0.53459	7.63299	No
SLV 11	-2045	-1246	-31	0.034	279.8	0.931	0.53459	7.63299	No
SLV 4	-1427	-3066	-16	0.041	217.7	0.916	0.64319	8.88274	No
SLV 3	-1427	-3066	-16	0.041	217.7	0.916	0.64319	8.88274	No
SLV 16	-2414	-1836	-10	0.042	317.2	0.938	0.65305	8.88274	No
SLV 15	-2414	-1836	-10	0.042	317.2	0.938	0.65305	8.88274	No
SLV 14	-2435	-2711	6	0.044	319.2	0.938	0.67452	8.88274	No
SLV 13	-2435	-2711	6	0.044	319.2	0.938	0.67452	8.88274	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.432	SLU 78	Si
V_SLU	6.063	SLU 83	Si
PF_SLV	0	SLV 3	No
V_SLV	0	SLV 3	No
PFFP_SLV	4.576	SLV 7	Si
R_SLV	0.068	SLV 7	No

Maschio 162

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-3.183	-3.359	-5.508	-3.359	L4	L5	2.325	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 78	7.07	-20012	2333.15	30741	14484.83	6.208	Si
SLU 78	7.87	-18326	2607.46	28151	13941.76	5.347	Si
SLU 55	7.07	-17015	2185.03	26136	13433.27	6.148	Si
SLU 55	7.87	-15449	2309.35	23731	12727.22	5.511	Si
SLU 84	7.07	-20046	2358.87	30793	14494.37	6.145	Si
SLU 84	7.87	-18358	2617.12	28200	13953.25	5.332	Si
SLU 73	7.07	-18375	2348.17	28226	13959.28	5.945	Si
SLU 73	7.87	-16759	2478.27	25743	13325.16	5.377	Si
SLU 80	7.07	-19756	2312.06	30347	14410.2	6.233	Si
SLU 80	7.87	-18077	2580.8	27768	13851.01	5.367	Si
SLU 82	7.07	-19543	2313.3	30020	14346.16	6.202	Si
SLU 82	7.87	-17863	2550.4	27440	13770.96	5.4	Si
SLU 76	7.07	-18878	2393.73	28999	14133.26	5.904	Si
SLU 76	7.87	-17253	2544.99	26503	13531.42	5.317	Si
SLU 75	7.07	-19509	2287.59	29968	14335.87	6.267	Si
SLU 75	7.87	-17831	2540.74	27391	13758.76	5.415	Si
SLU 77	7.07	-20574	2142.3	31604	14638.07	6.833	Si
SLU 77	7.87	-18820	2561.08	28909	14113.56	5.511	Si
SLU 83	7.07	-20608	2168.01	31656	14646.78	6.756	Si
SLU 83	7.87	-18852	2570.74	28958	14124.36	5.494	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 11	7.07	-6889	1326.96	10582	7314.49	5.512	Si
SLV 11	7.87	-6747	2170.45	10364	7178.33	3.307	Si
SLV 4	7.07	-13690	3738.94	21030	13175.81	3.524	Si
SLV 4	7.87	-10442	-2397.72	16041	10545.64	4.398	Si
SLV 15	7.07	-9767	-578.13	15002	9959.62	17.227	Si
SLV 15	7.87	-10733	5352.84	16486	10793.17	2.016	Si
SLV 3	7.07	-13690	3738.94	21030	13175.81	3.524	Si
SLV 3	7.87	-10442	-2397.72	16041	10545.64	4.398	Si
SLV 7	7.07	-8066	2622.08	12390	8425.61	3.213	Si
SLV 7	7.87	-6660	-154.72	10231	7094.19	45.852	Si
SLV 16	7.07	-9767	-578.13	15002	9959.62	17.227	Si
SLV 16	7.87	-10733	5352.84	16486	10793.17	2.016	Si
SLV 14	7.07	-13411	-915.94	20600	12961.41	14.151	Si
SLV 14	7.87	-14061	5755.43	21600	13456.8	2.338	Si
SLV 8	7.07	-8066	2622.08	12390	8425.61	3.213	Si
SLV 8	7.87	-6660	-154.72	10231	7094.19	45.852	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 12	7.07	-6889	1326.96	10582	7314.49	5.512	Si
SLV 12	7.87	-6747	2170.45	10364	7178.33	3.307	Si
SLV 13	7.07	-13411	-915.94	20600	12961.41	14.151	Si
SLV 13	7.87	-14061	5755.43	21600	13456.8	2.338	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 52	7.07	-16512	410	2139.46		25364	2.325	8937	5818			14.21	Si
SLU 52	7.87	-14954	635	2242.62		22971	2.325	8618	5611			8.84	Si
SLU 68	7.07	-17027	395	2178.18		26155	2.325	9043	5887			14.92	Si
SLU 68	7.87	-15443	633	2304.55		23722	2.325	8719	5676			8.97	Si
SLU 31	7.07	-15267	383	2032.64		23452	2.325	8682	5652			14.75	Si
SLU 31	7.87	-14012	611	2096.21		21523	2.325	8425	5485			8.97	Si
SLU 65	7.07	-16524	411	2132.62		25382	2.325	8940	5820			14.17	Si
SLU 65	7.87	-14948	633	2237.83		22962	2.325	8617	5610			8.86	Si
SLU 76	7.07	-18878	419	2393.73		28999	2.325	9422	6134			14.65	Si
SLU 76	7.87	-17253	691	2544.99		26503	2.325	9089	5917			8.56	Si
SLU 82	7.07	-19543	393	2313.3		30020	2.325	9558	6222			15.84	Si
SLU 82	7.87	-17863	652	2550.4		27440	2.325	9214	5998			9.2	Si
SLU 55	7.07	-17015	393	2185.03		26136	2.325	9040	5885			14.97	Si
SLU 55	7.87	-15449	634	2309.35		23731	2.325	8720	5676			8.95	Si
SLU 73	7.07	-18375	435	2348.17		28226	2.325	9319	6067			13.95	Si
SLU 73	7.87	-16759	692	2478.27		25743	2.325	8988	5851			8.46	Si
SLU 84	7.07	-20046	377	2358.87		30793	2.325	9661	6289			16.7	Si
SLU 84	7.87	-18358	651	2617.12		28200	2.325	9316	6064			9.31	Si
SLU 34	7.07	-15770	367	2078.2		24225	2.325	8786	5719			15.59	Si
SLU 34	7.87	-14507	611	2162.94		22283	2.325	8527	5551			9.09	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 4	7.07	-13690	11779	3738.94		21030	2.325	12539	8163			0.69	No, Vu<V
SLV 4	7.87	-10442	9454	-2397.72		16041	2.325	11541	7513			0.79	No, Vu<V
SLV 3	7.07	-13690	11779	3738.94		21030	2.325	12539	8163			0.69	No, Vu<V
SLV 3	7.87	-10442	9454	-2397.72		16041	2.325	11541	7513			0.79	No, Vu<V
SLV 7	7.07	-8066	5789	2622.08		12390	2.325	10811	7038			1.22	Si
SLV 7	7.87	-6660	4793	-154.72		10231	2.325	10379	6757			1.41	Si
SLV 2	7.07	-17334	10391	3401.13		26627	2.325	13659	8892			0.86	No, Vu<V
SLV 2	7.87	-13771	8332	-1995.13		21154	2.325	12564	8179			0.98	No, Vu<V
SLV 13	7.07	-13411	-11346	-915.94		20600	2.325	12453	8107			0.71	No, Vu<V
SLV 13	7.87	-14061	-8721	5755.43		22225	2.2596	12778	8085			0.93	No, Vu<V
SLV 16	7.07	-9767	-9958	-578.13		15002	2.325	11334	7378			0.74	No, Vu<V
SLV 16	7.87	-10733	-7599	5352.84		19249	1.9913	12183	6793			0.89	No, Vu<V
SLV 14	7.07	-13411	-11346	-915.94		20600	2.325	12453	8107			0.71	No, Vu<V
SLV 14	7.87	-14061	-8721	5755.43		22225	2.2596	12778	8085			0.93	No, Vu<V
SLV 15	7.07	-9767	-9958	-578.13		15002	2.325	11334	7378			0.74	No, Vu<V
SLV 15	7.87	-10733	-7599	5352.84		19249	1.9913	12183	6793			0.89	No, Vu<V
SLV 8	7.07	-8066	5789	2622.08		12390	2.325	10811	7038			1.22	Si
SLV 8	7.87	-6660	4793	-154.72		10231	2.325	10379	6757			1.41	Si
SLV 1	7.07	-17334	10391	3401.13		26627	2.325	13659	8892			0.86	No, Vu<V
SLV 1	7.87	-13771	8332	-1995.13		21154	2.325	12564	8179			0.98	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 12	143750	0.39	9922	-6459	242.69	830.82	3.42	Si
SLV 11	143750	0.39	9922	-6459	242.69	830.82	3.42	Si
SLV 7	143750	0.39	10209	-6646	242.69	852.71	3.51	Si
SLV 8	143750	0.39	10209	-6646	242.69	852.71	3.51	Si
SLV 15	143750	0.39	16009	-10422	242.69	1267.86	5.22	Si
SLV 16	143750	0.39	16009	-10422	242.69	1267.86	5.22	Si
SLV 3	143750	0.39	16967	-11045	242.69	1331.63	5.49	Si
SLV 4	143750	0.39	16967	-11045	242.69	1331.63	5.49	Si
SLV 13	143750	0.39	21513	-14005	242.69	1615.51	6.66	Si
SLV 14	143750	0.39	21513	-14005	242.69	1615.51	6.66	Si

Verifica dei meccanismi locali di colla con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 2	-11477	-12314	13	0.045	1496.8	0.939	0.68963	8.88274	No
SLV 1	-11477	-12314	13	0.045	1496.8	0.939	0.68963	8.88274	No
SLV 14	-11158	-13645	12	0.045	1464.4	0.938	0.69345	8.88274	No
SLV 13	-11158	-13645	12	0.045	1464.4	0.938	0.69345	8.88274	No
SLV 3	-9108	-8244	-11	0.046	1257.3	0.93	0.71632	8.88274	No
SLV 4	-9108	-8244	-11	0.046	1257.3	0.93	0.71632	8.88274	No
SLV 15	-8788	-9574	-12	0.046	1225.1	0.928	0.71908	8.88274	No
SLV 16	-8788	-9574	-12	0.046	1225.1	0.928	0.71908	8.88274	No
SLV 6	-14130	-17528	39	0.042	1765.6	0.947	0.64562	7.63299	No
SLV 5	-14130	-17528	39	0.042	1765.6	0.947	0.64562	7.63299	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.317	SLU 76	Si
V_SLV	8.457	SLU 73	Si
PF_SLV	2.016	SLV 15	Si
V_SLV	0.693	SLV 3	No
PFFP_SLV	3.423	SLV 11	Si
R_SLV	0.078	SLV 1	No



Maschio 163

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.123	-3.359	-2.283	-3.359	L4	L5	2.16	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ ₀	f _{v0}	μ	φ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLU 31	5.97	-13491	-2279.59	22307	10580.38	4.641	Si
SLU 31	7.77	-16055	2132.82	26546	11688.7	5.48	Si
SLU 65	5.97	-15084	-2325.63	24941	11303.07	4.86	Si
SLU 65	7.77	-17189	2155.13	28420	12086.91	5.608	Si
SLU 76	5.97	-16744	-2584.89	27686	11937.57	4.618	Si
SLU 76	7.77	-19517	2528.75	32271	12728.1	5.033	Si
SLU 13	5.97	-12463	-2093.74	20607	10054.9	4.802	Si
SLU 13	7.77	-14627	1904.73	24185	11107.12	5.831	Si
SLU 52	5.97	-15001	-2348.71	24803	11267.96	4.798	Si
SLU 52	7.77	-17192	2184.72	28427	12088.19	5.533	Si
SLU 34	5.97	-13849	-2304.75	22898	10752.24	4.665	Si
SLU 34	7.77	-16503	2190.79	27287	11853.01	5.41	Si
SLU 10	5.97	-12105	-2068.58	20015	9861.31	4.767	Si
SLU 10	7.77	-14179	1846.76	23444	10905.91	5.905	Si
SLU 23	5.97	-12189	-2045.5	20153	9907.02	4.843	Si
SLU 23	7.77	-14175	1817.18	23437	10904.1	6.001	Si
SLU 73	5.97	-16387	-2559.73	27094	11811.09	4.614	Si
SLU 73	7.77	-19069	2470.78	31529	12623.07	5.109	Si
SLU 55	5.97	-15358	-2373.87	25394	11416.16	4.809	Si
SLU 55	7.77	-17641	2242.69	29168	12230.12	5.453	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLV 11	5.97	-4523	-2721.52	7479	4586.26	1.685	Si
SLV 11	7.77	-8774	2424.49	14507	8350.9	3.444	Si
SLV 13	5.97	-17844	-5843.34	29505	14618.34	2.502	Si
SLV 13	7.77	-23139	5932.48	38260	17165.49	2.893	Si
SLV 1	5.97	-11246	3270.52	18594	10296.97	3.148	Si
SLV 1	7.77	-7490	-2410.36	12383	7268.92	3.016	Si
SLV 16	5.97	-12762	-5874.74	21102	11402.87	1.941	Si
SLV 16	7.77	-19037	5661.09	31477	15263.73	2.696	Si
SLV 2	5.97	-11246	3270.52	18594	10296.97	3.148	Si
SLV 2	7.77	-7490	-2410.36	12383	7268.92	3.016	Si
SLV 12	5.97	-4523	-2721.52	7479	4586.26	1.685	Si
SLV 12	7.77	-8774	2424.49	14507	8350.9	3.444	Si
SLV 15	5.97	-12762	-5874.74	21102	11402.87	1.941	Si
SLV 15	7.77	-19037	5661.09	31477	15263.73	2.696	Si
SLV 4	5.97	-6163	3239.12	10191	6101.25	1.884	Si
SLV 4	7.77	-3387	-2681.74	5601	3490.7	1.302	Si
SLV 14	5.97	-17844	-5843.34	29505	14618.34	2.502	Si
SLV 14	7.77	-23139	5932.48	38260	17165.49	2.893	Si
SLV 3	5.97	-6163	3239.12	10191	6101.25	1.884	Si
SLV 3	7.77	-3387	-2681.74	5601	3490.7	1.302	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 31	5.97	-13491	-5167	-2279.59		22307	2.16	8530	5159			1	No, Vu<V
SLU 31	7.77	-16055	-5114	2132.82		26546	2.16	9095	5501			1.08	Si
SLU 75	5.97	-17125	-5745	-2330.77		28314	2.16	9331	5643			0.98	No, Vu<V
SLU 75	7.77	-19707	-5712	2519.77		32584	2.16	9900	5988			1.05	Si
SLU 55	5.97	-15358	-5427	-2373.87		25394	2.16	8941	5408			1	No, Vu<V
SLU 55	7.77	-17641	-5374	2242.69		29168	2.16	9445	5712			1.06	Si
SLU 76	5.97	-16744	-6016	-2584.89		27686	2.16	9247	5593			0.93	No, Vu<V
SLU 76	7.77	-19517	-5962	2528.75		32271	2.16	9858	5962			1	No, Vu<V
SLU 80	5.97	-17275	-5812	-2346.23		28563	2.16	9364	5663			0.97	No, Vu<V
SLU 80	7.77	-19923	-5780	2555.66		32941	2.16	9948	6016			1.04	Si
SLU 73	5.97	-16387	-5915	-2559.73		27094	2.16	9168	5545			0.94	No, Vu<V
SLU 73	7.77	-19069	-5862	2470.78		31529	2.16	9759	5902			1.01	Si
SLU 84	5.97	-17476	-5991	-2421.39		28895	2.16	9408	5690			0.95	No, Vu<V
SLU 84	7.77	-20280	-5958	2632.96		33531	2.16	10026	6064			1.02	Si
SLU 34	5.97	-13849	-5268	-2304.75		22898	2.16	8609	5206			0.99	No, Vu<V
SLU 34	7.77	-16503	-5214	2190.79		27287	2.16	9194	5560			1.07	Si
SLU 78	5.97	-17482	-5845	-2355.93		28906	2.16	9410	5691			0.97	No, Vu<V
SLU 78	7.77	-20156	-5813	2577.74		33326	2.16	9999	6047			1.04	Si
SLU 82	5.97	-17118	-5890	-2396.23		28303	2.16	9329	5642			0.96	No, Vu<V
SLU 82	7.77	-19831	-5858	2574.99		32789	2.16	9927	6004			1.03	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 9	5.97	-21464	-6184	-2616.85		35489	2.16	15431	9333			1.51	Si
SLV 9	7.77	-22448	-6001	3329.1		37116	2.16	15757	9530			1.59	Si
SLV 12	5.97	-4523	-5562	-2721.52		11258	1.435	10585	4253			0.76	No, Vu<V
SLV 12	7.77	-8774	-5479	2424.49		14507	2.16	11235	6795			1.24	Si
SLV 15	5.97	-12762	-11269	-5874.74		24518	1.859	13237	6890			0.61	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 15	7.77	-19037	-10844	5661.09		31477	2.16	14629	8847			0.82	No, Vu<V
SLV 3	5.97	-6163	4416	3239.12		13233	1.6634	10980	5114			1.16	Si
SLV 3	7.77	-3387	3961	-2681.74		13987	0.865	11131	2696			0.68	No, Vu<V
SLV 4	5.97	-6163	4416	3239.12		13233	1.6634	10980	5114			1.16	Si
SLV 4	7.77	-3387	3961	-2681.74		13987	0.865	11131	2696			0.68	No, Vu<V
SLV 10	5.97	-21464	-6184	-2616.85		35489	2.16	15431	9333			1.51	Si
SLV 10	7.77	-22448	-6001	3329.1		37116	2.16	15757	9530			1.59	Si
SLV 13	5.97	-17844	-11456	-5843.34		29505	2.16	14234	8609			0.75	No, Vu<V
SLV 13	7.77	-23139	-11000	5932.48		38260	2.16	15985	9668			0.88	No, Vu<V
SLV 14	5.97	-17844	-11456	-5843.34		29505	2.16	14234	8609			0.75	No, Vu<V
SLV 14	7.77	-23139	-11000	5932.48		38260	2.16	15985	9668			0.88	No, Vu<V
SLV 11	5.97	-4523	-5562	-2721.52		11258	1.435	10585	4253			0.76	No, Vu<V
SLV 11	7.77	-8774	-5479	2424.49		14507	2.16	11235	6795			1.24	Si
SLV 16	5.97	-12762	-11269	-5874.74		24518	1.859	13237	6890			0.61	No, Vu<V
SLV 16	7.77	-19037	-10844	5661.09		31477	2.16	14629	8847			0.82	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 8	143750	0.39	6019	-3640	225.47	484.55	2.15	Si
SLV 7	143750	0.39	6019	-3640	225.47	484.55	2.15	Si
SLV 4	143750	0.39	8196	-4957	225.47	647.44	2.87	Si
SLV 3	143750	0.39	8196	-4957	225.47	647.44	2.87	Si
SLV 12	143750	0.39	11830	-7155	225.47	904.71	4.01	Si
SLV 11	143750	0.39	11830	-7155	225.47	904.71	4.01	Si
SLV 2	143750	0.39	15873	-9600	225.47	1169.43	5.19	Si
SLV 1	143750	0.39	15873	-9600	225.47	1169.43	5.19	Si
SLV 16	143750	0.39	27567	-16672	225.47	1807.52	8.02	Si
SLV 15	143750	0.39	27567	-16672	225.47	1807.52	8.02	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 2	-7601	-8299	142	0.033	1081.4	0.925	0.51064	8.88274	No
SLV 1	-7601	-8299	142	0.033	1081.4	0.925	0.51064	8.88274	No
SLV 15	-14447	-16327	-143	0.035	1774.4	0.951	0.54108	8.88274	No
SLV 16	-14447	-16327	-143	0.035	1774.4	0.951	0.54108	8.88274	No
SLV 14	-17684	-21209	-90	0.039	2103.2	0.957	0.58812	8.88274	No
SLV 13	-17684	-21209	-90	0.039	2103.2	0.957	0.58812	8.88274	No
SLV 3	-4364	-3417	89	0.037	758.2	0.904	0.60018	8.88274	No
SLV 4	-4364	-3417	89	0.037	758.2	0.904	0.60018	8.88274	No
SLV 12	-7143	-6112	-123	0.034	1035.3	0.923	0.54021	7.63299	No
SLV 11	-7143	-6112	-123	0.034	1035.3	0.923	0.54021	7.63299	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.614	SLU 73	Si
V_SLU	0.93	SLU 76	No
PF_SLV	1.302	SLV 3	Si
V_SLV	0.611	SLV 15	No
PFFP_SLV	2.149	SLV 7	Si
R_SLV	0.057	SLV 1	No

Maschio 164

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-2.963	5.951	-5.158	5.951	L4	L5	2.195	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 81	5.97	-19750	-1714.99	32135	13124.78	7.653	Si
SLU 81	7.77	-19141	839.11	31144	12975.54	15.463	Si
SLU 74	5.97	-20105	-1737.37	32713	13204.23	7.6	Si
SLU 74	7.77	-19387	1011	31545	13037.87	12.896	Si
SLU 82	5.97	-19640	-1700.73	31956	13099.04	7.702	Si
SLU 82	7.77	-18994	896.07	30904	12937.03	14.438	Si
SLU 79	5.97	-20754	-1773.02	33768	13335.08	7.521	Si
SLU 79	7.77	-20028	1212.41	32587	13187.37	10.877	Si
SLU 84	5.97	-20443	-1766.09	33263	13274.79	7.516	Si
SLU 84	7.77	-19805	1075.98	32224	13137.39	12.21	Si
SLU 77	5.97	-20908	-1802.73	34020	13363.6	7.413	Si
SLU 77	7.77	-20199	1190.91	32865	13224.22	11.104	Si
SLU 75	5.97	-19995	-1723.1	32534	13180.2	7.649	Si
SLU 75	7.77	-19240	1067.95	31305	13000.95	12.174	Si
SLU 78	5.97	-20798	-1788.46	33841	13343.45	7.461	Si
SLU 78	7.77	-20051	1247.86	32625	13192.54	10.572	Si
SLU 83	5.97	-20553	-1780.35	33442	13296.66	7.469	Si
SLU 83	7.77	-19952	1019.02	32464	13170.66	12.925	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 80	5.97	-20644	-1758.75	33589	13314.18	7.57	Si
SLU 80	7.77	-19880	1269.37	32347	13154.59	10.363	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 10	5.97	-6699	-1860.84	10900	6696.36	3.599	Si
SLV 10	7.77	-6126	1137.87	9968	6175.03	5.427	Si
SLV 1	5.97	-12160	3816.87	19785	11184.39	2.93	Si
SLV 1	7.77	-18341	-2907.07	29843	15213.21	5.233	Si
SLV 15	5.97	-15200	-6105.38	24732	13305.56	2.179	Si
SLV 15	7.77	-7489	4225.2	12184	7399.14	1.751	Si
SLV 4	5.97	-16253	3392.05	26446	13977.36	4.121	Si
SLV 4	7.77	-21182	-2581.73	34465	16690.1	6.465	Si
SLV 3	5.97	-16253	3392.05	26446	13977.36	4.121	Si
SLV 3	7.77	-21182	-2581.73	34465	16690.1	6.465	Si
SLV 16	5.97	-15200	-6105.38	24732	13305.56	2.179	Si
SLV 16	7.77	-7489	4225.2	12184	7399.14	1.751	Si
SLV 2	5.97	-12160	3816.87	19785	11184.39	2.93	Si
SLV 2	7.77	-18341	-2907.07	29843	15213.21	5.233	Si
SLV 13	5.97	-11106	-5680.56	18071	10386.57	1.828	Si
SLV 13	7.77	-4648	3899.86	7562	4785.21	1.227	Si
SLV 14	5.97	-11106	-5680.56	18071	10386.57	1.828	Si
SLV 14	7.77	-4648	3899.86	7562	4785.21	1.227	Si
SLV 9	5.97	-6699	-1860.84	10900	6696.36	3.599	Si
SLV 9	7.77	-6126	1137.87	9968	6175.03	5.427	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 48	5.97	-17826	-680	-1464.6		29004	2.195	9423	5791			8.51	Si
SLU 48	7.77	-16603	-680	1167.84		27015	2.195	9158	5628			8.27	Si
SLU 9	5.97	-14296	-629	-1164.11		23260	2.195	8657	5321			8.46	Si
SLU 9	7.77	-13363	-629	1069.25		21743	2.195	8455	5196			8.26	Si
SLU 50	5.97	-17671	-686	-1434.89		28752	2.195	9389	5771			8.42	Si
SLU 50	7.77	-16433	-686	1189.35		26737	2.195	9120	5605			8.18	Si
SLU 51	5.97	-17561	-732	-1420.63		28573	2.195	9365	5756			7.86	Si
SLU 51	7.77	-16285	-732	1246.3		26497	2.195	9089	5586			7.63	Si
SLU 49	5.97	-17716	-727	-1450.34		28825	2.195	9399	5777			7.95	Si
SLU 49	7.77	-16456	-727	1224.8		26775	2.195	9126	5609			7.72	Si
SLU 71	5.97	-19346	-666	-1603.39		31478	2.195	9753	5994			9	Si
SLU 71	7.77	-18311	-666	1243.86		29794	2.195	9528	5856			8.8	Si
SLU 7	5.97	-14451	-624	-1193.82		23512	2.195	8691	5341			8.56	Si
SLU 7	7.77	-13534	-624	1047.75		22021	2.195	8492	5219			8.37	Si
SLU 47	5.97	-16685	-632	-1345.76		27147	2.195	9175	5639			8.93	Si
SLU 47	7.77	-15376	-631	1104.36		25018	2.195	8891	5465			8.66	Si
SLU 70	5.97	-19391	-707	-1618.84		31551	2.195	9762	6000			8.49	Si
SLU 70	7.77	-18335	-707	1279.32		29832	2.195	9533	5859			8.29	Si
SLU 72	5.97	-19236	-712	-1589.13		31299	2.195	9729	5979			8.4	Si
SLU 72	7.77	-18164	-712	1300.82		29554	2.195	9496	5836			8.2	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 15	5.97	-15200	-9803	-6105.38		26005	2.0875	13534	7911			0.81	No, Vu<V
SLV 15	7.77	-7489	-9332	4225.2		16717	1.5998	11677	5231			0.56	No, Vu<V
SLV 3	5.97	-16253	7599	3392.05		26446	2.195	13622	8372			1.1	Si
SLV 3	7.77	-21182	7019	-2581.73		34465	2.195	15226	9358			1.33	Si
SLV 2	5.97	-12160	9238	3816.87		19785	2.195	12290	7554			0.82	No, Vu<V
SLV 2	7.77	-18341	8767	-2907.07		29843	2.195	14302	8790			1	Si
SLV 16	5.97	-15200	-9803	-6105.38		26005	2.0875	13534	7911			0.81	No, Vu<V
SLV 16	7.77	-7489	-9332	4225.2		16717	1.5998	11677	5231			0.56	No, Vu<V
SLV 1	5.97	-12160	9238	3816.87		19785	2.195	12290	7554			0.82	No, Vu<V
SLV 1	7.77	-18341	8767	-2907.07		29843	2.195	14302	8790			1	Si
SLV 4	5.97	-16253	7599	3392.05		26446	2.195	13622	8372			1.1	Si
SLV 4	7.77	-21182	7019	-2581.73		34465	2.195	15226	9358			1.33	Si
SLV 6	5.97	-7015	5060	988.39		11414	2.195	10616	6525			1.29	Si
SLV 6	7.77	-10234	5083	-904.21		16652	2.195	11664	7169			1.41	Si
SLV 14	5.97	-11106	-8164	-5680.56		22562	1.7581	12846	6324			0.77	No, Vu<V
SLV 14	7.77	-4648	-7584	3899.86		21411	0.7752	12616	2738			0.36	No, Vu<V
SLV 13	5.97	-11106	-8164	-5680.56		22562	1.7581	12846	6324			0.77	No, Vu<V
SLV 13	7.77	-4648	-7584	3899.86		21411	0.7752	12616	2738			0.36	No, Vu<V
SLV 5	5.97	-7015	5060	988.39		11414	2.195	10616	6525			1.29	Si
SLV 5	7.77	-10234	5083	-904.21		16652	2.195	11664	7169			1.41	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 9	143750	0.39	10301	-6331	229.12	811.63	3.54	Si
SLV 10	143750	0.39	10301	-6331	229.12	811.63	3.54	Si
SLV 13	143750	0.39	11382	-6996	229.12	888.15	3.88	Si
SLV 14	143750	0.39	11382	-6996	229.12	888.15	3.88	Si
SLV 6	143750	0.39	14873	-9141	229.12	1123.97	4.91	Si
SLV 5	143750	0.39	14873	-9141	229.12	1123.97	4.91	Si
SLV 15	143750	0.39	16881	-10375	229.12	1251.84	5.46	Si
SLV 16	143750	0.39	16881	-10375	229.12	1251.84	5.46	Si
SLV 1	143750	0.39	26622	-16362	229.12	1791.59	7.82	Si
SLV 2	143750	0.39	26622	-16362	229.12	1791.59	7.82	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	σ_0	M*	e*	a0*	aLim	Verifica
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Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 10	-7463	-5350	-346	0.011	1072.6	0.924	0.17228	7.63299	No
SLV 9	-7463	-5350	-346	0.011	1072.6	0.924	0.17228	7.63299	No
SLV 5	-10552	-6820	-315	0.02	1384.5	0.938	0.31725	7.63299	No
SLV 6	-10552	-6820	-315	0.02	1384.5	0.938	0.31725	7.63299	No
SLV 11	-10457	-18617	309	0.021	1374.8	0.938	0.32173	7.63299	No
SLV 12	-10457	-18617	309	0.021	1374.8	0.938	0.32173	7.63299	No
SLV 8	-13546	-20086	341	0.022	1687.9	0.948	0.34456	7.63299	No
SLV 7	-13546	-20086	341	0.022	1687.9	0.948	0.34456	7.63299	No
SLV 14	-4906	-8279	-153	0.028	817	0.907	0.45559	8.88274	No
SLV 13	-4906	-8279	-153	0.028	817	0.907	0.45559	8.88274	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.413	SLU 77	Si
V_SLU	7.633	SLU 51	Si
PF_SLV	1.227	SLV 13	Si
V_SLV	0.361	SLV 13	No
PFFP_SLV	3.542	SLV 9	Si
R_SLV	0.023	SLV 9	No

Maschio 165

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-0.123	5.951	-2.063	5.951	L4	L5	1.94	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	$\tau 0$	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	$\alpha 0$	Mu	c.s.	Verifica
SLU 80	5.97	-16355	-953.11	30108	10000.54	10.493	Si
SLU 80	7.77	-18476	2290.06	34013	10438.42	4.558	Si
SLU 79	5.97	-16711	-948.13	30764	10087.86	10.64	Si
SLU 79	7.77	-18700	2257.68	34426	10473.2	4.639	Si
SLU 75	5.97	-16071	-911.6	29587	9927.08	10.89	Si
SLU 75	7.77	-18088	2196.68	33298	10373.02	4.722	Si
SLU 74	5.97	-16428	-906.62	30242	10018.83	11.051	Si
SLU 74	7.77	-18312	2164.3	33711	10411.61	4.811	Si
SLU 76	5.97	-15664	-914	28837	9815.36	10.739	Si
SLU 76	7.77	-17749	2204.5	32674	10310.5	4.677	Si
SLU 77	5.97	-16881	-949.04	31077	10127.53	10.671	Si
SLU 77	7.77	-18890	2271.45	34775	10500.86	4.623	Si
SLU 84	5.97	-16389	-971.8	30170	10009.03	10.299	Si
SLU 84	7.77	-18626	2299.24	34289	10461.91	4.55	Si
SLU 82	5.97	-15935	-929.37	29336	9890.54	10.642	Si
SLU 82	7.77	-18048	2192.09	33226	10365.98	4.729	Si
SLU 83	5.97	-16745	-966.82	30826	10095.82	10.442	Si
SLU 83	7.77	-18850	2266.86	34702	10495.21	4.63	Si
SLU 78	5.97	-16525	-954.02	30421	10042.87	10.527	Si
SLU 78	7.77	-18665	2303.83	34362	10467.95	4.544	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	$\alpha 0$	Mu	c.s.	Verifica
SLV 15	5.97	-16312	-4640.27	30030	11934.2	2.572	Si
SLV 15	7.77	-20599	4280.13	37921	13779.63	3.219	Si
SLV 2	5.97	-6336	3507.39	11664	5559.1	1.585	Si
SLV 2	7.77	-3971	-1515.64	7311	3621.64	2.39	Si
SLV 16	5.97	-16312	-4640.27	30030	11934.2	2.572	Si
SLV 16	7.77	-20599	4280.13	37921	13779.63	3.219	Si
SLV 3	5.97	-10841	3399.66	19957	8797.85	2.588	Si
SLV 3	7.77	-7757	-1324.16	14280	6645.03	5.018	Si
SLV 10	5.97	-4637	-1592.88	8537	4183.75	2.627	Si
SLV 10	7.77	-7901	1903.78	14546	6751.85	3.547	Si
SLV 14	5.97	-11808	-4532.54	21737	9415.92	2.077	Si
SLV 14	7.77	-16813	4088.66	30951	12177.24	2.978	Si
SLV 9	5.97	-4637	-1592.88	8537	4183.75	2.627	Si
SLV 9	7.77	-7901	1903.78	14546	6751.85	3.547	Si
SLV 13	5.97	-11808	-4532.54	21737	9415.92	2.077	Si
SLV 13	7.77	-16813	4088.66	30951	12177.24	2.978	Si
SLV 4	5.97	-10841	3399.66	19957	8797.85	2.588	Si
SLV 4	7.77	-7757	-1324.16	14280	6645.03	5.018	Si
SLV 1	5.97	-6336	3507.39	11664	5559.1	1.585	Si
SLV 1	7.77	-3971	-1515.64	7311	3621.64	2.39	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	$\alpha 0$	αN	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 76	5.97	-15664	-4070	-914		28837	1.94	9400	5106			1.25	Si
SLU 76	7.77	-17749	-4064	2204.5		32674	1.94	9912	5384			1.32	Si
SLU 80	5.97	-16355	-4158	-953.11		30108	1.94	9570	5198			1.25	Si
SLU 80	7.77	-18476	-4154	2290.06		34013	1.94	10091	5481			1.32	Si
SLU 73	5.97	-15211	-3920	-871.58		28002	1.94	9289	5046			1.29	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 73	7.77	-17171	-3914	2097.35		31611	1.94	9770	5307			1.36	Si
SLU 77	5.97	-16881	-4083	-949.04		31077	1.94	9699	5269			1.29	Si
SLU 77	7.77	-18890	-4083	2271.45		34775	1.94	10192	5536			1.36	Si
SLU 78	5.97	-16525	-4176	-954.02		30421	1.94	9612	5221			1.25	Si
SLU 78	7.77	-18665	-4173	2303.83		34362	1.94	10137	5507			1.32	Si
SLU 75	5.97	-16071	-4026	-911.6		29587	1.94	9500	5161			1.28	Si
SLU 75	7.77	-18088	-4023	2196.68		33298	1.94	9995	5429			1.35	Si
SLU 82	5.97	-15935	-4086	-929.37		29336	1.94	9467	5142			1.26	Si
SLU 82	7.77	-18048	-4082	2192.09		33226	1.94	9986	5424			1.33	Si
SLU 84	5.97	-16389	-4236	-971.8		30170	1.94	9578	5203			1.23	Si
SLU 84	7.77	-18626	-4232	2299.24		34289	1.94	10127	5501			1.3	Si
SLU 83	5.97	-16745	-4142	-966.82		30826	1.94	9666	5250			1.27	Si
SLU 83	7.77	-18850	-4142	2266.86		34702	1.94	10182	5531			1.34	Si
SLU 79	5.97	-16711	-4064	-948.13		30764	1.94	9657	5246			1.29	Si
SLU 79	7.77	-18700	-4064	2257.68		34426	1.94	10146	5511			1.36	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 1	5.97	-6336	3367	3507.39		18113	1.2493	11956	4182			1.24	Si
SLV 1	7.77	-3971	2999	-1515.64		8036	1.765	9940	4913			1.64	Si
SLV 10	5.97	-4637	-4813	-1592.88		8812	1.8795	10096	5313			1.1	Si
SLV 10	7.77	-7901	-4241	1903.78		14546	1.94	11242	6107			1.44	Si
SLV 4	5.97	-10841	3651	3399.66		19957	1.94	12325	6695			1.83	Si
SLV 4	7.77	-7757	3029	-1324.16		14280	1.94	11189	6078			2.01	Si
SLV 14	5.97	-11808	-8708	-4532.54		23982	1.7584	13130	6465			0.74	No, Vu<V
SLV 14	7.77	-16813	-8087	4088.66		30951	1.94	14524	7889			0.98	No, Vu<V
SLV 9	5.97	-4637	-4813	-1592.88		8812	1.8795	10096	5313			1.1	Si
SLV 9	7.77	-7901	-4241	1903.78		14546	1.94	11242	6107			1.44	Si
SLV 15	5.97	-16312	-8424	-4640.27		30030	1.94	14339	7789			0.92	No, Vu<V
SLV 15	7.77	-20599	-8057	4280.13		37921	1.94	15917	8646			1.07	Si
SLV 2	5.97	-6336	3367	3507.39		18113	1.2493	11956	4182			1.24	Si
SLV 2	7.77	-3971	2999	-1515.64		8036	1.765	9940	4913			1.64	Si
SLV 13	5.97	-11808	-8708	-4532.54		23982	1.7584	13130	6465			0.74	No, Vu<V
SLV 13	7.77	-16813	-8087	4088.66		30951	1.94	14524	7889			0.98	No, Vu<V
SLV 3	5.97	-10841	3651	3399.66		19957	1.94	12325	6695			1.83	Si
SLV 3	7.77	-7757	3029	-1324.16		14280	1.94	11189	6078			2.01	Si
SLV 16	5.97	-16312	-8424	-4640.27		30030	1.94	14339	7789			0.92	No, Vu<V
SLV 16	7.77	-20599	-8057	4280.13		37921	1.94	15917	8646			1.07	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 6	143750	0.39	7323	-3978	202.5	523.54	2.59	Si
SLV 5	143750	0.39	7323	-3978	202.5	523.54	2.59	Si
SLV 2	143750	0.39	9756	-5299	202.5	682.67	3.37	Si
SLV 1	143750	0.39	9756	-5299	202.5	682.67	3.37	Si
SLV 10	143750	0.39	12798	-6952	202.5	871.34	4.3	Si
SLV 9	143750	0.39	12798	-6952	202.5	871.34	4.3	Si
SLV 4	143750	0.39	17316	-9406	202.5	1130.23	5.58	Si
SLV 3	143750	0.39	17316	-9406	202.5	1130.23	5.58	Si
SLV 14	143750	0.39	28006	-15213	202.5	1641.65	8.11	Si
SLV 13	143750	0.39	28006	-15213	202.5	1641.65	8.11	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 13	-12474	-14405	41	0.041	1542.6	0.949	0.63341	8.88274	No
SLV 14	-12474	-14405	41	0.041	1542.6	0.949	0.63341	8.88274	No
SLV 15	-15352	-18929	20	0.042	1835	0.956	0.64258	8.88274	No
SLV 16	-15352	-18929	20	0.042	1835	0.956	0.64258	8.88274	No
SLV 3	-7410	-7502	-40	0.043	1030	0.929	0.66643	8.88274	No
SLV 4	-7410	-7502	-40	0.043	1030	0.929	0.66643	8.88274	No
SLV 7	-13548	-16779	-44	0.041	1651.7	0.952	0.62672	7.63299	No
SLV 8	-13548	-16779	-44	0.041	1651.7	0.952	0.62672	7.63299	No
SLV 12	-15931	-20207	-26	0.042	1893.8	0.958	0.63513	7.63299	No
SLV 11	-15931	-20207	-26	0.042	1893.8	0.958	0.63513	7.63299	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.544	SLU 78	Si
V_SLU	1.228	SLU 84	Si
PF_SLV	1.585	SLV 1	Si
V_SLV	0.742	SLV 13	No
PFFP_SLV	2.585	SLV 5	Si
R_SLV	0.071	SLV 13	No

Maschio 166

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.123	-3.359	-0.123	5.951	L4	L5	9.31	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

Sismicad 12.19 - Licenza assegnata a Sidel ingegneria Srl - Via Isonzo, 13 - Villanova di Castenaso (BO)



fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 2	5.07	-78109	-12812.31	29963	229851.68	17.94	Si
SLU 2	8.62	-49399	-2451.09	18950	176456.31	71.991	Si
SLU 73	5.07	-117503	-15015.89	45076	244302.86	16.27	Si
SLU 73	8.62	-74493	-2668.72	28577	225116.68	84.354	Si
SLU 44	5.07	-97681	-13685.54	37472	245536.37	17.941	Si
SLU 44	8.62	-61839	-2346.44	23722	204030.53	86.953	Si
SLU 76	5.07	-119770	-14394.88	45945	243064.39	16.885	Si
SLU 76	8.62	-76371	-2348.83	29297	227647.43	96.919	Si
SLU 65	5.07	-107733	-14163.09	41327	247063.84	17.444	Si
SLU 65	8.62	-68415	-2391.12	26245	215863.96	90.277	Si
SLU 55	5.07	-109718	-13917.34	42089	246841.63	17.736	Si
SLU 55	8.62	-69795	-2304.15	26774	218107.78	94.659	Si
SLU 10	5.07	-87879	-13665.11	33712	239781.09	17.547	Si
SLU 10	8.62	-55477	-2728.69	21282	190776.96	69.915	Si
SLU 52	5.07	-107452	-14538.34	41220	247081.32	16.995	Si
SLU 52	8.62	-67918	-2624.04	26054	215035.69	81.948	Si
SLU 31	5.07	-97931	-14142.65	37568	245628.08	17.368	Si
SLU 31	8.62	-62053	-2773.37	23804	204444.56	73.717	Si
SLU 23	5.07	-88160	-13289.85	33819	240004.59	18.059	Si
SLU 23	8.62	-55974	-2495.77	21472	191876.34	76.88	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 10	5.07	-96597	-87684.5	37056	313291.67	3.573	Si
SLV 10	8.62	-58856	-40591.77	22578	223350.38	5.502	Si
SLV 5	5.07	-67135	-88861.7	25754	246642.93	2.776	Si
SLV 5	8.62	-44169	-43082.3	16944	177093.94	4.111	Si
SLV 9	5.07	-96597	-87684.5	37056	313291.67	3.573	Si
SLV 9	8.62	-58856	-40591.77	22578	223350.38	5.502	Si
SLV 7	5.07	-68187	80011.2	26157	249459.53	3.118	Si
SLV 7	8.62	-46342	41003.17	17777	184336.14	4.496	Si
SLV 6	5.07	-67135	-88861.7	25754	246642.93	2.776	Si
SLV 6	8.62	-44169	-43082.3	16944	177093.94	4.111	Si
SLV 8	5.07	-68187	80011.2	26157	249459.53	3.118	Si
SLV 8	8.62	-46342	41003.17	17777	184336.14	4.496	Si
SLV 1	5.07	-33130	-31129.59	12709	138177.51	4.439	Si
SLV 1	8.62	-27794	-16558.01	10662	118090.09	7.132	Si
SLV 11	5.07	-97649	81188.41	37459	315202.31	3.882	Si
SLV 11	8.62	-61030	43493.7	23412	229659.53	5.28	Si
SLV 12	5.07	-97649	81188.41	37459	315202.31	3.882	Si
SLV 12	8.62	-61030	43493.7	23412	229659.53	5.28	Si
SLV 2	5.07	-33130	-31129.59	12709	138177.51	4.439	Si
SLV 2	8.62	-27794	-16558.01	10662	118090.09	7.132	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 2	5.07	-78109	-1305	-12812.31		29963	9.31	9551	24897			19.07	Si
SLU 2	8.62	-49399	-885	-2451.09		18950	9.31	8082	21069			23.82	Si
SLU 23	5.07	-88160	-1309	-13289.85		33819	9.31	10065	26237			20.05	Si
SLU 23	8.62	-55974	-887	-2495.77		21472	9.31	8419	21945			24.73	Si
SLU 5	5.07	-80375	-1285	-12191.3		30833	9.31	9667	25199			19.61	Si
SLU 5	8.62	-51276	-864	-2131.21		19670	9.31	8178	21319			24.68	Si
SLU 10	5.07	-87879	-1317	-13665.11		33712	9.31	10050	26199			19.89	Si
SLU 10	8.62	-55477	-896	-2728.69		21282	9.31	8393	21879			24.43	Si
SLU 26	5.07	-90427	-1288	-12668.85		34689	9.31	10181	26539			20.6	Si
SLU 26	8.62	-57852	-867	-2175.89		22193	9.31	8515	22196			25.61	Si
SLU 31	5.07	-97931	-1320	-14142.65		37568	9.31	10565	27540			20.86	Si
SLU 31	8.62	-62053	-898	-2773.37		23804	9.31	8729	22756			25.33	Si
SLU 13	5.07	-90146	-1296	-13044.1		34581	9.31	10166	26502			20.44	Si
SLU 13	8.62	-57355	-875	-2408.8		22002	9.31	8489	22130			25.29	Si
SLU 73	5.07	-117503	-1311	-15015.89		45076	9.31	10833	28240			21.55	Si
SLU 73	8.62	-74493	-888	-2668.72		28577	9.31	9366	24415			27.5	Si
SLU 44	5.07	-97681	-1296	-13685.54		37472	9.31	10552	27506			21.23	Si
SLU 44	8.62	-61839	-874	-2346.44		23722	9.31	8719	22727			26	Si
SLU 34	5.07	-100197	-1300	-13521.65		38437	9.31	10680	27842			21.42	Si
SLU 34	8.62	-63930	-878	-2453.48		24524	9.31	8825	23006			26.21	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 2	5.07	-33130	-7092	-31129.59		12709	9.31	10875	28349			4	Si
SLV 2	8.62	-27794	-5890	-16558.01		10662	9.31	10466	27282			4.63	Si
SLV 10	5.07	-96597	-17514	-87684.5		37056	9.31	15745	41043			2.34	Si
SLV 10	8.62	-58856	-15209	-40591.77		22578	9.31	12849	33495			2.2	Si
SLV 12	5.07	-97649	18584	81188.41		37459	9.31	15825	41253			2.22	Si
SLV 12	8.62	-61030	16007	43493.7		23412	9.31	13016	33929			2.12	Si
SLV 6	5.07	-67135	-18535	-88861.7		25754	9.31	13484	35150			1.9	Si
SLV 6	8.62	-44169	-15950	-43082.3		16944	9.31	11722	30557			1.92	Si
SLV 5	5.07	-67135	-18535	-88861.7		25754	9.31	13484	35150			1.9	Si
SLV 5	8.62	-44169	-15950	-43082.3		16944	9.31	11722	30557			1.92	Si
SLV 1	5.07	-33130	-7092	-31129.59		12709	9.31	10875	28349			4	Si
SLV 1	8.62	-27794	-5890	-16558.01		10662	9.31	10466	27282			4.63	Si
SLV 8	5.07	-68187	17563	80011.2		26157	9.31	13565	35361			2.01	Si
SLV 8	8.62	-46342	15265	41003.17		17777	9.31	11889	30992			2.03	Si
SLV 7	5.07	-68187	17563	80011.2		26157	9.31	13565	35361			2.01	Si
SLV 7	8.62	-46342	15265	41003.17		17777	9.31	11889	30992			2.03	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 11	5.07	-97649	18584	81188.41		37459	9.31	15825	41253			2.22	Si
SLV 11	8.62	-61030	16007	43493.7		23412	9.31	13016	33929			2.12	Si
SLV 9	5.07	-96597	-17514	-87684.5		37056	9.31	15745	41043			2.34	Si
SLV 9	8.62	-58856	-15209	-40591.77		22578	9.31	12849	33495			2.2	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.845 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 2	143750	0.39	11885	-30982	971.81	3915.63	4.03	Si
SLV 1	143750	0.39	11885	-30982	971.81	3915.63	4.03	Si
SLV 3	143750	0.39	12035	-31373	971.81	3959.55	4.07	Si
SLV 4	143750	0.39	12035	-31373	971.81	3959.55	4.07	Si
SLV 6	143750	0.39	21047	-54865	971.81	6358.04	6.54	Si
SLV 5	143750	0.39	21047	-54865	971.81	6358.04	6.54	Si
SLV 8	143750	0.39	21546	-56165	971.81	6476.61	6.66	Si
SLV 7	143750	0.39	21546	-56165	971.81	6476.61	6.66	Si
SLV 9	143750	0.39	29049	-75726	971.81	8081.16	8.32	Si
SLV 10	143750	0.39	29049	-75726	971.81	8081.16	8.32	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.845 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 16	-77405	-131654	-53	0.043	9185.6	0.958	0.647	8.88274	No
SLV 15	-77405	-131654	-53	0.043	9185.6	0.958	0.647	8.88274	No
SLV 14	-76753	-131339	-51	0.043	9119.3	0.958	0.64789	8.88274	No
SLV 13	-76753	-131339	-51	0.043	9119.3	0.958	0.64789	8.88274	No
SLV 3	-28446	-33445	47	0.047	4227.4	0.919	0.74447	8.88274	No
SLV 4	-28446	-33445	47	0.047	4227.4	0.919	0.74447	8.88274	No
SLV 1	-27794	-33130	49	0.047	4162	0.919	0.74661	8.88274	No
SLV 2	-27794	-33130	49	0.047	4162	0.919	0.74661	8.88274	No
SLV 11	-61030	-97649	-20	0.044	7521.8	0.95	0.6714	7.63299	No
SLV 12	-61030	-97649	-20	0.044	7521.8	0.95	0.6714	7.63299	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	16.27	SLU 73	Si
V_SLU	19.071	SLU 2	Si
PF_SLV	2.776	SLV 5	Si
V_SLV	1.896	SLV 5	Si
PFFP_SLV	4.029	SLV 1	Si
R_SLV	0.073	SLV 15	No

Maschio 167

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.678	-3.359	-24.678	1.266	L5	L6	4.626	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	f ν_0	μ	ϕ	f ν_{lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 83	8.62	-38424	-6668.2	29667	56503.35	8.474	Si
SLU 83	10.72	-25573	-5991.1	19744	44809.82	7.479	Si
SLU 42	8.62	-32794	-5860.17	25320	52271.94	8.92	Si
SLU 42	10.72	-21696	-5243.17	16752	39861.22	7.602	Si
SLU 77	8.62	-38303	-6742.64	29573	56426.71	8.369	Si
SLU 77	10.72	-25790	-6005.09	19912	45067.27	7.505	Si
SLU 32	8.62	-31489	-5275.94	24312	51092.23	9.684	Si
SLU 32	10.72	-20910	-5088.16	16144	38777.1	7.621	Si
SLU 37	8.62	-31722	-5570.93	24492	51308.94	9.21	Si
SLU 37	10.72	-21197	-5393.87	16366	39175	7.263	Si
SLU 39	8.62	-31610	-5201.5	24406	51205.17	9.844	Si
SLU 39	10.72	-20693	-5074.17	15977	38473.25	7.582	Si
SLU 38	8.62	-32180	-5984.79	24846	51726.26	8.643	Si
SLU 38	10.72	-21580	-5211.03	16661	39701.67	7.619	Si
SLU 79	8.62	-37810	-6792.82	29192	56109.27	8.26	Si
SLU 79	10.72	-25456	-5958.95	19654	44670.14	7.496	Si
SLU 35	8.62	-32215	-5520.75	24873	51757.86	9.375	Si
SLU 35	10.72	-21530	-5440.01	16623	39634.47	7.286	Si
SLU 41	8.62	-32337	-5446.31	24967	51866.93	9.523	Si
SLU 41	10.72	-21313	-5426.02	16456	39336.52	7.25	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 9	8.62	-27842	-14812.07	21497	53066.12	3.583	Si
SLV 9	10.72	-21456	-2338.97	16566	42897.29	18.34	Si
SLV 12	8.62	-16389	6331.56	12654	33979.83	5.367	Si
SLV 12	10.72	-10475	-1719.47	8087	22623.2	13.157	Si
SLV 11	8.62	-16389	6331.56	12654	33979.83	5.367	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 11	10.72	-10475	-1719.47	8087	22623.2	13.157	Si
SLV 13	8.62	-15349	-6482.86	11851	32057.46	4.945	Si
SLV 13	10.72	-14309	1107.41	11048	30102.94	27.183	Si
SLV 6	8.62	-35115	-15608.3	27112	63194.73	4.049	Si
SLV 6	10.72	-24288	-5107.15	18752	47553.33	9.311	Si
SLV 3	8.62	-36155	-2793.88	27914	64516.44	23.092	Si
SLV 3	10.72	-20454	-7934.03	15792	41192	5.192	Si
SLV 4	8.62	-36155	-2793.88	27914	64516.44	23.092	Si
SLV 4	10.72	-20454	-7934.03	15792	41192	5.192	Si
SLV 10	8.62	-27842	-14812.07	21497	53066.12	3.583	Si
SLV 10	10.72	-21456	-2338.97	16566	42897.29	18.34	Si
SLV 14	8.62	-15349	-6482.86	11851	32057.46	4.945	Si
SLV 14	10.72	-14309	1107.41	11048	30102.94	27.183	Si
SLV 5	8.62	-35115	-15608.3	27112	63194.73	4.049	Si
SLV 5	10.72	-24288	-5107.15	18752	47553.33	9.311	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 83	8.62	-38424	-1974	-6668.2	29667	4.6257	9511	12319				6.24	Si
SLU 83	10.72	-25573	-1971	-5991.1	19744	4.6257	8188	10605				5.38	Si
SLU 40	8.62	-32068	-2029	-5615.37	24759	4.6257	8857	11471				5.65	Si
SLU 40	10.72	-21076	-1878	-4891.32	16273	4.6257	7725	10006				5.33	Si
SLU 73	8.62	-37120	-2300	-6992.99	28660	4.6257	9377	12145				5.28	Si
SLU 73	10.72	-24854	-2048	-4950.5	19189	4.6257	8114	10509				5.13	Si
SLU 81	8.62	-37698	-2162	-6423.39	29106	4.6257	9436	12222				5.65	Si
SLU 81	10.72	-24953	-2159	-5639.25	19266	4.6257	8124	10523				4.87	Si
SLU 39	8.62	-31610	-1871	-5201.5	24406	4.6257	8810	11410				6.1	Si
SLU 39	10.72	-20693	-1869	-5074.17	15977	4.6257	7686	9955				5.33	Si
SLU 84	8.62	-38882	-2131	-7082.06	30020	4.6257	9558	12380				5.81	Si
SLU 84	10.72	-25956	-1979	-5808.25	20040	4.6257	8228	10656				5.38	Si
SLU 74	8.62	-37576	-1915	-6497.83	29012	4.6257	9424	12206				6.37	Si
SLU 74	10.72	-25170	-1912	-5653.23	19433	4.6257	8147	10551				5.52	Si
SLU 61	8.62	-34958	-2093	-6497.56	26991	4.6257	9154	11857				5.66	Si
SLU 61	10.72	-23451	-1942	-4564.79	18106	4.6257	7970	10322				5.32	Si
SLU 82	8.62	-38155	-2320	-6837.26	29459	4.6257	9483	12283				5.29	Si
SLU 82	10.72	-25336	-2168	-5456.4	19561	4.6257	8164	10574				4.88	Si
SLU 60	8.62	-34501	-1936	-6083.69	26637	4.6257	9107	11796				6.09	Si
SLU 60	10.72	-23068	-1933	-4747.64	17811	4.6257	7930	10271				5.31	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 7	8.62	-23661	6773	5535.32	18269	4.6257	11987	15526				2.29	Si
SLV 7	10.72	-13306	5857	-4487.65	10274	4.6257	10388	13455				2.3	Si
SLV 12	8.62	-16389	7362	6331.56	12654	4.6257	10864	14071				1.91	Si
SLV 12	10.72	-10475	6470	-1719.47	8087	4.6257	9951	12888				1.99	Si
SLV 5	8.62	-35115	-10113	-15608.3	27112	4.6257	13756	17816				1.76	Si
SLV 5	10.72	-24288	-9218	-5107.15	18752	4.6257	12084	15651				1.7	Si
SLV 11	8.62	-16389	7362	6331.56	12654	4.6257	10864	14071				1.91	Si
SLV 11	10.72	-10475	6470	-1719.47	8087	4.6257	9951	12888				1.99	Si
SLV 6	8.62	-35115	-10113	-15608.3	27112	4.6257	13756	17816				1.76	Si
SLV 6	10.72	-24288	-9218	-5107.15	18752	4.6257	12084	15651				1.7	Si
SLV 8	8.62	-23661	6773	5535.32	18269	4.6257	11987	15526				2.29	Si
SLV 8	10.72	-13306	5857	-4487.65	10274	4.6257	10388	13455				2.3	Si
SLV 9	8.62	-27842	-9524	-14812.07	21497	4.6257	12633	16362				1.72	Si
SLV 9	10.72	-21456	-8605	-2338.97	16566	4.6257	11647	15085				1.75	Si
SLV 1	8.62	-39591	-4890	-9136.97	30567	4.6257	14447	18711				3.83	Si
SLV 1	10.72	-23748	-4658	-8119.88	18336	4.6257	12000	15543				3.34	Si
SLV 2	8.62	-39591	-4890	-9136.97	30567	4.6257	14447	18711				3.83	Si
SLV 2	10.72	-23748	-4658	-8119.88	18336	4.6257	12000	15543				3.34	Si
SLV 10	8.62	-27842	-9524	-14812.07	21497	4.6257	12633	16362				1.72	Si
SLV 10	10.72	-21456	-8605	-2338.97	16566	4.6257	11647	15085				1.75	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 11	143750	0.46	8923	-11557	574.45	1499.81	2.61	Si
SLV 12	143750	0.46	8923	-11557	574.45	1499.81	2.61	Si
SLV 15	143750	0.46	9156	-11859	574.45	1535.84	2.67	Si
SLV 16	143750	0.46	9156	-11859	574.45	1535.84	2.67	Si
SLV 8	143750	0.46	11139	-14427	574.45	1835.68	3.2	Si
SLV 7	143750	0.46	11139	-14427	574.45	1835.68	3.2	Si
SLV 13	143750	0.46	11572	-14988	574.45	1899.63	3.31	Si
SLV 14	143750	0.46	11572	-14988	574.45	1899.63	3.31	Si
SLV 3	143750	0.46	16543	-21427	574.45	2593.62	4.51	Si
SLV 4	143750	0.46	16543	-21427	574.45	2593.62	4.51	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 2	-13221	-39591	-121	0.042	2009	0.917	0.6641	10.16227	No
SLV 1	-13221	-39591	-121	0.042	2009	0.917	0.6641	10.16227	No
SLV 16	-8779	-11913	131	0.042	1567.9	0.902	0.6751	10.16227	No
SLV 15	-8779	-11913	131	0.042	1567.9	0.902	0.6751	10.16227	No
SLV 13	-10197	-15349	113	0.043	1707.8	0.907	0.68861	10.16227	No
SLV 14	-10197	-15349	113	0.043	1707.8	0.907	0.68861	10.16227	No
SLV 3	-11803	-36155	-102	0.043	1867.4	0.912	0.68975	10.16227	No
SLV 4	-11803	-36155	-102	0.043	1867.4	0.912	0.68975	10.16227	No
SLV 5	-13817	-35115	-61	0.045	2068.7	0.919	0.71396	8.73249	No
SLV 6	-13817	-35115	-61	0.045	2068.7	0.919	0.71396	8.73249	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.25	SLU 41	Si
V_SLU	4.873	SLU 81	Si
PF_SLV	3.583	SLV 9	Si
V_SLV	1.698	SLV 5	Si
PFFP_SLV	2.611	SLV 11	Si
R_SLV	0.065	SLV 1	No

Maschio 168

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.678	2.066	-24.678	5.951	L5	L6	3.885	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fν0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 35	8.62	-26864	6926.59	24696	36362.95	5.25	Si
SLU 35	10.72	-20888	170.29	19202	31010.19	182.107	Si
SLU 41	8.62	-26632	6954.97	24483	36184.39	5.203	Si
SLU 41	10.72	-20652	-267.53	18985	30766.57	115.003	Si
SLU 79	8.62	-31848	7933.68	29277	39629.37	4.995	Si
SLU 79	10.72	-24554	434.41	22572	34479.25	79.37	Si
SLU 83	8.62	-31912	8052.76	29337	39664.66	4.926	Si
SLU 83	10.72	-24601	-63.15	22615	34520.12	546.642	Si
SLU 84	8.62	-31761	7623.3	29198	39582.09	5.192	Si
SLU 84	10.72	-24351	100.34	22386	34303.09	341.88	Si
SLU 78	8.62	-31993	7594.91	29411	39708.48	5.228	Si
SLU 78	10.72	-24587	538.15	22603	34508.41	64.124	Si
SLU 81	8.62	-31050	7809.8	28544	39179.84	5.017	Si
SLU 81	10.72	-23878	-366.25	21951	33884.47	92.518	Si
SLU 74	8.62	-31282	7781.41	28757	39313.46	5.052	Si
SLU 74	10.72	-24115	71.57	22168	34094.68	476.411	Si
SLU 77	8.62	-32144	8024.37	29550	39789.51	4.959	Si
SLU 77	10.72	-24837	374.66	22832	34722.86	92.677	Si
SLU 80	8.62	-31697	7504.22	29138	39546.38	5.27	Si
SLU 80	10.72	-24304	597.9	22342	34261.71	57.304	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 12	8.62	-24433	11830.4	22461	38736.47	3.274	Si
SLV 12	10.72	-20719	-768.88	19047	33973.23	44.185	Si
SLV 10	8.62	-12182	-4968.77	11198	21493.97	4.326	Si
SLV 10	10.72	-7333	2401.53	6741	13457.92	5.604	Si
SLV 9	8.62	-12182	-4968.77	11198	21493.97	4.326	Si
SLV 9	10.72	-7333	2401.53	6741	13457.92	5.604	Si
SLV 8	8.62	-31028	15231.29	28524	46202.03	3.033	Si
SLV 8	10.72	-25621	-2103.2	23553	40174.84	19.102	Si
SLV 7	8.62	-31028	15231.29	28524	46202.03	3.033	Si
SLV 7	10.72	-25621	-2103.2	23553	40174.84	19.102	Si
SLV 4	8.62	-34435	13319.27	31655	49560.1	3.721	Si
SLV 4	10.72	-26654	-2550.25	24502	41392.33	16.231	Si
SLV 11	8.62	-24433	11830.4	22461	38736.47	3.274	Si
SLV 11	10.72	-20719	-768.88	19047	33973.23	44.185	Si
SLV 13	8.62	-8775	-3056.75	8067	15920.21	5.208	Si
SLV 13	10.72	-6300	2848.59	5791	11657.02	4.092	Si
SLV 14	8.62	-8775	-3056.75	8067	15920.21	5.208	Si
SLV 14	10.72	-6300	2848.59	5791	11657.02	4.092	Si
SLV 3	8.62	-34435	13319.27	31655	49560.1	3.721	Si
SLV 3	10.72	-26654	-2550.25	24502	41392.33	16.231	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 74	8.62	-31282	1933	7781.41		28757	3.885	9390	10214			5.28	Si
SLU 74	10.72	-24115	1934	71.57		22168	3.885	8511	9259			4.79	Si
SLU 39	8.62	-25770	1858	6712.01		23690	3.885	8714	9479			5.1	Si
SLU 39	10.72	-19929	1859	-570.63		18321	3.885	7998	8701			4.68	Si
SLU 60	8.62	-28680	1927	6948.36		26365	3.885	9071	9867			5.12	Si
SLU 60	10.72	-21919	1928	-84.53		20149	3.885	8242	8966			4.65	Si
SLU 41	8.62	-26632	1700	6954.97		24483	3.885	8820	9594			5.64	Si
SLU 41	10.72	-20652	1701	-267.53		18985	3.885	8087	8797			5.17	Si
SLU 64	8.62	-27960	1753	6602.99		25703	3.885	8983	9771			5.58	Si
SLU 64	10.72	-21312	1754	281.96		19592	3.885	8168	8885			5.07	Si
SLU 62	8.62	-29543	1769	7191.33		27158	3.885	9177	9982			5.64	Si
SLU 62	10.72	-22641	1770	218.57		20814	3.885	8331	9062			5.12	Si
SLU 83	8.62	-31912	1993	8052.76		29337	3.885	9467	10298			5.17	Si
SLU 83	10.72	-24601	1994	-63.15		22615	3.885	8571	9323			4.67	Si
SLU 81	8.62	-31050	2151	7809.8		28544	3.885	9361	10183			4.73	Si
SLU 81	10.72	-23878	2152	-366.25		21951	3.885	8482	9227			4.29	Si
SLU 18	8.62	-23400	1633	5850.58		21511	3.885	8424	9163			5.61	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 18	10.72	-17969	1634	-288.91		16519	3.885	7758	8439			5.16	Si
SLU 82	8.62	-30899	1778	7380.34		28405	3.885	9343	10163			5.72	Si
SLU 82	10.72	-23629	1778	-202.76		21722	3.885	8452	9194			5.17	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 8	8.62	-31028	7773	15231.29		28524	3.885	14038	15271			1.96	Si
SLV 8	10.72	-25621	6755	-2103.2		23553	3.885	13044	14189			2.1	Si
SLV 7	8.62	-31028	7773	15231.29		28524	3.885	14038	15271			1.96	Si
SLV 7	10.72	-25621	6755	-2103.2		23553	3.885	13044	14189			2.1	Si
SLV 4	8.62	-34435	4703	13319.27		31655	3.885	14664	15952			3.39	Si
SLV 4	10.72	-26654	4022	-2550.25		24502	3.885	13234	14396			3.58	Si
SLV 10	8.62	-12182	-5016	-4968.77		11198	3.885	10573	11501			2.29	Si
SLV 10	10.72	-7333	-3997	2401.53		6741	3.885	9681	10532			2.64	Si
SLV 12	8.62	-24433	6846	11830.4		22461	3.885	12825	13952			2.04	Si
SLV 12	10.72	-20719	6076	-768.88		19047	3.885	12143	13209			2.17	Si
SLV 5	8.62	-18777	-4089	-1567.89		17261	3.885	11786	12820			3.14	Si
SLV 5	10.72	-12234	-3318	1067.22		11247	3.885	10583	11512			3.47	Si
SLV 11	8.62	-24433	6846	11830.4		22461	3.885	12825	13952			2.04	Si
SLV 11	10.72	-20719	6076	-768.88		19047	3.885	12143	13209			2.17	Si
SLV 3	8.62	-34435	4703	13319.27		31655	3.885	14664	15952			3.39	Si
SLV 3	10.72	-26654	4022	-2550.25		24502	3.885	13234	14396			3.58	Si
SLV 9	8.62	-12182	-5016	-4968.77		11198	3.885	10573	11501			2.29	Si
SLV 9	10.72	-7333	-3997	2401.53		6741	3.885	9681	10532			2.64	Si
SLV 6	8.62	-18777	-4089	-1567.89		17261	3.885	11786	12820			3.14	Si
SLV 6	10.72	-12234	-3318	1067.22		11247	3.885	10583	11512			3.47	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 14	143750	0.46	6224	-6770	482.47	899.56	1.86	Si
SLV 13	143750	0.46	6224	-6770	482.47	899.56	1.86	Si
SLV 9	143750	0.46	7866	-8557	482.47	1120.83	2.32	Si
SLV 10	143750	0.46	7866	-8557	482.47	1120.83	2.32	Si
SLV 16	143750	0.46	9711	-10563	482.47	1361.34	2.82	Si
SLV 15	143750	0.46	9711	-10563	482.47	1361.34	2.82	Si
SLV 6	143750	0.46	12761	-13881	482.47	1740.42	3.61	Si
SLV 5	143750	0.46	12761	-13881	482.47	1740.42	3.61	Si
SLV 12	143750	0.46	19489	-21201	482.47	2494.66	5.17	Si
SLV 11	143750	0.46	19489	-21201	482.47	2494.66	5.17	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 4	-15588	-34435	-47	0.044	2138.1	0.931	0.68973	10.16227	No
SLV 3	-15588	-34435	-47	0.044	2138.1	0.931	0.68973	10.16227	No
SLV 1	-13663	-30759	6	0.047	1944.2	0.925	0.73988	10.16227	No
SLV 2	-13663	-30759	6	0.047	1944.2	0.925	0.73988	10.16227	No
SLV 7	-15211	-31028	-94	0.042	2100.2	0.93	0.65265	8.73249	No
SLV 8	-15211	-31028	-94	0.042	2100.2	0.93	0.65265	8.73249	No
SLV 12	-12964	-24433	-82	0.043	1873.9	0.923	0.67407	8.73249	No
SLV 11	-12964	-24433	-82	0.043	1873.9	0.923	0.67407	8.73249	No
SLV 14	-6173	-8775	47	0.049	1199.6	0.897	0.79084	10.16227	No
SLV 13	-6173	-8775	47	0.049	1199.6	0.897	0.79084	10.16227	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.926	SLU 83	Si
V_SLU	4.287	SLU 81	Si
PF_SLV	3.033	SLV 7	Si
V_SLV	1.965	SLV 7	Si
PFFP_SLV	1.864	SLV 13	Si
R_SLV	0.068	SLV 3	No

Maschio 169

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-22.713	5.951	-24.678	5.951	L5	L6	1.965	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 82	9.52	-14892	1553.97	27066	9769.69	6.287	Si
SLU 82	11.32	-14251	-2262.01	25901	9549.31	4.222	Si
SLU 81	9.52	-15059	1546.39	27370	9824.14	6.353	Si
SLU 81	11.32	-14342	-2248.26	26066	9581.74	4.262	Si
SLU 75	9.52	-15212	1580.6	27648	9872.91	6.246	Si
SLU 75	11.32	-14583	-2262.66	26505	9665.82	4.272	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 80	9.52	-15456	1721.78	28092	9948.72	5.778	Si
SLU 80	11.32	-14940	-2299.83	27155	9785.67	4.255	Si
SLU 83	9.52	-15531	1667.39	28228	9971.34	5.98	Si
SLU 83	11.32	-14941	-2322.14	27156	9785.9	4.214	Si
SLU 84	9.52	-15364	1674.97	27924	9920.34	5.923	Si
SLU 84	11.32	-14850	-2335.9	26990	9755.87	4.176	Si
SLU 77	9.52	-15851	1694.01	28809	10065.59	5.942	Si
SLU 77	11.32	-15274	-2322.79	27760	9892.34	4.259	Si
SLU 76	9.52	-14873	1605.84	27032	9763.45	6.08	Si
SLU 76	11.32	-14280	-2235.12	25955	9559.91	4.277	Si
SLU 78	9.52	-15684	1701.59	28505	10016.94	5.887	Si
SLU 78	11.32	-15182	-2336.54	27595	9863.64	4.221	Si
SLU 79	9.52	-15623	1714.2	28396	9999.03	5.833	Si
SLU 79	11.32	-15032	-2286.07	27320	9815.34	4.294	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 8	9.52	-16017	2974.17	29111	11987.46	4.031	Si
SLV 8	11.32	-15417	-3284.34	28021	11673.5	3.554	Si
SLV 4	9.52	-14670	5022.71	26663	11268.09	2.243	Si
SLV 4	11.32	-16317	-4945.69	29656	12140.16	2.455	Si
SLV 16	9.52	-9344	-2506.12	16982	7904.24	3.154	Si
SLV 16	11.32	-5659	1505.92	10285	5091.59	3.381	Si
SLV 13	9.52	-6591	-3008.88	11980	5840.89	1.941	Si
SLV 13	11.32	-3232	2017.39	5875	3023.03	1.498	Si
SLV 2	9.52	-11917	4519.95	21660	9633.26	2.131	Si
SLV 2	11.32	-13890	-4434.22	25246	10827.43	2.442	Si
SLV 1	9.52	-11917	4519.95	21660	9633.26	2.131	Si
SLV 1	11.32	-13890	-4434.22	25246	10827.43	2.442	Si
SLV 7	9.52	-16017	2974.17	29111	11987.46	4.031	Si
SLV 7	11.32	-15417	-3284.34	28021	11673.5	3.554	Si
SLV 3	9.52	-14670	5022.71	26663	11268.09	2.243	Si
SLV 3	11.32	-16317	-4945.69	29656	12140.16	2.455	Si
SLV 14	9.52	-6591	-3008.88	11980	5840.89	1.941	Si
SLV 14	11.32	-3232	2017.39	5875	3023.03	1.498	Si
SLV 15	9.52	-9344	-2506.12	16982	7904.24	3.154	Si
SLV 15	11.32	-5659	1505.92	10285	5091.59	3.381	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 78	9.52	-15684	3271	1701.59		28505	1.965	9356	5148			1.57	Si
SLU 78	11.32	-15182	3269	-2336.54		27595	1.965	9235	5081			1.55	Si
SLU 76	9.52	-14873	3112	1605.84		27032	1.965	9160	5040			1.62	Si
SLU 76	11.32	-14280	3108	-2235.12		25955	1.965	9016	4961			1.6	Si
SLU 82	9.52	-14892	3071	1553.97		27066	1.965	9164	5042			1.64	Si
SLU 82	11.32	-14251	3069	-2262.01		25901	1.965	9009	4957			1.62	Si
SLU 83	9.52	-15531	3195	1667.39		28228	1.965	9319	5127			1.61	Si
SLU 83	11.32	-14941	3195	-2322.14		27156	1.965	9176	5049			1.58	Si
SLU 79	9.52	-15623	3199	1714.2		28396	1.965	9342	5140			1.61	Si
SLU 79	11.32	-15032	3199	-2286.07		27320	1.965	9198	5061			1.58	Si
SLU 75	9.52	-15212	3093	1580.6		27648	1.965	9242	5085			1.64	Si
SLU 75	11.32	-14583	3091	-2262.66		26505	1.965	9090	5001			1.62	Si
SLU 42	9.52	-12705	2888	1469.37		23092	1.965	8634	4751			1.65	Si
SLU 42	11.32	-12589	2886	-2029.11		22880	1.965	8606	4735			1.64	Si
SLU 80	9.52	-15456	3254	1721.78		28092	1.965	9301	5117			1.57	Si
SLU 80	11.32	-14940	3252	-2299.83		27155	1.965	9176	5049			1.55	Si
SLU 84	9.52	-15364	3249	1674.97		27924	1.965	9279	5105			1.57	Si
SLU 84	11.32	-14850	3247	-2335.9		26990	1.965	9154	5037			1.55	Si
SLU 77	9.52	-15851	3217	1694.01		28809	1.965	9397	5170			1.61	Si
SLU 77	11.32	-15274	3217	-2322.79		27760	1.965	9257	5093			1.58	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 8	9.52	-16017	4459	2974.17		29111	1.965	14156	7788			1.75	Si
SLV 8	11.32	-15417	4288	-3284.34		28021	1.965	13937	7668			1.79	Si
SLV 4	9.52	-14670	7826	5022.71		27283	1.9204	13790	7415			0.95	No, Vu<V
SLV 4	11.32	-16317	7174	-4945.69		29656	1.965	14264	7848			1.09	Si
SLV 3	9.52	-14670	7826	5022.71		27283	1.9204	13790	7415			0.95	No, Vu<V
SLV 3	11.32	-16317	7174	-4945.69		29656	1.965	14264	7848			1.09	Si
SLV 14	9.52	-6591	-4021	-3008.88		14918	1.578	11317	5000			1.24	Si
SLV 14	11.32	-3232	-3369	2017.39		10738	1.0751	10481	3155			0.94	No, Vu<V
SLV 13	9.52	-6591	-4021	-3008.88		14918	1.578	11317	5000			1.24	Si
SLV 13	11.32	-3232	-3369	2017.39		10738	1.0751	10481	3155			0.94	No, Vu<V
SLV 2	9.52	-11917	7312	4519.95		23519	1.8097	13037	6606			0.9	No, Vu<V
SLV 2	11.32	-13890	6644	-4434.22		25246	1.965	13382	7363			1.11	Si
SLV 1	9.52	-11917	7312	4519.95		23519	1.8097	13037	6606			0.9	No, Vu<V
SLV 1	11.32	-13890	6644	-4434.22		25246	1.965	13382	7363			1.11	Si
SLV 16	9.52	-9344	-3507	-2506.12		16982	1.965	11730	6454			1.84	Si
SLV 16	11.32	-5659	-2839	1505.92		10285	1.965	10390	5717			2.01	Si
SLV 15	9.52	-9344	-3507	-2506.12		16982	1.965	11730	6454			1.84	Si
SLV 15	11.32	-5659	-2839	1505.92		10285	1.965	10390	5717			2.01	Si
SLV 7	9.52	-16017	4459	2974.17		29111	1.965	14156	7788			1.75	Si
SLV 7	11.32	-15417	4288	-3284.34		28021	1.965	13937	7668			1.79	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 10	143750	0.46	8618	-4742	244.03	617	2.53	Si
SLV 9	143750	0.46	8618	-4742	244.03	617	2.53	Si



Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 13	143750	0.46	8773	-4827	244.03	627.27	2.57	Si
SLV 14	143750	0.46	8773	-4827	244.03	627.27	2.57	Si
SLV 6	143750	0.46	13004	-7155	244.03	895.09	3.67	Si
SLV 5	143750	0.46	13004	-7155	244.03	895.09	3.67	Si
SLV 16	143750	0.46	13293	-7314	244.03	912.54	3.74	Si
SLV 15	143750	0.46	13293	-7314	244.03	912.54	3.74	Si
SLV 2	143750	0.46	23395	-12872	244.03	1457.01	5.97	Si
SLV 1	143750	0.46	23395	-12872	244.03	1457.01	5.97	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeraia = 10.395 $W_a = 0.05$ $T_a = 0.0752$

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 6	-5686	-8037	452	0	860.4	0.917	0	8.73249	No
SLV 5	-5686	-8037	452	0	860.4	0.917	0	8.73249	No
SLV 10	-3841	-4632	478	0	677	0.903	0	8.73249	No
SLV 9	-3841	-4632	478	0	677	0.903	0	8.73249	No
SLV 11	-8944	-14920	-451	0.004	1188.5	0.936	0.0581	8.73249	No
SLV 12	-8944	-14920	-451	0.004	1188.5	0.936	0.0581	8.73249	No
SLV 7	-10788	-18325	-477	0.007	1375.2	0.943	0.1067	8.73249	No
SLV 8	-10788	-18325	-477	0.007	1375.2	0.943	0.1067	8.73249	No
SLV 13	-3475	-4260	183	0.018	641.1	0.9	0.28648	10.16227	No
SLV 14	-3475	-4260	183	0.018	641.1	0.9	0.28648	10.16227	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.176	SLU 84	Si
V_SLU	1.551	SLU 84	Si
PF_SLV	1.498	SLV 13	Si
V_SLV	0.903	SLV 1	No
PFFP_SLV	2.528	SLV 9	Si
R_SLV	0	SLV 5	No

Maschio 170

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.618	5.951	-21.813	5.951	L5	L6	2.195	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 50	9.52	-9229	3810.74	15017	8261.84	2.168	Si
SLU 50	11.32	-6472	124.13	10530	6184.68	49.823	Si
SLU 8	9.52	-7357	3130.61	11971	6888.15	2.2	Si
SLU 8	11.32	-5229	74.4	8507	5139.17	69.073	Si
SLU 71	9.52	-10157	4066.51	16527	8885.96	2.185	Si
SLU 71	11.32	-7371	109.44	11993	6898.42	63.035	Si
SLU 69	9.52	-10532	4056.71	17137	9127.35	2.25	Si
SLU 69	11.32	-7746	120.94	12603	7185.6	59.415	Si
SLU 49	9.52	-9577	3777.16	15583	8500.34	2.25	Si
SLU 49	11.32	-6820	114.12	11097	6465.25	56.654	Si
SLU 9	9.52	-7331	3106.84	11928	6867.36	2.21	Si
SLU 9	11.32	-5202	52.89	8464	5115.88	96.736	Si
SLU 48	9.52	-9604	3800.93	15627	8518.48	2.241	Si
SLU 48	11.32	-6847	135.63	11140	6486.64	47.824	Si
SLU 29	9.52	-8286	3386.38	13481	7588.43	2.241	Si
SLU 29	11.32	-6128	59.71	9970	5901.9	98.848	Si
SLU 72	9.52	-10131	4042.75	16483	8868.47	2.194	Si
SLU 72	11.32	-7344	87.92	11949	6877.65	78.225	Si
SLU 51	9.52	-9202	3786.97	14973	8243.25	2.177	Si
SLU 51	11.32	-6445	102.62	10487	6162.85	60.057	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 12	9.52	-8250	4138.5	13424	8060.05	1.948	Si
SLV 12	11.32	-5955	617.27	9689	6017.38	9.748	Si
SLV 7	9.52	-5305	8223.28	0	0	0	No, $e > l/2$
SLV 7	11.32	-3186	-1389.14	5184	3348.59	2.411	Si
SLV 11	9.52	-8250	4138.5	13424	8060.05	1.948	Si
SLV 11	11.32	-5955	617.27	9689	6017.38	9.748	Si
SLV 13	9.52	-13068	-5196.3	21262	11846.29	2.28	Si
SLV 13	11.32	-10658	3646.65	17341	10036.99	2.752	Si
SLV 1	9.52	-3251	8419.62	0	0	0	No, $e > l/2$
SLV 1	11.32	-1429	-3041.36	0	0	0	No, $e > l/2$
SLV 4	9.52	-2613	10528.49	0	0	0	No, $e > l/2$
SLV 4	11.32	-749	-3359.17	0	0	0	No, $e > l/2$
SLV 8	9.52	-5305	8223.28	0	0	0	No, $e > l/2$
SLV 8	11.32	-3186	-1389.14	5184	3348.59	2.411	Si
SLV 3	9.52	-2613	10528.49	0	0	0	No, $e > l/2$
SLV 3	11.32	-749	-3359.17	0	0	0	No, $e > l/2$



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 14	9.52	-13068	-5196.3	21262	11846.29	2.28	Si
SLV 14	11.32	-10658	3646.65	17341	10036.99	2.752	Si
SLV 2	9.52	-3251	8419.62	0	0	0	No, $e>l/2$
SLV 2	11.32	-1429	-3041.36	0	0	0	No, $e>l/2$

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 79	9.52	-11122	2315	4184.11		18356	2.1639	8003	4849			2.09	Si
SLU 79	11.32	-8335	2315	105.81		13562	2.195	7364	4526			1.96	Si
SLU 70	9.52	-10505	2234	4032.94		17526	2.1408	7892	4731			2.12	Si
SLU 70	11.32	-7719	2234	99.42		12559	2.195	7230	4444			1.99	Si
SLU 77	9.52	-11497	2303	4174.3		18706	2.195	8050	4947			2.15	Si
SLU 77	11.32	-8710	2303	117.31		14172	2.195	7445	4576			1.99	Si
SLU 80	9.52	-11095	2314	4160.34		18281	2.1676	7993	4851			2.1	Si
SLU 80	11.32	-8308	2314	84.29		13518	2.195	7358	4522			1.95	Si
SLU 71	9.52	-10157	2248	4066.51		17345	2.0914	7868	4608			2.05	Si
SLU 71	11.32	-7371	2248	109.44		11993	2.195	7155	4397			1.96	Si
SLU 78	9.52	-11470	2302	4150.54		18662	2.195	8044	4944			2.15	Si
SLU 78	11.32	-8683	2302	95.8		14128	2.195	7439	4572			1.99	Si
SLU 58	9.52	-10194	2165	3928.34		17041	2.1364	7828	4682			2.16	Si
SLU 58	11.32	-7436	2165	120.51		12099	2.195	7169	4406			2.04	Si
SLU 72	9.52	-10131	2246	4042.75		17267	2.0953	7858	4610			2.05	Si
SLU 72	11.32	-7344	2246	87.92		11949	2.195	7149	4394			1.96	Si
SLU 69	9.52	-10532	2236	4056.71		17602	2.137	7902	4728			2.11	Si
SLU 69	11.32	-7746	2236	120.94		12603	2.195	7236	4447			1.99	Si
SLU 59	9.52	-10167	2163	3904.57		16965	2.1404	7817	4685			2.17	Si
SLU 59	11.32	-7409	2163	98.99		12056	2.195	7163	4402			2.04	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 1	9.52	-3251	6670	8419.62		0	0	8333	0			0	No, $V_u < V$
SLV 1	11.32	-1429	6140	-3041.36		0	0	8333	0			0	No, $V_u < V$
SLV 15	9.52	-12430	-3792	-3087.42		20225	2.195	12378	7608			2.01	Si
SLV 15	11.32	-9978	-3262	3328.85		16235	2.195	11580	7117			2.18	Si
SLV 7	9.52	-5305	5564	8223.28		0	0	8333	0			0	No, $V_u < V$
SLV 7	11.32	-3186	5254	-1389.14		5734	1.9846	9480	5268			1	Si
SLV 8	9.52	-5305	5564	8223.28		0	0	8333	0			0	No, $V_u < V$
SLV 8	11.32	-3186	5254	-1389.14		5734	1.9846	9480	5268			1	Si
SLV 2	9.52	-3251	6670	8419.62		0	0	8333	0			0	No, $V_u < V$
SLV 2	11.32	-1429	6140	-3041.36		0	0	8333	0			0	No, $V_u < V$
SLV 3	9.52	-2613	8077	10528.49		0	0	8333	0			0	No, $V_u < V$
SLV 3	11.32	-749	7463	-3359.17		0	0	8333	0			0	No, $V_u < V$
SLV 14	9.52	-13068	-5199	-5196.3		22229	2.0996	12779	7513			1.44	Si
SLV 14	11.32	-10658	-4585	3646.65		17341	2.195	11802	7253			1.58	Si
SLV 16	9.52	-12430	-3792	-3087.42		20225	2.195	12378	7608			2.01	Si
SLV 16	11.32	-9978	-3262	3328.85		16235	2.195	11580	7117			2.18	Si
SLV 13	9.52	-13068	-5199	-5196.3		22229	2.0996	12779	7513			1.44	Si
SLV 13	11.32	-10658	-4585	3646.65		17341	2.195	11802	7253			1.58	Si
SLV 4	9.52	-2613	8077	10528.49		0	0	8333	0			0	No, $V_u < V$
SLV 4	11.32	-749	7463	-3359.17		0	0	8333	0			0	No, $V_u < V$

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 3	143750	0.46	0	-1557	272.59	0	0	No, $e>t/2$
SLV 4	143750	0.46	0	-1557	272.59	0	0	No, $e>t/2$
SLV 2	143750	0.46	3658	-2248	272.59	305.33	1.12	Si
SLV 1	143750	0.46	3658	-2248	272.59	305.33	1.12	Si
SLV 7	143750	0.46	6613	-4064	272.59	538.19	1.97	Si
SLV 8	143750	0.46	6613	-4064	272.59	538.19	1.97	Si
SLV 5	143750	0.46	10363	-6369	272.59	816.05	2.99	Si
SLV 6	143750	0.46	10363	-6369	272.59	816.05	2.99	Si
SLV 11	143750	0.46	11235	-6905	272.59	877.79	3.22	Si
SLV 12	143750	0.46	11235	-6905	272.59	877.79	3.22	Si

Verifica dei meccanismi locali di colla con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzzeria = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 1	-3488	1758	-16	0	0	0	0	10.16227	No, Trazione
SLV 3	-3815	2899	-55	0	0	0	0	10.16227	No, Trazione
SLV 4	-3815	2899	-55	0	0	0	0	10.16227	No, Trazione
SLV 2	-3488	1758	-16	0	0	0	0	10.16227	No, Trazione
SLV 14	-6106	-16027	54	0.042	936.6	0.916	0.67158	10.16227	No
SLV 13	-6106	-16027	54	0.042	936.6	0.916	0.67158	10.16227	No
SLV 7	-5113	-1996	-75	0.04	837.5	0.909	0.63524	8.73249	No
SLV 8	-5113	-1996	-75	0.04	837.5	0.909	0.63524	8.73249	No
SLV 15	-6433	-14887	15	0.047	969.3	0.918	0.74147	10.16227	No
SLV 16	-6433	-14887	15	0.047	969.3	0.918	0.74147	10.16227	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.168	SLU 50	Si
V_SLV	1.955	SLU 80	Si
PF_SLV	0	SLV 1	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 3	No
R_SLV	0	SLV 4	No



Maschio 171

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.493	-3.359	-24.678	-3.359	L5	L6	2.185	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ ₀	f _{v0}	μ	φ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLU 77	9.52	-17358	1719.91	28372	12358.61	7.186	Si
SLU 77	11.32	-16845	-2815.03	27533	12182.66	4.328	Si
SLU 80	9.52	-17125	1883	27991	12280.17	6.522	Si
SLU 80	11.32	-16709	-2880.8	27311	12134.16	4.212	Si
SLU 73	9.52	-16161	1897.1	26415	11930.23	6.289	Si
SLU 73	11.32	-15572	-2774.24	25452	11696.59	4.216	Si
SLU 81	9.52	-16590	1744.44	27117	12091.04	6.931	Si
SLU 81	11.32	-15961	-2717.98	26088	11852.58	4.361	Si
SLU 84	9.52	-17092	1949.86	27937	12268.71	6.292	Si
SLU 84	11.32	-16715	-2920.18	27322	12136.53	4.156	Si
SLU 76	9.52	-16648	1943.17	27211	12112.06	6.233	Si
SLU 76	11.32	-16187	-2864.75	26458	11940.33	4.168	Si
SLU 78	9.52	-17373	1879.26	28396	12363.44	6.579	Si
SLU 78	11.32	-16984	-2926.72	27761	12231.69	4.179	Si
SLU 83	9.52	-17077	1790.51	27913	12263.7	6.849	Si
SLU 83	11.32	-16576	-2808.49	27093	12085.85	4.303	Si
SLU 82	9.52	-16604	1903.79	27140	12096.36	6.354	Si
SLU 82	11.32	-16100	-2829.67	26316	11907.03	4.208	Si
SLU 75	9.52	-16886	1833.19	27600	12197.1	6.653	Si
SLU 75	11.32	-16369	-2836.21	26756	12009.45	4.234	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLV 3	9.52	-13569	4188.53	22179	12133.29	2.897	Si
SLV 3	11.32	-15612	-5342.88	25519	13494.25	2.526	Si
SLV 2	9.52	-16845	4277.72	27533	14256.17	3.333	Si
SLV 2	11.32	-18224	-5652.85	29787	15055.86	2.663	Si
SLV 7	9.52	-7246	1873.56	11844	7149.25	3.816	Si
SLV 7	11.32	-8254	-2378.03	13491	8021.71	3.373	Si
SLV 14	9.52	-9700	-2039.2	15855	9222.44	4.523	Si
SLV 14	11.32	-5904	1784.95	9650	5940.76	3.328	Si
SLV 8	9.52	-7246	1873.56	11844	7149.25	3.816	Si
SLV 8	11.32	-8254	-2378.03	13491	8021.71	3.373	Si
SLV 15	9.52	-6424	-2128.38	10501	6415.44	3.014	Si
SLV 15	11.32	-3293	2094.91	5382	3438.82	1.642	Si
SLV 16	9.52	-6424	-2128.38	10501	6415.44	3.014	Si
SLV 16	11.32	-3293	2094.91	5382	3438.82	1.642	Si
SLV 13	9.52	-9700	-2039.2	15855	9222.44	4.523	Si
SLV 13	11.32	-5904	1784.95	9650	5940.76	3.328	Si
SLV 4	9.52	-13569	4188.53	22179	12133.29	2.897	Si
SLV 4	11.32	-15612	-5342.88	25519	13494.25	2.526	Si
SLV 1	9.52	-16845	4277.72	27533	14256.17	3.333	Si
SLV 1	11.32	-18224	-5652.85	29787	15055.86	2.663	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 76	9.52	-16648	4117	1943.17	27211	2.185	9184	5619				1.36	Si
SLU 76	11.32	-16187	4064	-2864.75	26458	2.185	9083	5557				1.37	Si
SLU 34	9.52	-13767	3681	1746.59	22502	2.185	8556	5234				1.42	Si
SLU 34	11.32	-13746	3628	-2484.43	22468	2.185	8551	5232				1.44	Si
SLU 75	9.52	-16886	3996	1833.19	27600	2.185	9236	5650				1.41	Si
SLU 75	11.32	-16369	3964	-2836.21	26756	2.185	9123	5581				1.41	Si
SLU 73	9.52	-16161	3964	1897.1	26415	2.185	9078	5554				1.4	Si
SLU 73	11.32	-15572	3911	-2774.24	25452	2.185	8949	5475				1.4	Si
SLU 80	9.52	-17125	4109	1883	27991	2.185	9288	5682				1.38	Si
SLU 80	11.32	-16709	4077	-2880.8	27311	2.185	9197	5627				1.38	Si
SLU 82	9.52	-16604	4039	1903.79	27140	2.185	9174	5613				1.39	Si
SLU 82	11.32	-16100	4007	-2829.67	26316	2.185	9064	5546				1.38	Si
SLU 83	9.52	-17077	3949	1790.51	27913	2.185	9277	5676				1.44	Si
SLU 83	11.32	-16576	3949	-2808.49	27093	2.185	9168	5609				1.42	Si
SLU 84	9.52	-17092	4192	1949.86	27937	2.185	9280	5678				1.35	Si
SLU 84	11.32	-16715	4160	-2920.18	27322	2.185	9198	5628				1.35	Si
SLU 42	9.52	-14211	3756	1753.28	23228	2.185	8653	5294				1.41	Si
SLU 42	11.32	-14275	3724	-2539.86	23332	2.185	8666	5302				1.42	Si
SLU 78	9.52	-17373	4149	1879.26	28396	2.185	9342	5715				1.38	Si
SLU 78	11.32	-16984	4117	-2926.72	27761	2.185	9257	5663				1.38	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 7	9.52	-7246	4082	1873.56	11844	2.185	10702	6548				1.6	Si
SLV 7	11.32	-8254	3997	-2378.03	13491	2.185	11032	6749				1.69	Si
SLV 13	9.52	-9700	-3433	-2039.2	15855	2.185	11504	7038				2.05	Si
SLV 13	11.32	-5904	-2680	1784.95	9650	2.185	10263	6279				2.34	Si
SLV 1	9.52	-16845	8153	4277.72	27533	2.185	13840	8467				1.04	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 1	11.32	-18224	7305	-5652.85		29787	2.185	14291	8743			1.2	Si
SLV 16	9.52	-6424	-3441	-2128.38		10501	2.185	10433	6383			1.86	Si
SLV 16	11.32	-3293	-2594	2094.91		8591	1.3688	10052	3852			1.49	Si
SLV 8	9.52	-7246	4082	1873.56		11844	2.185	10702	6548			1.6	Si
SLV 8	11.32	-8254	3997	-2378.03		13491	2.185	11032	6749			1.69	Si
SLV 15	9.52	-6424	-3441	-2128.38		10501	2.185	10433	6383			1.86	Si
SLV 15	11.32	-3293	-2594	2094.91		8591	1.3688	10052	3852			1.49	Si
SLV 2	9.52	-16845	8153	4277.72		27533	2.185	13840	8467			1.04	Si
SLV 2	11.32	-18224	7305	-5652.85		29787	2.185	14291	8743			1.2	Si
SLV 14	9.52	-9700	-3433	-2039.2		15855	2.185	11504	7038			2.05	Si
SLV 14	11.32	-5904	-2680	1784.95		9650	2.185	10263	6279			2.34	Si
SLV 4	9.52	-13569	8145	4188.53		22179	2.185	12769	7812			0.96	No, Vu<V
SLV 4	11.32	-15612	7392	-5342.88		25519	2.185	13437	8221			1.11	Si
SLV 3	9.52	-13569	8145	4188.53		22179	2.185	12769	7812			0.96	No, Vu<V
SLV 3	11.32	-15612	7392	-5342.88		25519	2.185	13437	8221			1.11	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 15	143750	0.46	7798	-4771	271.35	625.3	2.3	Si
SLV 16	143750	0.46	7798	-4771	271.35	625.3	2.3	Si
SLV 12	143750	0.46	8247	-5045	271.35	658.68	2.43	Si
SLV 11	143750	0.46	8247	-5045	271.35	658.68	2.43	Si
SLV 14	143750	0.46	12400	-7586	271.35	954.27	3.52	Si
SLV 13	143750	0.46	12400	-7586	271.35	954.27	3.52	Si
SLV 7	143750	0.46	13233	-8096	271.35	1010.67	3.72	Si
SLV 8	143750	0.46	13233	-8096	271.35	1010.67	3.72	Si
SLV 9	143750	0.46	23585	-14429	271.35	1630.17	6.01	Si
SLV 10	143750	0.46	23585	-14429	271.35	1630.17	6.01	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 11	-4018	-5067	-120	0.032	728	0.901	0.52086	8.73249	No
SLV 12	-4018	-5067	-120	0.032	728	0.901	0.52086	8.73249	No
SLV 7	-6009	-9239	-120	0.034	925.3	0.915	0.54149	8.73249	No
SLV 8	-6009	-9239	-120	0.034	925.3	0.915	0.54149	8.73249	No
SLV 10	-9717	-16259	119	0.036	1298.5	0.935	0.55791	8.73249	No
SLV 9	-9717	-16259	119	0.036	1298.5	0.935	0.55791	8.73249	No
SLV 6	-11708	-20431	119	0.036	1500	0.942	0.56125	8.73249	No
SLV 5	-11708	-20431	119	0.036	1500	0.942	0.56125	8.73249	No
SLV 1	-12036	-21381	36	0.042	1533.2	0.943	0.65329	10.16227	No
SLV 2	-12036	-21381	36	0.042	1533.2	0.943	0.65329	10.16227	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.156	SLU 84	Si
V_SLU	1.353	SLU 84	Si
PF_SLV	1.642	SLV 15	Si
V_SLV	0.959	SLV 3	No
PFFP_SLV	2.304	SLV 15	Si
R_SLV	0.06	SLV 11	No

Maschio 172

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.368	-3.359	-21.593	-3.359	L5	L6	2.225	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 82	10.62	-11585	234.34	18595	9945.93	42.442	Si
SLU 82	11.42	-10545	-1637.91	16926	9293.69	5.674	Si
SLU 83	10.62	-12459	212.92	19999	10458.05	49.117	Si
SLU 83	11.42	-11364	-1710.41	18241	9811.47	5.736	Si
SLU 73	10.62	-11012	239.59	17676	9592.65	40.038	Si
SLU 73	11.42	-10004	-1581.68	16058	8935.46	5.649	Si
SLU 76	10.62	-11583	232.05	18592	9944.69	42.856	Si
SLU 76	11.42	-10580	-1658.85	16983	9316.63	5.616	Si
SLU 80	10.62	-12356	215.26	19833	10399.2	48.31	Si
SLU 80	11.42	-11318	-1732.91	18168	9783.46	5.646	Si
SLU 78	10.62	-12658	204.34	20318	10569.68	51.725	Si
SLU 78	11.42	-11609	-1758.36	18634	9960.61	5.665	Si
SLU 68	10.62	-10720	222.7	17208	9407.04	42.241	Si
SLU 68	11.42	-9695	-1520.36	15562	8725.27	5.739	Si
SLU 55	10.62	-10558	227.05	16948	9302.44	40.972	Si
SLU 55	11.42	-9550	-1500.98	15329	8625.2	5.746	Si
SLU 75	10.62	-12088	211.88	19402	10244.54	48.351	Si
SLU 75	11.42	-11033	-1681.18	17709	9605.44	5.714	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 84	10.62	-12155	226.8	19511	10283.65	45.342	Si
SLU 84	11.42	-11121	-1715.08	17851	9661.18	5.633	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 5	10.62	-9689	1484.04	15551	9406.65	6.339	Si
SLV 5	11.42	-9442	-3005.7	15155	9201.2	3.061	Si
SLV 6	10.62	-9689	1484.04	15551	9406.65	6.339	Si
SLV 6	11.42	-9442	-3005.7	15155	9201.2	3.061	Si
SLV 14	10.62	-9901	-1100.33	15892	9581.94	8.708	Si
SLV 14	11.42	-7458	2012.94	11971	7483.96	3.718	Si
SLV 4	10.62	-6538	1422.09	10494	6648.6	4.675	Si
SLV 4	11.42	-7246	-4230.97	11631	7293.79	1.724	Si
SLV 13	10.62	-9901	-1100.33	15892	9581.94	8.708	Si
SLV 13	11.42	-7458	2012.94	11971	7483.96	3.718	Si
SLV 15	10.62	-8814	-1620.4	14148	8670.41	5.351	Si
SLV 15	11.42	-6290	2541.43	10096	6419.28	2.526	Si
SLV 1	10.62	-7624	1942.16	12238	7632.42	3.93	Si
SLV 1	11.42	-8414	-4759.46	13505	8325.84	1.749	Si
SLV 16	10.62	-8814	-1620.4	14148	8670.41	5.351	Si
SLV 16	11.42	-6290	2541.43	10096	6419.28	2.526	Si
SLV 2	10.62	-7624	1942.16	12238	7632.42	3.93	Si
SLV 2	11.42	-8414	-4759.46	13505	8325.84	1.749	Si
SLV 3	10.62	-6538	1422.09	10494	6648.6	4.675	Si
SLV 3	11.42	-7246	-4230.97	11631	7293.79	1.724	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 68	10.62	-10720	2351	222.7		17208	2.225	7850	4890			2.08	Si
SLU 68	11.42	-9695	1579	-1520.36		15562	2.225	7630	4754			3.01	Si
SLU 80	10.62	-12356	2603	215.26		19833	2.225	8200	5109			1.96	Si
SLU 80	11.42	-11318	1737	-1732.91		18168	2.225	7978	4970			2.86	Si
SLU 82	10.62	-11585	2496	234.34		18595	2.225	8035	5006			2.01	Si
SLU 82	11.42	-10545	1699	-1637.91		16926	2.225	7812	4867			2.87	Si
SLU 75	10.62	-12088	2504	211.88		19402	2.225	8143	5073			2.03	Si
SLU 75	11.42	-11033	1680	-1681.18		17709	2.225	7917	4932			2.94	Si
SLU 73	10.62	-11012	2477	239.59		17676	2.225	7912	4929			1.99	Si
SLU 73	11.42	-10004	1676	-1581.68		16058	2.225	7697	4795			2.86	Si
SLU 84	10.62	-12155	2598	226.8		19511	2.225	8157	5082			1.96	Si
SLU 84	11.42	-11121	1750	-1715.08		17851	2.225	7936	4944			2.83	Si
SLU 79	10.62	-12660	2486	201.38		20322	2.225	8265	5149			2.07	Si
SLU 79	11.42	-11561	1676	-1728.23		18557	2.225	8030	5003			2.98	Si
SLU 83	10.62	-12459	2481	212.92		19999	2.225	8222	5122			2.06	Si
SLU 83	11.42	-11364	1689	-1710.41		18241	2.225	7988	4976			2.95	Si
SLU 78	10.62	-12658	2606	204.34		20318	2.225	8265	5149			1.98	Si
SLU 78	11.42	-11609	1731	-1758.36		18634	2.225	8040	5009			2.89	Si
SLU 76	10.62	-11583	2579	232.05		18592	2.225	8034	5005			1.94	Si
SLU 76	11.42	-10580	1727	-1658.85		16983	2.225	7820	4872			2.82	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 2	10.62	-7624	11086	1942.16		12238	2.225	10781	6717			0.61	No, Vu<V
SLV 2	11.42	-8414	8455	-4759.46		18317	1.6405	11997	5511			0.65	No, Vu<V
SLV 16	10.62	-8814	-7903	-1620.4		14148	2.225	11163	6955			0.88	No, Vu<V
SLV 16	11.42	-6290	-6245	2541.43		10569	2.1253	10447	6217			1	No, Vu<V
SLV 5	10.62	-9689	6337	1484.04		15551	2.225	11444	7129			1.13	Si
SLV 5	11.42	-9442	4875	-3005.7		15155	2.225	11364	7080			1.45	Si
SLV 1	10.62	-7624	11086	1942.16		12238	2.225	10781	6717			0.61	No, Vu<V
SLV 1	11.42	-8414	8455	-4759.46		18317	1.6405	11997	5511			0.65	No, Vu<V
SLV 6	10.62	-9689	6337	1484.04		15551	2.225	11444	7129			1.13	Si
SLV 6	11.42	-9442	4875	-3005.7		15155	2.225	11364	7080			1.45	Si
SLV 15	10.62	-8814	-7903	-1620.4		14148	2.225	11163	6955			0.88	No, Vu<V
SLV 15	11.42	-6290	-6245	2541.43		10569	2.1253	10447	6217			1	No, Vu<V
SLV 14	10.62	-9901	-6652	-1100.33		15892	2.225	11512	7172			1.08	Si
SLV 14	11.42	-7458	-5212	2012.94		11971	2.225	10727	6683			1.28	Si
SLV 13	10.62	-9901	-6652	-1100.33		15892	2.225	11512	7172			1.08	Si
SLV 13	11.42	-7458	-5212	2012.94		11971	2.225	10727	6683			1.28	Si
SLV 3	10.62	-6538	9835	1422.09		10494	2.225	10432	6499			0.66	No, Vu<V
SLV 3	11.42	-7246	7423	-4230.97		16319	1.5858	11597	5149			0.69	No, Vu<V
SLV 4	10.62	-6538	9835	1422.09		10494	2.225	10432	6499			0.66	No, Vu<V
SLV 4	11.42	-7246	7423	-4230.97		16319	1.5858	11597	5149			0.69	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 12	143750	0.46	10057	-6266	276.32	804.99	2.91	Si
SLV 11	143750	0.46	10057	-6266	276.32	804.99	2.91	Si
SLV 7	143750	0.46	10322	-6431	276.32	824.22	2.98	Si
SLV 8	143750	0.46	10322	-6431	276.32	824.22	2.98	Si
SLV 15	143750	0.46	11724	-7304	276.32	924.46	3.35	Si
SLV 16	143750	0.46	11724	-7304	276.32	924.46	3.35	Si
SLV 4	143750	0.46	12606	-7854	276.32	986.07	3.57	Si
SLV 3	143750	0.46	12606	-7854	276.32	986.07	3.57	Si
SLV 14	143750	0.46	13417	-8359	276.32	1041.76	3.77	Si
SLV 13	143750	0.46	13417	-8359	276.32	1041.76	3.77	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
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Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 14	-6455	-7304	-42	0.044	975.9	0.917	0.69296	10.16227	No
SLV 13	-6455	-7304	-42	0.044	975.9	0.917	0.69296	10.16227	No
SLV 1	-6011	-9897	39	0.044	931.5	0.915	0.7044	10.16227	No
SLV 2	-6011	-9897	39	0.044	931.5	0.915	0.7044	10.16227	No
SLV 3	-5325	-8310	42	0.044	863.1	0.91	0.70859	10.16227	No
SLV 4	-5325	-8310	42	0.044	863.1	0.91	0.70859	10.16227	No
SLV 16	-5769	-5717	-39	0.045	907.4	0.913	0.70871	10.16227	No
SLV 15	-5769	-5717	-39	0.045	907.4	0.913	0.70871	10.16227	No
SLV 9	-7100	-10063	-17	0.046	1040.6	0.921	0.72851	8.73249	No
SLV 10	-7100	-10063	-17	0.046	1040.6	0.921	0.72851	8.73249	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.616	SLU 76	Si
V_SLU	1.941	SLU 76	Si
PF_SLV	1.724	SLV 3	Si
V_SLV	0.606	SLV 1	No
PFFP_SLV	2.913	SLV 11	Si
R_SLV	0.068	SLV 13	No

Maschio 173

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-18.263	-3.359	-18.868	-3.359	L5	L6	0.605	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	$\tau 0$	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLU 84	10.62	-4022	248.38	23740	861.99	3.471	Si
SLU 84	11.42	-3137	29.19	18516	733.15	25.117	Si
SLU 83	10.62	-4227	255.2	24953	886.99	3.476	Si
SLU 83	11.42	-3345	21.8	19745	766.54	35.155	Si
SLU 79	10.62	-4286	256.89	25300	893.8	3.479	Si
SLU 79	11.42	-3388	24.98	19999	773.21	30.947	Si
SLU 80	10.62	-4080	250.06	24087	869.33	3.476	Si
SLU 80	11.42	-3180	32.37	18770	740.21	22.867	Si
SLU 78	10.62	-4170	251.56	24617	880.24	3.499	Si
SLU 78	11.42	-3267	37.95	19288	754.34	19.879	Si
SLU 77	10.62	-4376	258.39	25830	903.9	3.498	Si
SLU 77	11.42	-3475	30.56	20516	786.53	25.736	Si
SLU 82	10.62	-3833	239.17	22625	837.36	3.501	Si
SLU 82	11.42	-2970	25.64	17531	705.03	27.501	Si
SLU 73	10.62	-3565	227.11	21047	799.86	3.522	Si
SLU 73	11.42	-2707	30.19	15982	658.29	21.807	Si
SLU 81	10.62	-4038	246	23837	864.06	3.512	Si
SLU 81	11.42	-3178	18.25	18760	739.94	40.542	Si
SLU 76	10.62	-3754	236.31	22163	826.71	3.498	Si
SLU 76	11.42	-2874	33.74	16966	688.33	20.401	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLV 16	10.62	88	-679.06	0	0	0	No, Trazione
SLV 16	11.42	-1812	836.66	0	0	0	No, e>/2
SLV 15	10.62	88	-679.06	0	0	0	No, Trazione
SLV 15	11.42	-1812	836.66	0	0	0	No, e>/2
SLV 3	10.62	-5582	870.51	32953	1233.21	1.417	Si
SLV 3	11.42	-3052	-798.03	18018	787.16	0.986	No, M>Mu
SLV 4	10.62	-5582	870.51	32953	1233.21	1.417	Si
SLV 4	11.42	-3052	-798.03	18018	787.16	0.986	No, M>Mu
SLV 2	10.62	-5657	1020.54	33397	1243.61	1.219	Si
SLV 2	11.42	-2473	-811.74	0	0	0	No, e>/2
SLV 1	10.62	-5657	1020.54	33397	1243.61	1.219	Si
SLV 1	11.42	-2473	-811.74	0	0	0	No, e>/2
SLV 13	10.62	13	-529.03	0	0	0	No, Trazione
SLV 13	11.42	-1233	822.95	0	0	0	No, e>/2
SLV 14	10.62	13	-529.03	0	0	0	No, Trazione
SLV 14	11.42	-1233	822.95	0	0	0	No, e>/2
SLV 10	10.62	-2060	188.35	12158	561.02	2.979	Si
SLV 10	11.42	-990	234.81	5846	285.24	1.215	Si
SLV 9	10.62	-2060	188.35	12158	561.02	2.979	Si
SLV 9	11.42	-990	234.81	5846	285.24	1.215	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	$\sigma 0$	σN	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 62	10.62	-3888	586	235.95		22954	0.605	8616	1460			2.49	Si
SLU 62	11.42	-3038	103	17.84		17934	0.605	7947	1346			13.09	Si
SLU 79	10.62	-4286	632	256.89		25300	0.605	8929	1513			2.39	Si
SLU 79	11.42	-3388	108	24.98		19999	0.605	8222	1393			12.92	Si
SLU 74	10.62	-4187	609	249.19		24714	0.605	8851	1499			2.46	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 74	11.42	-3309	103	27.01		19532	0.605	8160	1382			13.45	Si
SLU 83	10.62	-4227	633	255.2		24953	0.605	8883	1505			2.38	Si
SLU 83	11.42	-3345	100	21.8		19745	0.605	8188	1387			13.91	Si
SLU 58	10.62	-3947	585	237.63		23301	0.605	8662	1467			2.51	Si
SLU 58	11.42	-3081	111	21.02		18188	0.605	7981	1352			12.19	Si
SLU 80	10.62	-4080	586	250.06		24087	0.605	8767	1485			2.53	Si
SLU 80	11.42	-3180	140	32.37		18770	0.605	8058	1365			9.78	Si
SLU 71	10.62	-3982	582	239.35		23506	0.605	8690	1472			2.53	Si
SLU 71	11.42	-3099	123	24.12		18295	0.605	7995	1354			11.02	Si
SLU 81	10.62	-4038	612	246		23837	0.605	8734	1480			2.42	Si
SLU 81	11.42	-3178	98	18.25		18760	0.605	8057	1365			13.92	Si
SLU 84	10.62	-4022	587	248.38		23740	0.605	8721	1477			2.52	Si
SLU 84	11.42	-3137	131	29.19		18516	0.605	8024	1359			10.34	Si
SLU 77	10.62	-4376	630	258.39		25830	0.605	9000	1525			2.42	Si
SLU 77	11.42	-3475	104	30.56		20516	0.605	8291	1405			13.45	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 14	10.62	13	-2444	-529.03		0	0	8333	0			0	No, Vu<V
SLV 14	11.42	-1233	-396	822.95		0	0	8333	0			0	No, Vu<V
SLV 6	10.62	-3761	1734	653.22		34759	0.3864	15285	1654			0.95	No, Vu<V
SLV 6	11.42	-1362	917	-255.6		14117	0.3446	11157	1077			1.17	Si
SLV 2	10.62	-5657	3534	1020.54		55155	0.3663	16250	1667			0.47	No, Vu<V
SLV 2	11.42	-2473	949	-811.74		0	0	8333	0			0	No, Vu<V
SLV 13	10.62	13	-2444	-529.03		0	0	8333	0			0	No, Vu<V
SLV 13	11.42	-1233	-396	822.95		0	0	8333	0			0	No, Vu<V
SLV 4	10.62	-5582	3284	870.51		45344	0.4397	16250	2000			0.61	No, Vu<V
SLV 4	11.42	-3052	573	-798.03		88527	0.1231	16250	560			0.98	No, Vu<V
SLV 15	10.62	88	-2695	-679.06		0	0	8333	0			0	No, Vu<V
SLV 15	11.42	-1812	-772	836.66		0	0	8333	0			0	No, Vu<V
SLV 1	10.62	-5657	3534	1020.54		55155	0.3663	16250	1667			0.47	No, Vu<V
SLV 1	11.42	-2473	949	-811.74		0	0	8333	0			0	No, Vu<V
SLV 16	10.62	88	-2695	-679.06		0	0	8333	0			0	No, Vu<V
SLV 16	11.42	-1812	-772	836.66		0	0	8333	0			0	No, Vu<V
SLV 5	10.62	-3761	1734	653.22		34759	0.3864	15285	1654			0.95	No, Vu<V
SLV 5	11.42	-1362	917	-255.6		14117	0.3446	11157	1077			1.17	Si
SLV 3	10.62	-5582	3284	870.51		45344	0.4397	16250	2000			0.61	No, Vu<V
SLV 3	11.42	-3052	573	-798.03		88527	0.1231	16250	560			0.98	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 16	143750	0.46	5126	-868	75.13	116.48	1.55	Si
SLV 15	143750	0.46	5126	-868	75.13	116.48	1.55	Si
SLV 13	143750	0.46	6067	-1028	75.13	136.73	1.82	Si
SLV 14	143750	0.46	6067	-1028	75.13	136.73	1.82	Si
SLV 11	143750	0.46	8761	-1484	75.13	192.88	2.57	Si
SLV 12	143750	0.46	8761	-1484	75.13	192.88	2.57	Si
SLV 9	143750	0.46	11895	-2015	75.13	254.64	3.39	Si
SLV 10	143750	0.46	11895	-2015	75.13	254.64	3.39	Si
SLV 8	143750	0.46	12817	-2171	75.13	272.08	3.62	Si
SLV 7	143750	0.46	12817	-2171	75.13	272.08	3.62	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 4	-1899	-1286	-3	0.047	279.8	0.921	0.74152	10.16227	No
SLV 3	-1899	-1286	-3	0.047	279.8	0.921	0.74152	10.16227	No
SLV 2	-1582	-1480	2	0.048	248	0.913	0.76944	10.16227	No
SLV 1	-1582	-1480	2	0.048	248	0.913	0.76944	10.16227	No
SLV 7	-1860	-1264	-10	0.044	275.9	0.92	0.69843	8.73249	No
SLV 8	-1860	-1264	-10	0.044	275.9	0.92	0.69843	8.73249	No
SLV 11	-1510	-1439	-10	0.045	240.8	0.911	0.71332	8.73249	No
SLV 12	-1510	-1439	-10	0.045	240.8	0.911	0.71332	8.73249	No
SLV 15	-730	-1869	-5	0.052	164.6	0.891	0.85474	10.16227	No
SLV 16	-730	-1869	-5	0.052	164.6	0.891	0.85474	10.16227	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.471	SLU 84	Si
V_SLU	2.379	SLU 83	Si
PF_SLV	0	SLV 16	No
V_SLV	0	SLV 1	No
PFFP_SLV	1.55	SLV 15	Si
R_SLV	0.073	SLV 3	No

Maschio 174

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.618	1.046	-19.618	5.811	L5	L6	4.765	0.14	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

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fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 74	8.62	-20822	-2619.32	31211	30601.16	11.683	Si
SLU 74	12.17	-11357	-784.82	17024	21404.33	27.273	Si
SLU 83	8.62	-21202	-2703.25	31781	30806.56	11.396	Si
SLU 83	12.17	-11441	-667.41	17150	21520.33	32.245	Si
SLU 39	8.62	-17086	-2499.36	25611	27909	11.166	Si
SLU 39	12.17	-8838	-538.78	13248	17632.23	32.726	Si
SLU 81	8.62	-20397	-2719.7	30575	30356.8	11.162	Si
SLU 81	12.17	-10647	-630.24	15959	20396.61	32.363	Si
SLU 82	8.62	-20393	-2725.75	30568	30354.27	11.136	Si
SLU 82	12.17	-10666	-667.88	15988	20424.84	30.582	Si
SLU 41	8.62	-17891	-2482.91	26818	28592.48	11.516	Si
SLU 41	12.17	-9632	-575.95	14439	18881.98	32.784	Si
SLU 40	8.62	-17081	-2505.42	25605	27905.22	11.138	Si
SLU 40	12.17	-8857	-576.42	13277	17663.55	30.644	Si
SLU 75	8.62	-20817	-2625.38	31205	30598.78	11.655	Si
SLU 75	12.17	-11377	-822.45	17054	21431.34	26.058	Si
SLU 42	8.62	-17886	-2488.97	26811	28589.01	11.486	Si
SLU 42	12.17	-9652	-613.59	14468	18911.93	30.822	Si
SLU 84	8.62	-21198	-2709.3	31775	30804.32	11.37	Si
SLU 84	12.17	-11461	-705.04	17179	21547.19	30.561	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 14	8.62	-9416	-4171.14	14114	19841.98	4.757	Si
SLV 14	12.17	-6699	-1450.27	10042	14649.82	10.101	Si
SLV 12	8.62	-17029	2741.61	25526	32097.2	11.707	Si
SLV 12	12.17	-7887	-3277.04	11822	16972.6	5.179	Si
SLV 16	8.62	-11819	-1380.04	17716	24075.86	17.446	Si
SLV 16	12.17	-7043	-2849.02	10558	15330.91	5.381	Si
SLV 15	8.62	-11819	-1380.04	17716	24075.86	17.446	Si
SLV 15	12.17	-7043	-2849.02	10558	15330.91	5.381	Si
SLV 13	8.62	-9416	-4171.14	14114	19841.98	4.757	Si
SLV 13	12.17	-6699	-1450.27	10042	14649.82	10.101	Si
SLV 11	8.62	-17029	2741.61	25526	32097.2	11.707	Si
SLV 11	12.17	-7887	-3277.04	11822	16972.6	5.179	Si
SLV 6	8.62	-11083	-5820.33	16613	22815.25	3.92	Si
SLV 6	12.17	-7120	2417.35	10672	15481.82	6.404	Si
SLV 10	8.62	-9019	-6562.07	13520	19111.47	2.912	Si
SLV 10	12.17	-6741	1385.47	10104	14731.95	10.633	Si
SLV 5	8.62	-11083	-5820.33	16613	22815.25	3.92	Si
SLV 5	12.17	-7120	2417.35	10672	15481.82	6.404	Si
SLV 9	8.62	-9019	-6562.07	13520	19111.47	2.912	Si
SLV 9	12.17	-6741	1385.47	10104	14731.95	10.633	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 33	8.62	-17506	257	-2405.04		26241	4.7652	9054	6040			23.51	Si
SLU 33	12.17	-9568	123	-731		14342	4.7652	7468	4982			40.46	Si
SLU 42	8.62	-17886	287	-2488.97		26811	4.7652	9130	6091			21.22	Si
SLU 42	12.17	-9652	129	-613.59		14468	4.7652	7485	4993			38.71	Si
SLU 31	8.62	-16427	253	-2270.51		24623	4.7652	8839	5896			23.34	Si
SLU 31	12.17	-8614	125	-581.61		12912	4.7652	7277	4855			38.94	Si
SLU 84	8.62	-21198	289	-2709.3		31775	4.7652	9792	6533			22.62	Si
SLU 84	12.17	-11461	134	-705.04		17179	4.7652	7846	5234			39.13	Si
SLU 41	8.62	-17891	283	-2482.91		26818	4.7652	9131	6092			21.55	Si
SLU 41	12.17	-9632	133	-575.95		14439	4.7652	7481	4991			37.47	Si
SLU 83	8.62	-21202	284	-2703.25		31781	4.7652	9793	6533			22.97	Si
SLU 83	12.17	-11441	138	-667.41		17150	4.7652	7842	5232			37.92	Si
SLU 39	8.62	-17086	286	-2499.36		25611	4.7652	8970	5984			20.96	Si
SLU 39	12.17	-8838	153	-538.78		13248	4.7652	7322	4885			31.86	Si
SLU 82	8.62	-20393	292	-2725.75		30568	4.7652	9631	6425			22.03	Si
SLU 82	12.17	-10666	154	-667.88		15988	4.7652	7687	5128			33.33	Si
SLU 81	8.62	-20397	287	-2719.7		30575	4.7652	9632	6426			22.37	Si
SLU 81	12.17	-10647	158	-630.24		15959	4.7652	7683	5126			32.43	Si
SLU 40	8.62	-17081	290	-2505.42		25605	4.7652	8969	5984			20.64	Si
SLU 40	12.17	-8857	149	-576.42		13277	4.7652	7326	4887			32.78	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 8	8.62	-19093	10098	3483.35		28619	4.7652	14057	9378			0.93	No, Vu<V
SLV 8	12.17	-8266	8496	-2245.16		12390	4.7652	10811	7213			0.85	No, Vu<V
SLV 9	8.62	-9019	-9838	-6562.07		13520	4.7652	11037	7363			0.75	No, Vu<V
SLV 9	12.17	-6741	-8348	1385.47		10104	4.7652	10354	6907			0.83	No, Vu<V
SLV 13	8.62	-9416	-3873	-4171.14		14114	4.7652	11156	7442			1.92	Si
SLV 13	12.17	-6699	-2786	-1450.27		10042	4.7652	10342	6899			2.48	Si
SLV 11	8.62	-17029	9430	2741.61		25526	4.7652	13439	8965			0.95	No, Vu<V
SLV 11	12.17	-7887	8276	-3277.04		11822	4.7652	10698	7137			0.86	No, Vu<V
SLV 10	8.62	-9019	-9838	-6562.07		13520	4.7652	11037	7363			0.75	No, Vu<V
SLV 10	12.17	-6741	-8348	1385.47		10104	4.7652	10354	6907			0.83	No, Vu<V
SLV 5	8.62	-11083	-9171	-5820.33		16613	4.7652	11656	7776			0.85	No, Vu<V
SLV 5	12.17	-7120	-8128	2417.35		10672	4.7652	10468	6983			0.86	No, Vu<V
SLV 12	8.62	-17029	9430	2741.61		25526	4.7652	13439	8965			0.95	No, Vu<V
SLV 12	12.17	-7887	8276	-3277.04		11822	4.7652	10698	7137			0.86	No, Vu<V
SLV 7	8.62	-19093	10098	3483.35		28619	4.7652	14057	9378			0.93	No, Vu<V
SLV 7	12.17	-8266	8496	-2245.16		12390	4.7652	10811	7213			0.85	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 14	8.62	-9416	-3873	-4171.14		14114	4.7652	11156	7442			1.92	Si
SLV 14	12.17	-6699	-2786	-1450.27		10042	4.7652	10342	6899			2.48	Si
SLV 6	8.62	-11083	-9171	-5820.33		16613	4.7652	11656	7776			0.85	No, Vu<V
SLV 6	12.17	-7120	-8128	2417.35		10672	4.7652	10468	6983			0.86	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 9	143750	0.46	12036	-8029	316.53	506.68	1.6	Si
SLV 10	143750	0.46	12036	-8029	316.53	506.68	1.6	Si
SLV 5	143750	0.46	12973	-8655	316.53	541.52	1.71	Si
SLV 6	143750	0.46	12973	-8655	316.53	541.52	1.71	Si
SLV 14	143750	0.46	13528	-9025	316.53	561.78	1.77	Si
SLV 13	143750	0.46	13528	-9025	316.53	561.78	1.77	Si
SLV 16	143750	0.46	15745	-10504	316.53	640.51	2.02	Si
SLV 15	143750	0.46	15745	-10504	316.53	640.51	2.02	Si
SLV 1	143750	0.46	16654	-11110	316.53	671.72	2.12	Si
SLV 2	143750	0.46	16654	-11110	316.53	671.72	2.12	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.03 Ta = 0.1503

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 3	-8307	-18696	18	0.022	1185.1	0.925	0.34589	18.98212	No
SLV 4	-8307	-18696	18	0.022	1185.1	0.925	0.34589	18.98212	No
SLV 2	-7963	-16293	13	0.023	1150.5	0.923	0.35615	18.98212	No
SLV 1	-7963	-16293	13	0.023	1150.5	0.923	0.35615	18.98212	No
SLV 13	-6699	-9416	-18	0.022	1023.7	0.916	0.35631	18.98212	No
SLV 14	-6699	-9416	-18	0.022	1023.7	0.916	0.35631	18.98212	No
SLV 7	-8266	-19093	14	0.022	1180.9	0.925	0.35278	18.46841	No
SLV 8	-8266	-19093	14	0.022	1180.9	0.925	0.35278	18.46841	No
SLV 15	-7043	-11819	-12	0.023	1058.1	0.918	0.36318	18.98212	No
SLV 16	-7043	-11819	-12	0.023	1058.1	0.918	0.36318	18.98212	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	11.136	SLU 82	Si
V_SLU	20.64	SLU 40	Si
PF_SLV	2.912	SLV 9	Si
V_SLV	0.748	SLV 9	No
PFFP_SLV	1.601	SLV 9	Si
R_SLV	0.018	SLV 3	No

Maschio 175

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.618	5.811	-19.618	6.521	L5	L6	0.71	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 33	8.62	-3376	-92.07	16982	948.63	10.303	Si
SLU 33	12.17	-3151	39.53	15848	900.87	22.787	Si
SLU 36	8.62	-3654	-107.35	18379	1004.42	9.356	Si
SLU 36	12.17	-3461	43.45	17411	966.12	22.236	Si
SLU 42	8.62	-3348	-103.4	16841	942.81	9.118	Si
SLU 42	12.17	-3219	41.74	16192	915.57	21.936	Si
SLU 38	8.62	-3665	-107	18436	1006.63	9.408	Si
SLU 38	12.17	-3436	42.53	17284	960.98	22.595	Si
SLU 41	8.62	-3348	-104.27	16843	942.88	9.043	Si
SLU 41	12.17	-3226	41.9	16228	917.13	21.889	Si
SLU 39	8.62	-3071	-88.99	15446	883.37	9.927	Si
SLU 39	12.17	-2916	37.98	14666	848.68	22.343	Si
SLU 40	8.62	-3070	-88.13	15444	883.29	10.023	Si
SLU 40	12.17	-2908	37.82	14629	847.03	22.393	Si
SLU 32	8.62	-3376	-92.94	16984	948.7	10.208	Si
SLU 32	12.17	-3158	39.69	15885	902.45	22.735	Si
SLU 37	8.62	-3665	-107.87	18438	1006.7	9.333	Si
SLU 37	12.17	-3443	42.69	17321	962.47	22.545	Si
SLU 35	8.62	-3654	-108.22	18381	1004.49	9.282	Si
SLU 35	12.17	-3469	43.61	17447	967.59	22.189	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 13	8.62	-686	704.93	0	0	0	No, e>l/2
SLV 13	12.17	-778	-5.82	3916	267.5	45.976	Si
SLV 1	8.62	-3049	-855.54	15337	946.56	1.106	Si
SLV 1	12.17	-3886	67.4	19547	1158.8	17.193	Si
SLV 2	8.62	-3049	-855.54	15337	946.56	1.106	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 2	12.17	-3886	67.4	19547	1158.8	17.193	Si
SLV 6	8.62	608	-389.14	0	0	0	No, Trazione
SLV 6	12.17	-2535	54.16	12754	806.14	14.884	Si
SLV 15	8.62	-3111	773.31	15651	963.08	1.245	Si
SLV 15	12.17	-1004	-16.43	5049	341.59	20.785	Si
SLV 9	8.62	1317	79	0	0	0	No, Trazione
SLV 9	12.17	-1603	32.19	8065	531.59	16.512	Si
SLV 16	8.62	-3111	773.31	15651	963.08	1.245	Si
SLV 16	12.17	-1004	-16.43	5049	341.59	20.785	Si
SLV 5	8.62	608	-389.14	0	0	0	No, Trazione
SLV 5	12.17	-2535	54.16	12754	806.14	14.884	Si
SLV 10	8.62	1317	79	0	0	0	No, Trazione
SLV 10	12.17	-1603	32.19	8065	531.59	16.512	Si
SLV 14	8.62	-686	704.93	0	0	0	No, $e \geq l/2$
SLV 14	12.17	-778	-5.82	3916	267.5	45.976	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 37	8.62	-3665	-319	-107.87		18438	0.71	8014	1593			4.99	Si
SLU 37	12.17	-3443	-168	42.69		17321	0.71	7865	1564			9.29	Si
SLU 42	8.62	-3348	-320	-103.4		16841	0.71	7801	1551			4.85	Si
SLU 42	12.17	-3219	-172	41.74		16192	0.71	7714	1534			8.9	Si
SLU 36	8.62	-3654	-317	-107.35		18379	0.71	8006	1592			5.02	Si
SLU 36	12.17	-3461	-176	43.45		17411	0.71	7877	1566			8.87	Si
SLU 79	8.62	-4540	-337	-107.83		22838	0.71	8601	1710			5.08	Si
SLU 79	12.17	-4025	-185	47.2		20247	0.71	8255	1641			8.85	Si
SLU 84	8.62	-4223	-338	-103.37		21241	0.71	8388	1667			4.94	Si
SLU 84	12.17	-3801	-189	46.25		19118	0.71	8105	1611			8.5	Si
SLU 77	8.62	-4529	-338	-108.18		22781	0.71	8593	1708			5.05	Si
SLU 77	12.17	-4050	-193	48.12		20374	0.71	8272	1644			8.52	Si
SLU 83	8.62	-4223	-341	-104.23		21243	0.71	8388	1668			4.89	Si
SLU 83	12.17	-3808	-189	46.41		19155	0.71	8110	1612			8.54	Si
SLU 41	8.62	-3348	-323	-104.27		16843	0.71	7801	1551			4.8	Si
SLU 41	12.17	-3226	-172	41.9		16228	0.71	7719	1535			8.94	Si
SLU 38	8.62	-3665	-316	-107		18436	0.71	8014	1593			5.05	Si
SLU 38	12.17	-3436	-169	42.53		17284	0.71	7860	1563			9.25	Si
SLU 35	8.62	-3654	-321	-108.22		18381	0.71	8006	1592			4.96	Si
SLU 35	12.17	-3469	-176	43.61		17447	0.71	7882	1567			8.91	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 15	8.62	-3111	1193	773.31		34792	0.3194	15292	1368			1.15	Si
SLV 15	12.17	-1004	57	-16.43		5049	0.71	9343	1857			32.55	Si
SLV 1	8.62	-3049	-1527	-855.54		48780	0.2232	16250	1016			0.67	No, $V_u < V$
SLV 1	12.17	-3886	-264	67.4		19547	0.71	12243	2434			9.21	Si
SLV 5	8.62	608	-753	-389.14		0	0	8333	0			0	No, $V_u < V$
SLV 5	12.17	-2535	-411	54.16		12754	0.71	10884	2164			5.26	Si
SLV 13	8.62	-686	1075	704.93		0	0	8333	0			0	No, $V_u < V$
SLV 13	12.17	-778	-114	-5.82		3916	0.71	9116	1812			15.92	Si
SLV 14	8.62	-686	1075	704.93		0	0	8333	0			0	No, $V_u < V$
SLV 14	12.17	-778	-114	-5.82		3916	0.71	9116	1812			15.92	Si
SLV 16	8.62	-3111	1193	773.31		34792	0.3194	15292	1368			1.15	Si
SLV 16	12.17	-1004	57	-16.43		5049	0.71	9343	1857			32.55	Si
SLV 10	8.62	1317	28	79		0	0	8333	0			0	No, $V_u < V$
SLV 10	12.17	-1603	-366	32.19		8065	0.71	9946	1977			5.4	Si
SLV 9	8.62	1317	28	79		0	0	8333	0			0	No, $V_u < V$
SLV 9	12.17	-1603	-366	32.19		8065	0.71	9946	1977			5.4	Si
SLV 2	8.62	-3049	-1527	-855.54		48780	0.2232	16250	1016			0.67	No, $V_u < V$
SLV 2	12.17	-3886	-264	67.4		19547	0.71	12243	2434			9.21	Si
SLV 6	8.62	608	-753	-389.14		0	0	8333	0			0	No, $V_u < V$
SLV 6	12.17	-2535	-411	54.16		12754	0.71	10884	2164			5.26	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 10	143750	0.46	3707	-737	90.22	100.05	1.11	Si
SLV 9	143750	0.46	3707	-737	90.22	100.05	1.11	Si
SLV 14	143750	0.46	4445	-884	90.22	119.22	1.32	Si
SLV 13	143750	0.46	4445	-884	90.22	119.22	1.32	Si
SLV 6	143750	0.46	8022	-1595	90.22	208.6	2.31	Si
SLV 5	143750	0.46	8022	-1595	90.22	208.6	2.31	Si
SLV 16	143750	0.46	9393	-1867	90.22	241.32	2.67	Si
SLV 15	143750	0.46	9393	-1867	90.22	241.32	2.67	Si
SLV 1	143750	0.46	18827	-3743	90.22	443.25	4.91	Si
SLV 2	143750	0.46	18827	-3743	90.22	443.25	4.91	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 10	-1603	1317	12	0	0	0	0	8.73249	No, Trazione
SLV 6	-2535	608	16	0	0	0	0	8.73249	No, Trazione
SLV 5	-2535	608	16	0	0	0	0	8.73249	No, Trazione
SLV 9	-1603	1317	12	0	0	0	0	8.73249	No, Trazione
SLV 1	-3886	-3049	11	0.043	495.7	0.943	0.65638	10.16227	No
SLV 2	-3886	-3049	11	0.043	495.7	0.943	0.65638	10.16227	No
SLV 4	-4111	-5475	3	0.044	518.5	0.945	0.67865	10.16227	No
SLV 3	-4111	-5475	3	0.044	518.5	0.945	0.67865	10.16227	No
SLV 8	-3286	-7478	-11	0.043	435	0.936	0.66726	8.73249	No
SLV 7	-3286	-7478	-11	0.043	435	0.936	0.66726	8.73249	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.043	SLU 41	Si
V_SLU	4.796	SLU 41	Si
PF_SLV	0	SLV 10	No
V_SLV	0	SLV 5	No
PFFP_SLV	1.109	SLV 9	Si
R_SLV	0	SLV 10	No

Maschio 176

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.333	-3.359	-17.363	-3.359	L5	L6	1.03	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 2	9.52	-3868	-167.81	13411	1663.91	9.916	Si
SLU 2	11.32	-2965	301.09	10282	1334.33	4.432	Si
SLU 44	9.52	-5032	-150.93	17449	2036.45	13.493	Si
SLU 44	11.32	-3739	360.5	12964	1619	4.491	Si
SLU 5	9.52	-4148	-157.57	14382	1758.94	11.163	Si
SLU 5	11.32	-3206	313.34	11117	1425.86	4.551	Si
SLU 52	9.52	-5328	-131.96	18476	2121.71	16.079	Si
SLU 52	11.32	-4051	354.6	14048	1726.63	4.869	Si
SLU 68	9.52	-5686	-142.81	19716	2219.54	15.541	Si
SLU 68	11.32	-4377	387.53	15175	1834.04	4.733	Si
SLU 47	9.52	-5312	-140.69	18420	2117.18	15.048	Si
SLU 47	11.32	-3980	372.75	13799	1702.35	4.567	Si
SLU 65	9.52	-5406	-153.05	18744	2143.4	14.005	Si
SLU 65	11.32	-4136	375.28	14340	1754.89	4.676	Si
SLU 10	9.52	-4164	-148.84	14438	1764.3	11.854	Si
SLU 10	11.32	-3278	295.19	11366	1452.56	4.921	Si
SLU 26	9.52	-4521	-159.69	15678	1880.38	11.775	Si
SLU 26	11.32	-3603	328.12	12493	1571	4.788	Si
SLU 23	9.52	-4241	-169.93	14706	1789.94	10.533	Si
SLU 23	11.32	-3362	315.87	11658	1483.67	4.697	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 15	9.52	-1209	-2799.53	0	0	0	No, e>l/2
SLV 15	11.32	-4764	1670.96	16520	2121.91	1.27	Si
SLV 4	9.52	-7187	3516.41	24921	2946.51	0.838	No, M>Mu
SLV 4	11.32	160	-1530.23	0	0	0	No, Trazione
SLV 8	9.52	-4389	2005.32	15219	1978.87	0.987	No, M>Mu
SLV 8	11.32	612	-753.06	0	0	0	No, Trazione
SLV 2	9.52	-7792	2916.84	27018	3125.58	1.072	Si
SLV 2	11.32	-1705	-1236.02	0	0	0	No, e>l/2
SLV 3	9.52	-7187	3516.41	24921	2946.51	0.838	No, M>Mu
SLV 3	11.32	160	-1530.23	0	0	0	No, Trazione
SLV 13	9.52	-1813	-3399.1	0	0	0	No, e>l/2
SLV 13	11.32	-6629	1965.17	22986	2771.8	1.41	Si
SLV 7	9.52	-4389	2005.32	15219	1978.87	0.987	No, M>Mu
SLV 7	11.32	612	-753.06	0	0	0	No, Trazione
SLV 14	9.52	-1813	-3399.1	0	0	0	No, e>l/2
SLV 14	11.32	-6629	1965.17	22986	2771.8	1.41	Si
SLV 1	9.52	-7792	2916.84	27018	3125.58	1.072	Si
SLV 1	11.32	-1705	-1236.02	0	0	0	No, e>l/2
SLV 16	9.52	-1209	-2799.53	0	0	0	No, e>l/2
SLV 16	11.32	-4764	1670.96	16520	2121.91	1.27	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	l'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 34	9.52	-4818	-458	-140.72		16705	1.03	7783	2245			4.91	Si
SLU 34	11.32	-3916	15	322.21		13578	1.03	7366	2124			140.6	Si
SLU 10	9.52	-4164	-415	-148.84		14438	1.03	7481	2157			5.2	Si
SLU 10	11.32	-3278	-54	295.19		11366	1.03	7071	2039			37.5	Si
SLU 2	9.52	-3868	-394	-167.81		13411	1.03	7344	2118			5.37	Si
SLU 2	11.32	-2965	-122	301.09		10282	1.03	6926	1998			16.43	Si
SLU 31	9.52	-4538	-465	-150.96		15733	1.03	7653	2207			4.75	Si
SLU 31	11.32	-3675	-13	309.97		12742	1.03	7254	2092			165.13	Si
SLU 26	9.52	-4521	-438	-159.69		15678	1.03	7646	2205			5.04	Si
SLU 26	11.32	-3603	-52	328.12		12493	1.03	7221	2083			39.99	Si
SLU 65	9.52	-5406	-445	-153.05		18744	1.03	8055	2323			5.21	Si
SLU 65	11.32	-4136	-64	375.28		14340	1.03	7468	2154			33.7	Si
SLU 76	9.52	-5982	-458	-123.84		20743	1.03	8321	2400			5.24	Si
SLU 76	11.32	-4689	31	381.63		16260	1.03	7723	2227			71.72	Si
SLU 23	9.52	-4241	-445	-169.93		14706	1.03	7516	2168			4.87	Si
SLU 23	11.32	-3362	-80	315.87		11658	1.03	7110	2050			25.68	Si
SLU 73	9.52	-5702	-466	-134.08		19771	1.03	8192	2362			5.08	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 73	11.32	-4448	3	369.38		15424	1.03	7612	2195			669.42	Si
SLU 68	9.52	-5686	-438	-142.81		19716	1.03	8184	2360			5.39	Si
SLU 68	11.32	-4377	-36	387.53		15175	1.03	7579	2186			60.49	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 2	9.52	-7792	4943	2916.84		65946	0.422	16250	1920			0.39	No, Vu<V
SLV 2	11.32	-1705	1655	-1236.02		0	0	8333	0			0	No, Vu<V
SLV 14	9.52	-1813	-6031	-3399.1		0	0	8333	0			0	No, Vu<V
SLV 14	11.32	-6629	-1964	1965.17		36109	0.6557	15555	2856			1.45	Si
SLV 13	9.52	-1813	-6031	-3399.1		0	0	8333	0			0	No, Vu<V
SLV 13	11.32	-6629	-1964	1965.17		36109	0.6557	15555	2856			1.45	Si
SLV 15	9.52	-1209	-5102	-2799.53		0	0	8333	0			0	No, Vu<V
SLV 15	11.32	-4764	-1391	1670.96		34526	0.4928	15238	2103			1.51	Si
SLV 16	9.52	-1209	-5102	-2799.53		0	0	8333	0			0	No, Vu<V
SLV 16	11.32	-4764	-1391	1670.96		34526	0.4928	15238	2103			1.51	Si
SLV 3	9.52	-7187	5872	3516.41		332341	0.0772	16250	351			0.06	No, Vu<V
SLV 3	11.32	160	2227	-1530.23		0	0	8333	0			0	No, Vu<V
SLV 8	9.52	-4389	3115	2005.32		89907	0.1744	16250	793			0.25	No, Vu<V
SLV 8	11.32	612	1628	-753.06		0	0	8333	0			0	No, Vu<V
SLV 7	9.52	-4389	3115	2005.32		89907	0.1744	16250	793			0.25	No, Vu<V
SLV 7	11.32	612	1628	-753.06		0	0	8333	0			0	No, Vu<V
SLV 4	9.52	-7187	5872	3516.41		332341	0.0772	16250	351			0.06	No, Vu<V
SLV 4	11.32	160	2227	-1530.23		0	0	8333	0			0	No, Vu<V
SLV 1	9.52	-7792	4943	2916.84		65946	0.422	16250	1920			0.39	No, Vu<V
SLV 1	11.32	-1705	1655	-1236.02		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 15	143750	0.46	0	-546	127.91	0	0	No, e>t/2
SLV 16	143750	0.46	0	-546	127.91	0	0	No, e>t/2
SLV 13	143750	0.46	5147	-1485	127.91	199.08	1.56	Si
SLV 14	143750	0.46	5147	-1485	127.91	199.08	1.56	Si
SLV 11	143750	0.46	5559	-1603	127.91	214.22	1.67	Si
SLV 12	143750	0.46	5559	-1603	127.91	214.22	1.67	Si
SLV 7	143750	0.46	11954	-3448	127.91	435.43	3.4	Si
SLV 8	143750	0.46	11954	-3448	127.91	435.43	3.4	Si
SLV 9	143750	0.46	16405	-4731	127.91	573.44	4.48	Si
SLV 10	143750	0.46	16405	-4731	127.91	573.44	4.48	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 12	-1372	-2302	-98	0.012	292.6	0.893	0.20312	8.73249	No
SLV 11	-1372	-2302	-98	0.012	292.6	0.893	0.20312	8.73249	No
SLV 8	-331	-760	-68	0.014	202	0.911	0.22662	8.73249	No
SLV 7	-331	-760	-68	0.014	202	0.911	0.22662	8.73249	No
SLV 1	-1430	-2658	75	0.023	298.1	0.894	0.3767	10.16227	No
SLV 2	-1430	-2658	75	0.023	298.1	0.894	0.3767	10.16227	No
SLV 15	-3834	-6093	-76	0.031	536.7	0.928	0.48818	10.16227	No
SLV 16	-3834	-6093	-76	0.031	536.7	0.928	0.48818	10.16227	No
SLV 6	-3892	-6449	97	0.027	542.6	0.928	0.41988	8.73249	No
SLV 5	-3892	-6449	97	0.027	542.6	0.928	0.41988	8.73249	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.432	SLU 2	Si
V_SLU	4.746	SLU 31	Si
PF_SLV	0	SLV 8	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 15	No
R_SLV	0.023	SLV 11	No

Maschio 177

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-18.448	-3.359	-18.448	1.046	L5	L6	4.406	0.14	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	t0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 47	8.62	-14828	3272.08	24041	23024.3	7.037	Si
SLU 47	12.17	-7947	2728.58	12885	14737.54	5.401	Si
SLU 34	8.62	-15197	3646.73	24638	23350.8	6.403	Si
SLU 34	12.17	-7839	2691.67	12710	14574.46	5.415	Si
SLU 2	8.62	-11332	2556.32	18372	19332.19	7.563	Si
SLU 2	12.17	-5864	2109.39	9507	11409.25	5.409	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 76	8.62	-18073	4197.25	29301	25491.12	6.073	Si
SLU 76	12.17	-9370	3089.39	15192	16792.01	5.435	Si
SLU 23	8.62	-13016	3035.47	21103	21244.47	6.999	Si
SLU 23	12.17	-6676	2334.69	10824	12752.23	5.462	Si
SLU 5	8.62	-11952	2721.56	19378	20065.79	7.373	Si
SLU 5	12.17	-6416	2330.86	10402	12328.91	5.289	Si
SLU 13	8.62	-13512	3167.58	21907	21760.6	6.87	Si
SLU 13	12.17	-7027	2466.36	11393	13314.35	5.398	Si
SLU 55	8.62	-16388	3718.1	26570	24325.69	6.543	Si
SLU 55	12.17	-8558	2864.09	13875	15640.98	5.461	Si
SLU 26	8.62	-13637	3200.71	22109	21886.4	6.838	Si
SLU 26	12.17	-7229	2556.17	11720	13632.53	5.333	Si
SLU 68	8.62	-16513	3751.23	26772	24420.15	6.51	Si
SLU 68	12.17	-8760	2953.89	14202	15932.08	5.394	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 14	8.62	-11353	1740.93	18406	21241.37	12.201	Si
SLV 14	12.17	-5887	4101.87	9544	11955.04	2.915	Si
SLV 15	8.62	-10751	3266.76	17430	20303.9	6.215	Si
SLV 15	12.17	-6149	3042.31	9969	12439.57	4.089	Si
SLV 10	8.62	-13026	61	21119	23735.13	389.098	Si
SLV 10	12.17	-5876	4017.99	9527	11935.28	2.97	Si
SLV 13	8.62	-11353	1740.93	18406	21241.37	12.201	Si
SLV 13	12.17	-5887	4101.87	9544	11955.04	2.915	Si
SLV 16	8.62	-10751	3266.76	17430	20303.9	6.215	Si
SLV 16	12.17	-6149	3042.31	9969	12439.57	4.089	Si
SLV 9	8.62	-13026	61	21119	23735.13	389.098	Si
SLV 9	12.17	-5876	4017.99	9527	11935.28	2.97	Si
SLV 7	8.62	-11851	5233	19214	22000.94	4.204	Si
SLV 7	12.17	-7001	-645.34	11351	13990.34	21.679	Si
SLV 11	8.62	-11019	5147.1	17865	20724.14	4.026	Si
SLV 11	12.17	-6749	486.12	10942	13535.34	27.843	Si
SLV 8	8.62	-11851	5233	19214	22000.94	4.204	Si
SLV 8	12.17	-7001	-645.34	11351	13990.34	21.679	Si
SLV 12	8.62	-11019	5147.1	17865	20724.14	4.026	Si
SLV 12	12.17	-6749	486.12	10942	13535.34	27.843	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 26	8.62	-13637	-990	3200.71		22109	4.4057	8503	5245			5.3	Si
SLU 26	12.17	-7229	-305	2556.17		11720	4.4057	7118	4390			14.37	Si
SLU 13	8.62	-13512	-979	3167.58		21907	4.4057	8477	5228			5.34	Si
SLU 13	12.17	-7027	-295	2466.36		11393	4.4057	7075	4364			14.8	Si
SLU 31	8.62	-14576	-951	3481.49		23632	4.4057	8706	5370			5.65	Si
SLU 31	12.17	-7287	-264	2470.2		11814	4.4057	7131	4398			16.63	Si
SLU 23	8.62	-13016	-980	3035.47		21103	4.4057	8369	5162			5.27	Si
SLU 23	12.17	-6676	-297	2334.69		10824	4.4057	6999	4317			14.56	Si
SLU 5	8.62	-11952	-1008	2721.56		19378	4.4057	8139	5020			4.98	Si
SLU 5	12.17	-6416	-327	2330.86		10402	4.4057	6943	4282			13.09	Si
SLU 44	8.62	-14208	-937	3106.84		23035	4.4057	8627	5321			5.68	Si
SLU 44	12.17	-7395	-262	2507.11		11989	4.4057	7154	4413			16.81	Si
SLU 10	8.62	-12892	-970	3002.34		20901	4.4057	8342	5146			5.31	Si
SLU 10	12.17	-6474	-286	2244.89		10497	4.4057	6955	4290			15	Si
SLU 2	8.62	-11332	-998	2556.32		18372	4.4057	8005	4938			4.95	Si
SLU 2	12.17	-5864	-318	2109.39		9507	4.4057	6823	4208			13.22	Si
SLU 34	8.62	-15197	-961	3646.73		24638	4.4057	8841	5453			5.68	Si
SLU 34	12.17	-7839	-273	2691.67		12710	4.4057	7250	4472			16.37	Si
SLU 47	8.62	-14828	-947	3272.08		24041	4.4057	8761	5404			5.71	Si
SLU 47	12.17	-7947	-271	2728.58		12885	4.4057	7274	4486			16.54	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 9	8.62	-13026	-10818	61		21119	4.4057	12557	7745			0.72	No, Vu<V
SLV 9	12.17	-5876	-7971	4017.99		9527	4.4057	10239	6315			0.79	No, Vu<V
SLV 8	8.62	-11851	11295	5233		19214	4.4057	12176	7510			0.66	No, Vu<V
SLV 8	12.17	-7001	8423	-645.34		11351	4.4057	10604	6540			0.78	No, Vu<V
SLV 11	8.62	-11019	10311	5147.1		17865	4.4057	11906	7344			0.71	No, Vu<V
SLV 11	12.17	-6749	7846	486.12		10942	4.4057	10522	6490			0.83	No, Vu<V
SLV 12	8.62	-11019	10311	5147.1		17865	4.4057	11906	7344			0.71	No, Vu<V
SLV 12	12.17	-6749	7846	486.12		10942	4.4057	10522	6490			0.83	No, Vu<V
SLV 4	8.62	-13524	5049	3553.07		21927	4.4057	12719	7845			1.55	Si
SLV 4	12.17	-6991	3560	-729.22		11334	4.4057	10600	6538			1.84	Si
SLV 6	8.62	-13858	-9833	146.89		22468	4.4057	12827	7912			0.8	No, Vu<V
SLV 6	12.17	-6129	-7394	2886.53		9937	4.4057	10321	6366			0.86	No, Vu<V
SLV 7	8.62	-11851	11295	5233		19214	4.4057	12176	7510			0.66	No, Vu<V
SLV 7	12.17	-7001	8423	-645.34		11351	4.4057	10604	6540			0.78	No, Vu<V
SLV 5	8.62	-13858	-9833	146.89		22468	4.4057	12827	7912			0.8	No, Vu<V
SLV 5	12.17	-6129	-7394	2886.53		9937	4.4057	10321	6366			0.86	No, Vu<V
SLV 3	8.62	-13524	5049	3553.07		21927	4.4057	12719	7845			1.55	Si
SLV 3	12.17	-6991	3560	-729.22		11334	4.4057	10600	6538			1.84	Si
SLV 10	8.62	-13026	-10818	61		21119	4.4057	12557	7745			0.72	No, Vu<V
SLV 10	12.17	-5876	-7971	4017.99		9527	4.4057	10239	6315			0.79	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 15	143750	0.46	14058	-8671	292.65	537.14	1.84	Si
SLV 16	143750	0.46	14058	-8671	292.65	537.14	1.84	Si



Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 14	143750	0.46	14071	-8679	292.65	537.58	1.84	Si
SLV 13	143750	0.46	14071	-8679	292.65	537.58	1.84	Si
SLV 12	143750	0.46	14992	-9247	292.65	567.88	1.94	Si
SLV 11	143750	0.46	14992	-9247	292.65	567.88	1.94	Si
SLV 9	143750	0.46	15036	-9274	292.65	569.29	1.95	Si
SLV 10	143750	0.46	15036	-9274	292.65	569.29	1.95	Si
SLV 8	143750	0.46	15806	-9749	292.65	594.15	2.03	Si
SLV 7	143750	0.46	15806	-9749	292.65	594.15	2.03	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 $W_a = 0.03$ $T_a = 0.1503$

Comb.	N top	N base	V orto	α_0	M*	e*	a_0^*	aLim	Verifica
SLV 4	-6991	-13524	13	0.023	1026.4	0.921	0.35719	18.98212	No
SLV 3	-6991	-13524	13	0.023	1026.4	0.921	0.35719	18.98212	No
SLV 14	-5887	-11353	-13	0.023	915.8	0.914	0.36658	18.98212	No
SLV 13	-5887	-11353	-13	0.023	915.8	0.914	0.36658	18.98212	No
SLV 2	-6729	-14127	8	0.023	1000.1	0.919	0.36685	18.98212	No
SLV 1	-6729	-14127	8	0.023	1000.1	0.919	0.36685	18.98212	No
SLV 7	-7001	-11851	10	0.023	1027.4	0.921	0.36145	18.46841	No
SLV 8	-7001	-11851	10	0.023	1027.4	0.921	0.36145	18.46841	No
SLV 15	-6149	-10751	-8	0.023	942	0.916	0.37243	18.98212	No
SLV 16	-6149	-10751	-8	0.023	942	0.916	0.37243	18.98212	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.289	SLU 5	Si
V_SLU	4.945	SLU 2	Si
PF_SLV	2.915	SLV 13	Si
V_SLV	0.665	SLV 7	No
PFFP_SLV	1.835	SLV 15	Si
R_SLV	0.019	SLV 3	No

Maschio 178

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-17.053	-4.934	-17.053	-4.589	L5	L6	0.344	0.3	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 31	8.62	-2348	-249.29	22727	291.38	1.169	Si
SLU 31	11.73	-756	-48.68	7319	118.45	2.433	Si
SLU 13	8.62	-2244	-233.55	21725	283.29	1.213	Si
SLU 13	11.73	-764	-49.2	7399	119.62	2.431	Si
SLU 5	8.62	-2074	-215.46	20078	269.03	1.249	Si
SLU 5	11.73	-742	-48.1	7186	116.5	2.422	Si
SLU 10	8.62	-2191	-230.96	21207	278.93	1.208	Si
SLU 10	11.73	-732	-47.52	7088	115.08	2.422	Si
SLU 34	8.62	-2401	-251.88	23245	295.39	1.173	Si
SLU 34	11.73	-788	-50.36	7630	122.97	2.442	Si
SLU 73	8.62	-2889	-263.04	27973	326.6	1.242	Si
SLU 73	11.73	-977	-60.25	9461	148.69	2.468	Si
SLU 2	8.62	-2020	-212.87	19561	264.3	1.242	Si
SLU 2	11.73	-710	-46.42	6875	111.93	2.411	Si
SLU 76	8.62	-2943	-265.62	28491	329.43	1.24	Si
SLU 76	11.73	-1009	-61.92	9772	152.92	2.469	Si
SLU 23	8.62	-2177	-231.2	21080	277.84	1.202	Si
SLU 23	11.73	-734	-47.57	7105	115.32	2.424	Si
SLU 26	8.62	-2231	-233.79	21598	282.23	1.207	Si
SLU 26	11.73	-766	-49.25	7416	119.87	2.434	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 7	8.62	-1779	1294.05	0	0	0	No, $e>l/2$
SLV 7	11.73	-794	-272.74	0	0	0	No, $e>l/2$
SLV 6	8.62	-2415	-1220.34	0	0	0	No, $e>l/2$
SLV 6	11.73	-1311	113.79	12691	202.24	1.777	Si
SLV 4	8.62	-2043	680.07	0	0	0	No, $e>l/2$
SLV 4	11.73	-1617	-228.34	15651	242.66	1.063	Si
SLV 8	8.62	-1779	1294.05	0	0	0	No, $e>l/2$
SLV 8	11.73	-794	-272.74	0	0	0	No, $e>l/2$
SLV 9	8.62	-2379	-1448.38	0	0	0	No, $e>l/2$
SLV 9	11.73	-761	191.69	0	0	0	No, $e>l/2$
SLV 10	8.62	-2379	-1448.38	0	0	0	No, $e>l/2$
SLV 10	11.73	-761	191.69	0	0	0	No, $e>l/2$
SLV 11	8.62	-1744	1066.01	0	0	0	No, $e>l/2$
SLV 11	11.73	-245	-194.84	0	0	0	No, $e>l/2$
SLV 3	8.62	-2043	680.07	0	0	0	No, $e>l/2$
SLV 3	11.73	-1617	-228.34	15651	242.66	1.063	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 5	8.62	-2415	-1220.34	0	0	0	No, $e \geq l/2$
SLV 5	11.73	-1311	113.79	12691	202.24	1.777	Si
SLV 12	8.62	-1744	1066.01	0	0	0	No, $e \geq l/2$
SLV 12	11.73	-245	-194.84	0	0	0	No, $e \geq l/2$

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 26	8.62	-2231	-182	-233.79		36800	0.2021	10462	634			3.49	Si
SLU 26	11.73	-766	403	-49.25		7891	0.3236	6608	641			1.59	Si
SLU 23	8.62	-2177	-180	-231.2		36673	0.1979	10445	620			3.45	Si
SLU 23	11.73	-734	397	-47.57		7598	0.322	6569	635			1.6	Si
SLU 13	8.62	-2244	-181	-233.55		36625	0.2042	10439	640			3.53	Si
SLU 13	11.73	-764	403	-49.2		7879	0.3233	6606	641			1.59	Si
SLU 68	8.62	-2773	-192	-247.53		37172	0.2486	10512	784			4.09	Si
SLU 68	11.73	-987	429	-60.82		9923	0.3316	6879	684			1.6	Si
SLU 76	8.62	-2943	-204	-265.62		39927	0.2457	10833	798			3.91	Si
SLU 76	11.73	-1009	465	-61.92		10121	0.3324	6905	689			1.48	Si
SLU 34	8.62	-2401	-194	-251.88		39670	0.2017	10833	656			3.38	Si
SLU 34	11.73	-788	440	-50.36		8089	0.3248	6634	646			1.47	Si
SLU 55	8.62	-2786	-191	-247.29		37121	0.2502	10505	788			4.12	Si
SLU 55	11.73	-986	429	-60.77		9910	0.3315	6877	684			1.6	Si
SLU 31	8.62	-2348	-192	-249.29		39545	0.1979	10828	643			3.35	Si
SLU 31	11.73	-756	433	-48.68		7795	0.3233	6595	640			1.48	Si
SLU 73	8.62	-2889	-202	-263.04		39577	0.2434	10832	791			3.92	Si
SLU 73	11.73	-977	459	-60.25		9826	0.3315	6866	683			1.49	Si
SLU 10	8.62	-2191	-179	-230.96		36481	0.2002	10420	626			3.49	Si
SLU 10	11.73	-732	397	-47.52		7585	0.3217	6567	634			1.6	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 4	8.62	-2043	409	680.07		0	0	8333	0			0	No, $V_u < V$
SLV 4	11.73	-1617	-56	-228.34		58108	0.0927	16250	452			8.11	Si
SLV 7	8.62	-1779	787	1294.05		0	0	8333	0			0	No, $V_u < V$
SLV 7	11.73	-794	1501	-272.74		0	0	8333	0			0	No, $V_u < V$
SLV 10	8.62	-2379	-897	-1448.38		0	0	8333	0			0	No, $V_u < V$
SLV 10	11.73	-761	-1206	191.69		0	0	8333	0			0	No, $V_u < V$
SLV 9	8.62	-2379	-897	-1448.38		0	0	8333	0			0	No, $V_u < V$
SLV 9	11.73	-761	-1206	191.69		0	0	8333	0			0	No, $V_u < V$
SLV 6	8.62	-2415	-757	-1220.34		0	0	8333	0			0	No, $V_u < V$
SLV 6	11.73	-1311	-1608	113.79		17065	0.2561	11746	902			0.56	No, $V_u < V$
SLV 3	8.62	-2043	409	680.07		0	0	8333	0			0	No, $V_u < V$
SLV 3	11.73	-1617	-56	-228.34		58108	0.0927	16250	452			8.11	Si
SLV 12	8.62	-1744	647	1066.01		0	0	8333	0			0	No, $V_u < V$
SLV 12	11.73	-245	1903	-194.84		0	0	8333	0			0	No, $V_u < V$
SLV 5	8.62	-2415	-757	-1220.34		0	0	8333	0			0	No, $V_u < V$
SLV 5	11.73	-1311	-1608	113.79		17065	0.2561	11746	902			0.56	No, $V_u < V$
SLV 11	8.62	-1744	647	1066.01		0	0	8333	0			0	No, $V_u < V$
SLV 11	11.73	-245	1903	-194.84		0	0	8333	0			0	No, $V_u < V$
SLV 8	8.62	-1779	787	1294.05		0	0	8333	0			0	No, $V_u < V$
SLV 8	11.73	-794	1501	-272.74		0	0	8333	0			0	No, $V_u < V$

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 4	143750	0.46	7323	-756	44.75	106.66	2.38	Si
SLV 3	143750	0.46	7323	-756	44.75	106.66	2.38	Si
SLV 8	143750	0.46	9123	-942	44.75	130.79	2.92	Si
SLV 7	143750	0.46	9123	-942	44.75	130.79	2.92	Si
SLV 1	143750	0.46	10051	-1038	44.75	142.92	3.19	Si
SLV 2	143750	0.46	10051	-1038	44.75	142.92	3.19	Si
SLV 11	143750	0.46	13393	-1383	44.75	184.76	4.13	Si
SLV 12	143750	0.46	13393	-1383	44.75	184.76	4.13	Si
SLV 5	143750	0.46	18215	-1881	44.75	240.15	5.37	Si
SLV 6	143750	0.46	18215	-1881	44.75	240.15	5.37	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.05 Ta = 0.0702

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 5	2173	-2415	29	0	0	0	0	8.21782	No, Trazione
SLV 6	2173	-2415	29	0	0	0	0	8.21782	No, Trazione
SLV 10	1666	-2379	30	0	0	0	0	8.21782	No, Trazione
SLV 2	693	-2234	7	0	0	0	0	9.46416	No, Trazione
SLV 1	693	-2234	7	0	0	0	0	9.46416	No, Trazione
SLV 9	1666	-2379	30	0	0	0	0	8.21782	No, Trazione
SLV 7	-3743	-1779	-30	0.038	432.7	0.964	0.57785	8.21782	No
SLV 8	-3743	-1779	-30	0.038	432.7	0.964	0.57785	8.21782	No
SLV 12	-4250	-1744	-29	0.039	484.3	0.968	0.58586	8.21782	No
SLV 11	-4250	-1744	-29	0.039	484.3	0.968	0.58586	8.21782	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.169	SLU 31	Si
V_SLU	1.47	SLU 34	Si
PF_SLV	0	SLV 16	No
V_SLV	0	SLV 3	No
PFFP_SLV	2.384	SLV 3	Si
R_SLV	0	SLV 10	No



Maschio 179

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-3.359	-15.433	-3.359	L5	L6	1.67	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ ₀	f _{v0}	μ	φ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLU 82	8.62	-9256	-1304.15	19795	5850.61	4.486	Si
SLU 82	10.72	-10605	1640.17	22680	6389.79	3.896	Si
SLU 34	8.62	-7528	-1215.95	16100	5043.69	4.148	Si
SLU 34	10.72	-9035	1465.88	19322	5754.66	3.926	Si
SLU 73	8.62	-9160	-1296.16	19589	5809.13	4.482	Si
SLU 73	10.72	-10380	1612.91	22199	6305.51	3.909	Si
SLU 84	8.62	-9578	-1297.83	20484	5986.77	4.613	Si
SLU 84	10.72	-10957	1668.39	23432	6517.21	3.906	Si
SLU 78	8.62	-9948	-1197.2	21275	6137.29	5.126	Si
SLU 78	10.72	-11129	1634.89	23800	6577.59	4.023	Si
SLU 76	8.62	-9482	-1289.84	20279	5946.65	4.61	Si
SLU 76	10.72	-10732	1641.13	22952	6436.4	3.922	Si
SLU 40	8.62	-7302	-1230.26	15616	4928.26	4.006	Si
SLU 40	10.72	-8908	1464.92	19050	5698.6	3.89	Si
SLU 75	8.62	-9626	-1203.52	20586	6006.36	4.991	Si
SLU 75	10.72	-10777	1606.67	23048	6452.82	4.016	Si
SLU 31	8.62	-7206	-1222.27	15410	4878.54	3.991	Si
SLU 31	10.72	-8683	1437.66	18570	5597.59	3.894	Si
SLU 42	8.62	-7624	-1223.94	16305	5092.05	4.16	Si
SLU 42	10.72	-9260	1493.14	19802	5852.19	3.919	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLV 3	8.62	-8769	3350.29	18753	6198.21	1.85	Si
SLV 3	10.72	-1529	-2541.66	0	0	0	No, e>l/2
SLV 8	8.62	-5612	1544.32	12003	4226.01	2.736	Si
SLV 8	10.72	-2663	-1121.3	5695	2119.98	1.891	Si
SLV 15	8.62	-3924	-3968.77	0	0	0	No, e>l/2
SLV 15	10.72	-10939	3768.35	23394	7385.36	1.96	Si
SLV 16	8.62	-3924	-3968.77	0	0	0	No, e>l/2
SLV 16	10.72	-10939	3768.35	23394	7385.36	1.96	Si
SLV 1	8.62	-10021	2702.54	21431	6899.93	2.553	Si
SLV 1	10.72	-3379	-1866.11	7227	2654.8	1.423	Si
SLV 7	8.62	-5612	1544.32	12003	4226.01	2.736	Si
SLV 7	10.72	-2663	-1121.3	5695	2119.98	1.891	Si
SLV 13	8.62	-5177	-4616.52	0	0	0	No, e>l/2
SLV 13	10.72	-12790	4443.9	27352	8288.92	1.865	Si
SLV 2	8.62	-10021	2702.54	21431	6899.93	2.553	Si
SLV 2	10.72	-3379	-1866.11	7227	2654.8	1.423	Si
SLV 14	8.62	-5177	-4616.52	0	0	0	No, e>l/2
SLV 14	10.72	-12790	4443.9	27352	8288.92	1.865	Si
SLV 4	8.62	-8769	3350.29	18753	6198.21	1.85	Si
SLV 4	10.72	-1529	-2541.66	0	0	0	No, e>l/2

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 34	8.62	-7528	-2543	-1215.95	16100	1.67	7702	3602				1.42	Si
SLU 34	10.72	-9035	-2556	1465.88	19322	1.67	8132	3802				1.49	Si
SLU 42	8.62	-7624	-2591	-1223.94	16305	1.67	7730	3614				1.39	Si
SLU 42	10.72	-9260	-2606	1493.14	19802	1.67	8196	3832				1.47	Si
SLU 40	8.62	-7302	-2569	-1230.26	15616	1.67	7638	3571				1.39	Si
SLU 40	10.72	-8908	-2584	1464.92	19050	1.67	8096	3786				1.46	Si
SLU 82	8.62	-9256	-2800	-1304.15	19795	1.67	8195	3832				1.37	Si
SLU 82	10.72	-10605	-2819	1640.17	22680	1.67	8580	4012				1.42	Si
SLU 73	8.62	-9160	-2752	-1296.16	19589	1.67	8167	3819				1.39	Si
SLU 73	10.72	-10380	-2768	1612.91	22199	1.67	8515	3982				1.44	Si
SLU 76	8.62	-9482	-2774	-1289.84	20279	1.67	8259	3862				1.39	Si
SLU 76	10.72	-10732	-2790	1641.13	22952	1.67	8616	4029				1.44	Si
SLU 84	8.62	-9578	-2822	-1297.83	20484	1.67	8287	3875				1.37	Si
SLU 84	10.72	-10957	-2841	1668.39	23432	1.67	8680	4059				1.43	Si
SLU 75	8.62	-9626	-2677	-1203.52	20586	1.67	8300	3881				1.45	Si
SLU 75	10.72	-10777	-2694	1606.67	23048	1.67	8629	4035				1.5	Si
SLU 31	8.62	-7206	-2520	-1222.27	15410	1.67	7610	3559				1.41	Si
SLU 31	10.72	-8683	-2534	1437.66	18570	1.67	8032	3756				1.48	Si
SLU 78	8.62	-9948	-2700	-1197.2	21275	1.67	8392	3924				1.45	Si
SLU 78	10.72	-11129	-2716	1634.89	23800	1.67	8729	4082				1.5	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 15	8.62	-3924	-8147	-3968.77		0	0	8333	0			0	No, Vu<V
SLV 15	10.72	-10939	-6186	3768.35		26549	1.4716	13643	5621			0.91	No, Vu<V
SLV 9	8.62	-8333	-4996	-2810.55		19931	1.4932	12320	5151			1.03	Si
SLV 9	10.72	-11655	-4692	3023.54		24926	1.67	13319	6228			1.33	Si
SLV 4	8.62	-8769	5905	3350.29		23048	1.3588	12943	4924			0.83	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 4	10.72	-1529	4072	-2541.66		0	0	8333	0			0	No, Vu<V
SLV 2	8.62	-10021	5089	2702.54		21431	1.67	12619	5901			1.16	Si
SLV 2	10.72	-3379	3105	-1866.11		14227	0.8483	11179	2655			0.86	No, Vu<V
SLV 10	8.62	-8333	-4996	-2810.55		19931	1.4932	12320	5151			1.03	Si
SLV 10	10.72	-11655	-4692	3023.54		24926	1.67	13319	6228			1.33	Si
SLV 13	8.62	-5177	-8963	-4616.52		0	0	8333	0			0	No, Vu<V
SLV 13	10.72	-12790	-7154	4443.9		31230	1.4626	14579	5971			0.83	No, Vu<V
SLV 14	8.62	-5177	-8963	-4616.52		0	0	8333	0			0	No, Vu<V
SLV 14	10.72	-12790	-7154	4443.9		31230	1.4626	14579	5971			0.83	No, Vu<V
SLV 3	8.62	-8769	5905	3350.29		23048	1.3588	12943	4924			0.83	No, Vu<V
SLV 3	10.72	-1529	4072	-2541.66		0	0	8333	0			0	No, Vu<V
SLV 16	8.62	-3924	-8147	-3968.77		0	0	8333	0			0	No, Vu<V
SLV 16	10.72	-10939	-6186	3768.35		26549	1.4716	13643	5621			0.91	No, Vu<V
SLV 1	8.62	-10021	5089	2702.54		21431	1.67	12619	5901			1.16	Si
SLV 1	10.72	-3379	3105	-1866.11		14227	0.8483	11179	2655			0.86	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 4	143750	0.46	5536	-2588	207.39	345.97	1.67	Si
SLV 3	143750	0.46	5536	-2588	207.39	345.97	1.67	Si
SLV 7	143750	0.46	6453	-3017	207.39	400.11	1.93	Si
SLV 8	143750	0.46	6453	-3017	207.39	400.11	1.93	Si
SLV 2	143750	0.46	9553	-4467	207.39	576.48	2.78	Si
SLV 1	143750	0.46	9553	-4467	207.39	576.48	2.78	Si
SLV 11	143750	0.46	11256	-5263	207.39	668.97	3.23	Si
SLV 12	143750	0.46	11256	-5263	207.39	668.97	3.23	Si
SLV 6	143750	0.46	19843	-9279	207.39	1088.07	5.25	Si
SLV 5	143750	0.46	19843	-9279	207.39	1088.07	5.25	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 11	-3741	-4159	-170	0.018	622.5	0.907	0.29173	8.73249	No
SLV 12	-3741	-4159	-170	0.018	622.5	0.907	0.29173	8.73249	No
SLV 5	-5259	-9786	169	0.023	774	0.921	0.36411	8.73249	No
SLV 6	-5259	-9786	169	0.023	774	0.921	0.36411	8.73249	No
SLV 7	-3955	-5612	-148	0.023	643.7	0.91	0.36869	8.73249	No
SLV 8	-3955	-5612	-148	0.023	643.7	0.91	0.36869	8.73249	No
SLV 10	-5045	-8333	148	0.026	752.5	0.919	0.40932	8.73249	No
SLV 9	-5045	-8333	148	0.026	752.5	0.919	0.40932	8.73249	No
SLV 15	-3947	-3924	-84	0.035	642.9	0.909	0.55527	10.16227	No
SLV 16	-3947	-3924	-84	0.035	642.9	0.909	0.55527	10.16227	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.89	SLU 40	Si
V_SLU	1.368	SLU 82	Si
PF_SLV	0	SLV 3	No
V_SLV	0	SLV 3	No
PFFP_SLV	1.668	SLV 3	Si
R_SLV	0.033	SLV 11	No

Maschio 180

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.45	-4.784	-17.053	-4.784	L5	L6	0.602	0.3	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 32	8.62	-3729	128.57	20633	838.56	6.522	Si
SLU 32	11.73	-2278	8.25	12605	579.91	70.255	Si
SLU 40	8.62	-3962	138.49	21927	872.19	6.298	Si
SLU 40	11.73	-2392	1.67	13235	603.31	361.855	Si
SLU 39	8.62	-3715	141.72	20558	836.54	5.903	Si
SLU 39	11.73	-2278	1.99	12608	580.03	292.13	Si
SLU 35	8.62	-3817	129.66	21120	851.48	6.567	Si
SLU 35	11.73	-2351	10.7	13008	594.94	55.618	Si
SLU 37	8.62	-3812	128.31	21094	850.82	6.631	Si
SLU 37	11.73	-2351	10.96	13011	595.05	54.286	Si
SLU 42	8.62	-4050	139.58	22414	884.27	6.335	Si
SLU 42	11.73	-2464	4.11	13638	618	150.369	Si
SLU 83	8.62	-4720	150.67	26119	965.79	6.41	Si
SLU 83	11.73	-2857	13.46	15809	693.47	51.513	Si
SLU 41	8.62	-3803	142.81	21045	849.51	5.948	Si
SLU 41	11.73	-2351	4.43	13011	595.06	134.381	Si
SLU 81	8.62	-4632	149.58	25632	956.12	6.392	Si
SLU 81	11.73	-2784	11.02	15406	679.95	61.705	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 82	8.62	-4879	146.34	27001	982.49	6.714	Si
SLU 82	11.73	-2897	10.7	16033	700.89	65.496	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 6	8.62	-3317	958.13	18356	848.99	0.886	No, $M > M_u$
SLV 6	11.73	-2030	255.14	11236	555.31	2.176	Si
SLV 11	8.62	-3428	-800.21	18972	872.27	1.09	Si
SLV 11	11.73	-1905	-219.69	10539	524.15	2.386	Si
SLV 16	8.62	-3372	-632.03	18660	860.54	1.362	Si
SLV 16	11.73	-1709	14.9	9455	474.81	31.871	Si
SLV 5	8.62	-3317	958.13	18356	848.99	0.886	No, $M > M_u$
SLV 5	11.73	-2030	255.14	11236	555.31	2.176	Si
SLV 9	8.62	-3306	663.24	18293	846.58	1.276	Si
SLV 9	11.73	-1872	300.24	10360	516.08	1.719	Si
SLV 2	8.62	-3373	789.95	18667	860.8	1.09	Si
SLV 2	11.73	-2226	20.55	12320	602.93	29.338	Si
SLV 1	8.62	-3373	789.95	18667	860.8	1.09	Si
SLV 1	11.73	-2226	20.55	12320	602.93	29.338	Si
SLV 15	8.62	-3372	-632.03	18660	860.54	1.362	Si
SLV 15	11.73	-1709	14.9	9455	474.81	31.871	Si
SLV 10	8.62	-3306	663.24	18293	846.58	1.276	Si
SLV 10	11.73	-1872	300.24	10360	516.08	1.719	Si
SLV 12	8.62	-3428	-800.21	18972	872.27	1.09	Si
SLV 12	11.73	-1905	-219.69	10539	524.15	2.386	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 80	8.62	-4976	120	132.93		27538	0.6024	9227	1667			13.93	Si
SLU 80	11.73	-2970	-190	19.68		16435	0.6024	7747	1400			7.39	Si
SLU 81	8.62	-4632	146	149.58		25632	0.6024	8973	1622			11.09	Si
SLU 81	11.73	-2784	-188	11.02		15406	0.6024	7610	1375			7.31	Si
SLU 75	8.62	-4893	120	133.18		27076	0.6024	9166	1656			13.83	Si
SLU 75	11.73	-2897	-187	16.97		16030	0.6024	7693	1390			7.45	Si
SLU 74	8.62	-4646	134	136.42		25707	0.6024	8983	1623			12.14	Si
SLU 74	11.73	-2784	-187	17.29		15403	0.6024	7609	1375			7.34	Si
SLU 79	8.62	-4729	134	136.17		26169	0.6024	9045	1635			12.23	Si
SLU 79	11.73	-2857	-190	20		15809	0.6024	7663	1385			7.28	Si
SLU 82	8.62	-4879	132	146.34		27001	0.6024	9156	1655			12.5	Si
SLU 82	11.73	-2897	-187	10.7		16033	0.6024	7693	1390			7.42	Si
SLU 77	8.62	-4734	134	137.51		26194	0.6024	9048	1635			12.16	Si
SLU 77	11.73	-2856	-195	19.73		15806	0.6024	7663	1385			7.11	Si
SLU 84	8.62	-4967	133	147.43		27488	0.6024	9221	1666			12.52	Si
SLU 84	11.73	-2970	-195	13.14		16436	0.6024	7747	1400			7.19	Si
SLU 78	8.62	-4981	121	134.27		27563	0.6024	9231	1668			13.84	Si
SLU 78	11.73	-2970	-194	19.41		16433	0.6024	7747	1400			7.22	Si
SLU 83	8.62	-4720	147	150.67		26119	0.6024	9038	1633			11.11	Si
SLU 83	11.73	-2857	-196	13.46		15809	0.6024	7663	1385			7.08	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 16	8.62	-3372	-665	-632.03		32936	0.3413	14921	1528			2.3	Si
SLV 16	11.73	-1709	667	14.9		9455	0.6024	10224	1848			2.77	Si
SLV 6	8.62	-3317	529	958.13		298582	0.037	16250	181			0.34	No, $V_u < V$
SLV 6	11.73	-2030	-914	255.14		12853	0.5266	10904	1723			1.88	Si
SLV 1	8.62	-3373	825	789.95		55929	0.2011	16250	980			1.19	Si
SLV 1	11.73	-2226	-897	20.55		12320	0.6024	10797	1951			2.18	Si
SLV 15	8.62	-3372	-665	-632.03		32936	0.3413	14921	1528			2.3	Si
SLV 15	11.73	-1709	667	14.9		9455	0.6024	10224	1848			2.77	Si
SLV 2	8.62	-3373	825	789.95		55929	0.2011	16250	980			1.19	Si
SLV 2	11.73	-2226	-897	20.55		12320	0.6024	10797	1951			2.18	Si
SLV 12	8.62	-3428	-369	-800.21		56199	0.2033	16250	991			2.69	Si
SLV 12	11.73	-1905	685	-219.69		11387	0.5575	10611	1775			2.59	Si
SLV 9	8.62	-3306	127	663.24		36529	0.3017	15639	1415			11.19	Si
SLV 9	11.73	-1872	-557	300.24		14772	0.4225	11288	1431			2.57	Si
SLV 10	8.62	-3306	127	663.24		36529	0.3017	15639	1415			11.19	Si
SLV 10	11.73	-1872	-557	300.24		14772	0.4225	11288	1431			2.57	Si
SLV 5	8.62	-3317	529	958.13		298582	0.037	16250	181			0.34	No, $V_u < V$
SLV 5	11.73	-2030	-914	255.14		12853	0.5266	10904	1723			1.88	Si
SLV 11	8.62	-3428	-369	-800.21		56199	0.2033	16250	991			2.69	Si
SLV 11	11.73	-1905	685	-219.69		11387	0.5575	10611	1775			2.59	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 10	143750	0.46	5990	-1082	78.29	154.41	1.97	Si
SLV 9	143750	0.46	5990	-1082	78.29	154.41	1.97	Si
SLV 5	143750	0.46	8389	-1516	78.29	211.8	2.71	Si
SLV 6	143750	0.46	8389	-1516	78.29	211.8	2.71	Si
SLV 13	143750	0.46	9637	-1742	78.29	240.64	3.07	Si
SLV 14	143750	0.46	9637	-1742	78.29	240.64	3.07	Si
SLV 15	143750	0.46	15163	-2740	78.29	360.02	4.6	Si
SLV 16	143750	0.46	15163	-2740	78.29	360.02	4.6	Si
SLV 2	143750	0.46	17636	-3187	78.29	409.05	5.23	Si
SLV 1	143750	0.46	17636	-3187	78.29	409.05	5.23	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.05 Ta = 0.0702

Comb.	N top	N base	V orto	σ_0	M*	e*	a0*	aLim	Verifica
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Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 9	-475	-3306	43	0.024	147.9	0.89	0.39387	8.21782	No
SLV 10	-475	-3306	43	0.024	147.9	0.89	0.39387	8.21782	No
SLV 5	-673	-3317	44	0.026	165.7	0.889	0.43159	8.21782	No
SLV 6	-673	-3317	44	0.026	165.7	0.889	0.43159	8.21782	No
SLV 12	-2750	-3428	-47	0.035	371.5	0.933	0.5503	8.21782	No
SLV 11	-2750	-3428	-47	0.035	371.5	0.933	0.5503	8.21782	No
SLV 7	-2948	-3440	-47	0.036	391.4	0.936	0.55779	8.21782	No
SLV 8	-2948	-3440	-47	0.036	391.4	0.936	0.55779	8.21782	No
SLV 4	-2382	-3410	-14	0.046	334.3	0.927	0.71697	9.46416	No
SLV 3	-2382	-3410	-14	0.046	334.3	0.927	0.71697	9.46416	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.903	SLU 39	Si
V_SLU	7.082	SLU 83	Si
PF_SLV	0.886	SLV 5	No
V_SLV	0.341	SLV 5	No
PFFP_SLV	1.972	SLV 9	Si
R_SLV	0.048	SLV 9	No

Maschio 181

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-13.763	-4.784	-14.61	-4.784	L5	L6	0.848	0.3	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	$\tau 0$	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLU 40	8.62	-4520	-116.53	17775	1497.59	12.852	Si
SLU 40	11.73	-3071	109.83	12077	1108.59	10.093	Si
SLU 42	8.62	-4660	-113.3	18326	1530.67	13.509	Si
SLU 42	11.73	-3204	108.48	12598	1147.74	10.58	Si
SLU 81	8.62	-5540	-122.03	21788	1720.03	14.095	Si
SLU 81	11.73	-3666	119.04	14416	1278.69	10.742	Si
SLU 19	8.62	-4290	-92.81	16871	1441.61	15.533	Si
SLU 19	11.73	-2834	92.74	11145	1036.8	11.18	Si
SLU 31	8.62	-4494	-102.36	17674	1491.49	14.571	Si
SLU 31	11.73	-3019	101.27	11872	1092.95	10.792	Si
SLU 41	8.62	-4578	-113.28	18002	1511.3	13.341	Si
SLU 41	11.73	-3142	106.35	12355	1129.51	10.62	Si
SLU 83	8.62	-5681	-118.8	22339	1747.26	14.707	Si
SLU 83	11.73	-3798	117.69	14937	1314.61	11.17	Si
SLU 84	8.62	-5763	-118.83	22663	1762.9	14.836	Si
SLU 84	11.73	-3860	119.82	15181	1331.17	11.11	Si
SLU 82	8.62	-5623	-122.05	22112	1736.15	14.225	Si
SLU 82	11.73	-3728	121.17	14660	1295.58	10.692	Si
SLU 39	8.62	-4437	-116.51	17450	1477.75	12.684	Si
SLU 39	11.73	-3009	107.7	11833	1090.03	10.121	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma M = 2$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLV 6	8.62	-5496	223.93	21614	1917.33	8.562	Si
SLV 6	11.73	-1717	-325.64	6754	687.64	2.112	Si
SLV 4	8.62	-653	-37.35	2569	271.09	7.258	Si
SLV 4	11.73	-332	-510.62	0	0	0	No, e>l/2
SLV 2	8.62	-2007	115.87	7893	795.69	6.867	Si
SLV 2	11.73	-224	-632.09	0	0	0	No, e>l/2
SLV 7	8.62	-984	-286.81	3869	403.78	1.408	Si
SLV 7	11.73	-2076	79.23	8163	820.94	10.361	Si
SLV 8	8.62	-984	-286.81	3869	403.78	1.408	Si
SLV 8	11.73	-2076	79.23	8163	820.94	10.361	Si
SLV 5	8.62	-5496	223.93	21614	1917.33	8.562	Si
SLV 5	11.73	-1717	-325.64	6754	687.64	2.112	Si
SLV 16	8.62	-6110	-239.36	24028	2080.3	8.691	Si
SLV 16	11.73	-4956	769.81	19490	1765.43	2.293	Si
SLV 15	8.62	-6110	-239.36	24028	2080.3	8.691	Si
SLV 15	11.73	-4956	769.81	19490	1765.43	2.293	Si
SLV 1	8.62	-2007	115.87	7893	795.69	6.867	Si
SLV 1	11.73	-224	-632.09	0	0	0	No, e>l/2
SLV 3	8.62	-653	-37.35	2569	271.09	7.258	Si
SLV 3	11.73	-332	-510.62	0	0	0	No, e>l/2

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	V par	M	$\sigma 0$	σN	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 39	8.62	-4437	-335	-116.51		17450	0.8476	7882	2004			5.99	Si
SLU 39	11.73	-3009	-180	107.7		11833	0.8476	7133	1814			10.05	Si
SLU 41	8.62	-4578	-332	-113.28		18002	0.8476	7956	2023			6.09	Si
SLU 41	11.73	-3142	-179	106.35		12355	0.8476	7203	1832			10.21	Si
SLU 81	8.62	-5540	-376	-122.03		21788	0.8476	8461	2151			5.73	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 81	11.73	-3666	-201	119.04		14416	0.8476	7478	1901			9.46	Si
SLU 76	8.62	-5738	-355	-104.66		22563	0.8476	8564	2178			6.13	Si
SLU 76	11.73	-3808	-179	111.26		14976	0.8476	7552	1920			10.73	Si
SLU 84	8.62	-5763	-378	-118.83		22663	0.8476	8577	2181			5.77	Si
SLU 84	11.73	-3860	-196	119.82		15181	0.8476	7580	1927			9.81	Si
SLU 42	8.62	-4660	-337	-113.3		18326	0.8476	7999	2034			6.03	Si
SLU 42	11.73	-3204	-176	108.48		12598	0.8476	7235	1840			10.47	Si
SLU 73	8.62	-5597	-358	-107.88		22012	0.8476	8490	2159			6.04	Si
SLU 73	11.73	-3676	-180	112.61		14455	0.8476	7483	1903			10.57	Si
SLU 83	8.62	-5681	-373	-118.8		22339	0.8476	8534	2170			5.81	Si
SLU 83	11.73	-3798	-200	117.69		14937	0.8476	7547	1919			9.6	Si
SLU 82	8.62	-5623	-381	-122.05		22112	0.8476	8504	2162			5.68	Si
SLU 82	11.73	-3728	-197	121.17		14660	0.8476	7510	1910			9.67	Si
SLU 40	8.62	-4520	-340	-116.53		17775	0.8476	7926	2015			5.93	Si
SLU 40	11.73	-3071	-177	109.83		12077	0.8476	7166	1822			10.3	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 15	8.62	-6110	-1951	-239.36		24028	0.8476	13139	3341			1.71	Si
SLV 15	11.73	-4956	-939	769.81		20511	0.8055	12435	3005			3.2	Si
SLV 11	8.62	-2621	-1317	-347.42		10307	0.8476	10395	2643			2.01	Si
SLV 11	11.73	-3463	-278	463.36		13619	0.8476	11057	2812			10.11	Si
SLV 16	8.62	-6110	-1951	-239.36		24028	0.8476	13139	3341			1.71	Si
SLV 16	11.73	-4956	-939	769.81		20511	0.8055	12435	3005			3.2	Si
SLV 2	8.62	-2007	1496	115.87		7893	0.8476	9912	2520			1.68	Si
SLV 2	11.73	-224	699	-632.09		0	0	8333	0			0	No, Vu<V
SLV 1	8.62	-2007	1496	115.87		7893	0.8476	9912	2520			1.68	Si
SLV 1	11.73	-224	699	-632.09		0	0	8333	0			0	No, Vu<V
SLV 4	8.62	-653	1118	-37.35		2569	0.8476	8847	2250			2.01	Si
SLV 4	11.73	-332	757	-510.62		0	0	8333	0			0	No, Vu<V
SLV 14	8.62	-7464	-1573	-86.14		29352	0.8476	14204	3612			2.3	Si
SLV 14	11.73	-4849	-997	648.35		19068	0.8476	12147	3089			3.1	Si
SLV 13	8.62	-7464	-1573	-86.14		29352	0.8476	14204	3612			2.3	Si
SLV 13	11.73	-4849	-997	648.35		19068	0.8476	12147	3089			3.1	Si
SLV 12	8.62	-2621	-1317	-347.42		10307	0.8476	10395	2643			2.01	Si
SLV 12	11.73	-3463	-278	463.36		13619	0.8476	11057	2812			10.11	Si
SLV 3	8.62	-653	1118	-37.35		2569	0.8476	8847	2250			2.01	Si
SLV 3	11.73	-332	757	-510.62		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 3	143750	0.46	9170	-2332	110.16	323.52	2.94	Si
SLV 4	143750	0.46	9170	-2332	110.16	323.52	2.94	Si
SLV 8	143750	0.46	10032	-2551	110.16	351.23	3.19	Si
SLV 7	143750	0.46	10032	-2551	110.16	351.23	3.19	Si
SLV 2	143750	0.46	10641	-2706	110.16	370.53	3.36	Si
SLV 1	143750	0.46	10641	-2706	110.16	370.53	3.36	Si
SLV 12	143750	0.46	12242	-3113	110.16	420.16	3.81	Si
SLV 11	143750	0.46	12242	-3113	110.16	420.16	3.81	Si
SLV 6	143750	0.46	14935	-3798	110.16	500.03	4.54	Si
SLV 5	143750	0.46	14935	-3798	110.16	500.03	4.54	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 10.395 Wa = 0.05 Ta = 0.0702

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 3	546	-653	-68	0	0	0	0	9.46416	No, Trazione
SLV 1	647	-2007	-41	0	0	0	0	9.46416	No, Trazione
SLV 2	647	-2007	-41	0	0	0	0	9.46416	No, Trazione
SLV 4	546	-653	-68	0	0	0	0	9.46416	No, Trazione
SLV 13	-4655	-7464	68	0.036	602	0.941	0.55915	9.46416	No
SLV 14	-4655	-7464	68	0.036	602	0.941	0.55915	9.46416	No
SLV 7	-1428	-984	-61	0.03	279	0.896	0.49091	8.21782	No
SLV 8	-1428	-984	-61	0.03	279	0.896	0.49091	8.21782	No
SLV 9	-2681	-7133	61	0.035	403	0.918	0.54921	8.21782	No
SLV 10	-2681	-7133	61	0.035	403	0.918	0.54921	8.21782	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.093	SLU 40	Si
V_SLU	5.678	SLU 82	Si
PF_SLV	0	SLV 1	No
V_SLV	0	SLV 1	No
PFFP_SLV	2.937	SLV 3	Si
R_SLV	0	SLV 4	No

Maschio 182

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-15.058	1.046	-15.058	1.406	L5	L6	0.36	0.14	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

Sismicad 12.19 - Licenza assegnata a Sidel ingegneria Srl - Via Isonzo, 13 - Villanova di Castenaso (BO)



fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 83	8.62	-2954	135.21	58616	149.12	1.103	Si
SLU 83	10.72	-952	-96.76	18894	131.65	1.361	Si
SLU 80	8.62	-2951	133.52	58552	149.37	1.119	Si
SLU 80	10.72	-960	-97.61	19051	132.41	1.357	Si
SLU 77	8.62	-3011	135.87	59740	144.5	1.064	Si
SLU 77	10.72	-995	-98.26	19749	135.73	1.381	Si
SLU 82	8.62	-2809	125.91	55726	159.7	1.268	Si
SLU 82	10.72	-937	-88.99	18591	130.17	1.463	Si
SLU 79	8.62	-2971	135.61	58943	147.8	1.09	Si
SLU 79	10.72	-953	-98.77	18908	131.72	1.334	Si
SLU 75	8.62	-2865	126.57	56850	155.8	1.231	Si
SLU 75	10.72	-980	-90.48	19446	134.3	1.484	Si
SLU 84	8.62	-2934	133.11	58224	150.66	1.132	Si
SLU 84	10.72	-959	-95.6	19037	132.34	1.384	Si
SLU 74	8.62	-2885	128.66	57242	154.38	1.2	Si
SLU 74	10.72	-973	-91.64	19303	133.62	1.458	Si
SLU 81	8.62	-2828	128	56117	158.38	1.237	Si
SLU 81	10.72	-930	-90.15	18448	129.46	1.436	Si
SLU 78	8.62	-2991	133.77	59349	146.14	1.092	Si
SLU 78	10.72	-1003	-97.1	19892	136.39	1.405	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 7	8.62	-4766	492.13	94570	193.92	0.394	No, M>Mu
SLV 7	10.72	1377	-297.02	0	0	0	No, Trazione
SLV 11	8.62	-5549	594.07	110093	98.86	0.166	No, M>Mu
SLV 11	10.72	2062	-387.89	0	0	0	No, Trazione
SLV 12	8.62	-5549	594.07	110093	98.86	0.166	No, M>Mu
SLV 12	10.72	2062	-387.89	0	0	0	No, Trazione
SLV 10	8.62	948	-327.25	0	0	0	No, Trazione
SLV 10	10.72	-2689	179.92	53354	272.67	1.515	Si
SLV 2	8.62	369	-225.64	0	0	0	No, Trazione
SLV 2	10.72	-2509	178.06	49788	267.63	1.503	Si
SLV 9	8.62	948	-327.25	0	0	0	No, Trazione
SLV 9	10.72	-2689	179.92	53354	272.67	1.515	Si
SLV 6	8.62	1730	-429.18	0	0	0	No, Trazione
SLV 6	10.72	-3374	270.79	66936	274.59	1.014	Si
SLV 5	8.62	1730	-429.18	0	0	0	No, Trazione
SLV 5	10.72	-3374	270.79	66936	274.59	1.014	Si
SLV 1	8.62	369	-225.64	0	0	0	No, Trazione
SLV 1	10.72	-2509	178.06	49788	267.63	1.503	Si
SLV 8	8.62	-4766	492.13	94570	193.92	0.394	No, M>Mu
SLV 8	10.72	1377	-297.02	0	0	0	No, Trazione

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 78	8.62	-2991	261	133.77		59349	0.36	10833	546			2.09	Si
SLU 78	10.72	-1003	259	-97.1		28707	0.2495	9383	328			1.26	Si
SLU 84	8.62	-2934	259	133.11		58224	0.36	10833	546			2.11	Si
SLU 84	10.72	-959	257	-95.6		28426	0.2411	9346	315			1.23	Si
SLU 37	8.62	-2534	233	118.32		50288	0.36	10833	546			2.34	Si
SLU 37	10.72	-796	228	-86.15		26407	0.2153	9077	274			1.2	Si
SLU 38	8.62	-2515	228	116.23		49896	0.36	10833	546			2.4	Si
SLU 38	10.72	-803	226	-84.99		25779	0.2226	8993	280			1.24	Si
SLU 77	8.62	-3011	266	135.87		59740	0.36	10833	546			2.05	Si
SLU 77	10.72	-995	261	-98.26		29156	0.2439	9443	322			1.23	Si
SLU 80	8.62	-2951	261	133.52		58552	0.36	10833	546			2.09	Si
SLU 80	10.72	-960	260	-97.61		29181	0.235	9446	311			1.2	Si
SLU 83	8.62	-2954	264	135.21		58616	0.36	10833	546			2.07	Si
SLU 83	10.72	-952	259	-96.76		28923	0.2352	9412	310			1.2	Si
SLU 58	8.62	-2703	239	121.42		53636	0.36	10833	546			2.29	Si
SLU 58	10.72	-870	236	-89.38		26804	0.2319	9129	296			1.25	Si
SLU 41	8.62	-2518	231	117.91		49960	0.36	10833	546			2.36	Si
SLU 41	10.72	-795	225	-84.14		25519	0.2226	8958	279			1.24	Si
SLU 79	8.62	-2971	267	135.61		58943	0.36	10833	546			2.05	Si
SLU 79	10.72	-953	262	-98.77		29716	0.2291	9518	305			1.17	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 12	8.62	-5549	1581	594.07		181135	0.2188	16250	498			0.31	No, Vu<V
SLV 12	10.72	2062	877	-387.89		0	0	8333	0			0	No, Vu<V
SLV 1	8.62	369	-637	-225.64		0	0	8333	0			0	No, Vu<V
SLV 1	10.72	-2509	-372	178.06		54793	0.3271	16250	744			2	Si
SLV 7	8.62	-4766	1337	492.13		147866	0.2302	16250	524			0.39	No, Vu<V
SLV 7	10.72	1377	670	-297.02		0	0	8333	0			0	No, Vu<V
SLV 5	8.62	1730	-1262	-429.18		0	0	8333	0			0	No, Vu<V
SLV 5	10.72	-3374	-561	270.79		80539	0.2992	16250	681			1.21	Si
SLV 6	8.62	1730	-1262	-429.18		0	0	8333	0			0	No, Vu<V
SLV 6	10.72	-3374	-561	270.79		80539	0.2992	16250	681			1.21	Si
SLV 8	8.62	-4766	1337	492.13		147866	0.2302	16250	524			0.39	No, Vu<V
SLV 8	10.72	1377	670	-297.02		0	0	8333	0			0	No, Vu<V
SLV 11	8.62	-5549	1581	594.07		181135	0.2188	16250	498			0.31	No, Vu<V
SLV 11	10.72	2062	877	-387.89		0	0	8333	0			0	No, Vu<V
SLV 2	8.62	369	-637	-225.64		0	0	8333	0			0	No, Vu<V
SLV 2	10.72	-2509	-372	178.06		54793	0.3271	16250	744			2	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 9	8.62	948	-1019	-327.25		0	0	8333	0			0	No, Vu<V
SLV 9	10.72	-2689	-354	179.92		56614	0.3393	16250	772			2.18	Si
SLV 10	8.62	948	-1019	-327.25		0	0	8333	0			0	No, Vu<V
SLV 10	10.72	-2689	-354	179.92		56614	0.3393	16250	772			2.18	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 11	143750	0.46	0	2019	23.91	0	0	No, Trazione
SLV 13	143750	0.46	0	-265	23.91	0	0	No, e>t/2
SLV 7	143750	0.46	0	1335	23.91	0	0	No, Trazione
SLV 12	143750	0.46	0	2019	23.91	0	0	No, Trazione
SLV 16	143750	0.46	0	1157	23.91	0	0	No, Trazione
SLV 14	143750	0.46	0	-265	23.91	0	0	No, e>t/2
SLV 15	143750	0.46	0	1157	23.91	0	0	No, Trazione
SLV 8	143750	0.46	0	1335	23.91	0	0	No, Trazione
SLV 4	143750	0.46	22272	-1123	23.91	64.25	2.69	Si
SLV 3	143750	0.46	22272	-1123	23.91	64.25	2.69	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.03 Ta = 0.1503

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 6	386	1730	2	0	0	0	0	18.46841	No, Trazione
SLV 9	126	948	0	0	0	0	0	18.46841	No, Trazione
SLV 2	-149	369	4	0	0	0	0	18.98212	No, Trazione
SLV 1	-149	369	4	0	0	0	0	18.98212	No, Trazione
SLV 5	386	1730	2	0	0	0	0	18.46841	No, Trazione
SLV 10	126	948	0	0	0	0	0	18.46841	No, Trazione
SLV 16	-1732	-4188	-4	0.019	201.6	0.963	0.28737	18.98212	No
SLV 15	-1732	-4188	-4	0.019	201.6	0.963	0.28737	18.98212	No
SLV 13	-1014	-2239	-4	0.019	128.6	0.944	0.29629	18.98212	No
SLV 14	-1014	-2239	-4	0.019	128.6	0.944	0.29629	18.98212	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.064	SLU 77	Si
V_SLU	1.166	SLU 79	Si
PF_SLV	0	SLV 16	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 16	No
R_SLV	0	SLV 10	No

Maschio 183

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.058	2.206	-15.058	6.521	L5	L6	4.315	0.14	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	f ν_0	μ	ϕ	f ν_{lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 74	8.62	-19451	-2226.42	32198	25377.6	11.398	Si
SLU 74	10.72	-16239	-1555.34	26882	23474.18	15.093	Si
SLU 39	8.62	-16439	-2064.3	27212	23618.6	11.441	Si
SLU 39	10.72	-13609	-1238.56	22527	21241.2	17.15	Si
SLU 75	8.62	-19434	-2214.75	32171	25370.13	11.455	Si
SLU 75	10.72	-16213	-1509.6	26837	23454.4	15.537	Si
SLU 84	8.62	-19836	-2292.49	32836	25545.27	11.143	Si
SLU 84	10.72	-16530	-1476.21	27363	23683.43	16.043	Si
SLU 40	8.62	-16422	-2052.63	27185	23606.77	11.501	Si
SLU 40	10.72	-13582	-1192.81	22483	21215.21	17.786	Si
SLU 73	8.62	-18647	-2158.23	30868	24986.07	11.577	Si
SLU 73	10.72	-15382	-1429.22	25462	22812.71	15.962	Si
SLU 82	8.62	-19413	-2323.46	32135	25360.39	10.915	Si
SLU 82	10.72	-16036	-1480.43	26546	23323.32	15.754	Si
SLU 83	8.62	-19853	-2304.16	32863	25552.15	11.09	Si
SLU 83	10.72	-16557	-1521.95	27407	23702.46	15.574	Si
SLU 77	8.62	-19874	-2195.45	32899	25561.07	11.643	Si
SLU 77	10.72	-16733	-1551.12	27699	23825.49	15.36	Si
SLU 81	8.62	-19429	-2335.13	32163	25367.89	10.864	Si
SLU 81	10.72	-16063	-1526.17	26590	23343.51	15.295	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 6	8.62	-11265	-8327.38	18648	20595.06	2.473	Si
SLV 6	10.72	-7362	10856.92	12187	14299.82	1.317	Si
SLV 1	8.62	-13089	-2834.46	21668	23232.61	8.196	Si
SLV 1	10.72	-6967	5313.49	11532	13611.75	2.562	Si
SLV 12	8.62	-14951	5462.97	24749	25723.19	4.709	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 12	10.72	-14256	-13083.03	23599	24817.2	1.897	Si
SLV 2	8.62	-13089	-2834.46	21668	23232.61	8.196	Si
SLV 2	10.72	-6967	5313.49	11532	13611.75	2.562	Si
SLV 9	8.62	-10913	-8766.7	18064	20063.3	2.289	Si
SLV 9	10.72	-9214	8987.32	15253	17397.9	1.936	Si
SLV 10	8.62	-10913	-8766.7	18064	20063.3	2.289	Si
SLV 10	10.72	-9214	8987.32	15253	17397.9	1.936	Si
SLV 7	8.62	-15303	5902.29	25333	26171.78	4.434	Si
SLV 7	10.72	-12404	-11213.43	20534	22264.95	1.986	Si
SLV 11	8.62	-14951	5462.97	24749	25723.19	4.709	Si
SLV 11	10.72	-14256	-13083.03	23599	24817.2	1.897	Si
SLV 8	8.62	-15303	5902.29	25333	26171.78	4.434	Si
SLV 8	10.72	-12404	-11213.43	20534	22264.95	1.986	Si
SLV 5	8.62	-11265	-8327.38	18648	20595.06	2.473	Si
SLV 5	10.72	-7362	10856.92	12187	14299.82	1.317	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 71	8.62	-17760	-268	-1748.37		29399	4.315	9475	5724			21.38	Si
SLU 71	10.72	-14928	-268	-1448.68		24711	4.315	8850	5347			19.98	Si
SLU 79	8.62	-19521	-282	-2115.74		32315	4.315	9864	5959			21.17	Si
SLU 79	10.72	-16414	-281	-1497.01		27170	4.315	9178	5545			19.7	Si
SLU 80	8.62	-19505	-293	-2104.07		32287	4.315	9861	5957			20.36	Si
SLU 80	10.72	-16387	-292	-1451.27		27126	4.315	9172	5541			18.95	Si
SLU 76	8.62	-19070	-277	-2127.26		31568	4.315	9765	5899			21.26	Si
SLU 76	10.72	-15875	-277	-1424.99		26279	4.315	9059	5473			19.73	Si
SLU 70	8.62	-18097	-274	-1816.41		29956	4.315	9550	5769			21.04	Si
SLU 70	10.72	-15220	-274	-1457.04		25195	4.315	8915	5386			19.65	Si
SLU 59	8.62	-17660	-277	-1806.94		29233	4.315	9453	5711			20.58	Si
SLU 59	10.72	-14844	-277	-1352.9		24572	4.315	8832	5335			19.23	Si
SLU 57	8.62	-18013	-273	-1886.65		29817	4.315	9531	5758			21.1	Si
SLU 57	10.72	-15163	-273	-1407		25101	4.315	8902	5378			19.71	Si
SLU 72	8.62	-17744	-279	-1736.7		29372	4.315	9472	5722			20.53	Si
SLU 72	10.72	-14901	-279	-1402.93		24667	4.315	8844	5343			19.17	Si
SLU 78	8.62	-19858	-288	-2183.78		32872	4.315	9938	6004			20.85	Si
SLU 78	10.72	-16706	-288	-1505.37		27654	4.315	9243	5584			19.4	Si
SLU 51	8.62	-15899	-264	-1439.57		26318	4.315	9065	5476			20.77	Si
SLU 51	10.72	-13358	-264	-1304.56		22113	4.315	8504	5137			19.49	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 9	8.62	-10913	-9975	-8766.7		19187	4.0624	12171	6922			0.69	No, Vu<V
SLV 9	10.72	-9214	-8287	8987.32		18559	3.5463	12045	5980			0.72	No, Vu<V
SLV 12	8.62	-14951	9298	5462.97		24749	4.315	13283	8024			0.86	No, Vu<V
SLV 12	10.72	-14256	7567	-13083.03		27378	3.7194	13809	7190			0.95	No, Vu<V
SLV 14	8.62	-11915	-3616	-4298.86		19724	4.315	12278	7417			2.05	Si
SLV 14	10.72	-13139	-3176	-918.49		21750	4.315	12683	7662			2.41	Si
SLV 7	8.62	-15303	9630	5902.29		25333	4.315	13400	8095			0.84	No, Vu<V
SLV 7	10.72	-12404	7942	-11213.43		23561	3.7605	13046	6868			0.86	No, Vu<V
SLV 5	8.62	-11265	-9643	-8327.38		18911	4.2548	12116	7217			0.75	No, Vu<V
SLV 5	10.72	-7362	-7911	10856.92		25671	2.0485	13468	3862			0.49	No, Vu<V
SLV 11	8.62	-14951	9298	5462.97		24749	4.315	13283	8024			0.86	No, Vu<V
SLV 11	10.72	-14256	7567	-13083.03		27378	3.7194	13809	7190			0.95	No, Vu<V
SLV 13	8.62	-11915	-3616	-4298.86		19724	4.315	12278	7417			2.05	Si
SLV 13	10.72	-13139	-3176	-918.49		21750	4.315	12683	7662			2.41	Si
SLV 8	8.62	-15303	9630	5902.29		25333	4.315	13400	8095			0.84	No, Vu<V
SLV 8	10.72	-12404	7942	-11213.43		23561	3.7605	13046	6868			0.86	No, Vu<V
SLV 6	8.62	-11265	-9643	-8327.38		18911	4.2548	12116	7217			0.75	No, Vu<V
SLV 6	10.72	-7362	-7911	10856.92		25671	2.0485	13468	3862			0.49	No, Vu<V
SLV 10	8.62	-10913	-9975	-8766.7		19187	4.0624	12171	6922			0.69	No, Vu<V
SLV 10	10.72	-9214	-8287	8987.32		18559	3.5463	12045	5980			0.72	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 5	143750	0.46	12850	-7762	286.63	486.23	1.7	Si
SLV 6	143750	0.46	12850	-7762	286.63	486.23	1.7	Si
SLV 1	143750	0.46	12872	-7776	286.63	486.97	1.7	Si
SLV 2	143750	0.46	12872	-7776	286.63	486.97	1.7	Si
SLV 10	143750	0.46	15274	-9227	286.63	565.15	1.97	Si
SLV 9	143750	0.46	15274	-9227	286.63	565.15	1.97	Si
SLV 4	143750	0.46	15315	-9252	286.63	566.46	1.98	Si
SLV 3	143750	0.46	15315	-9252	286.63	566.46	1.98	Si
SLV 13	143750	0.46	20953	-12658	286.63	734.09	2.56	Si
SLV 14	143750	0.46	20953	-12658	286.63	734.09	2.56	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.03 Ta = 0.1503

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 3	-4489	-14301	-79	0.013	770.1	0.905	0.21339	18.98212	No
SLV 4	-4489	-14301	-79	0.013	770.1	0.905	0.21339	18.98212	No
SLV 13	-10594	-11915	79	0.016	1383.2	0.939	0.25424	18.98212	No
SLV 14	-10594	-11915	79	0.016	1383.2	0.939	0.25424	18.98212	No
SLV 8	-4553	-15303	-58	0.017	776.4	0.905	0.26607	18.46841	No
SLV 7	-4553	-15303	-58	0.017	776.4	0.905	0.26607	18.46841	No
SLV 2	-5856	-13089	-57	0.017	906	0.915	0.27561	18.98212	No
SLV 1	-5856	-13089	-57	0.017	906	0.915	0.27561	18.98212	No
SLV 16	-9227	-13127	56	0.018	1245	0.933	0.28133	18.98212	No
SLV 15	-9227	-13127	56	0.018	1245	0.933	0.28133	18.98212	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.864	SLU 81	Si
V_SLU	18.948	SLU 80	Si
PF_SLV	1.317	SLV 5	Si
V_SLV	0.488	SLV 5	No
PFFP_SLV	1.696	SLV 5	Si
R_SLV	0.011	SLV 3	No

Maschio 184

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-4.784	-13.763	-3.359	L5	Z medio 985 cm	1.424	0.28	1.23	1.23	1.23			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 83	8.62	-10236	-72.32	25666	4992.72	69.033	Si
SLU 83	9.85	-8576	339.17	21505	4495.22	13.253	Si
SLU 39	8.62	-8196	-60.83	20552	4364.34	71.742	Si
SLU 39	9.85	-6864	322.75	17212	3855.52	11.946	Si
SLU 84	8.62	-10373	-75.46	26009	5028.34	66.64	Si
SLU 84	9.85	-8671	336.99	21744	4527.01	13.434	Si
SLU 81	8.62	-9998	-79.01	25069	4928.75	62.381	Si
SLU 81	9.85	-8342	336.45	20917	4415.15	13.123	Si
SLU 41	8.62	-8434	-54.15	21149	4447.11	82.131	Si
SLU 41	9.85	-7099	325.47	17801	3950.79	12.139	Si
SLU 18	8.62	-7581	-61.26	19009	4138.93	67.559	Si
SLU 18	9.85	-6349	273.65	15919	3637.66	13.293	Si
SLU 82	8.62	-10135	-82.14	25412	4965.8	60.453	Si
SLU 82	9.85	-8437	334.27	21155	4447.92	13.307	Si
SLU 40	8.62	-8333	-63.97	20895	4412.19	68.977	Si
SLU 40	9.85	-6959	320.56	17451	3894.45	12.149	Si
SLU 42	8.62	-8571	-57.28	21492	4493.54	78.451	Si
SLU 42	9.85	-7194	323.29	18039	3988.75	12.338	Si
SLU 20	8.62	-7819	-54.58	19606	4228.14	77.472	Si
SLU 20	9.85	-6583	276.37	16508	3738.24	13.526	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 10	8.62	-10313	-677.48	25859	5790.03	8.546	Si
SLV 10	9.85	-7625	348.55	19119	4580.4	13.141	Si
SLV 15	8.62	-7410	-516.81	18580	4474.56	8.658	Si
SLV 15	9.85	-5980	207.52	14996	3736.29	18.005	Si
SLV 8	8.62	-3804	557.07	9539	2497.67	4.484	Si
SLV 8	9.85	-4031	-48.18	10108	2633.35	54.661	Si
SLV 14	8.62	-9143	-781.19	22927	5289.65	6.771	Si
SLV 14	9.85	-6944	307.24	17413	4240.66	13.802	Si
SLV 3	8.62	-4974	660.78	12472	3180.57	4.813	Si
SLV 3	9.85	-4712	-6.87	11815	3031.03	441.387	Si
SLV 4	8.62	-4974	660.78	12472	3180.57	4.813	Si
SLV 4	9.85	-4712	-6.87	11815	3031.03	441.387	Si
SLV 9	8.62	-10313	-677.48	25859	5790.03	8.546	Si
SLV 9	9.85	-7625	348.55	19119	4580.4	13.141	Si
SLV 16	8.62	-7410	-516.81	18580	4474.56	8.658	Si
SLV 16	9.85	-5980	207.52	14996	3736.29	18.005	Si
SLV 13	8.62	-9143	-781.19	22927	5289.65	6.771	Si
SLV 13	9.85	-6944	307.24	17413	4240.66	13.802	Si
SLV 7	8.62	-3804	557.07	9539	2497.67	4.484	Si
SLV 7	9.85	-4031	-48.18	10108	2633.35	54.661	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	l'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 76	8.62	-10202	-940	-77.19		25582	1.4243	8966	3576			3.81	Si
SLU 76	9.85	-8484	-870	283.97		21274	1.4243	8392	3347			3.85	Si
SLU 82	8.62	-10135	-970	-82.14		25412	1.4243	8944	3567			3.68	Si
SLU 82	9.85	-8437	-906	334.27		21155	1.4243	8376	3340			3.69	Si
SLU 78	8.62	-10418	-921	-63.99		26122	1.4243	9038	3605			3.91	Si
SLU 78	9.85	-8717	-841	294.45		21858	1.4243	8470	3378			4.02	Si
SLU 84	8.62	-10373	-966	-75.46		26009	1.4243	9023	3599			3.72	Si
SLU 84	9.85	-8671	-899	336.99		21744	1.4243	8455	3372			3.75	Si
SLU 73	8.62	-9964	-943	-83.88		24984	1.4243	8887	3544			3.76	Si
SLU 73	9.85	-8250	-877	281.25		20686	1.4243	8314	3316			3.78	Si
SLU 42	8.62	-8571	-860	-57.28		21492	1.4243	8421	3358			3.91	Si
SLU 42	9.85	-7194	-818	323.29		18039	1.4243	7961	3175			3.88	Si
SLU 40	8.62	-8333	-863	-63.97		20895	1.4243	8342	3327			3.85	Si
SLU 40	9.85	-6959	-825	320.56		17451	1.4243	7882	3144			3.81	Si
SLU 75	8.62	-10179	-924	-70.68		25525	1.4243	8959	3573			3.87	Si
SLU 75	9.85	-8482	-847	291.73		21269	1.4243	8391	3347			3.95	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 83	8.62	-10236	-923	-72.32		25666	1.4243	8978	3580			3.88	Si
SLU 83	9.85	-8576	-843	339.17		21505	1.4243	8423	3359			3.98	Si
SLU 81	8.62	-9998	-926	-79.01		25069	1.4243	8898	3549			3.83	Si
SLU 81	9.85	-8342	-850	336.45		20917	1.4243	8344	3328			3.92	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 7	8.62	-3804	3850	557.07		9539	1.4243	10241	4084			1.06	Si
SLV 7	9.85	-4031	3557	-48.18		10108	1.4243	10355	4130			1.16	Si
SLV 6	8.62	-9582	-3239	-324.2		24027	1.4243	13139	5240			1.62	Si
SLV 6	9.85	-7244	-2843	284.23		18165	1.4243	11966	4772			1.68	Si
SLV 5	8.62	-9582	-3239	-324.2		24027	1.4243	13139	5240			1.62	Si
SLV 5	9.85	-7244	-2843	284.23		18165	1.4243	11966	4772			1.68	Si
SLV 14	8.62	-9143	-4584	-781.19		22927	1.4243	12919	5152			1.12	Si
SLV 14	9.85	-6944	-4314	307.24		17413	1.4243	11816	4712			1.09	Si
SLV 13	8.62	-9143	-4584	-781.19		22927	1.4243	12919	5152			1.12	Si
SLV 13	9.85	-6944	-4314	307.24		17413	1.4243	11816	4712			1.09	Si
SLV 3	8.62	-4974	3429	660.78		12472	1.4243	10828	4318			1.26	Si
SLV 3	9.85	-4712	3315	-6.87		11815	1.4243	10696	4266			1.29	Si
SLV 10	8.62	-10313	-5005	-677.48		25859	1.4243	13505	5386			1.08	Si
SLV 10	9.85	-7625	-4556	348.55		19119	1.4243	12157	4848			1.06	Si
SLV 8	8.62	-3804	3850	557.07		9539	1.4243	10241	4084			1.06	Si
SLV 8	9.85	-4031	3557	-48.18		10108	1.4243	10355	4130			1.16	Si
SLV 9	8.62	-10313	-5005	-677.48		25859	1.4243	13505	5386			1.08	Si
SLV 9	9.85	-7625	-4556	348.55		19119	1.4243	12157	4848			1.06	Si
SLV 4	8.62	-4974	3429	660.78		12472	1.4243	10828	4318			1.26	Si
SLV 4	9.85	-4712	3315	-6.87		11815	1.4243	10696	4266			1.29	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 9.235 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 8	143750	0.43	10313	-4113	20.58	527.22	25.62	Si
SLV 7	143750	0.43	10313	-4113	20.58	527.22	25.62	Si
SLV 4	143750	0.43	11694	-4664	20.58	590.44	28.69	Si
SLV 3	143750	0.43	11694	-4664	20.58	590.44	28.69	Si
SLV 11	143750	0.43	12062	-4810	20.58	606.97	29.49	Si
SLV 12	143750	0.43	12062	-4810	20.58	606.97	29.49	Si
SLV 2	143750	0.43	14627	-5833	20.58	718.89	34.93	Si
SLV 1	143750	0.43	14627	-5833	20.58	718.89	34.93	Si
SLV 15	143750	0.43	17523	-6988	20.58	838.06	40.72	Si
SLV 16	143750	0.43	17523	-6988	20.58	838.06	40.72	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 9.235 Wa = 0.05 Ta = 0.009

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 2	-5676	-6707	71	0.111	646.9	0.968	1.66005	4.04124	No
SLV 1	-5676	-6707	71	0.111	646.9	0.968	1.66005	4.04124	No
SLV 6	-7244	-9582	68	0.111	806.6	0.974	1.66427	3.98071	No
SLV 5	-7244	-9582	68	0.111	806.6	0.974	1.66427	3.98071	No
SLV 15	-5980	-7410	-55	0.113	677.9	0.969	1.69668	4.04124	No
SLV 16	-5980	-7410	-55	0.113	677.9	0.969	1.69668	4.04124	No
SLV 4	-4712	-4974	43	0.115	548.8	0.962	1.74046	4.04124	No
SLV 3	-4712	-4974	43	0.115	548.8	0.962	1.74046	4.04124	No
SLV 11	-4412	-4535	-53	0.113	518.3	0.96	1.71533	3.98071	No
SLV 12	-4412	-4535	-53	0.113	518.3	0.96	1.71533	3.98071	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	11.946	SLU 39	Si
V_SLU	3.677	SLU 82	Si
PF_SLV	4.484	SLV 7	Si
V_SLV	1.061	SLV 7	Si
PFFP_SLV	25.619	SLV 7	Si
R_SLV	0.411	SLV 1	No

Maschio 185

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.sx	a.s.dx
-13.763	-4.784	-13.763	-3.359	Z medio 985 cm	L6	1.424	0.28	2.321	2.321	2.32			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ_0	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 73	9.85	-7536	-298.97	18897	4121.84	13.787	Si
SLU 73	12.17	-4886	118.94	12251	2956.1	24.853	Si
SLU 31	9.85	-6113	-268.14	15327	3534	13.18	Si
SLU 31	12.17	-3982	119.54	9984	2488	20.812	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 84	9.85	-7848	-311.92	19679	4238.76	13.589	Si
SLU 84	12.17	-5166	131.18	12953	3093.87	23.585	Si
SLU 34	9.85	-6347	-263.5	15915	3636.99	13.803	Si
SLU 34	12.17	-4226	124.08	10597	2618.16	21.101	Si
SLU 19	9.85	-5765	-257.11	14456	3377.08	13.135	Si
SLU 19	12.17	-3716	92.31	9317	2343.52	25.386	Si
SLU 21	9.85	-6000	-252.47	15044	3483.64	13.798	Si
SLU 21	12.17	-3960	96.85	9930	2476.53	25.572	Si
SLU 42	9.85	-6424	-281.09	16109	3670.39	13.058	Si
SLU 42	12.17	-4262	131.78	10686	2636.88	20.009	Si
SLU 82	9.85	-7613	-316.56	19090	4151.21	13.113	Si
SLU 82	12.17	-4921	126.65	12340	2973.79	23.48	Si
SLU 40	9.85	-6190	-285.73	15521	3568.19	12.488	Si
SLU 40	12.17	-4017	127.25	10073	2507.1	19.702	Si
SLU 39	9.85	-6104	-266.18	15305	3530.09	13.262	Si
SLU 39	12.17	-3943	118.34	9887	2467.22	20.848	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 14	9.85	-6253	-1086.84	15679	3881.59	3.571	Si
SLV 14	12.17	-4500	562.39	11283	2908.5	5.172	Si
SLV 7	9.85	-4102	659.18	10285	2675.16	4.058	Si
SLV 7	12.17	-2935	-542.08	7360	1964.33	3.624	Si
SLV 16	9.85	-5530	-726.56	13867	3491.32	4.805	Si
SLV 16	12.17	-4324	267.35	10842	2806.12	10.496	Si
SLV 10	9.85	-6781	-987.33	17003	4157.13	4.21	Si
SLV 10	12.17	-4067	656.09	10197	2654.47	4.046	Si
SLV 9	9.85	-6781	-987.33	17003	4157.13	4.21	Si
SLV 9	12.17	-4067	656.09	10197	2654.47	4.046	Si
SLV 3	9.85	-4630	758.69	11609	2983.91	3.933	Si
SLV 3	12.17	-2502	-448.38	6274	1690.51	3.77	Si
SLV 15	9.85	-5530	-726.56	13867	3491.32	4.805	Si
SLV 15	12.17	-4324	267.35	10842	2806.12	10.496	Si
SLV 4	9.85	-4630	758.69	11609	2983.91	3.933	Si
SLV 4	12.17	-2502	-448.38	6274	1690.51	3.77	Si
SLV 13	9.85	-6253	-1086.84	15679	3881.59	3.571	Si
SLV 13	12.17	-4500	562.39	11283	2908.5	5.172	Si
SLV 8	9.85	-4102	659.18	10285	2675.16	4.058	Si
SLV 8	12.17	-2935	-542.08	7360	1964.33	3.624	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 31	9.85	-6113	-759	-268.14		15327	1.4243	7599	3031			3.99	Si
SLU 31	12.17	-3982	-456	119.54		9984	1.4243	6887	2746			6.02	Si
SLU 82	9.85	-7613	-859	-316.56		19090	1.4243	8101	3231			3.76	Si
SLU 82	12.17	-4921	-487	126.65		12340	1.4243	7201	2872			5.9	Si
SLU 81	9.85	-7527	-800	-297.01		18874	1.4243	8072	3219			4.02	Si
SLU 81	12.17	-4847	-437	117.74		12154	1.4243	7176	2862			6.55	Si
SLU 76	9.85	-7771	-822	-294.33		19485	1.4243	8154	3252			3.95	Si
SLU 76	12.17	-5130	-471	123.47		12864	1.4243	7271	2900			6.15	Si
SLU 34	9.85	-6347	-751	-263.5		15915	1.4243	7678	3062			4.08	Si
SLU 34	12.17	-4226	-454	124.08		10597	1.4243	6969	2779			6.12	Si
SLU 40	9.85	-6190	-787	-285.73		15521	1.4243	7625	3041			3.86	Si
SLU 40	12.17	-4017	-469	127.25		10073	1.4243	6899	2751			5.86	Si
SLU 73	9.85	-7536	-831	-298.97		18897	1.4243	8075	3220			3.88	Si
SLU 73	12.17	-4886	-473	118.94		12251	1.4243	7189	2867			6.06	Si
SLU 42	9.85	-6424	-779	-281.09		16109	1.4243	7703	3072			3.95	Si
SLU 42	12.17	-4262	-468	131.78		10686	1.4243	6980	2784			5.95	Si
SLU 84	9.85	-7848	-850	-311.92		19679	1.4243	8179	3262			3.84	Si
SLU 84	12.17	-5166	-485	131.18		12953	1.4243	7283	2904			5.99	Si
SLU 75	9.85	-7773	-798	-279.36		19491	1.4243	8154	3252			4.08	Si
SLU 75	12.17	-5144	-460	129.93		12898	1.4243	7275	2901			6.3	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 8	9.85	-4102	3416	659.18		10285	1.4243	10390	4144			1.21	Si
SLV 8	12.17	-2935	2403	-542.08		7360	1.4243	9805	3910			1.63	Si
SLV 5	9.85	-6511	-2678	-541.76		16326	1.4243	11599	4626			1.73	Si
SLV 5	12.17	-3520	-1485	441.37		8827	1.4243	10099	4027			2.71	Si
SLV 9	9.85	-6781	-4338	-987.33		17003	1.4243	11734	4680			1.08	Si
SLV 9	12.17	-4067	-2855	656.09		10197	1.4243	10373	4137			1.45	Si
SLV 10	9.85	-6781	-4338	-987.33		17003	1.4243	11734	4680			1.08	Si
SLV 10	12.17	-4067	-2855	656.09		10197	1.4243	10373	4137			1.45	Si
SLV 6	9.85	-6511	-2678	-541.76		16326	1.4243	11599	4626			1.73	Si
SLV 6	12.17	-3520	-1485	441.37		8827	1.4243	10099	4027			2.71	Si
SLV 13	9.85	-6253	-4142	-1086.84		15679	1.4243	11469	4574			1.1	Si
SLV 13	12.17	-4500	-3092	562.39		11283	1.4243	10590	4223			1.37	Si
SLV 3	9.85	-4630	3220	758.69		11609	1.4243	10655	4249			1.32	Si
SLV 3	12.17	-2502	2641	-448.38		6274	1.4243	9588	3824			1.45	Si
SLV 4	9.85	-4630	3220	758.69		11609	1.4243	10655	4249			1.32	Si
SLV 4	12.17	-2502	2641	-448.38		6274	1.4243	9588	3824			1.45	Si
SLV 7	9.85	-4102	3416	659.18		10285	1.4243	10390	4144			1.21	Si
SLV 7	12.17	-2935	2403	-542.08		7360	1.4243	9805	3910			1.63	Si
SLV 14	9.85	-6253	-4142	-1086.84		15679	1.4243	11469	4574			1.1	Si
SLV 14	12.17	-4500	-3092	562.39		11283	1.4243	10590	4223			1.37	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 11.01 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
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Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 3	143750	0.47	9170	-3657	79.47	473.57	5.96	Si
SLV 4	143750	0.47	9170	-3657	79.47	473.57	5.96	Si
SLV 7	143750	0.47	9251	-3689	79.47	477.41	6.01	Si
SLV 8	143750	0.47	9251	-3689	79.47	477.41	6.01	Si
SLV 1	143750	0.47	9982	-3981	79.47	511.8	6.44	Si
SLV 2	143750	0.47	9982	-3981	79.47	511.8	6.44	Si
SLV 11	143750	0.47	10133	-4041	79.47	518.83	6.53	Si
SLV 12	143750	0.47	10133	-4041	79.47	518.83	6.53	Si
SLV 5	143750	0.47	11958	-4769	79.47	602.31	7.58	Si
SLV 6	143750	0.47	11958	-4769	79.47	602.31	7.58	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 11.01 $W_a = 0.05$ $T_a = 0.0321$

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 13	-4500	-6253	-2	0.069	589.6	0.938	1.07538	5.73437	No
SLV 14	-4500	-6253	-2	0.069	589.6	0.938	1.07538	5.73437	No
SLV 16	-4324	-5530	-1	0.07	571.9	0.937	1.08315	5.73437	No
SLV 15	-4324	-5530	-1	0.07	571.9	0.937	1.08315	5.73437	No
SLV 9	-4067	-6781	-1	0.07	545.9	0.934	1.0939	5.40759	No
SLV 10	-4067	-6781	-1	0.07	545.9	0.934	1.0939	5.40759	No
SLV 2	-2678	-5353	1	0.074	406	0.917	1.17996	5.73437	No
SLV 1	-2678	-5353	1	0.074	406	0.917	1.17996	5.73437	No
SLV 5	-3520	-6511	-1	0.072	490.7	0.928	1.12313	5.40759	No
SLV 6	-3520	-6511	-1	0.072	490.7	0.928	1.12313	5.40759	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	12.488	SLU 40	Si
V_SLU	3.762	SLU 82	Si
PF_SLV	3.571	SLV 13	Si
V_SLV	1.079	SLV 9	Si
PFFP_SLV	5.959	SLV 3	Si
R_SLV	0.188	SLV 13	No

Maschio 187

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota l.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-3.359	-13.763	-0.354	Z medio 915 cm	L6	3.006	0.28	3.025	2.499	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 24	9.67	-15525	1024.24	18448	18048.26	17.621	Si
SLU 24	12.17	-8862	-193.24	10531	11597.07	60.015	Si
SLU 71	9.67	-19234	1182.37	22854	20795.61	17.588	Si
SLU 71	12.17	-11001	-296.45	13072	13880.06	46.821	Si
SLU 29	9.67	-15870	1035.29	18857	18328.97	17.704	Si
SLU 29	12.17	-9130	-251.23	10849	11893.83	47.342	Si
SLU 27	9.67	-16145	1098.38	19183	18548.89	16.888	Si
SLU 27	12.17	-9344	-260.24	11103	12128.48	46.605	Si
SLU 69	9.67	-19508	1245.47	23180	20975.05	16.841	Si
SLU 69	12.17	-11215	-305.46	13326	14097.17	46.15	Si
SLU 28	9.67	-16217	1058.2	19270	18606.63	17.583	Si
SLU 28	12.17	-9403	-300.2	11173	12192.9	40.616	Si
SLU 66	9.67	-18889	1171.33	22445	20565.73	17.558	Si
SLU 66	12.17	-10734	-238.46	12754	13605.26	57.055	Si
SLU 67	9.67	-18962	1131.16	22531	20614.7	18.224	Si
SLU 67	12.17	-10793	-278.42	12824	13666.09	49.085	Si
SLU 72	9.67	-19306	1142.2	22940	20843.49	18.249	Si
SLU 72	12.17	-11060	-336.41	13142	13940.19	41.438	Si
SLU 70	9.67	-19581	1205.29	23267	21022.05	17.441	Si
SLU 70	12.17	-11274	-345.42	13396	14156.75	40.984	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 4	9.67	-12213	76.57	14512	16174.88	211.235	Si
SLV 4	12.17	-6590	368.06	7830	9268.54	25.182	Si
SLV 7	9.67	-10191	677.65	12109	13797.23	20.36	Si
SLV 7	12.17	-4477	255.68	5320	6435.63	25.171	Si
SLV 3	9.67	-12213	76.57	14512	16174.88	211.235	Si
SLV 3	12.17	-6590	368.06	7830	9268.54	25.182	Si
SLV 11	9.67	-10567	1084.55	12556	14248.83	13.138	Si
SLV 11	12.17	-4581	24.66	5443	6577.51	266.761	Si
SLV 13	9.67	-15579	1324.58	18511	19865.53	14.998	Si
SLV 13	12.17	-8849	-536.72	10514	12154.03	22.645	Si
SLV 16	9.67	-13468	1432.89	16004	17589.89	12.276	Si
SLV 16	12.17	-6935	-402.02	8240	9718.93	24.175	Si
SLV 8	9.67	-10191	677.65	12109	13797.23	20.36	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 8	12.17	-4477	255.68	5320	6435.63	25.171	Si
SLV 12	9.67	-10567	1084.55	12556	14248.83	13.138	Si
SLV 12	12.17	-4581	24.66	5443	6577.51	266.761	Si
SLV 15	9.67	-13468	1432.89	16004	17589.89	12.276	Si
SLV 15	12.17	-6935	-402.02	8240	9718.93	24.175	Si
SLV 14	9.67	-15579	1324.58	18511	19865.53	14.998	Si
SLV 14	12.17	-8849	-536.72	10514	12154.03	22.645	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 40	9.67	-16725	770	575.84		19873	3.0057	8205	6906			8.97	Si
SLU 40	12.17	-9203	445	63.13		10935	3.0057	7014	5903			13.27	Si
SLU 33	9.67	-17013	722	794.36		20215	3.0057	8251	6944			9.61	Si
SLU 33	12.17	-9605	528	-78.98		11413	3.0057	7077	5956			11.29	Si
SLU 76	9.67	-20150	814	851.58		23943	3.0057	8748	7362			9.05	Si
SLU 76	12.17	-11302	517	-141.83		13429	3.0057	7346	6182			11.95	Si
SLU 31	9.67	-16168	768	630.36		19211	3.0057	8117	6831			8.9	Si
SLU 31	12.17	-8949	464	-29.6		10634	3.0057	6973	5869			12.65	Si
SLU 34	9.67	-16787	767	704.49		19946	3.0057	8215	6914			9.01	Si
SLU 34	12.17	-9431	523	-96.61		11206	3.0057	7050	5933			11.35	Si
SLU 75	9.67	-20376	769	941.45		24212	3.0057	8784	7392			9.62	Si
SLU 75	12.17	-11476	523	-124.2		13636	3.0057	7374	6206			11.88	Si
SLU 84	9.67	-20708	816	797.06		24606	3.0057	8836	7437			9.12	Si
SLU 84	12.17	-11556	498	-49.1		13731	3.0057	7386	6216			12.48	Si
SLU 42	9.67	-17344	769	649.97		20609	3.0057	8303	6988			9.09	Si
SLU 42	12.17	-9685	503	-3.88		11507	3.0057	7090	5967			11.85	Si
SLU 82	9.67	-20089	816	722.93		23870	3.0057	8738	7354			9.01	Si
SLU 82	12.17	-11074	440	17.91		13159	3.0057	7310	6152			14	Si
SLU 73	9.67	-19531	814	777.45		23208	3.0057	8650	7280			8.94	Si
SLU 73	12.17	-10820	459	-74.83		12857	3.0057	7270	6118			13.34	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 8	9.67	-10191	10306	677.65		12109	3.0057	10755	9051			0.88	No, Vu<V
SLV 8	12.17	-4477	4158	255.68		5320	3.0057	9397	7909			1.9	Si
SLV 16	9.67	-13468	6616	1432.89		16004	3.0057	11534	9707			1.47	Si
SLV 16	12.17	-6935	2791	-402.02		8240	3.0057	9981	8400			3.01	Si
SLV 11	9.67	-10567	12088	1084.55		12556	3.0057	10845	9127			0.76	No, Vu<V
SLV 11	12.17	-4581	4918	24.66		5443	3.0057	9422	7929			1.61	Si
SLV 5	9.67	-17225	-11270	316.61		20467	3.0057	12427	10458			0.93	No, Vu<V
SLV 5	12.17	-10858	-4453	-193.32		12901	3.0057	10914	9185			2.06	Si
SLV 12	9.67	-10567	12088	1084.55		12556	3.0057	10845	9127			0.76	No, Vu<V
SLV 12	12.17	-4581	4918	24.66		5443	3.0057	9422	7929			1.61	Si
SLV 6	9.67	-17225	-11270	316.61		20467	3.0057	12427	10458			0.93	No, Vu<V
SLV 6	12.17	-10858	-4453	-193.32		12901	3.0057	10914	9185			2.06	Si
SLV 9	9.67	-17602	-9488	723.5		20915	3.0057	12516	10534			1.11	Si
SLV 9	12.17	-10961	-3693	-424.35		13024	3.0057	10938	9206			2.49	Si
SLV 10	9.67	-17602	-9488	723.5		20915	3.0057	12516	10534			1.11	Si
SLV 10	12.17	-10961	-3693	-424.35		13024	3.0057	10938	9206			2.49	Si
SLV 7	9.67	-10191	10306	677.65		12109	3.0057	10755	9051			0.88	No, Vu<V
SLV 7	12.17	-4477	4158	255.68		5320	3.0057	9397	7909			1.9	Si
SLV 15	9.67	-13468	6616	1432.89		16004	3.0057	11534	9707			1.47	Si
SLV 15	12.17	-6935	2791	-402.02		8240	3.0057	9981	8400			3.01	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.92 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 7	143750	0.47	9139	-7692	283.81	996.27	3.51	Si
SLV 8	143750	0.47	9139	-7692	283.81	996.27	3.51	Si
SLV 11	143750	0.47	9164	-7712	283.81	998.75	3.52	Si
SLV 12	143750	0.47	9164	-7712	283.81	998.75	3.52	Si
SLV 3	143750	0.47	11739	-9880	283.81	1250.29	4.41	Si
SLV 4	143750	0.47	11739	-9880	283.81	1250.29	4.41	Si
SLV 16	143750	0.47	11822	-9949	283.81	1258.11	4.43	Si
SLV 15	143750	0.47	11822	-9949	283.81	1258.11	4.43	Si
SLV 1	143750	0.47	13993	-11776	283.81	1459.87	5.14	Si
SLV 2	143750	0.47	13993	-11776	283.81	1459.87	5.14	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.92 Wa = 0.05 Ta = 0.0546

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 8	-4477	-10191	203	0.032	830.5	0.899	0.51647	6.95231	No
SLV 7	-4477	-10191	203	0.032	830.5	0.899	0.51647	6.95231	No
SLV 12	-4581	-10567	198	0.033	840.6	0.9	0.53029	6.95231	No
SLV 11	-4581	-10567	198	0.033	840.6	0.9	0.53029	6.95231	No
SLV 10	-10961	-17602	-140	0.044	1478.7	0.933	0.68104	6.95231	No
SLV 9	-10961	-17602	-140	0.044	1478.7	0.933	0.68104	6.95231	No
SLV 5	-10858	-17225	-135	0.044	1468.2	0.933	0.68642	6.95231	No
SLV 6	-10858	-17225	-135	0.044	1468.2	0.933	0.68642	6.95231	No
SLV 4	-6590	-12213	90	0.048	1039.3	0.913	0.76598	7.73662	No
SLV 3	-6590	-12213	90	0.048	1039.3	0.913	0.76598	7.73662	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF SLU	16.841	SLU 69	Si
V SLU	8.899	SLU 31	Si
PF SLV	12.276	SLV 15	Si
V SLV	0.755	SLV 11	No
PFFP SLV	3.51	SLV 7	Si



Stato limite	Coeff.s.	Comb.	Verifica
R_SLV	0.074	SLV 7	No

Maschio 188

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-0.354	-13.763	-0.228	L5	L6	0.126	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 60	8.62	-706	10.47	20048	33.43	3.194	Si
SLU 60	10.72	-305	-46.94	0	0	0	No, e>l/2
SLU 57	8.62	-780	7.57	22159	35.68	4.711	Si
SLU 57	10.72	-331	-50.12	0	0	0	No, e>l/2
SLU 54	8.62	-755	7.99	21448	34.95	4.376	Si
SLU 54	10.72	-314	-48.05	0	0	0	No, e>l/2
SLU 1	8.62	-564	1.76	16029	28.48	16.185	Si
SLU 1	10.72	-219	-33.39	0	0	0	No, e>l/2
SLU 58	8.62	-759	7.16	21555	35.06	4.895	Si
SLU 58	10.72	-328	-49.5	0	0	0	No, e>l/2
SLU 59	8.62	-765	7.67	21740	35.25	4.594	Si
SLU 59	10.72	-324	-49.13	0	0	0	No, e>l/2
SLU 55	8.62	-744	8.43	21152	34.64	4.11	Si
SLU 55	10.72	-304	-46.82	0	0	0	No, e>l/2
SLU 53	8.62	-748	7.48	21264	34.76	4.649	Si
SLU 53	10.72	-319	-48.42	0	0	0	No, e>l/2
SLU 56	8.62	-773	7.06	21975	35.49	5.025	Si
SLU 56	10.72	-335	-50.48	0	0	0	No, e>l/2
SLU 61	8.62	-712	10.98	20232	33.64	3.064	Si
SLU 61	10.72	-301	-46.58	0	0	0	No, e>l/2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 5	8.62	420	-83.82	0	0	0	No, Trazione
SLV 5	10.72	-895	-93.8	0	0	0	No, e>l/2
SLV 3	8.62	-576	20.76	16366	31.35	1.51	Si
SLV 3	10.72	-171	-30.65	0	0	0	No, e>l/2
SLV 6	8.62	420	-83.82	0	0	0	No, Trazione
SLV 6	10.72	-895	-93.8	0	0	0	No, e>l/2
SLV 4	8.62	-576	20.76	16366	31.35	1.51	Si
SLV 4	10.72	-171	-30.65	0	0	0	No, e>l/2
SLV 7	8.62	-1409	85.87	40023	59.53	0.693	No, M>Mu
SLV 7	10.72	349	15.38	0	0	0	No, Trazione
SLV 8	8.62	-1409	85.87	40023	59.53	0.693	No, M>Mu
SLV 8	10.72	349	15.38	0	0	0	No, Trazione
SLV 9	8.62	255	-78.91	0	0	0	No, Trazione
SLV 9	10.72	-822	-87.11	0	0	0	No, e>l/2
SLV 1	8.62	-27	-30.15	0	0	0	No, e>l/2
SLV 1	10.72	-545	-63.4	0	0	0	No, e>l/2
SLV 2	8.62	-27	-30.15	0	0	0	No, e>l/2
SLV 2	10.72	-545	-63.4	0	0	0	No, e>l/2
SLV 10	8.62	255	-78.91	0	0	0	No, Trazione
SLV 10	10.72	-822	-87.11	0	0	0	No, e>l/2

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 53	8.62	-748	122	7.48	21264	0.1257	8391	295				2.42	Si
SLU 53	10.72	-319	-105	-48.42	0	0	5556	0				0	No, Vu<V
SLU 54	8.62	-755	126	7.99	21448	0.1257	8415	296				2.35	Si
SLU 54	10.72	-314	-99	-48.05	0	0	5556	0				0	No, Vu<V
SLU 57	8.62	-780	127	7.57	22159	0.1257	8510	300				2.36	Si
SLU 57	10.72	-331	-111	-50.12	0	0	5556	0				0	No, Vu<V
SLU 55	8.62	-744	128	8.43	21152	0.1257	8376	295				2.31	Si
SLU 55	10.72	-304	-90	-46.82	0	0	5556	0				0	No, Vu<V
SLU 56	8.62	-773	122	7.06	21975	0.1257	8485	299				2.44	Si
SLU 56	10.72	-335	-117	-50.48	0	0	5556	0				0	No, Vu<V
SLU 61	8.62	-712	135	10.98	20232	0.1257	8253	290				2.16	Si
SLU 61	10.72	-301	-85	-46.58	0	0	5556	0				0	No, Vu<V
SLU 59	8.62	-765	125	7.67	21740	0.1257	8454	298				2.37	Si
SLU 59	10.72	-324	-107	-49.13	0	0	5556	0				0	No, Vu<V
SLU 58	8.62	-759	121	7.16	21555	0.1257	8430	297				2.45	Si
SLU 58	10.72	-328	-113	-49.5	0	0	5556	0				0	No, Vu<V
SLU 60	8.62	-706	130	10.47	20048	0.1257	8229	290				2.22	Si
SLU 60	10.72	-305	-91	-46.94	0	0	5556	0				0	No, Vu<V
SLU 1	8.62	-564	75	1.76	16029	0.1257	7693	271				3.61	Si
SLU 1	10.72	-219	-71	-33.39	0	0	5556	0				0	No, Vu<V

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, γM = 2

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
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Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 7	8.62	-1409	748	85.87		887795	0.0057	16250	26			0.03	No, Vu<V
SLV 7	10.72	349	721	15.38		0	0	8333	0			0	No, Vu<V
SLV 3	8.62	-576	394	20.76		25575	0.0804	13448	303			0.77	No, Vu<V
SLV 3	10.72	-171	13	-30.65		0	0	8333	0			0	No, Vu<V
SLV 4	8.62	-576	394	20.76		25575	0.0804	13448	303			0.77	No, Vu<V
SLV 4	10.72	-171	13	-30.65		0	0	8333	0			0	No, Vu<V
SLV 2	8.62	-27	18	-30.15		0	0	8333	0			0	No, Vu<V
SLV 2	10.72	-545	-496	-63.4		0	0	8333	0			0	No, Vu<V
SLV 8	8.62	-1409	748	85.87		887795	0.0057	16250	26			0.03	No, Vu<V
SLV 8	10.72	349	721	15.38		0	0	8333	0			0	No, Vu<V
SLV 6	8.62	420	-508	-83.82		0	0	8333	0			0	No, Vu<V
SLV 6	10.72	-895	-976	-93.8		0	0	8333	0			0	No, Vu<V
SLV 1	8.62	-27	18	-30.15		0	0	8333	0			0	No, Vu<V
SLV 1	10.72	-545	-496	-63.4		0	0	8333	0			0	No, Vu<V
SLV 5	8.62	420	-508	-83.82		0	0	8333	0			0	No, Vu<V
SLV 5	10.72	-895	-976	-93.8		0	0	8333	0			0	No, Vu<V
SLV 9	8.62	255	-581	-78.91		0	0	8333	0			0	No, Vu<V
SLV 9	10.72	-822	-878	-87.11		0	0	8333	0			0	No, Vu<V
SLV 10	8.62	255	-581	-78.91		0	0	8333	0			0	No, Vu<V
SLV 10	10.72	-822	-878	-87.11		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 12	143750	0.46	0	647	15.97	0	0	No, Trazione
SLV 11	143750	0.46	0	647	15.97	0	0	No, Trazione
SLV 8	143750	0.46	0	584	15.97	0	0	No, Trazione
SLV 7	143750	0.46	0	584	15.97	0	0	No, Trazione
SLV 16	143750	0.46	6283	-221	15.97	29.37	1.84	Si
SLV 15	143750	0.46	6283	-221	15.97	29.37	1.84	Si
SLV 4	143750	0.46	12259	-431	15.97	54.34	3.4	Si
SLV 3	143750	0.46	12259	-431	15.97	54.34	3.4	Si
SLV 14	143750	0.46	29227	-1029	15.97	109.56	6.86	Si
SLV 13	143750	0.46	29227	-1029	15.97	109.56	6.86	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 1	42	-27	379	0	0	0	0	10.16227	No, Trazione
SLV 8	-1559	-1409	309	0	176.3	0.97	0	8.73249	No
SLV 4	-624	-576	475	0	81.3	0.939	0	10.16227	No
SLV 2	42	-27	379	0	0	0	0	10.16227	No, Trazione
SLV 10	526	255	-248	0	0	0	0	8.73249	No, Trazione
SLV 6	661	420	-10	0	0	0	0	8.73249	No, Trazione
SLV 9	526	255	-248	0	0	0	0	8.73249	No, Trazione
SLV 5	661	420	-10	0	0	0	0	8.73249	No, Trazione
SLV 3	-624	-576	475	0	81.3	0.939	0	10.16227	No
SLV 7	-1559	-1409	309	0	176.3	0.97	0	8.73249	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0	SLU 1	No
V_SLU	0	SLU 1	No
PF_SLV	0	SLV 16	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 12	No
R_SLV	0	SLV 10	No

Maschio 189

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	0.672	-13.763	1.046	L5	L6	0.374	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 77	8.62	-4553	-61.56	43439	397.68	6.46	Si
SLU 77	10.72	-3615	-5.11	34491	390.08	76.319	Si
SLU 71	8.62	-4128	-55.81	39384	399.01	7.15	Si
SLU 71	10.72	-3260	-3.59	31108	377.16	105.06	Si
SLU 78	8.62	-4505	-56.76	42981	398.23	7.016	Si
SLU 78	10.72	-3632	-9.39	34657	390.57	41.588	Si
SLU 27	8.62	-3576	-55.22	34125	388.94	7.043	Si
SLU 27	10.72	-2765	4.23	26378	349.85	82.689	Si
SLU 37	8.62	-3828	-57.78	36527	395.2	6.84	Si
SLU 37	10.72	-2974	1.61	28378	362.71	225.691	Si
SLU 69	8.62	-4214	-57.41	40211	399.38	6.957	Si
SLU 69	10.72	-3333	-3.04	31800	380.25	125.138	Si
SLU 79	8.62	-4466	-59.96	42613	398.59	6.647	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 79	10.72	-3542	-5.66	33800	387.89	68.501	Si
SLU 83	8.62	-4429	-56.34	42262	398.88	7.08	Si
SLU 83	10.72	-3536	-10	33743	387.7	38.764	Si
SLU 35	8.62	-3915	-59.38	37353	396.7	6.681	Si
SLU 35	10.72	-3047	2.16	29069	366.71	169.897	Si
SLU 74	8.62	-4371	-56.16	41705	399.22	7.108	Si
SLU 74	10.72	-3488	-8.56	33281	386.09	45.095	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 6	8.62	-7004	-698.56	66827	593.9	0.85	No, M>Mu
SLV 6	10.72	1063	459.98	0	0	0	No, Trazione
SLV 5	8.62	-7004	-698.56	66827	593.9	0.85	No, M>Mu
SLV 5	10.72	1063	459.98	0	0	0	No, Trazione
SLV 9	8.62	-6519	-644.43	62196	598.98	0.929	No, M>Mu
SLV 9	10.72	1494	511.2	0	0	0	No, Trazione
SLV 8	8.62	739	580.1	0	0	0	No, Trazione
SLV 8	10.72	-6169	-532.84	58863	598.37	1.123	Si
SLV 10	8.62	-6519	-644.43	62196	598.98	0.929	No, M>Mu
SLV 10	10.72	1494	511.2	0	0	0	No, Trazione
SLV 14	8.62	-3242	-133.75	30936	453.17	3.388	Si
SLV 14	10.72	-535	223.49	0	0	0	No, e>1/2
SLV 12	8.62	1225	634.23	0	0	0	No, Trazione
SLV 12	10.72	-5738	-481.61	54752	592.72	1.231	Si
SLV 13	8.62	-3242	-133.75	30936	453.17	3.388	Si
SLV 13	10.72	-535	223.49	0	0	0	No, e>1/2
SLV 7	8.62	739	580.1	0	0	0	No, Trazione
SLV 7	10.72	-6169	-532.84	58863	598.37	1.123	Si
SLV 11	8.62	1225	634.23	0	0	0	No, Trazione
SLV 11	10.72	-5738	-481.61	54752	592.72	1.231	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 36	8.62	-3867	-63	-54.58		36895	0.3743	10475	1098			17.53	Si
SLU 36	10.72	-3064	-58	-2.12		29235	0.3743	9454	991			17.17	Si
SLU 32	8.62	-3733	-64	-53.97		35619	0.3743	10305	1080			16.8	Si
SLU 32	10.72	-2920	-58	-1.29		27859	0.3743	9270	972			16.76	Si
SLU 29	8.62	-3490	-64	-53.62		33298	0.3743	9995	1048			16.39	Si
SLU 29	10.72	-2692	-60	3.68		25686	0.3743	8980	941			15.67	Si
SLU 41	8.62	-3792	-65	-54.16		36176	0.3743	10379	1088			16.73	Si
SLU 41	10.72	-2968	-58	-2.73		28321	0.3743	9332	978			16.9	Si
SLU 37	8.62	-3828	-71	-57.78		36527	0.3743	10426	1093			15.33	Si
SLU 37	10.72	-2974	-65	1.61		28378	0.3743	9339	979			15.11	Si
SLU 79	8.62	-4466	-64	-59.96		42613	0.3743	10833	1135			17.64	Si
SLU 79	10.72	-3542	-58	-5.66		33800	0.3743	10062	1055			18.09	Si
SLU 24	8.62	-3395	-57	-49.82		32391	0.3743	9874	1035			18.18	Si
SLU 24	10.72	-2638	-53	0.78		25168	0.3743	8911	934			17.55	Si
SLU 77	8.62	-4553	-67	-61.56		43439	0.3743	10833	1135			16.99	Si
SLU 77	10.72	-3615	-60	-5.11		34491	0.3743	10154	1064			17.61	Si
SLU 27	8.62	-3576	-66	-55.22		34125	0.3743	10105	1059			15.96	Si
SLU 27	10.72	-2765	-62	4.23		26378	0.3743	9073	951			15.29	Si
SLU 35	8.62	-3915	-74	-59.38		37353	0.3743	10536	1104			14.98	Si
SLU 35	10.72	-3047	-67	2.16		29069	0.3743	9431	988			14.77	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 9	8.62	-6519	-1482	-644.43		87891	0.2649	16250	1205			0.81	No, Vu<V
SLV 9	10.72	1494	-1052	511.2		0	0	8333	0			0	No, Vu<V
SLV 7	8.62	739	1433	580.1		0	0	8333	0			0	No, Vu<V
SLV 7	10.72	-6169	1008	-532.84		72872	0.3023	16250	1376			1.37	Si
SLV 8	8.62	739	1433	580.1		0	0	8333	0			0	No, Vu<V
SLV 8	10.72	-6169	1008	-532.84		72872	0.3023	16250	1376			1.37	Si
SLV 13	8.62	-3242	-275	-133.75		30936	0.3743	14521	1522			5.52	Si
SLV 13	10.72	-535	-477	223.49		0	0	8333	0			0	No, Vu<V
SLV 14	8.62	-3242	-275	-133.75		30936	0.3743	14521	1522			5.52	Si
SLV 14	10.72	-535	-477	223.49		0	0	8333	0			0	No, Vu<V
SLV 12	8.62	1225	1556	634.23		0	0	8333	0			0	No, Vu<V
SLV 12	10.72	-5738	912	-481.61		66179	0.3097	16250	1409			1.55	Si
SLV 6	8.62	-7004	-1605	-698.56		95383	0.2622	16250	1193			0.74	No, Vu<V
SLV 6	10.72	1063	-956	459.98		0	0	8333	0			0	No, Vu<V
SLV 10	8.62	-6519	-1482	-644.43		87891	0.2649	16250	1205			0.81	No, Vu<V
SLV 10	10.72	1494	-1052	511.2		0	0	8333	0			0	No, Vu<V
SLV 11	8.62	1225	1556	634.23		0	0	8333	0			0	No, Vu<V
SLV 11	10.72	-5738	912	-481.61		66179	0.3097	16250	1409			1.55	Si
SLV 5	8.62	-7004	-1605	-698.56		95383	0.2622	16250	1193			0.74	No, Vu<V
SLV 5	10.72	1063	-956	459.98		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 5	143750	0.46	0	982	47.57	0	0	No, Trazione
SLV 9	143750	0.46	0	1410	47.57	0	0	No, Trazione
SLV 10	143750	0.46	0	1410	47.57	0	0	No, Trazione
SLV 6	143750	0.46	0	982	47.57	0	0	No, Trazione
SLV 13	143750	0.46	5923	-621	47.57	82.7	1.74	Si
SLV 14	143750	0.46	5923	-621	47.57	82.7	1.74	Si
SLV 1	143750	0.46	19516	-2045	47.57	240.62	5.06	Si
SLV 2	143750	0.46	19516	-2045	47.57	240.62	5.06	Si
SLV 16	143750	0.46	26605	-2788	47.57	305.38	6.42	Si



Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 15	143750	0.46	26605	-2788	47.57	305.38	6.42	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 7	9	739	28	0	0	0	0	8.73249	No, Trazione
SLV 11	504	1225	-26	0	0	0	0	8.73249	No, Trazione
SLV 15	-207	-919	-91	0	79.9	0.894	0	10.16227	No
SLV 13	-1311	-3242	-92	0	186.8	0.925	0	10.16227	No
SLV 14	-1311	-3242	-92	0	186.8	0.925	0	10.16227	No
SLV 8	9	739	28	0	0	0	0	8.73249	No, Trazione
SLV 12	504	1225	-26	0	0	0	0	8.73249	No, Trazione
SLV 16	-207	-919	-91	0	79.9	0.894	0	10.16227	No
SLV 3	-1856	-2537	89	0.005	241.8	0.939	0.07347	10.16227	No
SLV 4	-1856	-2537	89	0.005	241.8	0.939	0.07347	10.16227	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.46	SLU 77	Si
V_SLU	14.769	SLU 35	Si
PF_SLV	0	SLV 12	No
V_SLV	0	SLV 5	No
PFFP_SLV	0	SLV 10	No
R_SLV	0	SLV 12	No

Maschio 190

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.058	3.311	-11.448	3.311	L5	L6	3.61	0.14	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 49	8.62	-14489	824.21	28668	16948.36	20.563	Si
SLU 49	10.12	-12412	1304.34	24558	15649.09	11.998	Si
SLU 46	8.62	-14203	870.84	28102	16792.01	19.283	Si
SLU 46	10.12	-12166	1286.23	24073	15470.59	12.028	Si
SLU 45	8.62	-14242	869.36	28179	16813.76	19.34	Si
SLU 45	10.12	-12199	1294.86	24138	15494.65	11.966	Si
SLU 50	8.62	-14029	693.83	27758	16693.24	24.06	Si
SLU 50	10.12	-11928	1208.18	23602	15292.44	12.657	Si
SLU 67	8.62	-15403	1015.64	30478	17400.57	17.133	Si
SLU 67	10.12	-13468	1298.38	26649	16357.29	12.598	Si
SLU 66	8.62	-15442	1014.16	30555	17418.22	17.175	Si
SLU 66	10.12	-13501	1307.01	26713	16377.62	12.531	Si
SLU 69	8.62	-15728	967.53	31120	17543.5	18.132	Si
SLU 69	10.12	-13746	1325.12	27199	16527.4	12.472	Si
SLU 70	8.62	-15689	969.01	31043	17526.83	18.087	Si
SLU 70	10.12	-13714	1316.48	27134	16507.77	12.539	Si
SLU 43	8.62	-13457	787.09	26627	16350.33	20.773	Si
SLU 43	10.12	-11438	1171.96	22631	14909.37	12.722	Si
SLU 48	8.62	-14528	822.73	28745	16969.13	20.625	Si
SLU 48	10.12	-12444	1312.97	24623	15672.45	11.937	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 3	8.62	-11250	-1992.76	22260	16607.33	8.334	Si
SLV 3	10.12	-11897	6410.7	23539	17336.88	2.704	Si
SLV 15	8.62	-12707	2911.25	25143	18216.75	6.257	Si
SLV 15	10.12	-8891	-4730.68	17593	13738.29	2.904	Si
SLV 14	8.62	-11361	3466.47	22478	16733.37	4.827	Si
SLV 14	10.12	-7817	-4625.88	15466	12323.17	2.664	Si
SLV 1	8.62	-9904	-1437.54	19596	15009.26	10.441	Si
SLV 1	10.12	-10822	6515.5	21413	16110.59	2.473	Si
SLV 16	8.62	-12707	2911.25	25143	18216.75	6.257	Si
SLV 16	10.12	-8891	-4730.68	17593	13738.29	2.904	Si
SLV 6	8.62	-8842	926.62	17496	13675.24	14.758	Si
SLV 6	10.12	-8516	2738.28	16850	13251.92	4.84	Si
SLV 13	8.62	-11361	3466.47	22478	16733.37	4.827	Si
SLV 13	10.12	-7817	-4625.88	15466	12323.17	2.664	Si
SLV 5	8.62	-8842	926.62	17496	13675.24	14.758	Si
SLV 5	10.12	-8516	2738.28	16850	13251.92	4.84	Si
SLV 4	8.62	-11250	-1992.76	22260	16607.33	8.334	Si
SLV 4	10.12	-11897	6410.7	23539	17336.88	2.704	Si
SLV 2	8.62	-9904	-1437.54	19596	15009.26	10.441	Si
SLV 2	10.12	-10822	6515.5	21413	16110.59	2.473	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
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Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 33	8.62	-13644	-112	1053.61		26996	3.61	9155	4627			41.36	Si
SLU 33	10.12	-12373	-112	975.91		24483	3.61	8820	4458			39.86	Si
SLU 39	8.62	-13339	-133	1047.62		26394	3.61	9075	4586			34.52	Si
SLU 39	10.12	-12160	-133	837.98		24059	3.61	8763	4429			33.35	Si
SLU 83	8.62	-16414	-125	1144.44		32478	3.61	9886	4996			40.07	Si
SLU 83	10.12	-14701	-125	1123.34		29088	3.61	9434	4768			38.25	Si
SLU 31	8.62	-12833	-113	972.33		25392	3.61	8941	4519			39.84	Si
SLU 31	10.12	-11590	-113	847.26		22933	3.61	8613	4353			38.4	Si
SLU 82	8.62	-16089	-131	1192.55		31835	3.61	9800	4953			37.8	Si
SLU 82	10.12	-14423	-131	1096.6		28538	3.61	9361	4731			36.12	Si
SLU 41	8.62	-13625	-127	1000.99		26959	3.61	9150	4624			36.3	Si
SLU 41	10.12	-12405	-127	856.09		24545	3.61	8828	4462			35.04	Si
SLU 40	8.62	-13301	-134	1049.1		26317	3.61	9064	4581			34.25	Si
SLU 40	10.12	-12127	-134	829.35		23995	3.61	8755	4425			33.1	Si
SLU 81	8.62	-16128	-130	1191.07		31912	3.61	9811	4958			38.1	Si
SLU 81	10.12	-14456	-130	1105.23		28602	3.61	9369	4735			36.39	Si
SLU 84	8.62	-16375	-126	1145.92		32401	3.61	9876	4991			39.75	Si
SLU 84	10.12	-14668	-126	1114.71		29023	3.61	9425	4764			37.95	Si
SLU 42	8.62	-13586	-128	1002.47		26882	3.61	9140	4619			36.01	Si
SLU 42	10.12	-12372	-128	847.46		24480	3.61	8820	4457			34.76	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 4	8.62	-11250	-8226	-1992.76		22260	3.61	12785	6462			0.79	No, Vu<V
SLV 4	10.12	-11897	-7979	6410.7		23539	3.61	13041	6591			0.83	No, Vu<V
SLV 2	8.62	-9904	-8425	-1437.54		19596	3.61	12252	6192			0.73	No, Vu<V
SLV 2	10.12	-10822	-7680	6515.5		21420	3.6088	12617	6375			0.83	No, Vu<V
SLV 9	8.62	-9280	2097	2397.82		18361	3.61	12005	6068			2.89	Si
SLV 9	10.12	-7615	2778	-604.14		15067	3.61	11347	5735			2.06	Si
SLV 10	8.62	-9280	2097	2397.82		18361	3.61	12005	6068			2.89	Si
SLV 10	10.12	-7615	2778	-604.14		15067	3.61	11347	5735			2.06	Si
SLV 13	8.62	-11361	8120	3466.47		22478	3.61	12829	6484			0.8	No, Vu<V
SLV 13	10.12	-7817	7873	-4625.88		15466	3.61	11427	5775			0.73	No, Vu<V
SLV 16	8.62	-12707	8319	2911.25		25143	3.61	13362	6753			0.81	No, Vu<V
SLV 16	10.12	-8891	7574	-4730.68		17593	3.61	11852	5990			0.79	No, Vu<V
SLV 1	8.62	-9904	-8425	-1437.54		19596	3.61	12252	6192			0.73	No, Vu<V
SLV 1	10.12	-10822	-7680	6515.5		21420	3.6088	12617	6375			0.83	No, Vu<V
SLV 15	8.62	-12707	8319	2911.25		25143	3.61	13362	6753			0.81	No, Vu<V
SLV 15	10.12	-8891	7574	-4730.68		17593	3.61	11852	5990			0.79	No, Vu<V
SLV 14	8.62	-11361	8120	3466.47		22478	3.61	12829	6484			0.8	No, Vu<V
SLV 14	10.12	-7817	7873	-4625.88		15466	3.61	11427	5775			0.73	No, Vu<V
SLV 3	8.62	-11250	-8226	-1992.76		22260	3.61	12785	6462			0.79	No, Vu<V
SLV 3	10.12	-11897	-7979	6410.7		23539	3.61	13041	6591			0.83	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 9	143750	0.46	14599	-7378	218.95	454.77	2.08	Si
SLV 10	143750	0.46	14599	-7378	218.95	454.77	2.08	Si
SLV 13	143750	0.46	15504	-7836	218.95	478.91	2.19	Si
SLV 14	143750	0.46	15504	-7836	218.95	478.91	2.19	Si
SLV 6	143750	0.46	15555	-7861	218.95	480.24	2.19	Si
SLV 5	143750	0.46	15555	-7861	218.95	480.24	2.19	Si
SLV 16	143750	0.46	17236	-8711	218.95	523.76	2.39	Si
SLV 15	143750	0.46	17236	-8711	218.95	523.76	2.39	Si
SLV 2	143750	0.46	18689	-9446	218.95	560.06	2.56	Si
SLV 1	143750	0.46	18689	-9446	218.95	560.06	2.56	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 10.395 Wa = 0.03 Ta = 0.1503

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 6	-6122	-8842	-81	0.013	880.6	0.924	0.21119	18.46841	No
SLV 5	-6122	-8842	-81	0.013	880.6	0.924	0.21119	18.46841	No
SLV 10	-5899	-9280	-72	0.014	858.1	0.922	0.22706	18.46841	No
SLV 9	-5899	-9280	-72	0.014	858.1	0.922	0.22706	18.46841	No
SLV 12	-8305	-13768	81	0.015	1100.8	0.936	0.22989	18.46841	No
SLV 11	-8305	-13768	81	0.015	1100.8	0.936	0.22989	18.46841	No
SLV 8	-8528	-13331	72	0.016	1123.3	0.937	0.24476	18.46841	No
SLV 7	-8528	-13331	72	0.016	1123.3	0.937	0.24476	18.46841	No
SLV 2	-7225	-9904	-38	0.019	991.6	0.931	0.29793	18.98212	No
SLV 1	-7225	-9904	-38	0.019	991.6	0.931	0.29793	18.98212	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	11.937	SLU 48	Si
V_SLU	33.1	SLU 40	Si
PF_SLV	2.473	SLV 1	Si
V_SLV	0.734	SLV 13	No
PFFP_SLV	2.077	SLV 9	Si
R_SLV	0.011	SLV 5	No

Maschio 191

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.sx	a.s.dx
-9.948	3.311	-9.728	3.311	L5	L6	0.22	0.14	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	t0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 81	8.62	-917	38.69	29781	64.01	1.655	Si
SLU 81	10.12	-1715	-55.14	55687	59.69	1.083	Si
SLU 83	8.62	-960	36.79	31170	65.19	1.772	Si
SLU 83	10.12	-1718	-53.54	55779	59.57	1.113	Si
SLU 42	8.62	-720	39.28	23391	56.49	1.438	Si
SLU 42	10.12	-1533	-52.91	49766	65.6	1.24	Si
SLU 82	8.62	-910	39.01	29534	63.78	1.635	Si
SLU 82	10.12	-1715	-55.42	55680	59.7	1.077	Si
SLU 84	8.62	-952	37.12	30923	65	1.751	Si
SLU 84	10.12	-1718	-53.82	55772	59.58	1.107	Si
SLU 74	8.62	-1004	30.91	32600	66.25	2.143	Si
SLU 74	10.12	-1646	-47.98	53428	62.29	1.298	Si
SLU 41	8.62	-728	38.95	23639	56.85	1.46	Si
SLU 41	10.12	-1533	-52.63	49773	65.59	1.246	Si
SLU 75	8.62	-996	31.24	32353	66.08	2.115	Si
SLU 75	10.12	-1645	-48.26	53421	62.3	1.291	Si
SLU 39	8.62	-685	40.84	22249	54.79	1.342	Si
SLU 39	10.12	-1530	-54.24	49681	65.66	1.211	Si
SLU 40	8.62	-678	41.17	22002	54.41	1.322	Si
SLU 40	10.12	-1530	-54.51	49674	65.67	1.205	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 9	8.62	77	70.56	0	0	0	No, Trazione
SLV 9	10.12	-1271	-53.04	41262	92.59	1.746	Si
SLV 13	8.62	916	175.32	0	0	0	No, Trazione
SLV 13	10.12	-2417	-149.06	78473	95.12	0.638	No, M>Mu
SLV 14	8.62	916	175.32	0	0	0	No, Trazione
SLV 14	10.12	-2417	-149.06	78473	95.12	0.638	No, M>Mu
SLV 3	8.62	-2427	-147.86	78787	94.81	0.641	No, M>Mu
SLV 3	10.12	345	97.9	0	0	0	No, Trazione
SLV 4	8.62	-2427	-147.86	78787	94.81	0.641	No, M>Mu
SLV 4	10.12	345	97.9	0	0	0	No, Trazione
SLV 2	8.62	-2209	-142.35	71714	100.37	0.705	No, M>Mu
SLV 2	10.12	463	104.22	0	0	0	No, Trazione
SLV 16	8.62	698	169.82	0	0	0	No, Trazione
SLV 16	10.12	-2535	-155.39	82317	91	0.586	No, M>Mu
SLV 15	8.62	698	169.82	0	0	0	No, Trazione
SLV 15	10.12	-2535	-155.39	82317	91	0.586	No, M>Mu
SLV 1	8.62	-2209	-142.35	71714	100.37	0.705	No, M>Mu
SLV 1	10.12	463	104.22	0	0	0	No, Trazione
SLV 10	8.62	77	70.56	0	0	0	No, Trazione
SLV 10	10.12	-1271	-53.04	41262	92.59	1.746	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 82	8.62	-910	130	39.01		32272	0.2013	9858	278			2.14	Si
SLU 82	10.12	-1715	131	-55.42		55680	0.22	10833	334			2.55	Si
SLU 39	8.62	-685	131	40.84		32370	0.1512	9872	209			1.59	Si
SLU 39	10.12	-1530	132	-54.24		49681	0.22	10833	334			2.52	Si
SLU 41	8.62	-728	126	38.95		30680	0.1695	9646	229			1.82	Si
SLU 41	10.12	-1533	127	-52.63		49773	0.22	10833	334			2.63	Si
SLU 31	8.62	-699	112	34.25		27280	0.1829	9193	235			2.1	Si
SLU 31	10.12	-1408	113	-47.26		45713	0.22	10833	334			2.95	Si
SLU 81	8.62	-917	129	38.69		32200	0.2035	9849	281			2.18	Si
SLU 81	10.12	-1715	130	-55.14		55687	0.22	10833	334			2.57	Si
SLU 84	8.62	-952	124	37.12		31929	0.2131	9813	293			2.35	Si
SLU 84	10.12	-1718	126	-53.82		55772	0.22	10833	334			2.65	Si
SLU 42	8.62	-720	127	39.28		30917	0.1664	9678	226			1.78	Si
SLU 42	10.12	-1533	128	-52.91		49766	0.22	10833	334			2.61	Si
SLU 33	8.62	-764	111	33.39		27444	0.199	9215	257			2.32	Si
SLU 33	10.12	-1460	112	-47.35		47415	0.22	10833	334			2.98	Si
SLU 32	8.62	-772	110	33.06		27365	0.2015	9204	260			2.37	Si
SLU 32	10.12	-1461	111	-47.08		47422	0.22	10833	334			3.01	Si
SLU 40	8.62	-678	132	41.17		32760	0.1478	9924	205			1.55	Si
SLU 40	10.12	-1530	133	-54.51		49674	0.22	10833	334			2.5	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 2	8.62	-2209	-407	-142.35		115454	0.1367	16250	311			0.76	No, Vu<V
SLV 2	10.12	463	-269	104.22		0	0	8333	0			0	No, Vu<V
SLV 1	8.62	-2209	-407	-142.35		115454	0.1367	16250	311			0.76	No, Vu<V
SLV 1	10.12	463	-269	104.22		0	0	8333	0			0	No, Vu<V
SLV 15	8.62	698	512	169.82		0	0	8333	0			0	No, Vu<V
SLV 15	10.12	-2535	376	-155.39		123926	0.1461	16250	332			0.88	No, Vu<V
SLV 10	8.62	77	272	70.56		0	0	8333	0			0	No, Vu<V
SLV 10	10.12	-1271	212	-53.04		44324	0.2048	16250	466			2.2	Si
SLV 9	8.62	77	272	70.56		0	0	8333	0			0	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 9	10.12	-1271	212	-53.04		44324	0.2048	16250	466			2.2	Si
SLV 4	8.62	-2427	-452	-147.86		117747	0.1472	16250	335			0.74	No, Vu<V
SLV 4	10.12	345	-303	97.9		0	0	8333	0			0	No, Vu<V
SLV 13	8.62	916	558	175.32		0	0	8333	0			0	No, Vu<V
SLV 13	10.12	-2417	410	-149.06		119081	0.145	16250	330			0.8	No, Vu<V
SLV 3	8.62	-2427	-452	-147.86		117747	0.1472	16250	335			0.74	No, Vu<V
SLV 3	10.12	345	-303	97.9		0	0	8333	0			0	No, Vu<V
SLV 16	8.62	698	512	169.82		0	0	8333	0			0	No, Vu<V
SLV 16	10.12	-2535	376	-155.39		123926	0.1461	16250	332			0.88	No, Vu<V
SLV 14	8.62	916	558	175.32		0	0	8333	0			0	No, Vu<V
SLV 14	10.12	-2417	410	-149.06		119081	0.145	16250	330			0.8	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 2	143750	0.46	0	-1	13.34	0	0	No, e>t/2
SLV 3	143750	0.46	0	5	13.34	0	0	No, Trazione
SLV 1	143750	0.46	0	-1	13.34	0	0	No, e>t/2
SLV 4	143750	0.46	0	5	13.34	0	0	No, Trazione
SLV 8	143750	0.46	11633	-358	13.34	22.69	1.7	Si
SLV 7	143750	0.46	11633	-358	13.34	22.69	1.7	Si
SLV 6	143750	0.46	12269	-378	13.34	23.8	1.78	Si
SLV 5	143750	0.46	12269	-378	13.34	23.8	1.78	Si
SLV 11	143750	0.46	21932	-676	13.34	38.8	2.91	Si
SLV 12	143750	0.46	21932	-676	13.34	38.8	2.91	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.03 Ta = 0.1503

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 16	72	698	4	0	0	0	0	18.98212	No, Trazione
SLV 10	42	77	-4	0	0	0	0	18.46841	No, Trazione
SLV 14	218	916	1	0	0	0	0	18.98212	No, Trazione
SLV 15	72	698	4	0	0	0	0	18.98212	No, Trazione
SLV 9	42	77	-4	0	0	0	0	18.46841	No, Trazione
SLV 13	218	916	1	0	0	0	0	18.98212	No, Trazione
SLV 6	-255	-861	-5	0.01	41.9	0.909	0.16263	18.46841	No
SLV 5	-255	-861	-5	0.01	41.9	0.909	0.16263	18.46841	No
SLV 12	-446	-650	5	0.013	61	0.931	0.21068	18.46841	No
SLV 11	-446	-650	5	0.013	61	0.931	0.21068	18.46841	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.077	SLV 82	Si
V_SLV	1.552	SLV 40	Si
PF_SLV	0	SLV 16	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 4	No
R_SLV	0	SLV 16	No

Maschio 192

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.758	6.661	-17.718	6.661	L5	L6	2.04	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 78	9.52	-13746	-276.47	24064	9878.55	35.731	Si
SLU 78	11.32	-11133	1407.09	19490	8638.45	6.139	Si
SLU 84	9.52	-13274	-281.64	23238	9676.75	34.359	Si
SLU 84	11.32	-10661	1366.3	18664	8382.6	6.135	Si
SLU 83	9.52	-13275	-279.97	23240	9677.26	34.565	Si
SLU 83	11.32	-10662	1355.12	18666	8383.25	6.186	Si
SLU 80	9.52	-13448	-288.87	23543	9752.43	33.761	Si
SLU 80	11.32	-10835	1401.18	18969	8478.25	6.051	Si
SLU 76	9.52	-12873	-238.38	22536	9497.62	39.842	Si
SLU 76	11.32	-10260	1312.56	17962	8157.55	6.215	Si
SLU 77	9.52	-13747	-274.8	24066	9879.03	35.949	Si
SLU 77	11.32	-11134	1395.9	19492	8639.07	6.189	Si
SLU 79	9.52	-13449	-287.2	23545	9752.93	33.958	Si
SLU 79	11.32	-10836	1390	18971	8478.88	6.1	Si
SLU 38	9.52	-11376	-314.63	19917	8766.8	27.864	Si
SLU 38	11.32	-9353	1235.96	16374	7622.35	6.167	Si
SLU 37	9.52	-11378	-312.96	19919	8767.41	28.014	Si
SLU 37	11.32	-9354	1224.77	16376	7623.06	6.224	Si
SLU 42	9.52	-11202	-307.4	19612	8675.3	28.222	Si
SLU 42	11.32	-9179	1201.08	16069	7515.38	6.257	Si



Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 13	9.52	-4693	3431.15	8216	4465	1.301	Si
SLV 13	11.32	-2569	-2497.9	4497	2523.84	1.01	Si
SLV 6	9.52	-7089	-1992.3	12411	6496.59	3.261	Si
SLV 6	11.32	-4786	1678.53	8379	4546.85	2.709	Si
SLV 14	9.52	-4693	3431.15	8216	4465	1.301	Si
SLV 14	11.32	-2569	-2497.9	4497	2523.84	1.01	Si
SLV 2	9.52	-11242	-4053.4	19682	9620.11	2.373	Si
SLV 2	11.32	-9174	4059.49	16061	8127.61	2.002	Si
SLV 4	9.52	-12837	-3574.69	22474	10685.7	2.989	Si
SLV 4	11.32	-10954	4133.1	19177	9419.47	2.279	Si
SLV 1	9.52	-11242	-4053.4	19682	9620.11	2.373	Si
SLV 1	11.32	-9174	4059.49	16061	8127.61	2.002	Si
SLV 16	9.52	-6288	3909.85	11008	5835.93	1.493	Si
SLV 16	11.32	-4349	-2424.29	7613	4159.32	1.716	Si
SLV 3	9.52	-12837	-3574.69	22474	10685.7	2.989	Si
SLV 3	11.32	-10954	4133.1	19177	9419.47	2.279	Si
SLV 5	9.52	-7089	-1992.3	12411	6496.59	3.261	Si
SLV 5	11.32	-4786	1678.53	8379	4546.85	2.709	Si
SLV 15	9.52	-6288	3909.85	11008	5835.93	1.493	Si
SLV 15	11.32	-4349	-2424.29	7613	4159.32	1.716	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 35	9.52	-11675	-832	-300.57		20440	2.04	8281	4730			5.68	Si
SLU 35	11.32	-9652	-832	1230.68		16897	2.04	7809	4460			5.36	Si
SLU 79	9.52	-13449	-908	-287.2		23545	2.04	8695	4967			5.47	Si
SLU 79	11.32	-10836	-908	1390		18971	2.04	8085	4618			5.09	Si
SLU 77	9.52	-13747	-904	-274.8		24066	2.04	8764	5006			5.54	Si
SLU 77	11.32	-11134	-904	1395.9		19492	2.04	8155	4658			5.15	Si
SLU 78	9.52	-13746	-911	-276.47		24064	2.04	8764	5006			5.49	Si
SLU 78	11.32	-11133	-911	1407.09		19490	2.04	8154	4658			5.11	Si
SLU 38	9.52	-11376	-843	-314.63		19917	2.04	8211	4690			5.56	Si
SLU 38	11.32	-9353	-843	1235.96		16374	2.04	7739	4420			5.24	Si
SLU 37	9.52	-11378	-836	-312.96		19919	2.04	8211	4690			5.61	Si
SLU 37	11.32	-9354	-836	1224.77		16376	2.04	7739	4421			5.29	Si
SLU 84	9.52	-13274	-892	-281.64		23238	2.04	8654	4943			5.54	Si
SLU 84	11.32	-10661	-892	1366.3		18664	2.04	8044	4595			5.15	Si
SLU 36	9.52	-11674	-839	-302.23		20438	2.04	8281	4730			5.63	Si
SLU 36	11.32	-9651	-839	1241.86		16895	2.04	7808	4460			5.31	Si
SLU 83	9.52	-13275	-884	-279.97		23240	2.04	8654	4943			5.59	Si
SLU 83	11.32	-10662	-884	1355.12		18666	2.04	8044	4595			5.2	Si
SLU 80	9.52	-13448	-915	-288.87		23543	2.04	8695	4966			5.43	Si
SLU 80	11.32	-10835	-915	1401.18		18969	2.04	8085	4618			5.05	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 2	9.52	-11242	-4943	-4053.4		20295	1.9784	12392	6865			1.39	Si
SLV 2	11.32	-9174	-4326	4059.49		18912	1.7325	12116	5877			1.36	Si
SLV 6	9.52	-7089	-2603	-1992.3		12411	2.04	10816	6178			2.37	Si
SLV 6	11.32	-4786	-2264	1678.53		8513	2.0078	10036	5642			2.49	Si
SLV 16	9.52	-6288	3992	3909.85		18799	1.1946	12093	4045			1.01	Si
SLV 16	11.32	-4349	3374	-2424.29		11193	1.3876	10572	4107			1.22	Si
SLV 13	9.52	-4693	3472	3431.15		19340	0.8666	12201	2961			0.85	No, Vu<V
SLV 13	11.32	-2569	2957	-2497.9		64194	0.1429	16250	650			0.22	No, Vu<V
SLV 15	9.52	-6288	3992	3909.85		18799	1.1946	12093	4045			1.01	Si
SLV 15	11.32	-4349	3374	-2424.29		11193	1.3876	10572	4107			1.22	Si
SLV 3	9.52	-12837	-4424	-3574.69		22474	2.04	12828	7327			1.66	Si
SLV 3	11.32	-10954	-3908	4133.1		20291	1.9281	12391	6690			1.71	Si
SLV 5	9.52	-7089	-2603	-1992.3		12411	2.04	10816	6178			2.37	Si
SLV 5	11.32	-4786	-2264	1678.53		8513	2.0078	10036	5642			2.49	Si
SLV 14	9.52	-4693	3472	3431.15		19340	0.8666	12201	2961			0.85	No, Vu<V
SLV 14	11.32	-2569	2957	-2497.9		64194	0.1429	16250	650			0.22	No, Vu<V
SLV 1	9.52	-11242	-4943	-4053.4		20295	1.9784	12392	6865			1.39	Si
SLV 1	11.32	-9174	-4326	4059.49		18912	1.7325	12116	5877			1.36	Si
SLV 4	9.52	-12837	-4424	-3574.69		22474	2.04	12828	7327			1.66	Si
SLV 4	11.32	-10954	-3908	4133.1		20291	1.9281	12391	6690			1.71	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 14	143750	0.46	6093	-3480	253.34	462.94	1.83	Si
SLV 13	143750	0.46	6093	-3480	253.34	462.94	1.83	Si
SLV 10	143750	0.46	6642	-3794	253.34	502.29	1.98	Si
SLV 9	143750	0.46	6642	-3794	253.34	502.29	1.98	Si
SLV 15	143750	0.46	9101	-5199	253.34	673.6	2.66	Si
SLV 16	143750	0.46	9101	-5199	253.34	673.6	2.66	Si
SLV 6	143750	0.46	10121	-5781	253.34	742.33	2.93	Si
SLV 5	143750	0.46	10121	-5781	253.34	742.33	2.93	Si
SLV 11	143750	0.46	16670	-9522	253.34	1151.19	4.54	Si
SLV 12	143750	0.46	16670	-9522	253.34	1151.19	4.54	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 9	-2243	-5227	-392	0	534.6	0.89	0	8.73249	No
SLV 10	-2243	-5227	-392	0	534.6	0.89	0	8.73249	No
SLV 5	-2367	-9259	-390	0	546.2	0.891	0	8.73249	No



Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 6	-2367	-9259	-390	0	546.2	0.891	0	8.73249	No
SLV 11	-7425	-8897	389	0.005	1046.1	0.927	0.08146	8.73249	No
SLV 12	-7425	-8897	389	0.005	1046.1	0.927	0.08146	8.73249	No
SLV 7	-7549	-12929	391	0.005	1058.6	0.927	0.08517	8.73249	No
SLV 8	-7549	-12929	391	0.005	1058.6	0.927	0.08517	8.73249	No
SLV 13	-3912	-1807	-121	0.031	695.5	0.902	0.49826	10.16227	No
SLV 14	-3912	-1807	-121	0.031	695.5	0.902	0.49826	10.16227	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.051	SLU 80	Si
V_SLU	5.047	SLU 80	Si
PF_SLV	1.01	SLV 13	Si
V_SLV	0.22	SLV 13	No
PFFP_SLV	1.827	SLV 13	Si
R_SLV	0	SLV 5	No

Maschio 193

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.818	6.661	-12.838	6.661	L5	L6	3.98	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	$\tau 0$	f ν 0	μ	ϕ	f ν ,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLU 60	9.52	-24007	884.43	21543	35139.82	39.732	Si
SLU 60	11.32	-19132	478.06	17168	30048.33	62.855	Si
SLU 31	9.52	-21176	834.87	19002	32309.95	38.701	Si
SLU 31	11.32	-17354	381.43	15572	27932.27	73.23	Si
SLU 73	9.52	-25521	914.74	22901	36508.65	39.912	Si
SLU 73	11.32	-20589	522.28	18475	31679.06	60.655	Si
SLU 51	9.52	-23853	278.16	21404	34994.53	125.807	Si
SLU 51	11.32	-18977	772.33	17029	29870.04	38.675	Si
SLU 19	9.52	-19692	788.14	17670	30685.81	38.934	Si
SLU 19	11.32	-15926	362.84	14291	26132.81	72.022	Si
SLU 39	9.52	-21910	967.77	19661	33077.35	34.179	Si
SLU 39	11.32	-18088	308.77	16231	28822.67	93.348	Si
SLU 40	9.52	-21939	951.35	19687	33107.53	34.8	Si
SLU 40	11.32	-18117	334.4	16257	28857.77	86.296	Si
SLU 18	9.52	-19662	804.56	17644	30652.73	38.099	Si
SLU 18	11.32	-15897	337.21	14265	26094.89	77.386	Si
SLU 81	9.52	-26255	1047.64	23560	37136.22	35.447	Si
SLU 81	11.32	-21323	449.62	19134	32465.36	72.207	Si
SLU 82	9.52	-26284	1031.22	23586	37160.82	36.036	Si
SLU 82	11.32	-21352	475.25	19160	32496.3	68.377	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma M = 2$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLV 2	9.52	-19416	-10255.27	17423	33128.83	3.23	Si
SLV 2	11.32	-15658	11639.7	14051	27577.01	2.369	Si
SLV 6	9.52	-14494	-2677.46	13006	25772.74	9.626	Si
SLV 6	11.32	-10754	4903.67	9650	19710.54	4.02	Si
SLV 13	9.52	-14325	11394.97	12855	25507.95	2.239	Si
SLV 13	11.32	-10543	-10079.77	9460	19355.63	1.92	Si
SLV 15	9.52	-17017	11394.78	15270	29631.71	2.6	Si
SLV 15	11.32	-13212	-10821.87	11855	23740.33	2.194	Si
SLV 14	9.52	-14325	11394.97	12855	25507.95	2.239	Si
SLV 14	11.32	-10543	-10079.77	9460	19355.63	1.92	Si
SLV 16	9.52	-17017	11394.78	15270	29631.71	2.6	Si
SLV 16	11.32	-13212	-10821.87	11855	23740.33	2.194	Si
SLV 3	9.52	-22108	-10255.47	19839	36852.01	3.593	Si
SLV 3	11.32	-18327	10897.59	16446	31562.63	2.896	Si
SLV 5	9.52	-14494	-2677.46	13006	25772.74	9.626	Si
SLV 5	11.32	-10754	4903.67	9650	19710.54	4.02	Si
SLV 1	9.52	-19416	-10255.27	17423	33128.83	3.23	Si
SLV 1	11.32	-15658	11639.7	14051	27577.01	2.369	Si
SLV 4	9.52	-22108	-10255.47	19839	36852.01	3.593	Si
SLV 4	11.32	-18327	10897.59	16446	31562.63	2.896	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	V par	M	$\sigma 0$	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 39	9.52	-21910	472	967.77		19661	3.98	8177	9112			19.29	Si
SLU 39	11.32	-18088	472	308.77		16231	3.98	7720	8603			18.21	Si
SLU 81	9.52	-26255	471	1047.64		23560	3.98	8697	9692			20.6	Si
SLU 81	11.32	-21323	471	449.62		19134	3.98	8107	9034			19.2	Si
SLU 60	9.52	-24007	364	884.43		21543	3.98	8428	9392			25.79	Si
SLU 60	11.32	-19132	364	478.06		17168	3.98	7845	8742			24	Si
SLU 18	9.52	-19662	366	804.56		17644	3.98	7908	8813			24.07	Si
SLU 18	11.32	-15897	366	337.21		14265	3.98	7458	8311			22.7	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 41	9.52	-23123	359	848.75		20749	3.98	8322	9274			25.8	Si
SLU 41	11.32	-19301	359	393.19		17320	3.98	7865	8765			24.38	Si
SLU 82	9.52	-26284	447	1031.22		23586	3.98	8700	9696			21.68	Si
SLU 82	11.32	-21352	447	475.25		19160	3.98	8110	9038			20.21	Si
SLU 40	9.52	-21939	449	951.35		19687	3.98	8181	9116			20.3	Si
SLU 40	11.32	-18117	449	334.4		16257	3.98	7723	8607			19.16	Si
SLU 73	9.52	-25521	356	914.74		22901	3.98	8609	9594			26.92	Si
SLU 73	11.32	-20589	356	522.28		18475	3.98	8019	8936			25.08	Si
SLU 19	9.52	-19692	343	788.14		17670	3.98	7912	8817			25.72	Si
SLU 19	11.32	-15926	343	362.84		14291	3.98	7461	8315			24.26	Si
SLU 31	9.52	-21176	358	834.87		19002	3.98	8089	9015			25.16	Si
SLU 31	11.32	-17354	358	381.43		15572	3.98	7632	8505			23.74	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 15	9.52	-17017	12874	11394.78		15343	3.9612	11402	12646			0.98	No, Vu<V
SLV 15	11.32	-13212	11924	-10821.87		13433	3.5127	11020	10839			0.91	No, Vu<V
SLV 6	9.52	-14494	-3820	-2677.46		13006	3.98	10935	12185			3.19	Si
SLV 6	11.32	-10754	-4072	4903.67		9650	3.98	10263	11437			2.81	Si
SLV 16	9.52	-17017	12874	11394.78		15343	3.9612	11402	12646			0.98	No, Vu<V
SLV 16	11.32	-13212	11924	-10821.87		13433	3.5127	11020	10839			0.91	No, Vu<V
SLV 3	9.52	-22108	-12343	-10255.47		19839	3.98	12301	13708			1.11	Si
SLV 3	11.32	-18327	-11039	10897.59		16446	3.98	11623	12952			1.17	Si
SLV 1	9.52	-19416	-12483	-10255.27		17423	3.98	11818	13170			1.06	Si
SLV 1	11.32	-15658	-11533	11639.7		14953	3.74	11324	11858			1.03	Si
SLV 5	9.52	-14494	-3820	-2677.46		13006	3.98	10935	12185			3.19	Si
SLV 5	11.32	-10754	-4072	4903.67		9650	3.98	10263	11437			2.81	Si
SLV 2	9.52	-19416	-12483	-10255.27		17423	3.98	11818	13170			1.06	Si
SLV 2	11.32	-15658	-11533	11639.7		14953	3.74	11324	11858			1.03	Si
SLV 4	9.52	-22108	-12343	-10255.47		19839	3.98	12301	13708			1.11	Si
SLV 4	11.32	-18327	-11039	10897.59		16446	3.98	11623	12952			1.17	Si
SLV 13	9.52	-14325	12735	11394.97		14276	3.5836	11189	11227			0.88	No, Vu<V
SLV 13	11.32	-10543	11431	-10079.77		12139	3.1017	10761	9346			0.82	No, Vu<V
SLV 14	9.52	-14325	12735	11394.97		14276	3.5836	11189	11227			0.88	No, Vu<V
SLV 14	11.32	-10543	11431	-10079.77		12139	3.1017	10761	9346			0.82	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 10	143750	0.46	10247	-11419	494.27	1464.58	2.96	Si
SLV 9	143750	0.46	10247	-11419	494.27	1464.58	2.96	Si
SLV 13	143750	0.46	11372	-12673	494.27	1609.06	3.26	Si
SLV 14	143750	0.46	11372	-12673	494.27	1609.06	3.26	Si
SLV 5	143750	0.46	11637	-12968	494.27	1642.66	3.32	Si
SLV 6	143750	0.46	11637	-12968	494.27	1642.66	3.32	Si
SLV 15	143750	0.46	13727	-15297	494.27	1900.99	3.85	Si
SLV 16	143750	0.46	13727	-15297	494.27	1900.99	3.85	Si
SLV 2	143750	0.46	16007	-17838	494.27	2170.14	4.39	Si
SLV 1	143750	0.46	16007	-17838	494.27	2170.14	4.39	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 10	-6157	-14384	470	0.006	1212.8	0.896	0.09034	8.73249	No
SLV 9	-6157	-14384	470	0.006	1212.8	0.896	0.09034	8.73249	No
SLV 5	-7664	-15692	429	0.014	1359.9	0.902	0.22083	8.73249	No
SLV 6	-7664	-15692	429	0.014	1359.9	0.902	0.22083	8.73249	No
SLV 7	-15855	-21861	-474	0.022	2179	0.93	0.34795	8.73249	No
SLV 8	-15855	-21861	-474	0.022	2179	0.93	0.34795	8.73249	No
SLV 12	-14348	-20553	-433	0.023	2027.1	0.926	0.36217	8.73249	No
SLV 11	-14348	-20553	-433	0.023	2027.1	0.926	0.36217	8.73249	No
SLV 13	-7266	-15018	201	0.034	1320.8	0.901	0.5467	10.16227	No
SLV 14	-7266	-15018	201	0.034	1320.8	0.901	0.5467	10.16227	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	34.179	SLU 39	Si
V_SLU	18.207	SLU 39	Si
PF_SLV	1.92	SLV 13	Si
V_SLV	0.818	SLV 13	No
PFFP_SLV	2.963	SLV 9	Si
R_SLV	0.01	SLV 9	No

Maschio 194

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.938	6.661	-7.958	6.661	L5	L6	3.98	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2



Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 8	9.52	-19145	-909.97	17179	30063.12	33.037	Si
SLU 8	11.32	-15720	-1317.16	14107	25865.97	19.638	Si
SLU 7	9.52	-19756	-886.13	17728	30758.69	34.711	Si
SLU 7	11.32	-16332	-1224.89	14655	26653.37	21.76	Si
SLU 71	9.52	-25896	-1187.41	23238	36832.31	31.019	Si
SLU 71	11.32	-21406	-1482.53	19208	32552.55	21.957	Si
SLU 50	9.52	-23575	-1016.81	21155	34730.58	34.157	Si
SLU 50	11.32	-19144	-1475.84	17179	30062.13	20.37	Si
SLU 29	9.52	-21466	-1080.58	19262	32615.71	30.184	Si
SLU 29	11.32	-17982	-1323.85	16136	28695.86	21.676	Si
SLU 51	9.52	-23582	-1047.48	21162	34737.67	33.163	Si
SLU 51	11.32	-19151	-1485.49	17185	30070.66	20.243	Si
SLU 6	9.52	-19749	-855.46	17722	30750.36	35.946	Si
SLU 6	11.32	-16325	-1215.24	14649	26643.93	21.925	Si
SLU 72	9.52	-25904	-1218.09	23244	36838.65	30.243	Si
SLU 72	11.32	-21413	-1492.18	19215	32560.34	21.821	Si
SLU 9	9.52	-19152	-940.64	17186	30071.64	31.969	Si
SLU 9	11.32	-15728	-1326.81	14113	25875.6	19.502	Si
SLU 30	9.52	-21473	-1111.25	19269	32623.48	29.357	Si
SLU 30	11.32	-17990	-1333.5	16143	28704.77	21.526	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 6	9.52	-14078	-4113.88	12633	25119.1	6.106	Si
SLV 6	11.32	-10670	2119.18	9575	19569.8	9.235	Si
SLV 4	9.52	-17748	-11233.09	15926	30714.91	2.734	Si
SLV 4	11.32	-14168	8954.88	12713	25260.26	2.821	Si
SLV 1	9.52	-15372	-11396.22	13794	27136.45	2.381	Si
SLV 1	11.32	-11833	8833.17	10618	21500.96	2.434	Si
SLV 13	9.52	-19597	9954.18	17585	33384.86	3.354	Si
SLV 13	11.32	-16294	-9943.93	14622	28545.45	2.871	Si
SLV 16	9.52	-21973	10117.3	19717	36669.89	3.624	Si
SLV 16	11.32	-18629	-9822.22	16717	32000.25	3.258	Si
SLV 5	9.52	-14078	-4113.88	12633	25119.1	6.106	Si
SLV 5	11.32	-10670	2119.18	9575	19569.8	9.235	Si
SLV 15	9.52	-21973	10117.3	19717	36669.89	3.624	Si
SLV 15	11.32	-18629	-9822.22	16717	32000.25	3.258	Si
SLV 3	9.52	-17748	-11233.09	15926	30714.91	2.734	Si
SLV 3	11.32	-14168	8954.88	12713	25260.26	2.821	Si
SLV 14	9.52	-19597	9954.18	17585	33384.86	3.354	Si
SLV 14	11.32	-16294	-9943.93	14622	28545.45	2.871	Si
SLV 2	9.52	-15372	-11396.22	13794	27136.45	2.381	Si
SLV 2	11.32	-11833	8833.17	10618	21500.96	2.434	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 51	9.52	-23582	360	-1047.48		21162	3.98	8377	9335			25.92	Si
SLU 51	11.32	-19151	360	-1485.49		17185	3.98	7847	8745			24.28	Si
SLU 9	9.52	-19152	304	-940.64		17186	3.98	7847	8745			28.77	Si
SLU 9	11.32	-15728	304	-1326.81		14113	3.98	7437	8288			27.27	Si
SLU 6	9.52	-19749	289	-855.46		17722	3.98	7918	8824			30.51	Si
SLU 6	11.32	-16325	289	-1215.24		14649	3.98	7509	8368			28.93	Si
SLU 7	9.52	-19756	278	-886.13		17728	3.98	7919	8825			31.79	Si
SLU 7	11.32	-16332	278	-1224.89		14655	3.98	7510	8369			30.15	Si
SLU 71	9.52	-25896	279	-1187.41		23238	3.98	8654	9644			34.57	Si
SLU 71	11.32	-21406	279	-1482.53		19208	3.98	8117	9045			32.43	Si
SLU 8	9.52	-19145	316	-909.97		17179	3.98	7846	8744			27.71	Si
SLU 8	11.32	-15720	316	-1317.16		14107	3.98	7436	8287			26.26	Si
SLU 48	9.52	-24179	345	-962.29		21697	3.98	8449	9415			27.25	Si
SLU 48	11.32	-19748	345	-1373.92		17721	3.98	7918	8824			25.54	Si
SLU 72	9.52	-25904	267	-1218.09		23244	3.98	8655	9645			36.09	Si
SLU 72	11.32	-21413	267	-1492.18		19215	3.98	8118	9046			33.85	Si
SLU 50	9.52	-23575	372	-1016.81		21155	3.98	8376	9334			25.1	Si
SLU 50	11.32	-19144	372	-1475.84		17179	3.98	7846	8744			23.52	Si
SLU 49	9.52	-24187	334	-992.96		21704	3.98	8449	9416			28.21	Si
SLU 49	11.32	-19755	334	-1383.57		17727	3.98	7919	8825			26.44	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 14	9.52	-19597	11533	9954.18		17585	3.98	11850	13206			1.15	Si
SLV 14	11.32	-16294	10363	-9943.93		14622	3.98	11258	12546			1.21	Si
SLV 2	9.52	-15372	-12102	-11396.22		14656	3.7459	11265	11815			0.98	No, Vu<V
SLV 2	11.32	-11833	-10856	8833.17		11328	3.7305	10599	11071			1.02	Si
SLV 13	9.52	-19597	11533	9954.18		17585	3.98	11850	13206			1.15	Si
SLV 13	11.32	-16294	10363	-9943.93		14622	3.98	11258	12546			1.21	Si
SLV 1	9.52	-15372	-12102	-11396.22		14656	3.7459	11265	11815			0.98	No, Vu<V
SLV 1	11.32	-11833	-10856	8833.17		11328	3.7305	10599	11071			1.02	Si
SLV 6	9.52	-14078	-4513	-4113.88		12633	3.98	10860	12102			2.68	Si
SLV 6	11.32	-10670	-4024	2119.18		9575	3.98	10248	11421			2.84	Si
SLV 3	9.52	-17748	-11516	-11233.09		15926	3.98	11519	12836			1.11	Si
SLV 3	11.32	-14168	-10346	8954.88		12713	3.98	10876	12120			1.17	Si
SLV 16	9.52	-21973	12119	10117.3		19717	3.98	12277	13681			1.13	Si
SLV 16	11.32	-18629	10872	-9822.22		16717	3.98	11677	13013			1.2	Si
SLV 4	9.52	-17748	-11516	-11233.09		15926	3.98	11519	12836			1.11	Si
SLV 4	11.32	-14168	-10346	8954.88		12713	3.98	10876	12120			1.17	Si
SLV 15	9.52	-21973	12119	10117.3		19717	3.98	12277	13681			1.13	Si
SLV 15	11.32	-18629	10872	-9822.22		16717	3.98	11677	13013			1.2	Si
SLV 5	9.52	-14078	-4513	-4113.88		12633	3.98	10860	12102			2.68	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 5	11.32	-10670	-4024	2119.18		9575	3.98	10248	11421			2.84	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 6	143750	0.46	11138	-12412	494.27	1579.32	3.2	Si
SLV 5	143750	0.46	11138	-12412	494.27	1579.32	3.2	Si
SLV 2	143750	0.46	12178	-13571	494.27	1710.64	3.46	Si
SLV 1	143750	0.46	12178	-13571	494.27	1710.64	3.46	Si
SLV 9	143750	0.46	12345	-13757	494.27	1731.38	3.5	Si
SLV 10	143750	0.46	12345	-13757	494.27	1731.38	3.5	Si
SLV 3	143750	0.46	14276	-15910	494.27	1967.11	3.98	Si
SLV 4	143750	0.46	14276	-15910	494.27	1967.11	3.98	Si
SLV 14	143750	0.46	16200	-18053	494.27	2192.38	4.44	Si
SLV 13	143750	0.46	16200	-18053	494.27	2192.38	4.44	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 6	-7438	-15445	463	0.01	1337.6	0.901	0.16359	8.73249	No
SLV 5	-7438	-15445	463	0.01	1337.6	0.901	0.16359	8.73249	No
SLV 10	-8532	-16773	471	0.012	1445.5	0.906	0.19384	8.73249	No
SLV 9	-8532	-16773	471	0.012	1445.5	0.906	0.19384	8.73249	No
SLV 8	-13921	-21513	-473	0.02	1984.1	0.925	0.32053	8.73249	No
SLV 7	-13921	-21513	-473	0.02	1984.1	0.925	0.32053	8.73249	No
SLV 12	-15016	-22842	-465	0.022	2094.3	0.928	0.34429	8.73249	No
SLV 11	-15016	-22842	-465	0.022	2094.3	0.928	0.34429	8.73249	No
SLV 13	-12078	-20447	154	0.039	1798.9	0.919	0.61006	10.16227	No
SLV 14	-12078	-20447	154	0.039	1798.9	0.919	0.61006	10.16227	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	19.502	SLU 9	Si
V_SLU	23.515	SLU 50	Si
PF_SLV	2.381	SLV 1	Si
V_SLV	0.976	SLV 1	No
PFFP_SLV	3.195	SLV 5	Si
R_SLV	0.019	SLV 5	No

Maschio 195

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.058	6.661	-5.018	6.661	L5	L6	2.04	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 29	9.52	-8626	-279.32	15102	7167.67	25.661	Si
SLU 29	11.32	-6615	-1070.37	11581	5787.96	5.407	Si
SLU 17	9.52	-8655	-243.08	15152	7185.68	29.561	Si
SLU 17	11.32	-6673	-1059.78	11683	5830.56	5.502	Si
SLU 51	9.52	-9517	-407.54	16662	7721.96	18.948	Si
SLU 51	11.32	-6952	-1110.24	12171	6031.61	5.433	Si
SLU 80	9.52	-11670	-289.07	20431	8918.1	30.851	Si
SLU 80	11.32	-9075	-1370.06	15887	7451.03	5.438	Si
SLU 72	9.52	-10560	-367.43	18487	8326.44	22.661	Si
SLU 72	11.32	-7964	-1251.33	13943	6732.97	5.381	Si
SLU 71	9.52	-10600	-365.42	18557	8348.8	22.847	Si
SLU 71	11.32	-8004	-1239.57	14013	6759.91	5.453	Si
SLU 30	9.52	-8586	-281.34	15032	7141.83	25.385	Si
SLU 30	11.32	-6575	-1082.13	11510	5758.57	5.322	Si
SLU 8	9.52	-7584	-319.43	13277	6474.83	20.27	Si
SLU 8	11.32	-5603	-929.28	9809	5026.72	5.409	Si
SLU 9	9.52	-7544	-321.44	13207	6447.16	20.057	Si
SLU 9	11.32	-5563	-941.05	9738	4995.55	5.309	Si
SLU 38	9.52	-9697	-202.98	16977	7829.59	38.574	Si
SLU 38	11.32	-7685	-1200.86	13455	6544.29	5.45	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 10	9.52	-7378	1524.41	12917	6730.15	4.415	Si
SLV 10	11.32	-5066	-1531.07	8869	4792.43	3.13	Si
SLV 1	9.52	-2723	-3544.79	0	0	0	No, e>l/2
SLV 1	11.32	-380	1692.41	0	0	0	No, e>l/2
SLV 3	9.52	-4212	-3946.87	7374	4036.97	1.023	Si
SLV 3	11.32	-2105	1683.62	3684	2081.89	1.237	Si
SLV 13	9.52	-12557	3532.27	21984	10503.82	2.974	Si
SLV 13	11.32	-10685	-3282.57	18706	9230.04	2.812	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 15	9.52	-14046	3130.18	24590	11443.63	3.656	Si
SLV 15	11.32	-12409	-3291.36	21725	10406.99	3.162	Si
SLV 14	9.52	-12557	3532.27	21984	10503.82	2.974	Si
SLV 14	11.32	-10685	-3282.57	18706	9230.04	2.812	Si
SLV 9	9.52	-7378	1524.41	12917	6730.15	4.415	Si
SLV 9	11.32	-5066	-1531.07	8869	4792.43	3.13	Si
SLV 16	9.52	-14046	3130.18	24590	11443.63	3.656	Si
SLV 16	11.32	-12409	-3291.36	21725	10406.99	3.162	Si
SLV 2	9.52	-2723	-3544.79	0	0	0	No, $e>l/2$
SLV 2	11.32	-380	1692.41	0	0	0	No, $e>l/2$
SLV 4	9.52	-4212	-3946.87	7374	4036.97	1.023	Si
SLV 4	11.32	-2105	1683.62	3684	2081.89	1.237	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 41	9.52	-10306	541	-128.24		18043	2.04	7961	4547			8.41	Si
SLU 41	11.32	-8294	541	-1137.96		14521	2.04	7492	4279			7.91	Si
SLU 79	9.52	-11711	569	-287.06		20502	2.04	8289	4735			8.32	Si
SLU 79	11.32	-9115	569	-1358.3		15958	2.04	7683	4389			7.71	Si
SLU 42	9.52	-10266	546	-130.25		17972	2.04	7952	4542			8.31	Si
SLU 42	11.32	-8254	546	-1149.73		14450	2.04	7482	4274			7.82	Si
SLU 78	9.52	-12131	576	-286.3		21238	2.04	8387	4791			8.32	Si
SLU 78	11.32	-9535	576	-1369.7		16694	2.04	7781	4445			7.72	Si
SLU 80	9.52	-11670	575	-289.07		20431	2.04	8280	4729			8.23	Si
SLU 80	11.32	-9075	575	-1370.06		15887	2.04	7674	4383			7.63	Si
SLU 84	9.52	-12239	587	-216.35		21427	2.04	8412	4805			8.19	Si
SLU 84	11.32	-9644	587	-1318.93		16883	2.04	7807	4459			7.6	Si
SLU 37	9.52	-9737	529	-200.96		17047	2.04	7828	4472			8.45	Si
SLU 37	11.32	-7726	529	-1189.1		13525	2.04	7359	4203			7.95	Si
SLU 83	9.52	-12279	581	-214.33		21497	2.04	8422	4811			8.28	Si
SLU 83	11.32	-9684	581	-1307.16		16953	2.04	7816	4465			7.68	Si
SLU 77	9.52	-12171	571	-284.28		21308	2.04	8397	4796			8.41	Si
SLU 77	11.32	-9576	571	-1357.93		16764	2.04	7791	4450			7.8	Si
SLU 38	9.52	-9697	534	-202.98		16977	2.04	7819	4466			8.36	Si
SLU 38	11.32	-7685	534	-1200.86		13455	2.04	7350	4198			7.86	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 9	9.52	-7378	1153	1524.41		12917	2.04	10917	6236			5.41	Si
SLV 9	11.32	-5066	1672	-1531.07		8869	2.04	10107	5773			3.45	Si
SLV 3	9.52	-4212	-3267	-3946.87		60452	0.2488	16250	1132			0.35	No, $V_u < V$
SLV 3	11.32	-2105	-2882	1683.62		11388	0.66	10611	1961			0.68	No, $V_u < V$
SLV 2	9.52	-2723	-3417	-3544.79		0	0	8333	0			0	No, $V_u < V$
SLV 2	11.32	-380	-2615	1692.41		0	0	8333	0			0	No, $V_u < V$
SLV 4	9.52	-4212	-3267	-3946.87		60452	0.2488	16250	1132			0.35	No, $V_u < V$
SLV 4	11.32	-2105	-2882	1683.62		11388	0.66	10611	1961			0.68	No, $V_u < V$
SLV 1	9.52	-2723	-3417	-3544.79		0	0	8333	0			0	No, $V_u < V$
SLV 1	11.32	-380	-2615	1692.41		0	0	8333	0			0	No, $V_u < V$
SLV 16	9.52	-14046	4036	3130.18		24590	2.04	13251	7569			1.88	Si
SLV 16	11.32	-12409	3233	-3291.36		21725	2.04	12678	7242			2.24	Si
SLV 10	9.52	-7378	1153	1524.41		12917	2.04	10917	6236			5.41	Si
SLV 10	11.32	-5066	1672	-1531.07		8869	2.04	10107	5773			3.45	Si
SLV 14	9.52	-12557	3885	3532.27		21984	2.04	12730	7271			1.87	Si
SLV 14	11.32	-10685	3500	-3282.57		18706	2.04	12075	6897			1.97	Si
SLV 15	9.52	-14046	4036	3130.18		24590	2.04	13251	7569			1.88	Si
SLV 15	11.32	-12409	3233	-3291.36		21725	2.04	12678	7242			2.24	Si
SLV 13	9.52	-12557	3885	3532.27		21984	2.04	12730	7271			1.87	Si
SLV 13	11.32	-10685	3500	-3282.57		18706	2.04	12075	6897			1.97	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 2	143750	0.46	0	-1508	253.34	0	0	No, $e>t/2$
SLV 1	143750	0.46	0	-1508	253.34	0	0	No, $e>t/2$
SLV 5	143750	0.46	5235	-2990	253.34	400.68	1.58	Si
SLV 6	143750	0.46	5235	-2990	253.34	400.68	1.58	Si
SLV 4	143750	0.46	5609	-3204	253.34	427.96	1.69	Si
SLV 3	143750	0.46	5609	-3204	253.34	427.96	1.69	Si
SLV 9	143750	0.46	10426	-5956	253.34	762.63	3.01	Si
SLV 10	143750	0.46	10426	-5956	253.34	762.63	3.01	Si
SLV 7	143750	0.46	15129	-8642	253.34	1060.03	4.18	Si
SLV 8	143750	0.46	15129	-8642	253.34	1060.03	4.18	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	α_{lim}	Verifica
SLV 5	-1353	-4505	-96	0.032	454.4	0.891	0.5215	8.73249	No
SLV 6	-1353	-4505	-96	0.032	454.4	0.891	0.5215	8.73249	No
SLV 16	-7911	-16731	39	0.043	1095.1	0.929	0.66974	10.16227	No
SLV 15	-7911	-16731	39	0.043	1095.1	0.929	0.66974	10.16227	No
SLV 12	-7926	-12306	96	0.037	1096.6	0.929	0.57795	8.73249	No
SLV 11	-7926	-12306	96	0.037	1096.6	0.929	0.57795	8.73249	No
SLV 10	-2860	-9223	-89	0.036	593.1	0.894	0.58186	8.73249	No
SLV 9	-2860	-9223	-89	0.036	593.1	0.894	0.58186	8.73249	No
SLV 8	-6418	-7587	90	0.037	944.9	0.921	0.58884	8.73249	No
SLV 7	-6418	-7587	90	0.037	944.9	0.921	0.58884	8.73249	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
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Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.309	SLU 9	Si
V_SLU	7.601	SLU 84	Si
PF_SLV	0	SLV 1	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 1	No
R_SLV	0.06	SLV 5	No

Maschio 196

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-20.668	1.046	-24.678	1.046	L5	L6	4.01	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{med}	τ ₀	f _{v0}	μ	φ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLU 69	8.62	-26816	-4615.49	23883	38002.03	8.234	Si
SLU 69	10.72	-23779	-6398.62	21178	35281.09	5.514	Si
SLU 83	8.62	-27356	-4608.49	24364	38443.62	8.342	Si
SLU 83	10.72	-25646	-6774.54	22841	37002.08	5.462	Si
SLU 78	8.62	-28258	-4966.05	25167	39152.24	7.884	Si
SLU 78	10.72	-26182	-6856.45	23319	37467.7	5.465	Si
SLU 37	8.62	-22635	-3906.31	20159	34151.52	8.743	Si
SLU 37	10.72	-21587	-6173.98	19226	33065.89	5.356	Si
SLU 77	8.62	-28220	-4855.12	25134	39123.46	8.058	Si
SLU 77	10.72	-26201	-7146.9	23336	37483.97	5.245	Si
SLU 71	8.62	-26016	-4457.31	23171	37325.11	8.374	Si
SLU 71	10.72	-22843	-6185.58	20344	34360.91	5.555	Si
SLU 35	8.62	-23434	-4064.49	20871	34946.96	8.598	Si
SLU 35	10.72	-22523	-6387.02	20059	34037.61	5.329	Si
SLU 74	8.62	-27554	-4663.97	24540	38601.86	8.277	Si
SLU 74	10.72	-25544	-6666.88	22750	36911.95	5.537	Si
SLU 79	8.62	-27421	-4696.94	24422	38495.76	8.196	Si
SLU 79	10.72	-25265	-6933.87	22502	36663.22	5.288	Si
SLU 80	8.62	-27458	-4807.87	24455	38525.85	8.013	Si
SLU 80	10.72	-25246	-6643.42	22485	36646.17	5.516	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLV 1	8.62	-23173	6086.6	20638	38613.72	6.344	Si
SLV 1	10.72	-26072	-16712.21	23220	42339.95	2.533	Si
SLV 14	8.62	-14370	-11862.14	12799	25794.34	2.175	Si
SLV 14	10.72	-8141	8410.86	7251	15354.79	1.826	Si
SLV 7	8.62	-21012	-1273.41	18714	35676.21	28.016	Si
SLV 7	10.72	-17945	-7418.82	15982	31273.38	4.215	Si
SLV 15	8.62	-14795	-12359.65	13177	26464.56	2.141	Si
SLV 15	10.72	-7287	8641.78	6490	13834.31	1.601	Si
SLV 3	8.62	-23597	5589.08	21016	39174.71	7.009	Si
SLV 3	10.72	-25217	-16481.3	22459	41267.27	2.504	Si
SLV 8	8.62	-21012	-1273.41	18714	35676.21	28.016	Si
SLV 8	10.72	-17945	-7418.82	15982	31273.38	4.215	Si
SLV 4	8.62	-23597	5589.08	21016	39174.71	7.009	Si
SLV 4	10.72	-25217	-16481.3	22459	41267.27	2.504	Si
SLV 13	8.62	-14370	-11862.14	12799	25794.34	2.175	Si
SLV 13	10.72	-8141	8410.86	7251	15354.79	1.826	Si
SLV 2	8.62	-23173	6086.6	20638	38613.72	6.344	Si
SLV 2	10.72	-26072	-16712.21	23220	42339.95	2.533	Si
SLV 16	8.62	-14795	-12359.65	13177	26464.56	2.141	Si
SLV 16	10.72	-7287	8641.78	6490	13834.31	1.601	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	V par	M	σ ₀	σ _N	l'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 39	8.62	-21903	4658	-3626.7		19508	4.01	8157	9158			1.97	Si
SLU 39	10.72	-21311	4658	-5534.63		18980	4.01	8086	9079			1.95	Si
SLU 42	8.62	-22608	4528	-3928.79		20135	4.01	8240	9252			2.04	Si
SLU 42	10.72	-21949	4554	-5724.2		19548	4.01	8162	9164			2.01	Si
SLU 81	8.62	-26689	4808	-4417.34		23770	4.01	8725	9796			2.04	Si
SLU 81	10.72	-24989	4808	-6294.52		22256	4.01	8523	9570			1.99	Si
SLU 32	8.62	-22767	4423	-3873.33		20277	4.01	8259	9273			2.1	Si
SLU 32	10.72	-21866	4423	-5906.99		19474	4.01	8152	9153			2.07	Si
SLU 83	8.62	-27356	4937	-4608.49		24364	4.01	8804	9885			2	Si
SLU 83	10.72	-25646	4936	-6774.54		22841	4.01	8601	9657			1.96	Si
SLU 84	8.62	-27394	4678	-4719.42		24398	4.01	8809	9890			2.11	Si
SLU 84	10.72	-25627	4704	-6484.09		22824	4.01	8599	9655			2.05	Si
SLU 41	8.62	-22570	4786	-3817.86		20102	4.01	8236	9247			1.93	Si
SLU 41	10.72	-21968	4786	-6014.66		19565	4.01	8164	9167			1.92	Si
SLU 77	8.62	-28220	4701	-4855.12		25134	4.01	8907	10000			2.13	Si
SLU 77	10.72	-26201	4701	-7146.9		23336	4.01	8667	9731			2.07	Si
SLU 35	8.62	-23434	4551	-4064.49		20871	4.01	8338	9362			2.06	Si
SLU 35	10.72	-22523	4551	-6387.02		20059	4.01	8230	9241			2.03	Si
SLU 40	8.62	-21941	4400	-3737.63		19541	4.01	8161	9163			2.08	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 40	10.72	-21292	4426	-5244.18		18963	4.01	8084	9077			2.05	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 3	8.62	-23597	17246	5589.08		21016	4.01	12537	14076			0.82	No, Vu<V
SLV 3	10.72	-25217	15715	-16481.3		22459	4.01	12825	14400			0.92	No, Vu<V
SLV 13	8.62	-14370	-12319	-11862.14		14504	3.5386	11234	11131			0.9	No, Vu<V
SLV 13	10.72	-8141	-10789	8410.86		9972	2.9157	10328	8432			0.78	No, Vu<V
SLV 5	8.62	-19597	9366	384.97		17453	4.01	11824	13276			1.42	Si
SLV 5	10.72	-20793	8991	-8188.54		18519	4.01	12037	13515			1.5	Si
SLV 16	8.62	-14795	-13678	-12359.65		15059	3.5088	11345	11146			0.81	No, Vu<V
SLV 16	10.72	-7287	-12193	8641.78		10591	2.4572	10452	7191			0.59	No, Vu<V
SLV 15	8.62	-14795	-13678	-12359.65		15059	3.5088	11345	11146			0.81	No, Vu<V
SLV 15	10.72	-7287	-12193	8641.78		10591	2.4572	10452	7191			0.59	No, Vu<V
SLV 4	8.62	-23597	17246	5589.08		21016	4.01	12537	14076			0.82	No, Vu<V
SLV 4	10.72	-25217	15715	-16481.3		22459	4.01	12825	14400			0.92	No, Vu<V
SLV 2	8.62	-23173	18604	6086.6		20638	4.01	12461	13991			0.75	No, Vu<V
SLV 2	10.72	-26072	17120	-16712.21		23220	4.01	12977	14571			0.85	No, Vu<V
SLV 14	8.62	-14370	-12319	-11862.14		14504	3.5386	11234	11131			0.9	No, Vu<V
SLV 14	10.72	-8141	-10789	8410.86		9972	2.9157	10328	8432			0.78	No, Vu<V
SLV 6	8.62	-19597	9366	384.97		17453	4.01	11824	13276			1.42	Si
SLV 6	10.72	-20793	8991	-8188.54		18519	4.01	12037	13515			1.5	Si
SLV 1	8.62	-23173	18604	6086.6		20638	4.01	12461	13991			0.75	No, Vu<V
SLV 1	10.72	-26072	17120	-16712.21		23220	4.01	12977	14571			0.85	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 16	143750	0.46	7182	-8064	509.57	1062.62	2.09	Si
SLV 15	143750	0.46	7182	-8064	509.57	1062.62	2.09	Si
SLV 13	143750	0.46	7834	-8796	509.57	1152.48	2.26	Si
SLV 14	143750	0.46	7834	-8796	509.57	1152.48	2.26	Si
SLV 12	143750	0.46	12011	-13486	509.57	1702.49	3.34	Si
SLV 11	143750	0.46	12011	-13486	509.57	1702.49	3.34	Si
SLV 10	143750	0.46	14184	-15926	509.57	1970.76	3.87	Si
SLV 9	143750	0.46	14184	-15926	509.57	1970.76	3.87	Si
SLV 8	143750	0.46	16802	-18866	509.57	2278	4.47	Si
SLV 7	143750	0.46	16802	-18866	509.57	2278	4.47	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 10	-14688	-16956	-664	0.011	2065.6	0.927	0.17001	8.73249	No
SLV 9	-14688	-16956	-664	0.011	2065.6	0.927	0.17001	8.73249	No
SLV 7	-15863	-21012	664	0.013	2184.1	0.93	0.19645	8.73249	No
SLV 8	-15863	-21012	664	0.013	2184.1	0.93	0.19645	8.73249	No
SLV 11	-13135	-18371	591	0.013	1909.5	0.922	0.19812	8.73249	No
SLV 12	-13135	-18371	591	0.013	1909.5	0.922	0.19812	8.73249	No
SLV 6	-17415	-19597	-591	0.018	2340.8	0.934	0.28084	8.73249	No
SLV 5	-17415	-19597	-591	0.018	2340.8	0.934	0.28084	8.73249	No
SLV 13	-10962	-14370	-310	0.028	1691.7	0.915	0.442	10.16227	No
SLV 14	-10962	-14370	-310	0.028	1691.7	0.915	0.442	10.16227	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.245	SLU 77	Si
V_SLU	1.915	SLU 41	Si
PF_SLV	1.601	SLV 15	Si
V_SLV	0.59	SLV 15	No
PFFP_SLV	2.085	SLV 15	Si
R_SLV	0.019	SLV 9	No

Maschio 197

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-12.283	1.046	-19.868	1.046	L5	L6	7.585	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ_0	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 82	8.62	-70547	-8475.26	33217	158447.14	18.695	Si
SLU 82	11.12	-61531	-5193.06	28972	150359.14	28.954	Si
SLU 83	8.62	-73556	-8879.69	34634	160353.7	18.058	Si
SLU 83	11.12	-64590	-5743.6	30412	153502.42	26.726	Si
SLU 79	8.62	-74618	-8150.92	35134	160931.3	19.744	Si
SLU 79	11.12	-65457	-5511.69	30821	154318.69	27.998	Si
SLU 39	8.62	-58584	-8168.04	27585	146942.35	17.99	Si
SLU 39	11.12	-52075	-4720.01	24520	138046.39	29.247	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 84	8.62	-73515	-8523.74	34615	160330.11	18.81	Si
SLU 84	11.12	-64687	-5042.34	30458	153596.05	30.461	Si
SLU 74	8.62	-73164	-8082.19	34450	160127.64	19.812	Si
SLU 74	11.12	-63834	-5798.93	30056	152763.8	26.343	Si
SLU 41	8.62	-61552	-8216.52	28982	150382.06	18.302	Si
SLU 41	11.12	-55231	-4569.29	26006	142591.89	31.207	Si
SLU 42	8.62	-61511	-7860.57	28963	150336.64	19.125	Si
SLU 42	11.12	-55329	-3868.03	26052	142725.6	36.899	Si
SLU 40	8.62	-58543	-7812.09	27565	146891.53	18.803	Si
SLU 40	11.12	-52172	-4018.75	24566	138193.62	34.387	Si
SLU 81	8.62	-70588	-8831.21	33237	158476.12	17.945	Si
SLU 81	11.12	-61434	-5894.32	28926	150251.99	25.491	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 16	8.62	-47463	-40444.49	22348	147080.65	3.637	Si
SLV 16	11.12	-34791	22528.56	16382	114255.73	5.072	Si
SLV 12	8.62	-47732	-18856.79	22475	147726.34	7.834	Si
SLV 12	11.12	-38696	2064.25	18220	124872.01	60.493	Si
SLV 15	8.62	-47463	-40444.49	22348	147080.65	3.637	Si
SLV 15	11.12	-34791	22528.56	16382	114255.73	5.072	Si
SLV 2	8.62	-51393	30498.17	24199	156307.03	5.125	Si
SLV 2	11.12	-48316	-31178.89	22750	149122.84	4.783	Si
SLV 14	8.62	-48193	-38306.75	22692	148827.7	3.885	Si
SLV 14	11.12	-35338	23627.48	16639	115767.89	4.9	Si
SLV 4	8.62	-50663	28360.43	23855	154628.23	5.452	Si
SLV 4	11.12	-47770	-32277.81	22493	147817.96	4.58	Si
SLV 3	8.62	-50663	28360.43	23855	154628.23	5.452	Si
SLV 3	11.12	-47770	-32277.81	22493	147817.96	4.58	Si
SLV 1	8.62	-51393	30498.17	24199	156307.03	5.125	Si
SLV 1	11.12	-48316	-31178.89	22750	149122.84	4.783	Si
SLV 13	8.62	-48193	-38306.75	22692	148827.7	3.885	Si
SLV 13	11.12	-35338	23627.48	16639	115767.89	4.9	Si
SLV 11	8.62	-47732	-18856.79	22475	147726.34	7.834	Si
SLV 11	11.12	-38696	2064.25	18220	124872.01	60.493	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 37	8.62	-62613	-1534	-7487.76		29482	7.585	9486	20147			13.14	Si
SLU 37	11.12	-56098	-1447	-4337.38		26414	7.585	9077	19279			13.32	Si
SLU 29	8.62	-58164	-1287	-5674.17		27387	7.585	9207	19554			15.19	Si
SLU 29	11.12	-50756	-1363	-4147.93		23899	7.585	8742	18566			13.62	Si
SLU 41	8.62	-61552	-1462	-8216.52		28982	7.585	9420	20006			13.69	Si
SLU 41	11.12	-55231	-1226	-4569.29		26006	7.585	9023	19163			15.64	Si
SLU 27	8.62	-59679	-1256	-5653.92		28100	7.585	9302	19756			15.73	Si
SLU 27	11.12	-52289	-1304	-4284.45		24621	7.585	8838	18771			14.4	Si
SLU 71	8.62	-70168	-1258	-6337.34		33039	7.585	9961	21155			16.82	Si
SLU 71	11.12	-60115	-1370	-5322.24		28305	7.585	9330	19814			14.46	Si
SLU 36	8.62	-64086	-1397	-7111.55		30175	7.585	9579	20344			14.56	Si
SLU 36	11.12	-57729	-1237	-3772.64		27182	7.585	9180	19496			15.76	Si
SLU 79	8.62	-74618	-1504	-8150.92		35134	7.585	10240	21748			14.46	Si
SLU 79	11.12	-65457	-1455	-5511.69		30821	7.585	9665	20526			14.11	Si
SLU 38	8.62	-62572	-1428	-7131.8		29462	7.585	9484	20142			14.1	Si
SLU 38	11.12	-56196	-1296	-3636.12		26460	7.585	9084	19292			14.88	Si
SLU 42	8.62	-61511	-1357	-7860.57		28963	7.585	9417	20000			14.74	Si
SLU 42	11.12	-55329	-1075	-3868.03		26052	7.585	9029	19176			17.84	Si
SLU 35	8.62	-64128	-1502	-7467.51		30195	7.585	9582	20349			13.55	Si
SLU 35	11.12	-57631	-1388	-4473.9		27136	7.585	9174	19483			14.04	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 13	8.62	-48193	-38672	-38306.75		22692	7.585	12872	27337			0.71	No, Vu<V
SLV 13	11.12	-35338	-32014	23627.48		16639	7.585	11661	24766			0.77	No, Vu<V
SLV 14	8.62	-48193	-38672	-38306.75		22692	7.585	12872	27337			0.71	No, Vu<V
SLV 14	11.12	-35338	-32014	23627.48		16639	7.585	11661	24766			0.77	No, Vu<V
SLV 16	8.62	-47463	-36850	-40444.49		22348	7.585	12803	27191			0.74	No, Vu<V
SLV 16	11.12	-34791	-29660	22528.56		16382	7.585	11610	24657			0.83	No, Vu<V
SLV 4	8.62	-50663	37354	28360.43		23855	7.585	13104	27831			0.75	No, Vu<V
SLV 4	11.12	-47770	30820	-32277.81		22493	7.585	12832	27252			0.88	No, Vu<V
SLV 15	8.62	-47463	-36850	-40444.49		22348	7.585	12803	27191			0.74	No, Vu<V
SLV 15	11.12	-34791	-29660	22528.56		16382	7.585	11610	24657			0.83	No, Vu<V
SLV 9	8.62	-50164	-14828	-11731.01		23620	7.585	13057	27731			1.87	Si
SLV 9	11.12	-40518	-13594	5727.33		19078	7.585	12149	25802			1.9	Si
SLV 3	8.62	-50663	37354	28360.43		23855	7.585	13104	27831			0.75	No, Vu<V
SLV 3	11.12	-47770	30820	-32277.81		22493	7.585	12832	27252			0.88	No, Vu<V
SLV 2	8.62	-51393	35531	30498.17		24199	7.585	13173	27977			0.79	No, Vu<V
SLV 2	11.12	-48316	28465	-31178.89		22750	7.585	12883	27362			0.96	No, Vu<V
SLV 1	8.62	-51393	35531	30498.17		24199	7.585	13173	27977			0.79	No, Vu<V
SLV 1	11.12	-48316	28465	-31178.89		22750	7.585	12883	27362			0.96	No, Vu<V
SLV 10	8.62	-50164	-14828	-11731.01		23620	7.585	13057	27731			1.87	Si
SLV 10	11.12	-40518	-13594	5727.33		19078	7.585	12149	25802			1.9	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 15	143750	0.46	19912	-42289	963.87	4955.61	5.14	Si
SLV 16	143750	0.46	19912	-42289	963.87	4955.61	5.14	Si
SLV 11	143750	0.46	20223	-42949	963.87	5017.68	5.21	Si
SLV 12	143750	0.46	20223	-42949	963.87	5017.68	5.21	Si



Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 13	143750	0.46	20259	-43026	963.87	5024.87	5.21	Si
SLV 14	143750	0.46	20259	-43026	963.87	5024.87	5.21	Si
SLV 7	143750	0.46	20836	-44252	963.87	5138.8	5.33	Si
SLV 8	143750	0.46	20836	-44252	963.87	5138.8	5.33	Si
SLV 9	143750	0.46	21379	-45405	963.87	5244.51	5.44	Si
SLV 10	143750	0.46	21379	-45405	963.87	5244.51	5.44	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 10.395 $W_a = 0.05$ $T_a = 0.0752$

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 11	-33764	-47732	-1015	0.021	4510.9	0.935	0.32637	8.73249	No
SLV 12	-33764	-47732	-1015	0.021	4510.9	0.935	0.32637	8.73249	No
SLV 8	-36811	-48692	-1062	0.021	4819.2	0.938	0.32852	8.73249	No
SLV 7	-36811	-48692	-1062	0.021	4819.2	0.938	0.32852	8.73249	No
SLV 10	-37463	-50164	1066	0.021	4885.2	0.939	0.33115	8.73249	No
SLV 9	-37463	-50164	1066	0.021	4885.2	0.939	0.33115	8.73249	No
SLV 5	-40511	-51124	1019	0.024	5193.8	0.942	0.36325	8.73249	No
SLV 6	-40511	-51124	1019	0.024	5193.8	0.942	0.36325	8.73249	No
SLV 13	-32613	-48193	392	0.036	4394.6	0.933	0.56486	10.16227	No
SLV 14	-32613	-48193	392	0.036	4394.6	0.933	0.56486	10.16227	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	17.945	SLU 81	Si
V_SLU	13.137	SLU 37	Si
PF_SLV	3.637	SLV 15	Si
V_SLV	0.707	SLV 13	No
PFFP_SLV	5.141	SLV 15	Si
R_SLV	0.037	SLV 11	No

Maschio 198

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.sx	a.s.dx
-10.466	1.046	-11.163	1.046	L5	L6	0.696	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 47	8.62	-6518	-172.9	33428	1338.13	7.739	Si
SLU 47	11.12	-5473	185.37	28068	1248.95	6.738	Si
SLU 7	8.62	-5659	-129.44	29025	1268.38	9.799	Si
SLU 7	11.12	-4975	140.87	25517	1189.69	8.445	Si
SLU 44	8.62	-6222	-151.07	31911	1317.75	8.723	Si
SLU 44	11.12	-5191	162.77	26623	1216.72	7.475	Si
SLU 5	8.62	-5217	-126.35	26757	1219.86	9.654	Si
SLU 5	11.12	-4481	137.52	22980	1120.01	8.144	Si
SLU 50	8.62	-6820	-164.78	34975	1354.96	8.223	Si
SLU 50	11.12	-5850	179.07	30001	1286.63	7.185	Si
SLU 48	8.62	-6964	-158.02	35714	1361.59	8.617	Si
SLU 48	11.12	-6025	171.39	30898	1302	7.597	Si
SLU 46	8.62	-6664	-154.16	34179	1346.79	8.736	Si
SLU 46	11.12	-5686	166.13	29160	1271	7.651	Si
SLU 49	8.62	-6960	-175.99	35695	1361.44	7.736	Si
SLU 49	11.12	-5967	188.72	30604	1297.12	6.873	Si
SLU 9	8.62	-5515	-136.2	28286	1253.52	9.203	Si
SLU 9	11.12	-4801	148.55	24620	1166.29	7.851	Si
SLU 51	8.62	-6816	-182.75	34957	1354.78	7.413	Si
SLU 51	11.12	-5793	196.4	29708	1281.32	6.524	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 3	8.62	-3442	2436.11	0	0	0	No, $e > l/2$
SLV 3	11.12	-4754	-2136.14	0	0	0	No, $e > l/2$
SLV 6	8.62	-2114	1304.43	0	0	0	No, $e > l/2$
SLV 6	11.12	-7928	-1194.98	40661	1841.87	1.541	Si
SLV 5	8.62	-2114	1304.43	0	0	0	No, $e > l/2$
SLV 5	11.12	-7928	-1194.98	40661	1841.87	1.541	Si
SLV 13	8.62	-6982	-2503.66	0	0	0	No, $e > l/2$
SLV 13	11.12	-4743	2236.36	0	0	0	No, $e > l/2$
SLV 2	8.62	-2029	2764.86	0	0	0	No, $e > l/2$
SLV 2	11.12	-6503	-2460.48	0	0	0	No, $e > l/2$
SLV 12	8.62	-8309	-1371.98	42614	1884.09	1.373	Si
SLV 12	11.12	-1569	1295.2	0	0	0	No, $e > l/2$
SLV 1	8.62	-2029	2764.86	0	0	0	No, $e > l/2$
SLV 1	11.12	-6503	-2460.48	0	0	0	No, $e > l/2$
SLV 4	8.62	-3442	2436.11	0	0	0	No, $e > l/2$
SLV 4	11.12	-4754	-2136.14	0	0	0	No, $e > l/2$
SLV 14	8.62	-6982	-2503.66	0	0	0	No, $e > l/2$
SLV 14	11.12	-4743	2236.36	0	0	0	No, $e > l/2$



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 11	8.62	-8309	-1371.98	42614	1884.09	1.373	Si
SLV 11	11.12	-1569	1295.2	0	0	0	No, $e > l/2$

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 47	8.62	-6518	-122	-172.9		33428	0.6964	10013	1952			15.95	Si
SLU 47	11.12	-5473	-139	185.37		28068	0.6964	9298	1813			13.05	Si
SLU 39	8.62	-6126	174	99.18		31417	0.6964	9744	1900			10.9	Si
SLU 39	11.12	-6195	132	-66.03		31773	0.6964	9792	1909			14.44	Si
SLU 41	8.62	-6421	155	77.35		32933	0.6964	9947	1939			12.48	Si
SLU 41	11.12	-6477	113	-43.44		33218	0.6964	9985	1947			17.17	Si
SLU 49	8.62	-6960	-121	-175.99		35695	0.6964	10315	2011			16.64	Si
SLU 49	11.12	-5967	-137	188.72		30604	0.6964	9636	1879			13.7	Si
SLU 42	8.62	-6418	137	59.38		32915	0.6964	9944	1939			14.15	Si
SLU 42	11.12	-6420	95	-26.1		32924	0.6964	9945	1939			20.45	Si
SLU 51	8.62	-6816	-129	-182.75		34957	0.6964	10216	1992			15.44	Si
SLU 51	11.12	-5793	-145	196.4		29708	0.6964	9517	1856			12.76	Si
SLU 32	8.62	-6361	127	53.14		32625	0.6964	9906	1931			15.18	Si
SLU 32	11.12	-6341	93	-24.78		32520	0.6964	9892	1929			20.85	Si
SLU 50	8.62	-6820	-111	-164.78		34975	0.6964	10219	1993			18.01	Si
SLU 50	11.12	-5850	-127	179.07		30001	0.6964	9556	1863			14.68	Si
SLU 40	8.62	-6122	156	81.21		31398	0.6964	9742	1900			12.18	Si
SLU 40	11.12	-6138	114	-48.69		31480	0.6964	9753	1902			16.72	Si
SLU 44	8.62	-6222	-103	-151.07		31911	0.6964	9810	1913			18.49	Si
SLU 44	11.12	-5191	-120	162.77		26623	0.6964	9105	1775			14.78	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 4	8.62	-3442	2322	2436.11		0	0	8333	0			0	No, $Vu < V$
SLV 4	11.12	-4754	1632	-2136.14		0	0	8333	0			0	No, $Vu < V$
SLV 13	8.62	-6982	-2291	-2503.66		0	0	8333	0			0	No, $Vu < V$
SLV 13	11.12	-4743	-1641	2236.36		0	0	8333	0			0	No, $Vu < V$
SLV 14	8.62	-6982	-2291	-2503.66		0	0	8333	0			0	No, $Vu < V$
SLV 14	11.12	-4743	-1641	2236.36		0	0	8333	0			0	No, $Vu < V$
SLV 2	8.62	-2029	2784	2764.86		0	0	8333	0			0	No, $Vu < V$
SLV 2	11.12	-6503	2166	-2460.48		0	0	8333	0			0	No, $Vu < V$
SLV 5	8.62	-2114	1547	1304.43		0	0	8333	0			0	No, $Vu < V$
SLV 5	11.12	-7928	1457	-1194.98		47799	0.5924	16250	2695			1.85	Si
SLV 1	8.62	-2029	2784	2764.86		0	0	8333	0			0	No, $Vu < V$
SLV 1	11.12	-6503	2166	-2460.48		0	0	8333	0			0	No, $Vu < V$
SLV 6	8.62	-2114	1547	1304.43		0	0	8333	0			0	No, $Vu < V$
SLV 6	11.12	-7928	1457	-1194.98		47799	0.5924	16250	2695			1.85	Si
SLV 3	8.62	-3442	2322	2436.11		0	0	8333	0			0	No, $Vu < V$
SLV 3	11.12	-4754	1632	-2136.14		0	0	8333	0			0	No, $Vu < V$
SLV 11	8.62	-8309	-1515	-1371.98		54034	0.5492	16250	2499			1.65	Si
SLV 11	11.12	-1569	-1465	1295.2		0	0	8333	0			0	No, $Vu < V$
SLV 12	8.62	-8309	-1515	-1371.98		54034	0.5492	16250	2499			1.65	Si
SLV 12	11.12	-1569	-1465	1295.2		0	0	8333	0			0	No, $Vu < V$

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 11	143750	0.46	12850	-2505	88.49	313.87	3.55	Si
SLV 12	143750	0.46	12850	-2505	88.49	313.87	3.55	Si
SLV 7	143750	0.46	15715	-3064	88.49	373.82	4.22	Si
SLV 8	143750	0.46	15715	-3064	88.49	373.82	4.22	Si
SLV 15	143750	0.46	16541	-3225	88.49	390.4	4.41	Si
SLV 16	143750	0.46	16541	-3225	88.49	390.4	4.41	Si
SLV 13	143750	0.46	22571	-4401	88.49	502.32	5.68	Si
SLV 14	143750	0.46	22571	-4401	88.49	502.32	5.68	Si
SLV 3	143750	0.46	26094	-5088	88.49	560.19	6.33	Si
SLV 4	143750	0.46	26094	-5088	88.49	560.19	6.33	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzzeria = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 11	-3146	-8309	50	0.033	418.8	0.935	0.5065	8.73249	No
SLV 12	-3146	-8309	50	0.033	418.8	0.935	0.5065	8.73249	No
SLV 6	-2826	-2114	-48	0.033	386.5	0.931	0.50824	8.73249	No
SLV 5	-2826	-2114	-48	0.033	386.5	0.931	0.50824	8.73249	No
SLV 15	-4086	-8394	28	0.039	514.1	0.946	0.59568	10.16227	No
SLV 16	-4086	-8394	28	0.039	514.1	0.946	0.59568	10.16227	No
SLV 8	-2452	-6823	42	0.034	348.7	0.925	0.52803	8.73249	No
SLV 7	-2452	-6823	42	0.034	348.7	0.925	0.52803	8.73249	No
SLV 1	-1885	-2029	-26	0.039	291.9	0.915	0.61951	10.16227	No
SLV 2	-1885	-2029	-26	0.039	291.9	0.915	0.61951	10.16227	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.524	SLU 51	Si
V_SLU	10.902	SLU 39	Si
PF_SLV	0	SLV 1	No
V_SLV	0	SLV 1	No
PFFP_SLV	3.547	SLV 11	Si
R_SLV	0.058	SLV 11	No



Maschio 199

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.278	1.046	-9.386	1.046	L5	L6	2.109	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ ₀	f _{v0}	μ	φ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLU 44	8.62	-19136	-952.97	32412	12148	12.747	Si
SLU 44	11.12	-14884	1524.51	25209	10835.91	7.108	Si
SLU 70	8.62	-23451	-820.57	39719	12668.87	15.439	Si
SLU 70	11.12	-18815	1695.63	31867	12076.5	7.122	Si
SLU 49	8.62	-21483	-939.97	36387	12532.58	13.333	Si
SLU 49	11.12	-17097	1684.85	28958	11617.84	6.895	Si
SLU 72	8.62	-22877	-833.8	38747	12646.64	15.168	Si
SLU 72	11.12	-18289	1671.05	30976	11949.81	7.151	Si
SLU 59	8.62	-22510	-893.13	38125	12624.84	14.136	Si
SLU 59	11.12	-18054	1680.51	30579	11889.32	7.075	Si
SLU 46	8.62	-20603	-881.58	34896	12416.65	14.085	Si
SLU 46	11.12	-16235	1591.7	27497	11338.62	7.124	Si
SLU 51	8.62	-20909	-953.2	35415	12460.83	13.073	Si
SLU 51	11.12	-16572	1660.27	28068	11451.55	6.897	Si
SLU 47	8.62	-20017	-1011.37	33903	12320.53	12.182	Si
SLU 47	11.12	-15747	1617.66	26670	11166.23	6.903	Si
SLU 55	8.62	-21617	-951.29	36613	12547.18	13.19	Si
SLU 55	11.12	-17229	1637.89	29181	11657.63	7.117	Si
SLU 57	8.62	-23084	-879.9	39097	12656.31	14.384	Si
SLU 57	11.12	-18580	1705.08	31469	12021.43	7.05	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLV 4	8.62	-14995	9300.88	25397	12523.33	1.346	Si
SLV 4	11.12	-6965	-5659	11797	6634.67	1.172	Si
SLV 3	8.62	-14995	9300.88	25397	12523.33	1.346	Si
SLV 3	11.12	-6965	-5659	11797	6634.67	1.172	Si
SLV 13	8.62	-17571	-10153.15	29760	14013.11	1.38	Si
SLV 13	11.12	-18522	7833.45	31371	14514.18	1.853	Si
SLV 2	8.62	-15308	8229.06	25928	12714.95	1.545	Si
SLV 2	11.12	-7473	-5065.83	12658	7063	1.394	Si
SLV 15	8.62	-17257	-9081.32	29229	13842.21	1.524	Si
SLV 15	11.12	-18014	7240.28	30510	14249.87	1.968	Si
SLV 10	8.62	-17144	-4969.84	29038	13779.98	2.773	Si
SLV 10	11.12	-15247	4010.74	25825	12677.92	3.161	Si
SLV 14	8.62	-17571	-10153.15	29760	14013.11	1.38	Si
SLV 14	11.12	-18522	7833.45	31371	14514.18	1.853	Si
SLV 9	8.62	-17144	-4969.84	29038	13779.98	2.773	Si
SLV 9	11.12	-15247	4010.74	25825	12677.92	3.161	Si
SLV 1	8.62	-15308	8229.06	25928	12714.95	1.545	Si
SLV 1	11.12	-7473	-5065.83	12658	7063	1.394	Si
SLV 16	8.62	-17257	-9081.32	29229	13842.21	1.524	Si
SLV 16	11.12	-18014	7240.28	30510	14249.87	1.968	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 49	8.62	-21483	-741	-939.97		36387	2.1086	10407	6145			8.29	Si
SLU 49	11.12	-17097	-215	1684.85		28958	2.1086	9417	5560			25.92	Si
SLU 51	8.62	-20909	-757	-953.2		35415	2.1086	10278	6068			8.01	Si
SLU 51	11.12	-16572	-230	1660.27		28068	2.1086	9298	5490			23.92	Si
SLU 55	8.62	-21617	-730	-951.29		36613	2.1086	10437	6162			8.44	Si
SLU 55	11.12	-17229	-206	1637.89		29181	2.1086	9446	5577			27.07	Si
SLU 44	8.62	-19136	-733	-952.97		32412	2.1086	9877	5832			7.96	Si
SLU 44	11.12	-14884	-248	1524.51		25209	2.1086	8917	5265			21.23	Si
SLU 59	8.62	-22510	-696	-893.13		38125	2.1086	10639	6281			9.03	Si
SLU 59	11.12	-18054	-170	1680.51		30579	2.1086	9633	5687			33.4	Si
SLU 52	8.62	-20737	-671	-892.9		35122	2.1086	10239	6045			9	Si
SLU 52	11.12	-16366	-189	1544.75		27720	2.1086	9252	5462			28.94	Si
SLU 2	8.62	-15232	-588	-768.81		25799	2.1086	8995	5311			9.03	Si
SLU 2	11.12	-11924	-195	1204.7		20196	2.1086	8248	4870			24.93	Si
SLU 5	8.62	-16112	-647	-827.2		27290	2.1086	9194	5428			8.39	Si
SLU 5	11.12	-12787	-213	1297.85		21657	2.1086	8443	4985			23.45	Si
SLU 46	8.62	-20603	-682	-881.58		34896	2.1086	10208	6027			8.84	Si
SLU 46	11.12	-16235	-197	1591.7		27497	2.1086	9222	5445			27.61	Si
SLU 47	8.62	-20017	-792	-1011.37		33903	2.1086	10076	5949			7.51	Si
SLU 47	11.12	-15747	-265	1617.66		26670	2.1086	9112	5380			20.28	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 10	8.62	-17144	-3345	-4969.84		29038	2.1086	14141	8349			2.5	Si
SLV 10	11.12	-15247	-1163	4010.74		25825	2.1086	13498	7970			6.85	Si
SLV 14	8.62	-17571	-9403	-10153.15		43901	1.4294	16250	6504			0.69	No, Vu<V
SLV 14	11.12	-18522	-4378	7833.45		34923	1.8941	15318	8124			1.86	Si
SLV 13	8.62	-17571	-9403	-10153.15		43901	1.4294	16250	6504			0.69	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 13	11.12	-18522	-4378	7833.45		34923	1.8941	15318	8124			1.86	Si
SLV 4	8.62	-14995	8794	9300.88		41127	1.3021	16250	5925			0.67	No, Vu<V
SLV 4	11.12	-6965	4343	-5659		34283	0.7256	15190	3086			0.71	No, Vu<V
SLV 15	8.62	-17257	-9198	-9081.32		38904	1.5843	16114	7148			0.78	No, Vu<V
SLV 15	11.12	-18014	-4486	7240.28		32872	1.9572	14908	8169			1.82	Si
SLV 3	8.62	-14995	8794	9300.88		41127	1.3021	16250	5925			0.67	No, Vu<V
SLV 3	11.12	-6965	4343	-5659		34283	0.7256	15190	3086			0.71	No, Vu<V
SLV 16	8.62	-17257	-9198	-9081.32		38904	1.5843	16114	7148			0.78	No, Vu<V
SLV 16	11.12	-18014	-4486	7240.28		32872	1.9572	14908	8169			1.82	Si
SLV 1	8.62	-15308	8589	8229.06		35266	1.5503	15387	6679			0.78	No, Vu<V
SLV 1	11.12	-7473	4450	-5065.83		23633	1.1294	13060	4130			0.93	No, Vu<V
SLV 2	8.62	-15308	8589	8229.06		35266	1.5503	15387	6679			0.78	No, Vu<V
SLV 2	11.12	-7473	4450	-5065.83		23633	1.1294	13060	4130			0.93	No, Vu<V
SLV 9	8.62	-17144	-3345	-4969.84		29038	2.1086	14141	8349			2.5	Si
SLV 9	11.12	-15247	-1163	4010.74		25825	2.1086	13498	7970			6.85	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 3	143750	0.46	21999	-12989	267.96	1491.02	5.56	Si
SLV 4	143750	0.46	21999	-12989	267.96	1491.02	5.56	Si
SLV 7	143750	0.46	22311	-13173	267.96	1507.47	5.63	Si
SLV 8	143750	0.46	22311	-13173	267.96	1507.47	5.63	Si
SLV 1	143750	0.46	22925	-13535	267.96	1539.4	5.74	Si
SLV 2	143750	0.46	22925	-13535	267.96	1539.4	5.74	Si
SLV 11	143750	0.46	23505	-13877	267.96	1569.11	5.86	Si
SLV 12	143750	0.46	23505	-13877	267.96	1569.11	5.86	Si
SLV 5	143750	0.46	25397	-14995	267.96	1662.92	6.21	Si
SLV 6	143750	0.46	25397	-14995	267.96	1662.92	6.21	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 5	-9446	-16466	487	0.003	1260	0.935	0.0466	8.73249	No
SLV 6	-9446	-16466	487	0.003	1260	0.935	0.0466	8.73249	No
SLV 8	-10733	-15421	-467	0.008	1390.3	0.94	0.12817	8.73249	No
SLV 7	-10733	-15421	-467	0.008	1390.3	0.94	0.12817	8.73249	No
SLV 9	-11975	-17144	471	0.011	1516.2	0.944	0.16612	8.73249	No
SLV 10	-11975	-17144	471	0.011	1516.2	0.944	0.16612	8.73249	No
SLV 12	-13263	-16100	-483	0.012	1646.8	0.948	0.1907	8.73249	No
SLV 11	-13263	-16100	-483	0.012	1646.8	0.948	0.1907	8.73249	No
SLV 2	-6945	-15308	172	0.028	1007.9	0.923	0.44769	10.16227	No
SLV 1	-6945	-15308	172	0.028	1007.9	0.923	0.44769	10.16227	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.895	SLU 49	Si
V_SLU	7.514	SLU 47	Si
PF_SLV	1.172	SLV 3	Si
V_SLV	0.674	SLV 3	No
PFFP_SLV	5.564	SLV 3	Si
R_SLV	0.005	SLV 5	No

Maschio 200

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-4.968	1.046	-6.478	1.046	L5	L6	1.51	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 56	8.62	-14820	-779.1	35051	6374.33	8.182	Si
SLU 56	10.72	-14148	1126.96	33463	6293.75	5.585	Si
SLU 80	8.62	-15616	-819.06	36935	6444.25	7.868	Si
SLU 80	10.72	-15476	1206.05	36604	6433.96	5.335	Si
SLU 77	8.62	-16013	-840.86	37875	6468.73	7.693	Si
SLU 77	10.72	-15686	1209.93	37101	6449.07	5.33	Si
SLU 69	8.62	-15109	-773	35735	6402.92	8.283	Si
SLU 69	10.72	-14221	1134.95	33635	6303.45	5.554	Si
SLU 58	8.62	-14425	-777.33	34117	6329.35	8.142	Si
SLU 58	10.72	-13728	1127.18	32470	6233.36	5.53	Si
SLU 59	8.62	-14422	-757.29	34112	6329.06	8.358	Si
SLU 59	10.72	-13938	1123.08	32966	6264.47	5.578	Si
SLU 72	8.62	-14711	-751.19	34795	6362.68	8.47	Si
SLU 72	10.72	-14011	1131.07	33138	6274.84	5.548	Si
SLU 71	8.62	-14714	-771.24	34801	6362.94	8.25	Si
SLU 71	10.72	-13801	1135.17	32643	6244.4	5.501	Si
SLU 78	8.62	-16011	-820.82	37869	6468.61	7.881	Si
SLU 78	10.72	-15896	1205.83	37596	6462.19	5.359	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 79	8.62	-15619	-839.1	36941	6444.42	7.68	Si
SLU 79	10.72	-15266	1210.15	36108	6416.98	5.303	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 16	8.62	-11029	-7796.75	26085	6549.06	0.84	No, $M > M_u$
SLV 16	10.72	-10778	7455.59	25492	6439.61	0.864	No, $M > M_u$
SLV 12	8.62	-10204	-3352.96	24135	6182.42	1.844	Si
SLV 12	10.72	-10127	2733.33	23952	6147.08	2.249	Si
SLV 14	8.62	-11366	-7351.52	26882	6693.19	0.91	No, $M > M_u$
SLV 14	10.72	-10831	7450.87	25618	6463.02	0.867	No, $M > M_u$
SLV 15	8.62	-11029	-7796.75	26085	6549.06	0.84	No, $M > M_u$
SLV 15	10.72	-10778	7455.59	25492	6439.61	0.864	No, $M > M_u$
SLV 11	8.62	-10204	-3352.96	24135	6182.42	1.844	Si
SLV 11	10.72	-10127	2733.33	23952	6147.08	2.249	Si
SLV 3	8.62	-9796	6383.92	23170	5993.67	0.939	No, $M > M_u$
SLV 3	10.72	-9096	-6052.28	21514	5658.33	0.935	No, $M > M_u$
SLV 13	8.62	-11366	-7351.52	26882	6693.19	0.91	No, $M > M_u$
SLV 13	10.72	-10831	7450.87	25618	6463.02	0.867	No, $M > M_u$
SLV 2	8.62	-10133	6829.15	23967	6149.94	0.901	No, $M > M_u$
SLV 2	10.72	-9149	-6056.99	21640	5684.36	0.938	No, $M > M_u$
SLV 4	8.62	-9796	6383.92	23170	5993.67	0.939	No, $M > M_u$
SLV 4	10.72	-9096	-6052.28	21514	5658.33	0.935	No, $M > M_u$
SLV 1	8.62	-10133	6829.15	23967	6149.94	0.901	No, $M > M_u$
SLV 1	10.72	-9149	-6056.99	21640	5684.36	0.938	No, $M > M_u$

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 48	8.62	-13915	-974	-711.23		32912	1.51	9944	4204			4.32	Si
SLU 48	10.72	-12683	-974	1051.98		29997	1.51	9555	4040			4.15	Si
SLU 77	8.62	-16013	-1142	-840.86		37875	1.51	10606	4484			3.93	Si
SLU 77	10.72	-15686	-1142	1209.93		37101	1.51	10502	4440			3.89	Si
SLU 79	8.62	-15619	-1138	-839.1		36941	1.51	10481	4431			3.9	Si
SLU 79	10.72	-15266	-1138	1210.15		36108	1.51	10370	4384			3.85	Si
SLU 71	8.62	-14714	-1053	-771.24		34801	1.51	10196	4311			4.09	Si
SLU 71	10.72	-13801	-1053	1135.17		32643	1.51	9908	4189			3.98	Si
SLU 83	8.62	-15530	-1074	-793.26		36730	1.51	10453	4419			4.12	Si
SLU 83	10.72	-15418	-1074	1127.17		36466	1.51	10418	4405			4.1	Si
SLU 58	8.62	-14425	-1055	-777.33		34117	1.51	10105	4272			4.05	Si
SLU 58	10.72	-13728	-1055	1127.18		32470	1.51	9885	4179			3.96	Si
SLU 69	8.62	-15109	-1057	-773		35735	1.51	10320	4363			4.13	Si
SLU 69	10.72	-14221	-1057	1134.95		33635	1.51	10040	4245			4.02	Si
SLU 56	8.62	-14820	-1059	-779.1		35051	1.51	10229	4325			4.09	Si
SLU 56	10.72	-14148	-1059	1126.96		33463	1.51	10017	4235			4	Si
SLU 50	8.62	-13520	-970	-709.47		31978	1.51	9819	4152			4.28	Si
SLU 50	10.72	-12263	-970	1052.2		29005	1.51	9423	3984			4.11	Si
SLU 37	8.62	-13033	-982	-726.25		30827	1.51	9666	4087			4.16	Si
SLU 37	10.72	-13062	-982	1042.34		30894	1.51	9675	4091			4.16	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 14	8.62	-11366	-8179	-7351.52		125073	0.3245	16250	1477			0.18	No, $V_u < V$
SLV 14	10.72	-10831	-7538	7450.87		192202	0.2013	16250	916			0.12	No, $V_u < V$
SLV 15	8.62	-11029	-9568	-7796.75		273258	0.1441	16250	656			0.07	No, $V_u < V$
SLV 15	10.72	-10778	-8837	7455.59		202866	0.1897	16250	863			0.1	No, $V_u < V$
SLV 12	8.62	-10204	-5441	-3352.96		28488	1.2792	14031	5026			0.92	No, $V_u < V$
SLV 12	10.72	-10127	-5084	2733.33		24853	1.4553	13304	5421			1.07	Si
SLV 4	8.62	-9796	6856	6383.92		112862	0.31	16250	1410			0.21	No, $V_u < V$
SLV 4	10.72	-9096	6215	-6052.28		120821	0.2689	16250	1223			0.2	No, $V_u < V$
SLV 3	8.62	-9796	6856	6383.92		112862	0.31	16250	1410			0.21	No, $V_u < V$
SLV 3	10.72	-9096	6215	-6052.28		120821	0.2689	16250	1223			0.2	No, $V_u < V$
SLV 2	8.62	-10133	8246	6829.15		148812	0.2432	16250	1107			0.13	No, $V_u < V$
SLV 2	10.72	-9149	7513	-6056.99		117136	0.279	16250	1269			0.17	No, $V_u < V$
SLV 11	8.62	-10204	-5441	-3352.96		28488	1.2792	14031	5026			0.92	No, $V_u < V$
SLV 11	10.72	-10127	-5084	2733.33		24853	1.4553	13304	5421			1.07	Si
SLV 16	8.62	-11029	-9568	-7796.75		273258	0.1441	16250	656			0.07	No, $V_u < V$
SLV 16	10.72	-10778	-8837	7455.59		202866	0.1897	16250	863			0.1	No, $V_u < V$
SLV 13	8.62	-11366	-8179	-7351.52		125073	0.3245	16250	1477			0.18	No, $V_u < V$
SLV 13	10.72	-10831	-7538	7450.87		192202	0.2013	16250	916			0.12	No, $V_u < V$
SLV 1	8.62	-10133	8246	6829.15		148812	0.2432	16250	1107			0.13	No, $V_u < V$
SLV 1	10.72	-9149	7513	-6056.99		117136	0.279	16250	1269			0.17	No, $V_u < V$

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 4	143750	0.46	22321	-9437	191.88	1079.88	5.63	Si
SLV 3	143750	0.46	22321	-9437	191.88	1079.88	5.63	Si
SLV 1	143750	0.46	22378	-9461	191.88	1082.01	5.64	Si
SLV 2	143750	0.46	22378	-9461	191.88	1082.01	5.64	Si
SLV 8	143750	0.46	23637	-9994	191.88	1128.48	5.88	Si
SLV 7	143750	0.46	23637	-9994	191.88	1128.48	5.88	Si
SLV 5	143750	0.46	23827	-10074	191.88	1135.33	5.92	Si
SLV 6	143750	0.46	23827	-10074	191.88	1135.33	5.92	Si
SLV 12	143750	0.46	24822	-10495	191.88	1170.79	6.1	Si
SLV 11	143750	0.46	24822	-10495	191.88	1170.79	6.1	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	σ_0	M*	e*	a0*	aLim	Verifica
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Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 8	-6876	-9834	-215	0.02	913.7	0.936	0.30738	8.73249	No
SLV 7	-6876	-9834	-215	0.02	913.7	0.936	0.30738	8.73249	No
SLV 5	-7078	-10958	216	0.02	934	0.937	0.31314	8.73249	No
SLV 6	-7078	-10958	216	0.02	934	0.937	0.31314	8.73249	No
SLV 11	-7471	-10204	-216	0.021	973.9	0.939	0.32553	8.73249	No
SLV 12	-7471	-10204	-216	0.021	973.9	0.939	0.32553	8.73249	No
SLV 9	-7673	-11327	215	0.022	994.2	0.94	0.33292	8.73249	No
SLV 10	-7673	-11327	215	0.022	994.2	0.94	0.33292	8.73249	No
SLV 16	-8236	-11029	-66	0.038	1051.3	0.943	0.58767	10.16227	No
SLV 15	-8236	-11029	-66	0.038	1051.3	0.943	0.58767	10.16227	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.303	SLV 79	Si
V_SLV	3.853	SLV 79	Si
PF_SLV	0.84	SLV 15	No
V_SLV	0.069	SLV 15	No
PFFP_SLV	5.628	SLV 3	Si
R_SLV	0.035	SLV 7	No

Maschio 201

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.sx	a.s.dx
-0.123	1.046	-4.168	1.046	L5	L6	4.045	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	$\tau 0$	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	$\alpha 0$	Mu	c.s.	Verifica
SLU 77	8.62	-33872	2152.53	29907	43355.05	20.141	Si
SLU 77	10.72	-30555	5898.07	26978	41331.08	7.008	Si
SLU 74	8.62	-33097	2181.85	29222	42925.42	19.674	Si
SLU 74	10.72	-29806	5660.83	26317	40807.57	7.209	Si
SLU 32	8.62	-27301	1877.76	24104	38876.7	20.704	Si
SLU 32	10.72	-25344	5003.1	22377	37177.44	7.431	Si
SLU 41	8.62	-27248	1777.26	24058	38832.8	21.85	Si
SLU 41	10.72	-25594	4974.22	22598	37404.07	7.52	Si
SLU 78	8.62	-34050	2242.75	30063	43449.71	19.373	Si
SLU 78	10.72	-30578	5681.19	26998	41346.55	7.278	Si
SLU 79	8.62	-33095	1957.97	29221	42924.4	21.923	Si
SLU 79	10.72	-29665	5577.68	26192	40706.04	7.298	Si
SLU 81	8.62	-32269	2110.67	28491	42437.26	20.106	Si
SLU 81	10.72	-29308	5394.72	25877	40445.38	7.497	Si
SLU 75	8.62	-33275	2272.08	29379	43026.11	18.937	Si
SLU 75	10.72	-29829	5443.95	26337	40823.78	7.499	Si
SLU 83	8.62	-33044	2081.34	29175	42895.02	20.609	Si
SLU 83	10.72	-30057	5631.96	26538	40985.26	7.277	Si
SLU 35	8.62	-28076	1848.44	24789	39503.27	21.371	Si
SLU 35	10.72	-26093	5240.33	23038	37847.42	7.222	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	$\alpha 0$	Mu	c.s.	Verifica
SLV 4	8.62	-18044	12777.76	15932	31736.21	2.484	Si
SLV 4	10.72	-9920	-7240.68	8758	18624.53	2.572	Si
SLV 15	8.62	-27086	-9416.94	23915	44059.74	4.679	Si
SLV 15	10.72	-28521	13720.6	25182	45795.74	3.338	Si
SLV 2	8.62	-18841	12208.86	16635	32917.54	2.696	Si
SLV 2	10.72	-10975	-6849.92	9691	20437.45	2.984	Si
SLV 14	8.62	-27883	-9985.84	24618	45030.61	4.509	Si
SLV 14	10.72	-29577	14111.36	26114	47034.63	3.333	Si
SLV 16	8.62	-27086	-9416.94	23915	44059.74	4.679	Si
SLV 16	10.72	-28521	13720.6	25182	45795.74	3.338	Si
SLV 13	8.62	-27883	-9985.84	24618	45030.61	4.509	Si
SLV 13	10.72	-29577	14111.36	26114	47034.63	3.333	Si
SLV 10	8.62	-25647	-2881.41	22644	42258.04	14.666	Si
SLV 10	10.72	-24298	7230.8	21453	40514.63	5.603	Si
SLV 3	8.62	-18044	12777.76	15932	31736.21	2.484	Si
SLV 3	10.72	-9920	-7240.68	8758	18624.53	2.572	Si
SLV 9	8.62	-25647	-2881.41	22644	42258.04	14.666	Si
SLV 9	10.72	-24298	7230.8	21453	40514.63	5.603	Si
SLV 1	8.62	-18841	12208.86	16635	32917.54	2.696	Si
SLV 1	10.72	-10975	-6849.92	9691	20437.45	2.984	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	$\alpha 0$	αN	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 81	8.62	-32269	-4151	2110.67		28491	4.045	9354	10595			2.55	Si
SLU 81	10.72	-29308	-4152	5394.72		25877	4.045	9006	10200			2.46	Si
SLU 83	8.62	-33044	-4253	2081.34		29175	4.045	9446	10698			2.52	Si
SLU 83	10.72	-30057	-4254	5631.96		26538	4.045	9094	10300			2.42	Si
SLU 37	8.62	-27299	-3784	1653.88		24103	4.045	8769	9932			2.62	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 37	10.72	-25203	-3785	4919.94		22252	4.045	8523	9653			2.55	Si
SLU 32	8.62	-27301	-3851	1877.76		24104	4.045	8769	9932			2.58	Si
SLU 32	10.72	-25344	-3852	5003.1		22377	4.045	8539	9671			2.51	Si
SLU 35	8.62	-28076	-3953	1848.44		24789	4.045	8861	10036			2.54	Si
SLU 35	10.72	-26093	-3954	5240.33		23038	4.045	8627	9771			2.47	Si
SLU 41	8.62	-27248	-4177	1777.26		24058	4.045	8763	9925			2.38	Si
SLU 41	10.72	-25594	-4178	4974.22		22598	4.045	8569	9705			2.32	Si
SLU 42	8.62	-27425	-3864	1867.48		24214	4.045	8784	9949			2.57	Si
SLU 42	10.72	-25617	-3906	4757.34		22618	4.045	8571	9708			2.49	Si
SLU 77	8.62	-33872	-4028	2152.53		29907	4.045	9543	10809			2.68	Si
SLU 77	10.72	-30555	-4029	5898.07		26978	4.045	9153	10366			2.57	Si
SLU 39	8.62	-26473	-4076	1806.58		23373	4.045	8672	9822			2.41	Si
SLU 39	10.72	-24846	-4077	4736.98		21937	4.045	8480	9605			2.36	Si
SLU 40	8.62	-26650	-3762	1896.81		23530	4.045	8693	9846			2.62	Si
SLU 40	10.72	-24868	-3804	4520.1		21957	4.045	8483	9608			2.53	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 15	8.62	-27086	-17322	-9416.94		23915	4.045	13116	14856			0.86	No, Vu<V
SLV 15	10.72	-28521	-15249	13720.6		25182	4.045	13370	15143			0.99	No, Vu<V
SLV 10	8.62	-25647	-8583	-2881.41		22644	4.045	12862	14568			1.7	Si
SLV 10	10.72	-24298	-7521	7230.8		21453	4.045	12624	14298			1.9	Si
SLV 3	8.62	-18044	14342	12777.76		16343	3.9431	11602	12809			0.89	No, Vu<V
SLV 3	10.72	-9920	12025	-7240.68		9136	3.8777	10161	11032			0.92	No, Vu<V
SLV 2	8.62	-18841	13260	12208.86		16635	4.045	11660	13206			1	No, Vu<V
SLV 2	10.72	-10975	11186	-6849.92		9691	4.045	10271	11633			1.04	Si
SLV 14	8.62	-27883	-18404	-9985.84		24618	4.045	13257	15015			0.82	No, Vu<V
SLV 14	10.72	-29577	-16088	14111.36		26114	4.045	13556	15354			0.95	No, Vu<V
SLV 4	8.62	-18044	14342	12777.76		16343	3.9431	11602	12809			0.89	No, Vu<V
SLV 4	10.72	-9920	12025	-7240.68		9136	3.8777	10161	11032			0.92	No, Vu<V
SLV 13	8.62	-27883	-18404	-9985.84		24618	4.045	13257	15015			0.82	No, Vu<V
SLV 13	10.72	-29577	-16088	14111.36		26114	4.045	13556	15354			0.95	No, Vu<V
SLV 9	8.62	-25647	-8583	-2881.41		22644	4.045	12862	14568			1.7	Si
SLV 9	10.72	-24298	-7521	7230.8		21453	4.045	12624	14298			1.9	Si
SLV 1	8.62	-18841	13260	12208.86		16635	4.045	11660	13206			1	No, Vu<V
SLV 1	10.72	-10975	11186	-6849.92		9691	4.045	10271	11633			1.04	Si
SLV 16	8.62	-27086	-17322	-9416.94		23915	4.045	13116	14856			0.86	No, Vu<V
SLV 16	10.72	-28521	-15249	13720.6		25182	4.045	13370	15143			0.99	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 3	143750	0.46	10245	-11604	514.02	1488.33	2.9	Si
SLV 4	143750	0.46	10245	-11604	514.02	1488.33	2.9	Si
SLV 1	143750	0.46	10920	-12368	514.02	1576.83	3.07	Si
SLV 2	143750	0.46	10920	-12368	514.02	1576.83	3.07	Si
SLV 8	143750	0.46	14665	-16610	514.02	2046.25	3.98	Si
SLV 7	143750	0.46	14665	-16610	514.02	2046.25	3.98	Si
SLV 6	143750	0.46	16915	-19158	514.02	2310.84	4.5	Si
SLV 5	143750	0.46	16915	-19158	514.02	2310.84	4.5	Si
SLV 11	143750	0.46	19128	-21665	514.02	2558.24	4.98	Si
SLV 12	143750	0.46	19128	-21665	514.02	2558.24	4.98	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 8	-13468	-20280	-619	0.012	1948	0.923	0.18168	8.73249	No
SLV 7	-13468	-20280	-619	0.012	1948	0.923	0.18168	8.73249	No
SLV 11	-15073	-22993	-597	0.015	2109.5	0.928	0.23692	8.73249	No
SLV 12	-15073	-22993	-597	0.015	2109.5	0.928	0.23692	8.73249	No
SLV 6	-15574	-22934	599	0.016	2160	0.929	0.24543	8.73249	No
SLV 5	-15574	-22934	599	0.016	2160	0.929	0.24543	8.73249	No
SLV 9	-17178	-25647	621	0.016	2322	0.933	0.25628	8.73249	No
SLV 10	-17178	-25647	621	0.016	2322	0.933	0.25628	8.73249	No
SLV 4	-12333	-18044	-219	0.035	1834.1	0.919	0.54775	10.16227	No
SLV 3	-12333	-18044	-219	0.035	1834.1	0.919	0.54775	10.16227	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.008	SLU 77	Si
V_SLU	2.323	SLU 41	Si
PF_SLV	2.484	SLV 3	Si
V_SLV	0.816	SLV 13	No
PFFP_SLV	2.895	SLV 3	Si
R_SLV	0.021	SLV 7	No

Maschio 202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.013	-4.784	-11.013	-3.314	L5	Z medio 985 cm	1.47	0.28	1.23	1.23	1.23			



Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 76	8.62	-8965	-644.79	21781	4827.36	7.487	Si
SLU 76	9.85	-8152	15.45	19806	4535.02	293.622	Si
SLU 34	8.62	-7268	-550.19	17658	4184.01	7.605	Si
SLU 34	9.85	-6627	14.9	16100	3907.91	262.25	Si
SLU 84	8.62	-9087	-650.49	22077	4868.74	7.485	Si
SLU 84	9.85	-8267	33.2	20084	4577.86	137.897	Si
SLU 73	8.62	-8761	-636.03	21286	4756.77	7.479	Si
SLU 73	9.85	-7930	11.23	19267	4450.12	396.267	Si
SLU 82	8.62	-8883	-641.73	21582	4799.24	7.479	Si
SLU 82	9.85	-8045	28.98	19545	4494.08	155.061	Si
SLU 40	8.62	-7186	-547.12	17459	4149.81	7.585	Si
SLU 40	9.85	-6519	28.44	15838	3859.76	135.72	Si
SLU 75	8.62	-8955	-625.03	21758	4824.13	7.718	Si
SLU 75	9.85	-8152	29.41	19806	4534.97	154.209	Si
SLU 42	8.62	-7390	-555.88	17954	4234.47	7.618	Si
SLU 42	9.85	-6741	32.65	16377	3958.4	121.222	Si
SLU 31	8.62	-7064	-541.42	17163	4098.26	7.569	Si
SLU 31	9.85	-6405	10.69	15560	3808.17	356.353	Si
SLU 80	8.62	-9116	-634.48	22149	4878.68	7.689	Si
SLU 80	9.85	-8327	27.92	20230	4600.2	164.736	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 3	8.62	-4074	-1478.96	9899	2752.1	1.861	Si
SLV 3	9.85	-3785	-269.88	9196	2572.56	9.532	Si
SLV 11	8.62	-3471	721.3	8432	2374.83	3.292	Si
SLV 11	9.85	-3448	23.98	8377	2360.41	98.449	Si
SLV 15	8.62	-6669	1102.26	16202	4251.53	3.857	Si
SLV 15	9.85	-6113	255.3	14851	3946.79	15.459	Si
SLV 12	8.62	-3471	721.3	8432	2374.83	3.292	Si
SLV 12	9.85	-3448	23.98	8377	2360.41	98.449	Si
SLV 4	8.62	-4074	-1478.96	9899	2752.1	1.861	Si
SLV 4	9.85	-3785	-269.88	9196	2572.56	9.532	Si
SLV 2	8.62	-6037	-1926.79	14668	3904.8	2.027	Si
SLV 2	9.85	-5371	-229.16	13049	3525.98	15.386	Si
SLV 16	8.62	-6669	1102.26	16202	4251.53	3.857	Si
SLV 16	9.85	-6113	255.3	14851	3946.79	15.459	Si
SLV 1	8.62	-6037	-1926.79	14668	3904.8	2.027	Si
SLV 1	9.85	-5371	-229.16	13049	3525.98	15.386	Si
SLV 6	8.62	-9236	-1545.82	22438	5541.56	3.585	Si
SLV 6	9.85	-8036	2.16	19523	4962.57	1000	Si
SLV 5	8.62	-9236	-1545.82	22438	5541.56	3.585	Si
SLV 5	9.85	-8036	2.16	19523	4962.57	1000	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 73	8.62	-8761	-341	-636.03		21286	1.47	8394	3455			10.12	Si
SLU 73	9.85	-7930	121	11.23		19267	1.47	8124	3344			27.64	Si
SLU 76	8.62	-8965	-352	-644.79		21781	1.47	8460	3482			9.89	Si
SLU 76	9.85	-8152	124	15.45		19806	1.47	8196	3374			27.26	Si
SLU 36	8.62	-7462	-318	-539.19		18130	1.47	7973	3282			10.33	Si
SLU 36	9.85	-6848	121	33.08		16639	1.47	7774	3200			26.34	Si
SLU 78	8.62	-9159	-349	-633.79		22253	1.47	8523	3508			10.05	Si
SLU 78	9.85	-8374	141	33.62		20345	1.47	8268	3403			24.13	Si
SLU 34	8.62	-7268	-321	-550.19		17658	1.47	7910	3256			10.15	Si
SLU 34	9.85	-6627	104	14.9		16100	1.47	7702	3170			30.42	Si
SLU 82	8.62	-8883	-343	-641.73		21582	1.47	8433	3471			10.11	Si
SLU 82	9.85	-8045	140	28.98		19545	1.47	8161	3359			24.08	Si
SLU 75	8.62	-8955	-338	-625.03		21758	1.47	8457	3481			10.29	Si
SLU 75	9.85	-8152	138	29.41		19806	1.47	8196	3374			24.41	Si
SLU 80	8.62	-9116	-344	-634.48		22149	1.47	8509	3502			10.19	Si
SLU 80	9.85	-8327	140	27.92		20230	1.47	8253	3397			24.25	Si
SLU 42	8.62	-7390	-323	-555.88		17954	1.47	7949	3272			10.14	Si
SLU 42	9.85	-6741	123	32.65		16377	1.47	7739	3185			25.95	Si
SLU 84	8.62	-9087	-354	-650.49		22077	1.47	8499	3498			9.88	Si
SLU 84	9.85	-8267	142	33.2		20084	1.47	8233	3389			23.81	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, γM = 2

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 12	8.62	-3471	3453	721.3		8432	1.47	10020	4124			1.19	Si
SLV 12	9.85	-3448	3587	23.98		8377	1.47	10009	4120			1.15	Si
SLV 15	8.62	-6669	3464	1102.26		16202	1.47	11574	4764			1.38	Si
SLV 15	9.85	-6113	3101	255.3		14851	1.47	11304	4653			1.5	Si
SLV 5	8.62	-9236	-3834	-1545.82		22438	1.47	12821	5277			1.38	Si
SLV 5	9.85	-8036	-3372	2.16		19523	1.47	12238	5037			1.49	Si
SLV 3	8.62	-4074	-2165	-1478.96		13039	1.116	10941	3419			1.58	Si
SLV 3	9.85	-3785	-1184	-269.88		9196	1.47	10172	4187			3.54	Si
SLV 1	8.62	-6037	-3845	-1926.79		17283	1.2476	11790	4118			1.07	Si
SLV 1	9.85	-5371	-2886	-229.16		13049	1.47	10943	4504			1.56	Si
SLV 6	8.62	-9236	-3834	-1545.82		22438	1.47	12821	5277			1.38	Si
SLV 6	9.85	-8036	-3372	2.16		19523	1.47	12238	5037			1.49	Si
SLV 4	8.62	-4074	-2165	-1478.96		13039	1.116	10941	3419			1.58	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 4	9.85	-3785	-1184	-269.88		9196	1.47	10172	4187			3.54	Si
SLV 2	8.62	-6037	-3845	-1926.79		17283	1.2476	11790	4118			1.07	Si
SLV 2	9.85	-5371	-2886	-229.16		13049	1.47	10943	4504			1.56	Si
SLV 11	8.62	-3471	3453	721.3		8432	1.47	10020	4124			1.19	Si
SLV 11	9.85	-3448	3587	23.98		8377	1.47	10009	4120			1.15	Si
SLV 16	8.62	-6669	3464	1102.26		16202	1.47	11574	4764			1.38	Si
SLV 16	9.85	-6113	3101	255.3		14851	1.47	11304	4653			1.5	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 9.235 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 8	143750	0.43	7608	-3132	21.24	411.13	19.36	Si
SLV 7	143750	0.43	7608	-3132	21.24	411.13	19.36	Si
SLV 4	143750	0.43	8579	-3531	21.24	459.66	21.64	Si
SLV 3	143750	0.43	8579	-3531	21.24	459.66	21.64	Si
SLV 11	143750	0.43	10669	-4391	21.24	561.11	26.42	Si
SLV 12	143750	0.43	10669	-4391	21.24	561.11	26.42	Si
SLV 1	143750	0.43	12472	-5134	21.24	645.34	30.38	Si
SLV 2	143750	0.43	12472	-5134	21.24	645.34	30.38	Si
SLV 15	143750	0.43	18781	-7730	21.24	915.91	43.12	Si
SLV 16	143750	0.43	18781	-7730	21.24	915.91	43.12	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzaria = 9.235 Wa = 0.05 Ta = 0.009

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 8	-2749	-2692	-278	0.043	351.7	0.943	0.66804	3.98071	No
SLV 7	-2749	-2692	-278	0.043	351.7	0.943	0.66804	3.98071	No
SLV 11	-3448	-3471	-268	0.058	422.5	0.951	0.89369	3.98071	No
SLV 12	-3448	-3471	-268	0.058	422.5	0.951	0.89369	3.98071	No
SLV 5	-8036	-9236	258	0.09	889.4	0.975	1.33443	3.98071	No
SLV 6	-8036	-9236	258	0.09	889.4	0.975	1.33443	3.98071	No
SLV 10	-8734	-10014	268	0.09	960.6	0.977	1.34355	3.98071	No
SLV 9	-8734	-10014	268	0.09	960.6	0.977	1.34355	3.98071	No
SLV 4	-3785	-4074	-102	0.102	456.8	0.954	1.55498	4.04124	No
SLV 3	-3785	-4074	-102	0.102	456.8	0.954	1.55498	4.04124	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.479	SLU 82	Si
V_SLU	9.878	SLU 84	Si
PF_SLV	1.861	SLV 3	Si
V_SLV	1.071	SLV 1	Si
PFFP_SLV	19.357	SLV 7	Si
R_SLV	0.168	SLV 7	No

Maschio 203

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.013	-4.784	-11.013	-3.314	Z medio 985 cm	16	1.47	0.28	2.321	2.321	2.32			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 60	9.85	-7348	-89.93	17851	4216.99	46.893	Si
SLU 60	12.17	-4416	-433.81	10728	2818.04	6.496	Si
SLU 82	9.85	-7778	-107.56	18897	4390.54	40.82	Si
SLU 82	12.17	-4789	-472.65	11635	3017.07	6.383	Si
SLU 40	9.85	-6270	-93.76	15233	3746.53	39.959	Si
SLU 40	12.17	-3929	-391.85	9546	2549.59	6.507	Si
SLU 81	9.85	-7705	-90.79	18719	4361.67	48.041	Si
SLU 81	12.17	-4724	-466.98	11478	2983.01	6.388	Si
SLU 73	9.85	-7705	-109.99	18720	4361.78	39.655	Si
SLU 73	12.17	-4731	-462.69	11493	2986.36	6.454	Si
SLU 84	9.85	-7999	-103.63	19433	4476.43	43.197	Si
SLU 84	12.17	-5003	-487.94	12154	3128.37	6.411	Si
SLU 39	9.85	-6197	-76.99	15055	3712.84	48.224	Si
SLU 39	12.17	-3865	-386.18	9389	2513.09	6.508	Si
SLU 83	9.85	-7926	-86.86	19255	4448.27	51.212	Si
SLU 83	12.17	-4938	-482.27	11997	3094.92	6.417	Si
SLU 61	9.85	-7421	-106.7	18029	4247	39.805	Si
SLU 61	12.17	-4480	-439.47	10885	2852.97	6.492	Si
SLU 76	9.85	-7926	-106.06	19256	4448.37	41.941	Si
SLU 76	12.17	-4944	-477.99	12013	3098.21	6.482	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 2	9.85	-5699	-868.74	13846	3714.2	4.275	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 2	12.17	-3838	-17.42	9324	2605.5	149.55	Si
SLV 11	9.85	-3133	678.99	7612	2159.37	3.18	Si
SLV 11	12.17	-2939	-783.26	7141	2034.16	2.597	Si
SLV 12	9.85	-3133	678.99	7612	2159.37	3.18	Si
SLV 12	12.17	-2939	-783.26	7141	2034.16	2.597	Si
SLV 8	9.85	-2695	285.99	6548	1874.74	6.555	Si
SLV 8	12.17	-3159	-670.36	7676	2176.34	3.247	Si
SLV 16	9.85	-5537	762.62	13452	3621.55	4.749	Si
SLV 16	12.17	-2909	-634.32	7069	2014.72	3.176	Si
SLV 7	9.85	-2695	285.99	6548	1874.74	6.555	Si
SLV 7	12.17	-3159	-670.36	7676	2176.34	3.247	Si
SLV 15	9.85	-5537	762.62	13452	3621.55	4.749	Si
SLV 15	12.17	-2909	-634.32	7069	2014.72	3.176	Si
SLV 1	9.85	-5699	-868.74	13846	3714.2	4.275	Si
SLV 1	12.17	-3838	-17.42	9324	2605.5	149.55	Si
SLV 4	9.85	-4077	-547.41	9905	2753.56	5.03	Si
SLV 4	12.17	-3643	-257.99	8851	2483.81	9.628	Si
SLV 3	9.85	-4077	-547.41	9905	2753.56	5.03	Si
SLV 3	12.17	-3643	-257.99	8851	2483.81	9.628	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 80	9.85	-8098	190	-90.95		19674	1.47	8179	3366			17.74	Si
SLU 80	12.17	-5115	706	-489.51		12427	1.47	7213	2969			4.2	Si
SLU 75	9.85	-7925	187	-89.14		19253	1.47	8123	3343			17.9	Si
SLU 75	12.17	-4952	688	-471.42		12032	1.47	7160	2947			4.28	Si
SLU 78	9.85	-8145	191	-85.21		19790	1.47	8194	3373			17.62	Si
SLU 78	12.17	-5166	709	-486.72		12552	1.47	7229	2976			4.19	Si
SLU 74	9.85	-7852	211	-72.38		19076	1.47	8099	3334			15.81	Si
SLU 74	12.17	-4888	699	-465.76		11875	1.47	7139	2938			4.2	Si
SLU 79	9.85	-8025	214	-74.18		19497	1.47	8155	3357			15.7	Si
SLU 79	12.17	-5050	718	-483.84		12270	1.47	7192	2960			4.12	Si
SLU 77	9.85	-8072	216	-68.45		19612	1.47	8171	3363			15.6	Si
SLU 77	12.17	-5102	721	-481.05		12395	1.47	7208	2967			4.12	Si
SLU 84	9.85	-7999	192	-103.63		19433	1.47	8147	3353			17.46	Si
SLU 84	12.17	-5003	718	-487.94		12154	1.47	7176	2954			4.11	Si
SLU 82	9.85	-7778	187	-107.56		18897	1.47	8075	3324			17.74	Si
SLU 82	12.17	-4789	697	-472.65		11635	1.47	7107	2925			4.2	Si
SLU 81	9.85	-7705	211	-90.79		18719	1.47	8051	3314			15.67	Si
SLU 81	12.17	-4724	708	-466.98		11478	1.47	7086	2917			4.12	Si
SLU 83	9.85	-7926	216	-86.86		19255	1.47	8123	3343			15.47	Si
SLU 83	12.17	-4938	730	-482.27		11997	1.47	7155	2945			4.04	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 1	9.85	-5699	-2780	-868.74		13846	1.47	11103	4570			1.64	Si
SLV 1	12.17	-3838	-1507	-17.42		9324	1.47	10198	4198			2.78	Si
SLV 6	9.85	-8103	-3228	-785.11		19686	1.47	12271	5051			1.56	Si
SLV 6	12.17	-3808	-1597	131.52		9251	1.47	10184	4192			2.62	Si
SLV 5	9.85	-8103	-3228	-785.11		19686	1.47	12271	5051			1.56	Si
SLV 5	12.17	-3808	-1597	131.52		9251	1.47	10184	4192			2.62	Si
SLV 11	9.85	-3133	3511	678.99		7612	1.47	9856	4057			1.16	Si
SLV 11	12.17	-2939	2524	-783.26		7469	1.4056	9827	3868			1.53	Si
SLV 7	9.85	-2695	2252	285.99		6548	1.47	9643	3969			1.76	Si
SLV 7	12.17	-3159	1632	-670.36		7676	1.47	9869	4062			2.49	Si
SLV 15	9.85	-5537	3063	762.62		13452	1.47	11024	4537			1.48	Si
SLV 15	12.17	-2909	2434	-634.32		7069	1.47	9747	4012			1.65	Si
SLV 8	9.85	-2695	2252	285.99		6548	1.47	9643	3969			1.76	Si
SLV 8	12.17	-3159	1632	-670.36		7676	1.47	9869	4062			2.49	Si
SLV 2	9.85	-5699	-2780	-868.74		13846	1.47	11103	4570			1.64	Si
SLV 2	12.17	-3838	-1507	-17.42		9324	1.47	10198	4198			2.78	Si
SLV 12	9.85	-3133	3511	678.99		7612	1.47	9856	4057			1.16	Si
SLV 12	12.17	-2939	2524	-783.26		7469	1.4056	9827	3868			1.53	Si
SLV 16	9.85	-5537	3063	762.62		13452	1.47	11024	4537			1.48	Si
SLV 16	12.17	-2909	2434	-634.32		7069	1.47	9747	4012			1.65	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 11.01 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 11	143750	0.47	6572	-2705	82.02	358.32	4.37	Si
SLV 12	143750	0.47	6572	-2705	82.02	358.32	4.37	Si
SLV 8	143750	0.47	6917	-2847	82.02	376.03	4.58	Si
SLV 7	143750	0.47	6917	-2847	82.02	376.03	4.58	Si
SLV 15	143750	0.47	9572	-3940	82.02	508.39	6.2	Si
SLV 16	143750	0.47	9572	-3940	82.02	508.39	6.2	Si
SLV 4	143750	0.47	10724	-4414	82.02	563.73	6.87	Si
SLV 3	143750	0.47	10724	-4414	82.02	563.73	6.87	Si
SLV 13	143750	0.47	12490	-5141	82.02	646.15	7.88	Si
SLV 14	143750	0.47	12490	-5141	82.02	646.15	7.88	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 11.01 Wa = 0.05 Ta = 0.0321

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 2	-3838	-5699	35	0.064	527.1	0.93	0.99751	5.73437	No
SLV 1	-3838	-5699	35	0.064	527.1	0.93	0.99751	5.73437	No
SLV 16	-2909	-5537	-36	0.064	433.7	0.919	1.01906	5.73437	No
SLV 15	-2909	-5537	-36	0.064	433.7	0.919	1.01906	5.73437	No
SLV 6	-3808	-8103	35	0.064	524	0.93	0.99792	5.40759	No
SLV 5	-3808	-8103	35	0.064	524	0.93	0.99792	5.40759	No



Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 3	-3643	-4077	19	0.068	507.4	0.928	1.05986	5.73437	No
SLV 4	-3643	-4077	19	0.068	507.4	0.928	1.05986	5.73437	No
SLV 13	-3104	-7159	-20	0.068	453.2	0.922	1.07895	5.73437	No
SLV 14	-3104	-7159	-20	0.068	453.2	0.922	1.07895	5.73437	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.383	SLU 82	Si
V_SLU	4.035	SLU 83	Si
PF_SLV	2.597	SLV 11	Si
V_SLV	1.155	SLV 11	Si
PFFP_SLV	4.369	SLV 11	Si
R_SLV	0.174	SLV 1	No

Maschio 204

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.013	-3.314	-11.013	-0.354	L5	Z medio 1093 cm	2.96	0.28	2.308	1.065	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLU 75	8.62	-23052	1949.17	27814	22467.79	11.527	Si
SLU 75	9.69	-21488	2867.04	25927	21680.34	7.562	Si
SLU 74	8.62	-23040	1964.52	27799	22462.1	11.434	Si
SLU 74	9.69	-21480	2890.94	25917	21675.69	7.498	Si
SLU 83	8.62	-23395	1910.48	28228	22626.37	11.843	Si
SLU 83	9.69	-21772	2888.72	26269	21831.11	7.557	Si
SLU 35	8.62	-19791	1839.78	23879	20704.31	11.254	Si
SLU 35	9.69	-18536	2650.37	22365	19901.27	7.509	Si
SLU 79	8.62	-23409	1990.08	28244	22632.33	11.373	Si
SLU 79	9.69	-21864	2928.98	26381	21879.46	7.47	Si
SLU 36	8.62	-19803	1824.44	23894	20711.73	11.352	Si
SLU 36	9.69	-18545	2626.47	22375	19907.04	7.579	Si
SLU 80	8.62	-23421	1974.74	28259	22637.83	11.464	Si
SLU 80	9.69	-21873	2905.07	26391	21883.97	7.533	Si
SLU 77	8.62	-23695	2065.99	28589	22760.28	11.017	Si
SLU 77	9.69	-22161	3019.76	26739	22032.25	7.296	Si
SLU 78	8.62	-23707	2050.65	28604	22765.63	11.102	Si
SLU 78	9.69	-22170	2995.86	26749	22036.65	7.356	Si
SLU 69	8.62	-22198	2014.94	26783	22050.83	10.944	Si
SLU 69	9.69	-20787	2813.12	25081	21292.18	7.569	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma M = 2$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLV 8	8.62	-11072	4172.13	13359	14594.45	3.498	Si
SLV 8	9.69	-10398	3162.17	12545	13808.33	4.367	Si
SLV 15	8.62	-19682	1219.98	23747	23467.76	19.236	Si
SLV 15	9.69	-17856	1801.1	21544	21767.02	12.085	Si
SLV 3	8.62	-10082	2912.49	12164	13435.33	4.613	Si
SLV 3	9.69	-9768	2634.11	11786	13062.25	4.959	Si
SLV 7	8.62	-11072	4172.13	13359	14594.45	3.498	Si
SLV 7	9.69	-10398	3162.17	12545	13808.33	4.367	Si
SLV 11	8.62	-13952	3664.38	16834	17803.7	4.859	Si
SLV 11	9.69	-12824	2912.27	15473	16575.87	5.692	Si
SLV 1	8.62	-12113	1325.04	14615	15783.02	11.911	Si
SLV 1	9.69	-11655	1931.59	14062	15263.98	7.902	Si
SLV 12	8.62	-13952	3664.38	16834	17803.7	4.859	Si
SLV 12	9.69	-12824	2912.27	15473	16575.87	5.692	Si
SLV 4	8.62	-10082	2912.49	12164	13435.33	4.613	Si
SLV 4	9.69	-9768	2634.11	11786	13062.25	4.959	Si
SLV 2	8.62	-12113	1325.04	14615	15783.02	11.911	Si
SLV 2	9.69	-11655	1931.59	14062	15263.98	7.902	Si
SLV 16	8.62	-19682	1219.98	23747	23467.76	19.236	Si
SLV 16	9.69	-17856	1801.1	21544	21767.02	12.085	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	V par	M	$\sigma 0$	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 70	8.62	-22210	203	1999.6		26798	2.96	9129	7566			37.34	Si
SLU 70	9.69	-20795	92	2789.22		25091	2.96	8901	7377			80.08	Si
SLU 65	8.62	-20623	218	1710.51		24883	2.96	8873	7354			33.75	Si
SLU 65	9.69	-19142	107	2424.86		23096	2.96	8635	7157			66.96	Si
SLU 23	8.62	-16719	231	1484.3		20173	2.96	8245	6834			29.61	Si
SLU 23	9.69	-15517	126	2055.47		18722	2.96	8052	6673			53.1	Si
SLU 30	8.62	-18020	209	1697.48		21743	2.96	8455	7007			33.49	Si
SLU 30	9.69	-16874	104	2329.04		20359	2.96	8270	6854			65.76	Si
SLU 25	8.62	-17652	215	1671.91		21298	2.96	8395	6958			32.39	Si
SLU 25	9.69	-16489	116	2291.01		19895	2.96	8208	6803			58.63	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 26	8.62	-17374	232	1585.77		20963	2.96	8351	6921			29.89	Si
SLU 26	9.69	-16198	121	2184.29		19544	2.96	8161	6764			56.11	Si
SLU 67	8.62	-21555	202	1898.13		26008	2.96	9023	7478			37.04	Si
SLU 67	9.69	-20114	97	2660.4		24269	2.96	8791	7286			74.93	Si
SLU 68	8.62	-21277	219	1811.99		25672	2.96	8979	7441			34.04	Si
SLU 68	9.69	-19823	102	2553.68		23918	2.96	8745	7248			71.22	Si
SLU 28	8.62	-18306	216	1773.39		22088	2.96	8501	7045			32.68	Si
SLU 28	9.69	-17170	111	2419.83		20717	2.96	8318	6894			62.15	Si
SLU 72	8.62	-21924	196	1923.69		26453	2.96	9083	7528			38.35	Si
SLU 72	9.69	-20499	85	2698.43		24733	2.96	8853	7338			85.88	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 6	8.62	-17843	-8345	-1119.36		21529	2.96	12639	10475			1.26	Si
SLV 6	9.69	-16687	-8530	820.43		20134	2.96	12360	10244			1.2	Si
SLV 7	8.62	-11072	9202	4172.13		13359	2.96	11005	9121			0.99	No, Vu<V
SLV 7	9.69	-10398	9328	3162.17		12545	2.96	10842	8986			0.96	No, Vu<V
SLV 9	8.62	-20723	-9039	-1627.12		25004	2.96	13334	11051			1.22	Si
SLV 9	9.69	-19113	-9246	570.52		23061	2.96	12946	10729			1.16	Si
SLV 12	8.62	-13952	8508	3664.38		16834	2.96	11700	9697			1.14	Si
SLV 12	9.69	-12824	8612	2912.27		15473	2.96	11428	9471			1.1	Si
SLV 11	8.62	-13952	8508	3664.38		16834	2.96	11700	9697			1.14	Si
SLV 11	9.69	-12824	8612	2912.27		15473	2.96	11428	9471			1.1	Si
SLV 4	8.62	-10082	3871	2912.49		12164	2.96	10766	8923			2.31	Si
SLV 4	9.69	-9768	3913	2634.11		11786	2.96	10690	8860			2.26	Si
SLV 5	8.62	-17843	-8345	-1119.36		21529	2.96	12639	10475			1.26	Si
SLV 5	9.69	-16687	-8530	820.43		20134	2.96	12360	10244			1.2	Si
SLV 10	8.62	-20723	-9039	-1627.12		25004	2.96	13334	11051			1.22	Si
SLV 10	9.69	-19113	-9246	570.52		23061	2.96	12946	10729			1.16	Si
SLV 8	8.62	-11072	9202	4172.13		13359	2.96	11005	9121			0.99	No, Vu<V
SLV 8	9.69	-10398	9328	3162.17		12545	2.96	10842	8986			0.96	No, Vu<V
SLV 3	8.62	-10082	3871	2912.49		12164	2.96	10766	8923			2.31	Si
SLV 3	9.69	-9768	3913	2634.11		11786	2.96	10690	8860			2.26	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 9.153 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 3	143750	0.43	11529	-9555	150.08	1211.48	8.07	Si
SLV 4	143750	0.43	11529	-9555	150.08	1211.48	8.07	Si
SLV 8	143750	0.43	12742	-10561	150.08	1324.34	8.82	Si
SLV 7	143750	0.43	12742	-10561	150.08	1324.34	8.82	Si
SLV 1	143750	0.43	13973	-11581	150.08	1435.89	9.57	Si
SLV 2	143750	0.43	13973	-11581	150.08	1435.89	9.57	Si
SLV 12	143750	0.43	16227	-13449	150.08	1632.8	10.88	Si
SLV 11	143750	0.43	16227	-13449	150.08	1632.8	10.88	Si
SLV 5	143750	0.43	20890	-17313	150.08	2009.48	13.39	Si
SLV 6	143750	0.43	20890	-17313	150.08	2009.48	13.39	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 9.153 Wa = 0.05 Ta = 0.0318

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 4	-9768	-10082	-284	0.045	1266	0.94	0.69602	5.34026	No
SLV 3	-9768	-10082	-284	0.045	1266	0.94	0.69602	5.34026	No
SLV 1	-11655	-12113	-293	0.047	1457.3	0.947	0.71493	5.34026	No
SLV 2	-11655	-12113	-293	0.047	1457.3	0.947	0.71493	5.34026	No
SLV 15	-17856	-19682	256	0.053	2087.4	0.961	0.79963	5.34026	No
SLV 16	-17856	-19682	256	0.053	2087.4	0.961	0.79963	5.34026	No
SLV 13	-19743	-21713	248	0.054	2279.4	0.964	0.81354	5.34026	No
SLV 14	-19743	-21713	248	0.054	2279.4	0.964	0.81354	5.34026	No
SLV 5	-16687	-17843	-114	0.06	1968.5	0.959	0.91139	5.03955	No
SLV 6	-16687	-17843	-114	0.06	1968.5	0.959	0.91139	5.03955	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.296	SLU 77	Si
V_SLU	29.606	SLU 23	Si
PF_SLV	3.498	SLV 7	Si
V_SLV	0.963	SLV 7	No
PFFP_SLV	8.072	SLV 3	Si
R_SLV	0.13	SLV 3	No

Maschio 206

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.013	-0.354	-11.013	1.046	L5	L6	1.4	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	t0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2



Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 71	8.62	-13022	127.95	33220	5398.12	42.19	Si
SLU 71	12.17	-7652	747.02	19519	4072.67	5.452	Si
SLU 27	8.62	-11111	130.04	28344	5071.37	38.998	Si
SLU 27	12.17	-6635	670.84	16927	3679.59	5.485	Si
SLU 67	8.62	-12774	131.5	32585	5364.67	40.795	Si
SLU 67	12.17	-7421	716.31	18931	3987.47	5.567	Si
SLU 66	8.62	-12834	140.5	32741	5373.1	38.243	Si
SLU 66	12.17	-7457	726.82	19022	4000.78	5.505	Si
SLU 28	8.62	-11050	121.05	28189	5058.35	41.789	Si
SLU 28	12.17	-6600	660.33	16836	3665	5.55	Si
SLU 29	8.62	-10858	121.94	27699	5016.12	41.137	Si
SLU 29	12.17	-6426	641.86	16393	3593.05	5.598	Si
SLU 72	8.62	-12961	118.95	33065	5390.19	45.314	Si
SLU 72	12.17	-7616	736.51	19428	4059.67	5.512	Si
SLU 77	8.62	-14268	374.45	36398	5524.89	14.755	Si
SLU 77	12.17	-8396	777.44	21417	4331.73	5.572	Si
SLU 69	8.62	-13275	136.05	33865	5429.37	39.906	Si
SLU 69	12.17	-7861	776	20053	4147.97	5.345	Si
SLU 70	8.62	-13214	127.06	33710	5422.11	42.675	Si
SLU 70	12.17	-7825	765.49	19962	4135.3	5.402	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 14	8.62	-8948	-1593.81	22825	5093.29	3.196	Si
SLV 14	12.17	-5927	452.38	15119	3635.36	8.036	Si
SLV 6	8.62	-10147	-88.48	25885	5598.17	63.269	Si
SLV 6	12.17	-7109	1532.11	18136	4237.84	2.766	Si
SLV 4	8.62	-9731	1917.84	24824	5427.84	2.83	Si
SLV 4	12.17	-4593	506.79	11716	2906.54	5.735	Si
SLV 3	8.62	-9731	1917.84	24824	5427.84	2.83	Si
SLV 3	12.17	-4593	506.79	11716	2906.54	5.735	Si
SLV 10	8.62	-9798	-1013.62	24995	5455.59	5.382	Si
SLV 10	12.17	-7171	1343.32	18293	4268.18	3.177	Si
SLV 5	8.62	-10147	-88.48	25885	5598.17	63.269	Si
SLV 5	12.17	-7109	1532.11	18136	4237.84	2.766	Si
SLV 1	8.62	-10111	1490	25793	5583.61	3.747	Si
SLV 1	12.17	-5721	1081.67	14594	3526.28	3.26	Si
SLV 13	8.62	-8948	-1593.81	22825	5093.29	3.196	Si
SLV 13	12.17	-5927	452.38	15119	3635.36	8.036	Si
SLV 2	8.62	-10111	1490	25793	5583.61	3.747	Si
SLV 2	12.17	-5721	1081.67	14594	3526.28	3.26	Si
SLV 9	8.62	-9798	-1013.62	24995	5455.59	5.382	Si
SLV 9	12.17	-7171	1343.32	18293	4268.18	3.177	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 77	8.62	-14268	-61	374.45		36398	1.4	10409	4080			66.68	Si
SLU 77	12.17	-8396	-1029	777.44		21417	1.4	8411	3297			3.2	Si
SLU 72	8.62	-12961	-113	118.95		33065	1.4	9964	3906			34.71	Si
SLU 72	12.17	-7616	-1008	736.51		19428	1.4	8146	3193			3.17	Si
SLU 78	8.62	-14207	-47	365.46		36243	1.4	10388	4072			86.83	Si
SLU 78	12.17	-8360	-1019	766.94		21326	1.4	8399	3292			3.23	Si
SLU 69	8.62	-13275	-132	136.05		33865	1.4	10071	3948			29.99	Si
SLU 69	12.17	-7861	-1047	776		20053	1.4	8229	3226			3.08	Si
SLU 79	8.62	-14015	-56	366.35		35753	1.4	10323	4046			71.79	Si
SLU 79	12.17	-8186	-1000	748.46		20883	1.4	8340	3269			3.27	Si
SLU 67	8.62	-12774	-111	131.5		32585	1.4	9900	3881			34.98	Si
SLU 67	12.17	-7421	-968	716.31		18931	1.4	8080	3167			3.27	Si
SLU 70	8.62	-13214	-117	127.06		33710	1.4	10050	3940			33.57	Si
SLU 70	12.17	-7825	-1037	765.49		19962	1.4	8217	3221			3.11	Si
SLU 66	8.62	-12834	-125	140.5		32741	1.4	9921	3889			31.05	Si
SLU 66	12.17	-7457	-978	726.82		19022	1.4	8092	3172			3.24	Si
SLU 71	8.62	-13022	-127	127.95		33220	1.4	9985	3914			30.86	Si
SLU 71	12.17	-7652	-1018	747.02		19519	1.4	8158	3198			3.14	Si
SLU 80	8.62	-13954	-42	357.35		35598	1.4	10302	4038			95.97	Si
SLU 80	12.17	-8151	-990	737.96		20793	1.4	8328	3265			3.3	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 12	8.62	-8532	3540	412.51		21764	1.4	12686	4973			1.4	Si
SLV 12	12.17	-3410	2200	-572.94		8699	1.4	10073	3949			1.79	Si
SLV 6	8.62	-10147	-3630	-88.48		25885	1.4	13510	5296			1.46	Si
SLV 6	12.17	-7109	-3473	1532.11		18136	1.4	11960	4689			1.35	Si
SLV 5	8.62	-10147	-3630	-88.48		25885	1.4	13510	5296			1.46	Si
SLV 5	12.17	-7109	-3473	1532.11		18136	1.4	11960	4689			1.35	Si
SLV 8	8.62	-8881	4236	1337.65		22655	1.4	12864	5043			1.19	Si
SLV 8	12.17	-3348	2891	-384.15		8541	1.4	10042	3936			1.36	Si
SLV 10	8.62	-9798	-4326	-1013.62		24995	1.4	13332	5226			1.21	Si
SLV 10	12.17	-7171	-4164	1343.32		18293	1.4	11992	4701			1.13	Si
SLV 9	8.62	-9798	-4326	-1013.62		24995	1.4	13332	5226			1.21	Si
SLV 9	12.17	-7171	-4164	1343.32		18293	1.4	11992	4701			1.13	Si
SLV 7	8.62	-8881	4236	1337.65		22655	1.4	12864	5043			1.19	Si
SLV 7	12.17	-3348	2891	-384.15		8541	1.4	10042	3936			1.36	Si
SLV 13	8.62	-8948	-2384	-1593.81		22825	1.4	12898	5056			2.12	Si
SLV 13	12.17	-5927	-2743	452.38		15119	1.4	11357	4452			1.62	Si
SLV 11	8.62	-8532	3540	412.51		21764	1.4	12686	4973			1.4	Si
SLV 11	12.17	-3410	2200	-572.94		8699	1.4	10073	3949			1.79	Si
SLV 14	8.62	-8948	-2384	-1593.81		22825	1.4	12898	5056			2.12	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 14	12.17	-5927	-2743	452.38		15119	1.4	11357	4452			1.62	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 4	143750	0.46	9979	-3912	177.91	502.9	2.83	Si
SLV 3	143750	0.46	9979	-3912	177.91	502.9	2.83	Si
SLV 2	143750	0.46	10476	-4107	177.91	525.65	2.95	Si
SLV 1	143750	0.46	10476	-4107	177.91	525.65	2.95	Si
SLV 7	143750	0.46	16230	-6362	177.91	772.4	4.34	Si
SLV 8	143750	0.46	16230	-6362	177.91	772.4	4.34	Si
SLV 5	143750	0.46	17890	-7013	177.91	838.04	4.71	Si
SLV 6	143750	0.46	17890	-7013	177.91	838.04	4.71	Si
SLV 11	143750	0.46	22087	-8658	177.91	993.01	5.58	Si
SLV 12	143750	0.46	22087	-8658	177.91	993.01	5.58	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 12	-3410	-8532	-180	0.011	549	0.911	0.18271	8.73249	No
SLV 11	-3410	-8532	-180	0.011	549	0.911	0.18271	8.73249	No
SLV 2	-5721	-10111	162	0.023	781	0.931	0.36376	10.16227	No
SLV 1	-5721	-10111	162	0.023	781	0.931	0.36376	10.16227	No
SLV 16	-4798	-8568	-145	0.024	688	0.924	0.37207	10.16227	No
SLV 15	-4798	-8568	-145	0.024	688	0.924	0.37207	10.16227	No
SLV 6	-7109	-10147	197	0.022	921.4	0.94	0.337	8.73249	No
SLV 5	-7109	-10147	197	0.022	921.4	0.94	0.337	8.73249	No
SLV 8	-3348	-8881	-116	0.025	542.9	0.91	0.39851	8.73249	No
SLV 7	-3348	-8881	-116	0.025	542.9	0.91	0.39851	8.73249	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.345	SLU 69	Si
V_SLU	3.081	SLU 69	Si
PF_SLV	2.766	SLV 5	Si
V_SLV	1.129	SLV 9	Si
PFFP_SLV	2.827	SLV 3	Si
R_SLV	0.021	SLV 11	No

Maschio 207

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.728	1.046	-9.728	1.406	L5	L6	0.36	0.14	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 78	8.62	-2545	87.65	50496	174.12	1.986	Si
SLU 78	10.72	-2276	-62.76	45150	182.57	2.909	Si
SLU 83	8.62	-2495	92.16	49503	176.17	1.912	Si
SLU 83	10.72	-2226	-65.01	44157	183.44	2.822	Si
SLU 74	8.62	-2472	84.77	49052	177.03	2.088	Si
SLU 74	10.72	-2203	-59.67	43706	183.76	3.08	Si
SLU 84	8.62	-2490	90.37	49405	176.37	1.952	Si
SLU 84	10.72	-2221	-63.54	44059	183.51	2.888	Si
SLU 77	8.62	-2550	89.44	50594	173.91	1.944	Si
SLU 77	10.72	-2280	-64.23	45248	182.47	2.841	Si
SLU 82	8.62	-2412	85.69	47863	179.08	2.09	Si
SLU 82	10.72	-2143	-58.98	42517	184.39	3.126	Si
SLU 75	8.62	-2467	82.98	48954	177.21	2.136	Si
SLU 75	10.72	-2198	-58.2	43608	183.82	3.158	Si
SLU 80	8.62	-2488	88.55	49364	176.44	1.993	Si
SLU 80	10.72	-2219	-63.81	44018	183.54	2.876	Si
SLU 79	8.62	-2493	90.34	49462	176.25	1.951	Si
SLU 79	10.72	-2223	-65.28	44116	183.47	2.811	Si
SLU 81	8.62	-2417	87.48	47962	178.92	2.045	Si
SLU 81	10.72	-2148	-60.45	42616	184.35	3.05	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 8	8.62	-1354	417.94	0	0	0	No, $e \geq l/2$
SLV 8	10.72	-1146	-345.56	0	0	0	No, $e \geq l/2$
SLV 5	8.62	-1676	-220.81	33251	219.57	0.994	No, $M > Mu$
SLV 5	10.72	-1471	189.44	29179	201.5	1.064	Si
SLV 4	8.62	-1127	301.87	0	0	0	No, $e \geq l/2$
SLV 4	10.72	-917	-254.74	0	0	0	No, $e \geq l/2$
SLV 12	8.62	-1645	325.79	0	0	0	No, $e \geq l/2$
SLV 12	10.72	-1440	-262.91	0	0	0	No, $e \geq l/2$



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 6	8.62	-1676	-220.81	33251	219.57	0.994	No, M>Mu
SLV 6	10.72	-1471	189.44	29179	201.5	1.064	Si
SLV 3	8.62	-1127	301.87	0	0	0	No, e>l/2
SLV 3	10.72	-917	-254.74	0	0	0	No, e>l/2
SLV 11	8.62	-1645	325.79	0	0	0	No, e>l/2
SLV 11	10.72	-1440	-262.91	0	0	0	No, e>l/2
SLV 7	8.62	-1354	417.94	0	0	0	No, e>l/2
SLV 7	10.72	-1146	-345.56	0	0	0	No, e>l/2
SLV 9	8.62	-1967	-312.96	39025	240.96	0.77	No, M>Mu
SLV 9	10.72	-1764	272.1	35007	226.6	0.833	No, M>Mu
SLV 10	8.62	-1967	-312.96	39025	240.96	0.77	No, M>Mu
SLV 10	10.72	-1764	272.1	35007	226.6	0.833	No, M>Mu

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 74	8.62	-2472	69	84.77		49052	0.36	10833	546			7.94	Si
SLU 74	10.72	-2203	69	-59.67		43706	0.36	10833	546			7.94	Si
SLU 83	8.62	-2495	75	92.16		49503	0.36	10833	546			7.3	Si
SLU 83	10.72	-2226	75	-65.01		44157	0.36	10833	546			7.3	Si
SLU 79	8.62	-2493	74	90.34		49462	0.36	10833	546			7.37	Si
SLU 79	10.72	-2223	74	-65.28		44116	0.36	10833	546			7.37	Si
SLU 80	8.62	-2488	73	88.55		49364	0.36	10833	546			7.53	Si
SLU 80	10.72	-2219	73	-63.81		44018	0.36	10833	546			7.53	Si
SLU 77	8.62	-2550	73	89.44		50594	0.36	10833	546			7.46	Si
SLU 77	10.72	-2280	73	-64.23		45248	0.36	10833	546			7.46	Si
SLU 82	8.62	-2412	69	85.69		47863	0.36	10833	546			7.93	Si
SLU 82	10.72	-2143	69	-58.98		42517	0.36	10833	546			7.93	Si
SLU 84	8.62	-2490	73	90.37		49405	0.36	10833	546			7.45	Si
SLU 84	10.72	-2221	73	-63.54		44059	0.36	10833	546			7.45	Si
SLU 41	8.62	-2106	67	82.55		41792	0.36	10833	546			8.16	Si
SLU 41	10.72	-1894	67	-58.02		37580	0.36	10566	533			7.96	Si
SLU 78	8.62	-2545	72	87.65		50496	0.36	10833	546			7.62	Si
SLU 78	10.72	-2276	72	-62.76		45150	0.36	10833	546			7.62	Si
SLU 81	8.62	-2417	70	87.48		47962	0.36	10833	546			7.75	Si
SLU 81	10.72	-2148	70	-60.45		42616	0.36	10833	546			7.75	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 8	8.62	-1354	524	417.94		0	0	8333	0			0	No, Vu<V
SLV 8	10.72	-1146	335	-345.56		0	0	8333	0			0	No, Vu<V
SLV 6	8.62	-1676	-406	-220.81		82717	0.1447	16250	329			0.81	No, Vu<V
SLV 6	10.72	-1471	-167	189.44		68412	0.1535	16250	349			2.09	Si
SLV 9	8.62	-1967	-439	-312.96		224224	0.0627	16250	143			0.32	No, Vu<V
SLV 9	10.72	-1764	-250	272.1		162935	0.0773	16250	176			0.7	No, Vu<V
SLV 11	8.62	-1645	491	325.79		0	0	8333	0			0	No, Vu<V
SLV 11	10.72	-1440	252	-262.91		0	0	8333	0			0	No, Vu<V
SLV 12	8.62	-1645	491	325.79		0	0	8333	0			0	No, Vu<V
SLV 12	10.72	-1440	252	-262.91		0	0	8333	0			0	No, Vu<V
SLV 7	8.62	-1354	524	417.94		0	0	8333	0			0	No, Vu<V
SLV 7	10.72	-1146	335	-345.56		0	0	8333	0			0	No, Vu<V
SLV 10	8.62	-1967	-439	-312.96		224224	0.0627	16250	143			0.32	No, Vu<V
SLV 10	10.72	-1764	-250	272.1		162935	0.0773	16250	176			0.7	No, Vu<V
SLV 3	8.62	-1127	238	301.87		0	0	8333	0			0	No, Vu<V
SLV 3	10.72	-917	257	-254.74		0	0	8333	0			0	No, Vu<V
SLV 4	8.62	-1127	238	301.87		0	0	8333	0			0	No, Vu<V
SLV 4	10.72	-917	257	-254.74		0	0	8333	0			0	No, Vu<V
SLV 5	8.62	-1676	-406	-220.81		82717	0.1447	16250	329			0.81	No, Vu<V
SLV 5	10.72	-1471	-167	189.44		68412	0.1535	16250	349			2.09	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 3	143750	0.46	18878	-951	23.91	56.31	2.35	Si
SLV 4	143750	0.46	18878	-951	23.91	56.31	2.35	Si
SLV 1	143750	0.46	20759	-1046	23.91	60.79	2.54	Si
SLV 2	143750	0.46	20759	-1046	23.91	60.79	2.54	Si
SLV 8	143750	0.46	23550	-1187	23.91	67.07	2.8	Si
SLV 7	143750	0.46	23550	-1187	23.91	67.07	2.8	Si
SLV 12	143750	0.46	29436	-1484	23.91	78.83	3.3	Si
SLV 11	143750	0.46	29436	-1484	23.91	78.83	3.3	Si
SLV 6	143750	0.46	29820	-1503	23.91	79.53	3.33	Si
SLV 5	143750	0.46	29820	-1503	23.91	79.53	3.33	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 10.395 Wa = 0.03 Ta = 0.1503

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 13	-859	-2194	32	0	112.9	0.938	0	18.98212	No
SLV 10	-298	-1967	20	0	56.8	0.898	0	18.46841	No
SLV 4	-389	-1127	-32	0	65.7	0.906	0	18.98212	No
SLV 2	-128	-1224	-25	0	40.8	0.89	0	18.98212	No
SLV 3	-389	-1127	-32	0	65.7	0.906	0	18.98212	No
SLV 1	-128	-1224	-25	0	40.8	0.89	0	18.98212	No
SLV 9	-298	-1967	20	0	56.8	0.898	0	18.46841	No
SLV 14	-859	-2194	32	0	112.9	0.938	0	18.98212	No
SLV 15	-1120	-2097	25	0.002	139.4	0.948	0.03667	18.98212	No
SLV 16	-1120	-2097	25	0.002	139.4	0.948	0.03667	18.98212	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
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Sismicad 12.19 - Licenza assegnata a Sidel ingegneria Srl - Via Isonzo, 13 - Villanova di Castenaso (BO)



Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.912	SLU 83	Si
V_SLU	7.295	SLU 83	Si
PF_SLV	0	SLV 3	No
V_SLV	0	SLV 3	No
PFFP_SLV	2.355	SLV 3	Si
R_SLV	0	SLV 1	No

Maschio 208

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.728	2.206	-9.728	6.521	L5	L6	4.315	0.14	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ ₀	f _{v0}	μ	φ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLU 84	8.62	-20894	-5098.69	34586	25938.36	5.087	Si
SLU 84	10.72	-16556	-3442.19	27406	23701.86	6.886	Si
SLU 79	8.62	-20433	-4824.14	33823	25779.07	5.344	Si
SLU 79	10.72	-16332	-3398.99	27035	23541.61	6.926	Si
SLU 83	8.62	-20923	-5124.24	34635	25947.85	5.064	Si
SLU 83	10.72	-16594	-3484.54	27468	23728.5	6.81	Si
SLU 80	8.62	-20403	-4798.6	33775	25768.32	5.37	Si
SLU 80	10.72	-16294	-3356.65	26972	23514.11	7.005	Si
SLU 75	8.62	-20519	-4874.82	33966	25810.31	5.295	Si
SLU 75	10.72	-16321	-3379.59	27016	23533.35	6.963	Si
SLU 81	8.62	-20597	-5080.33	34096	25838.13	5.086	Si
SLU 81	10.72	-16222	-3422.78	26853	23461.14	6.854	Si
SLU 82	8.62	-20568	-5054.79	34048	25827.8	5.11	Si
SLU 82	10.72	-16184	-3380.44	26790	23433.27	6.932	Si
SLU 74	8.62	-20548	-4900.37	34015	25820.77	5.269	Si
SLU 74	10.72	-16358	-3421.93	27079	23560.77	6.885	Si
SLU 78	8.62	-20845	-4918.73	34505	25922.27	5.27	Si
SLU 78	10.72	-16692	-3441.34	27632	23797.49	6.915	Si
SLU 77	8.62	-20874	-4944.27	34554	25931.9	5.245	Si
SLU 77	10.72	-16730	-3483.68	27695	23823.67	6.839	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLV 6	8.62	-10235	-11421.11	16943	19020.86	1.665	Si
SLV 6	10.72	-7897	3536.92	13072	15214.24	4.302	Si
SLV 10	8.62	-12389	-11982.94	20508	22242.74	1.856	Si
SLV 10	10.72	-7969	4517.38	13192	15337.05	3.395	Si
SLV 5	8.62	-10235	-11421.11	16943	19020.86	1.665	Si
SLV 5	10.72	-7897	3536.92	13072	15214.24	4.302	Si
SLV 7	8.62	-15335	5764.57	25384	26211.3	4.547	Si
SLV 7	10.72	-13906	-9074.68	23020	24350.51	2.683	Si
SLV 4	8.62	-11038	405.06	18271	20252.87	50	Si
SLV 4	10.72	-11718	-5804.49	19398	21268.63	3.664	Si
SLV 9	8.62	-12389	-11982.94	20508	22242.74	1.856	Si
SLV 9	10.72	-7969	4517.38	13192	15337.05	3.395	Si
SLV 11	8.62	-17488	5202.73	28949	28791.28	5.534	Si
SLV 11	10.72	-13979	-8094.22	23140	24447.85	3.02	Si
SLV 12	8.62	-17488	5202.73	28949	28791.28	5.534	Si
SLV 12	10.72	-13979	-8094.22	23140	24447.85	3.02	Si
SLV 8	8.62	-15335	5764.57	25384	26211.3	4.547	Si
SLV 8	10.72	-13906	-9074.68	23020	24350.51	2.683	Si
SLV 3	8.62	-11038	405.06	18271	20252.87	50	Si
SLV 3	10.72	-11718	-5804.49	19398	21268.63	3.664	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 71	8.62	-18529	-149	-4021.48		30673	4.315	9645	5827			39.14	Si
SLU 71	10.72	-14853	-149	-3055.29		24587	4.315	8834	5337			35.87	Si
SLU 50	8.62	-16552	-144	-3356.98		27399	4.315	9209	5563			38.72	Si
SLU 50	10.72	-13315	-144	-2715.11		22042	4.315	8494	5131			35.73	Si
SLU 59	8.62	-18426	-153	-4134.1		30501	4.315	9622	5813			37.95	Si
SLU 59	10.72	-14756	-153	-3016.47		24427	4.315	8812	5324			34.77	Si
SLU 57	8.62	-18867	-149	-4254.23		31231	4.315	9720	5872			39.49	Si
SLU 57	10.72	-15155	-149	-3101.16		25086	4.315	8900	5377			36.18	Si
SLU 80	8.62	-20403	-158	-4798.6		33775	4.315	10059	6077			38.37	Si
SLU 80	10.72	-16294	-158	-3356.65		26972	4.315	9152	5529			34.93	Si
SLU 49	8.62	-16963	-143	-3451.56		28080	4.315	9300	5618			39.32	Si
SLU 49	10.72	-13676	-143	-2757.46		22638	4.315	8574	5180			36.27	Si
SLU 72	8.62	-18500	-153	-3995.93		30624	4.315	9639	5823			38.16	Si
SLU 72	10.72	-14815	-153	-3012.95		24525	4.315	8826	5331			34.96	Si
SLU 58	8.62	-18455	-149	-4159.65		30549	4.315	9629	5817			38.92	Si
SLU 58	10.72	-14794	-149	-3058.81		24489	4.315	8821	5329			35.67	Si
SLU 79	8.62	-20433	-155	-4824.14		33823	4.315	10065	6080			39.32	Si
SLU 79	10.72	-16332	-155	-3398.99		27035	4.315	9160	5534			35.8	Si
SLU 51	8.62	-16522	-147	-3331.43		27350	4.315	9202	5559			37.72	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 51	10.72	-13277	-147	-2672.77		21979	4.315	8486	5126			34.79	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 1	8.62	-9508	-3031	-4750.65		15739	4.315	11481	6936			2.29	Si
SLV 1	10.72	-9915	-2607	-2021.01		16414	4.315	11616	7017			2.69	Si
SLV 2	8.62	-9508	-3031	-4750.65		15739	4.315	11481	6936			2.29	Si
SLV 2	10.72	-9915	-2607	-2021.01		16414	4.315	11616	7017			2.69	Si
SLV 10	8.62	-12389	-8087	-11982.94		24782	3.5708	13290	6644			0.82	No, Vu<V
SLV 10	10.72	-7969	-6788	4517.38		13192	4.315	10972	6628			0.98	No, Vu<V
SLV 5	8.62	-10235	-8385	-11421.11		23395	3.125	13012	5693			0.68	No, Vu<V
SLV 5	10.72	-7897	-7067	3536.92		13072	4.315	10948	6613			0.94	No, Vu<V
SLV 7	8.62	-15335	7903	5764.57		25384	4.315	13410	8101			1.03	Si
SLV 7	10.72	-13906	6604	-9074.68		23020	4.315	12937	7815			1.18	Si
SLV 6	8.62	-10235	-8385	-11421.11		23395	3.125	13012	5693			0.68	No, Vu<V
SLV 6	10.72	-7897	-7067	3536.92		13072	4.315	10948	6613			0.94	No, Vu<V
SLV 12	8.62	-17488	8200	5202.73		28949	4.315	14123	8532			1.04	Si
SLV 12	10.72	-13979	6882	-8094.22		23140	4.315	12961	7830			1.14	Si
SLV 11	8.62	-17488	8200	5202.73		28949	4.315	14123	8532			1.04	Si
SLV 11	10.72	-13979	6882	-8094.22		23140	4.315	12961	7830			1.14	Si
SLV 9	8.62	-12389	-8087	-11982.94		24782	3.5708	13290	6644			0.82	No, Vu<V
SLV 9	10.72	-7969	-6788	4517.38		13192	4.315	10972	6628			0.98	No, Vu<V
SLV 8	8.62	-15335	7903	5764.57		25384	4.315	13410	8101			1.03	Si
SLV 8	10.72	-13906	6604	-9074.68		23020	4.315	12937	7815			1.18	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 5	143750	0.46	13480	-8143	286.63	507.14	1.77	Si
SLV 6	143750	0.46	13480	-8143	286.63	507.14	1.77	Si
SLV 9	143750	0.46	13686	-8268	286.63	513.92	1.79	Si
SLV 10	143750	0.46	13686	-8268	286.63	513.92	1.79	Si
SLV 2	143750	0.46	16782	-10138	286.63	612.21	2.14	Si
SLV 1	143750	0.46	16782	-10138	286.63	612.21	2.14	Si
SLV 13	143750	0.46	17469	-10553	286.63	633.11	2.21	Si
SLV 14	143750	0.46	17469	-10553	286.63	633.11	2.21	Si
SLV 3	143750	0.46	19819	-11973	286.63	702.15	2.45	Si
SLV 4	143750	0.46	19819	-11973	286.63	702.15	2.45	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.03 Ta = 0.1503

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 16	-7168	-18216	89	0.014	1037.4	0.923	0.22181	18.98212	No
SLV 15	-7168	-18216	89	0.014	1037.4	0.923	0.22181	18.98212	No
SLV 1	-7512	-9508	-89	0.014	1072.1	0.925	0.22536	18.98212	No
SLV 2	-7512	-9508	-89	0.014	1072.1	0.925	0.22536	18.98212	No
SLV 4	-7021	-11038	-67	0.017	1022.8	0.922	0.26017	18.98212	No
SLV 3	-7021	-11038	-67	0.017	1022.8	0.922	0.26017	18.98212	No
SLV 13	-7658	-16686	67	0.017	1086.8	0.926	0.26174	18.98212	No
SLV 14	-7658	-16686	67	0.017	1086.8	0.926	0.26174	18.98212	No
SLV 11	-6544	-17488	60	0.017	974.8	0.919	0.27016	18.46841	No
SLV 12	-6544	-17488	60	0.017	974.8	0.919	0.27016	18.46841	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.064	SLU 83	Si
V_SLU	34.77	SLU 59	Si
PF_SLV	1.665	SLV 5	Si
V_SLV	0.679	SLV 5	No
PFFP_SLV	1.769	SLV 5	Si
R_SLV	0.012	SLV 15	No

Maschio 209

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-10.12	-4.784	-11.013	-4.784	L5	L6	0.892	0.3	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ_0	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 46	8.62	-5395	42.07	20154	1811.77	43.065	Si
SLU 46	11.73	-3164	120.86	11820	1206.99	9.986	Si
SLU 44	8.62	-5302	44.58	19807	1790.63	40.167	Si
SLU 44	11.73	-3065	117.09	11448	1175.31	10.037	Si
SLU 67	8.62	-5561	75.55	20772	1848.5	24.466	Si
SLU 67	11.73	-3383	126.23	12636	1275.23	10.102	Si
SLU 48	8.62	-5441	42.27	20326	1822.08	43.107	Si
SLU 48	11.73	-3235	121.91	12084	1229.34	10.084	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 47	8.62	-5435	43.15	20301	1820.58	42.192	Si
SLU 47	11.73	-3186	122.12	11902	1213.96	9.941	Si
SLU 70	8.62	-5693	74.12	21266	1877.05	25.323	Si
SLU 70	11.73	-3504	131.25	13090	1312.31	9.998	Si
SLU 51	8.62	-5509	42.81	20580	1837.18	42.919	Si
SLU 51	11.73	-3274	124.49	12230	1241.51	9.973	Si
SLU 49	8.62	-5528	40.64	20648	1841.22	45.304	Si
SLU 49	11.73	-3286	125.88	12273	1245.15	9.891	Si
SLU 72	8.62	-5675	76.29	21197	1873.14	24.554	Si
SLU 72	11.73	-3493	129.86	13046	1308.77	10.078	Si
SLU 68	8.62	-5600	76.63	20918	1857.05	24.233	Si
SLU 68	11.73	-3405	127.49	12718	1282	10.056	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 8	8.62	-1086	650.23	0	0	0	No, $e \geq l/2$
SLV 8	11.73	-2935	-321.41	10962	1191.96	3.708	Si
SLV 16	8.62	-1381	-281.75	5158	590.1	2.094	Si
SLV 16	11.73	-863	437.46	0	0	0	No, $e \geq l/2$
SLV 9	8.62	-7107	-516.18	26548	2482.16	4.809	Si
SLV 9	11.73	-2007	498.64	7496	840.44	1.685	Si
SLV 10	8.62	-7107	-516.18	26548	2482.16	4.809	Si
SLV 10	11.73	-2007	498.64	7496	840.44	1.685	Si
SLV 14	8.62	-3487	-545.18	13024	1389.86	2.549	Si
SLV 14	11.73	-873	605.56	0	0	0	No, $e \geq l/2$
SLV 7	8.62	-1086	650.23	0	0	0	No, $e \geq l/2$
SLV 7	11.73	-2935	-321.41	10962	1191.96	3.708	Si
SLV 13	8.62	-3487	-545.18	13024	1389.86	2.549	Si
SLV 13	11.73	-873	605.56	0	0	0	No, $e \geq l/2$
SLV 15	8.62	-1381	-281.75	5158	590.1	2.094	Si
SLV 15	11.73	-863	437.46	0	0	0	No, $e \geq l/2$
SLV 12	8.62	-88	361.93	0	0	0	No, $e \geq l/2$
SLV 12	11.73	-1973	-61.68	7371	827.32	13.414	Si
SLV 11	8.62	-88	361.93	0	0	0	No, $e \geq l/2$
SLV 11	11.73	-1973	-61.68	7371	827.32	13.414	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 79	8.62	-5720	317	120.78		21364	0.8924	8404	2250			7.11	Si
SLU 79	11.73	-3645	-40	128.27		13614	0.8924	7371	1973			49.09	Si
SLU 83	8.62	-5643	343	140.58		21080	0.8924	8366	2240			6.53	Si
SLU 83	11.73	-3610	-44	124.27		13484	0.8924	7353	1969			44.69	Si
SLU 41	8.62	-4497	318	138.5		16797	0.8924	7795	2087			6.56	Si
SLU 41	11.73	-2980	-33	100.19		11130	0.8924	7040	1885			57.84	Si
SLU 42	8.62	-4583	312	136.87		17119	0.8924	7838	2098			6.72	Si
SLU 42	11.73	-3030	-48	104.16		11319	0.8924	7065	1891			39.34	Si
SLU 40	8.62	-4451	309	138.3		16625	0.8924	7772	2081			6.74	Si
SLU 40	11.73	-2909	-52	99.14		10866	0.8924	7004	1875			36.06	Si
SLU 84	8.62	-5730	338	138.95		21403	0.8924	8409	2251			6.67	Si
SLU 84	11.73	-3660	-60	128.24		13673	0.8924	7379	1975			33.18	Si
SLU 81	8.62	-5511	340	142.01		20586	0.8924	8300	2222			6.54	Si
SLU 81	11.73	-3488	-48	119.25		13031	0.8924	7293	1952			40.7	Si
SLU 82	8.62	-5598	334	140.38		20909	0.8924	8343	2234			6.68	Si
SLU 82	11.73	-3539	-63	123.22		13220	0.8924	7318	1959			30.87	Si
SLU 39	8.62	-4364	314	139.93		16303	0.8924	7729	2069			6.58	Si
SLU 39	11.73	-2858	-37	95.17		10677	0.8924	6979	1868			51.17	Si
SLU 37	8.62	-4573	291	118.7		17081	0.8924	7833	2097			7.2	Si
SLU 37	11.73	-3014	-29	104.19		11260	0.8924	7057	1889			65.75	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 12	8.62	-88	544	361.93	0	0	0	8333	0			0	No, $V_u < V$
SLV 12	11.73	-1973	-184	-61.68	7371	0.8924	9807	2626				14.27	Si
SLV 7	8.62	-1086	1721	650.23	0	0	0	8333	0			0	No, $V_u < V$
SLV 7	11.73	-2935	287	-321.41	10962	0.8924	10526	2818				9.82	Si
SLV 13	8.62	-3487	-2053	-545.18	13367	0.8695	11007	2871				1.4	Si
SLV 13	11.73	-873	-849	605.56	0	0	0	8333	0			0	No, $V_u < V$
SLV 8	8.62	-1086	1721	650.23	0	0	0	8333	0			0	No, $V_u < V$
SLV 8	11.73	-2935	287	-321.41	10962	0.8924	10526	2818				9.82	Si
SLV 15	8.62	-1381	-1488	-281.75	6336	0.7264	9601	2092				1.41	Si
SLV 15	11.73	-863	-796	437.46	0	0	0	8333	0			0	No, $V_u < V$
SLV 16	8.62	-1381	-1488	-281.75	6336	0.7264	9601	2092				1.41	Si
SLV 16	11.73	-863	-796	437.46	0	0	0	8333	0			0	No, $V_u < V$
SLV 4	8.62	-4706	2435	679.23	17580	0.8924	11849	3172				1.3	Si
SLV 4	11.73	-4068	774	-428.33	15196	0.8924	11373	3045				3.93	Si
SLV 3	8.62	-4706	2435	679.23	17580	0.8924	11849	3172				1.3	Si
SLV 3	11.73	-4068	774	-428.33	15196	0.8924	11373	3045				3.93	Si
SLV 11	8.62	-88	544	361.93	0	0	0	8333	0			0	No, $V_u < V$
SLV 11	11.73	-1973	-184	-61.68	7371	0.8924	9807	2626				14.27	Si
SLV 14	8.62	-3487	-2053	-545.18	13367	0.8695	11007	2871				1.4	Si
SLV 14	11.73	-873	-849	605.56	0	0	0	8333	0			0	No, $V_u < V$

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 12	143750	0.46	6836	-1830	115.98	259.16	2.23	Si
SLV 11	143750	0.46	6836	-1830	115.98	259.16	2.23	Si
SLV 16	143750	0.46	8535	-2285	115.98	318.8	2.75	Si
SLV 15	143750	0.46	8535	-2285	115.98	318.8	2.75	Si



Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 7	143750	0.46	8810	-2359	115.98	328.28	2.83	Si
SLV 8	143750	0.46	8810	-2359	115.98	328.28	2.83	Si
SLV 13	143750	0.46	11965	-3203	115.98	433.43	3.74	Si
SLV 14	143750	0.46	11965	-3203	115.98	433.43	3.74	Si
SLV 4	143750	0.46	15115	-4046	115.98	531.88	4.59	Si
SLV 3	143750	0.46	15115	-4046	115.98	531.88	4.59	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.05 Ta = 0.0702

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 16	67	-1381	-3	0	0	0	0	9.46416	No, Trazione
SLV 13	171	-3487	2	0	0	0	0	9.46416	No, Trazione
SLV 14	171	-3487	2	0	0	0	0	9.46416	No, Trazione
SLV 15	67	-1381	-3	0	0	0	0	9.46416	No, Trazione
SLV 3	-4217	-4706	-2	0.049	564.7	0.934	0.76211	9.46416	No
SLV 4	-4217	-4706	-2	0.049	564.7	0.934	0.76211	9.46416	No
SLV 1	-4113	-6812	2	0.049	554.2	0.933	0.76355	9.46416	No
SLV 2	-4113	-6812	2	0.049	554.2	0.933	0.76355	9.46416	No
SLV 8	-2839	-1086	-7	0.05	425.9	0.918	0.79257	8.21782	No
SLV 7	-2839	-1086	-7	0.05	425.9	0.918	0.79257	8.21782	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.891	SLU 49	Si
V_SLU	6.526	SLU 83	Si
PF_SLV	0	SLV 7	No
V_SLV	0	SLV 7	No
PFFP_SLV	2.235	SLV 11	Si
R_SLV	0	SLV 16	No

Maschio 210

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-7.723	-4.784	-8.28	-4.784	L5	L6	0.558	0.3	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 82	8.62	-5528	-159.05	33045	916.03	5.759	Si
SLU 82	11.73	-2870	-4.78	17159	631.73	132.135	Si
SLU 73	8.62	-5645	-163.85	33743	921.89	5.626	Si
SLU 73	11.73	-2858	2.7	17085	629.74	233.611	Si
SLU 76	8.62	-5752	-163.79	34386	926.81	5.658	Si
SLU 76	11.73	-2946	-0.1	17608	643.74	1000	Si
SLU 75	8.62	-5532	-150.24	33068	916.23	6.098	Si
SLU 75	11.73	-2902	-9.63	17348	636.83	66.098	Si
SLU 42	8.62	-4637	-147.14	27720	852.94	5.797	Si
SLU 42	11.73	-2404	2.69	14372	552.06	205.155	Si
SLU 31	8.62	-4646	-152	27774	853.74	5.617	Si
SLU 31	11.73	-2305	12.96	13776	533.87	41.199	Si
SLU 33	8.62	-4533	-138.39	27099	843.47	6.095	Si
SLU 33	11.73	-2349	0.63	14039	541.94	862.949	Si
SLU 34	8.62	-4754	-151.94	28418	863.05	5.68	Si
SLU 34	11.73	-2392	10.17	14298	549.84	54.078	Si
SLU 40	8.62	-4530	-147.2	27076	843.11	5.728	Si
SLU 40	11.73	-2317	5.48	13849	536.13	97.804	Si
SLU 84	8.62	-5636	-158.99	33689	921.46	5.796	Si
SLU 84	11.73	-2958	-7.57	17681	645.68	85.276	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 16	8.62	-5684	-784.81	33980	1144.14	1.458	Si
SLV 16	11.73	-2980	220.2	17816	709.81	3.223	Si
SLV 2	8.62	-1798	629.31	0	0	0	No, e>l/2
SLV 2	11.73	-1113	-267.3	6651	293.33	1.097	Si
SLV 1	8.62	-1798	629.31	0	0	0	No, e>l/2
SLV 1	11.73	-1113	-267.3	6651	293.33	1.097	Si
SLV 5	8.62	3030	342.09	0	0	0	No, Trazione
SLV 5	11.73	1416	-62.61	0	0	0	No, Trazione
SLV 15	8.62	-5684	-784.81	33980	1144.14	1.458	Si
SLV 15	11.73	-2980	220.2	17816	709.81	3.223	Si
SLV 10	8.62	3088	-41.06	0	0	0	No, Trazione
SLV 10	11.73	1485	90.37	0	0	0	No, Trazione
SLV 13	8.62	-1604	-647.85	0	0	0	No, e>l/2
SLV 13	11.73	-882	242.66	5275	235.41	0.97	No, M>Mu
SLV 6	8.62	3030	342.09	0	0	0	No, Trazione
SLV 6	11.73	1416	-62.61	0	0	0	No, Trazione
SLV 9	8.62	3088	-41.06	0	0	0	No, Trazione
SLV 9	11.73	1485	90.37	0	0	0	No, Trazione



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 14	8.62	-1604	-647.85	0	0	0	No, $e \geq l/2$
SLV 14	11.73	-882	242.66	5275	235.41	0.97	No, $M > M_u$

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 60	8.62	-4954	-60	-113.44		29616	0.5576	9504	1590			26.62	Si
SLU 60	11.73	-2697	62	-26.82		16124	0.5576	7705	1289			20.83	Si
SLU 77	8.62	-5305	-63	-126.1		31714	0.5576	9784	1637			25.85	Si
SLU 77	11.73	-2934	68	-28.52		17541	0.5576	7894	1321			19.36	Si
SLU 35	8.62	-4307	-58	-114.25		25745	0.5576	8988	1504			26.07	Si
SLU 35	11.73	-2381	59	-18.26		14232	0.5576	7453	1247			21.12	Si
SLU 39	8.62	-4195	-66	-123.12		25078	0.5576	8899	1489			22.68	Si
SLU 39	11.73	-2262	60	-10.62		13519	0.5576	7358	1231			20.49	Si
SLU 79	8.62	-5303	-62	-123.6		31700	0.5576	9782	1636			26.22	Si
SLU 79	11.73	-2941	65	-29.72		17581	0.5576	7900	1322			20.48	Si
SLU 41	8.62	-4303	-65	-123.06		25722	0.5576	8985	1503			23.29	Si
SLU 41	11.73	-2349	60	-13.41		14042	0.5576	7428	1243			20.79	Si
SLU 74	8.62	-5198	-64	-126.16		31070	0.5576	9698	1622			25.18	Si
SLU 74	11.73	-2847	69	-25.73		17018	0.5576	7825	1309			19.11	Si
SLU 81	8.62	-5194	-71	-134.97		31046	0.5576	9695	1622			22.75	Si
SLU 81	11.73	-2815	69	-20.88		16829	0.5576	7799	1305			18.84	Si
SLU 83	8.62	-5301	-70	-134.91		31690	0.5576	9781	1636			23.32	Si
SLU 83	11.73	-2903	69	-23.67		17351	0.5576	7869	1316			19.09	Si
SLU 32	8.62	-4199	-59	-114.31		25101	0.5576	8902	1489			25.33	Si
SLU 32	11.73	-2293	59	-15.47		13709	0.5576	7383	1235			20.82	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 13	8.62	-1604	-664	-647.85		0	0	8333	0			0	No, $V_u < V$
SLV 13	11.73	-882	667	242.66		256121	0.0115	16250	56			0.08	No, $V_u < V$
SLV 7	8.62	-10570	634	-114.44		63185	0.5576	16250	2718			4.29	Si
SLV 7	11.73	-5578	-951	-137.46		33342	0.5576	15002	2510			2.64	Si
SLV 2	8.62	-1798	263	629.31		0	0	8333	0			0	No, $V_u < V$
SLV 2	11.73	-1113	-46	-267.3		32045	0.1157	14742	512			11.06	Si
SLV 14	8.62	-1604	-664	-647.85		0	0	8333	0			0	No, $V_u < V$
SLV 14	11.73	-882	667	242.66		256121	0.0115	16250	56			0.08	No, $V_u < V$
SLV 9	8.62	3088	-714	-41.06		0	0	8333	0			0	No, $V_u < V$
SLV 9	11.73	1485	1038	90.37		0	0	8333	0			0	No, $V_u < V$
SLV 1	8.62	-1798	263	629.31		0	0	8333	0			0	No, $V_u < V$
SLV 1	11.73	-1113	-46	-267.3		32045	0.1157	14742	512			11.06	Si
SLV 6	8.62	3030	-436	342.09		0	0	8333	0			0	No, $V_u < V$
SLV 6	11.73	1416	825	-62.61		0	0	8333	0			0	No, $V_u < V$
SLV 8	8.62	-10570	634	-114.44		63185	0.5576	16250	2718			4.29	Si
SLV 8	11.73	-5578	-951	-137.46		33342	0.5576	15002	2510			2.64	Si
SLV 10	8.62	3088	-714	-41.06		0	0	8333	0			0	No, $V_u < V$
SLV 10	11.73	1485	1038	90.37		0	0	8333	0			0	No, $V_u < V$
SLV 5	8.62	3030	-436	342.09		0	0	8333	0			0	No, $V_u < V$
SLV 5	11.73	1416	825	-62.61		0	0	8333	0			0	No, $V_u < V$

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 5	143750	0.46	0	175	72.47	0	0	No, Trazione
SLV 6	143750	0.46	0	175	72.47	0	0	No, Trazione
SLV 9	143750	0.46	0	-312	72.47	0	0	No, $e > t/2$
SLV 10	143750	0.46	0	-312	72.47	0	0	No, $e > t/2$
SLV 2	143750	0.46	8022	-1342	72.47	188.08	2.6	Si
SLV 1	143750	0.46	8022	-1342	72.47	188.08	2.6	Si
SLV 13	143750	0.46	17712	-2963	72.47	380.01	5.24	Si
SLV 14	143750	0.46	17712	-2963	72.47	380.01	5.24	Si
SLV 3	143750	0.46	18700	-3128	72.47	397.42	5.48	Si
SLV 4	143750	0.46	18700	-3128	72.47	397.42	5.48	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.05 Ta = 0.0702

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	α_{lim}	Verifica
SLV 11	-6893	-10512	-379	0	785.4	0.968	0	8.21782	No
SLV 12	-6893	-10512	-379	0	785.4	0.968	0	8.21782	No
SLV 1	840	-1798	124	0	0	0	0	9.46416	No, Trazione
SLV 10	2216	3088	361	0	0	0	0	8.21782	No, Trazione
SLV 6	3052	3030	371	0	0	0	0	8.21782	No, Trazione
SLV 5	3052	3030	371	0	0	0	0	8.21782	No, Trazione
SLV 9	2216	3088	361	0	0	0	0	8.21782	No, Trazione
SLV 8	-6057	-10570	-369	0	700.3	0.964	0	8.21782	No
SLV 7	-6057	-10570	-369	0	700.3	0.964	0	8.21782	No
SLV 2	840	-1798	124	0	0	0	0	9.46416	No, Trazione

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.617	SLU 31	Si
V_SLU	18.844	SLU 81	Si
PF_SLV	0	SLV 10	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 6	No
R_SLV	0	SLV 10	No



Maschio 211

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.448	-3.359	-10.863	-3.359	L5	L6	1.415	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ ₀	f _{v0}	μ	φ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLU 80	8.62	-12999	2064.99	32810	5492.61	2.66	Si
SLU 80	10.72	-11072	-1405.13	27947	5146.17	3.662	Si
SLU 84	8.62	-13078	2186.13	33008	5503.27	2.517	Si
SLU 84	10.72	-11151	-1448.29	28145	5163.46	3.565	Si
SLU 82	8.62	-12719	2147.72	32102	5452.29	2.539	Si
SLU 82	10.72	-10792	-1413.59	27239	5082.15	3.595	Si
SLU 73	8.62	-12440	2100.18	31399	5408.85	2.575	Si
SLU 73	10.72	-10513	-1401.63	26536	5015.18	3.578	Si
SLU 42	8.62	-11075	2031.3	27952	5146.68	2.534	Si
SLU 42	10.72	-9581	-1297.62	24183	4766.27	3.673	Si
SLU 76	8.62	-12799	2138.6	32305	5464.22	2.555	Si
SLU 76	10.72	-10872	-1436.33	27442	5100.88	3.551	Si
SLU 40	8.62	-10716	1992.88	27046	5064.16	2.541	Si
SLU 40	10.72	-9222	-1262.92	23276	4660.24	3.69	Si
SLU 34	8.62	-10796	1983.76	27250	5083.16	2.562	Si
SLU 34	10.72	-9303	-1285.66	23480	4684.52	3.644	Si
SLU 31	8.62	-10437	1945.35	26343	4996.26	2.568	Si
SLU 31	10.72	-8944	-1250.96	22573	4574.11	3.656	Si
SLU 78	8.62	-13167	2092.5	33233	5515.06	2.636	Si
SLU 78	10.72	-11240	-1428.56	28370	5182.78	3.628	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLV 5	8.62	-12344	3572.46	31157	6506.62	1.821	Si
SLV 5	10.72	-10949	-2250.02	27636	5994.6	2.664	Si
SLV 6	8.62	-12344	3572.46	31157	6506.62	1.821	Si
SLV 6	10.72	-10949	-2250.02	27636	5994.6	2.664	Si
SLV 2	8.62	-14621	6097.56	36903	7220.16	1.184	Si
SLV 2	10.72	-13122	-3845.41	33121	6767.52	1.76	Si
SLV 1	8.62	-14621	6097.56	36903	7220.16	1.184	Si
SLV 1	10.72	-13122	-3845.41	33121	6767.52	1.76	Si
SLV 16	8.62	-2438	-3816.77	0	0	0	No, e>l/2
SLV 16	10.72	-983	2200.71	0	0	0	No, e>l/2
SLV 15	8.62	-2438	-3816.77	0	0	0	No, e>l/2
SLV 15	10.72	-983	2200.71	0	0	0	No, e>l/2
SLV 4	8.62	-13311	5474.54	33596	6828.01	1.247	Si
SLV 4	10.72	-11754	-3502.06	29666	6296.76	1.798	Si
SLV 14	8.62	-3749	-3193.75	0	0	0	No, e>l/2
SLV 14	10.72	-2352	1857.36	0	0	0	No, e>l/2
SLV 3	8.62	-13311	5474.54	33596	6828.01	1.247	Si
SLV 3	10.72	-11754	-3502.06	29666	6296.76	1.798	Si
SLV 13	8.62	-3749	-3193.75	0	0	0	No, e>l/2
SLV 13	10.72	-2352	1857.36	0	0	0	No, e>l/2

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 80	8.62	-12999	1657	2064.99		32810	1.415	9930	3934			2.37	Si
SLU 80	10.72	-11072	1657	-1405.13		27947	1.415	9282	3677			2.22	Si
SLU 84	8.62	-13078	1735	2186.13		33008	1.415	9957	3945			2.27	Si
SLU 84	10.72	-11151	1735	-1448.29		28145	1.415	9308	3688			2.13	Si
SLU 34	8.62	-10796	1560	1983.76		27250	1.415	9189	3641			2.33	Si
SLU 34	10.72	-9303	1560	-1285.66		23480	1.415	8686	3441			2.21	Si
SLU 76	8.62	-12799	1707	2138.6		32305	1.415	9863	3908			2.29	Si
SLU 76	10.72	-10872	1707	-1436.33		27442	1.415	9214	3651			2.14	Si
SLU 42	8.62	-11075	1589	2031.3		27952	1.415	9283	3678			2.31	Si
SLU 42	10.72	-9581	1589	-1297.62		24183	1.415	8780	3479			2.19	Si
SLU 82	8.62	-12719	1700	2147.72		32102	1.415	9836	3897			2.29	Si
SLU 82	10.72	-10792	1700	-1413.59		27239	1.415	9187	3640			2.14	Si
SLU 73	8.62	-12440	1672	2100.18		31399	1.415	9742	3860			2.31	Si
SLU 73	10.72	-10513	1672	-1401.63		26536	1.415	9094	3603			2.15	Si
SLU 78	8.62	-13167	1681	2092.5		33233	1.415	9987	3957			2.35	Si
SLU 78	10.72	-11240	1681	-1428.56		28370	1.415	9338	3700			2.2	Si
SLU 75	8.62	-12808	1646	2054.09		32327	1.415	9866	3909			2.37	Si
SLU 75	10.72	-10881	1646	-1393.86		27464	1.415	9217	3652			2.22	Si
SLU 40	8.62	-10716	1554	1992.88		27046	1.415	9162	3630			2.34	Si
SLU 40	10.72	-9222	1554	-1262.92		23276	1.415	8659	3431			2.21	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 14	8.62	-3749	-2413	-3193.75		0	0	8333	0			0	No, Vu<V
SLV 14	10.72	-2352	-2087	1857.36		0	0	8333	0			0	No, Vu<V
SLV 15	8.62	-2438	-3279	-3816.77		0	0	8333	0			0	No, Vu<V
SLV 15	10.72	-983	-2587	2200.71		0	0	8333	0			0	No, Vu<V
SLV 1	8.62	-14621	5155	6097.56		59926	0.8714	16250	3965			0.77	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 1	10.72	-13122	4464	-3845.41		37692	1.2434	15872	5526			1.24	Si
SLV 4	8.62	-13311	4289	5474.54		53496	0.8886	16250	4043			0.94	No, Vu<V
SLV 4	10.72	-11754	3963	-3502.06		34166	1.2286	15167	5218			1.32	Si
SLV 6	8.62	-12344	3517	3572.46		35149	1.2543	15363	5396			1.53	Si
SLV 6	10.72	-10949	2755	-2250.02		27636	1.415	13861	5492			1.99	Si
SLV 16	8.62	-2438	-3279	-3816.77		0	0	8333	0			0	No, Vu<V
SLV 16	10.72	-983	-2587	2200.71		0	0	8333	0			0	No, Vu<V
SLV 3	8.62	-13311	4289	5474.54		53496	0.8886	16250	4043			0.94	No, Vu<V
SLV 3	10.72	-11754	3963	-3502.06		34166	1.2286	15167	5218			1.32	Si
SLV 13	8.62	-3749	-2413	-3193.75		0	0	8333	0			0	No, Vu<V
SLV 13	10.72	-2352	-2087	1857.36		0	0	8333	0			0	No, Vu<V
SLV 5	8.62	-12344	3517	3572.46		35149	1.2543	15363	5396			1.53	Si
SLV 5	10.72	-10949	2755	-2250.02		27636	1.415	13861	5492			1.99	Si
SLV 2	8.62	-14621	5155	6097.56		59926	0.8714	16250	3965			0.77	No, Vu<V
SLV 2	10.72	-13122	4464	-3845.41		37692	1.2434	15872	5526			1.24	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 15	143750	0.46	3221	-1276	175.73	173.95	0.99	No, M>Mu
SLV 16	143750	0.46	3221	-1276	175.73	173.95	0.99	No, M>Mu
SLV 14	143750	0.46	6534	-2589	175.73	343.04	1.95	Si
SLV 13	143750	0.46	6534	-2589	175.73	343.04	1.95	Si
SLV 11	143750	0.46	8839	-3502	175.73	454.81	2.59	Si
SLV 12	143750	0.46	8839	-3502	175.73	454.81	2.59	Si
SLV 8	143750	0.46	16967	-6722	175.73	810.45	4.61	Si
SLV 7	143750	0.46	16967	-6722	175.73	810.45	4.61	Si
SLV 9	143750	0.46	19882	-7877	175.73	923.37	5.25	Si
SLV 10	143750	0.46	19882	-7877	175.73	923.37	5.25	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 10	-4769	-9083	422	0	687.2	0.923	0	8.73249	No
SLV 7	-2824	-7977	-422	0	493.2	0.903	0	8.73249	No
SLV 9	-4769	-9083	422	0	687.2	0.923	0	8.73249	No
SLV 11	-3248	-4715	-415	0	535.2	0.908	0	8.73249	No
SLV 6	-4345	-12344	415	0	644.6	0.92	0	8.73249	No
SLV 8	-2824	-7977	-422	0	493.2	0.903	0	8.73249	No
SLV 12	-3248	-4715	-415	0	535.2	0.908	0	8.73249	No
SLV 5	-4345	-12344	415	0	644.6	0.92	0	8.73249	No
SLV 4	-2862	-13311	-138	0.018	496.9	0.904	0.29198	10.16227	No
SLV 3	-2862	-13311	-138	0.018	496.9	0.904	0.29198	10.16227	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.517	SLU 84	Si
V_SLU	2.125	SLU 84	Si
PF_SLV	0	SLV 13	No
V_SLV	0	SLV 13	No
PFFP_SLV	0.99	SLV 15	No
R_SLV	0	SLV 5	No

Maschio 212

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-6.268	-3.359	-6.268	1.046	L5	L6	4.405	0.14	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 55	8.62	-18091	2925.83	29335	25495.93	8.714	Si
SLU 55	12.17	-9377	2406.24	15205	16797.71	6.981	Si
SLU 23	8.62	-14515	2439.67	23536	22731.88	9.318	Si
SLU 23	12.17	-7426	2021.26	12042	13938.54	6.896	Si
SLU 44	8.62	-15711	2494.89	25476	23781.33	9.532	Si
SLU 44	12.17	-8158	2232.4	13228	15049.89	6.742	Si
SLU 2	8.62	-12587	2031.6	20410	20776.43	10.227	Si
SLU 2	12.17	-6501	1866.86	10542	12466.24	6.678	Si
SLU 5	8.62	-13146	2093.05	21316	21376.67	10.213	Si
SLU 5	12.17	-6985	1965.48	11326	13245.25	6.739	Si
SLU 26	8.62	-15074	2501.13	24442	23237.67	9.291	Si
SLU 26	12.17	-7910	2119.89	12826	14678.34	6.924	Si
SLU 65	8.62	-17639	2902.97	28602	25208.62	8.684	Si
SLU 65	12.17	-9083	2386.8	14728	16387.85	6.866	Si
SLU 47	8.62	-16270	2556.34	26382	24228.51	9.478	Si
SLU 47	12.17	-8641	2331.02	14012	15758.67	6.76	Si
SLU 68	8.62	-18198	2964.42	29508	25561.34	8.623	Si
SLU 68	12.17	-9566	2485.43	15512	17057.42	6.863	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 52	8.62	-17532	2864.38	28429	25137.97	8.776	Si
SLU 52	12.17	-8893	2307.61	14421	16120.12	6.986	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 7	8.62	-12326	5175.79	19986	22706.5	4.387	Si
SLV 7	12.17	-6820	-131.41	11059	13661.42	103.96	Si
SLV 10	8.62	-15051	-710.08	24406	26529.02	37.36	Si
SLV 10	12.17	-7286	3052.49	11814	14495.26	4.749	Si
SLV 1	8.62	-14228	2965.34	23071	25420.1	8.572	Si
SLV 1	12.17	-5937	2345.46	9627	12046.23	5.136	Si
SLV 2	8.62	-14228	2965.34	23071	25420.1	8.572	Si
SLV 2	12.17	-5937	2345.46	9627	12046.23	5.136	Si
SLV 5	8.62	-15123	179.11	24523	26623.97	148.645	Si
SLV 5	12.17	-6633	3276.72	10756	13323.41	4.066	Si
SLV 6	8.62	-15123	179.11	24523	26623.97	148.645	Si
SLV 6	12.17	-6633	3276.72	10756	13323.41	4.066	Si
SLV 11	8.62	-12254	4286.59	19870	22599.79	5.272	Si
SLV 11	12.17	-7473	-355.63	12117	14826.15	41.689	Si
SLV 8	8.62	-12326	5175.79	19986	22706.5	4.387	Si
SLV 8	12.17	-6820	-131.41	11059	13661.42	103.96	Si
SLV 12	8.62	-12254	4286.59	19870	22599.79	5.272	Si
SLV 12	12.17	-7473	-355.63	12117	14826.15	41.689	Si
SLV 9	8.62	-15051	-710.08	24406	26529.02	37.36	Si
SLV 9	12.17	-7286	3052.49	11814	14495.26	4.749	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 34	8.62	-16894	-999	2870.62		27395	4.405	9208	5679			5.68	Si
SLU 34	12.17	-8645	-353	2195.1		14019	4.405	7425	4579			12.97	Si
SLU 26	8.62	-15074	-1028	2501.13		24442	4.405	8815	5436			5.29	Si
SLU 26	12.17	-7910	-383	2119.89		12826	4.405	7266	4481			11.69	Si
SLU 31	8.62	-16336	-1005	2809.16		26489	4.405	9087	5604			5.58	Si
SLU 31	12.17	-8162	-358	2096.48		13235	4.405	7320	4514			12.59	Si
SLU 10	8.62	-14408	-1029	2401.09		23363	4.405	8671	5347			5.2	Si
SLU 10	12.17	-7237	-384	1942.07		11735	4.405	7120	4391			11.42	Si
SLU 44	8.62	-15711	-1013	2494.89		25476	4.405	8952	5521			5.45	Si
SLU 44	12.17	-8158	-376	2232.4		13228	4.405	7319	4514			12.02	Si
SLU 5	8.62	-13146	-1052	2093.05		21316	4.405	8398	5179			4.92	Si
SLU 5	12.17	-6985	-409	1965.48		11326	4.405	7066	4357			10.64	Si
SLU 47	8.62	-16270	-1007	2556.34		26382	4.405	9073	5595			5.56	Si
SLU 47	12.17	-8641	-370	2331.02		14012	4.405	7424	4578			12.37	Si
SLU 2	8.62	-12587	-1058	2031.6		20410	4.405	8277	5104			4.82	Si
SLU 2	12.17	-6501	-415	1866.86		10542	4.405	6961	4293			10.35	Si
SLU 23	8.62	-14515	-1033	2439.67		23536	4.405	8694	5361			5.19	Si
SLU 23	12.17	-7426	-389	2021.26		12042	4.405	7161	4416			11.35	Si
SLU 13	8.62	-14967	-1024	2462.54		24269	4.405	8791	5422			5.3	Si
SLU 13	12.17	-7721	-379	2040.69		12519	4.405	7225	4456			11.76	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 6	8.62	-15123	-9366	179.11		24523	4.405	13238	8164			0.87	No, Vu<V
SLV 6	12.17	-6633	-7465	3276.72		10756	4.405	10484	6466			0.87	No, Vu<V
SLV 10	8.62	-15051	-9219	-710.08		24406	4.405	13215	8149			0.88	No, Vu<V
SLV 10	12.17	-7286	-6980	3052.49		11814	4.405	10696	6596			0.95	No, Vu<V
SLV 8	8.62	-12326	9606	5175.79		19986	4.405	12331	7604			0.79	No, Vu<V
SLV 8	12.17	-6820	7334	-131.41		11059	4.405	10545	6503			0.89	No, Vu<V
SLV 15	8.62	-13149	3284	1500.36		21321	4.405	12598	7769			2.37	Si
SLV 15	12.17	-8169	3205	575.62		13246	4.405	10982	6773			2.11	Si
SLV 7	8.62	-12326	9606	5175.79		19986	4.405	12331	7604			0.79	No, Vu<V
SLV 7	12.17	-6820	7334	-131.41		11059	4.405	10545	6503			0.89	No, Vu<V
SLV 5	8.62	-15123	-9366	179.11		24523	4.405	13238	8164			0.87	No, Vu<V
SLV 5	12.17	-6633	-7465	3276.72		10756	4.405	10484	6466			0.87	No, Vu<V
SLV 11	8.62	-12254	9753	4286.59		19870	4.405	12307	7590			0.78	No, Vu<V
SLV 11	12.17	-7473	7819	-355.63		12117	4.405	10757	6634			0.85	No, Vu<V
SLV 9	8.62	-15051	-9219	-710.08		24406	4.405	13215	8149			0.88	No, Vu<V
SLV 9	12.17	-7286	-6980	3052.49		11814	4.405	10696	6596			0.95	No, Vu<V
SLV 16	8.62	-13149	3284	1500.36		21321	4.405	12598	7769			2.37	Si
SLV 16	12.17	-8169	3205	575.62		13246	4.405	10982	6773			2.11	Si
SLV 12	8.62	-12254	9753	4286.59		19870	4.405	12307	7590			0.78	No, Vu<V
SLV 12	12.17	-7473	7819	-355.63		12117	4.405	10757	6634			0.85	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 3	143750	0.46	13322	-8216	292.61	512.4	1.75	Si
SLV 4	143750	0.46	13322	-8216	292.61	512.4	1.75	Si
SLV 1	143750	0.46	13979	-8621	292.61	534.43	1.83	Si
SLV 2	143750	0.46	13979	-8621	292.61	534.43	1.83	Si
SLV 7	143750	0.46	15465	-9537	292.61	583.11	1.99	Si
SLV 8	143750	0.46	15465	-9537	292.61	583.11	1.99	Si
SLV 5	143750	0.46	17656	-10888	292.61	652.05	2.23	Si
SLV 6	143750	0.46	17656	-10888	292.61	652.05	2.23	Si
SLV 11	143750	0.46	17959	-11075	292.61	661.33	2.26	Si
SLV 12	143750	0.46	17959	-11075	292.61	661.33	2.26	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.03 Ta = 0.1503

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
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Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 11	-7473	-12254	-25	0.021	1074.7	0.924	0.33272	18.46841	No
SLV 12	-7473	-12254	-25	0.021	1074.7	0.924	0.33272	18.46841	No
SLV 6	-6633	-15123	25	0.021	990.4	0.919	0.33731	18.46841	No
SLV 5	-6633	-15123	25	0.021	990.4	0.919	0.33731	18.46841	No
SLV 15	-8169	-13149	-13	0.022	1144.8	0.927	0.34914	18.98212	No
SLV 16	-8169	-13149	-13	0.022	1144.8	0.927	0.34914	18.98212	No
SLV 9	-7286	-15051	22	0.022	1055.9	0.923	0.33992	18.46841	No
SLV 10	-7286	-15051	22	0.022	1055.9	0.923	0.33992	18.46841	No
SLV 7	-6820	-12326	-22	0.022	1009.2	0.92	0.34186	18.46841	No
SLV 8	-6820	-12326	-22	0.022	1009.2	0.92	0.34186	18.46841	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.678	SLU 2	Si
V_SLU	4.825	SLU 2	Si
PF_SLV	4.066	SLV 5	Si
V_SLV	0.778	SLV 11	No
PFFP_SLV	1.751	SLV 3	Si
R_SLV	0.018	SLV 11	No

Maschio 213

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-7.413	-3.359	-8.548	-3.359	L5	L6	1.135	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	$\tau 0$	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLU 55	9.52	-7198	207.06	22649	2949	14.243	Si
SLU 55	11.32	-5675	-619.92	17856	2514.42	4.056	Si
SLU 68	9.52	-7266	235.3	22862	2966.01	12.605	Si
SLU 68	11.32	-5758	-650.49	18119	2540.89	3.906	Si
SLU 65	9.52	-6954	229.71	21881	2886.23	12.565	Si
SLU 65	11.32	-5451	-620.3	17152	2442.07	3.937	Si
SLU 5	9.52	-5322	229.57	16746	2399.32	10.451	Si
SLU 5	11.32	-4218	-514.25	13274	2003.85	3.897	Si
SLU 76	9.52	-7770	214.71	24449	3085.97	14.373	Si
SLU 76	11.32	-6250	-666.16	19667	2690.6	4.039	Si
SLU 44	9.52	-6382	222.06	20081	2728.79	12.289	Si
SLU 44	11.32	-4875	-574.06	15341	2245.71	3.912	Si
SLU 23	9.52	-5582	231.63	17565	2484.81	10.727	Si
SLU 23	11.32	-4487	-530.29	14119	2104.98	3.969	Si
SLU 47	9.52	-6693	227.65	21062	2816.39	12.372	Si
SLU 47	11.32	-5182	-604.26	16307	2352.28	3.893	Si
SLU 2	9.52	-5010	223.98	15765	2292.96	10.237	Si
SLU 2	11.32	-3911	-484.06	12307	1884.29	3.893	Si
SLU 26	9.52	-5894	237.22	18547	2583.34	10.89	Si
SLU 26	11.32	-4794	-560.49	15085	2216.78	3.955	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLV 4	9.52	-3381	2633.14	0	0	0	No, $e > l/2$
SLV 4	11.32	-5628	-2285.63	17708	2730.87	1.195	Si
SLV 11	9.52	-5025	-1516.56	15811	2482.5	1.637	Si
SLV 11	11.32	-1630	785.19	5129	886.15	1.129	Si
SLV 12	9.52	-5025	-1516.56	15811	2482.5	1.637	Si
SLV 12	11.32	-1630	785.19	5129	886.15	1.129	Si
SLV 2	9.52	-4016	3032.14	0	0	0	No, $e > l/2$
SLV 2	11.32	-6790	-2605.55	21365	3179.48	1.22	Si
SLV 16	9.52	-7050	-3034.85	22183	3274.46	1.079	Si
SLV 16	11.32	-1563	1864.48	0	0	0	No, $e > l/2$
SLV 13	9.52	-7685	-2635.85	24182	3498.18	1.327	Si
SLV 13	11.32	-2725	1544.55	8575	1438.05	0.931	No, $M > Mu$
SLV 1	9.52	-4016	3032.14	0	0	0	No, $e > l/2$
SLV 1	11.32	-6790	-2605.55	21365	3179.48	1.22	Si
SLV 15	9.52	-7050	-3034.85	22183	3274.46	1.079	Si
SLV 15	11.32	-1563	1864.48	0	0	0	No, $e > l/2$
SLV 3	9.52	-3381	2633.14	0	0	0	No, $e > l/2$
SLV 3	11.32	-5628	-2285.63	17708	2730.87	1.195	Si
SLV 14	9.52	-7685	-2635.85	24182	3498.18	1.327	Si
SLV 14	11.32	-2725	1544.55	8575	1438.05	0.931	No, $M > Mu$

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	$\sigma 0$	σN	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 31	9.52	-6087	576	211.04		19152	1.135	8109	2577			4.47	Si
SLU 31	11.32	-4979	25	-545.96		15667	1.135	7644	2429			96.26	Si
SLU 13	9.52	-5826	542	208.98		18333	1.135	8000	2542			4.69	Si
SLU 13	11.32	-4710	45	-529.92		14822	1.135	7532	2394			53.37	Si
SLU 34	9.52	-6398	603	216.63		20133	1.135	8240	2619			4.34	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 34	11.32	-5286	22	-576.15		16633	1.135	7773	2470			114.32	Si
SLU 65	9.52	-6954	596	229.71		21881	1.135	8473	2693			4.52	Si
SLU 65	11.32	-5451	61	-620.3		17152	1.135	7843	2492			40.53	Si
SLU 68	9.52	-7266	622	235.3		22862	1.135	8604	2734			4.4	Si
SLU 68	11.32	-5758	58	-650.49		18119	1.135	7971	2533			43.78	Si
SLU 23	9.52	-5582	563	231.63		17565	1.135	7898	2510			4.45	Si
SLU 23	11.32	-4487	78	-530.29		14119	1.135	7438	2364			30.31	Si
SLU 73	9.52	-7458	609	209.12		23468	1.135	8685	2760			4.54	Si
SLU 73	11.32	-5943	9	-635.96		18701	1.135	8049	2558			292.6	Si
SLU 76	9.52	-7770	635	214.71		24449	1.135	8815	2802			4.41	Si
SLU 76	11.32	-6250	5	-666.16		19667	1.135	8178	2599			508.21	Si
SLU 26	9.52	-5894	590	237.22		18547	1.135	8028	2551			4.33	Si
SLU 26	11.32	-4794	74	-560.49		15085	1.135	7567	2405			32.34	Si
SLU 5	9.52	-5322	529	229.57		16746	1.135	7788	2475			4.68	Si
SLU 5	11.32	-4218	98	-514.25		13274	1.135	7325	2328			23.85	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 11	9.52	-5025	-2246	-1516.56		22515	0.797	12836	2865			1.28	Si
SLV 11	11.32	-1630	-1317	785.19		22624	0.2573	12858	926			0.7	No, Vu<V
SLV 16	9.52	-7050	-5005	-3034.85		61253	0.4111	16250	1870			0.37	No, Vu<V
SLV 16	11.32	-1563	-2264	1864.48		0	0	8333	0			0	No, Vu<V
SLV 3	9.52	-3381	4820	2633.14		0	0	8333	0			0	No, Vu<V
SLV 3	11.32	-5628	1685	-2285.63		41519	0.4841	16250	2203			1.31	Si
SLV 13	9.52	-7685	-4423	-2635.85		40749	0.6736	16250	3065			0.69	No, Vu<V
SLV 13	11.32	-2725	-1892	1544.55		0	0	8333	0			0	No, Vu<V
SLV 1	9.52	-4016	5402	3032.14		0	0	8333	0			0	No, Vu<V
SLV 1	11.32	-6790	2058	-2605.55		43988	0.5513	16250	2508			1.22	Si
SLV 12	9.52	-5025	-2246	-1516.56		22515	0.797	12836	2865			1.28	Si
SLV 12	11.32	-1630	-1317	785.19		22624	0.2573	12858	926			0.7	No, Vu<V
SLV 2	9.52	-4016	5402	3032.14		0	0	8333	0			0	No, Vu<V
SLV 2	11.32	-6790	2058	-2605.55		43988	0.5513	16250	2508			1.22	Si
SLV 14	9.52	-7685	-4423	-2635.85		40749	0.6736	16250	3065			0.69	No, Vu<V
SLV 14	11.32	-2725	-1892	1544.55		0	0	8333	0			0	No, Vu<V
SLV 4	9.52	-3381	4820	2633.14		0	0	8333	0			0	No, Vu<V
SLV 4	11.32	-5628	1685	-2285.63		41519	0.4841	16250	2203			1.31	Si
SLV 15	9.52	-7050	-5005	-3034.85		61253	0.4111	16250	1870			0.37	No, Vu<V
SLV 15	11.32	-1563	-2264	1864.48		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 4	143750	0.46	9020	-2867	140.95	371.71	2.64	Si
SLV 3	143750	0.46	9020	-2867	140.95	371.71	2.64	Si
SLV 7	143750	0.46	10311	-3277	140.95	420.03	2.98	Si
SLV 8	143750	0.46	10311	-3277	140.95	420.03	2.98	Si
SLV 1	143750	0.46	11356	-3609	140.95	458.29	3.25	Si
SLV 2	143750	0.46	11356	-3609	140.95	458.29	3.25	Si
SLV 12	143750	0.46	13752	-4370	140.95	543	3.85	Si
SLV 11	143750	0.46	13752	-4370	140.95	543	3.85	Si
SLV 5	143750	0.46	18096	-5751	140.95	685.88	4.87	Si
SLV 6	143750	0.46	18096	-5751	140.95	685.88	4.87	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 14	-1911	-3103	168	0	361	0.898	0	10.16227	No
SLV 8	-2455	-4111	-540	0	414.4	0.906	0	8.73249	No
SLV 10	-4309	-6594	536	0	599.9	0.928	0	8.73249	No
SLV 12	-1302	-2383	-535	0	302.5	0.89	0	8.73249	No
SLV 6	-5462	-8323	530	0	716.4	0.938	0	8.73249	No
SLV 7	-2455	-4111	-540	0	414.4	0.906	0	8.73249	No
SLV 13	-1911	-3103	168	0	361	0.898	0	10.16227	No
SLV 5	-5462	-8323	530	0	716.4	0.938	0	8.73249	No
SLV 11	-1302	-2383	-535	0	302.5	0.89	0	8.73249	No
SLV 9	-4309	-6594	536	0	599.9	0.928	0	8.73249	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.893	SLU 2	Si
V_SLU	4.326	SLU 26	Si
PF_SLV	0	SLV 1	No
V_SLV	0	SLV 1	No
PFFP_SLV	2.637	SLV 3	Si
R_SLV	0	SLV 5	No

Maschio 214

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.158	1.046	-5.158	5.811	L5	L6	4.765	0.14	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

Sismicad 12.19 - Licenza assegnata a Sidel ingegneria Srl - Via Isonzo, 13 - Villanova di Castenaso (BO)



fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 61	8.62	-20206	-2979.51	30289	30240.16	10.149	Si
SLU 61	12.17	-11369	-343.47	17043	21420.35	62.365	Si
SLU 82	8.62	-22197	-3496.37	33274	31282.3	8.947	Si
SLU 82	12.17	-12464	-420.12	18683	22883.79	54.469	Si
SLU 75	8.62	-22888	-3086.02	34310	31562.81	10.228	Si
SLU 75	12.17	-13502	26.52	20239	24175.17	911.646	Si
SLU 83	8.62	-23356	-3100.96	35011	31728.88	10.232	Si
SLU 83	12.17	-13644	278.47	20452	24344.5	87.422	Si
SLU 40	8.62	-18573	-3199.7	27841	29125.75	9.103	Si
SLU 40	12.17	-10337	-473.6	15495	19942.61	42.109	Si
SLU 81	8.62	-22211	-3465.55	33295	31288.56	9.028	Si
SLU 81	12.17	-12455	-370.76	18670	22872.23	61.691	Si
SLU 73	8.62	-21516	-3195.17	32253	30964.83	9.691	Si
SLU 73	12.17	-12201	-321.57	18290	22542.76	70.102	Si
SLU 39	8.62	-18587	-3168.88	27862	29136.58	9.195	Si
SLU 39	12.17	-10328	-424.23	15482	19929.38	46.978	Si
SLU 31	8.62	-17891	-2898.5	26820	28591.75	9.864	Si
SLU 31	12.17	-10075	-375.04	15102	19552.7	52.134	Si
SLU 84	8.62	-23342	-3131.77	34990	31724.06	10.13	Si
SLU 84	12.17	-13653	229.1	20466	24355.12	106.306	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 10	8.62	-11568	-7283.35	17341	23649.23	3.247	Si
SLV 10	12.17	-7980	598.62	11962	17150.92	28.651	Si
SLV 9	8.62	-11568	-7283.35	17341	23649.23	3.247	Si
SLV 9	12.17	-7980	598.62	11962	17150.92	28.651	Si
SLV 12	8.62	-20441	3694.54	30642	36488.16	9.876	Si
SLV 12	12.17	-10172	-1033.02	15248	21210.39	20.532	Si
SLV 1	8.62	-11939	-4079.58	17897	24278.12	5.951	Si
SLV 1	12.17	-7687	886.82	11523	16587.61	18.705	Si
SLV 6	8.62	-10306	-7578.03	15449	21449.02	2.83	Si
SLV 6	12.17	-7491	995.21	11229	16206.64	16.285	Si
SLV 13	8.62	-16146	-3097.28	24204	30848.27	9.96	Si
SLV 13	12.17	-9318	-435.14	13968	19662.06	45.186	Si
SLV 14	8.62	-16146	-3097.28	24204	30848.27	9.96	Si
SLV 14	12.17	-9318	-435.14	13968	19662.06	45.186	Si
SLV 2	8.62	-11939	-4079.58	17897	24278.12	5.951	Si
SLV 2	12.17	-7687	886.82	11523	16587.61	18.705	Si
SLV 11	8.62	-20441	3694.54	30642	36488.16	9.876	Si
SLV 11	12.17	-10172	-1033.02	15248	21210.39	20.532	Si
SLV 5	8.62	-10306	-7578.03	15449	21449.02	2.83	Si
SLV 5	12.17	-7491	995.21	11229	16206.64	16.285	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 58	8.62	-21838	44	-1897.78		32736	4.765	9920	6618			149.02	Si
SLU 58	12.17	-13470	656	1135.82		20192	4.765	8248	5502			8.38	Si
SLU 71	8.62	-22262	0	-1663.92		33371	4.765	10005	6674			1000	Si
SLU 71	12.17	-13939	679	1365.91		20895	4.765	8342	5565			8.19	Si
SLU 37	8.62	-20205	124	-2117.97		30287	4.765	9594	6400			51.6	Si
SLU 37	12.17	-12438	642	1005.69		18644	4.765	8041	5364			8.36	Si
SLU 69	8.62	-22480	23	-1939.9		33698	4.765	10049	6703			293.59	Si
SLU 69	12.17	-14056	676	1031.86		21070	4.765	8365	5580			8.26	Si
SLU 77	8.62	-24047	134	-2690.62		36048	4.765	10362	6912			51.44	Si
SLU 77	12.17	-14682	720	725.11		22008	4.765	8490	5664			7.87	Si
SLU 70	8.62	-22466	25	-1970.72		33677	4.765	10046	6702			264.95	Si
SLU 70	12.17	-14065	665	982.5		21084	4.765	8367	5581			8.4	Si
SLU 80	8.62	-23815	114	-2445.45		35699	4.765	10315	6881			60.22	Si
SLU 80	12.17	-14573	712	1009.8		21846	4.765	8468	5649			7.94	Si
SLU 72	8.62	-22247	3	-1694.73		33349	4.765	10002	6672			1000	Si
SLU 72	12.17	-13948	668	1316.55		20908	4.765	8343	5566			8.33	Si
SLU 79	8.62	-23829	112	-2414.64		35720	4.765	10318	6883			61.56	Si
SLU 79	12.17	-14565	723	1059.16		21833	4.765	8467	5648			7.81	Si
SLU 78	8.62	-24033	137	-2721.43		36026	4.765	10359	6911			50.5	Si
SLU 78	12.17	-14691	708	675.75		22022	4.765	8492	5665			8	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 9	8.62	-11568	-8476	-7283.35		17341	4.765	11801	7873			0.93	No, Vu<V
SLV 9	12.17	-7980	-7773	598.62		11962	4.765	10726	7155			0.92	No, Vu<V
SLV 5	8.62	-10306	-9941	-7578.03		15449	4.765	11423	7620			0.77	No, Vu<V
SLV 5	12.17	-7491	-8204	995.21		11229	4.765	10579	7057			0.86	No, Vu<V
SLV 2	8.62	-11939	-5143	-4079.58		17897	4.765	11913	7947			1.55	Si
SLV 2	12.17	-7687	-2851	886.82		11523	4.765	10638	7097			2.49	Si
SLV 6	8.62	-10306	-9941	-7578.03		15449	4.765	11423	7620			0.77	No, Vu<V
SLV 6	12.17	-7491	-8204	995.21		11229	4.765	10579	7057			0.86	No, Vu<V
SLV 11	8.62	-20441	10116	3694.54		30642	4.765	14462	9647			0.95	No, Vu<V
SLV 11	12.17	-10172	8958	-1033.02		15248	4.765	11383	7594			0.85	No, Vu<V
SLV 10	8.62	-11568	-8476	-7283.35		17341	4.765	11801	7873			0.93	No, Vu<V
SLV 10	12.17	-7980	-7773	598.62		11962	4.765	10726	7155			0.92	No, Vu<V
SLV 7	8.62	-19179	8651	3399.85		28750	4.765	14083	9395			1.09	Si
SLV 7	12.17	-9683	8527	-636.43		14515	4.765	11236	7496			0.88	No, Vu<V
SLV 12	8.62	-20441	10116	3694.54		30642	4.765	14462	9647			0.95	No, Vu<V
SLV 12	12.17	-10172	8958	-1033.02		15248	4.765	11383	7594			0.85	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 8	8.62	-19179	8651	3399.85		28750	4.765	14083	9395			1.09	Si
SLV 8	12.17	-9683	8527	-636.43		14515	4.765	11236	7496			0.88	No, Vu<V
SLV 1	8.62	-11939	-5143	-4079.58		17897	4.765	11913	7947			1.55	Si
SLV 1	12.17	-7687	-2851	886.82		11523	4.765	10638	7097			2.49	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 10	143750	0.46	13884	-9262	316.52	574.68	1.82	Si
SLV 9	143750	0.46	13884	-9262	316.52	574.68	1.82	Si
SLV 6	143750	0.46	13953	-9308	316.52	577.15	1.82	Si
SLV 5	143750	0.46	13953	-9308	316.52	577.15	1.82	Si
SLV 13	143750	0.46	17052	-11375	316.52	685.15	2.16	Si
SLV 14	143750	0.46	17052	-11375	316.52	685.15	2.16	Si
SLV 2	143750	0.46	17280	-11528	316.52	692.81	2.19	Si
SLV 1	143750	0.46	17280	-11528	316.52	692.81	2.19	Si
SLV 16	143750	0.46	19836	-13232	316.52	775.9	2.45	Si
SLV 15	143750	0.46	19836	-13232	316.52	775.9	2.45	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.03 Ta = 0.1503

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 13	-9318	-16146	-32	0.021	1286.9	0.93	0.32173	18.98212	No
SLV 14	-9318	-16146	-32	0.021	1286.9	0.93	0.32173	18.98212	No
SLV 4	-8345	-14601	32	0.021	1188.8	0.925	0.32445	18.98212	No
SLV 3	-8345	-14601	32	0.021	1188.8	0.925	0.32445	18.98212	No
SLV 15	-9975	-18808	-23	0.021	1353.3	0.932	0.33163	18.98212	No
SLV 16	-9975	-18808	-23	0.021	1353.3	0.932	0.33163	18.98212	No
SLV 1	-7687	-11939	23	0.022	1122.7	0.922	0.34108	18.98212	No
SLV 2	-7687	-11939	23	0.022	1122.7	0.922	0.34108	18.98212	No
SLV 7	-9683	-19179	23	0.021	1323.7	0.931	0.33242	18.46841	No
SLV 8	-9683	-19179	23	0.021	1323.7	0.931	0.33242	18.46841	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.947	SLU 82	Si
V_SLU	7.813	SLU 79	Si
PF_SLV	2.83	SLV 5	Si
V_SLV	0.767	SLV 5	No
PFFP_SLV	1.816	SLV 9	Si
R_SLV	0.017	SLV 13	No

Maschio 215

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.158	5.811	-5.158	6.006	L5	L6	0.195	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	32000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 71	10.62	-2774	65.58	50813	101.77	1.552	Si
SLU 71	11.42	-2785	86.68	51009	101.51	1.171	Si
SLU 78	10.62	-2699	59.05	49437	103.46	1.752	Si
SLU 78	11.42	-2759	88.84	50527	102.14	1.15	Si
SLU 79	10.62	-2757	61.28	50501	102.17	1.667	Si
SLU 79	11.42	-2810	89.97	51474	100.87	1.121	Si
SLU 59	10.62	-2613	59.88	47859	105.09	1.755	Si
SLU 59	11.42	-2639	83.38	48333	104.63	1.255	Si
SLU 77	10.62	-2708	59.28	49592	103.28	1.742	Si
SLU 77	11.42	-2767	89.1	50685	101.93	1.144	Si
SLU 80	10.62	-2749	61.05	50346	102.37	1.677	Si
SLU 80	11.42	-2802	89.72	51316	101.09	1.127	Si
SLU 72	10.62	-2766	65.36	50657	101.97	1.56	Si
SLU 72	11.42	-2776	86.42	50850	101.72	1.177	Si
SLU 58	10.62	-2622	60.11	48014	104.94	1.746	Si
SLU 58	11.42	-2648	83.63	48491	104.47	1.249	Si
SLU 70	10.62	-2716	63.35	49749	103.09	1.627	Si
SLU 70	11.42	-2733	85.55	50062	102.72	1.201	Si
SLU 69	10.62	-2725	63.58	49904	102.91	1.619	Si
SLU 69	11.42	-2742	85.8	50220	102.52	1.195	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 6	10.62	-229	-40.22	0	0	0	No, e>l/2
SLV 6	11.42	-706	54.62	12933	61.56	1.127	Si
SLV 8	10.62	-2725	102.92	49901	157.16	1.527	Si
SLV 8	11.42	-2273	40.19	41635	146.12	3.635	Si
SLV 11	10.62	-2898	108.08	53083	159.82	1.479	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 11	11.42	-2445	45.98	44776	151.02	3.285	Si
SLV 14	10.62	-1479	21.04	27089	112.24	5.334	Si
SLV 14	11.42	-1626	62.1	29783	119.9	1.931	Si
SLV 5	10.62	-229	-40.22	0	0	0	No, $e > l/2$
SLV 5	11.42	-706	54.62	12933	61.56	1.127	Si
SLV 12	10.62	-2898	108.08	53083	159.82	1.479	Si
SLV 12	11.42	-2445	45.98	44776	151.02	3.285	Si
SLV 13	10.62	-1479	21.04	27089	112.24	5.334	Si
SLV 13	11.42	-1626	62.1	29783	119.9	1.931	Si
SLV 7	10.62	-2725	102.92	49901	157.16	1.527	Si
SLV 7	11.42	-2273	40.19	41635	146.12	3.635	Si
SLV 10	10.62	-403	-35.07	7380	36.91	1.053	Si
SLV 10	11.42	-878	60.41	16073	74.31	1.23	Si
SLV 9	10.62	-403	-35.07	7380	36.91	1.053	Si
SLV 9	11.42	-878	60.41	16073	74.31	1.23	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 69	10.62	-2725	240	63.58		49904	0.195	10833	591			2.46	Si
SLU 69	11.42	-2742	-327	85.8		50220	0.195	10833	591			1.81	Si
SLU 79	10.62	-2757	230	61.28		50501	0.195	10833	591			2.57	Si
SLU 79	11.42	-2810	-344	89.97		51474	0.195	10833	591			1.72	Si
SLU 71	10.62	-2774	248	65.58		50813	0.195	10833	591			2.39	Si
SLU 71	11.42	-2785	-330	86.68		51009	0.195	10833	591			1.79	Si
SLU 58	10.62	-2622	227	60.11		48014	0.195	10833	591			2.61	Si
SLU 58	11.42	-2648	-319	83.63		48491	0.195	10833	591			1.85	Si
SLU 72	10.62	-2766	247	65.36		50657	0.195	10833	591			2.4	Si
SLU 72	11.42	-2776	-329	86.42		50850	0.195	10833	591			1.8	Si
SLU 80	10.62	-2749	230	61.05		50346	0.195	10833	591			2.57	Si
SLU 80	11.42	-2802	-343	89.72		51316	0.195	10833	591			1.73	Si
SLU 70	10.62	-2716	239	63.35		49749	0.195	10833	591			2.47	Si
SLU 70	11.42	-2733	-326	85.55		50062	0.195	10833	591			1.81	Si
SLU 78	10.62	-2699	222	59.05		49437	0.195	10833	591			2.66	Si
SLU 78	11.42	-2759	-340	88.84		50527	0.195	10833	591			1.74	Si
SLU 59	10.62	-2613	226	59.88		47859	0.195	10833	591			2.62	Si
SLU 59	11.42	-2639	-318	83.38		48333	0.195	10833	591			1.86	Si
SLU 77	10.62	-2708	223	59.28		49592	0.195	10833	591			2.65	Si
SLU 77	11.42	-2767	-341	89.1		50685	0.195	10833	591			1.74	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 14	10.62	-1479	77	21.04		27089	0.195	13751	751			9.71	Si
SLV 14	11.42	-1626	-251	62.1		32641	0.1779	14861	740			2.95	Si
SLV 11	10.62	-2898	431	108.08		57305	0.1806	16250	822			1.9	Si
SLV 11	11.42	-2445	-125	45.98		44776	0.195	16250	887			7.08	Si
SLV 6	10.62	-229	-177	-40.22		0	0	8333	0			0	No, $V_u < V$
SLV 6	11.42	-706	-260	54.62		41733	0.0604	16250	275			1.06	Si
SLV 9	10.62	-403	-154	-35.07		45807	0.0314	16250	143			0.93	No, $V_u < V$
SLV 9	11.42	-878	-281	60.41		36443	0.086	15622	376			1.34	Si
SLV 7	10.62	-2725	409	102.92		54309	0.1792	16250	815			1.99	Si
SLV 7	11.42	-2273	-104	40.19		41635	0.195	16250	887			8.52	Si
SLV 5	10.62	-229	-177	-40.22		0	0	8333	0			0	No, $V_u < V$
SLV 5	11.42	-706	-260	54.62		41733	0.0604	16250	275			1.06	Si
SLV 13	10.62	-1479	77	21.04		27089	0.195	13751	751			9.71	Si
SLV 13	11.42	-1626	-251	62.1		32641	0.1779	14861	740			2.95	Si
SLV 10	10.62	-403	-154	-35.07		45807	0.0314	16250	143			0.93	No, $V_u < V$
SLV 10	11.42	-878	-281	60.41		36443	0.086	15622	376			1.34	Si
SLV 8	10.62	-2725	409	102.92		54309	0.1792	16250	815			1.99	Si
SLV 8	11.42	-2273	-104	40.19		41635	0.195	16250	887			8.52	Si
SLV 12	10.62	-2898	431	108.08		57305	0.1806	16250	822			1.9	Si
SLV 12	11.42	-2445	-125	45.98		44776	0.195	16250	887			7.08	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 5	143750	0.46	0	-26	24.78	0	0	No, $e > t/2$
SLV 6	143750	0.46	0	-26	24.78	0	0	No, $e > t/2$
SLV 10	143750	0.46	0	-86	24.78	0	0	No, $e > t/2$
SLV 9	143750	0.46	0	-86	24.78	0	0	No, $e > t/2$
SLV 2	143750	0.46	6137	-335	24.78	44.56	1.8	Si
SLV 1	143750	0.46	6137	-335	24.78	44.56	1.8	Si
SLV 13	143750	0.46	9815	-536	24.78	69	2.78	Si
SLV 14	143750	0.46	9815	-536	24.78	69	2.78	Si
SLV 4	143750	0.46	12096	-660	24.78	83.31	3.36	Si
SLV 3	143750	0.46	12096	-660	24.78	83.31	3.36	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 1	-506	307	5	0	0	0	0	10.16227	No, Trazione
SLV 10	-516	146	-8	0	0	0	0	8.73249	No, Trazione
SLV 6	-443	542	-3	0	0	0	0	8.73249	No, Trazione
SLV 9	-516	146	-8	0	0	0	0	8.73249	No, Trazione
SLV 5	-443	542	-3	0	0	0	0	8.73249	No, Trazione
SLV 2	-506	307	5	0	0	0	0	10.16227	No, Trazione
SLV 14	-749	-1013	-9	0.037	104	0.929	0.58485	10.16227	No
SLV 13	-749	-1013	-9	0.037	104	0.929	0.58485	10.16227	No
SLV 4	-632	-290	9	0.037	92.2	0.922	0.58579	10.16227	No
SLV 3	-632	-290	9	0.037	92.2	0.922	0.58579	10.16227	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.121	SLU 79	Si
V_SLU	1.722	SLU 79	Si
PF_SLV	0	SLV 5	No
V_SLV	0	SLV 5	No
PFFP_SLV	0	SLV 5	No
R_SLV	0	SLV 10	No

Maschio 216

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.158	6.506	-5.158	6.521	L5	L6	0.015	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLU 37	10.62	-389	-0.01	92592	0	0	No, Rottura per schiacciamento
SLU 37	11.42	-383	0.01	91100	0	0	No, Rottura per schiacciamento
SLU 84	10.62	-394	-0.01	93768	0	0	No, Rottura per schiacciamento
SLU 84	11.42	-386	0.01	91845	0	0	No, Rottura per schiacciamento
SLU 28	10.62	-380	0	90421	0	0	No, Rottura per schiacciamento
SLU 28	11.42	-374	0.01	88929	0	0	No, Rottura per schiacciamento
SLU 30	10.62	-389	0	92518	0	0	No, Rottura per schiacciamento
SLU 30	11.42	-382	0.01	91027	0	0	No, Rottura per schiacciamento
SLU 62	10.62	-372	-0.01	88620	0	0	No, Rottura per schiacciamento
SLU 62	11.42	-364	0.01	86721	0	0	No, Rottura per schiacciamento
SLU 38	10.62	-387	-0.01	92196	0	0	No, Rottura per schiacciamento
SLU 38	11.42	-381	0.01	90705	0	0	No, Rottura per schiacciamento
SLU 36	10.62	-378	-0.01	90098	0	0	No, Rottura per schiacciamento
SLU 36	11.42	-372	0.01	88607	0	0	No, Rottura per schiacciamento
SLU 63	10.62	-371	-0.01	88225	0	0	No, Rottura per schiacciamento
SLU 63	11.42	-363	0.01	86325	0	0	No, Rottura per schiacciamento
SLU 35	10.62	-380	-0.01	90494	0	0	No, Rottura per schiacciamento
SLU 35	11.42	-374	0.01	89003	0	0	No, Rottura per schiacciamento
SLU 29	10.62	-390	0	92914	0	0	No, Rottura per schiacciamento
SLU 29	11.42	-384	0.01	91423	0	0	No, Rottura per schiacciamento

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLV 15	10.62	-360	-0.02	85697	0.81	53.43	Si
SLV 15	11.42	-358	0.07	85210	0.81	12.477	Si
SLV 10	10.62	-102	-0.07	24188	0.61	9.238	Si
SLV 10	11.42	-93	-0.05	22194	0.57	12.28	Si
SLV 11	10.62	-440	0.04	104828	0.47	11.131	Si
SLV 11	11.42	-438	0.08	104332	0.48	5.845	Si
SLV 7	10.62	-408	0.06	97035	0.63	10.716	Si
SLV 7	11.42	-404	0.06	96081	0.65	11.116	Si
SLV 12	10.62	-440	0.04	104828	0.47	11.131	Si
SLV 12	11.42	-438	0.08	104332	0.48	5.845	Si
SLV 5	10.62	-69	-0.05	16395	0.45	9.018	Si
SLV 5	11.42	-59	-0.07	13943	0.39	5.512	Si
SLV 8	10.62	-408	0.06	97035	0.63	10.716	Si
SLV 8	11.42	-404	0.06	96081	0.65	11.116	Si
SLV 6	10.62	-69	-0.05	16395	0.45	9.018	Si
SLV 6	11.42	-59	-0.07	13943	0.39	5.512	Si
SLV 16	10.62	-360	-0.02	85697	0.81	53.43	Si
SLV 16	11.42	-358	0.07	85210	0.81	12.477	Si
SLV 9	10.62	-102	-0.07	24188	0.61	9.238	Si
SLV 9	11.42	-93	-0.05	22194	0.57	12.28	Si



Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 60	10.62	-313	0	-0.01		74495	0.015	10833	46			1000	Si
SLU 60	11.42	-305	0	0.01		72596	0.015	10833	46			1000	Si
SLU 56	10.62	-423	0	-0.01		100786	0.015	10833	46			1000	Si
SLU 56	11.42	-415	0	0.01		98887	0.015	10833	46			1000	Si
SLU 59	10.62	-430	0	-0.01		102488	0.015	10833	46			1000	Si
SLU 59	11.42	-422	0	0.01		100589	0.015	10833	46			1000	Si
SLU 61	10.62	-311	0	-0.01		74099	0.015	10833	46			1000	Si
SLU 61	11.42	-303	0	0.01		72200	0.015	10833	46			1000	Si
SLU 53	10.62	-364	0	-0.01		86661	0.015	10833	46			1000	Si
SLU 53	11.42	-356	0	0.01		84761	0.015	10833	46			1000	Si
SLU 54	10.62	-362	0	-0.01		86265	0.015	10833	46			1000	Si
SLU 54	11.42	-354	0	0.01		84366	0.015	10833	46			1000	Si
SLU 58	10.62	-432	0	-0.01		102884	0.015	10833	46			1000	Si
SLU 58	11.42	-424	0	0.01		100984	0.015	10833	46			1000	Si
SLU 1	10.62	-248	0	0		59120	0.015	10833	46			1000	Si
SLU 1	11.42	-242	0	0.01		57653	0.015	10833	46			1000	Si
SLU 55	10.62	-370	0	-0.01		88099	0.015	10833	46			1000	Si
SLU 55	11.42	-362	0	0.01		86200	0.015	10833	46			1000	Si
SLU 57	10.62	-422	0	-0.01		100390	0.015	10833	46			1000	Si
SLU 57	11.42	-414	0	0.01		98491	0.015	10833	46			1000	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 15	10.62	-360	0	-0.02		85697	0.015	16250	68			1000	Si
SLV 15	11.42	-358	0	0.07		85210	0.015	16250	68			273.72	Si
SLV 5	10.62	-69	0	-0.05		16395	0.015	11612	49			245.28	Si
SLV 5	11.42	-59	0	-0.07		13943	0.015	11122	47			143.18	Si
SLV 8	10.62	-408	0	0.06		97035	0.015	16250	68			293.71	Si
SLV 8	11.42	-404	0	0.06		96081	0.015	16250	68			262.14	Si
SLV 10	10.62	-102	0	-0.07		24188	0.015	13171	55			215.96	Si
SLV 10	11.42	-93	0	-0.05		22194	0.015	12772	54			226.74	Si
SLV 11	10.62	-440	0	0.04		104828	0.015	16250	68			389.86	Si
SLV 11	11.42	-438	0	0.08		104332	0.015	16250	68			194.98	Si
SLV 6	10.62	-69	0	-0.05		16395	0.015	11612	49			245.28	Si
SLV 6	11.42	-59	0	-0.07		13943	0.015	11122	47			143.18	Si
SLV 7	10.62	-408	0	0.06		97035	0.015	16250	68			293.71	Si
SLV 7	11.42	-404	0	0.06		96081	0.015	16250	68			262.14	Si
SLV 16	10.62	-360	0	-0.02		85697	0.015	16250	68			1000	Si
SLV 16	11.42	-358	0	0.07		85210	0.015	16250	68			273.72	Si
SLV 12	10.62	-440	0	0.04		104828	0.015	16250	68			389.86	Si
SLV 12	11.42	-438	0	0.08		104332	0.015	16250	68			194.98	Si
SLV 9	10.62	-102	0	-0.07		24188	0.015	13171	55			215.96	Si
SLV 9	11.42	-93	0	-0.05		22194	0.015	12772	54			226.74	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 5	143750	0.46	0	-3	1.91	0	0	No, $e > t/2$
SLV 4	143750	0.46	0	-11	1.91	0	0	No, $e > t/2$
SLV 10	143750	0.46	0	-5	1.91	0	0	No, $e > t/2$
SLV 3	143750	0.46	0	-11	1.91	0	0	No, $e > t/2$
SLV 14	143750	0.46	0	-13	1.91	0	0	No, $e > t/2$
SLV 6	143750	0.46	0	-3	1.91	0	0	No, $e > t/2$
SLV 13	143750	0.46	0	-13	1.91	0	0	No, $e > t/2$
SLV 2	143750	0.46	0	-6	1.91	0	0	No, $e > t/2$
SLV 1	143750	0.46	0	-6	1.91	0	0	No, $e > t/2$
SLV 9	143750	0.46	0	-5	1.91	0	0	No, $e > t/2$

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 1	-10	-89	2	0	3.4	0.891	0	10.16227	No
SLV 3	-14	-152	2	0	3.7	0.889	0	10.16227	No
SLV 13	-21	49	-2	0	0	0	0	10.16227	No, Trazione
SLV 14	-21	49	-2	0	0	0	0	10.16227	No, Trazione
SLV 9	-12	74	-1	0	0	0	0	8.73249	No, Trazione
SLV 6	-9	32	0	0	0	0	0	8.73249	No, Trazione
SLV 10	-12	74	-1	0	0	0	0	8.73249	No, Trazione
SLV 5	-9	32	0	0	0	0	0	8.73249	No, Trazione
SLV 2	-10	-89	2	0	3.4	0.891	0	10.16227	No
SLV 4	-14	-152	2	0	3.7	0.889	0	10.16227	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0	SLU 6	No
V_SLU	1000	SLU 1	Si
PF_SLV	5.512	SLV 5	Si
V_SLV	143.176	SLV 5	Si
PFFP_SLV	0	SLV 1	No
R_SLV	0	SLV 14	No

Maschio 217

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-6.008	-3.359	-6.513	-3.359	L5	L6	0.505	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 84	10.62	-3870	-122.69	27366	648.82	5.288	Si
SLU 84	11.42	-3301	-132.02	23348	594.68	4.504	Si
SLU 79	10.62	-4043	-130.29	28589	662.49	5.085	Si
SLU 79	11.42	-3475	-134.66	24576	612.73	4.55	Si
SLU 78	10.62	-3980	-123.36	28150	657.74	5.332	Si
SLU 78	11.42	-3392	-138.36	23989	604.26	4.367	Si
SLU 70	10.62	-3660	-114.49	25882	630.47	5.507	Si
SLU 70	11.42	-3052	-124.31	21583	566.41	4.556	Si
SLU 36	10.62	-3369	-101.03	23826	601.85	5.957	Si
SLU 36	11.42	-2911	-122.04	20587	549.26	4.501	Si
SLU 77	10.62	-4123	-131.4	29159	668.41	5.087	Si
SLU 77	11.42	-3554	-139.01	25133	620.47	4.463	Si
SLU 75	10.62	-3813	-120	26964	644.04	5.367	Si
SLU 75	11.42	-3234	-130.36	22874	587.35	4.506	Si
SLU 38	10.62	-3288	-99.92	23256	593.26	5.938	Si
SLU 38	11.42	-2832	-117.68	20030	539.29	4.583	Si
SLU 76	10.62	-3637	-113.53	25722	628.37	5.535	Si
SLU 76	11.42	-3048	-125.56	21555	565.94	4.507	Si
SLU 80	10.62	-3900	-122.25	27581	651.31	5.328	Si
SLU 80	11.42	-3313	-134	23433	595.96	4.447	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 3	10.62	-436	482.17	0	0	0	No, e>l/2
SLV 3	11.42	-1948	-480.1	13778	436.46	0.909	No, M>Mu
SLV 7	10.62	-1446	182.23	10226	334.55	1.836	Si
SLV 7	11.42	-2950	-259	20864	617.72	2.385	Si
SLV 2	10.62	-778	416.36	0	0	0	No, e>l/2
SLV 2	11.42	-1399	-441.69	0	0	0	No, e>l/2
SLV 15	10.62	-4464	-594.19	31568	835.9	1.407	Si
SLV 15	11.42	-2982	279.66	21087	622.96	2.228	Si
SLV 4	10.62	-436	482.17	0	0	0	No, e>l/2
SLV 4	11.42	-1948	-480.1	13778	436.46	0.909	No, M>Mu
SLV 1	10.62	-778	416.36	0	0	0	No, e>l/2
SLV 1	11.42	-1399	-441.69	0	0	0	No, e>l/2
SLV 16	10.62	-4464	-594.19	31568	835.9	1.407	Si
SLV 16	11.42	-2982	279.66	21087	622.96	2.228	Si
SLV 8	10.62	-1446	182.23	10226	334.55	1.836	Si
SLV 8	11.42	-2950	-259	20864	617.72	2.385	Si
SLV 14	10.62	-4806	-660.01	33990	875.98	1.327	Si
SLV 14	11.42	-2433	318.08	17207	527.83	1.659	Si
SLV 13	10.62	-4806	-660.01	33990	875.98	1.327	Si
SLV 13	11.42	-2433	318.08	17207	527.83	1.659	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 58	10.62	-3699	-306	-121.93		26159	0.505	9043	1279			4.18	Si
SLU 58	11.42	-3132	7	-118.84		22152	0.505	8509	1203			171.11	Si
SLU 53	10.62	-3612	-302	-119.68		25543	0.505	8961	1267			4.2	Si
SLU 53	11.42	-3053	8	-115.2		21593	0.505	8435	1193			146.07	Si
SLU 74	10.62	-3955	-325	-128.04		27973	0.505	9285	1313			4.04	Si
SLU 74	11.42	-3396	26	-131.02		24018	0.505	8758	1238			47.98	Si
SLU 56	10.62	-3779	-307	-123.05		26729	0.505	9119	1289			4.2	Si
SLU 56	11.42	-3211	6	-123.19		22709	0.505	8583	1214			189.08	Si
SLU 81	10.62	-3844	-334	-127.36		27188	0.505	9181	1298			3.89	Si
SLU 81	11.42	-3305	43	-124.68		23377	0.505	8672	1226			28.6	Si
SLU 79	10.62	-4043	-329	-130.29		28589	0.505	9367	1325			4.02	Si
SLU 79	11.42	-3475	25	-134.66		24576	0.505	8832	1249			50.6	Si
SLU 77	10.62	-4123	-330	-131.4		29159	0.505	9443	1335			4.04	Si
SLU 77	11.42	-3554	24	-139.01		25133	0.505	8907	1259			52.33	Si
SLU 60	10.62	-3501	-310	-119.01		24758	0.505	8857	1252			4.03	Si
SLU 60	11.42	-2963	25	-108.86		20952	0.505	8349	1181			46.8	Si
SLU 62	10.62	-3669	-316	-122.37		25945	0.505	9015	1275			4.04	Si
SLU 62	11.42	-3120	23	-116.86		22068	0.505	8498	1202			51.18	Si
SLU 83	10.62	-4012	-339	-130.73		28375	0.505	9339	1321			3.9	Si
SLU 83	11.42	-3463	41	-132.68		24492	0.505	8821	1247			30.33	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, γM = 2

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 1	10.62	-778	1723	416.36		0	0	8333	0			0	No, Vu<V
SLV 1	11.42	-1399	-348	-441.69		0	0	8333	0			0	No, Vu<V
SLV 10	10.62	-3796	-1025	-360.06		28665	0.4729	14066	1863			1.82	Si
SLV 10	11.42	-1431	-399	96.97		10121	0.505	10357	1465			3.67	Si
SLV 16	10.62	-4464	-2171	-594.19		44511	0.3582	16250	1630			0.75	No, Vu<V
SLV 16	11.42	-2982	350	279.66		22366	0.4761	12807	1707			4.88	Si
SLV 15	10.62	-4464	-2171	-594.19		44511	0.3582	16250	1630			0.75	No, Vu<V
SLV 15	11.42	-2982	350	279.66		22366	0.4761	12807	1707			4.88	Si
SLV 2	10.62	-778	1723	416.36		0	0	8333	0			0	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 2	11.42	-1399	-348	-441.69		0	0	8333	0			0	No, Vu<V
SLV 9	10.62	-3796	-1025	-360.06		28665	0.4729	14066	1863			1.82	Si
SLV 9	11.42	-1431	-399	96.97		10121	0.505	10357	1465			3.67	Si
SLV 4	10.62	-436	1843	482.17		0	0	8333	0			0	No, Vu<V
SLV 4	11.42	-1948	-70	-480.1		382083	0.0182	16250	83			1.19	Si
SLV 14	10.62	-4806	-2291	-660.01		49677	0.3455	16250	1572			0.69	No, Vu<V
SLV 14	11.42	-2433	72	318.08		23787	0.3653	13091	1339			18.56	Si
SLV 13	10.62	-4806	-2291	-660.01		49677	0.3455	16250	1572			0.69	No, Vu<V
SLV 13	11.42	-2433	72	318.08		23787	0.3653	13091	1339			18.56	Si
SLV 3	10.62	-436	1843	482.17		0	0	8333	0			0	No, Vu<V
SLV 3	11.42	-1948	-70	-480.1		382083	0.0182	16250	83			1.19	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 8	143750	0.46	7978	-1128	62.71	147.62	2.35	Si
SLV 7	143750	0.46	7978	-1128	62.71	147.62	2.35	Si
SLV 3	143750	0.46	8036	-1136	62.71	148.62	2.37	Si
SLV 4	143750	0.46	8036	-1136	62.71	148.62	2.37	Si
SLV 11	143750	0.46	10653	-1506	62.71	192.51	3.07	Si
SLV 12	143750	0.46	10653	-1506	62.71	192.51	3.07	Si
SLV 2	143750	0.46	10761	-1522	62.71	194.27	3.1	Si
SLV 1	143750	0.46	10761	-1522	62.71	194.27	3.1	Si
SLV 16	143750	0.46	16954	-2397	62.71	289.06	4.61	Si
SLV 15	143750	0.46	16954	-2397	62.71	289.06	4.61	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 15	-1662	-1105	-4	0.046	241.2	0.922	0.72518	10.16227	No
SLV 16	-1662	-1105	-4	0.046	241.2	0.922	0.72518	10.16227	No
SLV 13	-1576	-1276	-1	0.048	232.6	0.92	0.75488	10.16227	No
SLV 14	-1576	-1276	-1	0.048	232.6	0.92	0.75488	10.16227	No
SLV 11	-1346	-1163	-7	0.046	209.6	0.914	0.72651	8.73249	No
SLV 12	-1346	-1163	-7	0.046	209.6	0.914	0.72651	8.73249	No
SLV 7	-990	-1384	-6	0.048	174.2	0.903	0.76844	8.73249	No
SLV 8	-990	-1384	-6	0.048	174.2	0.903	0.76844	8.73249	No
SLV 9	-1061	-1735	4	0.049	181.3	0.905	0.78471	8.73249	No
SLV 10	-1061	-1735	4	0.049	181.3	0.905	0.78471	8.73249	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.367	SLV 78	Si
V_SLV	3.89	SLV 81	Si
PF_SLV	0	SLV 1	No
V_SLV	0	SLV 1	No
PFFP_SLV	2.354	SLV 7	Si
R_SLV	0.071	SLV 15	No

Maschio 218

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-3.183	-3.359	-5.508	-3.359	L5	L6	2.325	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 52	10.62	-10833	609.66	16641	10020.82	16.437	Si
SLU 52	11.42	-9492	1345.05	14581	9059.38	6.735	Si
SLU 55	10.62	-11464	644.31	17610	10445.9	16.212	Si
SLU 55	11.42	-10111	1410.36	15532	9513.12	6.745	Si
SLU 84	10.62	-13194	757.81	20267	11521.62	15.204	Si
SLU 84	11.42	-11776	1594.41	18089	10649.4	6.679	Si
SLU 73	10.62	-11994	691.29	18424	10789.5	15.608	Si
SLU 73	11.42	-10616	1479.8	16307	9870.61	6.67	Si
SLU 76	10.62	-12625	725.94	19393	11182.46	15.404	Si
SLU 76	11.42	-11235	1545.11	17259	10293.84	6.662	Si
SLU 65	10.62	-11015	614.39	16920	10145.04	16.512	Si
SLU 65	11.42	-9653	1357.15	14827	9178.65	6.763	Si
SLU 80	10.62	-13405	759.51	20591	11644.03	15.331	Si
SLU 80	11.42	-11982	1607.16	18405	10781.78	6.709	Si
SLU 75	10.62	-13087	740.34	20103	11459.21	15.478	Si
SLU 75	11.42	-11665	1565.68	17918	10577.51	6.756	Si
SLU 82	10.62	-12563	723.16	19297	11144.38	15.411	Si
SLU 82	11.42	-11156	1529.09	17137	10240.84	6.697	Si
SLU 78	10.62	-13718	774.99	21072	11821.94	15.254	Si
SLU 78	11.42	-12284	1631	18870	10972.26	6.727	Si



Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 3	10.62	-9503	1952.58	14597	9727.23	4.982	Si
SLV 3	11.42	-7320	-2639.94	11244	7726.16	2.927	Si
SLV 13	10.62	-8065	-1003.45	12389	8424.99	8.396	Si
SLV 13	11.42	-8077	4726.13	12407	8435.96	1.785	Si
SLV 11	10.62	-5097	322.26	7830	5545.92	17.21	Si
SLV 11	11.42	-4600	1626.85	7066	5038.26	3.097	Si
SLV 1	10.62	-11413	1792.35	17532	11364.27	6.34	Si
SLV 1	11.42	-9088	-2353.07	13960	9357.52	3.977	Si
SLV 2	10.62	-11413	1792.35	17532	11364.27	6.34	Si
SLV 2	11.42	-9088	-2353.07	13960	9357.52	3.977	Si
SLV 14	10.62	-8065	-1003.45	12389	8424.99	8.396	Si
SLV 14	11.42	-8077	4726.13	12407	8435.96	1.785	Si
SLV 16	10.62	-6154	-843.21	9454	6600.97	7.828	Si
SLV 16	11.42	-6309	4439.26	9691	6752.37	1.521	Si
SLV 15	10.62	-6154	-843.21	9454	6600.97	7.828	Si
SLV 15	11.42	-6309	4439.26	9691	6752.37	1.521	Si
SLV 4	10.62	-9503	1952.58	14597	9727.23	4.982	Si
SLV 4	11.42	-7320	-2639.94	11244	7726.16	2.927	Si
SLV 12	10.62	-5097	322.26	7830	5545.92	17.21	Si
SLV 12	11.42	-4600	1626.85	7066	5038.26	3.097	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 76	10.62	-12625	-811	725.94		19393	2.325	8141	5300			6.53	Si
SLU 76	11.42	-11235	-470	1545.11		17259	2.325	7857	5115			10.89	Si
SLU 78	10.62	-13718	-796	774.99		21072	2.325	8365	5446			6.84	Si
SLU 78	11.42	-12284	-446	1631		18870	2.325	8071	5255			11.78	Si
SLU 73	10.62	-11994	-786	691.29		18424	2.325	8012	5216			6.63	Si
SLU 73	11.42	-10616	-467	1479.8		16307	2.325	7730	5032			10.77	Si
SLU 80	10.62	-13405	-800	759.51		20591	2.325	8301	5404			6.75	Si
SLU 80	11.42	-11982	-456	1607.16		18405	2.325	8010	5214			11.44	Si
SLU 65	10.62	-11015	-747	614.39		16920	2.325	7812	5085			6.8	Si
SLU 65	11.42	-9653	-455	1357.15		14827	2.325	7533	4904			10.77	Si
SLU 68	10.62	-11646	-772	649.04		17889	2.325	7941	5169			6.69	Si
SLU 68	11.42	-10272	-458	1422.46		15779	2.325	7659	4986			10.88	Si
SLU 47	10.62	-10485	-734	567.42		16106	2.325	7703	5015			6.83	Si
SLU 47	11.42	-9148	-450	1287.71		14052	2.325	7429	4836			10.75	Si
SLU 52	10.62	-10833	-748	609.66		16641	2.325	7774	5061			6.76	Si
SLU 52	11.42	-9492	-459	1345.05		14581	2.325	7500	4882			10.64	Si
SLU 84	10.62	-13194	-792	757.81		20267	2.325	8258	5376			6.79	Si
SLU 84	11.42	-11776	-458	1594.41		18089	2.325	7967	5187			11.33	Si
SLU 55	10.62	-11464	-773	644.31		17610	2.325	7904	5145			6.65	Si
SLU 55	11.42	-10111	-461	1410.36		15532	2.325	7626	4965			10.76	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 4	10.62	-9503	8390	1952.58		14597	2.325	11253	7326			0.87	No, Vu<V
SLV 4	11.42	-7320	6870	-2639.94		11244	2.325	10582	6889			1	Si
SLV 9	10.62	-11466	-5219	-211.86		17613	2.325	11856	7718			1.48	Si
SLV 9	11.42	-10493	-4217	2583.1		16119	2.325	11557	7524			1.78	Si
SLV 14	10.62	-8065	-9407	-1003.45		12389	2.325	10811	7038			0.75	No, Vu<V
SLV 14	11.42	-8077	-7509	4726.13		16654	1.7321	11664	5657			0.75	No, Vu<V
SLV 13	10.62	-8065	-9407	-1003.45		12389	2.325	10811	7038			0.75	No, Vu<V
SLV 13	11.42	-8077	-7509	4726.13		16654	1.7321	11664	5657			0.75	No, Vu<V
SLV 1	10.62	-11413	7044	1792.35		17532	2.325	11840	7708			1.09	Si
SLV 1	11.42	-9088	5722	-2353.07		13960	2.325	11125	7243			1.27	Si
SLV 3	10.62	-9503	8390	1952.58		14597	2.325	11253	7326			0.87	No, Vu<V
SLV 3	11.42	-7320	6870	-2639.94		11244	2.325	10582	6889			1	Si
SLV 16	10.62	-6154	-8061	-843.21		9454	2.325	10224	6656			0.83	No, Vu<V
SLV 16	11.42	-6309	-6361	4439.26		16368	1.3765	11607	4474			0.7	No, Vu<V
SLV 10	10.62	-11466	-5219	-211.86		17613	2.325	11856	7718			1.48	Si
SLV 10	11.42	-10493	-4217	2583.1		16119	2.325	11557	7524			1.78	Si
SLV 15	10.62	-6154	-8061	-843.21		9454	2.325	10224	6656			0.83	No, Vu<V
SLV 15	11.42	-6309	-6361	4439.26		16368	1.3765	11607	4474			0.7	No, Vu<V
SLV 2	10.62	-11413	7044	1792.35		17532	2.325	11840	7708			1.09	Si
SLV 2	11.42	-9088	5722	-2353.07		13960	2.325	11125	7243			1.27	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 11	143750	0.46	8254	-5374	288.74	701.49	2.43	Si
SLV 12	143750	0.46	8254	-5374	288.74	701.49	2.43	Si
SLV 8	143750	0.46	8501	-5534	288.74	720.86	2.5	Si
SLV 7	143750	0.46	8501	-5534	288.74	720.86	2.5	Si
SLV 15	143750	0.46	11386	-7412	288.74	941.03	3.26	Si
SLV 16	143750	0.46	11386	-7412	288.74	941.03	3.26	Si
SLV 4	143750	0.46	12207	-7947	288.74	1001.4	3.47	Si
SLV 3	143750	0.46	12207	-7947	288.74	1001.4	3.47	Si
SLV 13	143750	0.46	14317	-9320	288.74	1151.93	3.99	Si
SLV 14	143750	0.46	14317	-9320	288.74	1151.93	3.99	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 13	-6368	-10897	58	0.042	982.1	0.915	0.67114	10.16227	No
SLV 14	-6368	-10897	58	0.042	982.1	0.915	0.67114	10.16227	No
SLV 4	-6078	-6476	-58	0.042	953.1	0.913	0.67526	10.16227	No



Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 3	-6078	-6476	-58	0.042	953.1	0.913	0.67526	10.16227	No
SLV 10	-7925	-12486	96	0.038	1138.1	0.924	0.59902	8.73249	No
SLV 9	-7925	-12486	96	0.038	1138.1	0.924	0.59902	8.73249	No
SLV 8	-4522	-4886	-95	0.037	798.8	0.903	0.60339	8.73249	No
SLV 7	-4522	-4886	-95	0.037	798.8	0.903	0.60339	8.73249	No
SLV 6	-8165	-11781	76	0.04	1162.4	0.925	0.62834	8.73249	No
SLV 5	-8165	-11781	76	0.04	1162.4	0.925	0.62834	8.73249	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.662	SLU 76	Si
V_SLU	6.531	SLU 76	Si
PF_SLV	1.521	SLV 15	Si
V_SLV	0.703	SLV 15	No
PFFP_SLV	2.43	SLV 11	Si
R_SLV	0.066	SLV 13	No

Maschio 219

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.123	-3.359	-2.283	-3.359	L5	L6	2.16	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLU 83	9.52	-12911	-1267.35	21348	10289.7	8.119	Si
SLU 83	11.32	-12962	2198.2	21432	10315.76	4.693	Si
SLU 78	9.52	-13226	-1316	21868	10449.13	7.94	Si
SLU 78	11.32	-13357	2295.71	22085	10514.48	4.58	Si
SLU 42	9.52	-10682	-1239.82	17661	9034.92	7.287	Si
SLU 42	11.32	-11144	1994.75	18425	9312.82	4.669	Si
SLU 84	9.52	-12879	-1382.37	21295	10273.21	7.432	Si
SLU 84	11.32	-13060	2282.76	21595	10365.98	4.541	Si
SLU 73	9.52	-12120	-1356.36	20039	9869.16	7.276	Si
SLU 73	11.32	-12148	2152.02	20085	9884.58	4.593	Si
SLU 34	9.52	-10352	-1233.79	17116	8830.9	7.158	Si
SLU 34	11.32	-10741	1942.81	17759	9071.12	4.669	Si
SLU 75	9.52	-12796	-1296.01	21157	10230.09	7.894	Si
SLU 75	11.32	-12847	2216.91	21241	10256.58	4.627	Si
SLU 82	9.52	-12449	-1362.38	20584	10047.64	7.375	Si
SLU 82	11.32	-12550	2203.96	20751	10101.45	4.583	Si
SLU 76	9.52	-12549	-1376.35	20750	10100.95	7.339	Si
SLU 76	11.32	-12658	2230.82	20929	10158.12	4.554	Si
SLU 80	9.52	-13001	-1319.65	21496	10335.53	7.832	Si
SLU 80	11.32	-13102	2253.24	21664	10387.12	4.61	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma M = 2$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLV 1	9.52	-9069	2398.44	14995	8592.64	3.583	Si
SLV 1	11.32	-5927	-1904.07	9800	5887.84	3.092	Si
SLV 11	9.52	-4458	-1640.78	7371	4524.1	2.757	Si
SLV 11	11.32	-5778	1975.23	9554	5752.54	2.912	Si
SLV 12	9.52	-4458	-1640.78	7371	4524.1	2.757	Si
SLV 12	11.32	-5778	1975.23	9554	5752.54	2.912	Si
SLV 2	9.52	-9069	2398.44	14995	8592.64	3.583	Si
SLV 2	11.32	-5927	-1904.07	9800	5887.84	3.092	Si
SLV 14	9.52	-11392	-3980.4	18836	10406.54	2.614	Si
SLV 14	11.32	-13161	4899.62	21761	11682.4	2.384	Si
SLV 3	9.52	-6244	2447.83	10324	6173.82	2.522	Si
SLV 3	11.32	-3688	-2154.73	6098	3784.5	1.756	Si
SLV 16	9.52	-8567	-3931	14165	8179.5	2.081	Si
SLV 16	11.32	-10922	4648.96	18059	10052.43	2.162	Si
SLV 13	9.52	-11392	-3980.4	18836	10406.54	2.614	Si
SLV 13	11.32	-13161	4899.62	21761	11682.4	2.384	Si
SLV 15	9.52	-8567	-3931	14165	8179.5	2.081	Si
SLV 15	11.32	-10922	4648.96	18059	10052.43	2.162	Si
SLV 4	9.52	-6244	2447.83	10324	6173.82	2.522	Si
SLV 4	11.32	-3688	-2154.73	6098	3784.5	1.756	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	V par	M	$\sigma 0$	σN	l'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 78	9.52	-13226	-3750	-1316		21868	2.16	8471	5123			1.37	Si
SLU 78	11.32	-13357	-3722	2295.71		22085	2.16	8500	5141			1.38	Si
SLU 73	9.52	-12120	-3640	-1356.36		20039	2.16	8227	4976			1.37	Si
SLU 73	11.32	-12148	-3593	2152.02		20085	2.16	8234	4980			1.39	Si
SLU 76	9.52	-12549	-3743	-1376.35		20750	2.16	8322	5033			1.34	Si
SLU 76	11.32	-12658	-3696	2230.82		20929	2.16	8346	5048			1.37	Si
SLU 84	9.52	-12879	-3809	-1382.37		21295	2.16	8395	5077			1.33	Si
SLU 84	11.32	-13060	-3781	2282.76		21595	2.16	8435	5101			1.35	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 81	9.52	-12481	-3503	-1247.36		20637	2.16	8307	5024			1.43	Si
SLU 81	11.32	-12452	-3503	2119.4		20588	2.16	8301	5020			1.43	Si
SLU 42	9.52	-10682	-3366	-1239.82		17661	2.16	7910	4784			1.42	Si
SLU 42	11.32	-11144	-3338	1994.75		18425	2.16	8012	4846			1.45	Si
SLU 75	9.52	-12796	-3647	-1296.01		21157	2.16	8376	5066			1.39	Si
SLU 75	11.32	-12847	-3619	2216.91		21241	2.16	8388	5073			1.4	Si
SLU 82	9.52	-12449	-3706	-1362.38		20584	2.16	8300	5020			1.35	Si
SLU 82	11.32	-12550	-3678	2203.96		20751	2.16	8322	5033			1.37	Si
SLU 83	9.52	-12911	-3606	-1267.35		21348	2.16	8402	5081			1.41	Si
SLU 83	11.32	-12962	-3606	2198.2		21432	2.16	8413	5088			1.41	Si
SLU 80	9.52	-13001	-3710	-1319.65		21496	2.16	8422	5093			1.37	Si
SLU 80	11.32	-13102	-3682	2253.24		21664	2.16	8444	5107			1.39	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 12	9.52	-4458	-4426	-1640.78		7454	2.1358	9824	5875			1.33	Si
SLV 12	11.32	-5778	-4879	1975.23		9554	2.16	10244	6196			1.27	Si
SLV 16	9.52	-8567	-8020	-3931		16419	1.8634	11617	6061			0.76	No, Vu<V
SLV 16	11.32	-10922	-7359	4648.96		19871	1.9631	12307	6765			0.92	No, Vu<V
SLV 3	9.52	-6244	3276	2447.83		10805	2.0639	10494	6065			1.85	Si
SLV 3	11.32	-3688	2186	-2154.73		8856	1.4873	10105	4208			1.93	Si
SLV 2	9.52	-9069	3585	2398.44		14995	2.16	11332	6854			1.91	Si
SLV 2	11.32	-5927	2923	-1904.07		9800	2.16	10293	6225			2.13	Si
SLV 4	9.52	-6244	3276	2447.83		10805	2.0639	10494	6065			1.85	Si
SLV 4	11.32	-3688	2186	-2154.73		8856	1.4873	10105	4208			1.93	Si
SLV 14	9.52	-11392	-7712	-3980.4		18836	2.16	12100	7318			0.95	No, Vu<V
SLV 14	11.32	-13161	-6621	4899.62		22139	2.1231	12761	7586			1.15	Si
SLV 1	9.52	-9069	3585	2398.44		14995	2.16	11332	6854			1.91	Si
SLV 1	11.32	-5927	2923	-1904.07		9800	2.16	10293	6225			2.13	Si
SLV 15	9.52	-8567	-8020	-3931		16419	1.8634	11617	6061			0.76	No, Vu<V
SLV 15	11.32	-10922	-7359	4648.96		19871	1.9631	12307	6765			0.92	No, Vu<V
SLV 13	9.52	-11392	-7712	-3980.4		18836	2.16	12100	7318			0.95	No, Vu<V
SLV 13	11.32	-13161	-6621	4899.62		22139	2.1231	12761	7586			1.15	Si
SLV 11	9.52	-4458	-4426	-1640.78		7454	2.1358	9824	5875			1.33	Si
SLV 11	11.32	-5778	-4879	1975.23		9554	2.16	10244	6196			1.27	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 8	143750	0.46	6638	-4015	268.25	531.53	1.98	Si
SLV 7	143750	0.46	6638	-4015	268.25	531.53	1.98	Si
SLV 4	143750	0.46	8701	-5263	268.25	684.29	2.55	Si
SLV 3	143750	0.46	8701	-5263	268.25	684.29	2.55	Si
SLV 11	143750	0.46	8940	-5407	268.25	701.55	2.62	Si
SLV 12	143750	0.46	8940	-5407	268.25	701.55	2.62	Si
SLV 1	143750	0.46	12771	-7724	268.25	968.32	3.61	Si
SLV 2	143750	0.46	12771	-7724	268.25	968.32	3.61	Si
SLV 15	143750	0.46	16373	-9902	268.25	1200.54	4.48	Si
SLV 16	143750	0.46	16373	-9902	268.25	1200.54	4.48	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 8	-3506	-3067	-172	0.022	674.1	0.897	0.35407	8.73249	No
SLV 7	-3506	-3067	-172	0.022	674.1	0.897	0.35407	8.73249	No
SLV 12	-4482	-5028	-149	0.028	769.9	0.905	0.45081	8.73249	No
SLV 11	-4482	-5028	-149	0.028	769.9	0.905	0.45081	8.73249	No
SLV 9	-9555	-14981	172	0.031	1278.6	0.935	0.48418	8.73249	No
SLV 10	-9555	-14981	172	0.031	1278.6	0.935	0.48418	8.73249	No
SLV 5	-8579	-13019	149	0.033	1179.9	0.93	0.50807	8.73249	No
SLV 6	-8579	-13019	149	0.033	1179.9	0.93	0.50807	8.73249	No
SLV 14	-8919	-13786	86	0.039	1214.3	0.932	0.60141	10.16227	No
SLV 13	-8919	-13786	86	0.039	1214.3	0.932	0.60141	10.16227	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.541	SLU 84	Si
V_SLU	1.333	SLU 84	Si
PF_SLV	1.756	SLV 3	Si
V_SLV	0.756	SLV 15	No
PFFP_SLV	1.982	SLV 7	Si
R_SLV	0.041	SLV 7	No

Maschio 220

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-2.963	5.951	-5.158	5.951	L5	L6	2.195	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ_0	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2



Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 51	9.52	-12281	-2057.47	19983	10172.34	4.944	Si
SLU 51	11.32	-9450	49.37	15375	8413.52	170.414	Si
SLU 48	9.52	-12624	-2028.75	20540	10361.31	5.107	Si
SLU 48	11.32	-9792	-5.5	15933	8645.02	1000	Si
SLU 72	9.52	-13471	-2145.4	21919	10806.54	5.037	Si
SLU 72	11.32	-10611	68.05	17264	9177.09	134.858	Si
SLU 70	9.52	-13729	-2138.96	22339	10935.76	5.113	Si
SLU 70	11.32	-10868	55.01	17684	9338.64	169.768	Si
SLU 69	9.52	-13814	-2116.68	22477	10977.63	5.186	Si
SLU 69	11.32	-10953	13.18	17822	9391.15	712.415	Si
SLU 68	9.52	-12662	-1994.26	20602	10382.05	5.206	Si
SLU 68	11.32	-9801	36.39	15948	8651.1	237.703	Si
SLU 71	9.52	-13556	-2123.12	22057	10849.37	5.11	Si
SLU 71	11.32	-10695	26.22	17402	9230.56	351.988	Si
SLU 47	9.52	-11472	-1906.33	18666	9705.63	5.091	Si
SLU 47	11.32	-8641	17.72	14059	7846.35	442.914	Si
SLU 49	9.52	-12539	-2051.03	20402	10315.01	5.029	Si
SLU 49	11.32	-9708	36.33	15795	8588.19	236.4	Si
SLU 50	9.52	-12366	-2035.2	20121	10219.6	5.021	Si
SLU 50	11.32	-9535	7.54	15513	8471.3	1000	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 14	9.52	-5118	-5935.99	0	0	0	No, $e > l/2$
SLV 14	11.32	-2826	3208.37	0	0	0	No, $e > l/2$
SLV 2	9.52	-13086	4794.2	21291	11859	2.474	Si
SLV 2	11.32	-10703	-3499.12	17414	10071.99	2.878	Si
SLV 15	9.52	-5498	-7499.05	0	0	0	No, $e > l/2$
SLV 15	11.32	-3493	3351.71	5683	3654.85	1.09	Si
SLV 4	9.52	-13466	3231.14	21910	12128.56	3.754	Si
SLV 4	11.32	-11369	-3355.78	18498	10588.27	3.155	Si
SLV 12	9.52	-8730	-5567.05	14204	8467.25	1.521	Si
SLV 12	11.32	-7026	1171.32	11433	6990.03	5.968	Si
SLV 3	9.52	-13466	3231.14	21910	12128.56	3.754	Si
SLV 3	11.32	-11369	-3355.78	18498	10588.27	3.155	Si
SLV 11	9.52	-8730	-5567.05	14204	8467.25	1.521	Si
SLV 11	11.32	-7026	1171.32	11433	6990.03	5.968	Si
SLV 1	9.52	-13086	4794.2	21291	11859	2.474	Si
SLV 1	11.32	-10703	-3499.12	17414	10071.99	2.878	Si
SLV 16	9.52	-5498	-7499.05	0	0	0	No, $e > l/2$
SLV 16	11.32	-3493	3351.71	5683	3654.85	1.09	Si
SLV 13	9.52	-5118	-5935.99	0	0	0	No, $e > l/2$
SLV 13	11.32	-2826	3208.37	0	0	0	No, $e > l/2$

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 50	9.52	-12366	-1160	-2035.2		20121	2.195	8238	5063			4.36	Si
SLU 50	11.32	-9535	-1160	7.54		15513	2.195	7624	4686			4.04	Si
SLU 51	9.52	-12281	-1196	-2057.47		19983	2.195	8220	5052			4.22	Si
SLU 51	11.32	-9450	-1196	49.37		15375	2.195	7606	4674			3.91	Si
SLU 78	9.52	-14721	-1236	-2117.8		23952	2.195	8749	5377			4.35	Si
SLU 78	11.32	-11860	-1236	61.41		19297	2.195	8129	4996			4.04	Si
SLU 69	9.52	-13814	-1209	-2116.68		22477	2.195	8552	5256			4.35	Si
SLU 69	11.32	-10953	-1209	13.18		17822	2.195	7932	4875			4.03	Si
SLU 49	9.52	-12539	-1185	-2051.03		20402	2.195	8276	5086			4.29	Si
SLU 49	11.32	-9708	-1185	36.33		15795	2.195	7662	4709			3.97	Si
SLU 59	9.52	-13273	-1188	-2036.32		21596	2.195	8435	5184			4.37	Si
SLU 59	11.32	-10441	-1188	55.77		16989	2.195	7821	4807			4.05	Si
SLU 72	9.52	-13471	-1255	-2145.4		21919	2.195	8478	5211			4.15	Si
SLU 72	11.32	-10611	-1255	68.05		17264	2.195	7857	4829			3.85	Si
SLU 80	9.52	-14463	-1247	-2124.24		23532	2.195	8693	5343			4.28	Si
SLU 80	11.32	-11602	-1247	74.45		18878	2.195	8073	4961			3.98	Si
SLU 70	9.52	-13729	-1244	-2138.96		22339	2.195	8534	5245			4.22	Si
SLU 70	11.32	-10868	-1244	55.01		17684	2.195	7913	4864			3.91	Si
SLU 71	9.52	-13556	-1220	-2123.12		22057	2.195	8496	5222			4.28	Si
SLU 71	11.32	-10695	-1220	26.22		17402	2.195	7876	4841			3.97	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 13	9.52	-5118	-5264	-5935.99		0	0	8333	0			0	No, $V_u < V$
SLV 13	11.32	-2826	-4752	3208.37		0	0	8333	0			0	No, $V_u < V$
SLV 2	9.52	-13086	4908	4794.2		21307	2.1934	12595	7735			1.58	Si
SLV 2	11.32	-10703	4238	-3499.12		17414	2.195	11816	7262			1.71	Si
SLV 4	9.52	-13466	3804	3231.14		21910	2.195	12715	7815			2.05	Si
SLV 4	11.32	-11369	3292	-3355.78		18498	2.195	12033	7395			2.25	Si
SLV 1	9.52	-13086	4908	4794.2		21307	2.1934	12595	7735			1.58	Si
SLV 1	11.32	-10703	4238	-3499.12		17414	2.195	11816	7262			1.71	Si
SLV 12	9.52	-8730	-4096	-5567.05		22603	1.3794	12854	4965			1.21	Si
SLV 12	11.32	-7026	-3654	1171.32		11433	2.195	10620	6527			1.79	Si
SLV 15	9.52	-5498	-6368	-7499.05		0	0	8333	0			0	No, $V_u < V$
SLV 15	11.32	-3493	-5698	3351.71		30165	0.4135	14366	1663			0.29	No, $V_u < V$
SLV 16	9.52	-5498	-6368	-7499.05		0	0	8333	0			0	No, $V_u < V$
SLV 16	11.32	-3493	-5698	3351.71		30165	0.4135	14366	1663			0.29	No, $V_u < V$
SLV 11	9.52	-8730	-4096	-5567.05		22603	1.3794	12854	4965			1.21	Si
SLV 11	11.32	-7026	-3654	1171.32		11433	2.195	10620	6527			1.79	Si
SLV 14	9.52	-5118	-5264	-5935.99		0	0	8333	0			0	No, $V_u < V$
SLV 14	11.32	-2826	-4752	3208.37		0	0	8333	0			0	No, $V_u < V$
SLV 3	9.52	-13466	3804	3231.14		21910	2.195	12715	7815			2.05	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scor.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 3	11.32	-11369	3292	-3355.78		18498	2.195	12033	7395			2.25	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 14	143750	0.46	6919	-4252	272.59	561.6	2.06	Si
SLV 13	143750	0.46	6919	-4252	272.59	561.6	2.06	Si
SLV 15	143750	0.46	7249	-4455	272.59	586.73	2.15	Si
SLV 16	143750	0.46	7249	-4455	272.59	586.73	2.15	Si
SLV 9	143750	0.46	11090	-6816	272.59	867.63	3.18	Si
SLV 10	143750	0.46	11090	-6816	272.59	867.63	3.18	Si
SLV 12	143750	0.46	12191	-7493	272.59	944.34	3.46	Si
SLV 11	143750	0.46	12191	-7493	272.59	944.34	3.46	Si
SLV 5	143750	0.46	14996	-9217	272.59	1131.96	4.15	Si
SLV 6	143750	0.46	14996	-9217	272.59	1131.96	4.15	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 1	-6976	-16240	57	0.042	1023.7	0.921	0.65763	10.16227	No
SLV 2	-6976	-16240	57	0.042	1023.7	0.921	0.65763	10.16227	No
SLV 5	-5540	-11444	107	0.036	880	0.912	0.56591	8.73249	No
SLV 6	-5540	-11444	107	0.036	880	0.912	0.56591	8.73249	No
SLV 12	-6866	-6046	-108	0.036	1012.7	0.92	0.56865	8.73249	No
SLV 11	-6866	-6046	-108	0.036	1012.7	0.92	0.56865	8.73249	No
SLV 16	-5430	-1250	-58	0.042	869.1	0.911	0.67064	10.16227	No
SLV 15	-5430	-1250	-58	0.042	869.1	0.911	0.67064	10.16227	No
SLV 8	-7507	-10454	-91	0.038	1077.1	0.924	0.59807	8.73249	No
SLV 7	-7507	-10454	-91	0.038	1077.1	0.924	0.59807	8.73249	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.944	SLU 51	Si
V_SLU	3.848	SLU 72	Si
PF_SLV	0	SLV 13	No
V_SLV	0	SLV 13	No
PFFP_SLV	2.06	SLV 13	Si
R_SLV	0.065	SLV 1	No

Maschio 221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.123	5.951	-2.063	5.951	L5	L6	1.94	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 75	9.52	-11758	-1114.31	21647	8374.75	7.516	Si
SLU 75	11.32	-12180	2094.07	22422	8562.31	4.089	Si
SLU 77	9.52	-12414	-1108.12	22854	8663.38	7.818	Si
SLU 77	11.32	-12843	2198.74	23643	8841.72	4.021	Si
SLU 80	9.52	-12044	-1150.6	22172	8502.72	7.39	Si
SLU 80	11.32	-12548	2214.6	23100	8719.92	3.937	Si
SLU 79	9.52	-12223	-1112.28	22501	8581.03	7.715	Si
SLU 79	11.32	-12623	2177.65	23239	8751.45	4.019	Si
SLU 38	9.52	-9986	-1019.86	18384	7500.49	7.354	Si
SLU 38	11.32	-10712	1946.86	19720	7875.03	4.045	Si
SLU 84	9.52	-11822	-1187.6	21765	8403.78	7.076	Si
SLU 84	11.32	-12388	2167.61	22805	8652.08	3.992	Si
SLU 83	9.52	-12001	-1149.29	22094	8483.82	7.382	Si
SLU 83	11.32	-12463	2130.66	22944	8684.14	4.076	Si
SLU 76	9.52	-11448	-1144.02	21075	8231.41	7.195	Si
SLU 76	11.32	-11910	2097.62	21926	8443.21	4.025	Si
SLU 36	9.52	-10178	-1015.7	18737	7601.62	7.484	Si
SLU 36	11.32	-10931	1967.95	20123	7983.68	4.057	Si
SLU 78	9.52	-12236	-1146.44	22525	8586.58	7.49	Si
SLU 78	11.32	-12767	2235.69	23504	8810.91	3.941	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 4	9.52	-9218	2440.64	16969	7699.52	3.155	Si
SLV 4	11.32	-5880	-1404.17	10824	5197.96	3.702	Si
SLV 10	9.52	-3999	-1382.88	7362	3645.52	2.636	Si
SLV 10	11.32	-5527	1595.32	10174	4914.37	3.08	Si
SLV 9	9.52	-3999	-1382.88	7362	3645.52	2.636	Si
SLV 9	11.32	-5527	1595.32	10174	4914.37	3.08	Si
SLV 1	9.52	-6650	2607.63	12242	5803.96	2.226	Si
SLV 1	11.32	-3771	-1742.48	6941	3449.66	1.98	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 14	9.52	-7182	-3831.33	13221	6212.4	1.621	Si
SLV 14	11.32	-10257	3999.83	18883	8412.06	2.103	Si
SLV 2	9.52	-6650	2607.63	12242	5803.96	2.226	Si
SLV 2	11.32	-3771	-1742.48	6941	3449.66	1.98	Si
SLV 13	9.52	-7182	-3831.33	13221	6212.4	1.621	Si
SLV 13	11.32	-10257	3999.83	18883	8412.06	2.103	Si
SLV 16	9.52	-9750	-3998.31	17949	8068.03	2.018	Si
SLV 16	11.32	-12366	4338.15	22766	9760.48	2.25	Si
SLV 3	9.52	-9218	2440.64	16969	7699.52	3.155	Si
SLV 3	11.32	-5880	-1404.17	10824	5197.96	3.702	Si
SLV 15	9.52	-9750	-3998.31	17949	8068.03	2.018	Si
SLV 15	11.32	-12366	4338.15	22766	9760.48	2.25	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 84	9.52	-11822	-3524	-1187.6		21765	1.94	8457	4594			1.3	Si
SLU 84	11.32	-12388	-3520	2167.61		22805	1.94	8596	4669			1.33	Si
SLU 78	9.52	-12236	-3521	-1146.44		22525	1.94	8559	4649			1.32	Si
SLU 78	11.32	-12767	-3517	2235.69		23504	1.94	8689	4720			1.34	Si
SLU 77	9.52	-12414	-3421	-1108.12		22854	1.94	8603	4673			1.37	Si
SLU 77	11.32	-12843	-3421	2198.74		23643	1.94	8708	4730			1.38	Si
SLU 75	9.52	-11758	-3365	-1114.31		21647	1.94	8442	4586			1.36	Si
SLU 75	11.32	-12180	-3361	2094.07		22422	1.94	8545	4642			1.38	Si
SLU 80	9.52	-12044	-3496	-1150.6		22172	1.94	8512	4624			1.32	Si
SLU 80	11.32	-12548	-3492	2214.6		23100	1.94	8636	4691			1.34	Si
SLU 79	9.52	-12223	-3397	-1112.28		22501	1.94	8556	4647			1.37	Si
SLU 79	11.32	-12623	-3397	2177.65		23239	1.94	8654	4701			1.38	Si
SLU 83	9.52	-12001	-3424	-1149.29		22094	1.94	8501	4618			1.35	Si
SLU 83	11.32	-12463	-3424	2130.66		22944	1.94	8615	4680			1.37	Si
SLU 76	9.52	-11448	-3407	-1144.02		21075	1.94	8365	4544			1.33	Si
SLU 76	11.32	-11910	-3400	2097.62		21926	1.94	8479	4606			1.35	Si
SLU 73	9.52	-10971	-3251	-1111.89		20196	1.94	8248	4481			1.38	Si
SLU 73	11.32	-11323	-3244	1956		20844	1.94	8335	4527			1.4	Si
SLU 82	9.52	-11345	-3368	-1155.48		20886	1.94	8340	4531			1.35	Si
SLU 82	11.32	-11800	-3364	2026		21724	1.94	8452	4591			1.36	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 9	9.52	-3999	-3187	-1382.88		7627	1.8726	9859	5169			1.62	Si
SLV 9	11.32	-5527	-3386	1595.32		10174	1.94	10368	5632			1.66	Si
SLV 10	9.52	-3999	-3187	-1382.88		7627	1.8726	9859	5169			1.62	Si
SLV 10	11.32	-5527	-3386	1595.32		10174	1.94	10368	5632			1.66	Si
SLV 14	9.52	-7182	-7391	-3831.33		19586	1.3095	12251	4492			0.61	No, Vu<V
SLV 14	11.32	-10257	-6640	3999.83		21052	1.7402	12544	6112			0.92	No, Vu<V
SLV 12	9.52	-12560	-4248	-1939.49		23122	1.94	12958	7039			1.66	Si
SLV 12	11.32	-12557	-3514	2723.04		23116	1.94	12957	7038			2	Si
SLV 2	9.52	-6650	3560	2607.63		13699	1.7336	11073	5375			1.51	Si
SLV 2	11.32	-3771	2529	-1742.48		8838	1.5236	10101	4309			1.7	Si
SLV 15	9.52	-9750	-7710	-3998.31		20730	1.6797	12479	5869			0.76	No, Vu<V
SLV 15	11.32	-12366	-6678	4338.15		23776	1.8576	13088	6808			1.02	Si
SLV 1	9.52	-6650	3560	2607.63		13699	1.7336	11073	5375			1.51	Si
SLV 1	11.32	-3771	2529	-1742.48		8838	1.5236	10101	4309			1.7	Si
SLV 11	9.52	-12560	-4248	-1939.49		23122	1.94	12958	7039			1.66	Si
SLV 11	11.32	-12557	-3514	2723.04		23116	1.94	12957	7038			2	Si
SLV 13	9.52	-7182	-7391	-3831.33		19586	1.3095	12251	4492			0.61	No, Vu<V
SLV 13	11.32	-10257	-6640	3999.83		21052	1.7402	12544	6112			0.92	No, Vu<V
SLV 16	9.52	-9750	-7710	-3998.31		20730	1.6797	12479	5869			0.76	No, Vu<V
SLV 16	11.32	-12366	-6678	4338.15		23776	1.8576	13088	6808			1.02	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 5	143750	0.46	7291	-3961	240.92	521.4	2.16	Si
SLV 6	143750	0.46	7291	-3961	240.92	521.4	2.16	Si
SLV 9	143750	0.46	9344	-5076	240.92	656.26	2.72	Si
SLV 10	143750	0.46	9344	-5076	240.92	656.26	2.72	Si
SLV 1	143750	0.46	9801	-5324	240.92	685.56	2.85	Si
SLV 2	143750	0.46	9801	-5324	240.92	685.56	2.85	Si
SLV 4	143750	0.46	14005	-7608	240.92	942.99	3.91	Si
SLV 3	143750	0.46	14005	-7608	240.92	942.99	3.91	Si
SLV 13	143750	0.46	16644	-9041	240.92	1093.34	4.54	Si
SLV 14	143750	0.46	16644	-9041	240.92	1093.34	4.54	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 9	-4244	-4538	345	0	713	0.907	0	8.73249	No
SLV 10	-4244	-4538	345	0	713	0.907	0	8.73249	No
SLV 5	-3468	-2835	367	0	636.6	0.9	0	8.73249	No
SLV 6	-3468	-2835	367	0	636.6	0.9	0	8.73249	No
SLV 12	-8682	-13585	-367	0.011	1158.4	0.935	0.16744	8.73249	No
SLV 11	-8682	-13585	-367	0.011	1158.4	0.935	0.16744	8.73249	No
SLV 8	-7906	-11883	-345	0.011	1080	0.931	0.1675	8.73249	No
SLV 7	-7906	-11883	-345	0.011	1080	0.931	0.1675	8.73249	No
SLV 1	-4115	-4016	143	0.027	700.3	0.906	0.42716	10.16227	No
SLV 2	-4115	-4016	143	0.027	700.3	0.906	0.42716	10.16227	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
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Sismicad 12.19 - Licenza assegnata a Sidel ingegneria Srl - Via Isonzo, 13 - Villanova di Castenaso (BO)



Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.937	SLU 80	Si
V_SLU	1.304	SLU 84	Si
PF_SLV	1.621	SLV 13	Si
V_SLV	0.608	SLV 13	No
PFFP_SLV	2.164	SLV 5	Si
R_SLV	0	SLV 5	No

Maschio 222

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.123	-3.359	-0.123	5.951	L5	L6	9.31	0.28	3.55	3.55	3.55			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ ₀	f _{v0}	μ	φ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLU 34	8.62	-61657	-1971.71	23652	203675.65	103.299	Si
SLU 34	12.17	-31254	745.42	11990	124074.82	166.45	Si
SLU 13	8.62	-55577	-1973.88	21320	190999.15	96.763	Si
SLU 13	12.17	-28068	701.98	10767	113386.61	161.524	Si
SLU 31	8.62	-59812	-2281.91	22945	199999.78	87.646	Si
SLU 31	12.17	-29696	726.36	11392	118901.8	163.695	Si
SLU 5	8.62	-50055	-1752.84	19202	178081.83	101.596	Si
SLU 5	12.17	-25621	724.21	9829	104877	144.815	Si
SLU 52	8.62	-66004	-2106.48	25320	211744.87	100.521	Si
SLU 52	12.17	-32634	880.27	12519	128563.83	146.051	Si
SLU 23	8.62	-54290	-2060.87	20826	188107.65	91.276	Si
SLU 23	12.17	-27249	748.6	10453	110566.77	147.698	Si
SLU 2	8.62	-48210	-2063.03	18494	173467.42	84.084	Si
SLU 2	12.17	-24063	705.16	9231	99319.04	140.846	Si
SLU 73	8.62	-72083	-2104.32	27652	221642.1	105.327	Si
SLU 73	12.17	-35820	923.7	13741	138614.26	150.063	Si
SLU 10	8.62	-53732	-2284.08	20612	186831.44	81.797	Si
SLU 10	12.17	-26509	682.93	10169	107995.85	158.137	Si
SLU 44	8.62	-60482	-1885.44	23202	201351.73	106.793	Si
SLU 44	12.17	-30187	902.5	11580	120543.97	133.566	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLV 5	8.62	-43312	-44598.19	16615	174202.77	3.906	Si
SLV 5	12.17	-23909	-12922.64	9172	102941.74	7.966	Si
SLV 1	8.62	-28393	-17234.29	10892	120388.57	6.985	Si
SLV 1	12.17	-19888	-3706.91	7629	86796.56	23.415	Si
SLV 12	8.62	-59024	45662.01	22642	223842.48	4.902	Si
SLV 12	12.17	-27421	14349.64	10519	116654.33	8.129	Si
SLV 11	8.62	-59024	45662.01	22642	223842.48	4.902	Si
SLV 11	12.17	-27421	14349.64	10519	116654.33	8.129	Si
SLV 8	8.62	-45562	42874.87	17478	181751.3	4.239	Si
SLV 8	12.17	-23959	14132.35	9191	103139.13	7.298	Si
SLV 10	8.62	-56775	-41811.04	21780	217178.99	5.194	Si
SLV 10	12.17	-27371	-12705.34	10500	116461.98	9.166	Si
SLV 7	8.62	-45562	42874.87	17478	181751.3	4.239	Si
SLV 7	12.17	-23959	14132.35	9191	103139.13	7.298	Si
SLV 9	8.62	-56775	-41811.04	21780	217178.99	5.194	Si
SLV 9	12.17	-27371	-12705.34	10500	116461.98	9.166	Si
SLV 6	8.62	-43312	-44598.19	16615	174202.77	3.906	Si
SLV 6	12.17	-23909	-12922.64	9172	102941.74	7.966	Si
SLV 2	8.62	-28393	-17234.29	10892	120388.57	6.985	Si
SLV 2	12.17	-19888	-3706.91	7629	86796.56	23.415	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	V par	M	σ ₀	σ _N	l'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 44	8.62	-60482	-819	-1885.44		23202	9.31	8649	22546			27.51	Si
SLU 44	12.17	-30187	-397	902.5		11580	9.31	7100	18507			46.57	Si
SLU 31	8.62	-59812	-844	-2281.91		22945	9.31	8615	22457			26.61	Si
SLU 31	12.17	-29696	-421	726.36		11392	9.31	7074	18442			43.76	Si
SLU 26	8.62	-56135	-812	-1750.67		21534	9.31	8427	21967			27.05	Si
SLU 26	12.17	-28808	-390	767.65		11051	9.31	7029	18323			47.03	Si
SLU 10	8.62	-53732	-841	-2284.08		20612	9.31	8304	21646			25.74	Si
SLU 10	12.17	-26509	-419	682.93		10169	9.31	6911	18017			43.05	Si
SLU 5	8.62	-50055	-809	-1752.84		19202	9.31	8116	21156			26.14	Si
SLU 5	12.17	-25621	-387	724.21		9829	9.31	6866	17898			46.28	Si
SLU 23	8.62	-54290	-833	-2060.87		20826	9.31	8332	21721			26.08	Si
SLU 23	12.17	-27249	-410	748.6		10453	9.31	6949	18115			44.15	Si
SLU 2	8.62	-48210	-830	-2063.03		18494	9.31	8021	20910			25.19	Si
SLU 2	12.17	-24063	-407	705.16		9231	9.31	6786	17691			43.41	Si
SLU 52	8.62	-66004	-831	-2106.48		25320	9.31	8932	23283			28.03	Si
SLU 52	12.17	-32634	-408	880.27		12519	9.31	7225	18833			46.1	Si
SLU 13	8.62	-55577	-820	-1973.88		21320	9.31	8398	21893			26.69	Si
SLU 13	12.17	-28068	-398	701.98		10767	9.31	6991	18225			45.81	Si
SLU 34	8.62	-61657	-823	-1971.71		23652	9.31	8709	22703			27.58	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 34	12.17	-31254	-401	745.42		11990	9.31	7154	18649			46.55	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 11	8.62	-59024	15630	45662.01		22642	9.31	12862	33528			2.15	Si
SLV 11	12.17	-27421	11819	14349.64		10519	9.31	10437	27207			2.3	Si
SLV 10	8.62	-56775	-14717	-41811.04		21780	9.31	12689	33078			2.25	Si
SLV 10	12.17	-27371	-11317	-12705.34		10500	9.31	10433	27197			2.4	Si
SLV 2	8.62	-28393	-5952	-17234.29		10892	9.31	10512	27402			4.6	Si
SLV 2	12.17	-19888	-4194	-3706.91		7629	9.31	9859	25701			6.13	Si
SLV 12	8.62	-59024	15630	45662.01		22642	9.31	12862	33528			2.15	Si
SLV 12	12.17	-27421	11819	14349.64		10519	9.31	10437	27207			2.3	Si
SLV 1	8.62	-28393	-5952	-17234.29		10892	9.31	10512	27402			4.6	Si
SLV 1	12.17	-19888	-4194	-3706.91		7629	9.31	9859	25701			6.13	Si
SLV 5	8.62	-43312	-15574	-44598.19		16615	9.31	11656	30386			1.95	Si
SLV 5	12.17	-23909	-11767	-12922.64		9172	9.31	10168	26505			2.25	Si
SLV 6	8.62	-43312	-15574	-44598.19		16615	9.31	11656	30386			1.95	Si
SLV 6	12.17	-23909	-11767	-12922.64		9172	9.31	10168	26505			2.25	Si
SLV 9	8.62	-56775	-14717	-41811.04		21780	9.31	12689	33078			2.25	Si
SLV 9	12.17	-27371	-11317	-12705.34		10500	9.31	10433	27197			2.4	Si
SLV 7	8.62	-45562	14773	42874.87		17478	9.31	11829	30836			2.09	Si
SLV 7	12.17	-23959	11370	14132.35		9191	9.31	10172	26515			2.33	Si
SLV 8	8.62	-45562	14773	42874.87		17478	9.31	11829	30836			2.09	Si
SLV 8	12.17	-23959	11370	14132.35		9191	9.31	10172	26515			2.33	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.395 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 2	143750	0.46	9441	-24610	1156.19	3179.22	2.75	Si
SLV 1	143750	0.46	9441	-24610	1156.19	3179.22	2.75	Si
SLV 4	143750	0.46	9555	-24908	1156.19	3214.38	2.78	Si
SLV 3	143750	0.46	9555	-24908	1156.19	3214.38	2.78	Si
SLV 5	143750	0.46	12867	-33542	1156.19	4201.37	3.63	Si
SLV 6	143750	0.46	12867	-33542	1156.19	4201.37	3.63	Si
SLV 7	143750	0.46	13247	-34533	1156.19	4310.5	3.73	Si
SLV 8	143750	0.46	13247	-34533	1156.19	4310.5	3.73	Si
SLV 9	143750	0.46	15918	-41495	1156.19	5052.51	4.37	Si
SLV 10	143750	0.46	15918	-41495	1156.19	5052.51	4.37	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 10.395 Wa = 0.05 Ta = 0.0752

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 13	-31427	-73269	-339	0.039	4526.7	0.924	0.61659	10.16227	No
SLV 14	-31427	-73269	-339	0.039	4526.7	0.924	0.61659	10.16227	No
SLV 15	-31442	-73943	-333	0.039	4528.2	0.924	0.61869	10.16227	No
SLV 16	-31442	-73943	-333	0.039	4528.2	0.924	0.61869	10.16227	No
SLV 4	-19903	-29068	337	0.039	3375.8	0.906	0.62796	10.16227	No
SLV 3	-19903	-29068	337	0.039	3375.8	0.906	0.62796	10.16227	No
SLV 1	-19888	-28393	332	0.039	3374.3	0.906	0.63101	10.16227	No
SLV 2	-19888	-28393	332	0.039	3374.3	0.906	0.63101	10.16227	No
SLV 10	-27371	-56775	-110	0.046	4119.6	0.918	0.72117	8.73249	No
SLV 9	-27371	-56775	-110	0.046	4119.6	0.918	0.72117	8.73249	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	81.797	SLU 10	Si
V_SLU	25.192	SLU 2	Si
PF_SLV	3.906	SLV 5	Si
V_SLV	1.951	SLV 5	Si
PFFP_SLV	2.75	SLV 1	Si
R_SLV	0.061	SLV 13	No

Maschio 223

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.678	-3.359	-24.678	1.266	L6	L7	4.626	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 39	12.17	-11341	-7280.1	8756	23409.99	3.216	Si
SLU 39	14.27	-4525	-5450.12	3494	10017.28	1.838	Si
SLU 40	12.17	-11568	-7169.78	8931	23820.99	3.322	Si
SLU 40	14.27	-4693	-5262.35	3623	10370.67	1.971	Si
SLU 36	12.17	-12531	-7553.32	9675	25539.58	3.381	Si
SLU 36	14.27	-5382	-5941.62	4155	11812.2	1.988	Si
SLU 35	12.17	-12304	-7663.64	9500	25138.16	3.28	Si
SLU 35	14.27	-5214	-6129.39	4026	11463.87	1.87	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 42	12.17	-12079	-7535.7	9326	24738.83	3.283	Si
SLU 42	14.27	-5037	-5713.85	3889	11093.5	1.942	Si
SLU 38	12.17	-12461	-7225.47	9621	25415.76	3.518	Si
SLU 38	14.27	-5365	-5722.35	4143	11778.33	2.058	Si
SLU 33	12.17	-12019	-7187.4	9280	24631.86	3.427	Si
SLU 33	14.27	-5037	-5490.11	3889	11094.58	2.021	Si
SLU 37	12.17	-12234	-7335.79	9445	25013.65	3.41	Si
SLU 37	14.27	-5198	-5910.12	4013	11429.88	1.934	Si
SLU 32	12.17	-11792	-7297.72	9105	24225.35	3.32	Si
SLU 32	14.27	-4870	-5677.88	3760	10743.72	1.892	Si
SLU 41	12.17	-11852	-7646.02	9151	24332.92	3.182	Si
SLU 41	14.27	-4870	-5901.62	3760	10742.63	1.82	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 8	12.17	-9421	1708.33	7274	20492.95	11.996	Si
SLV 8	14.27	-1703	-6177.4	0	0	0	No, $e \geq l/2$
SLV 12	12.17	-9116	4032.92	7038	19869.19	4.927	Si
SLV 12	14.27	-2039	-4266.55	1574	4654.5	1.091	Si
SLV 11	12.17	-9116	4032.92	7038	19869.19	4.927	Si
SLV 11	14.27	-2039	-4266.55	1574	4654.5	1.091	Si
SLV 2	12.17	-11510	-10432.3	8887	24685.52	2.366	Si
SLV 2	14.27	-4524	-6160.12	3493	10164.3	1.65	Si
SLV 6	12.17	-12087	-12797.22	9332	25820.22	2.018	Si
SLV 6	14.27	-6646	-2721.07	5131	14724.93	5.411	Si
SLV 1	12.17	-11510	-10432.3	8887	24685.52	2.366	Si
SLV 1	14.27	-4524	-6160.12	3493	10164.3	1.65	Si
SLV 3	12.17	-10711	-6080.64	8270	23095.67	3.798	Si
SLV 3	14.27	-3041	-7197.02	0	0	0	No, $e \geq l/2$
SLV 4	12.17	-10711	-6080.64	8270	23095.67	3.798	Si
SLV 4	14.27	-3041	-7197.02	0	0	0	No, $e \geq l/2$
SLV 5	12.17	-12087	-12797.22	9332	25820.22	2.018	Si
SLV 5	14.27	-6646	-2721.07	5131	14724.93	5.411	Si
SLV 7	12.17	-9421	1708.33	7274	20492.95	11.996	Si
SLV 7	14.27	-1703	-6177.4	0	0	0	No, $e \geq l/2$

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 38	12.17	-12461	1339	-7225.47		9621	4.6257	6838	8857			6.61	Si
SLU 38	14.27	-5365	1460	-5722.35		5125	3.739	6239	6532			4.47	Si
SLU 78	12.17	-15450	1552	-8075.8		11929	4.6257	7146	9255			5.96	Si
SLU 78	14.27	-6597	1673	-6436.18		5873	4.0115	6339	7120			4.26	Si
SLU 80	12.17	-15380	1545	-7747.95		11874	4.6257	7139	9246			5.99	Si
SLU 80	14.27	-6580	1665	-6216.92		5726	4.1042	6319	7262			4.36	Si
SLU 84	12.17	-14998	1335	-8058.18		11580	4.6257	7100	9195			6.89	Si
SLU 84	14.27	-6252	1455	-6208.42		5639	3.9594	6307	6993			4.81	Si
SLU 35	12.17	-12304	1381	-7663.64		9500	4.6257	6822	8836			6.4	Si
SLU 35	14.27	-5214	1381	-6129.39		5458	3.4121	6283	6003			4.35	Si
SLU 37	12.17	-12234	1373	-7335.79		9445	4.6257	6815	8827			6.43	Si
SLU 37	14.27	-5198	1373	-5910.12		5263	3.5275	6257	6180			4.5	Si
SLU 70	12.17	-15146	1518	-6498.12		11694	4.6257	7115	9215			6.07	Si
SLU 70	14.27	-6560	1638	-5402.5		5244	4.4678	6255	7825			4.78	Si
SLU 79	12.17	-15153	1579	-7858.27		11699	4.6257	7115	9216			5.84	Si
SLU 79	14.27	-6413	1579	-6404.69		5809	3.9424	6330	6988			4.43	Si
SLU 77	12.17	-15223	1586	-8186.12		11753	4.6257	7123	9225			5.82	Si
SLU 77	14.27	-6429	1586	-6623.96		5968	3.8477	6351	6843			4.31	Si
SLU 36	12.17	-12531	1347	-7553.32		9675	4.6257	6846	8866			6.58	Si
SLU 36	14.27	-5382	1467	-5941.62		5300	3.6264	6262	6359			4.33	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 10	12.17	-11782	-4076	-10472.62		9850	4.2718	10303	12324			3.02	Si
SLV 10	14.27	-6981	-3985	-810.21		5390	4.6257	9411	12190			3.06	Si
SLV 11	12.17	-9116	5426	4032.92		7038	4.6257	9741	12616			2.33	Si
SLV 11	14.27	-2039	5240	-4266.55		11028	0.6603	10539	1948			0.37	No, $V_u < V$
SLV 5	12.17	-12087	-3764	-12797.22		11474	3.7623	10628	11196			2.97	Si
SLV 5	14.27	-6646	-3578	-2721.07		5131	4.6257	9360	12122			3.39	Si
SLV 8	12.17	-9421	5737	1708.33		7274	4.6257	9788	12678			2.21	Si
SLV 8	14.27	-1703	5647	-6177.4		0	0	8333	0			0	No, $V_u < V$
SLV 3	12.17	-10711	2776	-6080.64		8270	4.6257	9987	12935			4.66	Si
SLV 3	14.27	-3041	2893	-7197.02		0	0	8333	0			0	No, $V_u < V$
SLV 12	12.17	-9116	5426	4032.92		7038	4.6257	9741	12616			2.33	Si
SLV 12	14.27	-2039	5240	-4266.55		11028	0.6603	10539	1948			0.37	No, $V_u < V$
SLV 7	12.17	-9421	5737	1708.33		7274	4.6257	9788	12678			2.21	Si
SLV 7	14.27	-1703	5647	-6177.4		0	0	8333	0			0	No, $V_u < V$
SLV 9	12.17	-11782	-4076	-10472.62		9850	4.2718	10303	12324			3.02	Si
SLV 9	14.27	-6981	-3985	-810.21		5390	4.6257	9411	12190			3.06	Si
SLV 6	12.17	-12087	-3764	-12797.22		11474	3.7623	10628	11196			2.97	Si
SLV 6	14.27	-6646	-3578	-2721.07		5131	4.6257	9360	12122			3.39	Si
SLV 4	12.17	-10711	2776	-6080.64		8270	4.6257	9987	12935			4.66	Si
SLV 4	14.27	-3041	2893	-7197.02		0	0	8333	0			0	No, $V_u < V$

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 7	143750	0.53	2878	-3728	520.36	509.62	0.98	No, $M > Mu$
SLV 8	143750	0.53	2878	-3728	520.36	509.62	0.98	No, $M > Mu$
SLV 12	143750	0.53	3011	-3900	520.36	532.51	1.02	Si
SLV 11	143750	0.53	3011	-3900	520.36	532.51	1.02	Si



Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 4	143750	0.53	3982	-5157	520.36	698.5	1.34	Si
SLV 3	143750	0.53	3982	-5157	520.36	698.5	1.34	Si
SLV 15	143750	0.53	4424	-5730	520.36	773.17	1.49	Si
SLV 16	143750	0.53	4424	-5730	520.36	773.17	1.49	Si
SLV 1	143750	0.53	5061	-6554	520.36	879.62	1.69	Si
SLV 2	143750	0.53	5061	-6554	520.36	879.62	1.69	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 16	-1241	-9692	729	0	799.6	0.914	0	9.06484	No
SLV 1	-1688	-11510	-717	0	831	0.903	0	9.06484	No
SLV 15	-1241	-9692	729	0	799.6	0.914	0	9.06484	No
SLV 2	-1688	-11510	-717	0	831	0.903	0	9.06484	No
SLV 14	-2047	-10492	747	0	858.6	0.897	0	9.06484	No
SLV 13	-2047	-10492	747	0	858.6	0.897	0	9.06484	No
SLV 4	-882	-10711	-735	0	777.8	0.928	0	9.06484	No
SLV 3	-882	-10711	-735	0	777.8	0.928	0	9.06484	No
SLV 8	-68	-9421	-243	0.023	748.8	0.991	0.33891	8.06258	No
SLV 7	-68	-9421	-243	0.023	748.8	0.991	0.33891	8.06258	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.82	SLU 41	Si
V_SLU	4.256	SLU 78	Si
PF_SLV	0	SLV 3	No
V_SLV	0	SLV 3	No
PFFP_SLV	0.979	SLV 7	No
R_SLV	0	SLV 1	No

Maschio 224

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.sx	a.s.dx
-24.678	2.066	-24.678	5.951	L6	L7	3.885	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 41	12.17	-12742	3531	11714	21192.27	6.002	Si
SLU 41	14.27	-6052	1391.99	5564	10953.46	7.869	Si
SLU 28	12.17	-12473	2952.03	11466	20818.05	7.052	Si
SLU 28	14.27	-5964	1892.64	5483	10805.24	5.709	Si
SLU 70	12.17	-15191	3300.35	13965	24450.11	7.408	Si
SLU 70	14.27	-7141	2129.92	6565	12753.53	5.988	Si
SLU 51	12.17	-14119	2536.28	12980	23056.66	9.091	Si
SLU 51	14.27	-6565	1975.41	6036	11808.39	5.978	Si
SLU 7	12.17	-11530	2341.24	10599	19482.04	8.321	Si
SLU 7	14.27	-5437	1766.89	4998	9913.88	5.611	Si
SLU 35	12.17	-13206	3717.67	12140	21829.37	5.872	Si
SLU 35	14.27	-6411	1770.73	5894	11552.33	6.524	Si
SLU 15	12.17	-12242	2894.61	11254	20495.28	7.081	Si
SLU 15	14.27	-5809	1756.98	5340	10544.36	6.001	Si
SLU 49	12.17	-14248	2689.56	13098	23226.53	8.636	Si
SLU 49	14.27	-6614	2004.17	6081	11889.34	5.932	Si
SLU 30	12.17	-12344	2798.75	11348	20638.18	7.374	Si
SLU 30	14.27	-5915	1863.89	5438	10722.9	5.753	Si
SLU 9	12.17	-11401	2187.96	10481	19296.84	8.82	Si
SLU 9	14.27	-5388	1738.13	4953	9830.41	5.656	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 8	12.17	-13812	6687.89	12697	24042.18	3.595	Si
SLV 8	14.27	-7843	-1504.68	7210	14336.35	9.528	Si
SLV 9	12.17	-7414	-2304.41	6815	13597.64	5.901	Si
SLV 9	14.27	-1721	3440.18	0	0	0	No, e>1/2
SLV 14	12.17	-7024	-392.18	6457	12923.74	32.953	Si
SLV 14	14.27	-2507	2210.62	2305	4777.77	2.161	Si
SLV 12	12.17	-12079	5873.55	11104	21331.21	3.632	Si
SLV 12	14.27	-6949	-1174.25	6388	12791.92	10.894	Si
SLV 10	12.17	-7414	-2304.41	6815	13597.64	5.901	Si
SLV 10	14.27	-1721	3440.18	0	0	0	No, e>1/2
SLV 11	12.17	-12079	5873.55	11104	21331.21	3.632	Si
SLV 11	14.27	-6949	-1174.25	6388	12791.92	10.894	Si
SLV 13	12.17	-7024	-392.18	6457	12923.74	32.953	Si
SLV 13	14.27	-2507	2210.62	2305	4777.77	2.161	Si
SLV 5	12.17	-9147	-1490.07	8409	16544.97	11.103	Si
SLV 5	14.27	-2616	3109.75	2404	4980.82	1.602	Si
SLV 7	12.17	-13812	6687.89	12697	24042.18	3.595	Si
SLV 7	14.27	-7843	-1504.68	7210	14336.35	9.528	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 6	12.17	-9147	-1490.07	8409	16544.97	11.103	Si
SLV 6	14.27	-2616	3109.75	2404	4980.82	1.602	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 76	12.17	-15121	-1669	3288.37		13901	3.885	7409	8060			4.83	Si
SLU 76	14.27	-6944	-1671	1820.18		6384	3.885	6407	6969			4.17	Si
SLU 57	12.17	-14961	-1645	3242.93		13753	3.885	7389	8038			4.89	Si
SLU 57	14.27	-6986	-1647	1994.26		6422	3.885	6412	6975			4.23	Si
SLU 72	12.17	-15063	-1679	3147.07		13847	3.885	7402	8052			4.79	Si
SLU 72	14.27	-7092	-1682	2101.17		6520	3.885	6425	6989			4.16	Si
SLU 51	12.17	-14119	-1583	2536.28		12980	3.885	7286	7926			5.01	Si
SLU 51	14.27	-6565	-1586	1975.41		6036	3.885	6360	6919			4.36	Si
SLU 70	12.17	-15191	-1694	3300.35		13965	3.885	7418	8069			4.76	Si
SLU 70	14.27	-7141	-1696	2129.92		6565	3.885	6431	6995			4.12	Si
SLU 78	12.17	-15904	-1741	3853.72		14621	3.885	7505	8164			4.69	Si
SLU 78	14.27	-7513	-1743	2120.01		6906	3.885	6476	7045			4.04	Si
SLU 68	12.17	-14409	-1622	2735		13246	3.885	7322	7964			4.91	Si
SLU 68	14.27	-6573	-1624	1830.09		6042	3.885	6361	6920			4.26	Si
SLU 59	12.17	-14832	-1630	3089.65		13635	3.885	7374	8021			4.92	Si
SLU 59	14.27	-6937	-1633	1965.5		6377	3.885	6406	6968			4.27	Si
SLU 80	12.17	-15776	-1726	3700.44		14502	3.885	7489	8147			4.72	Si
SLU 80	14.27	-7464	-1729	2091.26		6861	3.885	6470	7039			4.07	Si
SLU 49	12.17	-14248	-1597	2689.56		13098	3.885	7302	7943			4.97	Si
SLU 49	14.27	-6614	-1600	2004.17		6081	3.885	6366	6925			4.33	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 8	12.17	-13812	2988	6687.89		12697	3.885	10873	11827			3.96	Si
SLV 8	14.27	-7843	1590	-1504.68		7210	3.885	9775	10634			6.69	Si
SLV 7	12.17	-13812	2988	6687.89		12697	3.885	10873	11827			3.96	Si
SLV 7	14.27	-7843	1590	-1504.68		7210	3.885	9775	10634			6.69	Si
SLV 5	12.17	-9147	-4762	-1490.07		8409	3.885	10015	10894			2.29	Si
SLV 5	14.27	-2616	-3364	3109.75		4132	2.2607	9160	5798			1.72	Si
SLV 2	12.17	-12802	-2190	2322.28		11769	3.885	10687	11625			5.31	Si
SLV 2	14.27	-5489	-1768	1109.2		5046	3.885	9343	10163			5.75	Si
SLV 11	12.17	-12079	3108	5873.55		11104	3.885	10554	11481			3.69	Si
SLV 11	14.27	-6949	1708	-1174.25		6388	3.885	9611	10455			6.12	Si
SLV 12	12.17	-12079	3108	5873.55		11104	3.885	10554	11481			3.69	Si
SLV 12	14.27	-6949	1708	-1174.25		6388	3.885	9611	10455			6.12	Si
SLV 10	12.17	-7414	-4642	-2304.41		6815	3.885	9696	10548			2.27	Si
SLV 10	14.27	-1721	-3246	3440.18		0	0	8333	0			0	No, Vu<V
SLV 9	12.17	-7414	-4642	-2304.41		6815	3.885	9696	10548			2.27	Si
SLV 9	14.27	-1721	-3246	3440.18		0	0	8333	0			0	No, Vu<V
SLV 1	12.17	-12802	-2190	2322.28		11769	3.885	10687	11625			5.31	Si
SLV 1	14.27	-5489	-1768	1109.2		5046	3.885	9343	10163			5.75	Si
SLV 6	12.17	-9147	-4762	-1490.07		8409	3.885	10015	10894			2.29	Si
SLV 6	14.27	-2616	-3364	3109.75		4132	2.2607	9160	5798			1.72	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 10	143750	0.53	2889	-3142	437.03	429.53	0.98	No, M>Mu
SLV 9	143750	0.53	2889	-3142	437.03	429.53	0.98	No, M>Mu
SLV 13	143750	0.53	3376	-3672	437.03	499.89	1.14	Si
SLV 14	143750	0.53	3376	-3672	437.03	499.89	1.14	Si
SLV 5	143750	0.53	3877	-4217	437.03	571.64	1.31	Si
SLV 6	143750	0.53	3877	-4217	437.03	571.64	1.31	Si
SLV 15	143750	0.53	4781	-5201	437.03	699.61	1.6	Si
SLV 16	143750	0.53	4781	-5201	437.03	699.61	1.6	Si
SLV 1	143750	0.53	6669	-7254	437.03	960.15	2.2	Si
SLV 2	143750	0.53	6669	-7254	437.03	960.15	2.2	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 16	-1871	-8424	301	0.011	733.3	0.895	0.18555	9.06484	No
SLV 15	-1871	-8424	301	0.011	733.3	0.895	0.18555	9.06484	No
SLV 2	-1776	-12802	-280	0.015	725.6	0.896	0.24375	9.06484	No
SLV 1	-1776	-12802	-280	0.015	725.6	0.896	0.24375	9.06484	No
SLV 13	-1368	-7024	233	0.023	694.3	0.904	0.36734	9.06484	No
SLV 14	-1368	-7024	233	0.023	694.3	0.904	0.36734	9.06484	No
SLV 4	-2278	-14201	-213	0.03	767.2	0.891	0.49522	9.06484	No
SLV 3	-2278	-14201	-213	0.03	767.2	0.891	0.49522	9.06484	No
SLV 5	-1047	-9147	-179	0.034	671.9	0.914	0.54528	8.06258	No
SLV 6	-1047	-9147	-179	0.034	671.9	0.914	0.54528	8.06258	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.611	SLU 7	Si
V_SLU	4.041	SLU 78	Si
PF_SLV	0	SLV 9	No
V_SLV	0	SLV 9	No
PFFP_SLV	0.983	SLV 9	No
R_SLV	0.02	SLV 15	No



Maschio 225

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.713	5.951	-24.678	5.951	L6	L7	1.965	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ ₀	f _{v0}	μ	φ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLU 19	13.07	-3440	1792.85	6251	3119.98	1.74	Si
SLU 19	14.87	-3020	-763.73	5490	2767.53	3.624	Si
SLU 82	13.07	-4644	2394.07	8441	4089.92	1.708	Si
SLU 82	14.87	-4133	-1051.87	7513	3686.52	3.505	Si
SLU 31	13.07	-3618	1970.86	6575	3267.48	1.658	Si
SLU 31	14.87	-3351	-876.33	6091	3046.37	3.476	Si
SLU 34	13.07	-4094	2080.44	7441	3654.74	1.757	Si
SLU 34	14.87	-3932	-1124.29	7147	3524.52	3.135	Si
SLU 39	13.07	-3649	2083.8	6633	3293.58	1.581	Si
SLU 39	14.87	-3429	-856.88	6232	3111.24	3.631	Si
SLU 81	13.07	-4695	2382.71	8533	4129.34	1.733	Si
SLU 81	14.87	-4146	-1035.34	7535	3696.41	3.57	Si
SLU 18	13.07	-3490	1781.48	6344	3162.08	1.775	Si
SLU 18	14.87	-3033	-747.2	5512	2778.02	3.718	Si
SLU 42	13.07	-4075	2204.75	7406	3639.49	1.651	Si
SLU 42	14.87	-3998	-1121.37	7266	3577.44	3.19	Si
SLU 40	13.07	-3599	2095.16	6541	3251.84	1.552	Si
SLU 40	14.87	-3417	-873.41	6210	3100.96	3.55	Si
SLU 41	13.07	-4125	2193.38	7498	3680.18	1.678	Si
SLU 41	14.87	-4010	-1104.84	7288	3587.4	3.247	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLV 11	13.07	-4429	2002.76	8051	4065.24	2.03	Si
SLV 11	14.87	-3036	-871.41	5518	2848.32	3.269	Si
SLV 1	13.07	-3267	3098.69	5937	3053.5	0.985	No, M>Mu
SLV 1	14.87	-3969	-1236.73	7214	3669.52	2.967	Si
SLV 2	13.07	-3267	3098.69	5937	3053.5	0.985	No, M>Mu
SLV 2	14.87	-3969	-1236.73	7214	3669.52	2.967	Si
SLV 7	13.07	-4308	3142.43	7830	3961.61	1.261	Si
SLV 7	14.87	-3688	-1210.39	6703	3424.74	2.829	Si
SLV 8	13.07	-4308	3142.43	7830	3961.61	1.261	Si
SLV 8	14.87	-3688	-1210.39	6703	3424.74	2.829	Si
SLV 6	13.07	-2923	1029.58	5313	2747.26	2.668	Si
SLV 6	14.87	-2951	-642.49	5363	2771.7	4.314	Si
SLV 4	13.07	-3682	3732.54	0	0	0	No, e>l/2
SLV 4	14.87	-4190	-1407.1	7616	3860.52	2.744	Si
SLV 5	13.07	-2923	1029.58	5313	2747.26	2.668	Si
SLV 5	14.87	-2951	-642.49	5363	2771.7	4.314	Si
SLV 3	13.07	-3682	3732.54	0	0	0	No, e>l/2
SLV 3	14.87	-4190	-1407.1	7616	3860.52	2.744	Si
SLV 12	13.07	-4429	2002.76	8051	4065.24	2.03	Si
SLV 12	14.87	-3036	-871.41	5518	2848.32	3.269	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 83	13.07	-5171	3160	2492.29		12299	1.5015	7195	3025			0.96	No, Vu<V
SLU 83	14.87	-4727	3159	-1283.3		8591	1.965	6701	3687			1.17	Si
SLU 80	13.07	-5649	3315	2481.36		12379	1.6297	7206	3288			0.99	No, Vu<V
SLU 80	14.87	-5238	3313	-1539.69		9521	1.965	6825	3755			1.13	Si
SLU 40	13.07	-3599	2561	2095.16		10702	1.2009	6983	2348			0.92	No, Vu<V
SLU 40	14.87	-3417	2559	-873.41		6210	1.965	6384	3512			1.37	Si
SLU 76	13.07	-5139	3083	2379.35		11776	1.5585	7126	3110			1.01	Si
SLU 76	14.87	-4649	3081	-1302.75		8450	1.965	6682	3677			1.19	Si
SLU 41	13.07	-4125	2780	2193.38		10894	1.3525	7008	2654			0.95	No, Vu<V
SLU 41	14.87	-4010	2779	-1104.84		7288	1.965	6527	3591			1.29	Si
SLU 39	13.07	-3649	2524	2083.8		10558	1.2345	6963	2407			0.95	No, Vu<V
SLU 39	14.87	-3429	2523	-856.88		6232	1.965	6387	3514			1.39	Si
SLU 82	13.07	-4644	2941	2394.07		11839	1.4009	7134	2798			0.95	No, Vu<V
SLU 82	14.87	-4133	2939	-1051.87		7513	1.965	6557	3608			1.23	Si
SLU 42	13.07	-4075	2817	2204.75		10989	1.3243	7021	2603			0.92	No, Vu<V
SLU 42	14.87	-3998	2815	-1121.37		7266	1.965	6524	3590			1.28	Si
SLU 84	13.07	-5120	3197	2503.66		12351	1.4805	7202	2986			0.93	No, Vu<V
SLU 84	14.87	-4714	3195	-1299.83		8569	1.965	6698	3685			1.15	Si
SLU 81	13.07	-4695	2904	2382.71		11767	1.4249	7124	2842			0.98	No, Vu<V
SLU 81	14.87	-4146	2903	-1035.34		7535	1.965	6560	3609			1.24	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 8	13.07	-4308	3370	3142.43		20264	0.7593	12386	2633			0.78	No, Vu<V
SLV 8	14.87	-3688	2733	-1210.39		6710	1.9629	9675	5318			1.95	Si
SLV 12	13.07	-4429	1955	2002.76		9943	1.5911	10322	4598			2.35	Si
SLV 12	14.87	-3036	2142	-871.41		5518	1.965	9437	5192			2.42	Si
SLV 4	13.07	-3682	4481	3732.54		0	0	8333	0			0	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 4	14.87	-4190	3041	-1407.1		7714	1.9401	9876	5365			1.76	Si
SLV 7	13.07	-4308	3370	3142.43		20264	0.7593	12386	2633			0.78	No, Vu<V
SLV 7	14.87	-3688	2733	-1210.39		6710	1.9629	9675	5318			1.95	Si
SLV 1	13.07	-3267	4018	3098.69		114695	0.1017	16250	463			0.12	No, Vu<V
SLV 1	14.87	-3969	2712	-1236.73		7214	1.965	9776	5379			1.98	Si
SLV 5	13.07	-2923	1826	1029.58		5521	1.8909	9438	4997			2.74	Si
SLV 5	14.87	-2951	1638	-642.49		5363	1.965	9406	5175			3.16	Si
SLV 6	13.07	-2923	1826	1029.58		5521	1.8909	9438	4997			2.74	Si
SLV 6	14.87	-2951	1638	-642.49		5363	1.965	9406	5175			3.16	Si
SLV 3	13.07	-3682	4481	3732.54		0	0	8333	0			0	No, Vu<V
SLV 3	14.87	-4190	3041	-1407.1		7714	1.9401	9876	5365			1.76	Si
SLV 11	13.07	-4429	1955	2002.76		9943	1.5911	10322	4598			2.35	Si
SLV 11	14.87	-3036	2142	-871.41		5518	1.965	9437	5192			2.42	Si
SLV 2	13.07	-3267	4018	3098.69		114695	0.1017	16250	463			0.12	No, Vu<V
SLV 2	14.87	-3969	2712	-1236.73		7214	1.965	9776	5379			1.98	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 10	143750	0.53	5391	-2966	221.05	396.94	1.8	Si
SLV 9	143750	0.53	5391	-2966	221.05	396.94	1.8	Si
SLV 5	143750	0.53	5733	-3154	221.05	420.85	1.9	Si
SLV 6	143750	0.53	5733	-3154	221.05	420.85	1.9	Si
SLV 13	143750	0.53	5800	-3191	221.05	425.56	1.93	Si
SLV 14	143750	0.53	5800	-3191	221.05	425.56	1.93	Si
SLV 16	143750	0.53	6492	-3572	221.05	473.5	2.14	Si
SLV 15	143750	0.53	6492	-3572	221.05	473.5	2.14	Si
SLV 2	143750	0.53	6938	-3817	221.05	504.1	2.28	Si
SLV 1	143750	0.53	6938	-3817	221.05	504.1	2.28	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 1	-2727	-6361	-44	0.05	534.2	0.896	0.81794	9.06484	No
SLV 2	-2727	-6361	-44	0.05	534.2	0.896	0.81794	9.06484	No
SLV 6	-2215	-3760	-58	0.047	485	0.892	0.77348	8.06258	No
SLV 5	-2215	-3760	-58	0.047	485	0.892	0.77348	8.06258	No
SLV 3	-2736	-7474	-19	0.056	535	0.896	0.91156	9.06484	No
SLV 4	-2736	-7474	-19	0.056	535	0.896	0.91156	9.06484	No
SLV 9	-1784	-2644	-45	0.052	444.5	0.889	0.84369	8.06258	No
SLV 10	-1784	-2644	-45	0.052	444.5	0.889	0.84369	8.06258	No
SLV 15	-1301	-3756	23	0.061	400.9	0.89	0.98882	9.06484	No
SLV 16	-1301	-3756	23	0.061	400.9	0.89	0.98882	9.06484	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.552	SLU 40	Si
V_SLU	0.917	SLU 40	No
PF_SLV	0	SLV 3	No
V_SLV	0	SLV 3	No
PFFP_SLV	1.796	SLV 9	Si
R_SLV	0.09	SLV 1	No

Maschio 226

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.758	5.951	-21.813	5.951	L6	L7	2.055	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 81	13.07	-5141	1656.42	8935	4703.04	2.839	Si
SLU 81	14.87	-2529	-2042.85	4396	2458.54	1.203	Si
SLU 19	13.07	-3836	1244.71	6666	3618.64	2.907	Si
SLU 19	14.87	-1840	-1540.66	3199	1816.78	1.179	Si
SLU 18	13.07	-3836	1231.95	6666	3618.66	2.937	Si
SLU 18	14.87	-1840	-1532.72	3199	1816.8	1.185	Si
SLU 61	13.07	-4967	1496.33	8631	4562.37	3.049	Si
SLU 61	14.87	-2382	-1887.86	4140	2323.18	1.231	Si
SLU 31	13.07	-4050	1367.37	7039	3801.93	2.78	Si
SLU 31	14.87	-2027	-1652.12	3524	1993.14	1.206	Si
SLU 40	13.07	-4010	1417.56	6969	3767.94	2.658	Si
SLU 40	14.87	-1988	-1703.58	3454	1955.61	1.148	Si
SLU 39	13.07	-4010	1404.8	6969	3767.96	2.682	Si
SLU 39	14.87	-1988	-1695.65	3454	1955.63	1.153	Si
SLU 82	13.07	-5141	1669.18	8935	4703.02	2.818	Si
SLU 82	14.87	-2529	-2050.79	4396	2458.52	1.199	Si
SLU 60	13.07	-4967	1483.57	8631	4562.38	3.075	Si
SLU 60	14.87	-2382	-1879.93	4140	2323.21	1.236	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 10	13.07	-3876	1194.52	6736	3652.93	3.058	Si
SLU 10	14.87	-1880	-1489.19	3268	1854.56	1.245	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 1	13.07	-5991	1690.76	10412	5631.25	3.331	Si
SLV 1	14.87	-3629	-4963.69	0	0	0	No, $e \geq l/2$
SLV 3	13.07	-7178	1978.63	12474	6621.99	3.347	Si
SLV 3	14.87	-4716	-6543.12	0	0	0	No, $e \geq l/2$
SLV 7	13.07	-6747	1817.57	11726	6267.42	3.448	Si
SLV 7	14.87	-4455	-5357.96	0	0	0	No, $e \geq l/2$
SLV 14	13.07	-807	270.99	1402	819.42	3.024	Si
SLV 14	14.87	738	3687.25	0	0	0	No, Trazione
SLV 10	13.07	-1237	432.06	2150	1248.71	2.89	Si
SLV 10	14.87	477	2502.09	0	0	0	No, Trazione
SLV 13	13.07	-807	270.99	1402	819.42	3.024	Si
SLV 13	14.87	738	3687.25	0	0	0	No, Trazione
SLV 2	13.07	-5991	1690.76	10412	5631.25	3.331	Si
SLV 2	14.87	-3629	-4963.69	0	0	0	No, $e \geq l/2$
SLV 9	13.07	-1237	432.06	2150	1248.71	2.89	Si
SLV 9	14.87	477	2502.09	0	0	0	No, Trazione
SLV 8	13.07	-6747	1817.57	11726	6267.42	3.448	Si
SLV 8	14.87	-4455	-5357.96	0	0	0	No, $e \geq l/2$
SLV 4	13.07	-7178	1978.63	12474	6621.99	3.347	Si
SLV 4	14.87	-4716	-6543.12	0	0	0	No, $e \geq l/2$

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 18	13.07	-3836	1569	1231.95		6666	2.055	6444	3708			2.36	Si
SLU 18	14.87	-1840	1569	-1532.72		11253	0.5841	7056	1154			0.74	No, $V_u < V$
SLU 73	13.07	-5181	2053	1618.99		9004	2.055	6756	3887			1.89	Si
SLU 73	14.87	-2569	2053	-1999.32		12269	0.7479	7191	1506			0.73	No, $V_u < V$
SLU 82	13.07	-5141	2109	1669.18		8935	2.055	6747	3882			1.84	Si
SLU 82	14.87	-2529	2109	-2050.79		13897	0.65	7409	1348			0.64	No, $V_u < V$
SLU 19	13.07	-3836	1580	1244.71		6666	2.055	6444	3708			2.35	Si
SLU 19	14.87	-1840	1580	-1540.66		11509	0.5711	7090	1134			0.72	No, $V_u < V$
SLU 40	13.07	-4010	1767	1417.56		7083	2.022	6500	3680			2.08	Si
SLU 40	14.87	-1988	1767	-1703.58		13888	0.5111	7407	1060			0.6	No, $V_u < V$
SLU 61	13.07	-4967	1923	1496.33		8631	2.055	6706	3859			2.01	Si
SLU 61	14.87	-2382	1923	-1887.86		12069	0.7049	7165	1414			0.74	No, $V_u < V$
SLU 81	13.07	-5141	2098	1656.42		8935	2.055	6747	3882			1.85	Si
SLU 81	14.87	-2529	2098	-2042.85		13699	0.6594	7382	1363			0.65	No, $V_u < V$
SLU 60	13.07	-4967	1911	1483.57		8631	2.055	6706	3859			2.02	Si
SLU 60	14.87	-2382	1911	-1879.93		11900	0.7149	7142	1430			0.75	No, $V_u < V$
SLU 39	13.07	-4010	1755	1404.8		7050	2.0316	6496	3695			2.1	Si
SLU 39	14.87	-1988	1755	-1695.65		13569	0.5231	7365	1079			0.61	No, $V_u < V$
SLU 31	13.07	-4050	1710	1367.37		7039	2.055	6494	3737			2.18	Si
SLU 31	14.87	-2027	1710	-1652.12		11351	0.6379	7069	1263			0.74	No, $V_u < V$

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 8	13.07	-6747	4314	1817.57		11726	2.055	10679	6144			1.42	Si
SLV 8	14.87	-4455	3946	-5357.96		0	0	8333	0			0	No, $V_u < V$
SLV 1	13.07	-5991	4211	1690.76		10412	2.055	10416	5993			1.42	Si
SLV 1	14.87	-3629	3313	-4963.69		0	0	8333	0			0	No, $V_u < V$
SLV 9	13.07	-1237	-1412	432.06		2171	2.0347	8768	4995			3.54	Si
SLV 9	14.87	477	-1044	2502.09		0	0	8333	0			0	No, $V_u < V$
SLV 3	13.07	-7178	5331	1978.63		12474	2.055	10828	6231			1.17	Si
SLV 3	14.87	-4716	4379	-6543.12		0	0	8333	0			0	No, $V_u < V$
SLV 2	13.07	-5991	4211	1690.76		10412	2.055	10416	5993			1.42	Si
SLV 2	14.87	-3629	3313	-4963.69		0	0	8333	0			0	No, $V_u < V$
SLV 7	13.07	-6747	4314	1817.57		11726	2.055	10679	6144			1.42	Si
SLV 7	14.87	-4455	3946	-5357.96		0	0	8333	0			0	No, $V_u < V$
SLV 13	13.07	-807	-2429	270.99		1402	2.055	8614	4956			2.04	Si
SLV 13	14.87	738	-1477	3687.25		0	0	8333	0			0	No, $V_u < V$
SLV 4	13.07	-7178	5331	1978.63		12474	2.055	10828	6231			1.17	Si
SLV 4	14.87	-4716	4379	-6543.12		0	0	8333	0			0	No, $V_u < V$
SLV 10	13.07	-1237	-1412	432.06		2171	2.0347	8768	4995			3.54	Si
SLV 10	14.87	477	-1044	2502.09		0	0	8333	0			0	No, $V_u < V$
SLV 14	13.07	-807	-2429	270.99		1402	2.055	8614	4956			2.04	Si
SLV 14	14.87	738	-1477	3687.25		0	0	8333	0			0	No, $V_u < V$

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 10	143750	0.53	0	-765	231.17	0	0	No, $e \geq t/2$
SLV 15	143750	0.53	0	-1343	231.17	0	0	No, $e \geq t/2$
SLV 16	143750	0.53	0	-1343	231.17	0	0	No, $e \geq t/2$
SLV 9	143750	0.53	0	-765	231.17	0	0	No, $e \geq t/2$
SLV 13	143750	0.53	0	-274	231.17	0	0	No, $e \geq t/2$
SLV 14	143750	0.53	0	-274	231.17	0	0	No, $e \geq t/2$
SLV 5	143750	0.53	3919	-2255	231.17	305.54	1.32	Si
SLV 6	143750	0.53	3919	-2255	231.17	305.54	1.32	Si
SLV 12	143750	0.53	7523	-4329	231.17	568.7	2.46	Si
SLV 11	143750	0.53	7523	-4329	231.17	568.7	2.46	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeraia = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
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Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 5	-723	-2362	-388	0	367.2	0.904	0	8.06258	No
SLV 12	-2957	-4307	387	0	568.8	0.897	0	8.06258	No
SLV 6	-723	-2362	-388	0	367.2	0.904	0	8.06258	No
SLV 11	-2957	-4307	387	0	568.8	0.897	0	8.06258	No
SLV 13	1957	-3094	-110	0	0	0	0	9.06484	No, Trazione
SLV 7	-4863	-4279	384	0	757	0.914	0	8.06258	No
SLV 9	1183	-2390	-384	0	0	0	0	8.06258	No, Trazione
SLV 14	1957	-3094	-110	0	0	0	0	9.06484	No, Trazione
SLV 8	-4863	-4279	384	0	757	0.914	0	8.06258	No
SLV 10	1183	-2390	-384	0	0	0	0	8.06258	No, Trazione

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.148	SLU 40	Si
V_SLU	0.6	SLU 40	No
PF_SLV	0	SLV 14	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 9	No
R_SLV	0	SLV 16	No

Maschio 227

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-22.493	-3.359	-24.678	-3.359	L6	L7	2.185	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	M	$\alpha 0$	Mu	c.s.	Verifica
SLU 31	13.07	-4217	2060.9	6892	4217.01	2.046	Si
SLU 31	14.87	-3708	-699.61	6062	3750.03	5.36	Si
SLU 39	13.07	-4295	2087.67	7020	4287.86	2.054	Si
SLU 39	14.87	-3823	-577.41	6249	3856.48	6.679	Si
SLU 73	13.07	-5366	2304.46	8770	5230.74	2.27	Si
SLU 73	14.87	-4482	-826.29	7326	4456.5	5.393	Si
SLU 34	13.07	-4742	2158.33	7751	4687.77	2.172	Si
SLU 34	14.87	-4396	-846.64	7185	4378.84	5.172	Si
SLU 41	13.07	-4820	2185.09	7879	4756.82	2.177	Si
SLU 41	14.87	-4511	-724.44	7373	4481.83	6.187	Si
SLU 82	13.07	-5385	2411.01	8801	5247.19	2.176	Si
SLU 82	14.87	-4574	-780.25	7476	4538.18	5.816	Si
SLU 84	13.07	-5910	2508.44	9660	5691.04	2.269	Si
SLU 84	14.87	-5261	-927.28	8599	5140.92	5.544	Si
SLU 42	13.07	-4761	2264.88	7782	4704.74	2.077	Si
SLU 42	14.87	-4487	-800.6	7334	4460.87	5.572	Si
SLU 19	13.07	-3987	1820.58	6517	4007.58	2.201	Si
SLU 19	14.87	-3337	-588.53	5455	3401.81	5.78	Si
SLU 40	13.07	-4236	2167.46	6924	4234.42	1.954	Si
SLU 40	14.87	-3800	-653.57	6211	3834.81	5.868	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma M = 2$

Comb.	Quota	N	M	$\alpha 0$	Mu	c.s.	Verifica
SLV 4	13.07	-4313	2597.82	7050	4440.46	1.709	Si
SLV 4	14.87	-4649	-1330.24	7598	4762.7	3.58	Si
SLV 2	13.07	-5212	3249.03	8519	5297.24	1.63	Si
SLV 2	14.87	-5161	-1368.53	8435	5248.79	3.835	Si
SLV 5	13.07	-5847	2952.1	9556	5887.78	1.994	Si
SLV 5	14.87	-4629	-831.47	7565	4743.56	5.705	Si
SLV 3	13.07	-4313	2597.82	7050	4440.46	1.709	Si
SLV 3	14.87	-4649	-1330.24	7598	4762.7	3.58	Si
SLV 10	13.07	-5492	2046.38	8976	5558.75	2.716	Si
SLV 10	14.87	-3660	-332.84	5983	3803.02	11.426	Si
SLV 7	13.07	-2851	781.4	4659	2995.57	3.834	Si
SLV 7	14.87	-2921	-703.84	4775	3066.88	4.357	Si
SLV 9	13.07	-5492	2046.38	8976	5558.75	2.716	Si
SLV 9	14.87	-3660	-332.84	5983	3803.02	11.426	Si
SLV 1	13.07	-5212	3249.03	8519	5297.24	1.63	Si
SLV 1	14.87	-5161	-1368.53	8435	5248.79	3.835	Si
SLV 8	13.07	-2851	781.4	4659	2995.57	3.834	Si
SLV 8	14.87	-2921	-703.84	4775	3066.88	4.357	Si
SLV 6	13.07	-5847	2952.1	9556	5887.78	1.994	Si
SLV 6	14.87	-4629	-831.47	7565	4743.56	5.705	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	V par	M	$\alpha 0$	αN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 78	13.07	-6737	3150	2410.23		11011	2.185	7024	4297			1.36	Si
SLU 78	14.87	-6219	3234	-1130.69		10164	2.185	6911	4228			1.31	Si
SLU 42	13.07	-4761	2709	2264.88		9189	1.8504	6781	3513			1.3	Si
SLU 42	14.87	-4487	2780	-800.6		7334	2.185	6533	3997			1.44	Si
SLU 83	13.07	-5969	2903	2428.65		10364	2.0569	6937	3995			1.38	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 83	14.87	-5284	3004	-851.13		8638	2.185	6707	4103			1.37	Si
SLU 84	13.07	-5910	3024	2508.44		10532	2.0042	6960	3906			1.29	Si
SLU 84	14.87	-5261	3106	-927.28		8599	2.185	6702	4100			1.32	Si
SLU 40	13.07	-4236	2483	2167.46		8682	1.7425	6713	3275			1.32	Si
SLU 40	14.87	-3800	2547	-653.57		6211	2.185	6384	3906			1.53	Si
SLU 76	13.07	-5891	2953	2401.88		10241	2.0543	6921	3981			1.35	Si
SLU 76	14.87	-5170	3018	-973.33		8450	2.185	6682	4088			1.35	Si
SLU 79	13.07	-6515	2979	2366.32		10648	2.185	6975	4267			1.43	Si
SLU 79	14.87	-5896	3081	-993.43		9637	2.185	6841	4185			1.36	Si
SLU 77	13.07	-6796	3029	2330.44		11108	2.185	7037	4305			1.42	Si
SLU 77	14.87	-6242	3131	-1054.53		10203	2.185	6916	4231			1.35	Si
SLU 82	13.07	-5385	2797	2411.01		9942	1.9342	6881	3727			1.33	Si
SLU 82	14.87	-4574	2878	-780.25		7476	2.185	6552	4009			1.4	Si
SLU 80	13.07	-6456	3100	2446.11		10770	2.1407	6992	4191			1.35	Si
SLU 80	14.87	-5873	3184	-1069.59		9599	2.185	6835	4182			1.31	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 1	13.07	-5212	3852	3249.03		13226	1.4074	10979	4326			1.12	Si
SLV 1	14.87	-5161	2651	-1368.53		8435	2.185	10020	6130			2.31	Si
SLV 8	13.07	-2851	2439	781.4		4659	2.185	9265	5668			2.32	Si
SLV 8	14.87	-2921	2161	-703.84		4775	2.185	9288	5683			2.63	Si
SLV 12	13.07	-2496	1124	-124.32		4079	2.185	9149	5597			4.98	Si
SLV 12	14.87	-1953	1596	-205.21		3192	2.185	8972	5489			3.44	Si
SLV 3	13.07	-4313	3907	2597.82		10475	1.4707	10428	4294			1.1	Si
SLV 3	14.87	-4649	2729	-1330.24		7598	2.185	9853	6028			2.21	Si
SLV 4	13.07	-4313	3907	2597.82		10475	1.4707	10428	4294			1.1	Si
SLV 4	14.87	-4649	2729	-1330.24		7598	2.185	9853	6028			2.21	Si
SLV 7	13.07	-2851	2439	781.4		4659	2.185	9265	5668			2.32	Si
SLV 7	14.87	-2921	2161	-703.84		4775	2.185	9288	5683			2.63	Si
SLV 2	13.07	-5212	3852	3249.03		13226	1.4074	10979	4326			1.12	Si
SLV 2	14.87	-5161	2651	-1368.53		8435	2.185	10020	6130			2.31	Si
SLV 11	13.07	-2496	1124	-124.32		4079	2.185	9149	5597			4.98	Si
SLV 11	14.87	-1953	1596	-205.21		3192	2.185	8972	5489			3.44	Si
SLV 6	13.07	-5847	2254	2952.1		11846	1.7627	10702	5282			2.34	Si
SLV 6	14.87	-4629	1901	-831.47		7565	2.185	9846	6024			3.17	Si
SLV 5	13.07	-5847	2254	2952.1		11846	1.7627	10702	5282			2.34	Si
SLV 5	14.87	-4629	1901	-831.47		7565	2.185	9846	6024			3.17	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 11	143750	0.53	3657	-2237	245.8	303.85	1.24	Si
SLV 12	143750	0.53	3657	-2237	245.8	303.85	1.24	Si
SLV 15	143750	0.53	4301	-2632	245.8	355.46	1.45	Si
SLV 16	143750	0.53	4301	-2632	245.8	355.46	1.45	Si
SLV 8	143750	0.53	4702	-2877	245.8	387.25	1.58	Si
SLV 7	143750	0.53	4702	-2877	245.8	387.25	1.58	Si
SLV 14	143750	0.53	5899	-3609	245.8	480.88	1.96	Si
SLV 13	143750	0.53	5899	-3609	245.8	480.88	1.96	Si
SLV 3	143750	0.53	7786	-4763	245.8	624.35	2.54	Si
SLV 4	143750	0.53	7786	-4763	245.8	624.35	2.54	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 3	-2754	-7646	86	0.042	567.1	0.894	0.68967	9.06484	No
SLV 4	-2754	-7646	86	0.042	567.1	0.894	0.68967	9.06484	No
SLV 13	-1484	-3996	-75	0.045	449.1	0.889	0.73493	9.06484	No
SLV 14	-1484	-3996	-75	0.045	449.1	0.889	0.73493	9.06484	No
SLV 1	-2883	-9047	66	0.047	579.5	0.895	0.76114	9.06484	No
SLV 2	-2883	-9047	66	0.047	579.5	0.895	0.76114	9.06484	No
SLV 16	-1355	-2595	-55	0.052	437.8	0.89	0.84172	9.06484	No
SLV 15	-1355	-2595	-55	0.052	437.8	0.89	0.84172	9.06484	No
SLV 7	-2114	-4243	60	0.049	506.4	0.89	0.79675	8.06258	No
SLV 8	-2114	-4243	60	0.049	506.4	0.89	0.79675	8.06258	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.954	SLU 40	Si
V_SLU	1.292	SLU 84	Si
PF_SLV	1.63	SLV 1	Si
V_SLV	1.099	SLV 3	Si
PFFP_SLV	1.236	SLV 11	Si
R_SLV	0.076	SLV 3	No

Maschio 228

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.368	-3.359	-21.593	-3.359	L6	L7	2.225	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

Sismicad 12.19 - Licenza assegnata a Sidel ingegneria Srl - Via Isonzo, 13 - Villanova di Castenaso (BO)



fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 19	14.17	-2708	447.78	4347	2851.91	6.369	Si
SLU 19	14.97	-2015	-572.04	3235	2153.14	3.764	Si
SLU 18	14.17	-2730	484.75	4382	2873.43	5.928	Si
SLU 18	14.97	-2014	-524.48	3232	2151.28	4.102	Si
SLU 61	14.17	-3485	570.12	5594	3611.09	6.334	Si
SLU 61	14.97	-2533	-662.22	4065	2676.82	4.042	Si
SLU 52	14.17	-3520	536.16	5650	3644.04	6.797	Si
SLU 52	14.97	-2551	-654.85	4094	2694.84	4.115	Si
SLU 39	14.17	-2993	524.9	4805	3133.78	5.97	Si
SLU 39	14.97	-2316	-606.44	3718	2459.42	4.056	Si
SLU 31	14.17	-3006	453.97	4825	3146.23	6.93	Si
SLU 31	14.97	-2336	-646.63	3750	2479.46	3.834	Si
SLU 82	14.17	-3749	610.27	6018	3862.71	6.329	Si
SLU 82	14.97	-2835	-744.17	4551	2978.07	4.002	Si
SLU 40	14.17	-2972	487.93	4770	3112.51	6.379	Si
SLU 40	14.97	-2318	-653.99	3721	2461.26	3.763	Si
SLU 73	14.17	-3783	576.31	6073	3895.26	6.759	Si
SLU 73	14.97	-2853	-736.8	4580	2995.86	4.066	Si
SLU 10	14.17	-2742	413.82	4402	2886.03	6.974	Si
SLU 10	14.97	-2033	-564.67	3264	2171.58	3.846	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 3	14.17	-2224	1570.82	3570	2401.85	1.529	Si
SLV 3	14.97	-2057	-911.26	3301	2226.25	2.443	Si
SLV 4	14.17	-2224	1570.82	3570	2401.85	1.529	Si
SLV 4	14.97	-2057	-911.26	3301	2226.25	2.443	Si
SLV 1	14.17	-2397	1883.11	3848	2582.7	1.372	Si
SLV 1	14.97	-2322	-1332.89	3728	2504.77	1.879	Si
SLV 6	14.17	-3036	1368.54	4874	3243.07	2.37	Si
SLV 6	14.97	-2601	-1349.95	4175	2794.77	2.07	Si
SLV 16	14.17	-3473	-940.36	5575	3687.77	3.922	Si
SLV 16	14.97	-1968	445.46	3158	2132.29	4.787	Si
SLV 5	14.17	-3036	1368.54	4874	3243.07	2.37	Si
SLV 5	14.97	-2601	-1349.95	4175	2794.77	2.07	Si
SLV 9	14.17	-3411	615.19	5475	3624.73	5.892	Si
SLV 9	14.97	-2574	-942.94	4132	2767.03	2.934	Si
SLV 10	14.17	-3411	615.19	5475	3624.73	5.892	Si
SLV 10	14.97	-2574	-942.94	4132	2767.03	2.934	Si
SLV 2	14.17	-2397	1883.11	3848	2582.7	1.372	Si
SLV 2	14.97	-2322	-1332.89	3728	2504.77	1.879	Si
SLV 15	14.17	-3473	-940.36	5575	3687.77	3.922	Si
SLV 15	14.97	-1968	445.46	3158	2132.29	4.787	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 83	14.17	-4568	2115	716.81		7332	2.225	6533	4070			1.92	Si
SLU 83	14.97	-3609	1292	-677.13		5792	2.225	6328	3942			3.05	Si
SLU 80	14.17	-5392	2094	740.1		8655	2.225	6710	4180			2	Si
SLU 80	14.97	-4402	1229	-666.14		7066	2.225	6498	4048			3.29	Si
SLU 84	14.17	-4546	2163	679.85		7297	2.225	6529	4067			1.88	Si
SLU 84	14.97	-3610	1322	-724.69		5795	2.225	6328	3943			2.98	Si
SLU 79	14.17	-5414	2046	777.07		8690	2.225	6714	4183			2.04	Si
SLU 79	14.97	-4401	1199	-618.58		7063	2.225	6497	4048			3.38	Si
SLU 82	14.17	-3749	2122	610.27		6018	2.225	6358	3961			1.87	Si
SLU 82	14.97	-2835	1342	-744.17		4551	2.225	6162	3839			2.86	Si
SLU 73	14.17	-3783	2045	576.31		6073	2.225	6365	3966			1.94	Si
SLU 73	14.97	-2853	1289	-736.8		4580	2.225	6166	3842			2.98	Si
SLU 75	14.17	-4958	2025	667.09		7958	2.225	6617	4122			2.04	Si
SLU 75	14.97	-3960	1237	-701.3		6356	2.225	6403	3989			3.22	Si
SLU 81	14.17	-3771	2074	647.24		6053	2.225	6363	3964			1.91	Si
SLU 81	14.97	-2834	1312	-696.61		4548	2.225	6162	3839			2.93	Si
SLU 76	14.17	-4581	2086	645.88		7352	2.225	6536	4072			1.95	Si
SLU 76	14.97	-3628	1269	-717.32		5824	2.225	6332	3945			3.11	Si
SLU 78	14.17	-5755	2066	736.67		9237	2.225	6787	4228			2.05	Si
SLU 78	14.97	-4735	1217	-681.82		7600	2.225	6569	4092			3.36	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 1	14.17	-2397	5563	1883.11		8729	0.9807	10079	2768			0.5	No, Vu<V
SLV 1	14.97	-2322	3425	-1332.89		5134	1.6157	9360	4234			1.24	Si
SLV 2	14.17	-2397	5563	1883.11		8729	0.9807	10079	2768			0.5	No, Vu<V
SLV 2	14.97	-2322	3425	-1332.89		5134	1.6157	9360	4234			1.24	Si
SLV 15	14.17	-3473	-2892	-940.36		5575	2.225	9448	5886			2.04	Si
SLV 15	14.97	-1968	-1743	445.46		3158	2.225	8965	5585			3.2	Si
SLV 4	14.17	-2224	4398	1570.82		6518	1.2185	9637	3288			0.75	No, Vu<V
SLV 4	14.97	-2057	2312	-911.26		3657	2.0083	9065	5097			2.2	Si
SLV 6	14.17	-3036	4371	1368.54		5462	1.9853	9426	5240			1.2	Si
SLV 6	14.97	-2601	3305	-1349.95		5217	1.7805	9377	4675			1.41	Si
SLV 9	14.17	-3411	2184	615.19		5475	2.225	9428	5874			2.69	Si
SLV 9	14.97	-2574	2089	-942.94		4132	2.225	9160	5707			2.73	Si
SLV 16	14.17	-3473	-2892	-940.36		5575	2.225	9448	5886			2.04	Si
SLV 16	14.97	-1968	-1743	445.46		3158	2.225	8965	5585			3.2	Si
SLV 3	14.17	-2224	4398	1570.82		6518	1.2185	9637	3288			0.75	No, Vu<V
SLV 3	14.97	-2057	2312	-911.26		3657	2.0083	9065	5097			2.2	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 5	14.17	-3036	4371	1368.54		5462	1.9853	9426	5240			1.2	Si
SLV 5	14.97	-2601	3305	-1349.95		5217	1.7805	9377	4675			1.41	Si
SLV 10	14.17	-3411	2184	615.19		5475	2.225	9428	5874			2.69	Si
SLV 10	14.97	-2574	2089	-942.94		4132	2.225	9160	5707			2.73	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 16	143750	0.53	4164	-2594	250.3	350.82	1.4	Si
SLV 15	143750	0.53	4164	-2594	250.3	350.82	1.4	Si
SLV 12	143750	0.53	4423	-2756	250.3	371.81	1.49	Si
SLV 11	143750	0.53	4423	-2756	250.3	371.81	1.49	Si
SLV 13	143750	0.53	4789	-2983	250.3	401.3	1.6	Si
SLV 14	143750	0.53	4789	-2983	250.3	401.3	1.6	Si
SLV 7	143750	0.53	5270	-3283	250.3	439.79	1.76	Si
SLV 8	143750	0.53	5270	-3283	250.3	439.79	1.76	Si
SLV 10	143750	0.53	6505	-4053	250.3	537.17	2.15	Si
SLV 9	143750	0.53	6505	-4053	250.3	537.17	2.15	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 5	-1723	-5667	-38	0.056	476.2	0.889	0.91812	8.06258	No
SLV 6	-1723	-5667	-38	0.056	476.2	0.889	0.91812	8.06258	No
SLV 10	-1750	-5339	-36	0.056	478.6	0.889	0.92263	8.06258	No
SLV 9	-1750	-5339	-36	0.056	478.6	0.889	0.92263	8.06258	No
SLV 15	-1617	-3308	13	0.064	466.6	0.889	1.04125	9.06484	No
SLV 16	-1617	-3308	13	0.064	466.6	0.889	1.04125	9.06484	No
SLV 1	-1603	-5163	-13	0.064	465.5	0.889	1.04344	9.06484	No
SLV 2	-1603	-5163	-13	0.064	465.5	0.889	1.04344	9.06484	No
SLV 12	-1497	-2804	38	0.057	456	0.89	0.92971	8.06258	No
SLV 11	-1497	-2804	38	0.057	456	0.89	0.92971	8.06258	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.763	SLU 40	Si
V_SLU	1.866	SLU 82	Si
PF_SLV	1.372	SLV 1	Si
V_SLV	0.498	SLV 1	No
PFFP_SLV	1.402	SLV 15	Si
R_SLV	0.114	SLV 5	No

Maschio 229

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.263	-3.359	-18.868	-3.359	L6	L7	0.605	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 39	14.17	-1151	147.78	6795	319.14	2.16	Si
SLU 39	14.97	-587	-134.34	3464	169.96	1.265	Si
SLU 40	14.17	-1064	145.53	6281	297.05	2.041	Si
SLU 40	14.97	-545	-122.45	3218	158.37	1.293	Si
SLU 31	14.17	-1012	138.3	5976	283.76	2.052	Si
SLU 31	14.97	-533	-106.76	3149	155.12	1.453	Si
SLU 60	14.17	-1341	161.09	7917	366.25	2.274	Si
SLU 60	14.97	-668	-145.17	3941	192.19	1.324	Si
SLU 19	14.17	-966	130.13	5701	271.68	2.088	Si
SLU 19	14.97	-477	-109.25	2817	139.37	1.276	Si
SLU 82	14.17	-1352	174.24	7983	369.01	2.118	Si
SLU 82	14.97	-694	-146.49	4095	199.29	1.36	Si
SLU 81	14.17	-1439	176.49	8497	390	2.21	Si
SLU 81	14.97	-735	-158.38	4341	210.61	1.33	Si
SLU 18	14.17	-1053	132.38	6214	294.15	2.222	Si
SLU 18	14.97	-519	-121.13	3064	151.09	1.247	Si
SLU 61	14.17	-1254	158.84	7403	344.89	2.171	Si
SLU 61	14.97	-626	-133.29	3695	180.74	1.356	Si
SLU 10	14.17	-914	122.9	5395	258.17	2.101	Si
SLU 10	14.97	-466	-93.55	2749	136.1	1.455	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 12	14.17	646	-143.34	0	0	0	No, Trazione
SLV 12	14.97	767	189.35	0	0	0	No, Trazione
SLV 8	14.17	-63	22.82	0	0	0	No, e \geq 1/2
SLV 8	14.97	759	-109.16	0	0	0	No, Trazione
SLV 3	14.17	-1863	343.9	10998	512.85	1.491	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 3	14.97	-192	-558.4	0	0	0	No, $e \geq l/2$
SLV 14	14.17	-332	-100.9	0	0	0	No, $e \geq l/2$
SLV 14	14.97	-971	350.06	0	0	0	No, $e \geq l/2$
SLV 4	14.17	-1863	343.9	10998	512.85	1.491	Si
SLV 4	14.97	-192	-558.4	0	0	0	No, $e \geq l/2$
SLV 2	14.17	-2697	452.96	15919	709.47	1.566	Si
SLV 2	14.97	-999	-644.96	0	0	0	No, $e \geq l/2$
SLV 7	14.17	-63	22.82	0	0	0	No, $e \geq l/2$
SLV 7	14.97	759	-109.16	0	0	0	No, Trazione
SLV 1	14.17	-2697	452.96	15919	709.47	1.566	Si
SLV 1	14.97	-999	-644.96	0	0	0	No, $e \geq l/2$
SLV 11	14.17	646	-143.34	0	0	0	No, Trazione
SLV 11	14.97	767	189.35	0	0	0	No, Trazione
SLV 13	14.17	-332	-100.9	0	0	0	No, $e \geq l/2$
SLV 13	14.97	-971	350.06	0	0	0	No, $e \geq l/2$

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 81	14.17	-1439	662	176.49		9526	0.5397	6826	1031			1.56	Si
SLU 81	14.97	-735	86	-158.38		10046	0.2614	6895	505			5.88	Si
SLU 77	14.17	-2082	711	190.5		12290	0.605	7194	1219			1.72	Si
SLU 77	14.97	-1366	74	-150.29		8449	0.5774	6682	1080			14.59	Si
SLU 83	14.17	-1689	692	184.06		10390	0.5805	6941	1128			1.63	Si
SLU 83	14.97	-976	83	-159.38		8347	0.4175	6668	780			9.35	Si
SLU 73	14.17	-1301	569	167		8894	0.5223	6741	986			1.73	Si
SLU 73	14.97	-682	101	-130.79		7332	0.3322	6533	608			6.04	Si
SLU 82	14.17	-1352	621	174.24		9271	0.521	6792	991			1.6	Si
SLU 82	14.97	-694	95	-146.49		9043	0.274	6761	519			5.49	Si
SLU 60	14.17	-1341	606	161.09		8754	0.5471	6723	1030			1.7	Si
SLU 60	14.97	-668	79	-145.17		9345	0.2552	6801	486			6.13	Si
SLU 84	14.17	-1602	651	181.81		10090	0.567	6901	1096			1.68	Si
SLU 84	14.97	-934	92	-147.49		7690	0.4338	6581	799			8.68	Si
SLU 79	14.17	-1945	697	185.91		11479	0.605	7086	1200			1.72	Si
SLU 79	14.97	-1232	81	-152.6		8211	0.5361	6650	998			12.31	Si
SLU 39	14.17	-1151	555	147.78		7870	0.5223	6605	966			1.74	Si
SLU 39	14.97	-587	69	-134.34		9496	0.2207	6822	422			6.09	Si
SLU 74	14.17	-1832	681	182.93		10817	0.605	6998	1185			1.74	Si
SLU 74	14.97	-1126	77	-149.29		7888	0.5096	6607	943			12.31	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 11	14.17	646	-701	-143.34		0	0	8333	0			0	No, $V_u < V$
SLV 11	14.97	767	-591	189.35		0	0	8333	0			0	No, $V_u < V$
SLV 7	14.17	-63	237	22.82		0	0	8333	0			0	No, $V_u < V$
SLV 7	14.97	759	-448	-109.16		0	0	8333	0			0	No, $V_u < V$
SLV 1	14.17	-2697	2220	452.96		23863	0.4036	13106	1481			0.67	No, $V_u < V$
SLV 1	14.97	-999	479	-644.96		0	0	8333	0			0	No, $V_u < V$
SLV 8	14.17	-63	237	22.82		0	0	8333	0			0	No, $V_u < V$
SLV 8	14.97	759	-448	-109.16		0	0	8333	0			0	No, $V_u < V$
SLV 12	14.17	646	-701	-143.34		0	0	8333	0			0	No, $V_u < V$
SLV 12	14.97	767	-591	189.35		0	0	8333	0			0	No, $V_u < V$
SLV 2	14.17	-2697	2220	452.96		23863	0.4036	13106	1481			0.67	No, $V_u < V$
SLV 2	14.97	-999	479	-644.96		0	0	8333	0			0	No, $V_u < V$
SLV 13	14.17	-332	-908	-100.9		0	0	8333	0			0	No, $V_u < V$
SLV 13	14.97	-971	2	350.06		0	0	8333	0			0	No, $V_u < V$
SLV 14	14.17	-332	-908	-100.9		0	0	8333	0			0	No, $V_u < V$
SLV 14	14.97	-971	2	350.06		0	0	8333	0			0	No, $V_u < V$
SLV 3	14.17	-1863	1810	343.9		18810	0.3537	12095	1198			0.66	No, $V_u < V$
SLV 3	14.97	-192	128	-558.4		0	0	8333	0			0	No, $V_u < V$
SLV 4	14.17	-1863	1810	343.9		18810	0.3537	12095	1198			0.66	No, $V_u < V$
SLV 4	14.97	-192	128	-558.4		0	0	8333	0			0	No, $V_u < V$

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 4	143750	0.53	0	200	68.06	0	0	No, Trazione
SLV 8	143750	0.53	0	488	68.06	0	0	No, Trazione
SLV 1	143750	0.53	0	-333	68.06	0	0	No, $e \geq t/2$
SLV 3	143750	0.53	0	200	68.06	0	0	No, Trazione
SLV 12	143750	0.53	0	203	68.06	0	0	No, Trazione
SLV 11	143750	0.53	0	203	68.06	0	0	No, Trazione
SLV 2	143750	0.53	0	-333	68.06	0	0	No, $e \geq t/2$
SLV 7	143750	0.53	0	488	68.06	0	0	No, Trazione
SLV 15	143750	0.53	4429	-750	68.06	101.24	1.49	Si
SLV 16	143750	0.53	4429	-750	68.06	101.24	1.49	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 8	124	-582	-7	0	0	0	0	8.06258	No, Trazione
SLV 7	124	-582	-7	0	0	0	0	8.06258	No, Trazione
SLV 12	213	-604	-5	0	0	0	0	8.06258	No, Trazione
SLV 11	213	-604	-5	0	0	0	0	8.06258	No, Trazione
SLV 2	-664	-647	-5	0.058	147.6	0.891	0.95268	9.06484	No
SLV 1	-664	-647	-5	0.058	147.6	0.891	0.95268	9.06484	No
SLV 4	-348	-605	-8	0.061	118.9	0.891	0.99099	9.06484	No
SLV 3	-348	-605	-8	0.061	118.9	0.891	0.99099	9.06484	No
SLV 9	-841	-746	4	0.058	164.6	0.896	0.93878	8.06258	No
SLV 10	-841	-746	4	0.058	164.6	0.896	0.93878	8.06258	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.247	SLU 18	Si
V_SLU	1.558	SLU 81	Si
PF_SLV	0	SLV 16	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 12	No
R_SLV	0	SLV 12	No

Maschio 230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.618	1.046	-19.618	5.811	L6	L7	4.765	0.14	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLU 72	12.17	-10899	-269.81	16338	20759.82	76.943	Si
SLU 72	15.32	-2552	3972.92	3825	5794.38	1.458	Si
SLU 9	12.17	-8363	-291.05	12536	16858.63	57.923	Si
SLU 9	15.32	-2153	3375.98	3227	4926.46	1.459	Si
SLU 8	12.17	-8346	-256.47	12510	16830.59	65.624	Si
SLU 8	15.32	-2153	3377.91	3227	4925.74	1.458	Si
SLU 59	12.17	-10572	-175.97	15848	20288.91	115.298	Si
SLU 59	15.32	-2365	3707.37	3545	5389.08	1.454	Si
SLU 58	12.17	-10555	-141.39	15822	20264.17	143.322	Si
SLU 58	15.32	-2364	3709.3	3544	5388.37	1.453	Si
SLU 51	12.17	-10134	-367.22	15190	19642.02	53.489	Si
SLU 51	15.32	-2444	3828.09	3663	5560.2	1.452	Si
SLU 79	12.17	-11321	-43.98	16970	21353.67	485.561	Si
SLU 79	15.32	-2473	3854.13	3707	5623.31	1.459	Si
SLU 71	12.17	-10882	-235.23	16312	20735.57	88.151	Si
SLU 71	15.32	-2551	3974.85	3825	5793.68	1.458	Si
SLU 50	12.17	-10117	-332.64	15165	19616.63	58.973	Si
SLU 50	15.32	-2443	3830.02	3662	5559.49	1.452	Si
SLU 16	12.17	-8784	-65.22	13168	17546.26	269.025	Si
SLU 16	15.32	-2074	3257.19	3109	4752.62	1.459	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma M = 2$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLV 1	12.17	-7682	1519.17	11515	16578.18	10.913	Si
SLV 1	15.32	496	-858.91	0	0	0	No, Trazione
SLV 9	12.17	-6786	-510.38	10173	14823.08	29.043	Si
SLV 9	15.32	-1974	6067.04	0	0	0	No, e>l/2
SLV 5	12.17	-7150	433.3	10718	15541.33	35.867	Si
SLV 5	15.32	-951	3945.22	0	0	0	No, e>l/2
SLV 4	12.17	-7774	1506.24	11654	16756.49	11.125	Si
SLV 4	15.32	713	-2854.93	0	0	0	No, Trazione
SLV 10	12.17	-6786	-510.38	10173	14823.08	29.043	Si
SLV 10	15.32	-1974	6067.04	0	0	0	No, e>l/2
SLV 3	12.17	-7774	1506.24	11654	16756.49	11.125	Si
SLV 3	15.32	713	-2854.93	0	0	0	No, Trazione
SLV 2	12.17	-7682	1519.17	11515	16578.18	10.913	Si
SLV 2	15.32	496	-858.91	0	0	0	No, Trazione
SLV 7	12.17	-7458	390.2	11179	16143.34	41.372	Si
SLV 7	15.32	-228	-2708.15	0	0	0	No, e>l/2
SLV 6	12.17	-7150	433.3	10718	15541.33	35.867	Si
SLV 6	15.32	-951	3945.22	0	0	0	No, e>l/2
SLV 8	12.17	-7458	390.2	11179	16143.34	41.372	Si
SLV 8	15.32	-228	-2708.15	0	0	0	No, e>l/2

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	V par	M	$\sigma 0$	σN	l'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 8	12.17	-8346	24	-256.47		12510	4.7652	7224	4819			198.31	Si
SLU 8	15.32	-2153	-735	3377.91		6301	2.4402	6396	2185			2.97	Si
SLU 29	12.17	-9111	57	-159.06		13657	4.7652	7377	4921			85.88	Si
SLU 29	15.32	-2261	-699	3522.74		6529	2.4734	6426	2225			3.18	Si
SLU 72	12.17	-10899	60	-269.81		16338	4.7652	7734	5159			86.35	Si
SLU 72	15.32	-2552	-777	3972.92		7359	2.477	6537	2267			2.92	Si
SLU 71	12.17	-10882	65	-235.23		16312	4.7652	7731	5157			79.87	Si
SLU 71	15.32	-2551	-774	3974.85		7366	2.4742	6538	2265			2.93	Si
SLU 49	12.17	-10290	44	-500.37		15425	4.7652	7612	5078			114.9	Si
SLU 49	15.32	-2389	-745	3631.54		6596	2.5869	6435	2331			3.13	Si
SLU 9	12.17	-8363	19	-291.05		12536	4.7652	7227	4821			247.5	Si
SLU 9	15.32	-2153	-738	3375.98		6293	2.4436	6395	2188			2.96	Si
SLU 50	12.17	-10117	32	-332.64		15165	4.7652	7578	5055			160.14	Si
SLU 50	15.32	-2443	-809	3830.02		7138	2.4449	6507	2227			2.75	Si
SLU 51	12.17	-10134	27	-367.22		15190	4.7652	7581	5057			189.08	Si
SLU 51	15.32	-2444	-812	3828.09		7130	2.4479	6506	2230			2.74	Si
SLU 48	12.17	-10273	49	-486.79		15400	4.7652	7609	5076			103.56	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 48	15.32	-2388	-742	3633.48		6603	2.5838	6436	2328			3.14	Si
SLU 30	12.17	-9128	52	-193.64		13683	4.7652	7380	4923			93.81	Si
SLU 30	15.32	-2261	-702	3520.81		6522	2.4767	6425	2228			3.17	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 5	12.17	-7150	-7255	433.3		10718	4.7652	10477	6989			0.96	No, Vu<V
SLV 5	15.32	-951	-2314	3945.22		0	0	8333	0			0	No, Vu<V
SLV 10	12.17	-6786	-7696	-510.38		10173	4.7652	10368	6917			0.9	No, Vu<V
SLV 10	15.32	-1974	-3426	6067.04		0	0	8333	0			0	No, Vu<V
SLV 2	12.17	-7682	-1446	1519.17		11515	4.7652	10636	7096			4.91	Si
SLV 2	15.32	496	883	-858.91		0	0	8333	0			0	No, Vu<V
SLV 6	12.17	-7150	-7255	433.3		10718	4.7652	10477	6989			0.96	No, Vu<V
SLV 6	15.32	-951	-2314	3945.22		0	0	8333	0			0	No, Vu<V
SLV 7	12.17	-7458	7870	390.2		11179	4.7652	10569	7051			0.9	No, Vu<V
SLV 7	15.32	-228	3113	-2708.15		0	0	8333	0			0	No, Vu<V
SLV 3	12.17	-7774	3091	1506.24		11654	4.7652	10664	7114			2.3	Si
SLV 3	15.32	713	2511	-2854.93		0	0	8333	0			0	No, Vu<V
SLV 1	12.17	-7682	-1446	1519.17		11515	4.7652	10636	7096			4.91	Si
SLV 1	15.32	496	883	-858.91		0	0	8333	0			0	No, Vu<V
SLV 9	12.17	-6786	-7696	-510.38		10173	4.7652	10368	6917			0.9	No, Vu<V
SLV 9	15.32	-1974	-3426	6067.04		0	0	8333	0			0	No, Vu<V
SLV 4	12.17	-7774	3091	1506.24		11654	4.7652	10664	7114			2.3	Si
SLV 4	15.32	713	2511	-2854.93		0	0	8333	0			0	No, Vu<V
SLV 8	12.17	-7458	7870	390.2		11179	4.7652	10569	7051			0.9	No, Vu<V
SLV 8	15.32	-228	3113	-2708.15		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 3	143750	0.53	0	-2690	286.72	0	0	No, e>t/2
SLV 7	143750	0.53	0	-2888	286.72	0	0	No, e>t/2
SLV 4	143750	0.53	0	-2690	286.72	0	0	No, e>t/2
SLV 1	143750	0.53	0	-3177	286.72	0	0	No, e>t/2
SLV 12	143750	0.53	0	-3545	286.72	0	0	No, e>t/2
SLV 2	143750	0.53	0	-3177	286.72	0	0	No, e>t/2
SLV 8	143750	0.53	0	-2888	286.72	0	0	No, e>t/2
SLV 11	143750	0.53	0	-3545	286.72	0	0	No, e>t/2
SLV 6	143750	0.53	6761	-4511	286.72	298.27	1.04	Si
SLV 5	143750	0.53	6761	-4511	286.72	298.27	1.04	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 13.745 Wa = 0.03 Ta = 0.1184

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 4	713	-7774	12	0	0	0	0	19.2913	No, Trazione
SLV 3	713	-7774	12	0	0	0	0	19.2913	No, Trazione
SLV 1	496	-7682	-8	0	0	0	0	19.2913	No, Trazione
SLV 2	496	-7682	-8	0	0	0	0	19.2913	No, Trazione
SLV 14	-2914	-6470	-13	0.028	609.8	0.893	0.46014	19.2913	No
SLV 13	-2914	-6470	-13	0.028	609.8	0.893	0.46014	19.2913	No
SLV 8	-228	-7458	35	0.025	390.1	0.954	0.38816	16.21392	No
SLV 7	-228	-7458	35	0.025	390.1	0.954	0.38816	16.21392	No
SLV 10	-1974	-6786	-36	0.024	521.6	0.889	0.39034	16.21392	No
SLV 9	-1974	-6786	-36	0.024	521.6	0.889	0.39034	16.21392	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.452	SLU 50	Si
V_SLU	2.745	SLU 51	Si
PF_SLV	0	SLV 4	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 1	No
R_SLV	0	SLV 4	No

Maschio 231

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-19.618	5.811	-19.618	6.521	L6	L7	0.71	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 60	12.17	-3318	-14.36	16693	936.65	65.228	Si
SLU 60	15.32	385	-986.42	0	0	0	No, Trazione
SLU 55	12.17	-3521	-13.07	17714	978.27	74.837	Si
SLU 55	15.32	232	-1265.63	0	0	0	No, Trazione
SLU 57	12.17	-3878	-14.08	19508	1047.05	74.357	Si
SLU 57	15.32	-109	-1462.73	0	0	0	No, e>l/2



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 58	12.17	-3853	-12.06	19380	1042.33	86.448	Si
SLU 58	15.32	-26	-1504.58	0	0	0	No, $e \geq l/2$
SLU 53	12.17	-3565	-14.06	17931	986.9	70.183	Si
SLU 53	15.32	157	-1209.73	0	0	0	No, Trazione
SLU 54	12.17	-3558	-14.45	17897	985.57	68.208	Si
SLU 54	15.32	154	-1215	0	0	0	No, Trazione
SLU 56	12.17	-3885	-13.69	19542	1048.28	76.554	Si
SLU 56	15.32	-106	-1457.46	0	0	0	No, $e \geq l/2$
SLU 61	12.17	-3312	-14.75	16659	935.26	63.417	Si
SLU 61	15.32	382	-991.69	0	0	0	No, Trazione
SLU 59	12.17	-3846	-12.45	19347	1041.09	83.654	Si
SLU 59	15.32	-29	-1509.85	0	0	0	No, $e \geq l/2$
SLU 1	12.17	-2367	-7.68	11907	717.5	93.457	Si
SLU 1	15.32	519	-825.65	0	0	0	No, Trazione

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 9	12.17	-1771	-117.48	8908	582.82	4.961	Si
SLV 9	15.32	-1278	-594.2	0	0	0	No, $e \geq l/2$
SLV 8	12.17	-3293	98.64	16563	1010.45	10.244	Si
SLV 8	15.32	2011	-1045.61	0	0	0	No, Trazione
SLV 12	12.17	-2317	92.23	11657	744.2	8.069	Si
SLV 12	15.32	2084	-1782.48	0	0	0	No, Trazione
SLV 1	12.17	-4075	-30.2	20499	1203.98	39.872	Si
SLV 1	15.32	-260	586.44	0	0	0	No, $e \geq l/2$
SLV 11	12.17	-2317	92.23	11657	744.2	8.069	Si
SLV 11	15.32	2084	-1782.48	0	0	0	No, Trazione
SLV 3	12.17	-4239	32.72	21324	1242.27	37.971	Si
SLV 3	15.32	749	229.95	0	0	0	No, Trazione
SLV 2	12.17	-4075	-30.2	20499	1203.98	39.872	Si
SLV 2	15.32	-260	586.44	0	0	0	No, $e \geq l/2$
SLV 10	12.17	-1771	-117.48	8908	582.82	4.961	Si
SLV 10	15.32	-1278	-594.2	0	0	0	No, $e \geq l/2$
SLV 7	12.17	-3293	98.64	16563	1010.45	10.244	Si
SLV 7	15.32	2011	-1045.61	0	0	0	No, Trazione
SLV 4	12.17	-4239	32.72	21324	1242.27	37.971	Si
SLV 4	15.32	749	229.95	0	0	0	No, Trazione

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 55	12.17	-3521	-167	-13.07		17714	0.71	7917	1574			9.44	Si
SLU 55	15.32	232	1258	-1265.63		0	0	5556	0			0	No, $V_u < V$
SLU 54	12.17	-3558	-175	-14.45		17897	0.71	7942	1579			9	Si
SLU 54	15.32	154	1191	-1215		0	0	5556	0			0	No, $V_u < V$
SLU 1	12.17	-2367	-97	-7.68		11907	0.71	7143	1420			14.66	Si
SLU 1	15.32	519	791	-825.65		0	0	5556	0			0	No, $V_u < V$
SLU 53	12.17	-3565	-175	-14.06		17931	0.71	7946	1580			9.05	Si
SLU 53	15.32	157	1162	-1209.73		0	0	5556	0			0	No, $V_u < V$
SLU 57	12.17	-3878	-188	-14.08		19508	0.71	8157	1622			8.63	Si
SLU 57	15.32	-109	1424	-1462.73		0	0	5556	0			0	No, $V_u < V$
SLU 59	12.17	-3846	-179	-12.45		19347	0.71	8135	1617			9.05	Si
SLU 59	15.32	-29	1472	-1509.85		0	0	5556	0			0	No, $V_u < V$
SLU 58	12.17	-3853	-178	-12.06		19380	0.71	8140	1618			9.1	Si
SLU 58	15.32	-26	1443	-1504.58		0	0	5556	0			0	No, $V_u < V$
SLU 60	12.17	-3318	-169	-14.36		16693	0.71	7781	1547			9.18	Si
SLU 60	15.32	385	962	-986.42		0	0	5556	0			0	No, $V_u < V$
SLU 56	12.17	-3885	-187	-13.69		19542	0.71	8161	1622			8.67	Si
SLU 56	15.32	-106	1395	-1457.46		0	0	5556	0			0	No, $V_u < V$
SLU 61	12.17	-3312	-169	-14.75		16659	0.71	7777	1546			9.12	Si
SLU 61	15.32	382	991	-991.69		0	0	5556	0			0	No, $V_u < V$

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 12	12.17	-2317	173	92.23		11657	0.71	10665	2120			12.28	Si
SLV 12	15.32	2084	2807	-1782.48		0	0	8333	0			0	No, $V_u < V$
SLV 7	12.17	-3293	103	98.64		16563	0.71	11646	2315			22.38	Si
SLV 7	15.32	2011	1503	-1045.61		0	0	8333	0			0	No, $V_u < V$
SLV 4	12.17	-4239	-155	32.72		21324	0.71	12598	2504			16.18	Si
SLV 4	15.32	749	-968	229.95		0	0	8333	0			0	No, $V_u < V$
SLV 11	12.17	-2317	173	92.23		11657	0.71	10665	2120			12.28	Si
SLV 11	15.32	2084	2807	-1782.48		0	0	8333	0			0	No, $V_u < V$
SLV 8	12.17	-3293	103	98.64		16563	0.71	11646	2315			22.38	Si
SLV 8	15.32	2011	1503	-1045.61		0	0	8333	0			0	No, $V_u < V$
SLV 1	12.17	-4075	-307	-30.2		20499	0.71	12433	2472			8.05	Si
SLV 1	15.32	-260	-1782	586.44		0	0	8333	0			0	No, $V_u < V$
SLV 9	12.17	-1771	-334	-117.48		8908	0.71	10115	2011			6.01	Si
SLV 9	15.32	-1278	93	-594.2		0	0	8333	0			0	No, $V_u < V$
SLV 2	12.17	-4075	-307	-30.2		20499	0.71	12433	2472			8.05	Si
SLV 2	15.32	-260	-1782	586.44		0	0	8333	0			0	No, $V_u < V$
SLV 3	12.17	-4239	-155	32.72		21324	0.71	12598	2504			16.18	Si
SLV 3	15.32	749	-968	229.95		0	0	8333	0			0	No, $V_u < V$
SLV 10	12.17	-1771	-334	-117.48		8908	0.71	10115	2011			6.01	Si
SLV 10	15.32	-1278	93	-594.2		0	0	8333	0			0	No, $V_u < V$

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 12	143750	0.53	0	-520	81.73	0	0	No, $e \geq t/2$
SLV 16	143750	0.53	0	281	81.73	0	0	No, Trazione



Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 13	143750	0.53	0	-452	81.73	0	0	No, $e > t/2$
SLV 14	143750	0.53	0	-452	81.73	0	0	No, $e > t/2$
SLV 15	143750	0.53	0	281	81.73	0	0	No, Trazione
SLV 11	143750	0.53	0	-520	81.73	0	0	No, $e > t/2$
SLV 7	143750	0.53	9756	-1940	81.73	249.86	3.06	Si
SLV 8	143750	0.53	9756	-1940	81.73	249.86	3.06	Si
SLV 9	143750	0.53	14900	-2962	81.73	364.13	4.46	Si
SLV 10	143750	0.53	14900	-2962	81.73	364.13	4.46	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 13.745 $W_a = 0.05$ $T_a = 0.0592$

Comb.	N top	N base	V orto	α_0	M*	e*	a_0^*	aLim	Verifica
SLV 9	-1278	-1771	-211	0	221.7	0.904	0	8.06258	No
SLV 1	-260	-4075	73	0	127.6	0.903	0	9.06484	No
SLV 10	-1278	-1771	-211	0	221.7	0.904	0	8.06258	No
SLV 2	-260	-4075	73	0	127.6	0.903	0	9.06484	No
SLV 5	-1351	-2746	-128	0	228.9	0.906	0	8.06258	No
SLV 3	749	-4239	161	0	0	0	0	9.06484	No, Trazione
SLV 8	2011	-3293	168	0	0	0	0	8.06258	No, Trazione
SLV 6	-1351	-2746	-128	0	228.9	0.906	0	8.06258	No
SLV 7	2011	-3293	168	0	0	0	0	8.06258	No, Trazione
SLV 4	749	-4239	161	0	0	0	0	9.06484	No, Trazione

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0	SLU 82	No
V_SLU	0	SLU 1	No
PF_SLV	0	SLV 16	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 16	No
R_SLV	0	SLV 16	No

Maschio 232

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.333	-3.359	-17.363	-3.359	L6	L7	1.03	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 60	13.07	-2642	340.43	9162	1207.73	3.548	Si
SLU 60	14.87	-865	-84.22	2999	429.08	5.095	Si
SLU 62	13.07	-3066	365.28	10630	1372.82	3.758	Si
SLU 62	14.87	-1189	-74.51	4123	581.38	7.803	Si
SLU 39	13.07	-1912	286.47	6629	904.42	3.157	Si
SLU 39	14.87	-658	-71.59	2282	329.48	4.602	Si
SLU 18	13.07	-1943	274.52	6739	918.08	3.344	Si
SLU 18	14.87	-627	-72.64	2174	314.24	4.326	Si
SLU 20	13.07	-2367	299.37	8207	1096.14	3.661	Si
SLU 20	14.87	-951	-62.94	3297	469.92	7.467	Si
SLU 32	13.07	-2637	303.66	9144	1205.72	3.971	Si
SLU 32	14.87	-1208	-34.37	4189	590.14	17.172	Si
SLU 74	13.07	-3336	369.56	11568	1474.11	3.989	Si
SLU 74	14.87	-1446	-45.94	5014	698.91	15.214	Si
SLU 41	13.07	-2335	311.33	8097	1083.07	3.479	Si
SLU 41	14.87	-982	-61.88	3406	484.72	7.833	Si
SLU 81	13.07	-2611	352.38	9052	1195.04	3.391	Si
SLU 81	14.87	-896	-83.16	3108	443.99	5.339	Si
SLU 83	13.07	-3034	377.23	10520	1360.72	3.607	Si
SLU 83	14.87	-1220	-73.45	4232	595.85	8.112	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 11	13.07	-822	237.37	2851	413.62	1.743	Si
SLV 11	14.87	-145	-234.84	0	0	0	No, $e > l/2$
SLV 8	13.07	-2411	1527.21	0	0	0	No, $e > l/2$
SLV 8	14.87	89	-1040.1	0	0	0	No, Trazione
SLV 3	13.07	-4683	2585.91	0	0	0	No, $e > l/2$
SLV 3	14.87	-176	-1564.24	0	0	0	No, $e > l/2$
SLV 9	13.07	-2017	-1037.23	6995	979.46	0.944	No, $M > Mu$
SLV 9	14.87	-1685	951.86	0	0	0	No, $e > l/2$
SLV 7	13.07	-2411	1527.21	0	0	0	No, $e > l/2$
SLV 7	14.87	89	-1040.1	0	0	0	No, Trazione
SLV 2	13.07	-5041	2203.53	17480	2224.86	1.01	Si
SLV 2	14.87	-637	-1208.23	0	0	0	No, $e > l/2$
SLV 1	13.07	-5041	2203.53	17480	2224.86	1.01	Si
SLV 1	14.87	-637	-1208.23	0	0	0	No, $e > l/2$
SLV 12	13.07	-822	237.37	2851	413.62	1.743	Si
SLV 12	14.87	-145	-234.84	0	0	0	No, $e > l/2$



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 4	13.07	-4683	2585.91	0	0	0	No, $e \geq l/2$
SLV 4	14.87	-176	-1564.24	0	0	0	No, $e \geq l/2$
SLV 10	13.07	-2017	-1037.23	6995	979.46	0.944	No, $M > \mu$
SLV 10	14.87	-1685	951.86	0	0	0	No, $e \geq l/2$

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 48	13.07	-4036	291	353.63		13995	1.03	7422	2140			7.37	Si
SLU 48	14.87	-1881	263	-12.59		6521	1.03	6425	1853			7.03	Si
SLU 50	13.07	-3839	294	348.95		13311	1.03	7330	2114			7.18	Si
SLU 50	14.87	-1716	266	-29.53		5949	1.03	6349	1831			6.87	Si
SLU 53	13.07	-3368	272	357.61		11678	1.03	7113	2051			7.53	Si
SLU 53	14.87	-1415	208	-46.99		4906	1.03	6210	1791			8.62	Si
SLU 71	13.07	-3807	265	360.9		13201	1.03	7316	2110			7.96	Si
SLU 71	14.87	-1747	267	-28.47		6058	1.03	6363	1835			6.86	Si
SLU 69	13.07	-4004	261	365.59		13885	1.03	7407	2136			8.19	Si
SLU 69	14.87	-1912	265	-11.54		6630	1.03	6440	1857			7.02	Si
SLU 58	13.07	-3594	296	377.78		12462	1.03	7217	2081			7.03	Si
SLU 58	14.87	-1574	261	-54.22		5457	1.03	6283	1812			6.95	Si
SLU 56	13.07	-3791	292	382.46		13146	1.03	7308	2108			7.22	Si
SLU 56	14.87	-1739	258	-37.29		6029	1.03	6359	1834			7.11	Si
SLU 79	13.07	-3562	266	389.73		12352	1.03	7203	2077			7.8	Si
SLU 79	14.87	-1605	262	-53.16		5566	1.03	6298	1816			6.93	Si
SLU 62	13.07	-3066	277	365.28		10630	1.03	6973	2011			7.26	Si
SLU 62	14.87	-1189	208	-74.51		4123	1.03	6105	1761			8.45	Si
SLU 77	13.07	-3760	262	394.41		13036	1.03	7294	2103			8.02	Si
SLU 77	14.87	-1770	259	-36.23		6138	1.03	6374	1838			7.1	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 4	13.07	-4683	4274	2585.91		0	0	8333	0			0	No, $V_u < V$
SLV 4	14.87	-176	1249	-1564.24		0	0	8333	0			0	No, $V_u < V$
SLV 3	13.07	-4683	4274	2585.91		0	0	8333	0			0	No, $V_u < V$
SLV 3	14.87	-176	1249	-1564.24		0	0	8333	0			0	No, $V_u < V$
SLV 8	13.07	-2411	2560	1527.21		0	0	8333	0			0	No, $V_u < V$
SLV 8	14.87	89	1610	-1040.1		0	0	8333	0			0	No, $V_u < V$
SLV 11	13.07	-822	332	237.37		4325	0.6791	9198	1749			5.28	Si
SLV 11	14.87	-145	1164	-234.84		0	0	8333	0			0	No, $V_u < V$
SLV 2	13.07	-5041	3515	2203.53		77035	0.2337	16250	1063			0.3	No, $V_u < V$
SLV 2	14.87	-637	493	-1208.23		0	0	8333	0			0	No, $V_u < V$
SLV 12	13.07	-822	332	237.37		4325	0.6791	9198	1749			5.28	Si
SLV 12	14.87	-145	1164	-234.84		0	0	8333	0			0	No, $V_u < V$
SLV 1	13.07	-5041	3515	2203.53		77035	0.2337	16250	1063			0.3	No, $V_u < V$
SLV 1	14.87	-637	493	-1208.23		0	0	8333	0			0	No, $V_u < V$
SLV 7	13.07	-2411	2560	1527.21		0	0	8333	0			0	No, $V_u < V$
SLV 7	14.87	89	1610	-1040.1		0	0	8333	0			0	No, $V_u < V$
SLV 10	13.07	-2017	-2198	-1037.23		0	0	8333	0			0	No, $V_u < V$
SLV 10	14.87	-1685	-1356	951.86		0	0	8333	0			0	No, $V_u < V$
SLV 9	13.07	-2017	-2198	-1037.23		0	0	8333	0			0	No, $V_u < V$
SLV 9	14.87	-1685	-1356	951.86		0	0	8333	0			0	No, $V_u < V$

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 13	143750	0.53	0	554	115.87	0	0	No, Trazione
SLV 15	143750	0.53	0	1137	115.87	0	0	No, Trazione
SLV 16	143750	0.53	0	1137	115.87	0	0	No, Trazione
SLV 11	143750	0.53	0	-5	115.87	0	0	No, $e \geq t/2$
SLV 14	143750	0.53	0	554	115.87	0	0	No, Trazione
SLV 12	143750	0.53	0	-5	115.87	0	0	No, $e \geq t/2$
SLV 8	143750	0.53	5436	-1568	115.87	209.71	1.81	Si
SLV 7	143750	0.53	5436	-1568	115.87	209.71	1.81	Si
SLV 9	143750	0.53	6757	-1949	115.87	257.74	2.22	Si
SLV 10	143750	0.53	6757	-1949	115.87	257.74	2.22	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 7	-762	170	-66	0	0	0	0	8.06258	No, Trazione
SLV 8	-762	170	-66	0	0	0	0	8.06258	No, Trazione
SLV 6	-635	-3529	92	0.006	206	0.89	0.09542	8.06258	No
SLV 5	-635	-3529	92	0.006	206	0.89	0.09542	8.06258	No
SLV 12	-690	-707	-91	0.008	210.9	0.89	0.13266	8.06258	No
SLV 11	-690	-707	-91	0.008	210.9	0.89	0.13266	8.06258	No
SLV 15	-561	-3025	-65	0.024	199.8	0.892	0.38719	9.06484	No
SLV 16	-561	-3025	-65	0.024	199.8	0.892	0.38719	9.06484	No
SLV 9	-562	-4407	67	0.022	199.9	0.892	0.35774	8.06258	No
SLV 10	-562	-4407	67	0.022	199.9	0.892	0.35774	8.06258	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.157	SLU 39	Si
V_SLV	6.861	SLU 71	Si
PF_SLV	0	SLV 16	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 16	No
R_SLV	0	SLV 8	No



Maschio 233

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.448	-3.359	-18.448	1.046	L6	L7	4.406	0.14	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ ₀	f _{v0}	μ	φ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLU 68	12.17	-8113	2814.96	13154	14986.45	5.324	Si
SLU 68	15.32	-609	107.54	987	1324.39	12.315	Si
SLU 76	12.17	-8507	2911.97	13792	15566.26	5.346	Si
SLU 76	15.32	-613	57.21	994	1333.83	23.315	Si
SLU 26	12.17	-6641	2376.29	10767	12695.35	5.343	Si
SLU 26	15.32	-518	78.57	840	1129.2	14.372	Si
SLU 55	12.17	-7886	2722.24	12786	14645.74	5.38	Si
SLU 55	15.32	-563	74.17	913	1227.21	16.546	Si
SLU 72	12.17	-8676	2948.2	14067	15811.92	5.363	Si
SLU 72	15.32	-695	182.58	1126	1509.36	8.267	Si
SLU 80	12.17	-9069	3045.21	14704	16372.31	5.376	Si
SLU 80	15.32	-699	132.25	1134	1518.77	11.484	Si
SLU 78	12.17	-9307	3115.78	15090	16704.47	5.361	Si
SLU 78	15.32	-740	134.9	1200	1606.96	11.913	Si
SLU 47	12.17	-7493	2625.23	12148	14044.55	5.35	Si
SLU 47	15.32	-559	124.5	906	1217.74	9.781	Si
SLU 70	12.17	-8914	3018.77	14452	16152.27	5.351	Si
SLU 70	15.32	-736	185.23	1193	1597.57	8.625	Si
SLU 5	12.17	-6021	2186.56	9761	11673.36	5.339	Si
SLU 5	15.32	-468	95.53	759	1022.16	10.7	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLV 12	12.17	-6257	3088.47	10144	12638.96	4.092	Si
SLV 12	15.32	-849	-3431.96	0	0	0	No, e>l/2
SLV 4	12.17	-6261	1037.9	10151	12646.32	12.185	Si
SLV 4	15.32	-624	-1684.1	0	0	0	No, e>l/2
SLV 11	12.17	-6257	3088.47	10144	12638.96	4.092	Si
SLV 11	15.32	-849	-3431.96	0	0	0	No, e>l/2
SLV 5	12.17	-5556	433.54	9008	11337.23	26.15	Si
SLV 5	15.32	100	3547.89	0	0	0	No, Trazione
SLV 6	12.17	-5556	433.54	9008	11337.23	26.15	Si
SLV 6	15.32	100	3547.89	0	0	0	No, Trazione
SLV 10	12.17	-5419	1050.79	8786	11078.99	10.543	Si
SLV 10	15.32	160	3930.5	0	0	0	No, Trazione
SLV 7	12.17	-6394	2471.22	10367	12890.49	5.216	Si
SLV 7	15.32	-908	-3814.57	0	0	0	No, e>l/2
SLV 9	12.17	-5419	1050.79	8786	11078.99	10.543	Si
SLV 9	15.32	160	3930.5	0	0	0	No, Trazione
SLV 3	12.17	-6261	1037.9	10151	12646.32	12.185	Si
SLV 3	15.32	-624	-1684.1	0	0	0	No, e>l/2
SLV 8	12.17	-6394	2471.22	10367	12890.49	5.216	Si
SLV 8	15.32	-908	-3814.57	0	0	0	No, e>l/2

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 55	12.17	-7886	-83	2722.24		12786	4.4057	7260	4478			53.66	Si
SLU 55	15.32	-563	320	74.17		913	4.4057	5677	3502			10.94	Si
SLU 76	12.17	-8507	-61	2911.97		13792	4.4057	7394	4561			74.42	Si
SLU 76	15.32	-613	343	57.21		994	4.4057	5688	3508			10.22	Si
SLU 52	12.17	-7369	-75	2482.08		11947	4.4057	7149	4409			58.9	Si
SLU 52	15.32	-471	330	15.33		763	4.4057	5657	3489			10.59	Si
SLU 82	12.17	-8203	110	2606.45		13300	4.4057	7329	4520			41.07	Si
SLU 82	15.32	-515	344	-7		835	4.4057	5667	3495			10.15	Si
SLU 78	12.17	-9307	85	3115.78		15090	4.4057	7568	4668			55.15	Si
SLU 78	15.32	-740	317	134.9		1200	4.4057	5716	3525			11.14	Si
SLU 65	12.17	-7596	-85	2574.8		12315	4.4057	7198	4439			51.99	Si
SLU 65	15.32	-516	318	48.7		836	4.4057	5667	3495			10.98	Si
SLU 75	12.17	-8790	93	2875.61		14251	4.4057	7456	4599			49.32	Si
SLU 75	15.32	-648	326	76.06		1050	4.4057	5696	3513			10.77	Si
SLU 61	12.17	-7583	88	2416.73		12294	4.4057	7195	4438			50.49	Si
SLU 61	15.32	-466	321	9.96		755	4.4057	5656	3489			10.87	Si
SLU 73	12.17	-7989	-53	2671.8		12953	4.4057	7283	4492			85.27	Si
SLU 73	15.32	-520	353	-1.63		843	4.4057	5668	3496			9.9	Si
SLU 84	12.17	-8721	101	2846.62		14139	4.4057	7441	4589			45.23	Si
SLU 84	15.32	-608	335	51.84		986	4.4057	5687	3508			10.48	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 11	12.17	-6257	6416	3088.47		10144	4.4057	10362	6391			1	No, Vu<V
SLV 11	15.32	-849	5166	-3431.96		0	0	8333	0			0	No, Vu<V
SLV 3	12.17	-6261	2594	1037.9		10151	4.4057	10364	6392			2.46	Si
SLV 3	15.32	-624	815	-1684.1		0	0	8333	0			0	No, Vu<V
SLV 8	12.17	-6394	6698	2471.22		10367	4.4057	10407	6419			0.96	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 8	15.32	-908	4683	-3814.57		0	0	8333	0			0	No, Vu<V
SLV 9	12.17	-5419	-6248	1050.79		8786	4.4057	10090	6224			1	No, Vu<V
SLV 9	15.32	160	-4274	3930.5		0	0	8333	0			0	No, Vu<V
SLV 7	12.17	-6394	6698	2471.22		10367	4.4057	10407	6419			0.96	No, Vu<V
SLV 7	15.32	-908	4683	-3814.57		0	0	8333	0			0	No, Vu<V
SLV 12	12.17	-6257	6416	3088.47		10144	4.4057	10362	6391			1	No, Vu<V
SLV 12	15.32	-849	5166	-3431.96		0	0	8333	0			0	No, Vu<V
SLV 6	12.17	-5556	-5967	433.54		9008	4.4057	10135	6251			1.05	Si
SLV 6	15.32	100	-4757	3547.89		0	0	8333	0			0	No, Vu<V
SLV 10	12.17	-5419	-6248	1050.79		8786	4.4057	10090	6224			1	No, Vu<V
SLV 10	15.32	160	-4274	3930.5		0	0	8333	0			0	No, Vu<V
SLV 4	12.17	-6261	2594	1037.9		10151	4.4057	10364	6392			2.46	Si
SLV 4	15.32	-624	815	-1684.1		0	0	8333	0			0	No, Vu<V
SLV 5	12.17	-5556	-5967	433.54		9008	4.4057	10135	6251			1.05	Si
SLV 5	15.32	100	-4757	3547.89		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 4	143750	0.53	0	-3328	265.09	0	0	No, e>t/2
SLV 2	143750	0.53	0	-2773	265.09	0	0	No, e>t/2
SLV 5	143750	0.53	0	-2258	265.09	0	0	No, e>t/2
SLV 14	143750	0.53	0	-3151	265.09	0	0	No, e>t/2
SLV 10	143750	0.53	0	-2372	265.09	0	0	No, e>t/2
SLV 9	143750	0.53	0	-2372	265.09	0	0	No, e>t/2
SLV 3	143750	0.53	0	-3328	265.09	0	0	No, e>t/2
SLV 13	143750	0.53	0	-3151	265.09	0	0	No, e>t/2
SLV 1	143750	0.53	0	-2773	265.09	0	0	No, e>t/2
SLV 6	143750	0.53	0	-2258	265.09	0	0	No, e>t/2

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 13.745 Wa = 0.03 Ta = 0.1184

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 9	160	-5419	-4	0	0	0	0	16.21392	No, Trazione
SLV 6	100	-5556	-6	0	0	0	0	16.21392	No, Trazione
SLV 5	100	-5556	-6	0	0	0	0	16.21392	No, Trazione
SLV 10	160	-5419	-4	0	0	0	0	16.21392	No, Trazione
SLV 16	-427	-5804	5	0.038	370.8	0.927	0.59403	19.2913	No
SLV 15	-427	-5804	5	0.038	370.8	0.927	0.59403	19.2913	No
SLV 2	-322	-6010	-5	0.039	365.3	0.938	0.59652	19.2913	No
SLV 1	-322	-6010	-5	0.039	365.3	0.938	0.59652	19.2913	No
SLV 3	-624	-6261	-2	0.038	383	0.912	0.60077	19.2913	No
SLV 4	-624	-6261	-2	0.038	383	0.912	0.60077	19.2913	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.324	SLU 68	Si
V_SLU	9.902	SLU 73	Si
PF_SLV	0	SLV 10	No
V_SLV	0	SLV 3	No
PFFP_SLV	0	SLV 1	No
R_SLV	0	SLV 10	No

Maschio 234

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-3.359	-15.433	-3.359	L6	L7	1.67	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 39	12.17	-2453	-808.37	5247	1916.31	2.371	Si
SLU 39	14.27	-2890	673.63	6181	2229.74	3.31	Si
SLU 34	12.17	-2879	-910.35	6157	2221.73	2.441	Si
SLU 34	14.27	-3480	830.71	7442	2639.82	3.178	Si
SLU 40	12.17	-2380	-924.36	5091	1863.05	2.016	Si
SLU 40	14.27	-2987	748.91	6389	2298.4	3.069	Si
SLU 73	12.17	-3542	-933.13	7576	2682.55	2.875	Si
SLU 73	14.27	-3703	873.29	7919	2791.02	3.196	Si
SLU 31	12.17	-2515	-911.21	5378	1960.91	2.152	Si
SLU 31	14.27	-3032	769.99	6485	2329.93	3.026	Si
SLU 42	12.17	-2744	-923.5	5869	2126.02	2.302	Si
SLU 42	14.27	-3435	809.63	7346	2609.17	3.223	Si
SLU 19	12.17	-2549	-721.97	5452	1985.86	2.751	Si
SLU 19	14.27	-2713	640.53	5803	2103.93	3.285	Si
SLU 82	12.17	-3408	-946.28	7289	2590.75	2.738	Si
SLU 82	14.27	-3658	852.22	7824	2760.81	3.24	Si
SLU 33	12.17	-3075	-841.74	6578	2360.4	2.804	Si
SLU 33	14.27	-3640	826.77	7785	2748.61	3.324	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 41	12.17	-2817	-807.51	6025	2178.11	2.697	Si
SLU 41	14.27	-3338	734.35	7138	2542.41	3.462	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 14	12.17	-1888	-3110.83	0	0	0	No, $e \geq l/2$
SLV 14	14.27	-6064	3010.1	12969	4525.33	1.503	Si
SLV 1	12.17	-4451	1685.28	9519	3426.42	2.033	Si
SLV 1	14.27	-123	-1303	0	0	0	No, $e \geq l/2$
SLV 3	12.17	-4237	2265.8	9062	3275.38	1.446	Si
SLV 3	14.27	782	-1972.94	0	0	0	No, Trazione
SLV 16	12.17	-1674	-2530.32	0	0	0	No, $e \geq l/2$
SLV 16	14.27	-5159	2340.17	11033	3918.16	1.674	Si
SLV 7	12.17	-3091	1264.42	6611	2441.31	1.931	Si
SLV 7	14.27	-242	-1244.94	0	0	0	No, $e \geq l/2$
SLV 13	12.17	-1888	-3110.83	0	0	0	No, $e \geq l/2$
SLV 13	14.27	-6064	3010.1	12969	4525.33	1.503	Si
SLV 8	12.17	-3091	1264.42	6611	2441.31	1.931	Si
SLV 8	14.27	-242	-1244.94	0	0	0	No, $e \geq l/2$
SLV 4	12.17	-4237	2265.8	9062	3275.38	1.446	Si
SLV 4	14.27	782	-1972.94	0	0	0	No, Trazione
SLV 15	12.17	-1674	-2530.32	0	0	0	No, $e \geq l/2$
SLV 15	14.27	-5159	2340.17	11033	3918.16	1.674	Si
SLV 2	12.17	-4451	1685.28	9519	3426.42	2.033	Si
SLV 2	14.27	-123	-1303	0	0	0	No, $e \geq l/2$

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 31	12.17	-2515	-1688	-911.21		6335	1.4177	6400	2541			1.5	Si
SLU 31	14.27	-3032	-1731	769.99		6485	1.6699	6420	3002			1.73	Si
SLU 40	12.17	-2380	-1729	-924.36		6345	1.3397	6402	2401			1.39	Si
SLU 40	14.27	-2987	-1754	748.91		6389	1.6699	6407	2996			1.71	Si
SLU 76	12.17	-3906	-1872	-932.27		8355	1.6699	6670	3118			1.67	Si
SLU 76	14.27	-4151	-1915	934.01		8877	1.6699	6739	3151			1.65	Si
SLU 82	12.17	-3408	-1851	-946.28		7289	1.6699	6527	3052			1.65	Si
SLU 82	14.27	-3658	-1876	852.22		7824	1.6699	6599	3085			1.64	Si
SLU 34	12.17	-2879	-1750	-910.35		6607	1.556	6436	2804			1.6	Si
SLU 34	14.27	-3480	-1792	830.71		7442	1.6699	6548	3062			1.71	Si
SLU 42	12.17	-2744	-1790	-923.5		6555	1.4951	6430	2692			1.5	Si
SLU 42	14.27	-3435	-1816	809.63		7346	1.6699	6535	3056			1.68	Si
SLU 39	12.17	-2453	-1583	-808.37		5778	1.5162	6326	2686			1.7	Si
SLU 39	14.27	-2890	-1583	673.63		6181	1.6699	6380	2983			1.88	Si
SLU 78	12.17	-4467	-1893	-862.8		9554	1.6699	6829	3193			1.69	Si
SLU 78	14.27	-4758	-1920	990.79		10177	1.6699	6913	3232			1.68	Si
SLU 73	12.17	-3542	-1810	-933.13		7576	1.6699	6566	3070			1.7	Si
SLU 73	14.27	-3703	-1853	873.29		7919	1.6699	6611	3091			1.67	Si
SLU 84	12.17	-3772	-1912	-945.42		8067	1.6699	6631	3100			1.62	Si
SLU 84	14.27	-4106	-1938	912.93		8781	1.6699	6726	3145			1.62	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 3	12.17	-4237	4088	2265.8		16804	0.9006	11694	2949			0.72	No, $V_u < V$
SLV 3	14.27	782	2456	-1972.94		0	0	8333	0			0	No, $V_u < V$
SLV 4	12.17	-4237	4088	2265.8		16804	0.9006	11694	2949			0.72	No, $V_u < V$
SLV 4	14.27	782	2456	-1972.94		0	0	8333	0			0	No, $V_u < V$
SLV 16	12.17	-1674	-5069	-2530.32		0	0	8333	0			0	No, $V_u < V$
SLV 16	14.27	-5159	-3443	2340.17		16107	1.1439	11555	3701			1.07	Si
SLV 7	12.17	-3091	2017	1264.42		8641	1.2777	10061	3600			1.78	Si
SLV 7	14.27	-242	1521	-1244.94		0	0	8333	0			0	No, $V_u < V$
SLV 13	12.17	-1888	-6041	-3110.83		0	0	8333	0			0	No, $V_u < V$
SLV 13	14.27	-6064	-4412	3010.1		21325	1.0155	12598	3582			0.81	No, $V_u < V$
SLV 1	12.17	-4451	3116	1685.28		11612	1.3688	10656	4084			1.31	Si
SLV 1	14.27	-123	1487	-1303		0	0	8333	0			0	No, $V_u < V$
SLV 8	12.17	-3091	2017	1264.42		8641	1.2777	10061	3600			1.78	Si
SLV 8	14.27	-242	1521	-1244.94		0	0	8333	0			0	No, $V_u < V$
SLV 15	12.17	-1674	-5069	-2530.32		0	0	8333	0			0	No, $V_u < V$
SLV 15	14.27	-5159	-3443	2340.17		16107	1.1439	11555	3701			1.07	Si
SLV 2	12.17	-4451	3116	1685.28		11612	1.3688	10656	4084			1.31	Si
SLV 2	14.27	-123	1487	-1303		0	0	8333	0			0	No, $V_u < V$
SLV 14	12.17	-1888	-6041	-3110.83		0	0	8333	0			0	No, $V_u < V$
SLV 14	14.27	-6064	-4412	3010.1		21325	1.0155	12598	3582			0.81	No, $V_u < V$

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 4	143750	0.53	0	-29	187.85	0	0	No, $e > t/2$
SLV 3	143750	0.53	0	-29	187.85	0	0	No, $e > t/2$
SLV 1	143750	0.53	0	-854	187.85	0	0	No, $e > t/2$
SLV 7	143750	0.53	0	-732	187.85	0	0	No, $e > t/2$
SLV 8	143750	0.53	0	-732	187.85	0	0	No, $e > t/2$
SLV 2	143750	0.53	0	-854	187.85	0	0	No, $e > t/2$
SLV 12	143750	0.53	4617	-2159	187.85	290.82	1.55	Si
SLV 11	143750	0.53	4617	-2159	187.85	290.82	1.55	Si
SLV 6	143750	0.53	7445	-3481	187.85	457.63	2.44	Si
SLV 5	143750	0.53	7445	-3481	187.85	457.63	2.44	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
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Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 1	-422	-4451	-73	0.036	287	0.916	0.57421	9.06484	No
SLV 2	-422	-4451	-73	0.036	287	0.916	0.57421	9.06484	No
SLV 16	-707	-1674	75	0.037	307.5	0.898	0.59362	9.06484	No
SLV 15	-707	-1674	75	0.037	307.5	0.898	0.59362	9.06484	No
SLV 6	-66	-3802	-63	0.042	270.8	0.978	0.6178	8.06258	No
SLV 5	-66	-3802	-63	0.042	270.8	0.978	0.6178	8.06258	No
SLV 11	-1063	-2322	64	0.042	337	0.89	0.6891	8.06258	No
SLV 12	-1063	-2322	64	0.042	337	0.89	0.6891	8.06258	No
SLV 13	-407	-1888	47	0.051	286	0.918	0.80921	9.06484	No
SLV 14	-407	-1888	47	0.051	286	0.918	0.80921	9.06484	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.016	SLU 40	Si
V_SLU	1.389	SLU 40	Si
PF_SLV	0	SLV 4	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 1	No
R_SLV	0.063	SLV 1	No

Maschio 235

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.058	1.046	-15.058	1.406	L6	L7	0.36	0.14	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	$\tau 0$	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLU 56	12.17	-2180	133.18	43255	184.04	1.382	Si
SLU 56	14.27	212	-124.72	0	0	0	No, Trazione
SLU 54	12.17	-1999	119.56	39657	184.62	1.544	Si
SLU 54	14.27	169	-112	0	0	0	No, Trazione
SLU 57	12.17	-2167	131.48	43004	184.17	1.401	Si
SLU 57	14.27	204	-124.08	0	0	0	No, Trazione
SLU 60	12.17	-1841	113.54	36525	182.78	1.61	Si
SLU 60	14.27	208	-103.75	0	0	0	No, Trazione
SLU 58	12.17	-2133	132.02	42319	184.47	1.397	Si
SLU 58	14.27	242	-123.84	0	0	0	No, Trazione
SLU 61	12.17	-1828	111.84	36274	182.54	1.632	Si
SLU 61	14.27	200	-103.11	0	0	0	No, Trazione
SLU 59	12.17	-2120	130.32	42069	184.55	1.416	Si
SLU 59	14.27	234	-123.2	0	0	0	No, Trazione
SLU 55	12.17	-1943	117.27	38555	184.22	1.571	Si
SLU 55	14.27	194	-110.69	0	0	0	No, Trazione
SLU 53	12.17	-2011	121.27	39908	184.67	1.523	Si
SLU 53	14.27	177	-112.64	0	0	0	No, Trazione
SLU 1	12.17	-1341	77.1	26607	162.54	2.108	Si
SLU 1	14.27	86	-72.17	0	0	0	No, Trazione

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLV 1	12.17	304	-143.75	0	0	0	No, Trazione
SLV 1	14.27	-1262	78.04	25037	180.59	2.314	Si
SLV 6	12.17	1274	-289.77	0	0	0	No, Trazione
SLV 6	14.27	-1689	91.29	33516	220.66	2.417	Si
SLV 8	12.17	-3504	382.2	69520	271.85	0.711	No, M>Mu
SLV 8	14.27	1381	-177.77	0	0	0	No, Trazione
SLV 5	12.17	1274	-289.77	0	0	0	No, Trazione
SLV 5	14.27	-1689	91.29	33516	220.66	2.417	Si
SLV 2	12.17	304	-143.75	0	0	0	No, Trazione
SLV 2	14.27	-1262	78.04	25037	180.59	2.314	Si
SLV 10	12.17	672	-213.34	0	0	0	No, Trazione
SLV 10	14.27	-1135	21.92	22511	166.59	7.599	Si
SLV 7	12.17	-3504	382.2	69520	271.85	0.711	No, M>Mu
SLV 7	14.27	1381	-177.77	0	0	0	No, Trazione
SLV 11	12.17	-4106	458.64	81466	246.31	0.537	No, M>Mu
SLV 11	14.27	1935	-247.13	0	0	0	No, Trazione
SLV 9	12.17	672	-213.34	0	0	0	No, Trazione
SLV 9	14.27	-1135	21.92	22511	166.59	7.599	Si
SLV 12	12.17	-4106	458.64	81466	246.31	0.537	No, M>Mu
SLV 12	14.27	1935	-247.13	0	0	0	No, Trazione

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	$\sigma 0$	σN	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 54	12.17	-1999	273	119.56		39657	0.36	10833	546			2	Si
SLU 54	14.27	169	281	-112		0	0	5556	0			0	No, Vu<V
SLU 1	12.17	-1341	175	77.1		26607	0.36	9103	459			2.62	Si
SLU 1	14.27	86	181	-72.17		0	0	5556	0			0	No, Vu<V
SLU 53	12.17	-2011	278	121.27		40005	0.3591	10833	545			1.96	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 53	14.27	177	282	-112.64		0	0	5556	0			0	No, Vu<V
SLU 57	12.17	-2167	302	131.48		43243	0.358	10833	543			1.8	Si
SLU 57	14.27	204	310	-124.08		0	0	5556	0			0	No, Vu<V
SLU 60	12.17	-1841	258	113.54		37043	0.355	10495	522			2.02	Si
SLU 60	14.27	208	262	-103.75		0	0	5556	0			0	No, Vu<V
SLU 56	12.17	-2180	307	133.18		43652	0.3567	10833	541			1.76	Si
SLU 56	14.27	212	311	-124.72		0	0	5556	0			0	No, Vu<V
SLU 58	12.17	-2133	305	132.02		43000	0.3543	10833	537			1.76	Si
SLU 58	14.27	242	309	-123.84		0	0	5556	0			0	No, Vu<V
SLU 61	12.17	-1828	253	111.84		36633	0.3565	10440	521			2.06	Si
SLU 61	14.27	200	261	-103.11		0	0	5556	0			0	No, Vu<V
SLU 59	12.17	-2120	299	130.32		42589	0.3556	10833	539			1.8	Si
SLU 59	14.27	234	308	-123.2		0	0	5556	0			0	No, Vu<V
SLU 55	12.17	-1943	267	117.27		38668	0.359	10711	538			2.02	Si
SLU 55	14.27	194	279	-110.69		0	0	5556	0			0	No, Vu<V

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 10	12.17	672	-853	-213.34		0	0	8333	0			0	No, Vu<V
SLV 10	14.27	-1135	-73	21.92		22511	0.36	12835	647			8.91	Si
SLV 1	12.17	304	-482	-143.75		0	0	8333	0			0	No, Vu<V
SLV 1	14.27	-1262	-181	78.04		25428	0.3545	13419	666			3.68	Si
SLV 5	12.17	1274	-1051	-289.77		0	0	8333	0			0	No, Vu<V
SLV 5	14.27	-1689	-236	91.29		33516	0.36	15037	758			3.22	Si
SLV 11	12.17	-4106	1435	458.64		143136	0.2049	16250	466			0.32	No, Vu<V
SLV 11	14.27	1935	627	-247.13		0	0	8333	0			0	No, Vu<V
SLV 8	12.17	-3504	1236	382.2		117635	0.2128	16250	484			0.39	No, Vu<V
SLV 8	14.27	1381	464	-177.77		0	0	8333	0			0	No, Vu<V
SLV 2	12.17	304	-482	-143.75		0	0	8333	0			0	No, Vu<V
SLV 2	14.27	-1262	-181	78.04		25428	0.3545	13419	666			3.68	Si
SLV 12	12.17	-4106	1435	458.64		143136	0.2049	16250	466			0.32	No, Vu<V
SLV 12	14.27	1935	627	-247.13		0	0	8333	0			0	No, Vu<V
SLV 6	12.17	1274	-1051	-289.77		0	0	8333	0			0	No, Vu<V
SLV 6	14.27	-1689	-236	91.29		33516	0.36	15037	758			3.22	Si
SLV 9	12.17	672	-853	-213.34		0	0	8333	0			0	No, Vu<V
SLV 9	14.27	-1135	-73	21.92		22511	0.36	12835	647			8.91	Si
SLV 7	12.17	-3504	1236	382.2		117635	0.2128	16250	484			0.39	No, Vu<V
SLV 7	14.27	1381	464	-177.77		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 7	143750	0.53	0	830	21.66	0	0	No, Trazione
SLV 13	143750	0.53	0	40	21.66	0	0	No, Trazione
SLV 12	143750	0.53	0	1175	21.66	0	0	No, Trazione
SLV 14	143750	0.53	0	40	21.66	0	0	No, Trazione
SLV 16	143750	0.53	0	749	21.66	0	0	No, Trazione
SLV 8	143750	0.53	0	830	21.66	0	0	No, Trazione
SLV 11	143750	0.53	0	1175	21.66	0	0	No, Trazione
SLV 15	143750	0.53	0	749	21.66	0	0	No, Trazione
SLV 3	143750	0.53	7947	-401	21.66	26.21	1.21	Si
SLV 4	143750	0.53	7947	-401	21.66	26.21	1.21	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 13.745 Wa = 0.03 Ta = 0.1184

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 1	-36	304	3	0	0	0	0	19.2913	No, Trazione
SLV 6	113	1274	2	0	0	0	0	16.21392	No, Trazione
SLV 9	88	672	0	0	0	0	0	16.21392	No, Trazione
SLV 5	113	1274	2	0	0	0	0	16.21392	No, Trazione
SLV 10	88	672	0	0	0	0	0	16.21392	No, Trazione
SLV 2	-36	304	3	0	0	0	0	19.2913	No, Trazione
SLV 16	-275	-3136	-4	0.021	51.4	0.899	0.34665	19.2913	No
SLV 15	-275	-3136	-4	0.021	51.4	0.899	0.34665	19.2913	No
SLV 4	-190	-1129	3	0.023	43.2	0.891	0.37499	19.2913	No
SLV 3	-190	-1129	3	0.023	43.2	0.891	0.37499	19.2913	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0	SLU 84	No
V_SLU	0	SLU 1	No
PF_SLV	0	SLV 16	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 16	No
R_SLV	0	SLV 10	No

Maschio 236

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.058	2.206	-15.058	6.661	L6	L7	4.455	0.14	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

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fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 35	12.17	-9317	4001.01	14939	16947.97	4.236	Si
SLU 35	14.27	-3540	-1601.19	5677	7336.79	4.582	Si
SLU 17	12.17	-8076	3539.26	12949	15130.23	4.275	Si
SLU 17	14.27	-3120	-1409.51	5003	6523.15	4.628	Si
SLU 37	12.17	-9046	4028.24	14503	16561.71	4.111	Si
SLU 37	14.27	-3414	-1553.97	5474	7093.93	4.565	Si
SLU 16	12.17	-8082	3547.75	12958	15139.05	4.267	Si
SLU 16	14.27	-3129	-1428.98	5017	6541.33	4.578	Si
SLU 80	12.17	-10654	4490.53	17081	18754.64	4.176	Si
SLU 80	14.27	-4069	-1854.44	6524	8337.57	4.496	Si
SLU 78	12.17	-10925	4463.3	17517	19102.61	4.28	Si
SLU 78	14.27	-4195	-1901.66	6726	8573.19	4.508	Si
SLU 77	12.17	-10931	4471.79	17526	19109.97	4.273	Si
SLU 77	14.27	-4205	-1921.12	6741	8590.49	4.472	Si
SLU 38	12.17	-9040	4019.74	14494	16553.39	4.118	Si
SLU 38	14.27	-3405	-1534.51	5459	7075.98	4.611	Si
SLU 79	12.17	-10659	4499.02	17091	18762.14	4.17	Si
SLU 79	14.27	-4078	-1873.91	6539	8354.98	4.459	Si
SLU 36	12.17	-9311	3992.51	14929	16939.78	4.243	Si
SLU 36	14.27	-3531	-1581.72	5662	7318.95	4.627	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 12	12.17	-2688	-2851.92	4309	5775.61	2.025	Si
SLV 12	14.27	-2969	-7325.1	0	0	0	No, $e \geq l/2$
SLV 8	12.17	-1563	-4349.6	0	0	0	No, $e \geq l/2$
SLV 8	14.27	-2327	-6104.63	0	0	0	No, $e \geq l/2$
SLV 16	12.17	-7421	3104.36	11899	14920.88	4.806	Si
SLV 16	14.27	-3738	-4941.69	5993	7917.74	1.602	Si
SLV 11	12.17	-2688	-2851.92	4309	5775.61	2.025	Si
SLV 11	14.27	-2969	-7325.1	0	0	0	No, $e \geq l/2$
SLV 15	12.17	-7421	3104.36	11899	14920.88	4.806	Si
SLV 15	14.27	-3738	-4941.69	5993	7917.74	1.602	Si
SLV 7	12.17	-1563	-4349.6	0	0	0	No, $e \geq l/2$
SLV 7	14.27	-2327	-6104.63	0	0	0	No, $e \geq l/2$
SLV 2	12.17	-6607	1719.8	10593	13441.1	7.816	Si
SLV 2	14.27	-1613	2389.94	2586	3516.05	1.471	Si
SLV 5	12.17	-11340	7676.08	18183	21501.85	2.801	Si
SLV 5	14.27	-2381	4773.35	3818	5138.57	1.077	Si
SLV 6	12.17	-11340	7676.08	18183	21501.85	2.801	Si
SLV 6	14.27	-2381	4773.35	3818	5138.57	1.077	Si
SLV 1	12.17	-6607	1719.8	10593	13441.1	7.816	Si
SLV 1	14.27	-1613	2389.94	2586	3516.05	1.471	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 72	12.17	-9749	-334	3943.15		15631	4.455	7640	4765			14.28	Si
SLU 72	14.27	-3877	-333	-1746.42		6216	4.455	6384	3982			11.95	Si
SLU 59	12.17	-9690	-329	4010.04		15536	4.455	7627	4757			14.47	Si
SLU 59	14.27	-3784	-328	-1729.45		6067	4.455	6365	3970			12.09	Si
SLU 77	12.17	-10931	-347	4471.79		17526	4.455	7892	4922			14.19	Si
SLU 77	14.27	-4205	-346	-1921.12		6741	4.455	6454	4026			11.62	Si
SLU 79	12.17	-10659	-348	4499.02		17091	4.455	7834	4886			14.04	Si
SLU 79	14.27	-4078	-348	-1873.91		6539	4.455	6427	4009			11.53	Si
SLU 70	12.17	-10020	-333	3915.92		16066	4.455	7698	4801			14.43	Si
SLU 70	14.27	-4003	-332	-1793.63		6418	4.455	6411	3999			12.04	Si
SLU 78	12.17	-10925	-350	4463.3		17517	4.455	7891	4922			14.08	Si
SLU 78	14.27	-4195	-349	-1901.66		6726	4.455	6452	4024			11.52	Si
SLU 80	12.17	-10654	-351	4490.53		17081	4.455	7833	4885			13.93	Si
SLU 80	14.27	-4069	-350	-1854.44		6524	4.455	6425	4008			11.44	Si
SLU 69	12.17	-10026	-330	3924.41		16075	4.455	7699	4802			14.55	Si
SLU 69	14.27	-4012	-329	-1813.1		6433	4.455	6413	4000			12.14	Si
SLU 71	12.17	-9755	-331	3951.64		15640	4.455	7641	4766			14.4	Si
SLU 71	14.27	-3886	-330	-1765.89		6231	4.455	6386	3983			12.05	Si
SLU 57	12.17	-9962	-328	3982.81		15972	4.455	7685	4793			14.62	Si
SLU 57	14.27	-3910	-327	-1776.66		6270	4.455	6392	3986			12.18	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 6	12.17	-11340	-3896	7676.08		18183	4.455	11970	7466			1.92	Si
SLV 6	14.27	-2381	-3536	4773.35		25428	0.6689	13419	1257			0.36	No, $V_u < V$
SLV 9	12.17	-12465	-4096	9173.76		19985	4.455	12330	7690			1.88	Si
SLV 9	14.27	-3024	-3687	3552.88		6840	3.1576	9701	4289			1.16	Si
SLV 8	12.17	-1563	3700	-4349.6		0	0	8333	0			0	No, $V_u < V$
SLV 8	14.27	-2327	3291	-6104.63		0	0	8333	0			0	No, $V_u < V$
SLV 10	12.17	-12465	-4096	9173.76		19985	4.455	12330	7690			1.88	Si
SLV 10	14.27	-3024	-3687	3552.88		6840	3.1576	9701	4289			1.16	Si
SLV 2	12.17	-6607	-1004	1719.8		10593	4.455	10452	6519			6.49	Si
SLV 2	14.27	-1613	-971	2389.94		5151	2.2364	9363	2932			3.02	Si
SLV 11	12.17	-2688	3500	-2851.92		5486	3.4991	9431	4620			1.32	Si
SLV 11	14.27	-2969	3141	-7325.1		0	0	8333	0			0	No, $V_u < V$
SLV 12	12.17	-2688	3500	-2851.92		5486	3.4991	9431	4620			1.32	Si
SLV 12	14.27	-2969	3141	-7325.1		0	0	8333	0			0	No, $V_u < V$
SLV 1	12.17	-6607	-1004	1719.8		10593	4.455	10452	6519			6.49	Si
SLV 1	14.27	-1613	-971	2389.94		5151	2.2364	9363	2932			3.02	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 7	12.17	-1563	3700	-4349.6		0	0	8333	0			0	No, Vu<V
SLV 7	14.27	-2327	3291	-6104.63		0	0	8333	0			0	No, Vu<V
SLV 5	12.17	-11340	-3896	7676.08		18183	4.455	11970	7466			1.92	Si
SLV 5	14.27	-2381	-3536	4773.35		25428	0.6689	13419	1257			0.36	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 8	143750	0.53	0	-2728	268.06	0	0	No, e>t/2
SLV 2	143750	0.53	0	-2468	268.06	0	0	No, e>t/2
SLV 11	143750	0.53	0	-3382	268.06	0	0	No, e>t/2
SLV 5	143750	0.53	0	-3501	268.06	0	0	No, e>t/2
SLV 12	143750	0.53	0	-3382	268.06	0	0	No, e>t/2
SLV 6	143750	0.53	0	-3501	268.06	0	0	No, e>t/2
SLV 4	143750	0.53	0	-2236	268.06	0	0	No, e>t/2
SLV 7	143750	0.53	0	-2728	268.06	0	0	No, e>t/2
SLV 1	143750	0.53	0	-2468	268.06	0	0	No, e>t/2
SLV 3	143750	0.53	0	-2236	268.06	0	0	No, e>t/2

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 13.745 Wa = 0.03 Ta = 0.1184

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 16	166	-7421	13	0	0	0	0	19.2913	No, Trazione
SLV 11	513	-2688	12	0	0	0	0	16.21392	No, Trazione
SLV 8	442	-1563	6	0	0	0	0	16.21392	No, Trazione
SLV 12	513	-2688	12	0	0	0	0	16.21392	No, Trazione
SLV 15	166	-7421	13	0	0	0	0	19.2913	No, Trazione
SLV 7	442	-1563	6	0	0	0	0	16.21392	No, Trazione
SLV 1	-439	-6607	-13	0.034	375.4	0.926	0.53377	19.2913	No
SLV 2	-439	-6607	-13	0.034	375.4	0.926	0.53377	19.2913	No
SLV 14	-203	-10354	8	0.038	364.4	0.956	0.57993	19.2913	No
SLV 13	-203	-10354	8	0.038	364.4	0.956	0.57993	19.2913	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.111	SLU 37	Si
V_SLU	11.44	SLU 80	Si
PF_SLV	0	SLV 7	No
V_SLV	0	SLV 7	No
PFFP_SLV	0	SLV 1	No
R_SLV	0	SLV 16	No

Maschio 237

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-3.509	-13.763	-0.228	L6	L7	3.281	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 60	12.17	-10106	-231.81	10999	14341.7	61.869	Si
SLU 60	14.27	-4489	750.11	4886	6923.69	9.23	Si
SLU 31	12.17	-8842	-184.98	9623	12792.65	69.156	Si
SLU 31	14.27	-3926	633.25	4273	6104.08	9.639	Si
SLU 22	12.17	-8362	-25.02	9101	12186.44	486.972	Si
SLU 22	14.27	-3837	686.15	4176	5972.25	8.704	Si
SLU 39	12.17	-8847	-231.59	9629	12799.65	55.269	Si
SLU 39	14.27	-3942	747.12	4290	6126.71	8.2	Si
SLU 82	12.17	-10951	-245.46	11918	15337.87	62.485	Si
SLU 82	14.27	-4866	816.24	5296	7465.02	9.146	Si
SLU 81	12.17	-10867	-236.24	11827	15240.21	64.51	Si
SLU 81	14.27	-4857	873.58	5286	7451.22	8.529	Si
SLU 1	12.17	-7601	-20.59	8273	11204.38	544.2	Si
SLU 1	14.27	-3469	562.67	3776	5428.28	9.647	Si
SLU 40	12.17	-8931	-240.81	9721	12904.74	53.589	Si
SLU 40	14.27	-3951	689.77	4301	6140.89	8.903	Si
SLU 18	12.17	-8086	-227.15	8801	11833.77	52.096	Si
SLU 18	14.27	-3574	623.64	3890	5584.44	8.955	Si
SLU 64	12.17	-10381	-29.68	11299	14669.98	494.262	Si
SLU 64	14.27	-4752	812.61	5172	7300.97	8.985	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 11	12.17	-6163	4868.29	6707	9556.14	1.963	Si
SLV 11	14.27	-1408	-4402.4	0	0	0	No, e>l/2
SLV 10	12.17	-9967	-4745.19	10847	14900.45	3.14	Si
SLV 10	14.27	-5418	5075.93	5896	8459.67	1.667	Si
SLV 9	12.17	-9967	-4745.19	10847	14900.45	3.14	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 9	14.27	-5418	5075.93	5896	8459.67	1.667	Si
SLV 6	12.17	-9668	-4994.63	10523	14496.4	2.902	Si
SLV 6	14.27	-5783	5622.69	6294	8999.25	1.601	Si
SLV 16	12.17	-7842	1794.59	8535	11968.02	6.669	Si
SLV 16	14.27	-2385	-1722.86	2596	3829.91	2.223	Si
SLV 5	12.17	-9668	-4994.63	10523	14496.4	2.902	Si
SLV 5	14.27	-5783	5622.69	6294	8999.25	1.601	Si
SLV 8	12.17	-5864	4618.85	6383	9118.9	1.974	Si
SLV 8	14.27	-1773	-3855.65	0	0	0	No, $e>l/2$
SLV 7	12.17	-5864	4618.85	6383	9118.9	1.974	Si
SLV 7	14.27	-1773	-3855.65	0	0	0	No, $e>l/2$
SLV 12	12.17	-6163	4868.29	6707	9556.14	1.963	Si
SLV 12	14.27	-1408	-4402.4	0	0	0	No, $e>l/2$
SLV 15	12.17	-7842	1794.59	8535	11968.02	6.669	Si
SLV 15	14.27	-2385	-1722.86	2596	3829.91	2.223	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 80	12.17	-11786	494	-355.18		12828	3.2814	7266	6676			13.51	Si
SLU 80	14.27	-5697	824	564.27		6200	3.2814	6382	5864			7.12	Si
SLU 78	12.17	-12011	529	-352.56		13073	3.2814	7299	6706			12.67	Si
SLU 78	14.27	-5887	897	509.8		6408	3.2814	6410	5889			6.56	Si
SLU 38	12.17	-9767	491	-350.52		10630	3.2814	6973	6407			13.06	Si
SLU 38	14.27	-4782	787	437.81		5205	3.2814	6250	5742			7.3	Si
SLU 28	12.17	-9652	439	-203.31		10505	3.2814	6956	6391			14.56	Si
SLU 28	14.27	-4899	779	340.65		5332	3.2814	6266	5758			7.39	Si
SLU 77	12.17	-11927	455	-343.35		12981	3.2814	7286	6695			14.73	Si
SLU 77	14.27	-5878	840	567.14		6397	3.2814	6409	5888			7.01	Si
SLU 36	12.17	-9992	526	-347.91		10875	3.2814	7006	6437			12.25	Si
SLU 36	14.27	-4972	860	383.33		5412	3.2814	6277	5767			6.7	Si
SLU 70	12.17	-11671	443	-207.97		12703	3.2814	7249	6661			15.05	Si
SLU 70	14.27	-5814	816	467.12		6328	3.2814	6399	5880			7.2	Si
SLU 35	12.17	-9908	451	-338.69		10783	3.2814	6993	6425			14.25	Si
SLU 35	14.27	-4963	803	440.68		5401	3.2814	6276	5766			7.18	Si
SLU 33	12.17	-9501	495	-262.07		10341	3.2814	6934	6371			12.86	Si
SLU 33	14.27	-4541	752	500.17		4943	3.2814	6215	5710			7.59	Si
SLU 75	12.17	-11520	499	-266.72		12539	3.2814	7227	6640			13.31	Si
SLU 75	14.27	-5456	789	626.64		5939	3.2814	6347	5832			7.39	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 9	12.17	-9967	-5731	-4745.19		10847	3.2814	10503	9650			1.68	Si
SLV 9	14.27	-5418	-2930	5075.93		9164	2.1113	10166	6010			2.05	Si
SLV 10	12.17	-9967	-5731	-4745.19		10847	3.2814	10503	9650			1.68	Si
SLV 10	14.27	-5418	-2930	5075.93		9164	2.1113	10166	6010			2.05	Si
SLV 16	12.17	-7842	3569	1794.59		8535	3.2814	10040	9225			2.58	Si
SLV 16	14.27	-2385	2071	-1722.86		3092	2.755	8952	6905			3.33	Si
SLV 7	12.17	-5864	6148	4618.85		8184	2.5592	9970	7144			1.16	Si
SLV 7	14.27	-1773	3636	-3855.65		0	0	8333	0			0	No, $V_u < V$
SLV 8	12.17	-5864	6148	4618.85		8184	2.5592	9970	7144			1.16	Si
SLV 8	14.27	-1773	3636	-3855.65		0	0	8333	0			0	No, $V_u < V$
SLV 5	12.17	-9668	-6600	-4994.63		10523	3.2814	10438	9590			1.45	Si
SLV 5	14.27	-5783	-3334	5622.69		10300	2.0052	10393	5835			1.75	Si
SLV 11	12.17	-6163	7017	4868.29		8624	2.5522	10058	7188			1.02	Si
SLV 11	14.27	-1408	4040	-4402.4		0	0	8333	0			0	No, $V_u < V$
SLV 6	12.17	-9668	-6600	-4994.63		10523	3.2814	10438	9590			1.45	Si
SLV 6	14.27	-5783	-3334	5622.69		10300	2.0052	10393	5835			1.75	Si
SLV 12	12.17	-6163	7017	4868.29		8624	2.5522	10058	7188			1.02	Si
SLV 12	14.27	-1408	4040	-4402.4		0	0	8333	0			0	No, $V_u < V$
SLV 15	12.17	-7842	3569	1794.59		8535	3.2814	10040	9225			2.58	Si
SLV 15	14.27	-2385	2071	-1722.86		3092	2.755	8952	6905			3.33	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 12	143750	0.53	0	-2413	377.72	0	0	No, $e>t/2$
SLV 11	143750	0.53	0	-2413	377.72	0	0	No, $e>t/2$
SLV 7	143750	0.53	3010	-2765	377.72	377.62	1	No, $M>Mu$
SLV 8	143750	0.53	3010	-2765	377.72	377.62	1	No, $M>Mu$
SLV 15	143750	0.53	3564	-3275	377.72	445.12	1.18	Si
SLV 16	143750	0.53	3564	-3275	377.72	445.12	1.18	Si
SLV 14	143750	0.53	4753	-4367	377.72	587.57	1.56	Si
SLV 13	143750	0.53	4753	-4367	377.72	587.57	1.56	Si
SLV 4	143750	0.53	4844	-4451	377.72	598.39	1.58	Si
SLV 3	143750	0.53	4844	-4451	377.72	598.39	1.58	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 16	-935	-7842	220	0.015	570.9	0.911	0.23783	9.06484	No
SLV 15	-935	-7842	220	0.015	570.9	0.911	0.23783	9.06484	No
SLV 2	-1202	-7989	-210	0.02	589.8	0.903	0.31783	9.06484	No
SLV 1	-1202	-7989	-210	0.02	589.8	0.903	0.31783	9.06484	No
SLV 12	-557	-6163	199	0.018	548.1	0.932	0.28462	8.06258	No
SLV 11	-557	-6163	199	0.018	548.1	0.932	0.28462	8.06258	No
SLV 5	-1580	-9668	-188	0.027	619.3	0.895	0.44116	8.06258	No
SLV 6	-1580	-9668	-188	0.027	619.3	0.895	0.44116	8.06258	No
SLV 13	-1246	-8983	135	0.039	593.2	0.901	0.6345	9.06484	No
SLV 14	-1246	-8983	135	0.039	593.2	0.901	0.6345	9.06484	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.2	SLU 39	Si
V_SLU	6.565	SLU 78	Si
PF_SLV	0	SLV 7	No
V_SLV	0	SLV 7	No
PFFP_SLV	0	SLV 11	No
R_SLV	0.026	SLV 15	No

Maschio 238

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	0.672	-13.763	1.046	L6	L7	0.374	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 38	12.17	-2781	-108.75	26535	350.93	3.227	Si
SLU 38	14.27	-833	94.06	7947	140.67	1.496	Si
SLU 29	12.17	-2702	-106.12	25777	345.62	3.257	Si
SLU 29	14.27	-808	93.32	7706	136.85	1.466	Si
SLU 32	12.17	-2698	-105.44	25745	345.38	3.276	Si
SLU 32	14.27	-796	90.01	7600	135.16	1.502	Si
SLU 77	12.17	-3413	-130.1	32560	383.38	2.947	Si
SLU 77	14.27	-1057	112.53	10086	173.34	1.54	Si
SLU 36	12.17	-2888	-113.47	27560	357.69	3.152	Si
SLU 36	14.27	-869	98.69	8290	146.07	1.48	Si
SLU 37	12.17	-2819	-112.84	26901	353.4	3.132	Si
SLU 37	14.27	-813	97.56	7757	137.66	1.411	Si
SLU 35	12.17	-2927	-117.55	27926	359.98	3.062	Si
SLU 35	14.27	-849	102.19	8100	143.08	1.4	Si
SLU 28	12.17	-2771	-106.75	26437	350.26	3.281	Si
SLU 28	14.27	-864	94.46	8239	145.27	1.538	Si
SLU 41	12.17	-2641	-103.6	25201	341.39	3.295	Si
SLU 41	14.27	-763	87.19	7278	130.01	1.491	Si
SLU 27	12.17	-2809	-110.83	26802	352.74	3.183	Si
SLU 27	14.27	-844	97.96	8049	142.28	1.452	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 8	12.17	970	410.53	0	0	0	No, Trazione
SLV 8	14.27	-3032	-226.65	28932	433.12	1.911	Si
SLV 11	12.17	1823	469.37	0	0	0	No, Trazione
SLV 11	14.27	-3144	-287.71	30001	443.98	1.543	Si
SLV 5	12.17	-5962	-610.28	56887	596.33	0.977	No, M>Mu
SLV 5	14.27	1742	405.05	0	0	0	No, Trazione
SLV 6	12.17	-5962	-610.28	56887	596.33	0.977	No, M>Mu
SLV 6	14.27	1742	405.05	0	0	0	No, Trazione
SLV 7	12.17	970	410.53	0	0	0	No, Trazione
SLV 7	14.27	-3032	-226.65	28932	433.12	1.911	Si
SLV 1	12.17	-4530	-321.64	43227	547.93	1.704	Si
SLV 1	14.27	201	255.19	0	0	0	No, Trazione
SLV 2	12.17	-4530	-321.64	43227	547.93	1.704	Si
SLV 2	14.27	201	255.19	0	0	0	No, Trazione
SLV 9	12.17	-5110	-551.44	48753	574.72	1.042	Si
SLV 9	14.27	1630	343.99	0	0	0	No, Trazione
SLV 12	12.17	1823	469.37	0	0	0	No, Trazione
SLV 12	14.27	-3144	-287.71	30001	443.98	1.543	Si
SLV 10	12.17	-5110	-551.44	48753	574.72	1.042	Si
SLV 10	14.27	1630	343.99	0	0	0	No, Trazione

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 37	12.17	-2819	-244	-112.84		26901	0.3743	9142	958			3.92	Si
SLU 37	14.27	-813	-244	97.56		14413	0.2014	7477	422			1.73	Si
SLU 38	12.17	-2781	-234	-108.75		26535	0.3743	9094	953			4.07	Si
SLU 38	14.27	-833	-237	94.06		13359	0.2227	7337	457			1.93	Si
SLU 36	12.17	-2888	-245	-113.47		27560	0.3743	9230	967			3.94	Si
SLU 36	14.27	-869	-247	98.69		14061	0.2207	7430	459			1.86	Si
SLU 32	12.17	-2698	-228	-105.44		25745	0.3743	8988	942			4.13	Si
SLU 32	14.27	-796	-227	90.01		12788	0.2224	7261	452			1.99	Si
SLU 79	12.17	-3305	-269	-125.38		31535	0.3743	9760	1023			3.8	Si
SLU 79	14.27	-1021	-271	107.9		14918	0.2445	7545	516			1.91	Si
SLU 77	12.17	-3413	-280	-130.1		32560	0.3743	9897	1037			3.71	Si
SLU 77	14.27	-1057	-281	112.53		15594	0.2421	7635	518			1.84	Si
SLU 41	12.17	-2641	-224	-103.6		25201	0.3743	8916	934			4.17	Si
SLU 41	14.27	-763	-223	87.19		12465	0.2186	7218	442			1.98	Si
SLU 35	12.17	-2927	-256	-117.55		27926	0.3743	9279	972			3.81	Si
SLU 35	14.27	-849	-255	102.19		15135	0.2003	7574	425			1.67	Si
SLU 27	12.17	-2809	-239	-110.83		26802	0.3743	9129	957			4.01	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 27	14.27	-844	-240	97.96		14138	0.2131	7441	444			1.85	Si
SLU 29	12.17	-2702	-228	-106.12		25777	0.3743	8993	942			4.14	Si
SLU 29	14.27	-808	-230	93.32		13428	0.2148	7346	442			1.92	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 9	12.17	-5110	-1470	-551.44		76773	0.2377	16250	1082			0.74	No, Vu<V
SLV 9	14.27	1630	-629	343.99		0	0	8333	0			0	No, Vu<V
SLV 11	12.17	1823	1357	469.37		0	0	8333	0			0	No, Vu<V
SLV 11	14.27	-3144	455	-287.71		39134	0.287	16160	1298			2.86	Si
SLV 10	12.17	-5110	-1470	-551.44		76773	0.2377	16250	1082			0.74	No, Vu<V
SLV 10	14.27	1630	-629	343.99		0	0	8333	0			0	No, Vu<V
SLV 5	12.17	-5962	-1650	-610.28		83705	0.2544	16250	1157			0.7	No, Vu<V
SLV 5	14.27	1742	-754	405.05		0	0	8333	0			0	No, Vu<V
SLV 7	12.17	970	1176	410.53		0	0	8333	0			0	No, Vu<V
SLV 7	14.27	-3032	329	-226.65		32114	0.3372	14756	1393			4.23	Si
SLV 12	12.17	1823	1357	469.37		0	0	8333	0			0	No, Vu<V
SLV 12	14.27	-3144	455	-287.71		39134	0.287	16160	1298			2.86	Si
SLV 1	12.17	-4530	-872	-321.64		46431	0.3485	16250	1586			1.82	Si
SLV 1	14.27	201	-521	255.19		0	0	8333	0			0	No, Vu<V
SLV 6	12.17	-5962	-1650	-610.28		83705	0.2544	16250	1157			0.7	No, Vu<V
SLV 6	14.27	1742	-754	405.05		0	0	8333	0			0	No, Vu<V
SLV 2	12.17	-4530	-872	-321.64		46431	0.3485	16250	1586			1.82	Si
SLV 2	14.27	201	-521	255.19		0	0	8333	0			0	No, Vu<V
SLV 8	12.17	970	1176	410.53		0	0	8333	0			0	No, Vu<V
SLV 8	14.27	-3032	329	-226.65		32114	0.3372	14756	1393			4.23	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 14	143750	0.53	0	-225	43.09	0	0	No, $e > t/2$
SLV 6	143750	0.53	0	527	43.09	0	0	No, Trazione
SLV 9	143750	0.53	0	714	43.09	0	0	No, Trazione
SLV 5	143750	0.53	0	527	43.09	0	0	No, Trazione
SLV 10	143750	0.53	0	714	43.09	0	0	No, Trazione
SLV 13	143750	0.53	0	-225	43.09	0	0	No, $e > t/2$
SLV 1	143750	0.53	8104	-849	43.09	111.02	2.58	Si
SLV 2	143750	0.53	8104	-849	43.09	111.02	2.58	Si
SLV 15	143750	0.53	11617	-1218	43.09	154.25	3.58	Si
SLV 16	143750	0.53	11617	-1218	43.09	154.25	3.58	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 11	93	1823	3	0	0	0	0	8.06258	No, Trazione
SLV 15	-175	391	4	0	0	0	0	9.06484	No, Trazione
SLV 16	-175	391	4	0	0	0	0	9.06484	No, Trazione
SLV 7	47	970	0	0	0	0	0	8.06258	No, Trazione
SLV 8	47	970	0	0	0	0	0	8.06258	No, Trazione
SLV 12	93	1823	3	0	0	0	0	8.06258	No, Trazione
SLV 1	-602	-4530	-5	0.054	109.8	0.9	0.86501	9.06484	No
SLV 2	-602	-4530	-5	0.054	109.8	0.9	0.86501	9.06484	No
SLV 13	-450	-1689	3	0.058	95.1	0.893	0.93967	9.06484	No
SLV 14	-450	-1689	3	0.058	95.1	0.893	0.93967	9.06484	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.4	SLU 35	Si
V_SLU	1.666	SLU 35	Si
PF_SLV	0	SLV 16	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 10	No
R_SLV	0	SLV 16	No

Maschio 239

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-15.058	3.311	-11.448	3.311	L6	L7	3.61	0.14	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	t0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 41	12.17	-3246	-173.9	6422	5396.63	31.033	Si
SLU 41	13.67	-2079	-437.63	4114	3563.66	8.143	Si
SLU 42	12.17	-3231	-170.83	6393	5374.53	31.462	Si
SLU 42	13.67	-2071	-443.82	4097	3549.57	7.998	Si
SLU 6	12.17	-4957	373.34	9807	7869.56	21.079	Si
SLU 6	13.67	-3425	648.44	6776	5667.16	8.74	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 39	12.17	-3133	-133.96	6200	5225.2	39.006	Si
SLU 39	13.67	-2016	-476.22	3989	3460.37	7.266	Si
SLU 48	12.17	-6240	456.39	12347	9556.05	20.938	Si
SLU 48	13.67	-4226	838.74	8363	6845.57	8.162	Si
SLU 45	12.17	-6128	496.33	12124	9414.13	18.968	Si
SLU 45	13.67	-4163	800.15	8237	6754.25	8.441	Si
SLU 7	12.17	-4942	376.41	9779	7849.64	20.854	Si
SLU 7	13.67	-3416	642.24	6759	5654.09	8.804	Si
SLU 49	12.17	-6225	459.46	12318	9537.77	20.759	Si
SLU 49	13.67	-4218	832.54	8345	6833.11	8.208	Si
SLU 40	12.17	-3119	-130.89	6171	5202.95	39.751	Si
SLU 40	13.67	-2007	-482.41	3971	3446.23	7.144	Si
SLU 46	12.17	-6113	499.4	12096	9395.7	18.814	Si
SLU 46	13.67	-4154	793.95	8220	6741.74	8.491	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 9	12.17	-2802	901.82	5545	4828.93	5.355	Si
SLV 9	13.67	-1628	-882.84	3221	2860.87	3.241	Si
SLV 13	12.17	-3545	261.77	7014	6031.59	23.041	Si
SLV 13	13.67	-1464	-2725.02	0	0	0	No, $e > l/2$
SLV 10	12.17	-2802	901.82	5545	4828.93	5.355	Si
SLV 10	13.67	-1628	-882.84	3221	2860.87	3.241	Si
SLV 14	12.17	-3545	261.77	7014	6031.59	23.041	Si
SLV 14	13.67	-1464	-2725.02	0	0	0	No, $e > l/2$
SLV 4	12.17	-4184	-67.18	8279	7040.56	104.808	Si
SLV 4	13.67	-3466	3051.72	6858	5905.02	1.935	Si
SLV 3	12.17	-4184	-67.18	8279	7040.56	104.808	Si
SLV 3	13.67	-3466	3051.72	6858	5905.02	1.935	Si
SLV 1	12.17	-3547	430.74	7018	6034.56	14.01	Si
SLV 1	13.67	-3112	2933.25	6158	5334.53	1.819	Si
SLV 15	12.17	-4182	-236.15	8275	7037.66	29.802	Si
SLV 15	13.67	-1817	-2606.55	3596	3183.61	1.221	Si
SLV 2	12.17	-3547	430.74	7018	6034.56	14.01	Si
SLV 2	13.67	-3112	2933.25	6158	5334.53	1.819	Si
SLV 16	12.17	-4182	-236.15	8275	7037.66	29.802	Si
SLV 16	13.67	-1817	-2606.55	3596	3183.61	1.221	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 81	12.17	-4417	-118	-50.91		8739	3.61	6721	3397			28.72	Si
SLU 81	13.67	-2818	-118	-285.92		5575	3.61	6299	3183			26.93	Si
SLU 42	12.17	-3231	-113	-170.83		6393	3.61	6408	3239			28.62	Si
SLU 42	13.67	-2071	-113	-443.82		4097	3.61	6102	3084			27.28	Si
SLU 33	12.17	-4121	-109	177.48		8153	3.61	6643	3357			30.94	Si
SLU 33	13.67	-2931	-108	-49.3		5799	3.61	6329	3199			29.5	Si
SLU 39	12.17	-3133	-119	-133.96		6200	3.61	6382	3226			27.17	Si
SLU 39	13.67	-2016	-119	-476.22		3989	3.61	6087	3077			25.94	Si
SLU 82	12.17	-4402	-119	-47.84		8710	3.61	6717	3395			28.49	Si
SLU 82	13.67	-2809	-119	-292.11		5558	3.61	6297	3182			26.73	Si
SLU 84	12.17	-4515	-113	-87.78		8933	3.61	6747	3410			30.24	Si
SLU 84	13.67	-2873	-113	-253.52		5684	3.61	6313	3191			28.32	Si
SLU 40	12.17	-3119	-120	-130.89		6171	3.61	6378	3224			26.96	Si
SLU 40	13.67	-2007	-119	-482.41		3971	3.61	6085	3075			25.75	Si
SLU 32	12.17	-4135	-108	174.41		8182	3.61	6646	3359			31.2	Si
SLU 32	13.67	-2939	-108	-43.11		5816	3.61	6331	3200			29.74	Si
SLU 83	12.17	-4529	-112	-90.85		8961	3.61	6750	3412			30.5	Si
SLU 83	13.67	-2881	-112	-247.32		5701	3.61	6316	3192			28.55	Si
SLU 41	12.17	-3246	-112	-173.9		6422	3.61	6412	3241			28.86	Si
SLU 41	13.67	-2079	-112	-437.63		4114	3.61	6104	3085			27.5	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 13	12.17	-3545	3135	261.77		7014	3.61	9736	4921			1.57	Si
SLV 13	13.67	-1464	2406	-2725.02		0	0	8333	0			0	No, $V_u < V$
SLV 4	12.17	-4184	-3237	-67.18		8279	3.61	9989	5048			1.56	Si
SLV 4	13.67	-3466	-2509	3051.72		8926	2.7736	10119	3929			1.57	Si
SLV 14	12.17	-3545	3135	261.77		7014	3.61	9736	4921			1.57	Si
SLV 14	13.67	-1464	2406	-2725.02		0	0	8333	0			0	No, $V_u < V$
SLV 1	12.17	-3547	-3159	430.74		7018	3.61	9737	4921			1.56	Si
SLV 1	13.67	-3112	-2493	2933.25		8591	2.5876	10052	3641			1.46	Si
SLV 8	12.17	-4927	-1126	-707.22		9748	3.61	10283	5197			4.62	Si
SLV 8	13.67	-3302	-812	1209.54		6533	3.61	9640	4872			6	Si
SLV 3	12.17	-4184	-3237	-67.18		8279	3.61	9989	5048			1.56	Si
SLV 3	13.67	-3466	-2509	3051.72		8926	2.7736	10119	3929			1.57	Si
SLV 2	12.17	-3547	-3159	430.74		7018	3.61	9737	4921			1.56	Si
SLV 2	13.67	-3112	-2493	2933.25		8591	2.5876	10052	3641			1.46	Si
SLV 16	12.17	-4182	3057	-236.15		8275	3.61	9988	5048			1.65	Si
SLV 16	13.67	-1817	2391	-2606.55		11673	1.112	10668	1661			0.69	No, $V_u < V$
SLV 7	12.17	-4927	-1126	-707.22		9748	3.61	10283	5197			4.62	Si
SLV 7	13.67	-3302	-812	1209.54		6533	3.61	9640	4872			6	Si
SLV 15	12.17	-4182	3057	-236.15		8275	3.61	9988	5048			1.65	Si
SLV 15	13.67	-1817	2391	-2606.55		11673	1.112	10668	1661			0.69	No, $V_u < V$

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 2	143750	0.53	0	-2565	198.33	0	0	No, $e > t/2$
SLV 8	143750	0.53	0	-2790	198.33	0	0	No, $e > t/2$



Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 6	143750	0.53	0	-2172	198.33	0	0	No, $e>t/2$
SLV 10	143750	0.53	0	-2021	198.33	0	0	No, $e>t/2$
SLV 9	143750	0.53	0	-2021	198.33	0	0	No, $e>t/2$
SLV 4	143750	0.53	0	-2750	198.33	0	0	No, $e>t/2$
SLV 3	143750	0.53	0	-2750	198.33	0	0	No, $e>t/2$
SLV 1	143750	0.53	0	-2565	198.33	0	0	No, $e>t/2$
SLV 5	143750	0.53	0	-2172	198.33	0	0	No, $e>t/2$
SLV 7	143750	0.53	0	-2790	198.33	0	0	No, $e>t/2$

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 13.745 $W_a = 0.03$ $T_a = 0.1184$

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 16	-921	-4182	87	0	344.9	0.894	0	19.2913	No
SLV 1	-845	-3547	-87	0	338.7	0.896	0	19.2913	No
SLV 2	-845	-3547	-87	0	338.7	0.896	0	19.2913	No
SLV 15	-921	-4182	87	0	344.9	0.894	0	19.2913	No
SLV 4	-873	-4184	-71	0.005	341	0.895	0.08775	19.2913	No
SLV 3	-873	-4184	-71	0.005	341	0.895	0.08775	19.2913	No
SLV 14	-892	-3545	71	0.006	342.6	0.894	0.09038	19.2913	No
SLV 13	-892	-3545	71	0.006	342.6	0.894	0.09038	19.2913	No
SLV 6	-828	-2803	-51	0.014	337.4	0.896	0.22586	16.21392	No
SLV 5	-828	-2803	-51	0.014	337.4	0.896	0.22586	16.21392	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.144	SLU 40	Si
V_SLU	25.746	SLU 40	Si
PF_SLV	0	SLV 13	No
V_SLV	0	SLV 13	No
PFFP_SLV	0	SLV 1	No
R_SLV	0	SLV 1	No

Maschio 240

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.948	3.311	-9.728	3.311	L6	L7	0.22	0.14	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 83	12.17	-16	39.97	0	0	0	No, $e>l/2$
SLU 83	13.67	-686	-41.02	22269	54.82	1.336	Si
SLU 39	12.17	115	42.59	0	0	0	No, Trazione
SLU 39	13.67	-635	-42.29	20604	52.15	1.233	Si
SLU 37	12.17	-19	31.88	0	0	0	No, $e>l/2$
SLU 37	13.67	-546	-32.47	17725	46.99	1.447	Si
SLU 35	12.17	-9	35.93	0	0	0	No, $e>l/2$
SLU 35	13.67	-629	-37.52	20417	51.84	1.382	Si
SLU 40	12.17	120	42.89	0	0	0	No, Trazione
SLU 40	13.67	-637	-42.56	20669	52.26	1.228	Si
SLU 42	12.17	88	40.79	0	0	0	No, Trazione
SLU 42	13.67	-620	-40.56	20134	51.35	1.266	Si
SLU 52	12.17	-144	25.49	0	0	0	No, $e>l/2$
SLU 52	13.67	-546	-28.14	17723	46.98	1.669	Si
SLU 36	12.17	-4	36.23	0	0	0	No, $e>l/2$
SLU 36	13.67	-631	-37.8	20482	51.94	1.374	Si
SLU 38	12.17	-15	32.18	0	0	0	No, $e>l/2$
SLU 38	13.67	-548	-32.74	17790	47.11	1.439	Si
SLU 41	12.17	83	40.5	0	0	0	No, Trazione
SLU 41	13.67	-618	-40.28	20069	51.24	1.272	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 9	12.17	548	70.62	0	0	0	No, Trazione
SLV 9	13.67	-745	-59.44	24177	65.7	1.105	Si
SLV 12	12.17	-201	28.66	0	0	0	No, $e>l/2$
SLV 12	13.67	-548	-19.34	17807	51.54	2.665	Si
SLV 7	12.17	-832	-35.27	27017	71.29	2.021	Si
SLV 7	13.67	-79	19.47	0	0	0	No, $e>l/2$
SLV 10	12.17	548	70.62	0	0	0	No, Trazione
SLV 10	13.67	-745	-59.44	24177	65.7	1.105	Si
SLV 8	12.17	-832	-35.27	27017	71.29	2.021	Si
SLV 8	13.67	-79	19.47	0	0	0	No, $e>l/2$
SLV 3	12.17	-1306	-95.17	42406	93.81	0.986	No, $M>Mu$
SLV 3	13.67	401	50.7	0	0	0	No, Trazione
SLV 1	12.17	-1081	-82.58	35110	84.77	1.027	Si
SLV 1	13.67	342	38.67	0	0	0	No, Trazione
SLV 2	12.17	-1081	-82.58	35110	84.77	1.027	Si
SLV 2	13.67	342	38.67	0	0	0	No, Trazione



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 4	12.17	-1306	-95.17	42406	93.81	0.986	No, M>Mu
SLV 4	13.67	401	50.7	0	0	0	No, Trazione
SLV 11	12.17	-201	28.66	0	0	0	No, e>/2
SLV 11	13.67	-548	-19.34	17807	51.54	2.665	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 38	12.17	-15	89	32.18		0	0	5556	0			0	No, Vu<V
SLU 38	13.67	-548	89	-32.74		25967	0.1507	9018	190			2.14	Si
SLU 36	12.17	-4	102	36.23		0	0	5556	0			0	No, Vu<V
SLU 36	13.67	-631	102	-37.8		29988	0.1503	9554	201			1.98	Si
SLU 41	12.17	83	112	40.5		0	0	5556	0			0	No, Vu<V
SLU 41	13.67	-618	112	-40.28		32826	0.1345	9932	187			1.67	Si
SLU 42	12.17	88	113	40.79		0	0	5556	0			0	No, Vu<V
SLU 42	13.67	-620	113	-40.56		33107	0.1338	9970	187			1.66	Si
SLU 37	12.17	-19	88	31.88		0	0	5556	0			0	No, Vu<V
SLU 37	13.67	-546	88	-32.47		25725	0.1516	8986	191			2.17	Si
SLU 35	12.17	-9	101	35.93		0	0	5556	0			0	No, Vu<V
SLU 35	13.67	-629	101	-37.52		29745	0.151	9522	201			2	Si
SLU 40	12.17	120	119	42.89		0	0	5556	0			0	No, Vu<V
SLU 40	13.67	-637	119	-42.56		35136	0.1294	10240	186			1.56	Si
SLU 83	12.17	-16	111	39.97		0	0	5556	0			0	No, Vu<V
SLU 83	13.67	-686	111	-41.02		32539	0.1506	9894	209			1.87	Si
SLU 52	12.17	-144	73	25.49		0	0	5556	0			0	No, Vu<V
SLU 52	13.67	-546	73	-28.14		22237	0.1753	8520	209			2.85	Si
SLU 39	12.17	115	118	42.59		0	0	5556	0			0	No, Vu<V
SLU 39	13.67	-635	118	-42.29		34844	0.1301	10201	186			1.57	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 9	12.17	548	238	70.62		0	0	8333	0			0	No, Vu<V
SLV 9	13.67	-745	171	-59.44		58739	0.0906	16250	206			1.21	Si
SLV 7	12.17	-832	-136	-35.27		29303	0.2028	14194	403			2.97	Si
SLV 7	13.67	-79	-68	19.47		0	0	8333	0			0	No, Vu<V
SLV 2	12.17	-1081	-269	-82.58		76546	0.1009	16250	230			0.85	No, Vu<V
SLV 2	13.67	342	-108	38.67		0	0	8333	0			0	No, Vu<V
SLV 4	12.17	-1306	-319	-95.17		83739	0.1114	16250	253			0.79	No, Vu<V
SLV 4	13.67	401	-147	50.7		0	0	8333	0			0	No, Vu<V
SLV 12	12.17	-201	72	28.66		0	0	8333	0			0	No, Vu<V
SLV 12	13.67	-548	39	-19.34		17807	0.22	11895	366			9.39	Si
SLV 8	12.17	-832	-136	-35.27		29303	0.2028	14194	403			2.97	Si
SLV 8	13.67	-79	-68	19.47		0	0	8333	0			0	No, Vu<V
SLV 10	12.17	548	238	70.62		0	0	8333	0			0	No, Vu<V
SLV 10	13.67	-745	171	-59.44		58739	0.0906	16250	206			1.21	Si
SLV 1	12.17	-1081	-269	-82.58		76546	0.1009	16250	230			0.85	No, Vu<V
SLV 1	13.67	342	-108	38.67		0	0	8333	0			0	No, Vu<V
SLV 11	12.17	-201	72	28.66		0	0	8333	0			0	No, Vu<V
SLV 11	13.67	-548	39	-19.34		17807	0.22	11895	366			9.39	Si
SLV 3	12.17	-1306	-319	-95.17		83739	0.1114	16250	253			0.79	No, Vu<V
SLV 3	13.67	401	-147	50.7		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 4	143750	0.53	0	133	12.09	0	0	No, Trazione
SLV 2	143750	0.53	0	76	12.09	0	0	No, Trazione
SLV 1	143750	0.53	0	76	12.09	0	0	No, Trazione
SLV 8	143750	0.53	0	-24	12.09	0	0	No, e>t/2
SLV 3	143750	0.53	0	133	12.09	0	0	No, Trazione
SLV 7	143750	0.53	0	-24	12.09	0	0	No, e>t/2
SLV 5	143750	0.53	6906	-213	12.09	14.05	1.16	Si
SLV 6	143750	0.53	6906	-213	12.09	14.05	1.16	Si
SLV 12	143750	0.53	6973	-215	12.09	14.18	1.17	Si
SLV 11	143750	0.53	6973	-215	12.09	14.18	1.17	Si

Verifica dei meccanismi locali di colla con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzzeria = 13.745 Wa = 0.03 Ta = 0.1184

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 14	-25	1022	1	0	0	0	0	19.2913	No, Trazione
SLV 9	-20	548	-1	0	0	0	0	16.21392	No, Trazione
SLV 13	-25	1022	1	0	0	0	0	19.2913	No, Trazione
SLV 15	-38	797	2	0	0	0	0	19.2913	No, Trazione
SLV 10	-20	548	-1	0	0	0	0	16.21392	No, Trazione
SLV 16	-38	797	2	0	0	0	0	19.2913	No, Trazione
SLV 1	-50	-1081	-2	0.022	20.5	0.896	0.35434	19.2913	No
SLV 2	-50	-1081	-2	0.022	20.5	0.896	0.35434	19.2913	No
SLV 3	-62	-1306	-1	0.026	21.5	0.892	0.42371	19.2913	No
SLV 4	-62	-1306	-1	0.026	21.5	0.892	0.42371	19.2913	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0	SLU 82	No
V_SLU	0	SLU 10	No
PF_SLV	0	SLV 16	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 4	No
R_SLV	0	SLV 16	No



Maschio 241

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.758	6.661	-17.718	6.661	L6	L7	2.04	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ ₀	f _{v0}	μ	φ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLU 61	13.07	-2239	865.85	3920	2174.04	2.511	Si
SLU 61	14.87	341	2598.1	0	0	0	No, Trazione
SLU 56	13.07	-3585	1008.03	6276	3375	3.348	Si
SLU 56	14.87	-1005	3314.09	0	0	0	No, e>l/2
SLU 59	13.07	-3247	947.29	5684	3080.57	3.252	Si
SLU 59	14.87	-667	3190.99	0	0	0	No, e>l/2
SLU 60	13.07	-2245	856.1	3931	2179.85	2.546	Si
SLU 60	14.87	334	2599.29	0	0	0	No, Trazione
SLU 55	13.07	-2846	904.82	4982	2724.95	3.012	Si
SLU 55	14.87	-266	2832.93	0	0	0	No, e>l/2
SLU 53	13.07	-3188	959.07	5581	3029.03	3.158	Si
SLU 53	14.87	-608	2956.82	0	0	0	No, e>l/2
SLU 1	13.07	-2237	631.98	3916	2171.98	3.437	Si
SLU 1	14.87	-245	1780.83	0	0	0	No, e>l/2
SLU 54	13.07	-3182	968.81	5570	3023.49	3.121	Si
SLU 54	14.87	-602	2955.63	0	0	0	No, e>l/2
SLU 57	13.07	-3579	1017.78	6265	3369.57	3.311	Si
SLU 57	14.87	-999	3312.89	0	0	0	No, e>l/2
SLU 58	13.07	-3253	937.54	5695	3086.1	3.292	Si
SLU 58	14.87	-673	3192.18	0	0	0	No, e>l/2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLV 10	13.07	-123	1344.41	0	0	0	No, e>l/2
SLV 10	14.87	1892	2142.8	0	0	0	No, Trazione
SLV 3	13.07	409	-144.53	0	0	0	No, Trazione
SLV 3	14.87	2274	6004.9	0	0	0	No, Trazione
SLV 5	13.07	1883	949.34	0	0	0	No, Trazione
SLV 5	14.87	3812	4843.39	0	0	0	No, Trazione
SLV 1	13.07	2169	147.6	0	0	0	No, Trazione
SLV 1	14.87	4018	6922.98	0	0	0	No, Trazione
SLV 4	13.07	409	-144.53	0	0	0	No, Trazione
SLV 4	14.87	2274	6004.9	0	0	0	No, Trazione
SLV 7	13.07	-3984	-24.44	6975	3831.72	156.793	Si
SLV 7	14.87	-2000	1783.11	3501	1981.11	1.111	Si
SLV 8	13.07	-3984	-24.44	6975	3831.72	156.793	Si
SLV 8	14.87	-2000	1783.11	3501	1981.11	1.111	Si
SLV 9	13.07	-123	1344.41	0	0	0	No, e>l/2
SLV 9	14.87	1892	2142.8	0	0	0	No, Trazione
SLV 6	13.07	1883	949.34	0	0	0	No, Trazione
SLV 6	14.87	3812	4843.39	0	0	0	No, Trazione
SLV 2	13.07	2169	147.6	0	0	0	No, Trazione
SLV 2	14.87	4018	6922.98	0	0	0	No, Trazione

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 54	13.07	-3182	-1056	968.81	5570	2.04	6298	3598				3.41	Si
SLU 54	14.87	-602	-1056	2955.63	0	0	5556	0				0	No, Vu<V
SLU 61	13.07	-2239	-914	865.85	4209	1.9	6117	3254				3.56	Si
SLU 61	14.87	341	-914	2598.1	0	0	5556	0				0	No, Vu<V
SLU 56	13.07	-3585	-1233	1008.03	6276	2.04	6392	3651				2.96	Si
SLU 56	14.87	-1005	-1233	3314.09	0	0	5556	0				0	No, Vu<V
SLU 59	13.07	-3247	-1198	947.29	5684	2.04	6313	3606				3.01	Si
SLU 59	14.87	-667	-1198	3190.99	0	0	5556	0				0	No, Vu<V
SLU 53	13.07	-3188	-1062	959.07	5581	2.04	6300	3598				3.39	Si
SLU 53	14.87	-608	-1062	2956.82	0	0	5556	0				0	No, Vu<V
SLU 60	13.07	-2245	-920	856.1	4185	1.9162	6114	3280				3.56	Si
SLU 60	14.87	334	-920	2599.29	0	0	5556	0				0	No, Vu<V
SLU 57	13.07	-3579	-1227	1017.78	6265	2.04	6391	3651				2.98	Si
SLU 57	14.87	-999	-1227	3312.89	0	0	5556	0				0	No, Vu<V
SLU 55	13.07	-2846	-1023	904.82	4982	2.04	6220	3553				3.47	Si
SLU 55	14.87	-266	-1023	2832.93	0	0	5556	0				0	No, Vu<V
SLU 58	13.07	-3253	-1204	937.54	5695	2.04	6315	3607				2.99	Si
SLU 58	14.87	-673	-1204	3192.18	0	0	5556	0				0	No, Vu<V
SLU 1	13.07	-2237	-601	631.98	3916	2.04	6078	3472				5.77	Si
SLU 1	14.87	-245	-601	1780.83	0	0	5556	0				0	No, Vu<V

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 5	13.07	1883	-2548	949.34		0	0	8333	0			0	No, Vu<V
SLV 5	14.87	3812	-2025	4843.39		0	0	8333	0			0	No, Vu<V
SLV 14	13.07	-4516	2293	1464.5		7906	2.04	9914	5663			2.47	Si
SLV 14	14.87	-2382	1211	-2078.98		19274	0.4413	12188	1506			1.24	Si
SLV 4	13.07	409	-3666	-144.53		0	0	8333	0			0	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 4	14.87	2274	-2585	6004.9		0	0	8333	0			0	No, Vu<V
SLV 2	13.07	2169	-4199	147.6		0	0	8333	0			0	No, Vu<V
SLV 2	14.87	4018	-3008	6922.98		0	0	8333	0			0	No, Vu<V
SLV 3	13.07	409	-3666	-144.53		0	0	8333	0			0	No, Vu<V
SLV 3	14.87	2274	-2585	6004.9		0	0	8333	0			0	No, Vu<V
SLV 10	13.07	-123	-600	1344.41		0	0	8333	0			0	No, Vu<V
SLV 10	14.87	1892	-760	2142.8		0	0	8333	0			0	No, Vu<V
SLV 1	13.07	2169	-4199	147.6		0	0	8333	0			0	No, Vu<V
SLV 1	14.87	4018	-3008	6922.98		0	0	8333	0			0	No, Vu<V
SLV 13	13.07	-4516	2293	1464.5		7906	2.04	9914	5663			2.47	Si
SLV 13	14.87	-2382	1211	-2078.98		19274	0.4413	12188	1506			1.24	Si
SLV 9	13.07	-123	-600	1344.41		0	0	8333	0			0	No, Vu<V
SLV 9	14.87	1892	-760	2142.8		0	0	8333	0			0	No, Vu<V
SLV 6	13.07	1883	-2548	949.34		0	0	8333	0			0	No, Vu<V
SLV 6	14.87	3812	-2025	4843.39		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 9	143750	0.53	0	530	229.48	0	0	No, Trazione
SLV 4	143750	0.53	0	1102	229.48	0	0	No, Trazione
SLV 3	143750	0.53	0	1102	229.48	0	0	No, Trazione
SLV 5	143750	0.53	0	2521	229.48	0	0	No, Trazione
SLV 6	143750	0.53	0	2521	229.48	0	0	No, Trazione
SLV 2	143750	0.53	0	2829	229.48	0	0	No, Trazione
SLV 1	143750	0.53	0	2829	229.48	0	0	No, Trazione
SLV 10	143750	0.53	0	530	229.48	0	0	No, Trazione
SLV 7	143750	0.53	5666	-3236	229.48	432.08	1.88	Si
SLV 8	143750	0.53	5666	-3236	229.48	432.08	1.88	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 6	356	120	-561	0	0	0	0	8.06258	No, Trazione
SLV 8	-2414	-5035	610	0	514.5	0.893	0	8.06258	No
SLV 2	681	-1014	-172	0	0	0	0	9.06484	No, Trazione
SLV 3	-150	-2561	179	0	332.5	0.963	0	9.06484	No
SLV 5	356	120	-561	0	0	0	0	8.06258	No, Trazione
SLV 10	-755	-454	-542	0	367.2	0.902	0	8.06258	No
SLV 1	681	-1014	-172	0	0	0	0	9.06484	No, Trazione
SLV 9	-755	-454	-542	0	367.2	0.902	0	8.06258	No
SLV 4	-150	-2561	179	0	332.5	0.963	0	9.06484	No
SLV 7	-2414	-5035	610	0	514.5	0.893	0	8.06258	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0	SLU 84	No
V_SLU	0	SLU 1	No
PF_SLV	0	SLV 10	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 10	No
R_SLV	0	SLV 6	No

Maschio 242

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.818	6.661	-12.838	6.661	L6	L7	3.98	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 12	13.07	-9163	624.82	8222	16393.14	26.237	Si
SLU 12	14.87	-6724	-1272.16	6034	12389.19	9.739	Si
SLU 33	13.07	-9695	828.38	8700	17232.24	20.802	Si
SLU 33	14.87	-7407	-1401.65	6646	13536.77	9.658	Si
SLU 75	13.07	-11730	925.48	10526	20326.08	21.963	Si
SLU 75	14.87	-8528	-1603.95	7653	15376.34	9.587	Si
SLU 11	13.07	-9152	631.74	8213	16376.51	25.923	Si
SLU 11	14.87	-6716	-1276.18	6026	12375.8	9.698	Si
SLU 74	13.07	-11719	932.4	10516	20310.62	21.783	Si
SLU 74	14.87	-8520	-1607.96	7645	15363.57	9.555	Si
SLU 54	13.07	-11198	721.93	10048	19534.47	27.059	Si
SLU 54	14.87	-7845	-1474.46	7040	14262.34	9.673	Si
SLU 67	13.07	-11950	546.32	10723	20649.78	37.798	Si
SLU 67	14.87	-8523	-1574.1	7648	15368.75	9.764	Si
SLU 53	13.07	-11187	728.85	10039	19518.77	26.78	Si
SLU 53	14.87	-7837	-1478.47	7033	14249.34	9.638	Si
SLU 32	13.07	-9684	835.3	8690	17215.85	20.61	Si
SLU 32	14.87	-7399	-1405.66	6639	13523.61	9.621	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 66	13.07	-11939	553.24	10714	20634.42	37.298	Si
SLU 66	14.87	-8515	-1578.11	7641	15355.98	9.731	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 1	13.07	-8026	-4877.16	7202	15030.16	3.082	Si
SLV 1	14.87	-4847	2413.5	4349	9302.28	3.854	Si
SLV 2	13.07	-8026	-4877.16	7202	15030.16	3.082	Si
SLV 2	14.87	-4847	2413.5	4349	9302.28	3.854	Si
SLV 3	13.07	-9421	-5087.92	8454	17450.22	3.43	Si
SLV 3	14.87	-5238	2430.37	4701	10023.51	4.124	Si
SLV 4	13.07	-9421	-5087.92	8454	17450.22	3.43	Si
SLV 4	14.87	-5238	2430.37	4701	10023.51	4.124	Si
SLV 16	13.07	-6935	6322.8	6223	13098.57	2.072	Si
SLV 16	14.87	-4582	-4149.16	4111	8811.02	2.124	Si
SLV 14	13.07	-5541	6533.56	4972	10577.19	1.619	Si
SLV 14	14.87	-4190	-4166.03	3760	8082.28	1.94	Si
SLV 9	13.07	-4783	2785.7	4292	9184.16	3.297	Si
SLV 9	14.87	-3964	-1882.88	3557	7657.93	4.067	Si
SLV 15	13.07	-6935	6322.8	6223	13098.57	2.072	Si
SLV 15	14.87	-4582	-4149.16	4111	8811.02	2.124	Si
SLV 10	13.07	-4783	2785.7	4292	9184.16	3.297	Si
SLV 10	14.87	-3964	-1882.88	3557	7657.93	4.067	Si
SLV 13	13.07	-5541	6533.56	4972	10577.19	1.619	Si
SLV 13	14.87	-4190	-4166.03	3760	8082.28	1.94	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 75	13.07	-11730	1173	925.48		10526	3.98	6959	7755			6.61	Si
SLU 75	14.87	-8528	1173	-1603.95		7653	3.98	6576	7328			6.25	Si
SLU 81	13.07	-9644	1224	1398.66		8654	3.98	6709	7477			6.11	Si
SLU 81	14.87	-6329	1224	-1196.73		5679	3.98	6313	7035			5.75	Si
SLU 60	13.07	-9112	1065	1195.11		8177	3.98	6646	7406			6.95	Si
SLU 60	14.87	-5646	1065	-1067.25		5066	3.98	6231	6944			6.52	Si
SLU 82	13.07	-9655	1218	1391.74		8664	3.98	6711	7478			6.14	Si
SLU 82	14.87	-6337	1218	-1192.72		5686	3.98	6314	7036			5.78	Si
SLU 74	13.07	-11719	1179	932.4		10516	3.98	6958	7754			6.58	Si
SLU 74	14.87	-8520	1179	-1607.96		7645	3.98	6575	7327			6.22	Si
SLU 40	13.07	-7620	1080	1294.64		6838	3.98	6467	7207			6.67	Si
SLU 40	14.87	-5216	1080	-990.42		4680	3.98	6180	6887			6.38	Si
SLU 73	13.07	-9756	1129	1224.63		8755	3.98	6723	7492			6.63	Si
SLU 73	14.87	-6340	1129	-1177.25		5689	3.98	6314	7036			6.23	Si
SLU 39	13.07	-7609	1086	1301.56		6828	3.98	6466	7206			6.64	Si
SLU 39	14.87	-5208	1086	-994.44		4673	3.98	6179	6885			6.34	Si
SLU 84	13.07	-11122	1163	1112.24		9980	3.98	6886	7674			6.6	Si
SLU 84	14.87	-7969	1163	-1410.89		7151	3.98	6509	7254			6.24	Si
SLU 83	13.07	-11111	1169	1119.16		9971	3.98	6885	7673			6.56	Si
SLU 83	14.87	-7961	1169	-1414.9		7144	3.98	6508	7253			6.21	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 9	13.07	-4783	2407	2785.7		4292	3.98	9192	10243			4.26	Si
SLV 9	14.87	-3964	1885	-1882.88		3557	3.98	9045	10079			5.35	Si
SLV 1	13.07	-8026	-5045	-4877.16		7202	3.98	9774	10892			2.16	Si
SLV 1	14.87	-4847	-3383	2413.5		4349	3.98	9203	10256			3.03	Si
SLV 15	13.07	-6935	6535	6322.8		7657	3.235	9865	8935			1.37	Si
SLV 15	14.87	-4582	4873	-4149.16		5030	3.2533	9339	8507			1.75	Si
SLV 10	13.07	-4783	2407	2785.7		4292	3.98	9192	10243			4.26	Si
SLV 10	14.87	-3964	1885	-1882.88		3557	3.98	9045	10079			5.35	Si
SLV 3	13.07	-9421	-5003	-5087.92		8454	3.98	10024	11171			2.23	Si
SLV 3	14.87	-5238	-3329	2430.37		4701	3.98	9273	10334			3.1	Si
SLV 4	13.07	-9421	-5003	-5087.92		8454	3.98	10024	11171			2.23	Si
SLV 4	14.87	-5238	-3329	2430.37		4701	3.98	9273	10334			3.1	Si
SLV 13	13.07	-5541	6494	6533.56		8135	2.4324	9960	6784			1.04	Si
SLV 13	14.87	-4190	4819	-4166.03		5010	2.9874	9335	7809			1.62	Si
SLV 16	13.07	-6935	6535	6322.8		7657	3.235	9865	8935			1.37	Si
SLV 16	14.87	-4582	4873	-4149.16		5030	3.2533	9339	8507			1.75	Si
SLV 14	13.07	-5541	6494	6533.56		8135	2.4324	9960	6784			1.04	Si
SLV 14	14.87	-4190	4819	-4166.03		5010	2.9874	9335	7809			1.62	Si
SLV 2	13.07	-8026	-5045	-4877.16		7202	3.98	9774	10892			2.16	Si
SLV 2	14.87	-4847	-3383	2413.5		4349	3.98	9203	10256			3.03	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 9	143750	0.53	4647	-5178	447.72	697.38	1.56	Si
SLV 10	143750	0.53	4647	-5178	447.72	697.38	1.56	Si
SLV 5	143750	0.53	5021	-5596	447.72	751.19	1.68	Si
SLV 6	143750	0.53	5021	-5596	447.72	751.19	1.68	Si
SLV 14	143750	0.53	5079	-5660	447.72	759.49	1.7	Si
SLV 13	143750	0.53	5079	-5660	447.72	759.49	1.7	Si
SLV 15	143750	0.53	5824	-6491	447.72	865.38	1.93	Si
SLV 16	143750	0.53	5824	-6491	447.72	865.38	1.93	Si
SLV 1	143750	0.53	6328	-7051	447.72	936.07	2.09	Si
SLV 2	143750	0.53	6328	-7051	447.72	936.07	2.09	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 9	143750	0.53	4647	-5178	447.72	697.38	1.56	Si	
SLV 10	143750	0.53	4647	-5178	447.72	697.38	1.56	Si	
SLV 5	143750	0.53	5021	-5596	447.72	751.19	1.68	Si	
SLV 6	143750	0.53	5021	-5596	447.72	751.19	1.68	Si	
SLV 14	143750	0.53	5079	-5660	447.72	759.49	1.7	Si	
SLV 13	143750	0.53	5079	-5660	447.72	759.49	1.7	Si	
SLV 15	143750	0.53	5824	-6491	447.72	865.38	1.93	Si	
SLV 16	143750	0.53	5824	-6491	447.72	865.38	1.93	Si	
SLV 1	143750	0.53	6328	-7051	447.72	936.07	2.09	Si	
SLV 2	143750	0.53	6328	-7051	447.72	936.07	2.09	Si	



Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 11	-3816	-10912	-113	0.048	919.2	0.89	0.79011	8.06258	No
SLV 12	-3816	-10912	-113	0.048	919.2	0.89	0.79011	8.06258	No
SLV 15	-3347	-6569	-72	0.055	875.9	0.889	0.89757	9.06484	No
SLV 16	-3347	-6569	-72	0.055	875.9	0.889	0.89757	9.06484	No
SLV 1	-3214	-8828	73	0.055	863.8	0.889	0.89874	9.06484	No
SLV 2	-3214	-8828	73	0.055	863.8	0.889	0.89874	9.06484	No
SLV 6	-2746	-4485	114	0.049	821.8	0.889	0.79942	8.06258	No
SLV 5	-2746	-4485	114	0.049	821.8	0.889	0.79942	8.06258	No
SLV 8	-3878	-12292	-87	0.052	925	0.89	0.84877	8.06258	No
SLV 7	-3878	-12292	-87	0.052	925	0.89	0.84877	8.06258	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	9.555	SLV 74	Si
V_SLV	5.748	SLV 81	Si
PF_SLV	1.619	SLV 13	Si
V_SLV	1.045	SLV 13	Si
PFFP_SLV	1.558	SLV 9	Si
R_SLV	0.098	SLV 11	No

Maschio 243

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-11.938	6.661	-7.958	6.661	L6	L7	3.98	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	$\tau 0$	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	$\alpha 0$	Mu	c.s.	Verifica
SLV 79	13.07	-11484	-2643.07	10305	19961.79	7.553	Si
SLV 79	14.87	-7994	79.81	7174	14507.69	181.784	Si
SLV 37	13.07	-9505	-2437.47	8529	16933.73	6.947	Si
SLV 37	14.87	-6972	-15.07	6257	12809.36	849.713	Si
SLV 34	13.07	-8471	-2140.94	7602	15284.79	7.139	Si
SLV 34	14.87	-5806	187.55	5210	10815.35	57.667	Si
SLV 84	13.07	-10372	-2451.51	9308	18282.62	7.458	Si
SLV 84	14.87	-6832	275.5	6131	12572.59	45.635	Si
SLV 39	13.07	-7326	-1851.36	6574	13401.58	7.239	Si
SLV 39	14.87	-4625	331.09	4150	8734.2	26.38	Si
SLV 38	13.07	-9517	-2474.23	8540	16953.97	6.852	Si
SLV 38	14.87	-6980	4.48	6263	12821.57	1000	Si
SLV 41	13.07	-8380	-2209.15	7520	15137.23	6.852	Si
SLV 41	14.87	-5803	161.06	5207	10809.6	67.115	Si
SLV 42	13.07	-8393	-2245.91	7532	15158.11	6.749	Si
SLV 42	14.87	-5810	180.62	5214	10822.18	59.917	Si
SLV 40	13.07	-7339	-1888.12	6585	13423.05	7.109	Si
SLV 40	14.87	-4632	350.65	4156	8747.16	24.946	Si
SLV 80	13.07	-11497	-2679.83	10316	19980.92	7.456	Si
SLV 80	14.87	-8002	99.37	7180	14519.58	146.123	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	$\alpha 0$	Mu	c.s.	Verifica
SLV 2	13.07	-6106	-7323.83	5479	11605.72	1.585	Si
SLV 2	14.87	-3877	3853.42	3479	7494.88	1.945	Si
SLV 3	13.07	-7120	-6717.7	6389	13427.23	1.999	Si
SLV 3	14.87	-4291	3488.34	3850	8269.36	2.371	Si
SLV 16	13.07	-8277	4801.26	7427	15469.32	3.222	Si
SLV 16	14.87	-4533	-3220.13	4068	8720.74	2.708	Si
SLV 15	13.07	-8277	4801.26	7427	15469.32	3.222	Si
SLV 15	14.87	-4533	-3220.13	4068	8720.74	2.708	Si
SLV 14	13.07	-7263	4195.13	6517	13682.09	3.261	Si
SLV 14	14.87	-4119	-2855.05	3696	7949.19	2.784	Si
SLV 13	13.07	-7263	4195.13	6517	13682.09	3.261	Si
SLV 13	14.87	-4119	-2855.05	3696	7949.19	2.784	Si
SLV 6	13.07	-5328	-3999.35	4781	10187.82	2.547	Si
SLV 6	14.87	-3479	1931.38	3121	6745.4	3.493	Si
SLV 4	13.07	-7120	-6717.7	6389	13427.23	1.999	Si
SLV 4	14.87	-4291	3488.34	3850	8269.36	2.371	Si
SLV 5	13.07	-5328	-3999.35	4781	10187.82	2.547	Si
SLV 5	14.87	-3479	1931.38	3121	6745.4	3.493	Si
SLV 1	13.07	-6106	-7323.83	5479	11605.72	1.585	Si
SLV 1	14.87	-3877	3853.42	3479	7494.88	1.945	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	$\alpha 0$	αN	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 83	13.07	-10360	-1302	-2414.75		9296	3.98	6795	7572			5.81	Si
SLV 83	14.87	-6825	-1302	255.94		6124	3.98	6372	7101			5.45	Si
SLV 79	13.07	-11484	-1326	-2643.07		10305	3.98	6930	7722			5.82	Si
SLV 79	14.87	-7994	-1326	79.81		7174	3.98	6512	7257			5.47	Si
SLV 80	13.07	-11497	-1358	-2679.83		10316	3.98	6931	7724			5.69	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 80	14.87	-8002	-1358	99.37		7180	3.98	6513	7258			5.35	Si
SLU 84	13.07	-10372	-1334	-2451.51		9308	3.98	6797	7574			5.68	Si
SLU 84	14.87	-6832	-1334	275.5		6131	3.98	6373	7102			5.32	Si
SLU 82	13.07	-9318	-1245	-2093.72		8361	3.98	6670	7433			5.97	Si
SLU 82	14.87	-5654	-1245	445.53		5073	3.98	6232	6945			5.58	Si
SLU 75	13.07	-11028	-1327	-2173.45		9896	3.98	6875	7662			5.77	Si
SLU 75	14.87	-7461	-1327	534.54		6695	3.98	6448	7186			5.42	Si
SLU 74	13.07	-11015	-1295	-2136.69		9884	3.98	6873	7660			5.91	Si
SLU 74	14.87	-7454	-1295	514.98		6689	3.98	6447	7185			5.55	Si
SLU 77	13.07	-12070	-1384	-2494.48		10831	3.98	7000	7800			5.63	Si
SLU 77	14.87	-8632	-1384	344.95		7746	3.98	6588	7342			5.3	Si
SLU 78	13.07	-12083	-1416	-2531.24		10842	3.98	7001	7802			5.51	Si
SLU 78	14.87	-8640	-1416	364.51		7753	3.98	6589	7343			5.18	Si
SLU 76	13.07	-10451	-1290	-2346.54		9378	3.98	6806	7585			5.88	Si
SLU 76	14.87	-6828	-1290	282.43		6127	3.98	6373	7102			5.51	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 5	13.07	-5328	-3679	-3999.35		5118	3.7181	9357	9741			2.65	Si
SLV 5	14.87	-3479	-2478	1931.38		3121	3.98	8958	9982			4.03	Si
SLV 3	13.07	-7120	-6382	-6717.7		8099	3.1394	9953	8749			1.37	Si
SLV 3	14.87	-4291	-4979	3488.34		4340	3.531	9201	9097			1.83	Si
SLV 1	13.07	-6106	-7056	-7323.83		9195	2.3715	10172	6755			0.96	No, Vu<V
SLV 1	14.87	-3877	-5224	3853.42		4634	2.988	9260	7747			1.48	Si
SLV 2	13.07	-6106	-7056	-7323.83		9195	2.3715	10172	6755			0.96	No, Vu<V
SLV 2	14.87	-3877	-5224	3853.42		4634	2.988	9260	7747			1.48	Si
SLV 4	13.07	-7120	-6382	-6717.7		8099	3.1394	9953	8749			1.37	Si
SLV 4	14.87	-4291	-4979	3488.34		4340	3.531	9201	9097			1.83	Si
SLV 6	13.07	-5328	-3679	-3999.35		5118	3.7181	9357	9741			2.65	Si
SLV 6	14.87	-3479	-2478	1931.38		3121	3.98	8958	9982			4.03	Si
SLV 16	13.07	-8277	5513	4801.26		7427	3.98	9819	10942			1.98	Si
SLV 16	14.87	-4533	3681	-3220.13		4217	3.839	9177	9864			2.68	Si
SLV 15	13.07	-8277	5513	4801.26		7427	3.98	9819	10942			1.98	Si
SLV 15	14.87	-4533	3681	-3220.13		4217	3.839	9177	9864			2.68	Si
SLV 14	13.07	-7263	4839	4195.13		6517	3.98	9637	10739			2.22	Si
SLV 14	14.87	-4119	3436	-2855.05		3781	3.8907	9090	9902			2.88	Si
SLV 13	13.07	-7263	4839	4195.13		6517	3.98	9637	10739			2.22	Si
SLV 13	14.87	-4119	3436	-2855.05		3781	3.8907	9090	9902			2.88	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 6	143750	0.53	4528	-5046	447.72	680.21	1.52	Si
SLV 5	143750	0.53	4528	-5046	447.72	680.21	1.52	Si
SLV 9	143750	0.53	4693	-5230	447.72	704.09	1.57	Si
SLV 10	143750	0.53	4693	-5230	447.72	704.09	1.57	Si
SLV 1	143750	0.53	5095	-5678	447.72	761.81	1.7	Si
SLV 2	143750	0.53	5095	-5678	447.72	761.81	1.7	Si
SLV 13	143750	0.53	5647	-6293	447.72	840.32	1.88	Si
SLV 14	143750	0.53	5647	-6293	447.72	840.32	1.88	Si
SLV 3	143750	0.53	5747	-6405	447.72	854.52	1.91	Si
SLV 4	143750	0.53	5747	-6405	447.72	854.52	1.91	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 6	-2206	-4162	-153	0.042	775.1	0.892	0.68606	8.06258	No
SLV 5	-2206	-4162	-153	0.042	775.1	0.892	0.68606	8.06258	No
SLV 12	-3256	-11534	153	0.042	867.6	0.889	0.69469	8.06258	No
SLV 11	-3256	-11534	153	0.042	867.6	0.889	0.69469	8.06258	No
SLV 9	-2226	-5106	-142	0.044	776.8	0.892	0.71946	8.06258	No
SLV 10	-2226	-5106	-142	0.044	776.8	0.892	0.71946	8.06258	No
SLV 7	-3236	-10590	142	0.044	865.7	0.889	0.72259	8.06258	No
SLV 8	-3236	-10590	142	0.044	865.7	0.889	0.72259	8.06258	No
SLV 15	-2920	-10385	62	0.057	837.2	0.889	0.93607	9.06484	No
SLV 16	-2920	-10385	62	0.057	837.2	0.889	0.93607	9.06484	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.749	SLU 42	Si
V_SLU	5.185	SLU 78	Si
PF_SLV	1.585	SLV 1	Si
V_SLV	0.957	SLV 1	No
PFFP_SLV	1.519	SLV 5	Si
R_SLV	0.085	SLV 5	No

Maschio 244

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-7.058	6.661	-5.018	6.661	L6	L7	2.04	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

Sismicad 12.19 - Licenza assegnata a Sidel ingegneria Srl - Via Isonzo, 13 - Villanova di Castenaso (BO)



fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 60	13.07	-2164	-1038.88	3789	2104.71	2.026	Si
SLU 60	14.87	356	-2833.84	0	0	0	No, Trazione
SLU 53	13.07	-2602	-1301.45	4555	2505.48	1.925	Si
SLU 53	14.87	-82	-3521.62	0	0	0	No, $e \geq l/2$
SLU 1	13.07	-1933	-815.35	3384	1889.79	2.318	Si
SLU 1	14.87	12	-2115.29	0	0	0	No, Trazione
SLU 59	13.07	-1915	-1536.79	3353	1873.31	1.219	Si
SLU 59	14.87	604	-4245.23	0	0	0	No, Trazione
SLU 56	13.07	-2435	-1539.01	4262	2353.36	1.529	Si
SLU 56	14.87	85	-4250.17	0	0	0	No, Trazione
SLU 58	13.07	-1950	-1510.48	3414	1905.61	1.262	Si
SLU 58	14.87	570	-4228.13	0	0	0	No, Trazione
SLU 54	13.07	-2567	-1327.75	4495	2474.17	1.863	Si
SLU 54	14.87	-48	-3538.71	0	0	0	No, $e \geq l/2$
SLU 55	13.07	-2060	-1316.76	3606	2007.85	1.525	Si
SLU 55	14.87	460	-3528.07	0	0	0	No, Trazione
SLU 61	13.07	-2130	-1065.18	3728	2072.74	1.946	Si
SLU 61	14.87	390	-2850.93	0	0	0	No, Trazione
SLU 57	13.07	-2400	-1565.31	4202	2321.79	1.483	Si
SLU 57	14.87	120	-4267.27	0	0	0	No, Trazione

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 16	13.07	-1872	886.16	3278	1858.48	2.097	Si
SLV 16	14.87	108	-3925.87	0	0	0	No, Trazione
SLV 9	13.07	709	-1462.04	0	0	0	No, Trazione
SLV 9	14.87	2701	-4439	0	0	0	No, Trazione
SLV 15	13.07	-1872	886.16	3278	1858.48	2.097	Si
SLV 15	14.87	108	-3925.87	0	0	0	No, Trazione
SLV 2	13.07	-1746	-2576.21	0	0	0	No, $e \geq l/2$
SLV 2	14.87	180	-597.55	0	0	0	No, Trazione
SLV 1	13.07	-1746	-2576.21	0	0	0	No, $e \geq l/2$
SLV 1	14.87	180	-597.55	0	0	0	No, Trazione
SLV 13	13.07	-476	260.63	833	482.08	1.85	Si
SLV 13	14.87	1521	-4849.57	0	0	0	No, Trazione
SLV 10	13.07	709	-1462.04	0	0	0	No, Trazione
SLV 10	14.87	2701	-4439	0	0	0	No, Trazione
SLV 6	13.07	328	-2313.09	0	0	0	No, Trazione
SLV 6	14.87	2299	-3163.4	0	0	0	No, Trazione
SLV 14	13.07	-476	260.63	833	482.08	1.85	Si
SLV 14	14.87	1521	-4849.57	0	0	0	No, Trazione
SLV 5	13.07	328	-2313.09	0	0	0	No, Trazione
SLV 5	14.87	2299	-3163.4	0	0	0	No, Trazione

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 59	13.07	-1915	1457	-1536.79		10475	0.653	6952	1271			0.87	No, Vu<V
SLU 59	14.87	604	1457	-4245.23		0	0	5556	0			0	No, Vu<V
SLU 56	13.07	-2435	1459	-1539.01		7473	1.1636	6552	2135			1.46	Si
SLU 56	14.87	85	1459	-4250.17		0	0	5556	0			0	No, Vu<V
SLU 58	13.07	-1950	1463	-1510.48		9460	0.7361	6817	1405			0.96	No, Vu<V
SLU 58	14.87	570	1463	-4228.13		0	0	5556	0			0	No, Vu<V
SLU 53	13.07	-2602	1186	-1301.45		5959	1.5594	6350	2773			2.34	Si
SLU 53	14.87	-82	1186	-3521.62		0	0	5556	0			0	No, Vu<V
SLU 60	13.07	-2164	950	-1038.88		4771	1.6198	6192	2808			2.96	Si
SLU 60	14.87	356	950	-2833.84		0	0	5556	0			0	No, Vu<V
SLU 1	13.07	-1933	686	-815.35		3847	1.7946	6068	3049			4.45	Si
SLU 1	14.87	12	686	-2115.29		0	0	5556	0			0	No, Vu<V
SLU 55	13.07	-2060	1181	-1316.76		6441	1.1421	6414	2051			1.74	Si
SLU 55	14.87	460	1181	-3528.07		0	0	5556	0			0	No, Vu<V
SLU 54	13.07	-2567	1181	-1327.75		6078	1.5085	6366	2689			2.28	Si
SLU 54	14.87	-48	1181	-3538.71		0	0	5556	0			0	No, Vu<V
SLU 57	13.07	-2400	1454	-1565.31		7768	1.1034	6591	2036			1.4	Si
SLU 57	14.87	120	1454	-4267.27		0	0	5556	0			0	No, Vu<V
SLU 61	13.07	-2130	945	-1065.18		4877	1.5594	6206	2710			2.87	Si
SLU 61	14.87	390	945	-2850.93		0	0	5556	0			0	No, Vu<V

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 10	13.07	709	1622	-1462.04		0	0	8333	0			0	No, Vu<V
SLV 10	14.87	2701	1387	-4439		0	0	8333	0			0	No, Vu<V
SLV 9	13.07	709	1622	-1462.04		0	0	8333	0			0	No, Vu<V
SLV 9	14.87	2701	1387	-4439		0	0	8333	0			0	No, Vu<V
SLV 15	13.07	-1872	3015	886.16		4077	1.6401	9149	4201			1.39	Si
SLV 15	14.87	108	2216	-3925.87		0	0	8333	0			0	No, Vu<V
SLV 1	13.07	-1746	-1514	-2576.21		0	0	8333	0			0	No, Vu<V
SLV 1	14.87	180	-715	-597.55		0	0	8333	0			0	No, Vu<V
SLV 5	13.07	328	231	-2313.09		0	0	8333	0			0	No, Vu<V
SLV 5	14.87	2299	475	-3163.4		0	0	8333	0			0	No, Vu<V
SLV 6	13.07	328	231	-2313.09		0	0	8333	0			0	No, Vu<V
SLV 6	14.87	2299	475	-3163.4		0	0	8333	0			0	No, Vu<V
SLV 14	13.07	-476	3121	260.63		1199	1.4169	8573	3401			1.09	Si
SLV 14	14.87	1521	2324	-4849.57		0	0	8333	0			0	No, Vu<V
SLV 13	13.07	-476	3121	260.63		1199	1.4169	8573	3401			1.09	Si
SLV 13	14.87	1521	2324	-4849.57		0	0	8333	0			0	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 2	13.07	-1746	-1514	-2576.21		0	0	8333	0			0	No, Vu<V
SLV 2	14.87	180	-715	-597.55		0	0	8333	0			0	No, Vu<V
SLV 16	13.07	-1872	3015	886.16		4077	1.6401	9149	4201			1.39	Si
SLV 16	14.87	108	2216	-3925.87		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 16	143750	0.53	0	-1179	229.48	0	0	No, e>t/2
SLV 6	143750	0.53	0	1141	229.48	0	0	No, Trazione
SLV 5	143750	0.53	0	1141	229.48	0	0	No, Trazione
SLV 9	143750	0.53	0	1583	229.48	0	0	No, Trazione
SLV 10	143750	0.53	0	1583	229.48	0	0	No, Trazione
SLV 15	143750	0.53	0	-1179	229.48	0	0	No, e>t/2
SLV 1	143750	0.53	0	-1138	229.48	0	0	No, e>t/2
SLV 13	143750	0.53	0	334	229.48	0	0	No, Trazione
SLV 14	143750	0.53	0	334	229.48	0	0	No, Trazione
SLV 2	143750	0.53	0	-1138	229.48	0	0	No, e>t/2

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 13	2077	-3179	42	0	0	0	0	9.06484	No, Trazione
SLV 15	637	-4651	-63	0	0	0	0	9.06484	No, Trazione
SLV 14	2077	-3179	42	0	0	0	0	9.06484	No, Trazione
SLV 5	2743	464	181	0	0	0	0	8.06258	No, Trazione
SLV 1	517	-217	67	0	0	0	0	9.06484	No, Trazione
SLV 9	3211	-425	173	0	0	0	0	8.06258	No, Trazione
SLV 2	517	-217	67	0	0	0	0	9.06484	No, Trazione
SLV 6	2743	464	181	0	0	0	0	8.06258	No, Trazione
SLV 16	637	-4651	-63	0	0	0	0	9.06484	No, Trazione
SLV 10	3211	-425	173	0	0	0	0	8.06258	No, Trazione

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0	SLU 84	No
V_SLU	0	SLU 1	No
PF_SLV	0	SLV 16	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 14	No
R_SLV	0	SLV 16	No

Maschio 245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-20.668	1.046	-24.528	1.046	L6	L7	3.86	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 8	12.17	-9798	526.38	9065	16805.18	31.926	Si
SLU 8	14.27	-5761	-3060.25	5330	10390.49	3.395	Si
SLU 40	12.17	-9600	5030.71	8883	16508.34	3.282	Si
SLU 40	14.27	-5435	-1128.16	5029	9842.54	8.724	Si
SLU 50	12.17	-12267	409.7	11350	20377.12	49.737	Si
SLU 50	14.27	-7063	-3492.16	6535	12538.13	3.59	Si
SLU 42	12.17	-10017	4664.11	9268	17132.49	3.673	Si
SLU 42	14.27	-5851	-1892.88	5414	10542.68	5.57	Si
SLU 41	12.17	-10107	4893.37	9351	17267.18	3.529	Si
SLU 41	14.27	-5942	-1999.66	5498	10693.89	5.348	Si
SLU 39	12.17	-9691	5259.97	8966	16644.68	3.164	Si
SLU 39	14.27	-5526	-1234.94	5113	9995.4	8.094	Si
SLU 29	12.17	-10439	1968.82	9659	17758.61	9.02	Si
SLU 29	14.27	-6274	-3139.95	5805	11245.97	3.582	Si
SLU 9	12.17	-9707	297.12	8982	16669.26	56.103	Si
SLU 9	14.27	-5670	-2953.47	5246	10238.56	3.467	Si
SLU 30	12.17	-10349	1739.56	9575	17625.24	10.132	Si
SLU 30	14.27	-6184	-3033.17	5721	11096.08	3.658	Si
SLU 51	12.17	-12177	180.44	11267	20251	112.23	Si
SLU 51	14.27	-6973	-3385.38	6451	12391.36	3.66	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 6	12.17	-11181	6513.35	10345	19752.05	3.033	Si
SLV 6	14.27	-7166	-4214.9	6630	13079.66	3.103	Si
SLV 13	12.17	-4910	-4073.56	4543	9124.81	2.24	Si
SLV 13	14.27	-1063	4325.34	0	0	0	No, e>l/2
SLV 2	12.17	-13827	9790.42	12794	23892.46	2.44	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 2	14.27	-9597	-7830.13	8880	17176.36	2.194	Si
SLV 5	12.17	-11181	6513.35	10345	19752.05	3.033	Si
SLV 5	14.27	-7166	-4214.9	6630	13079.66	3.103	Si
SLV 4	12.17	-13421	8440.14	12417	23269.53	2.757	Si
SLV 4	14.27	-9121	-7282.26	8439	16387.36	2.25	Si
SLV 1	12.17	-13827	9790.42	12794	23892.46	2.44	Si
SLV 1	14.27	-9597	-7830.13	8880	17176.36	2.194	Si
SLV 3	12.17	-13421	8440.14	12417	23269.53	2.757	Si
SLV 3	14.27	-9121	-7282.26	8439	16387.36	2.25	Si
SLV 14	12.17	-4910	-4073.56	4543	9124.81	2.24	Si
SLV 14	14.27	-1063	4325.34	0	0	0	No, $e \geq l/2$
SLV 15	12.17	-4504	-5423.83	4167	8395.9	1.548	Si
SLV 15	14.27	-587	4873.21	0	0	0	No, $e \geq l/2$
SLV 16	12.17	-4504	-5423.83	4167	8395.9	1.548	Si
SLV 16	14.27	-587	4873.21	0	0	0	No, $e \geq l/2$

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 81	12.17	-12161	3279	5143.29		11251	3.86	7056	7626			2.33	Si
SLU 81	14.27	-6828	3279	-1666.85		6318	3.86	6398	6915			2.11	Si
SLU 83	12.17	-12577	3468	4776.69		11637	3.86	7107	7681			2.21	Si
SLU 83	14.27	-7244	3468	-2431.58		6703	3.86	6449	6970			2.01	Si
SLU 42	12.17	-10017	3150	4664.11		9268	3.86	6791	7340			2.33	Si
SLU 42	14.27	-5851	3150	-1892.88		5414	3.86	6277	6785			2.15	Si
SLU 84	12.17	-12486	3308	4547.43		11553	3.86	7096	7669			2.32	Si
SLU 84	14.27	-7154	3308	-2324.8		6619	3.86	6438	6958			2.1	Si
SLU 41	12.17	-10107	3310	4893.37		9351	3.86	6802	7352			2.22	Si
SLU 41	14.27	-5942	3310	-1999.66		5498	3.86	6289	6797			2.05	Si
SLU 39	12.17	-9691	3120	5259.97		8966	3.86	6751	7297			2.34	Si
SLU 39	14.27	-5526	3120	-1234.94		5113	3.86	6237	6741			2.16	Si
SLU 35	12.17	-11853	3284	4021.77		10967	3.86	7018	7585			2.31	Si
SLU 35	14.27	-7688	3284	-2816.47		7113	3.86	6504	7030			2.14	Si
SLU 37	12.17	-10498	3188	3759.38		9713	3.86	6851	7404			2.32	Si
SLU 37	14.27	-6333	3188	-2877.05		5859	3.86	6337	6849			2.15	Si
SLU 79	12.17	-12968	3346	3642.71		11998	3.86	7155	7733			2.31	Si
SLU 79	14.27	-7635	3346	-3308.97		7064	3.86	6497	7022			2.1	Si
SLU 77	12.17	-14323	3442	3905.09		13252	3.86	7322	7914			2.3	Si
SLU 77	14.27	-8990	3442	-3248.38		8318	3.86	6665	7203			2.09	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 1	12.17	-13827	7600	9790.42		13471	3.6658	11028	11319			1.49	Si
SLV 1	14.27	-9597	7184	-7830.13		10255	3.3423	10384	9718			1.35	Si
SLV 4	12.17	-13421	6719	8440.14		12417	3.86	10817	11691			1.74	Si
SLV 4	14.27	-9121	6396	-7282.26		9596	3.3947	10252	9745			1.52	Si
SLV 15	12.17	-4504	-4057	-5423.83		7388	2.1772	9811	5981			1.47	Si
SLV 15	14.27	-587	-3642	4873.21		0	0	8333	0			0	No, $V_u < V$
SLV 16	12.17	-4504	-4057	-5423.83		7388	2.1772	9811	5981			1.47	Si
SLV 16	14.27	-587	-3642	4873.21		0	0	8333	0			0	No, $V_u < V$
SLV 5	12.17	-11181	4856	6513.35		10345	3.86	10402	11243			2.32	Si
SLV 5	14.27	-7166	4590	-4214.9		6630	3.86	9659	10440			2.27	Si
SLV 6	12.17	-11181	4856	6513.35		10345	3.86	10402	11243			2.32	Si
SLV 6	14.27	-7166	4590	-4214.9		6630	3.86	9659	10440			2.27	Si
SLV 3	12.17	-13421	6719	8440.14		12417	3.86	10817	11691			1.74	Si
SLV 3	14.27	-9121	6396	-7282.26		9596	3.3947	10252	9745			1.52	Si
SLV 13	12.17	-4910	-3176	-4073.56		5312	3.3013	9396	8685			2.73	Si
SLV 13	14.27	-1063	-2854	4325.34		0	0	8333	0			0	No, $V_u < V$
SLV 2	12.17	-13827	7600	9790.42		13471	3.6658	11028	11319			1.49	Si
SLV 2	14.27	-9597	7184	-7830.13		10255	3.3423	10384	9718			1.35	Si
SLV 14	12.17	-4910	-3176	-4073.56		5312	3.3013	9396	8685			2.73	Si
SLV 14	14.27	-1063	-2854	4325.34		0	0	8333	0			0	No, $V_u < V$

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 13	143750	0.53	0	-1941	444.32	0	0	No, $e > t/2$
SLV 16	143750	0.53	0	-1372	444.32	0	0	No, $e > t/2$
SLV 14	143750	0.53	0	-1941	444.32	0	0	No, $e > t/2$
SLV 15	143750	0.53	0	-1372	444.32	0	0	No, $e > t/2$
SLV 11	143750	0.53	3417	-3693	444.32	502.62	1.13	Si
SLV 12	143750	0.53	3417	-3693	444.32	502.62	1.13	Si
SLV 9	143750	0.53	5172	-5590	444.32	749.51	1.69	Si
SLV 10	143750	0.53	5172	-5590	444.32	749.51	1.69	Si
SLV 8	143750	0.53	5785	-6252	444.32	833.86	1.88	Si
SLV 7	143750	0.53	5785	-6252	444.32	833.86	1.88	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 3	-1859	-13421	-9	0.07	728.5	0.895	1.14096	9.06484	No
SLV 4	-1859	-13421	-9	0.07	728.5	0.895	1.14096	9.06484	No
SLV 1	-1887	-13827	2	0.072	730.8	0.895	1.16252	9.06484	No
SLV 2	-1887	-13827	2	0.072	730.8	0.895	1.16252	9.06484	No
SLV 14	-1330	-4910	10	0.073	687.7	0.905	1.17378	9.06484	No
SLV 13	-1330	-4910	10	0.073	687.7	0.905	1.17378	9.06484	No
SLV 16	-1302	-4504	-1	0.075	685.6	0.905	1.21189	9.06484	No
SLV 15	-1302	-4504	-1	0.075	685.6	0.905	1.21189	9.06484	No
SLV 5	-1725	-11181	18	0.069	717.8	0.897	1.12063	8.06258	No
SLV 6	-1725	-11181	18	0.069	717.8	0.897	1.12063	8.06258	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.164	SLU 39	Si
V_SLU	2.01	SLU 83	Si
PF_SLV	0	SLV 13	No
V_SLV	0	SLV 13	No
PFFP_SLV	0	SLV 13	No
R_SLV	0.126	SLV 3	No

Maschio 246

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-12.283	1.046	-19.868	1.046	L6	L7	7.585	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fν0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 40	12.17	-27123	-10881.99	12771	86737.52	7.971	Si
SLU 40	14.67	-22558	-7083.28	10621	74394.62	10.503	Si
SLU 31	12.17	-27588	-9522.09	12990	87942.66	9.236	Si
SLU 31	14.67	-22678	-6065.81	10678	74731.9	12.32	Si
SLU 18	12.17	-25732	-8976.37	12116	83074.64	9.255	Si
SLU 18	14.67	-20646	-6184.53	9721	68956.28	11.15	Si
SLU 19	12.17	-25815	-8584.61	12155	83293.26	9.703	Si
SLU 19	14.67	-20696	-5744.54	9745	69100.98	12.029	Si
SLU 42	12.17	-30567	-10042.13	14393	95443.34	9.504	Si
SLU 42	14.67	-26702	-5328.38	12573	85637.28	16.072	Si
SLU 39	12.17	-27041	-11273.75	12732	86523.61	7.675	Si
SLU 39	14.67	-22507	-7523.27	10598	74254.01	9.87	Si
SLU 82	12.17	-34804	-11688.5	16388	105440.47	9.021	Si
SLU 82	14.67	-28200	-7755.5	13278	89516.08	11.542	Si
SLU 83	12.17	-38166	-11240.4	17971	112812.61	10.036	Si
SLU 83	14.67	-32295	-6440.6	15206	99614.29	15.467	Si
SLU 41	12.17	-30485	-10433.89	14354	95241.83	9.128	Si
SLU 41	14.67	-26652	-5768.38	12549	85505.78	14.823	Si
SLU 81	12.17	-34722	-12080.26	16349	105254.21	8.713	Si
SLU 81	14.67	-28150	-8195.5	13255	89387.88	10.907	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 6	12.17	-30513	-9257.68	14367	102114.22	11.03	Si
SLV 6	14.67	-23731	-25701.41	11174	81768.25	3.181	Si
SLV 15	12.17	-21189	-6627.39	9977	73798.52	11.135	Si
SLV 15	14.67	-13598	38506.66	6403	48867.53	1.269	Si
SLV 1	12.17	-33210	-6778.23	15637	109830.88	16.203	Si
SLV 1	14.67	-29222	-47778.64	13759	98345.09	2.058	Si
SLV 13	12.17	-22185	-8297	10446	76943.91	9.274	Si
SLV 13	14.67	-13583	33151.09	6395	48815.99	1.473	Si
SLV 5	12.17	-30513	-9257.68	14367	102114.22	11.03	Si
SLV 5	14.67	-23731	-25701.41	11174	81768.25	3.181	Si
SLV 16	12.17	-21189	-6627.39	9977	73798.52	11.135	Si
SLV 16	14.67	-13598	38506.66	6403	48867.53	1.269	Si
SLV 3	12.17	-32214	-5108.63	15168	107006.4	20.946	Si
SLV 3	14.67	-29237	-42423.07	13767	98389.7	2.319	Si
SLV 14	12.17	-22185	-8297	10446	76943.91	9.274	Si
SLV 14	14.67	-13583	33151.09	6395	48815.99	1.473	Si
SLV 4	12.17	-32214	-5108.63	15168	107006.4	20.946	Si
SLV 4	14.67	-29237	-42423.07	13767	98389.7	2.319	Si
SLV 2	12.17	-33210	-6778.23	15637	109830.88	16.203	Si
SLV 2	14.67	-29222	-47778.64	13759	98345.09	2.058	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 30	12.17	-35378	-1575	-5539.83		16658	7.585	7777	16516			10.49	Si
SLU 30	14.67	-31137	-1192	-1159.69		14661	7.585	7510	15950			13.38	Si
SLU 79	12.17	-42020	-1754	-9301.8		19785	7.585	8194	17402			9.92	Si
SLU 79	14.67	-36526	-993	-3961.57		17199	7.585	7849	16669			16.78	Si
SLU 35	12.17	-35917	-1647	-8557.47		16911	7.585	7810	16588			10.07	Si
SLU 35	14.67	-32673	-786	-3507.17		15384	7.585	7607	16155			20.56	Si
SLU 38	12.17	-34421	-1606	-8103.54		16207	7.585	7717	16388			10.21	Si
SLU 38	14.67	-30934	-882	-2849.35		14565	7.585	7498	15923			18.05	Si
SLU 77	12.17	-43598	-1714	-9363.98		20528	7.585	8293	17612			10.27	Si
SLU 77	14.67	-38315	-850	-4179.39		18041	7.585	7961	16908			19.88	Si
SLU 80	12.17	-42102	-1673	-8910.04		19824	7.585	8199	17413			10.41	Si
SLU 80	14.67	-36576	-947	-3521.57		17222	7.585	7852	16676			17.61	Si
SLU 71	12.17	-42977	-1723	-6738.1		20236	7.585	8254	17529			10.17	Si
SLU 71	14.67	-36729	-1303	-2271.91		17294	7.585	7861	16696			12.82	Si
SLU 27	12.17	-36873	-1616	-5993.77		17362	7.585	7870	16715			10.34	Si
SLU 27	14.67	-32876	-1095	-1817.5		15480	7.585	7620	16182			14.78	Si
SLU 29	12.17	-35296	-1656	-5931.59		16619	7.585	7771	16505			9.97	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 29	14.67	-31086	-1238	-1599.68		14637	7.585	7507	15944			12.88	Si
SLU 37	12.17	-34339	-1686	-8495.3		16169	7.585	7711	16377			9.71	Si
SLU 37	14.67	-30883	-929	-3289.35		14542	7.585	7494	15917			17.14	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 14	12.17	-22185	-24165	-8297		10446	7.585	10423	22135			0.92	No, Vu<V
SLV 14	14.67	-13583	-17350	33151.09		11962	4.0554	10726	12179			0.7	No, Vu<V
SLV 3	12.17	-32214	22722	-5108.63		15168	7.585	11367	24141			1.06	Si
SLV 3	14.67	-29237	16901	-42423.07		14865	7.0245	11306	22238			1.32	Si
SLV 4	12.17	-32214	22722	-5108.63		15168	7.585	11367	24141			1.06	Si
SLV 4	14.67	-29237	16901	-42423.07		14865	7.0245	11306	22238			1.32	Si
SLV 13	12.17	-22185	-24165	-8297		10446	7.585	10423	22135			0.92	No, Vu<V
SLV 13	14.67	-13583	-17350	33151.09		11962	4.0554	10726	12179			0.7	No, Vu<V
SLV 1	12.17	-33210	20605	-6778.23		15637	7.585	11461	24340			1.18	Si
SLV 1	14.67	-29222	14097	-47778.64		16124	6.4725	11558	20947			1.49	Si
SLV 9	12.17	-27206	-10965	-9713.31		12810	7.585	10895	23139			2.11	Si
SLV 9	14.67	-19039	-9615	-1422.49		8964	7.585	10126	21506			2.24	Si
SLV 15	12.17	-21189	-22048	-6627.39		9977	7.585	10329	21936			0.99	No, Vu<V
SLV 15	14.67	-13598	-14546	38506.66		16851	2.882	11703	9444			0.65	No, Vu<V
SLV 16	12.17	-21189	-22048	-6627.39		9977	7.585	10329	21936			0.99	No, Vu<V
SLV 16	14.67	-13598	-14546	38506.66		16851	2.882	11703	9444			0.65	No, Vu<V
SLV 2	12.17	-33210	20605	-6778.23		15637	7.585	11461	24340			1.18	Si
SLV 2	14.67	-29222	14097	-47778.64		16124	6.4725	11558	20947			1.49	Si
SLV 10	12.17	-27206	-10965	-9713.31		12810	7.585	10895	23139			2.11	Si
SLV 10	14.67	-19039	-9615	-1422.49		8964	7.585	10126	21506			2.24	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 15	143750	0.53	8583	-18229	873.1	2372.74	2.72	Si
SLV 16	143750	0.53	8583	-18229	873.1	2372.74	2.72	Si
SLV 14	143750	0.53	8769	-18624	873.1	2420.22	2.77	Si
SLV 13	143750	0.53	8769	-18624	873.1	2420.22	2.77	Si
SLV 11	143750	0.53	10312	-21901	873.1	2807.38	3.22	Si
SLV 12	143750	0.53	10312	-21901	873.1	2807.38	3.22	Si
SLV 9	143750	0.53	10933	-23219	873.1	2959.76	3.39	Si
SLV 10	143750	0.53	10933	-23219	873.1	2959.76	3.39	Si
SLV 7	143750	0.53	11981	-25444	873.1	3212.91	3.68	Si
SLV 8	143750	0.53	11981	-25444	873.1	3212.91	3.68	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 10	-18478	-27206	-437	0.038	2847.2	0.915	0.59589	8.06258	No
SLV 9	-18478	-27206	-437	0.038	2847.2	0.915	0.59589	8.06258	No
SLV 6	-21022	-30513	-419	0.039	3102	0.92	0.61367	8.06258	No
SLV 5	-21022	-30513	-419	0.039	3102	0.92	0.61367	8.06258	No
SLV 7	-18536	-27194	362	0.041	2853.1	0.915	0.64467	8.06258	No
SLV 8	-18536	-27194	362	0.041	2853.1	0.915	0.64467	8.06258	No
SLV 12	-15993	-23886	343	0.041	2599.5	0.91	0.65509	8.06258	No
SLV 11	-15993	-23886	343	0.041	2599.5	0.91	0.65509	8.06258	No
SLV 14	-14641	-22185	-186	0.048	2465.4	0.906	0.77621	9.06484	No
SLV 13	-14641	-22185	-186	0.048	2465.4	0.906	0.77621	9.06484	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.675	SLU 39	Si
V_SLU	9.713	SLU 37	Si
PF_SLV	1.269	SLV 15	Si
V_SLV	0.649	SLV 15	No
PFFP_SLV	2.718	SLV 15	Si
R_SLV	0.074	SLV 9	No

Maschio 247

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-10.466	1.046	-11.163	1.046	L6	L7	0.696	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 31	12.17	-2859	90.17	14662	816.26	9.052	Si
SLU 31	14.67	-3925	-29.77	20131	1028.95	34.563	Si
SLU 82	12.17	-3638	99.96	18660	976.65	9.771	Si
SLU 82	14.67	-4839	-29.24	24819	1171.58	40.066	Si
SLU 41	12.17	-3138	129.06	16095	876.78	6.794	Si
SLU 41	14.67	-4548	-54.39	23325	1130.1	20.779	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 39	12.17	-2805	138.48	14388	804.29	5.808	Si
SLU 39	14.67	-4021	-64.54	20625	1045.69	16.202	Si
SLU 33	12.17	-3330	102.28	17080	916.42	8.96	Si
SLU 33	14.67	-4736	-38.19	24287	1157.25	30.301	Si
SLU 32	12.17	-3330	115.84	17081	916.46	7.911	Si
SLU 32	14.67	-4774	-49.46	24482	1162.56	23.506	Si
SLU 42	12.17	-3138	115.49	16094	876.74	7.591	Si
SLU 42	14.67	-4510	-43.12	23130	1124.42	26.077	Si
SLU 81	12.17	-3639	113.52	18662	976.69	8.604	Si
SLU 81	14.67	-4877	-40.51	25013	1176.71	29.049	Si
SLU 35	12.17	-3663	106.42	18787	981.3	9.221	Si
SLU 35	14.67	-5300	-39.3	27182	1229.61	31.285	Si
SLU 40	12.17	-2805	124.91	14387	804.24	6.438	Si
SLU 40	14.67	-3983	-53.27	20430	1039.13	19.505	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 3	12.17	-1115	1883.86	0	0	0	No, $e \geq l/2$
SLV 3	14.67	-2507	-1364.4	0	0	0	No, $e \geq l/2$
SLV 2	12.17	-997	2206.14	0	0	0	No, $e \geq l/2$
SLV 2	14.67	-4679	-1588.91	23999	1309.27	0.824	No, $M > \mu$
SLV 1	12.17	-997	2206.14	0	0	0	No, $e \geq l/2$
SLV 1	14.67	-4679	-1588.91	23999	1309.27	0.824	No, $M > \mu$
SLV 12	12.17	-3624	-1118.63	18588	1069.96	0.956	No, $M > \mu$
SLV 12	14.67	44	828.3	0	0	0	No, Trazione
SLV 6	12.17	-2135	1167.85	0	0	0	No, $e \geq l/2$
SLV 6	14.67	-7205	-811.2	36953	1750.04	2.157	Si
SLV 11	12.17	-3624	-1118.63	18588	1069.96	0.956	No, $M > \mu$
SLV 11	14.67	44	828.3	0	0	0	No, Trazione
SLV 4	12.17	-1115	1883.86	0	0	0	No, $e \geq l/2$
SLV 4	14.67	-2507	-1364.4	0	0	0	No, $e \geq l/2$
SLV 5	12.17	-2135	1167.85	0	0	0	No, $e \geq l/2$
SLV 5	14.67	-7205	-811.2	36953	1750.04	2.157	Si
SLV 8	12.17	-2530	93.61	12976	787.4	8.412	Si
SLV 8	14.67	37	-62.83	0	0	0	No, Trazione
SLV 7	12.17	-2530	93.61	12976	787.4	8.412	Si
SLV 7	14.67	37	-62.83	0	0	0	No, Trazione

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 35	12.17	-3663	278	106.42		18787	0.6964	8061	1572			5.65	Si
SLU 35	14.67	-5300	250	-39.3		27182	0.6964	9180	1790			7.16	Si
SLU 41	12.17	-3138	279	129.06		16095	0.6964	7702	1502			5.38	Si
SLU 41	14.67	-4548	244	-54.39		23325	0.6964	8666	1690			6.92	Si
SLU 81	12.17	-3639	276	113.52		18662	0.6964	8044	1568			5.68	Si
SLU 81	14.67	-4877	239	-40.51		25013	0.6964	8891	1734			7.26	Si
SLU 36	12.17	-3663	265	92.86		18786	0.6964	8060	1572			5.93	Si
SLU 36	14.67	-5262	237	-28.04		26988	0.6964	9154	1785			7.53	Si
SLU 83	12.17	-3971	283	104.1		20368	0.6964	8271	1613			5.69	Si
SLU 83	14.67	-5404	246	-30.35		27714	0.6964	9251	1804			7.32	Si
SLU 42	12.17	-3138	266	115.49		16094	0.6964	7701	1502			5.65	Si
SLU 42	14.67	-4510	232	-43.12		23130	0.6964	8640	1685			7.27	Si
SLU 40	12.17	-2805	259	124.91		14387	0.6964	7474	1457			5.64	Si
SLU 40	14.67	-3983	224	-53.27		20430	0.6964	8280	1614			7.21	Si
SLU 39	12.17	-2805	272	138.48		14388	0.6964	7474	1457			5.36	Si
SLU 39	14.67	-4021	237	-64.54		20625	0.6964	8306	1619			6.84	Si
SLU 32	12.17	-3330	271	115.84		17081	0.6964	7833	1527			5.64	Si
SLU 32	14.67	-4774	242	-49.46		24482	0.6964	8820	1720			7.1	Si
SLU 33	12.17	-3330	258	102.28		17080	0.6964	7833	1527			5.93	Si
SLU 33	14.67	-4736	230	-38.19		24287	0.6964	8794	1715			7.47	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 11	12.17	-3624	-976	-1118.63		109118	0.1186	16250	540			0.55	No, $V_u < V$
SLV 11	14.67	44	-868	828.3		0	0	8333	0			0	No, $V_u < V$
SLV 7	12.17	-2530	178	93.61		12976	0.6964	10929	2131			11.97	Si
SLV 7	14.67	37	-253	-62.83		0	0	8333	0			0	No, $V_u < V$
SLV 8	12.17	-2530	178	93.61		12976	0.6964	10929	2131			11.97	Si
SLV 8	14.67	37	-253	-62.83		0	0	8333	0			0	No, $V_u < V$
SLV 4	12.17	-1115	1904	1883.86		0	0	8333	0			0	No, $V_u < V$
SLV 4	14.67	-2507	946	-1364.4		0	0	8333	0			0	No, $V_u < V$
SLV 12	12.17	-3624	-976	-1118.63		109118	0.1186	16250	540			0.55	No, $V_u < V$
SLV 12	14.67	44	-868	828.3		0	0	8333	0			0	No, $V_u < V$
SLV 3	12.17	-1115	1904	1883.86		0	0	8333	0			0	No, $V_u < V$
SLV 3	14.67	-2507	946	-1364.4		0	0	8333	0			0	No, $V_u < V$
SLV 1	12.17	-997	2230	2206.14		0	0	8333	0			0	No, $V_u < V$
SLV 1	14.67	-4679	1359	-1588.91		645826	0.0259	16250	118			0.09	No, $V_u < V$
SLV 5	12.17	-2135	1263	1167.85		0	0	8333	0			0	No, $V_u < V$
SLV 5	14.67	-7205	1123	-811.2		36953	0.6964	15724	3066			2.73	Si
SLV 6	12.17	-2135	1263	1167.85		0	0	8333	0			0	No, $V_u < V$
SLV 6	14.67	-7205	1123	-811.2		36953	0.6964	15724	3066			2.73	Si
SLV 2	12.17	-997	2230	2206.14		0	0	8333	0			0	No, $V_u < V$
SLV 2	14.67	-4679	1359	-1588.91		645826	0.0259	16250	118			0.09	No, $V_u < V$

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 8	143750	0.53	4239	-827	80.16	111.7	1.39	Si
SLV 7	143750	0.53	4239	-827	80.16	111.7	1.39	Si



Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 12	143750	0.53	5999	-1170	80.16	155.73	1.94	Si
SLV 11	143750	0.53	5999	-1170	80.16	155.73	1.94	Si
SLV 4	143750	0.53	9619	-1876	80.16	241.91	3.02	Si
SLV 3	143750	0.53	9619	-1876	80.16	241.91	3.02	Si
SLV 15	143750	0.53	15488	-3020	80.16	369.19	4.61	Si
SLV 16	143750	0.53	15488	-3020	80.16	369.19	4.61	Si
SLV 2	143750	0.53	15991	-3118	80.16	379.39	4.73	Si
SLV 1	143750	0.53	15991	-3118	80.16	379.39	4.73	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 13.745 $W_a = 0.05$ $T_a = 0.0592$

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 8	289	-2530	189	0	0	0	0	8.06258	No, Trazione
SLV 11	-169	-3624	201	0	119.2	0.918	0	8.06258	No
SLV 12	-169	-3624	201	0	119.2	0.918	0	8.06258	No
SLV 7	289	-2530	189	0	0	0	0	8.06258	No, Trazione
SLV 5	-4611	-2135	-230	0.005	556.2	0.954	0.07054	8.06258	No
SLV 6	-4611	-2135	-230	0.005	556.2	0.954	0.07054	8.06258	No
SLV 10	-5069	-3229	-218	0.01	602.7	0.958	0.15209	8.06258	No
SLV 9	-5069	-3229	-218	0.01	602.7	0.958	0.15209	8.06258	No
SLV 1	-2362	-997	-98	0.019	328.3	0.929	0.30294	9.06484	No
SLV 2	-2362	-997	-98	0.019	328.3	0.929	0.30294	9.06484	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.808	SLU 39	Si
V_SLU	5.364	SLU 39	Si
PF_SLV	0	SLV 12	No
V_SLV	0	SLV 1	No
PFFP_SLV	1.393	SLV 7	Si
R_SLV	0	SLV 8	No

Maschio 248

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.278	1.046	-9.386	1.046	L6	L7	2.109	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 52	12.17	-11122	-573.19	18838	9014.4	15.727	Si
SLU 52	14.67	-7298	1320.4	12361	6527.01	4.943	Si
SLU 51	12.17	-14050	-561.98	23797	10485.89	18.659	Si
SLU 51	14.67	-9879	1725.79	16732	8276.1	4.796	Si
SLU 2	12.17	-9188	-478.67	15561	7836.15	16.371	Si
SLU 2	14.67	-6147	1119.83	10412	5652.71	5.048	Si
SLU 5	12.17	-10285	-493.96	17420	8524.63	17.258	Si
SLU 5	14.67	-7139	1281.19	12091	6409.45	5.003	Si
SLU 59	12.17	-13270	-528.98	22476	10130.62	19.151	Si
SLU 59	14.67	-9215	1591.54	15607	7853.89	4.935	Si
SLU 47	12.17	-12999	-621.48	22017	10001.03	16.092	Si
SLU 47	14.67	-8954	1616.02	15166	7682.84	4.754	Si
SLU 55	12.17	-12219	-588.48	20696	9609.82	16.33	Si
SLU 55	14.67	-8290	1481.76	14041	7233.7	4.882	Si
SLU 44	12.17	-11902	-606.19	20159	9443.15	15.578	Si
SLU 44	14.67	-7962	1454.66	13486	7005.03	4.816	Si
SLU 50	12.17	-13981	-449.79	23680	10455.34	23.245	Si
SLU 50	14.67	-9779	1648.42	16562	8213.57	4.983	Si
SLU 49	12.17	-14678	-539.59	24861	10752.37	19.927	Si
SLU 49	14.67	-10437	1726.46	17678	8616.03	4.991	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 5	12.17	-6480	164.03	10975	6217.89	37.907	Si
SLV 5	14.67	-1481	-2234.11	0	0	0	No, $e \geq l/2$
SLV 16	12.17	-13591	-5724.75	23019	11629.58	2.031	Si
SLV 16	14.67	-13226	8226.72	22401	11387.87	1.384	Si
SLV 13	12.17	-12962	-6535.61	21953	11210.33	1.715	Si
SLV 13	14.67	-11870	7591.34	20105	10455.8	1.377	Si
SLV 14	12.17	-12962	-6535.61	21953	11210.33	1.715	Si
SLV 14	14.67	-11870	7591.34	20105	10455.8	1.377	Si
SLV 2	12.17	-4119	5226.93	0	0	0	No, $e \geq l/2$
SLV 2	14.67	1681	-6384.31	0	0	0	No, Trazione
SLV 15	12.17	-13591	-5724.75	23019	11629.58	2.031	Si
SLV 15	14.67	-13226	8226.72	22401	11387.87	1.384	Si
SLV 6	12.17	-6480	164.03	10975	6217.89	37.907	Si
SLV 6	14.67	-1481	-2234.11	0	0	0	No, $e \geq l/2$
SLV 4	12.17	-4748	6037.79	0	0	0	No, $e \geq l/2$
SLV 4	14.67	325	-5748.92	0	0	0	No, Trazione



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 3	12.17	-11859	-4748	6037.79	0	0	No, $e \geq l/2$
SLV 3	14.67	325	-5748.92	0	0	0	No, Trazione
SLV 1	12.17	-4119	5226.93	0	0	0	No, $e \geq l/2$
SLV 1	14.67	1681	-6384.31	0	0	0	No, Trazione

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 84	12.17	-11859	-491	-382.83	20086	2.1086	8234	4861				9.9	Si
SLU 84	14.67	-7877	-777	1263.07	13341	2.1086	7334	4330				5.57	Si
SLU 63	12.17	-11839	-589	-499.55	20051	2.1086	8229	4859				8.24	Si
SLU 63	14.67	-7938	-749	1372.64	13446	2.1086	7348	4339				5.79	Si
SLU 79	12.17	-13221	-428	-300.07	22393	2.1086	8541	5043				11.77	Si
SLU 79	14.67	-9053	-798	1404.6	15333	2.1086	7600	4487				5.62	Si
SLU 78	12.17	-13918	-485	-389.87	23574	2.1086	8699	5136				10.6	Si
SLU 78	14.67	-9711	-818	1482.64	16448	2.1086	7749	4575				5.59	Si
SLU 77	12.17	-13849	-389	-277.68	23456	2.1086	8683	5127				13.19	Si
SLU 77	14.67	-9611	-790	1405.27	16278	2.1086	7726	4562				5.77	Si
SLU 76	12.17	-12240	-565	-471.77	20730	2.1086	8320	4912				8.69	Si
SLU 76	14.67	-8228	-762	1372.19	13936	2.1086	7414	4377				5.75	Si
SLU 83	12.17	-11790	-395	-270.64	19968	2.1086	8218	4852				12.28	Si
SLU 83	14.67	-7776	-749	1185.7	13171	2.1086	7312	4317				5.76	Si
SLU 57	12.17	-13898	-583	-506.59	23539	2.1086	8694	5133				8.81	Si
SLU 57	14.67	-9773	-790	1592.21	16553	2.1086	7763	4583				5.8	Si
SLU 59	12.17	-13270	-623	-528.98	22476	2.1086	8552	5049				8.11	Si
SLU 59	14.67	-9215	-798	1591.54	15607	2.1086	7637	4509				5.65	Si
SLU 80	12.17	-13291	-524	-412.27	22511	2.1086	8557	5052				9.63	Si
SLU 80	14.67	-9153	-826	1481.97	15503	2.1086	7623	4501				5.45	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 3	12.17	-4748	6377	6037.79	0	0	0	8333	0			0	No, $V_u < V$
SLV 3	14.67	325	3570	-5748.92	0	0	0	8333	0			0	No, $V_u < V$
SLV 1	12.17	-4119	6911	5226.93	0	0	0	8333	0			0	No, $V_u < V$
SLV 1	14.67	1681	4337	-6384.31	0	0	0	8333	0			0	No, $V_u < V$
SLV 15	12.17	-13591	-7564	-5724.75	25556	1.8993	13445	7150				0.95	No, $V_u < V$
SLV 15	14.67	-13226	-5222	8226.72	36422	1.2969	15618	5671				1.09	Si
SLV 2	12.17	-4119	6911	5226.93	0	0	0	8333	0			0	No, $V_u < V$
SLV 2	14.67	1681	4337	-6384.31	0	0	0	8333	0			0	No, $V_u < V$
SLV 6	12.17	-6480	2655	164.03	10975	2.1086	10528	6216				2.34	Si
SLV 6	14.67	-1481	2154	-2234.11	0	0	0	8333	0			0	No, $V_u < V$
SLV 4	12.17	-4748	6377	6037.79	0	0	0	8333	0			0	No, $V_u < V$
SLV 4	14.67	325	3570	-5748.92	0	0	0	8333	0			0	No, $V_u < V$
SLV 5	12.17	-6480	2655	164.03	10975	2.1086	10528	6216				2.34	Si
SLV 5	14.67	-1481	2154	-2234.11	0	0	0	8333	0			0	No, $V_u < V$
SLV 14	12.17	-12962	-7030	-6535.61	28051	1.6503	13944	6443				0.92	No, $V_u < V$
SLV 14	14.67	-11870	-4456	7591.34	34068	1.2444	15147	5278				1.18	Si
SLV 16	12.17	-13591	-7564	-5724.75	25556	1.8993	13445	7150				0.95	No, $V_u < V$
SLV 16	14.67	-13226	-5222	8226.72	36422	1.2969	15618	5671				1.09	Si
SLV 13	12.17	-12962	-7030	-6535.61	28051	1.6503	13944	6443				0.92	No, $V_u < V$
SLV 13	14.67	-11870	-4456	7591.34	34068	1.2444	15147	5278				1.18	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 1	143750	0.53	3509	-2072	242.72	281.69	1.16	Si
SLV 2	143750	0.53	3509	-2072	242.72	281.69	1.16	Si
SLV 3	143750	0.53	5216	-3080	242.72	412.75	1.7	Si
SLV 4	143750	0.53	5216	-3080	242.72	412.75	1.7	Si
SLV 6	143750	0.53	6800	-4015	242.72	530.82	2.19	Si
SLV 5	143750	0.53	6800	-4015	242.72	530.82	2.19	Si
SLV 10	143750	0.53	11329	-6689	242.72	849.63	3.5	Si
SLV 9	143750	0.53	11329	-6689	242.72	849.63	3.5	Si
SLV 7	143750	0.53	12492	-7375	242.72	926.99	3.82	Si
SLV 8	143750	0.53	12492	-7375	242.72	926.99	3.82	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 6	-1632	-6480	222	0	451.2	0.889	0	8.06258	No
SLV 1	185	-4119	83	0	0	0	0	9.06484	No, Trazione
SLV 2	185	-4119	83	0	0	0	0	9.06484	No, Trazione
SLV 5	-1632	-6480	222	0	451.2	0.889	0	8.06258	No
SLV 10	-4164	-9132	210	0.021	694.7	0.907	0.34003	8.06258	No
SLV 9	-4164	-9132	210	0.021	694.7	0.907	0.34003	8.06258	No
SLV 7	-4881	-8577	-216	0.023	766	0.913	0.36292	8.06258	No
SLV 8	-4881	-8577	-216	0.023	766	0.913	0.36292	8.06258	No
SLV 12	-7414	-11230	-229	0.027	1020.3	0.93	0.42927	8.06258	No
SLV 11	-7414	-11230	-229	0.027	1020.3	0.93	0.42927	8.06258	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.754	SLU 47	Si
V_SLU	5.448	SLU 80	Si
PF_SLV	0	SLV 4	No
V_SLV	0	SLV 1	No
PFFP_SLV	1.161	SLV 1	Si
R_SLV	0	SLV 2	No



Maschio 249

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-4.968	1.046	-6.478	1.046	L6	L7	1.51	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ ₀	f _{v0}	μ	φ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLU 55	12.17	-7206	-679.32	17043	4302.09	6.333	Si
SLU 55	14.27	-7699	993.33	18209	4513.24	4.544	Si
SLU 71	12.17	-8252	-758.38	19518	4737.53	6.247	Si
SLU 71	14.27	-8812	1072.97	20842	4950.82	4.614	Si
SLU 51	12.17	-8199	-685.94	19392	4716.62	6.876	Si
SLU 51	14.27	-8477	1091.51	20050	4824.92	4.42	Si
SLU 63	12.17	-7009	-718.24	16577	4214.78	5.868	Si
SLU 63	14.27	-7643	973.97	18076	4489.74	4.61	Si
SLU 50	12.17	-8164	-697.57	19309	4702.71	6.742	Si
SLU 50	14.27	-8377	1065.98	19812	4786.15	4.49	Si
SLU 58	12.17	-7759	-770.28	18352	4538.36	5.892	Si
SLU 58	14.27	-8402	1060.53	19872	4796	4.522	Si
SLU 47	12.17	-7611	-606.61	18000	4476.25	7.379	Si
SLU 47	14.27	-7673	998.79	18149	4502.6	4.508	Si
SLU 80	12.17	-7882	-819.45	18643	4589.15	5.6	Si
SLU 80	14.27	-8938	1093.05	21140	4996.92	4.572	Si
SLU 59	12.17	-7794	-758.64	18435	4552.9	6.001	Si
SLU 59	14.27	-8503	1086.06	20110	4834.66	4.452	Si
SLU 72	12.17	-8287	-746.74	19601	4751.3	6.363	Si
SLU 72	14.27	-8913	1098.5	21080	4987.67	4.54	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLV 16	12.17	-6396	-4865.7	0	0	0	No, e>l/2
SLV 16	14.27	-7467	4762.24	17660	4822.5	1.013	Si
SLV 13	12.17	-6514	-4499.76	15406	4297.85	0.955	No, M>Mu
SLV 13	14.27	-6789	4573.74	16057	4451.95	0.973	No, M>Mu
SLV 3	12.17	-4029	3538.41	0	0	0	No, e>l/2
SLV 3	14.27	-3912	-3266.88	0	0	0	No, e>l/2
SLV 11	12.17	-5430	-2351.18	12843	3668.75	1.56	Si
SLV 11	14.27	-7013	2171.98	16587	4576.11	2.107	Si
SLV 14	12.17	-6514	-4499.76	15406	4297.85	0.955	No, M>Mu
SLV 14	14.27	-6789	4573.74	16057	4451.95	0.973	No, M>Mu
SLV 4	12.17	-4029	3538.41	0	0	0	No, e>l/2
SLV 4	14.27	-3912	-3266.88	0	0	0	No, e>l/2
SLV 1	12.17	-4147	3904.35	0	0	0	No, e>l/2
SLV 1	14.27	-3234	-3455.38	0	0	0	No, e>l/2
SLV 12	12.17	-5430	-2351.18	12843	3668.75	1.56	Si
SLV 12	14.27	-7013	2171.98	16587	4576.11	2.107	Si
SLV 2	12.17	-4147	3904.35	0	0	0	No, e>l/2
SLV 2	14.27	-3234	-3455.38	0	0	0	No, e>l/2
SLV 15	12.17	-6396	-4865.7	0	0	0	No, e>l/2
SLV 15	14.27	-7467	4762.24	17660	4822.5	1.013	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 79	12.17	-7847	-1177	-831.09		18560	1.51	8030	3395			2.88	Si
SLU 79	14.27	-8837	-1177	1067.51		20902	1.51	8343	3527			3	Si
SLU 78	12.17	-8314	-1140	-801.27		19665	1.51	8178	3457			3.03	Si
SLU 78	14.27	-9490	-1138	1063.42		22446	1.51	8548	3614			3.18	Si
SLU 58	12.17	-7759	-1128	-770.28		18352	1.51	8002	3383			3	Si
SLU 58	14.27	-8402	-1129	1060.53		19872	1.51	8205	3469			3.07	Si
SLU 84	12.17	-7097	-1069	-779.05		16786	1.51	7794	3295			3.08	Si
SLU 84	14.27	-8078	-1067	980.96		19106	1.51	8103	3426			3.21	Si
SLU 80	12.17	-7882	-1170	-819.45		18643	1.51	8041	3400			2.91	Si
SLU 80	14.27	-8938	-1168	1093.05		21140	1.51	8374	3541			3.03	Si
SLU 72	12.17	-8287	-1127	-746.74		19601	1.51	8169	3454			3.06	Si
SLU 72	14.27	-8913	-1125	1098.5		21080	1.51	8366	3537			3.14	Si
SLU 71	12.17	-8252	-1134	-758.38		19518	1.51	8158	3449			3.04	Si
SLU 71	14.27	-8812	-1134	1072.97		20842	1.51	8335	3524			3.11	Si
SLU 59	12.17	-7794	-1121	-758.64		18435	1.51	8014	3388			3.02	Si
SLU 59	14.27	-8503	-1120	1086.06		20110	1.51	8237	3483			3.11	Si
SLU 83	12.17	-7062	-1076	-790.68		16703	1.51	7783	3290			3.06	Si
SLU 83	14.27	-7977	-1076	955.43		18868	1.51	8071	3413			3.17	Si
SLU 77	12.17	-8279	-1146	-812.9		19582	1.51	8167	3453			3.01	Si
SLU 77	14.27	-9389	-1147	1037.89		22208	1.51	8517	3601			3.14	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 14	12.17	-6514	-5289	-4499.76		120787	0.1926	16250	876			0.17	No, Vu<V
SLV 14	14.27	-6789	-4279	4573.74		99437	0.2438	16250	1109			0.26	No, Vu<V
SLV 15	12.17	-6396	-6246	-4865.7		0	0	8333	0			0	No, Vu<V
SLV 15	14.27	-7467	-5306	4762.24		75849	0.3516	16250	1600			0.3	No, Vu<V
SLV 13	12.17	-6514	-5289	-4499.76		120787	0.1926	16250	876			0.17	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 13	14.27	-6789	-4279	4573.74		99437	0.2438	16250	1109			0.26	No, Vu<V
SLV 1	12.17	-4147	4865	3904.35		0	0	8333	0			0	No, Vu<V
SLV 1	14.27	-3234	3924	-3455.38		0	0	8333	0			0	No, Vu<V
SLV 4	12.17	-4029	3908	3538.41		0	0	8333	0			0	No, Vu<V
SLV 4	14.27	-3912	2897	-3266.88		0	0	8333	0			0	No, Vu<V
SLV 2	12.17	-4147	4865	3904.35		0	0	8333	0			0	No, Vu<V
SLV 2	14.27	-3234	3924	-3455.38		0	0	8333	0			0	No, Vu<V
SLV 12	12.17	-5430	-3808	-2351.18		20075	0.966	12348	3340			0.88	No, Vu<V
SLV 12	14.27	-7013	-3632	2171.98		18749	1.3359	12083	4520			1.24	Si
SLV 16	12.17	-6396	-6246	-4865.7		0	0	8333	0			0	No, Vu<V
SLV 16	14.27	-7467	-5306	4762.24		75849	0.3516	16250	1600			0.3	No, Vu<V
SLV 11	12.17	-5430	-3808	-2351.18		20075	0.966	12348	3340			0.88	No, Vu<V
SLV 11	14.27	-7013	-3632	2171.98		18749	1.3359	12083	4520			1.24	Si
SLV 3	12.17	-4029	3908	3538.41		0	0	8333	0			0	No, Vu<V
SLV 3	14.27	-3912	2897	-3266.88		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 2	143750	0.53	8466	-3579	173.81	466.38	2.68	Si
SLV 1	143750	0.53	8466	-3579	173.81	466.38	2.68	Si
SLV 4	143750	0.53	9345	-3951	173.81	510.86	2.94	Si
SLV 3	143750	0.53	9345	-3951	173.81	510.86	2.94	Si
SLV 5	143750	0.53	10047	-4248	173.81	545.78	3.14	Si
SLV 6	143750	0.53	10047	-4248	173.81	545.78	3.14	Si
SLV 10	143750	0.53	12281	-5193	173.81	653.9	3.76	Si
SLV 9	143750	0.53	12281	-5193	173.81	653.9	3.76	Si
SLV 7	143750	0.53	12979	-5488	173.81	686.66	3.95	Si
SLV 8	143750	0.53	12979	-5488	173.81	686.66	3.95	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 5	-3396	-5113	-515	0	538.6	0.912	0	8.06258	No
SLV 6	-3396	-5113	-515	0	538.6	0.912	0	8.06258	No
SLV 7	-3715	-4720	496	0	570.4	0.916	0	8.06258	No
SLV 11	-4556	-5430	509	0	654.8	0.924	0	8.06258	No
SLV 12	-4556	-5430	509	0	654.8	0.924	0	8.06258	No
SLV 10	-4237	-5823	-503	0	622.7	0.921	0	8.06258	No
SLV 9	-4237	-5823	-503	0	622.7	0.921	0	8.06258	No
SLV 8	-3715	-4720	496	0	570.4	0.916	0	8.06258	No
SLV 1	-2526	-4147	-176	0.011	452.5	0.902	0.18495	9.06484	No
SLV 2	-2526	-4147	-176	0.011	452.5	0.902	0.18495	9.06484	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.42	SLU 51	Si
V_SLU	2.885	SLU 79	Si
PF_SLV	0	SLV 1	No
V_SLV	0	SLV 1	No
PFFP_SLV	2.683	SLV 1	Si
R_SLV	0	SLV 5	No

Maschio 250

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.123	1.046	-4.168	1.046	L6	L7	4.045	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 35	12.17	-10498	869.82	9269	18816.2	21.632	Si
SLU 35	14.27	-7422	3775.68	6553	13802.91	3.656	Si
SLU 16	12.17	-9461	477.81	8353	17172.43	35.94	Si
SLU 16	14.27	-5755	2910.71	5081	10913.48	3.749	Si
SLU 37	12.17	-9441	433.13	8335	17139.93	39.572	Si
SLU 37	14.27	-6164	3357.58	5442	11633.11	3.465	Si
SLU 41	12.17	-8614	421.08	7606	15795.59	37.512	Si
SLU 41	14.27	-5752	3210.01	5079	10907.98	3.398	Si
SLU 79	12.17	-12212	654.64	10782	21429.86	32.735	Si
SLU 79	14.27	-7538	3824.52	6656	14000.61	3.661	Si
SLU 39	12.17	-8113	462.93	7163	14965	32.327	Si
SLU 39	14.27	-5367	2935.89	4739	10224.05	3.482	Si
SLU 81	12.17	-10884	684.44	9610	19416.31	28.368	Si
SLU 81	14.27	-6742	3402.83	5953	12639.55	3.714	Si
SLU 42	12.17	-8700	449.8	7681	15936.19	35.429	Si
SLU 42	14.27	-5722	2918.94	5052	10854.45	3.719	Si
SLU 20	12.17	-8634	465.76	7624	15828.82	33.985	Si
SLU 20	14.27	-5343	2763.14	4718	10180.98	3.685	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 83	12.17	-11386	642.59	10053	20185.95	31.413	Si
SLU 83	14.27	-7127	3676.95	6292	13300.3	3.617	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 1	12.17	-8105	3447.18	7156	15432.91	4.477	Si
SLV 1	14.27	-3694	-4750.31	3261	7270.77	1.531	Si
SLV 14	12.17	-10299	-2760.98	9093	19279.32	6.983	Si
SLV 14	14.27	-7218	9783.11	6373	13836.86	1.414	Si
SLV 9	12.17	-10019	-1277.63	8846	18795.63	14.711	Si
SLV 9	14.27	-6702	5249.81	5918	12898.7	2.457	Si
SLV 15	12.17	-9881	-2169.98	8724	18557.55	8.552	Si
SLV 15	14.27	-6603	9308.77	5830	12716.78	1.366	Si
SLV 4	12.17	-7688	4038.18	6788	14684.35	3.636	Si
SLV 4	14.27	-3078	-5224.65	2718	6087.3	1.165	Si
SLV 16	12.17	-9881	-2169.98	8724	18557.55	8.552	Si
SLV 16	14.27	-6603	9308.77	5830	12716.78	1.366	Si
SLV 10	12.17	-10019	-1277.63	8846	18795.63	14.711	Si
SLV 10	14.27	-6702	5249.81	5918	12898.7	2.457	Si
SLV 2	12.17	-8105	3447.18	7156	15432.91	4.477	Si
SLV 2	14.27	-3694	-4750.31	3261	7270.77	1.531	Si
SLV 13	12.17	-10299	-2760.98	9093	19279.32	6.983	Si
SLV 13	14.27	-7218	9783.11	6373	13836.86	1.414	Si
SLV 3	12.17	-7688	4038.18	6788	14684.35	3.636	Si
SLV 3	14.27	-3078	-5224.65	2718	6087.3	1.165	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 81	12.17	-10884	-2901	684.44		9610	4.045	6837	7743			2.67	Si
SLU 81	14.27	-6742	-2925	3402.83		5953	4.045	6349	7191			2.46	Si
SLU 77	12.17	-13270	-2784	1091.33		11716	4.045	7118	8061			2.9	Si
SLU 77	14.27	-8796	-2822	4242.62		7767	4.045	6591	7465			2.65	Si
SLU 39	12.17	-8113	-2894	462.93		7163	4.045	6511	7374			2.55	Si
SLU 39	14.27	-5367	-2914	2935.89		4739	4.045	6187	7008			2.4	Si
SLU 41	12.17	-8614	-2929	421.08		7606	4.045	6570	7441			2.54	Si
SLU 41	14.27	-5752	-2957	3210.01		5079	4.045	6233	7059			2.39	Si
SLU 74	12.17	-12768	-2749	1133.18		11273	4.045	7059	7995			2.91	Si
SLU 74	14.27	-8412	-2779	3968.5		7427	4.045	6546	7414			2.67	Si
SLU 42	12.17	-8700	-2655	449.8		7681	4.045	6580	7452			2.81	Si
SLU 42	14.27	-5722	-2701	2918.94		5052	4.045	6229	7055			2.61	Si
SLU 83	12.17	-11386	-2937	642.59		10053	4.045	6896	7810			2.66	Si
SLU 83	14.27	-7127	-2968	3676.95		6292	4.045	6395	7242			2.44	Si
SLU 40	12.17	-8198	-2620	491.65		7238	4.045	6521	7385			2.82	Si
SLU 40	14.27	-5337	-2658	2644.82		4712	4.045	6184	7004			2.63	Si
SLU 35	12.17	-10498	-2777	869.82		9269	4.045	6791	7692			2.77	Si
SLU 35	14.27	-7422	-2811	3775.68		6553	4.045	6429	7282			2.59	Si
SLU 32	12.17	-9996	-2742	911.67		8826	4.045	6732	7625			2.78	Si
SLU 32	14.27	-7037	-2768	3501.56		6213	4.045	6384	7231			2.61	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 15	12.17	-9881	-7471	-2169.98		8724	4.045	10078	11415			1.53	Si
SLV 15	14.27	-6603	-5027	9308.77		12830	1.838	10899	5609			1.12	Si
SLV 3	12.17	-7688	5522	4038.18		6788	4.045	9691	10976			1.99	Si
SLV 3	14.27	-3078	2789	-5224.65		11268	0.9757	10587	2892			1.04	Si
SLV 13	12.17	-10299	-8239	-2760.98		9093	4.045	10152	11498			1.4	Si
SLV 13	14.27	-7218	-5541	9783.11		12881	2.0013	10909	6113			1.1	Si
SLV 4	12.17	-7688	5522	4038.18		6788	4.045	9691	10976			1.99	Si
SLV 4	14.27	-3078	2789	-5224.65		11268	0.9757	10587	2892			1.04	Si
SLV 9	12.17	-10019	-4587	-1277.63		8846	4.045	10102	11442			2.49	Si
SLV 9	14.27	-6702	-3404	5249.81		6439	3.7176	9621	10015			2.94	Si
SLV 1	12.17	-8105	4754	3447.18		7156	4.045	9765	11059			2.33	Si
SLV 1	14.27	-3694	2275	-4750.31		5971	2.2091	9528	5893			2.59	Si
SLV 10	12.17	-10019	-4587	-1277.63		8846	4.045	10102	11442			2.49	Si
SLV 10	14.27	-6702	-3404	5249.81		6439	3.7176	9621	10015			2.94	Si
SLV 16	12.17	-9881	-7471	-2169.98		8724	4.045	10078	11415			1.53	Si
SLV 16	14.27	-6603	-5027	9308.77		12830	1.838	10899	5609			1.12	Si
SLV 2	12.17	-8105	4754	3447.18		7156	4.045	9765	11059			2.33	Si
SLV 2	14.27	-3694	2275	-4750.31		5971	2.2091	9528	5893			2.59	Si
SLV 14	12.17	-10299	-8239	-2760.98		9093	4.045	10152	11498			1.4	Si
SLV 14	14.27	-7218	-5541	9783.11		12881	2.0013	10909	6113			1.1	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 3	143750	0.53	3936	-4458	465.61	603.99	1.3	Si
SLV 4	143750	0.53	3936	-4458	465.61	603.99	1.3	Si
SLV 7	143750	0.53	4354	-4931	465.61	665.79	1.43	Si
SLV 8	143750	0.53	4354	-4931	465.61	665.79	1.43	Si
SLV 2	143750	0.53	4421	-5007	465.61	675.68	1.45	Si
SLV 1	143750	0.53	4421	-5007	465.61	675.68	1.45	Si
SLV 11	143750	0.53	5198	-5887	465.61	789.1	1.69	Si
SLV 12	143750	0.53	5198	-5887	465.61	789.1	1.69	Si
SLV 5	143750	0.53	5972	-6764	465.61	900.62	1.93	Si
SLV 6	143750	0.53	5972	-6764	465.61	900.62	1.93	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
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Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 10	-1716	-10019	93	0.054	745	0.898	0.88194	8.06258	No
SLV 9	-1716	-10019	93	0.054	745	0.898	0.88194	8.06258	No
SLV 7	-1642	-7968	-93	0.055	739.2	0.899	0.88405	8.06258	No
SLV 8	-1642	-7968	-93	0.055	739.2	0.899	0.88405	8.06258	No
SLV 4	-1949	-7688	-50	0.062	763.6	0.895	1.01446	9.06484	No
SLV 3	-1949	-7688	-50	0.062	763.6	0.895	1.01446	9.06484	No
SLV 13	-1408	-10299	50	0.065	721.7	0.904	1.03698	9.06484	No
SLV 14	-1408	-10299	50	0.065	721.7	0.904	1.03698	9.06484	No
SLV 6	-1902	-9360	79	0.057	759.7	0.895	0.92459	8.06258	No
SLV 5	-1902	-9360	79	0.057	759.7	0.895	0.92459	8.06258	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.398	SLU 41	Si
V_SLU	2.387	SLU 41	Si
PF_SLV	1.165	SLV 3	Si
V_SLV	1.037	SLV 3	Si
PFFP_SLV	1.297	SLV 3	Si
R_SLV	0.109	SLV 9	No

Maschio 251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-11.013	-3.509	-11.013	1.046	L6	L7	4.556	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	$\tau 0$	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	$\alpha 0$	Mu	c.s.	Verifica
SLU 40	12.17	-15556	1806.62	12195	30129.67	16.677	Si
SLU 40	15.32	-4039	-5128.82	3167	8843.05	1.724	Si
SLU 42	12.17	-16569	2126.29	12989	31723.78	14.92	Si
SLU 42	15.32	-4789	-6138.4	3754	10406.27	1.695	Si
SLU 78	12.17	-21242	3409.76	16653	38494.89	11.29	Si
SLU 78	15.32	-6319	-7864.14	4954	13519.26	1.719	Si
SLU 38	12.17	-17326	2610.82	13583	32885.94	12.596	Si
SLU 38	15.32	-5389	-6835.67	4225	11638.8	1.703	Si
SLU 34	12.17	-16329	2190.04	12801	31349.32	14.315	Si
SLU 34	15.32	-4710	-5978.27	3692	10241.65	1.713	Si
SLU 33	12.17	-16788	2515.56	13161	32061.94	12.745	Si
SLU 33	15.32	-4979	-6357.2	3904	10798.55	1.699	Si
SLU 15	12.17	-16303	2558.63	12781	31309.76	12.237	Si
SLU 15	15.32	-5045	-6339.36	3955	10934.42	1.725	Si
SLU 41	12.17	-16546	2277.96	12971	31688.23	13.911	Si
SLU 41	15.32	-4683	-5910.12	3671	10187.03	1.724	Si
SLU 35	12.17	-17778	2986.89	13937	33567.04	11.238	Si
SLU 35	15.32	-5623	-7138.51	4408	12115.98	1.697	Si
SLU 36	12.17	-17801	2835.23	13955	33601.36	11.851	Si
SLU 36	15.32	-5729	-7366.79	4491	12330.85	1.674	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	$\alpha 0$	Mu	c.s.	Verifica
SLV 15	12.17	-13094	668.18	10265	27320.07	40.887	Si
SLV 15	15.32	-165	4134.28	0	0	0	No, e>l/2
SLV 8	12.17	-10894	1238.69	8541	23081.14	18.634	Si
SLV 8	15.32	-1990	-6295.14	0	0	0	No, e>l/2
SLV 16	12.17	-13094	668.18	10265	27320.07	40.887	Si
SLV 16	15.32	-165	4134.28	0	0	0	No, e>l/2
SLV 13	12.17	-14797	1450.55	11600	30504.59	21.03	Si
SLV 13	15.32	-1220	4531.11	0	0	0	No, e>l/2
SLV 3	12.17	-12766	2950.14	10008	26697.7	9.05	Si
SLV 3	15.32	-4868	-11198.71	0	0	0	No, e>l/2
SLV 12	12.17	-10993	554.1	8618	23273.56	42.002	Si
SLV 12	15.32	-579	-1695.25	0	0	0	No, e>l/2
SLV 7	12.17	-10894	1238.69	8541	23081.14	18.634	Si
SLV 7	15.32	-1990	-6295.14	0	0	0	No, e>l/2
SLV 14	12.17	-14797	1450.55	11600	30504.59	21.03	Si
SLV 14	15.32	-1220	4531.11	0	0	0	No, e>l/2
SLV 11	12.17	-10993	554.1	8618	23273.56	42.002	Si
SLV 11	15.32	-579	-1695.25	0	0	0	No, e>l/2
SLV 4	12.17	-12766	2950.14	10008	26697.7	9.05	Si
SLV 4	15.32	-4868	-11198.71	0	0	0	No, e>l/2

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	$\alpha 0$	αN	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 77	12.17	-21219	-979	3561.43		16635	4.5557	7774	9916			10.13	Si
SLU 77	15.32	-6214	844	-7635.86		7052	3.1468	6496	5724			6.78	Si
SLU 35	12.17	-17778	-853	2986.89		13937	4.5557	7414	9457			11.08	Si
SLU 35	15.32	-5623	792	-7138.51		6639	3.0252	6441	5456			6.89	Si
SLU 38	12.17	-17326	-837	2610.82		13583	4.5557	7367	9397			11.23	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 38	15.32	-5389	763	-6835.67		6356	3.0282	6403	5429			7.11	Si
SLU 78	12.17	-21242	-965	3409.76		16653	4.5557	7776	9919			10.28	Si
SLU 78	15.32	-6319	885	-7864.14		7280	3.1002	6526	5665			6.4	Si
SLU 33	12.17	-16788	-805	2515.56		13161	4.5557	7310	9325			11.58	Si
SLU 33	15.32	-4979	736	-6357.2		5921	3.0034	6345	5336			7.25	Si
SLU 75	12.17	-20229	-930	3090.09		15859	4.5557	7670	9784			10.52	Si
SLU 75	15.32	-5569	788	-6854.55		6332	3.1413	6400	5629			7.15	Si
SLU 70	12.17	-20645	-857	3794.42		16185	4.5557	7714	9839			11.48	Si
SLU 70	15.32	-5969	795	-7135.39		6565	3.2474	6431	5847			7.36	Si
SLU 80	12.17	-20768	-962	3185.35		16281	4.5557	7726	9856			10.24	Si
SLU 80	15.32	-5979	816	-7333.01		6770	3.1543	6458	5704			6.99	Si
SLU 84	12.17	-20011	-973	2700.83		15687	4.5557	7647	9755			10.02	Si
SLU 84	15.32	-5379	757	-6635.75		6132	3.1329	6373	5591			7.39	Si
SLU 36	12.17	-17801	-840	2835.23		13955	4.5557	7416	9460			11.26	Si
SLU 36	15.32	-5729	833	-7366.79		6875	2.9761	6472	5393			6.48	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 12	12.17	-10993	8141	554.1		8618	4.5557	10057	12828			1.58	Si
SLV 12	15.32	-579	3722	-1695.25		0	0	8333	0			0	No, Vu<V
SLV 7	12.17	-10894	8490	1238.69		8541	4.5557	10041	12809			1.51	Si
SLV 7	15.32	-1990	3725	-6295.14		0	0	8333	0			0	No, Vu<V
SLV 15	12.17	-13094	1481	668.18		10265	4.5557	10386	13249			8.95	Si
SLV 15	15.32	-165	1375	4134.28		0	0	8333	0			0	No, Vu<V
SLV 11	12.17	-10993	8141	554.1		8618	4.5557	10057	12828			1.58	Si
SLV 11	15.32	-579	3722	-1695.25		0	0	8333	0			0	No, Vu<V
SLV 4	12.17	-12766	2644	2950.14		10008	4.5557	10335	13183			4.99	Si
SLV 4	15.32	-4868	1385	-11198.71		0	0	8333	0			0	No, Vu<V
SLV 8	12.17	-10894	8490	1238.69		8541	4.5557	10041	12809			1.51	Si
SLV 8	15.32	-1990	3725	-6295.14		0	0	8333	0			0	No, Vu<V
SLV 3	12.17	-12766	2644	2950.14		10008	4.5557	10335	13183			4.99	Si
SLV 3	15.32	-4868	1385	-11198.71		0	0	8333	0			0	No, Vu<V
SLV 16	12.17	-13094	1481	668.18		10265	4.5557	10386	13249			8.95	Si
SLV 16	15.32	-165	1375	4134.28		0	0	8333	0			0	No, Vu<V
SLV 14	12.17	-14797	-3879	1450.55		11600	4.5557	10653	13589			3.5	Si
SLV 14	15.32	-1220	-634	4531.11		0	0	8333	0			0	No, Vu<V
SLV 13	12.17	-14797	-3879	1450.55		11600	4.5557	10653	13589			3.5	Si
SLV 13	15.32	-1220	-634	4531.11		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 12	143750	0.53	4972	-6342	524.4	851.74	1.62	Si
SLV 11	143750	0.53	4972	-6342	524.4	851.74	1.62	Si
SLV 8	143750	0.53	5111	-6519	524.4	874.52	1.67	Si
SLV 7	143750	0.53	5111	-6519	524.4	874.52	1.67	Si
SLV 15	143750	0.53	6011	-7668	524.4	1020.69	1.95	Si
SLV 16	143750	0.53	6011	-7668	524.4	1020.69	1.95	Si
SLV 4	143750	0.53	6475	-8259	524.4	1095	2.09	Si
SLV 3	143750	0.53	6475	-8259	524.4	1095	2.09	Si
SLV 14	143750	0.53	7041	-8982	524.4	1184.98	2.26	Si
SLV 13	143750	0.53	7041	-8982	524.4	1184.98	2.26	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 2	-5924	-14469	-755	0	1199.9	0.895	0	9.06484	No
SLV 13	-1220	-14797	942	0	787.4	0.914	0	9.06484	No
SLV 3	-4868	-12766	-963	0	1099.1	0.891	0	9.06484	No
SLV 9	-4098	-16668	592	0	1027.2	0.889	0	8.06258	No
SLV 8	-1990	-10894	-613	0	843.6	0.897	0	8.06258	No
SLV 1	-5924	-14469	-755	0	1199.9	0.895	0	9.06484	No
SLV 7	-1990	-10894	-613	0	843.6	0.897	0	8.06258	No
SLV 14	-1220	-14797	942	0	787.4	0.914	0	9.06484	No
SLV 10	-4098	-16668	592	0	1027.2	0.889	0	8.06258	No
SLV 4	-4868	-12766	-963	0	1099.1	0.891	0	9.06484	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.674	SLU 36	Si
V_SLU	6.403	SLU 78	Si
PF_SLV	0	SLV 3	No
V_SLV	0	SLV 3	No
PFFP_SLV	1.624	SLV 11	Si
R_SLV	0	SLV 1	No

Maschio 252

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.728	1.046	-9.728	1.406	L6	L7	0.36	0.14	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

Sismicad 12.19 - Licenza assegnata a Sidel ingegneria Srl - Via Isonzo, 13 - Villanova di Castenaso (BO)



fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 38	12.17	-1126	99.83	22334	147.06	1.473	Si
SLU 38	14.27	-913	-92.26	18122	127.83	1.386	Si
SLU 42	12.17	-1005	95.74	19944	136.63	1.427	Si
SLU 42	14.27	-793	-85.41	15732	115.16	1.348	Si
SLU 83	12.17	-1269	110.51	25170	157.79	1.428	Si
SLU 83	14.27	-999	-100.28	19824	136.07	1.357	Si
SLU 41	12.17	-1001	97.15	19851	136.2	1.402	Si
SLU 41	14.27	-788	-86.51	15639	114.64	1.325	Si
SLU 79	12.17	-1389	114.6	27560	165.43	1.444	Si
SLU 79	14.27	-1120	-107.14	22214	146.57	1.368	Si
SLU 40	12.17	-904	86.08	17936	126.89	1.474	Si
SLU 40	14.27	-692	-74.95	13724	103.53	1.381	Si
SLU 39	12.17	-899	87.49	17843	126.42	1.445	Si
SLU 39	14.27	-687	-76.06	13631	102.97	1.354	Si
SLU 80	12.17	-1394	113.19	27653	165.7	1.464	Si
SLU 80	14.27	-1124	-106.03	22307	146.95	1.386	Si
SLU 84	12.17	-1273	109.1	25262	158.11	1.449	Si
SLU 84	14.27	-1004	-99.18	19916	136.51	1.376	Si
SLU 37	12.17	-1121	101.24	22242	146.68	1.449	Si
SLU 37	14.27	-909	-93.36	18030	127.36	1.364	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 6	12.17	-657	-158.7	0	0	0	No, e>1/2
SLV 6	14.27	-462	104.77	0	0	0	No, e>1/2
SLV 7	12.17	-713	358.81	0	0	0	No, e>1/2
SLV 7	14.27	-512	-289.62	0	0	0	No, e>1/2
SLV 4	12.17	-129	260.64	0	0	0	No, e>1/2
SLV 4	14.27	54	-226.3	0	0	0	No, Trazione
SLV 3	12.17	-129	260.64	0	0	0	No, e>1/2
SLV 3	14.27	54	-226.3	0	0	0	No, Trazione
SLV 2	12.17	-113	105.38	0	0	0	No, e>1/2
SLV 2	14.27	69	-107.98	0	0	0	No, Trazione
SLV 1	12.17	-113	105.38	0	0	0	No, e>1/2
SLV 1	14.27	69	-107.98	0	0	0	No, Trazione
SLV 5	12.17	-657	-158.7	0	0	0	No, e>1/2
SLV 5	14.27	-462	104.77	0	0	0	No, e>1/2
SLV 9	12.17	-1141	-229.81	0	0	0	No, e>1/2
SLV 9	14.27	-932	168.81	0	0	0	No, e>1/2
SLV 10	12.17	-1141	-229.81	0	0	0	No, e>1/2
SLV 10	14.27	-932	168.81	0	0	0	No, e>1/2
SLV 8	12.17	-713	358.81	0	0	0	No, e>1/2
SLV 8	14.27	-512	-289.62	0	0	0	No, e>1/2

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 38	12.17	-1126	91	99.83		29349	0.274	9469	363			3.97	Si
SLU 38	14.27	-913	91	-92.26		27531	0.237	9226	306			3.35	Si
SLU 83	12.17	-1269	100	110.51		32518	0.2787	9891	386			3.84	Si
SLU 83	14.27	-999	100	-100.28		29875	0.2389	9539	319			3.18	Si
SLU 42	12.17	-1005	86	95.74		28238	0.2543	9321	332			3.85	Si
SLU 42	14.27	-793	86	-85.41		26117	0.2169	9038	274			3.18	Si
SLU 84	12.17	-1273	99	109.1		32143	0.2829	9841	390			3.93	Si
SLU 84	14.27	-1004	99	-99.18		29435	0.2436	9480	323			3.26	Si
SLU 41	12.17	-1001	87	97.15		28736	0.2487	9387	327			3.74	Si
SLU 41	14.27	-788	87	-86.51		26717	0.2107	9118	269			3.08	Si
SLU 37	12.17	-1121	93	101.24		29758	0.2691	9523	359			3.87	Si
SLU 37	14.27	-909	93	-93.36		28006	0.2318	9290	301			3.25	Si
SLU 39	12.17	-899	78	87.49		25887	0.2481	9007	313			4.02	Si
SLU 39	14.27	-687	78	-76.06		23605	0.2079	8703	253			3.25	Si
SLU 79	12.17	-1389	106	114.6		33921	0.2925	10078	413			3.91	Si
SLU 79	14.27	-1120	106	-107.14		31619	0.2529	9771	346			3.28	Si
SLU 81	12.17	-1167	91	100.85		29693	0.2808	9515	374			4.12	Si
SLU 81	14.27	-898	91	-89.83		26738	0.2399	9121	306			3.37	Si
SLU 80	12.17	-1394	104	113.19		33591	0.2964	10034	416			3.99	Si
SLU 80	14.27	-1124	104	-106.03		31240	0.2571	9721	350			3.35	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 8	12.17	-713	258	358.81		0	0	8333	0			0	No, Vu<V
SLV 8	14.27	-512	240	-289.62		0	0	8333	0			0	No, Vu<V
SLV 7	12.17	-713	258	358.81		0	0	8333	0			0	No, Vu<V
SLV 7	14.27	-512	240	-289.62		0	0	8333	0			0	No, Vu<V
SLV 5	12.17	-657	-111	-158.7		0	0	8333	0			0	No, Vu<V
SLV 5	14.27	-462	-45	104.77		0	0	8333	0			0	No, Vu<V
SLV 4	12.17	-129	162	260.64		0	0	8333	0			0	No, Vu<V
SLV 4	14.27	54	230	-226.3		0	0	8333	0			0	No, Vu<V
SLV 6	12.17	-657	-111	-158.7		0	0	8333	0			0	No, Vu<V
SLV 6	14.27	-462	-45	104.77		0	0	8333	0			0	No, Vu<V
SLV 1	12.17	-113	51	105.38		0	0	8333	0			0	No, Vu<V
SLV 1	14.27	69	145	-107.98		0	0	8333	0			0	No, Vu<V
SLV 9	12.17	-1141	-139	-229.81		0	0	8333	0			0	No, Vu<V
SLV 9	14.27	-932	-121	168.81		0	0	8333	0			0	No, Vu<V
SLV 10	12.17	-1141	-139	-229.81		0	0	8333	0			0	No, Vu<V
SLV 10	14.27	-932	-121	168.81		0	0	8333	0			0	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 3	12.17	-129	162	260.64		0	0	8333	0			0	No, Vu<V
SLV 3	14.27	54	230	-226.3		0	0	8333	0			0	No, Vu<V
SLV 2	12.17	-113	51	105.38		0	0	8333	0			0	No, Vu<V
SLV 2	14.27	69	145	-107.98		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 3	143750	0.53	0	82	21.66	0	0	No, Trazione
SLV 1	143750	0.53	0	128	21.66	0	0	No, Trazione
SLV 2	143750	0.53	0	128	21.66	0	0	No, Trazione
SLV 4	143750	0.53	0	82	21.66	0	0	No, Trazione
SLV 6	143750	0.53	8440	-425	21.66	27.72	1.28	Si
SLV 5	143750	0.53	8440	-425	21.66	27.72	1.28	Si
SLV 8	143750	0.53	11534	-581	21.66	36.85	1.7	Si
SLV 7	143750	0.53	11534	-581	21.66	36.85	1.7	Si
SLV 9	143750	0.53	18785	-947	21.66	56.08	2.59	Si
SLV 10	143750	0.53	18785	-947	21.66	56.08	2.59	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 13.745 Wa = 0.03 Ta = 0.1184

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 2	300	-113	-3	0	0	0	0	19.2913	No, Trazione
SLV 4	89	-129	-5	0	0	0	0	19.2913	No, Trazione
SLV 9	190	-1141	4	0	0	0	0	16.21392	No, Trazione
SLV 5	355	-657	2	0	0	0	0	16.21392	No, Trazione
SLV 1	300	-113	-3	0	0	0	0	19.2913	No, Trazione
SLV 6	355	-657	2	0	0	0	0	16.21392	No, Trazione
SLV 3	89	-129	-5	0	0	0	0	19.2913	No, Trazione
SLV 10	190	-1141	4	0	0	0	0	16.21392	No, Trazione
SLV 14	-250	-1725	4	0.019	49	0.896	0.30986	19.2913	No
SLV 13	-250	-1725	4	0.019	49	0.896	0.30986	19.2913	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.325	SLU 41	Si
V_SLU	3.076	SLU 41	Si
PF_SLV	0	SLV 4	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 4	No
R_SLV	0	SLV 10	No

Maschio 253

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.728	2.206	-9.728	6.661	L6	L7	4.455	0.14	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 57	12.17	-9881	1929.5	15843	17729.33	9.189	Si
SLU 57	14.27	-3973	-2040.79	6370	8157.23	3.997	Si
SLU 56	12.17	-9897	1947.41	15868	17750.64	9.115	Si
SLU 56	14.27	-3984	-2058.52	6388	8179.24	3.973	Si
SLU 77	12.17	-10796	2246.94	17310	18938	8.428	Si
SLU 77	14.27	-4244	-2166.48	6805	8664.06	3.999	Si
SLU 45	12.17	-8827	1257.15	14152	16245.34	12.922	Si
SLU 45	14.27	-3676	-1903.69	5893	7595.23	3.99	Si
SLU 49	12.17	-9064	1536.64	14533	16588.08	10.795	Si
SLU 49	14.27	-3807	-1971.97	6104	7845.14	3.978	Si
SLU 50	12.17	-8689	1676.47	13931	16044.33	9.57	Si
SLU 50	14.27	-3619	-1886.34	5802	7486.36	3.969	Si
SLU 58	12.17	-9506	2069.33	15241	17212.47	8.318	Si
SLU 58	14.27	-3784	-1955.16	6067	7801.18	3.99	Si
SLU 69	12.17	-9979	1854.08	16000	17862.3	9.634	Si
SLU 69	14.27	-4079	-2097.66	6540	8355.92	3.983	Si
SLU 48	12.17	-9080	1554.55	14558	16610.51	10.685	Si
SLU 48	14.27	-3819	-1989.7	6123	7867.32	3.954	Si
SLU 51	12.17	-8673	1658.56	13906	16021.37	9.66	Si
SLU 51	14.27	-3607	-1868.61	5783	7463.97	3.994	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 12	12.17	-4011	-3820.29	6431	8464.15	2.216	Si
SLV 12	14.27	-2935	-6016.92	4705	6285.18	1.045	Si
SLV 4	12.17	-5419	2968.85	8688	11211.55	3.776	Si
SLV 4	14.27	-3005	-3803.34	4818	6429.46	1.69	Si
SLV 10	12.17	-10418	4200.19	16704	20033.72	4.77	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 10	14.27	-2463	3782.93	3949	5308.76	1.403	Si
SLV 6	12.17	-10033	6038.03	16086	19405.71	3.214	Si
SLV 6	14.27	-2572	3221.53	4123	5534.75	1.718	Si
SLV 3	12.17	-5419	2968.85	8688	11211.55	3.776	Si
SLV 3	14.27	-3005	-3803.34	4818	6429.46	1.69	Si
SLV 7	12.17	-3626	-1982.45	5813	7691.81	3.88	Si
SLV 7	14.27	-3043	-6578.32	4879	6508.17	0.989	No, M>Mu
SLV 5	12.17	-10033	6038.03	16086	19405.71	3.214	Si
SLV 5	14.27	-2572	3221.53	4123	5534.75	1.718	Si
SLV 11	12.17	-4011	-3820.29	6431	8464.15	2.216	Si
SLV 11	14.27	-2935	-6016.92	4705	6285.18	1.045	Si
SLV 8	12.17	-3626	-1982.45	5813	7691.81	3.88	Si
SLV 8	14.27	-3043	-6578.32	4879	6508.17	0.989	No, M>Mu
SLV 9	12.17	-10418	4200.19	16704	20033.72	4.77	Si
SLV 9	14.27	-2463	3782.93	3949	5308.76	1.403	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 79	12.17	-10405	-168	2368.86		16683	4.455	7780	4852			28.91	Si
SLU 79	14.27	-4044	-171	-2063.13		6484	4.455	6420	4004			23.46	Si
SLU 77	12.17	-10796	-164	2246.94		17310	4.455	7864	4904			29.83	Si
SLU 77	14.27	-4244	-167	-2166.48		6805	4.455	6463	4031			24.13	Si
SLU 72	12.17	-9572	-162	1958.09		15348	4.455	7602	4741			29.21	Si
SLU 72	14.27	-3867	-165	-1976.58		6199	4.455	6382	3981			24.16	Si
SLU 57	12.17	-9881	-158	1929.5		15843	4.455	7668	4782			30.31	Si
SLU 57	14.27	-3973	-160	-2040.79		6370	4.455	6405	3995			24.95	Si
SLU 58	12.17	-9506	-160	2069.33		15241	4.455	7588	4732			29.49	Si
SLU 58	14.27	-3784	-163	-1955.16		6067	4.455	6365	3970			24.36	Si
SLU 80	12.17	-10389	-169	2350.95		16658	4.455	7777	4850			28.76	Si
SLU 80	14.27	-4032	-171	-2045.4		6465	4.455	6418	4003			23.35	Si
SLU 70	12.17	-9963	-159	1836.17		15975	4.455	7686	4793			30.18	Si
SLU 70	14.27	-4067	-161	-2079.93		6521	4.455	6425	4007			24.87	Si
SLU 78	12.17	-10780	-165	2229.03		17285	4.455	7860	4902			29.68	Si
SLU 78	14.27	-4232	-168	-2148.75		6786	4.455	6460	4029			24.01	Si
SLU 71	12.17	-9588	-162	1976		15373	4.455	7605	4743			29.37	Si
SLU 71	14.27	-3878	-164	-1994.31		6218	4.455	6385	3982			24.29	Si
SLU 59	12.17	-9490	-161	2051.42		15216	4.455	7584	4730			29.33	Si
SLU 59	14.27	-3772	-164	-1937.43		6048	4.455	6362	3968			24.23	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 7	12.17	-3626	3249	-1982.45		5813	4.455	9496	5923			1.82	Si
SLV 7	14.27	-3043	2851	-6578.32		109952	0.1977	16250	450			0.16	No, Vu<V
SLV 4	12.17	-5419	730	2968.85		8688	4.455	10071	6281			8.61	Si
SLV 4	14.27	-3005	826	-3803.34		7439	2.8853	9821	3967			4.8	Si
SLV 9	12.17	-10418	-3436	4200.19		16704	4.455	11674	7281			2.12	Si
SLV 9	14.27	-2463	-3041	3782.93		8480	2.0746	10029	2913			0.96	No, Vu<V
SLV 5	12.17	-10033	-3554	6038.03		16086	4.455	11550	7204			2.03	Si
SLV 5	14.27	-2572	-3016	3221.53		6281	2.9242	9590	3926			1.3	Si
SLV 3	12.17	-5419	730	2968.85		8688	4.455	10071	6281			8.61	Si
SLV 3	14.27	-3005	826	-3803.34		7439	2.8853	9821	3967			4.8	Si
SLV 12	12.17	-4011	3367	-3820.29		7490	3.8251	9831	5265			1.56	Si
SLV 12	14.27	-2935	2827	-6016.92		39434	0.5316	16220	1207			0.43	No, Vu<V
SLV 8	12.17	-3626	3249	-1982.45		5813	4.455	9496	5923			1.82	Si
SLV 8	14.27	-3043	2851	-6578.32		109952	0.1977	16250	450			0.16	No, Vu<V
SLV 10	12.17	-10418	-3436	4200.19		16704	4.455	11674	7281			2.12	Si
SLV 10	14.27	-2463	-3041	3782.93		8480	2.0746	10029	2913			0.96	No, Vu<V
SLV 6	12.17	-10033	-3554	6038.03		16086	4.455	11550	7204			2.03	Si
SLV 6	14.27	-2572	-3016	3221.53		6281	2.9242	9590	3926			1.3	Si
SLV 11	12.17	-4011	3367	-3820.29		7490	3.8251	9831	5265			1.56	Si
SLV 11	14.27	-2935	2827	-6016.92		39434	0.5316	16220	1207			0.43	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 6	143750	0.53	0	-3534	268.06	0	0	No, e>t/2
SLV 12	143750	0.53	0	-3535	268.06	0	0	No, e>t/2
SLV 5	143750	0.53	0	-3534	268.06	0	0	No, e>t/2
SLV 10	143750	0.53	0	-3370	268.06	0	0	No, e>t/2
SLV 11	143750	0.53	0	-3535	268.06	0	0	No, e>t/2
SLV 9	143750	0.53	0	-3370	268.06	0	0	No, e>t/2
SLV 2	143750	0.53	0	-3784	268.06	0	0	No, e>t/2
SLV 1	143750	0.53	0	-3784	268.06	0	0	No, e>t/2
SLV 8	143750	0.53	0	-3699	268.06	0	0	No, e>t/2
SLV 7	143750	0.53	0	-3699	268.06	0	0	No, e>t/2

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 13.745 Wa = 0.03 Ta = 0.1184

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 11	359	-4011	-6	0	0	0	0	16.21392	No, Trazione
SLV 4	158	-5419	-13	0	0	0	0	19.2913	No, Trazione
SLV 7	445	-3626	-12	0	0	0	0	16.21392	No, Trazione
SLV 12	359	-4011	-6	0	0	0	0	16.21392	No, Trazione
SLV 8	445	-3626	-12	0	0	0	0	16.21392	No, Trazione
SLV 3	158	-5419	-13	0	0	0	0	19.2913	No, Trazione
SLV 13	-457	-8625	13	0.034	376.4	0.925	0.53712	19.2913	No
SLV 14	-457	-8625	13	0.034	376.4	0.925	0.53712	19.2913	No
SLV 1	-172	-7341	-8	0.039	363.3	0.961	0.58333	19.2913	No
SLV 2	-172	-7341	-8	0.039	363.3	0.961	0.58333	19.2913	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.954	SLU 48	Si
V_SLU	23.346	SLU 80	Si
PF_SLV	0.989	SLV 7	No
V_SLV	0.158	SLV 7	No
PFFP_SLV	0	SLV 1	No
R_SLV	0	SLV 12	No

Maschio 254

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.448	-3.359	-10.863	-3.359	L6	L7	1.415	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLU 59	12.17	-3178	613.71	8021	2026.93	3.303	Si
SLU 59	14.27	-1223	-1804.91	0	0	0	No, e>l/2
SLU 61	12.17	-2465	617.98	6222	1610.82	2.607	Si
SLU 61	14.27	-511	-1642.07	0	0	0	No, e>l/2
SLU 60	12.17	-2507	537.38	6328	1636.01	3.044	Si
SLU 60	14.27	-553	-1532.82	0	0	0	No, e>l/2
SLU 57	12.17	-3281	627.27	8280	2085.05	3.324	Si
SLU 57	14.27	-1326	-1882.03	0	0	0	No, e>l/2
SLU 58	12.17	-3220	533.11	8127	2050.81	3.847	Si
SLU 58	14.27	-1266	-1695.66	0	0	0	No, e>l/2
SLU 56	12.17	-3323	546.67	8386	2108.74	3.857	Si
SLU 56	14.27	-1368	-1772.78	0	0	0	No, e>l/2
SLU 55	12.17	-2894	641.75	7305	1864	2.905	Si
SLU 55	14.27	-940	-1741.73	0	0	0	No, e>l/2
SLU 53	12.17	-3067	520.98	7741	1963.71	3.769	Si
SLU 53	14.27	-1113	-1636.76	0	0	0	No, e>l/2
SLU 1	12.17	-2376	307.6	5998	1557.49	5.063	Si
SLU 1	14.27	-867	-979.46	0	0	0	No, e>l/2
SLU 54	12.17	-3025	601.58	7635	1939.55	3.224	Si
SLU 54	14.27	-1071	-1746.01	0	0	0	No, e>l/2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLV 2	12.17	-214	2171.02	0	0	0	No, e>l/2
SLV 2	14.27	1610	-4652.5	0	0	0	No, Trazione
SLV 8	12.17	-1112	127.5	2806	768.53	6.028	Si
SLV 8	14.27	-614	-908.76	0	0	0	No, e>l/2
SLV 1	12.17	-214	2171.02	0	0	0	No, e>l/2
SLV 1	14.27	1610	-4652.5	0	0	0	No, Trazione
SLV 9	12.17	-3222	641.85	8133	2128.12	3.316	Si
SLV 9	14.27	-689	-1369.81	0	0	0	No, e>l/2
SLV 6	12.17	-1973	1582.69	0	0	0	No, e>l/2
SLV 6	14.27	562	-3265.63	0	0	0	No, Trazione
SLV 10	12.17	-3222	641.85	8133	2128.12	3.316	Si
SLV 10	14.27	-689	-1369.81	0	0	0	No, e>l/2
SLV 3	12.17	44	1734.46	0	0	0	No, Trazione
SLV 3	14.27	1258	-3945.44	0	0	0	No, Trazione
SLV 7	12.17	-1112	127.5	2806	768.53	6.028	Si
SLV 7	14.27	-614	-908.76	0	0	0	No, e>l/2
SLV 4	12.17	44	1734.46	0	0	0	No, Trazione
SLV 4	14.27	1258	-3945.44	0	0	0	No, Trazione
SLV 5	12.17	-1973	1582.69	0	0	0	No, e>l/2
SLV 5	14.27	562	-3265.63	0	0	0	No, Trazione

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	$\sigma 0$	σN	l'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 59	12.17	-3178	1165	613.71	8021	1.415		6625	2625			2.25	Si
SLU 59	14.27	-1223	1165	-1804.91	0	0	0	5556	0			0	No, Vu<V
SLU 55	12.17	-2894	1149	641.75	7305	1.415		6530	2587			2.25	Si
SLU 55	14.27	-940	1149	-1741.73	0	0	0	5556	0			0	No, Vu<V
SLU 1	12.17	-2376	623	307.6	5998	1.415		6355	2518			4.04	Si
SLU 1	14.27	-867	623	-979.46	0	0	0	5556	0			0	No, Vu<V
SLU 53	12.17	-3067	1041	520.98	7741	1.415		6588	2610			2.51	Si
SLU 53	14.27	-1113	1041	-1636.76	0	0	0	5556	0			0	No, Vu<V
SLU 57	12.17	-3281	1208	627.27	8280	1.415		6660	2639			2.18	Si
SLU 57	14.27	-1326	1208	-1882.03	0	0	0	5556	0			0	No, Vu<V
SLU 58	12.17	-3220	1075	533.11	8127	1.415		6639	2630			2.45	Si
SLU 58	14.27	-1266	1075	-1695.66	0	0	0	5556	0			0	No, Vu<V
SLU 54	12.17	-3025	1131	601.58	7635	1.415		6574	2604			2.3	Si
SLU 54	14.27	-1071	1131	-1746.01	0	0	0	5556	0			0	No, Vu<V
SLU 61	12.17	-2465	1090	617.98	6424	1.3704		6412	2460			2.26	Si
SLU 61	14.27	-511	1090	-1642.07	0	0	0	5556	0			0	No, Vu<V
SLU 60	12.17	-2507	999	537.38	6328	1.415		6399	2535			2.54	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 60	14.27	-553	999	-1532.82		0	0	5556	0			0	No, Vu<V
SLU 56	12.17	-3323	1118	546.67		8386	1.415	6674	2644			2.36	Si
SLU 56	14.27	-1368	1118	-1772.78		0	0	5556	0			0	No, Vu<V

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 4	12.17	44	3053	1734.46		0	0	8333	0			0	No, Vu<V
SLV 4	14.27	1258	2347	-3945.44		0	0	8333	0			0	No, Vu<V
SLV 6	12.17	-1973	2249	1582.69		0	0	8333	0			0	No, Vu<V
SLV 6	14.27	562	2171	-3265.63		0	0	8333	0			0	No, Vu<V
SLV 1	12.17	-214	3503	2171.02		0	0	8333	0			0	No, Vu<V
SLV 1	14.27	1610	2871	-4652.5		0	0	8333	0			0	No, Vu<V
SLV 3	12.17	44	3053	1734.46		0	0	8333	0			0	No, Vu<V
SLV 3	14.27	1258	2347	-3945.44		0	0	8333	0			0	No, Vu<V
SLV 5	12.17	-1973	2249	1582.69		0	0	8333	0			0	No, Vu<V
SLV 5	14.27	562	2171	-3265.63		0	0	8333	0			0	No, Vu<V
SLV 10	12.17	-3222	724	641.85		8133	1.415	9960	3946			5.45	Si
SLV 10	14.27	-689	1047	-1369.81		0	0	8333	0			0	No, Vu<V
SLV 7	12.17	-1112	748	127.5		2806	1.415	8895	3524			4.71	Si
SLV 7	14.27	-614	425	-908.76		0	0	8333	0			0	No, Vu<V
SLV 9	12.17	-3222	724	641.85		8133	1.415	9960	3946			5.45	Si
SLV 9	14.27	-689	1047	-1369.81		0	0	8333	0			0	No, Vu<V
SLV 2	12.17	-214	3503	2171.02		0	0	8333	0			0	No, Vu<V
SLV 2	14.27	1610	2871	-4652.5		0	0	8333	0			0	No, Vu<V
SLV 8	12.17	-1112	748	127.5		2806	1.415	8895	3524			4.71	Si
SLV 8	14.27	-614	425	-908.76		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 2	143750	0.53	0	1264	159.18	0	0	No, Trazione
SLV 3	143750	0.53	0	1080	159.18	0	0	No, Trazione
SLV 1	143750	0.53	0	1264	159.18	0	0	No, Trazione
SLV 4	143750	0.53	0	1080	159.18	0	0	No, Trazione
SLV 8	143750	0.53	0	-606	159.18	0	0	No, $e > t/2$
SLV 5	143750	0.53	0	9	159.18	0	0	No, Trazione
SLV 7	143750	0.53	0	-606	159.18	0	0	No, $e > t/2$
SLV 6	143750	0.53	0	9	159.18	0	0	No, Trazione
SLV 10	143750	0.53	3160	-1252	159.18	170.76	1.07	Si
SLV 9	143750	0.53	3160	-1252	159.18	170.76	1.07	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 2	5506	-214	-87	0	0	0	0	9.06484	No, Trazione
SLV 5	3945	-1973	-193	0	0	0	0	8.06258	No, Trazione
SLV 9	1548	-3222	-174	0	0	0	0	8.06258	No, Trazione
SLV 6	3945	-1973	-193	0	0	0	0	8.06258	No, Trazione
SLV 10	1548	-3222	-174	0	0	0	0	8.06258	No, Trazione
SLV 4	4448	44	23	0	0	0	0	9.06484	No, Trazione
SLV 7	416	-1112	173	0	0	0	0	8.06258	No, Trazione
SLV 1	5506	-214	-87	0	0	0	0	9.06484	No, Trazione
SLV 8	416	-1112	173	0	0	0	0	8.06258	No, Trazione
SLV 3	4448	44	23	0	0	0	0	9.06484	No, Trazione

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0	SLU 40	No
V_SLU	0	SLU 1	No
PF_SLV	0	SLV 6	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 6	No
R_SLV	0	SLV 10	No

Maschio 255

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-6.268	-3.359	-6.268	1.046	L6	L7	4.405	0.14	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 50	12.17	-8619	2246.86	13976	15726.71	6.999	Si
SLU 50	15.32	-619	337.53	1004	1346.89	3.99	Si
SLU 46	12.17	-8431	2378.37	13671	15452.3	6.497	Si
SLU 46	15.32	-594	311.72	963	1293.14	4.148	Si
SLU 48	12.17	-8914	2376.53	14454	16148.97	6.795	Si
SLU 48	15.32	-664	350.13	1077	1443.82	4.124	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 51	12.17	-8592	2380.19	13932	15687.48	6.591	Si
SLU 51	15.32	-630	328.49	1022	1370.43	4.172	Si
SLU 44	12.17	-7662	2206.1	12424	14301.76	6.483	Si
SLU 44	15.32	-475	263.72	771	1036.66	3.931	Si
SLU 45	12.17	-8458	2245.04	13715	15491.91	6.901	Si
SLU 45	15.32	-583	320.77	946	1269.57	3.958	Si
SLU 64	12.17	-8419	2108.94	13652	15435.1	7.319	Si
SLU 64	15.32	-509	263.66	826	1110.65	4.212	Si
SLU 1	12.17	-6116	1559.04	9918	11831.04	7.589	Si
SLU 1	15.32	-365	210.47	592	798.76	3.795	Si
SLU 43	12.17	-7707	1983.88	12498	14370.78	7.244	Si
SLU 43	15.32	-457	278.8	741	997.17	3.577	Si
SLU 47	12.17	-8118	2337.59	13164	14990.65	6.413	Si
SLU 47	15.32	-556	293.09	902	1211.67	4.134	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 2	12.17	-5745	1566.04	9316	11688.56	7.464	Si
SLV 2	15.32	247	1023.7	0	0	0	No, Trazione
SLV 9	12.17	-6518	586.97	10570	13114.59	22.343	Si
SLV 9	15.32	-185	3658.97	0	0	0	No, $e > l/2$
SLV 4	12.17	-5831	2131.62	9456	11849.73	5.559	Si
SLV 4	15.32	33	-1018.39	0	0	0	No, Trazione
SLV 8	12.17	-6403	2619.57	10383	12904.24	4.926	Si
SLV 8	15.32	-583	-3264.69	0	0	0	No, $e > l/2$
SLV 1	12.17	-5745	1566.04	9316	11688.56	7.464	Si
SLV 1	15.32	247	1023.7	0	0	0	No, Trazione
SLV 10	12.17	-6518	586.97	10570	13114.59	22.343	Si
SLV 10	15.32	-185	3658.97	0	0	0	No, $e > l/2$
SLV 3	12.17	-5831	2131.62	9456	11849.73	5.559	Si
SLV 3	15.32	33	-1018.39	0	0	0	No, Trazione
SLV 6	12.17	-6115	734.31	9915	12374.93	16.853	Si
SLV 6	15.32	129	3542.28	0	0	0	No, Trazione
SLV 5	12.17	-6115	734.31	9915	12374.93	16.853	Si
SLV 5	15.32	129	3542.28	0	0	0	No, Trazione
SLV 7	12.17	-6403	2619.57	10383	12904.24	4.926	Si
SLV 7	15.32	-583	-3264.69	0	0	0	No, $e > l/2$

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 80	12.17	-9797	14	2534.97		15887	4.405	7674	4732			327.85	Si
SLU 80	15.32	-695	259	281.83		1127	4.405	5706	3519			13.58	Si
SLU 78	12.17	-10092	16	2664.65		16364	4.405	7737	4772			295.44	Si
SLU 78	15.32	-740	261	294.43		1200	4.405	5716	3525			13.51	Si
SLU 82	12.17	-9097	16	2284.73		14750	4.405	7522	4639			283.18	Si
SLU 82	15.32	-538	262	209.59		873	4.405	5672	3498			13.36	Si
SLU 81	12.17	-9124	268	2151.4		14794	4.405	7528	4643			17.35	Si
SLU 81	15.32	-527	247	218.64		855	4.405	5670	3496			14.15	Si
SLU 75	12.17	-9636	11	2533.15		15625	4.405	7639	4711			447.55	Si
SLU 75	15.32	-659	256	265.06		1069	4.405	5698	3514			13.75	Si
SLU 73	12.17	-8867	-164	2360.88		14378	4.405	7473	4608			28.06	Si
SLU 73	15.32	-540	258	217.07		876	4.405	5672	3498			13.54	Si
SLU 77	12.17	-10119	267	2531.31		16408	4.405	7743	4775			17.87	Si
SLU 77	15.32	-729	246	303.48		1183	4.405	5713	3523			14.31	Si
SLU 76	12.17	-9323	-159	2492.37		15118	4.405	7571	4669			29.44	Si
SLU 76	15.32	-621	264	246.43		1007	4.405	5690	3509			13.31	Si
SLU 83	12.17	-9580	273	2282.89		15534	4.405	7627	4703			17.22	Si
SLU 83	15.32	-608	252	248.01		987	4.405	5687	3507			13.89	Si
SLU 84	12.17	-9553	22	2416.22		15490	4.405	7621	4700			213.56	Si
SLU 84	15.32	-619	267	238.96		1004	4.405	5689	3509			13.14	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 6	12.17	-6115	-6236	734.31		9915	4.405	10316	6362			1.02	Si
SLV 6	15.32	129	-3906	3542.28		0	0	8333	0			0	No, $V_u < V$
SLV 4	12.17	-5831	1328	2131.62		9456	4.405	10224	6305			4.75	Si
SLV 4	15.32	33	825	-1018.39		0	0	8333	0			0	No, $V_u < V$
SLV 9	12.17	-6518	-5812	586.97		10570	4.405	10447	6443			1.11	Si
SLV 9	15.32	-185	-3601	3658.97		0	0	8333	0			0	No, $V_u < V$
SLV 3	12.17	-5831	1328	2131.62		9456	4.405	10224	6305			4.75	Si
SLV 3	15.32	33	825	-1018.39		0	0	8333	0			0	No, $V_u < V$
SLV 7	12.17	-6403	6162	2619.57		10383	4.405	10410	6420			1.04	Si
SLV 7	15.32	-583	3920	-3264.69		0	0	8333	0			0	No, $V_u < V$
SLV 1	12.17	-5745	-2392	1566.04		9316	4.405	10196	6288			2.63	Si
SLV 1	15.32	247	-1523	1023.7		0	0	8333	0			0	No, $V_u < V$
SLV 8	12.17	-6403	6162	2619.57		10383	4.405	10410	6420			1.04	Si
SLV 8	15.32	-583	3920	-3264.69		0	0	8333	0			0	No, $V_u < V$
SLV 10	12.17	-6518	-5812	586.97		10570	4.405	10447	6443			1.11	Si
SLV 10	15.32	-185	-3601	3658.97		0	0	8333	0			0	No, $V_u < V$
SLV 5	12.17	-6115	-6236	734.31		9915	4.405	10316	6362			1.02	Si
SLV 5	15.32	129	-3906	3542.28		0	0	8333	0			0	No, $V_u < V$
SLV 2	12.17	-5745	-2392	1566.04		9316	4.405	10196	6288			2.63	Si
SLV 2	15.32	247	-1523	1023.7		0	0	8333	0			0	No, $V_u < V$

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 5	143750	0.53	0	-2695	265.05	0	0	No, $e > t/2$
SLV 10	143750	0.53	0	-3476	265.05	0	0	No, $e > t/2$



Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 3	143750	0.53	0	-2676	265.05	0	0	No, $e>t/2$
SLV 1	143750	0.53	0	-2264	265.05	0	0	No, $e>t/2$
SLV 4	143750	0.53	0	-2676	265.05	0	0	No, $e>t/2$
SLV 9	143750	0.53	0	-3476	265.05	0	0	No, $e>t/2$
SLV 6	143750	0.53	0	-2695	265.05	0	0	No, $e>t/2$
SLV 2	143750	0.53	0	-2264	265.05	0	0	No, $e>t/2$
SLV 8	143750	0.53	6596	-4068	265.05	269.37	1.02	Si
SLV 7	143750	0.53	6596	-4068	265.05	269.37	1.02	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 13.745 $W_a = 0.03$ $T_a = 0.1184$

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 6	129	-6115	-1	0	0	0	0	16.21392	No, Trazione
SLV 2	247	-5745	-3	0	0	0	0	19.2913	No, Trazione
SLV 4	33	-5831	-3	0	0	0	0	19.2913	No, Trazione
SLV 5	129	-6115	-1	0	0	0	0	16.21392	No, Trazione
SLV 1	247	-5745	-3	0	0	0	0	19.2913	No, Trazione
SLV 3	33	-5831	-3	0	0	0	0	19.2913	No, Trazione
SLV 16	-1014	-7176	3	0.035	412	0.896	0.56988	19.2913	No
SLV 15	-1014	-7176	3	0.035	412	0.896	0.56988	19.2913	No
SLV 14	-801	-7090	3	0.036	395.5	0.903	0.58325	19.2913	No
SLV 13	-801	-7090	3	0.036	395.5	0.903	0.58325	19.2913	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.577	SLU 43	Si
V_SLU	13.138	SLU 84	Si
PF_SLV	0	SLV 6	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 1	No
R_SLV	0	SLV 6	No

Maschio 256

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.413	-3.359	-8.548	-3.359	L6	L7	1.135	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	t0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 20	13.07	-2947	-203.39	9273	1482.07	7.287	Si
SLU 20	14.87	-1505	-1.11	4734	804.2	722.673	Si
SLU 60	13.07	-3257	-241.06	10250	1616.01	6.704	Si
SLU 60	14.87	-1476	16.63	4643	789.63	47.477	Si
SLU 18	13.07	-2483	-190.76	7815	1274.17	6.679	Si
SLU 18	14.87	-1135	18.95	3572	615.99	32.501	Si
SLU 83	13.07	-3809	-250.61	11986	1843.56	7.356	Si
SLU 83	14.87	-1948	-10.49	6130	1022.31	97.489	Si
SLU 81	13.07	-3345	-237.99	10527	1653.19	6.947	Si
SLU 81	14.87	-1579	9.58	4968	841.27	87.819	Si
SLU 39	13.07	-2571	-187.68	8091	1314.34	7.003	Si
SLU 39	14.87	-1238	11.9	3897	669.17	56.228	Si
SLU 2	13.07	-2445	-8.47	7692	1256.27	148.256	Si
SLU 2	14.87	-1260	-91.49	3965	680.23	7.435	Si
SLU 62	13.07	-3721	-253.69	11709	1808.17	7.127	Si
SLU 62	14.87	-1845	-3.43	5805	972.34	283.138	Si
SLU 41	13.07	-3035	-200.31	9550	1520.45	7.59	Si
SLU 41	14.87	-1608	-8.17	5059	855.71	104.802	Si
SLU 23	13.07	-2532	-5.4	7969	1296.59	240.261	Si
SLU 23	14.87	-1363	-98.54	4289	732.84	7.437	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 11	13.07	-2813	-1313.66	8853	1480.93	1.127	Si
SLV 11	14.87	-371	985.78	0	0	0	No, $e>l/2$
SLV 4	13.07	-1316	1519.3	0	0	0	No, $e>l/2$
SLV 4	14.87	-1735	-1082.35	0	0	0	No, $e>l/2$
SLV 1	13.07	-1458	1870.88	0	0	0	No, $e>l/2$
SLV 1	14.87	-2145	-1454.02	0	0	0	No, $e>l/2$
SLV 13	13.07	-4016	-1856.51	12638	2043.48	1.101	Si
SLV 13	14.87	-781	1060.63	0	0	0	No, $e>l/2$
SLV 2	13.07	-1458	1870.88	0	0	0	No, $e>l/2$
SLV 2	14.87	-2145	-1454.02	0	0	0	No, $e>l/2$
SLV 14	13.07	-4016	-1856.51	12638	2043.48	1.101	Si
SLV 14	14.87	-781	1060.63	0	0	0	No, $e>l/2$
SLV 16	13.07	-3874	-2208.08	0	0	0	No, $e>l/2$
SLV 16	14.87	-372	1432.3	0	0	0	No, $e>l/2$
SLV 15	13.07	-3874	-2208.08	0	0	0	No, $e>l/2$
SLV 15	14.87	-372	1432.3	0	0	0	No, $e>l/2$



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 3	13.07	-1316	1519.3	0	0	0	No, $e \geq l/2$
SLV 3	14.87	-1735	-1082.35	0	0	0	No, $e \geq l/2$
SLV 12	13.07	-2813	-1313.66	8853	1480.93	1.127	Si
SLV 12	14.87	-371	985.78	0	0	0	No, $e \geq l/2$

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 80	13.07	-4190	180	-161.85		13185	1.135	7314	2324			12.89	Si
SLU 80	14.87	-2357	-569	-86.39		7417	1.135	6544	2080			3.66	Si
SLU 79	13.07	-4332	45	-255.26		13630	1.135	7373	2343			51.64	Si
SLU 79	14.87	-2352	-582	-40.98		7402	1.135	6543	2079			3.57	Si
SLU 35	13.07	-3789	76	-211.47		11921	1.135	7145	2271			29.93	Si
SLU 35	14.87	-2199	-544	-55.47		6921	1.135	6478	2059			3.78	Si
SLU 83	13.07	-3809	48	-250.61		11986	1.135	7154	2273			47.67	Si
SLU 83	14.87	-1948	-556	-10.49		6130	1.135	6373	2025			3.64	Si
SLU 84	13.07	-3667	183	-157.2		11540	1.135	7094	2255			12.34	Si
SLU 84	14.87	-1953	-543	-55.9		6144	1.135	6375	2026			3.73	Si
SLU 36	13.07	-3647	211	-118.06		11476	1.135	7086	2252			10.68	Si
SLU 36	14.87	-2204	-531	-100.89		6935	1.135	6480	2059			3.88	Si
SLU 74	13.07	-4099	44	-249.15		12898	1.135	7275	2312			52.1	Si
SLU 74	14.87	-2170	-537	-37.73		6829	1.135	6466	2055			3.83	Si
SLU 37	13.07	-3558	71	-204.96		11195	1.135	7048	2240			31.51	Si
SLU 37	14.87	-2012	-531	-38.66		6331	1.135	6400	2034			3.83	Si
SLU 78	13.07	-4421	185	-168.36		13911	1.135	7410	2355			12.72	Si
SLU 78	14.87	-2544	-581	-103.21		8006	1.135	6623	2105			3.62	Si
SLU 77	13.07	-4563	50	-261.77		14357	1.135	7470	2374			47.33	Si
SLU 77	14.87	-2540	-595	-57.79		7991	1.135	6621	2104			3.54	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 11	13.07	-2813	-1925	-1313.66		33303	0.3017	14994	1267			0.66	No, $V_u < V$
SLV 11	14.87	-371	-271	985.78		0	0	8333	0			0	No, $V_u < V$
SLV 3	13.07	-1316	3001	1519.3		0	0	8333	0			0	No, $V_u < V$
SLV 3	14.87	-1735	-82	-1082.35		0	0	8333	0			0	No, $V_u < V$
SLV 1	13.07	-1458	3568	1870.88		0	0	8333	0			0	No, $V_u < V$
SLV 1	14.87	-2145	-137	-1454.02		0	0	8333	0			0	No, $V_u < V$
SLV 13	13.07	-4016	-2993	-1856.51		45427	0.3158	16250	1437			0.48	No, $V_u < V$
SLV 13	14.87	-781	-527	1060.63		0	0	8333	0			0	No, $V_u < V$
SLV 14	13.07	-4016	-2993	-1856.51		45427	0.3158	16250	1437			0.48	No, $V_u < V$
SLV 14	14.87	-781	-527	1060.63		0	0	8333	0			0	No, $V_u < V$
SLV 16	13.07	-3874	-3560	-2208.08		0	0	8333	0			0	No, $V_u < V$
SLV 16	14.87	-372	-472	1432.3		0	0	8333	0			0	No, $V_u < V$
SLV 2	13.07	-1458	3568	1870.88		0	0	8333	0			0	No, $V_u < V$
SLV 2	14.87	-2145	-137	-1454.02		0	0	8333	0			0	No, $V_u < V$
SLV 12	13.07	-2813	-1925	-1313.66		33303	0.3017	14994	1267			0.66	No, $V_u < V$
SLV 12	14.87	-371	-271	985.78		0	0	8333	0			0	No, $V_u < V$
SLV 4	13.07	-1316	3001	1519.3		0	0	8333	0			0	No, $V_u < V$
SLV 4	14.87	-1735	-82	-1082.35		0	0	8333	0			0	No, $V_u < V$
SLV 15	13.07	-3874	-3560	-2208.08		0	0	8333	0			0	No, $V_u < V$
SLV 15	14.87	-372	-472	1432.3		0	0	8333	0			0	No, $V_u < V$

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 3	143750	0.53	0	-777	127.68	0	0	No, $e > t/2$
SLV 4	143750	0.53	0	-777	127.68	0	0	No, $e > t/2$
SLV 2	143750	0.53	3521	-1119	127.68	152.13	1.19	Si
SLV 1	143750	0.53	3521	-1119	127.68	152.13	1.19	Si
SLV 7	143750	0.53	3993	-1269	127.68	171.85	1.35	Si
SLV 8	143750	0.53	3993	-1269	127.68	171.85	1.35	Si
SLV 11	143750	0.53	6398	-2033	127.68	269.75	2.11	Si
SLV 12	143750	0.53	6398	-2033	127.68	269.75	2.11	Si
SLV 6	143750	0.53	7583	-2410	127.68	316.44	2.48	Si
SLV 5	143750	0.53	7583	-2410	127.68	316.44	2.48	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 12	-543	-782	-145	0	213.9	0.895	0	8.06258	No
SLV 5	-967	-4692	146	0	251	0.889	0	8.06258	No
SLV 8	-516	-1851	-141	0	211.8	0.896	0	8.06258	No
SLV 6	-967	-4692	146	0	251	0.889	0	8.06258	No
SLV 9	-994	-3623	142	0	253.4	0.889	0	8.06258	No
SLV 10	-994	-3623	142	0	253.4	0.889	0	8.06258	No
SLV 11	-543	-782	-145	0	213.9	0.895	0	8.06258	No
SLV 7	-516	-1851	-141	0	211.8	0.896	0	8.06258	No
SLV 2	-778	-4944	50	0.039	233.9	0.889	0.63339	9.06484	No
SLV 1	-778	-4944	50	0.039	233.9	0.889	0.63339	9.06484	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.679	SLU 18	Si
V_SLU	3.538	SLU 77	Si
PF_SLV	0	SLV 1	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 3	No
R_SLV	0	SLV 5	No



Maschio 257

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota s.	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.158	1.046	-5.158	5.811	L6	L7	4.765	0.14	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ ₀	f _{v0}	μ	φ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLU 59	12.17	-12839	1439.32	19246	23361.36	16.231	Si
SLU 59	15.32	-3666	7116.47	5495	8144.79	1.144	Si
SLU 79	12.17	-13780	1574.31	20656	24505	15.566	Si
SLU 79	15.32	-3894	7525.53	5837	8612.59	1.144	Si
SLU 30	12.17	-11235	1565.8	16841	21232.98	13.56	Si
SLU 30	15.32	-3513	6837.51	5266	7827.96	1.145	Si
SLU 71	12.17	-13298	1647.98	19935	23929.82	14.521	Si
SLU 71	15.32	-3943	7624.83	5911	8712.68	1.143	Si
SLU 58	12.17	-12833	1481.32	19237	23354.15	15.766	Si
SLU 58	15.32	-3670	7115.04	5501	8153.05	1.146	Si
SLU 72	12.17	-13304	1605.97	19943	23936.8	14.905	Si
SLU 72	15.32	-3939	7626.25	5905	8704.52	1.141	Si
SLU 80	12.17	-13785	1532.3	20665	24511.74	15.997	Si
SLU 80	15.32	-3890	7526.95	5831	8604.41	1.143	Si
SLU 9	12.17	-10288	1472.82	15422	19870.88	13.492	Si
SLU 9	15.32	-3289	6427.03	4930	7360.93	1.145	Si
SLU 50	12.17	-12352	1554.99	18516	22739.02	14.623	Si
SLU 50	15.32	-3719	7214.34	5575	8254.1	1.144	Si
SLU 51	12.17	-12357	1512.99	18524	22746.48	15.034	Si
SLU 51	15.32	-3715	7215.77	5569	8245.86	1.143	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLV 11	12.17	-8973	1118.3	13451	19025.71	17.013	Si
SLV 11	15.32	-603	-1593.82	0	0	0	No, e>l/2
SLV 6	12.17	-7802	-626.93	11695	16808.48	26.811	Si
SLV 6	15.32	-2852	7968.16	0	0	0	No, e>l/2
SLV 10	12.17	-7997	-1089.84	11988	17184.17	15.768	Si
SLV 10	15.32	-1724	5526	0	0	0	No, e>l/2
SLV 15	12.17	-8860	-194.61	13281	18814.53	96.677	Si
SLV 15	15.32	321	-1951.07	0	0	0	No, Trazione
SLV 5	12.17	-7802	-626.93	11695	16808.48	26.811	Si
SLV 5	15.32	-2852	7968.16	0	0	0	No, e>l/2
SLV 14	12.17	-8567	-857.06	12842	18265.97	21.312	Si
SLV 14	15.32	-15	184.87	0	0	0	No, e>l/2
SLV 9	12.17	-7997	-1089.84	11988	17184.17	15.768	Si
SLV 9	15.32	-1724	5526	0	0	0	No, e>l/2
SLV 13	12.17	-8567	-857.06	12842	18265.97	21.312	Si
SLV 13	15.32	-15	184.87	0	0	0	No, e>l/2
SLV 16	12.17	-8860	-194.61	13281	18814.53	96.677	Si
SLV 16	15.32	321	-1951.07	0	0	0	No, Trazione
SLV 12	12.17	-8973	1118.3	13451	19025.71	17.013	Si
SLV 12	15.32	-603	-1593.82	0	0	0	No, e>l/2

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 51	12.17	-12357	441	1512.99		18524	4.765	8025	5354			12.13	Si
SLU 51	15.32	-3715	-2146	7215.77		20095	1.3205	8235	1522			0.71	No, Vu<V
SLU 30	12.17	-11235	439	1565.8		16841	4.765	7801	5204			11.85	Si
SLU 30	15.32	-3513	-1948	6837.51		19184	1.3079	8113	1486			0.76	No, Vu<V
SLU 71	12.17	-13298	509	1647.98		19935	4.765	8214	5479			10.77	Si
SLU 71	15.32	-3943	-2170	7624.83		20920	1.3463	8345	1573			0.72	No, Vu<V
SLU 8	12.17	-10282	395	1514.82		15414	4.765	7611	5077			12.85	Si
SLU 8	15.32	-3293	-1902	6425.6		18190	1.2929	7981	1445			0.76	No, Vu<V
SLU 29	12.17	-11229	451	1607.81		16833	4.765	7800	5203			11.54	Si
SLU 29	15.32	-3517	-1937	6836.09		19091	1.3158	8101	1492			0.77	No, Vu<V
SLU 58	12.17	-12833	495	1481.32		19237	4.765	8120	5417			10.94	Si
SLU 58	15.32	-3670	-1966	7115.04		19691	1.3312	8181	1525			0.78	No, Vu<V
SLU 59	12.17	-12839	483	1439.32		19246	4.765	8122	5418			11.21	Si
SLU 59	15.32	-3666	-1977	7116.47		19781	1.3237	8193	1518			0.77	No, Vu<V
SLU 50	12.17	-12352	453	1554.99		18516	4.765	8024	5353			11.81	Si
SLU 50	15.32	-3719	-2135	7214.34		20005	1.3279	8223	1529			0.72	No, Vu<V
SLU 72	12.17	-13304	497	1605.97		19943	4.765	8215	5480			11.02	Si
SLU 72	15.32	-3939	-2182	7626.25		21008	1.3393	8357	1567			0.72	No, Vu<V
SLU 9	12.17	-10288	383	1472.82		15422	4.765	7612	5078			13.25	Si
SLU 9	15.32	-3289	-1913	6427.03		18287	1.2845	7994	1438			0.75	No, Vu<V

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 6	12.17	-7802	-7209	-626.93		11695	4.765	10672	7120			0.99	No, Vu<V
SLV 6	15.32	-2852	-4456	7968.16		0	0	8333	0			0	No, Vu<V
SLV 16	12.17	-8860	3062	-194.61		13281	4.765	10990	7331			2.39	Si
SLV 16	15.32	321	2534	-1951.07		0	0	8333	0			0	No, Vu<V
SLV 10	12.17	-7997	-6861	-1089.84		11988	4.765	10731	7159			1.04	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 10	15.32	-1724	-2998	5526		0	0	8333	0			0	No, Vu<V
SLV 14	12.17	-8567	-1330	-857.06		12842	4.765	10902	7273			5.47	Si
SLV 14	15.32	-15	766	184.87		0	0	8333	0			0	No, Vu<V
SLV 13	12.17	-8567	-1330	-857.06		12842	4.765	10902	7273			5.47	Si
SLV 13	15.32	-15	766	184.87		0	0	8333	0			0	No, Vu<V
SLV 9	12.17	-7997	-6861	-1089.84		11988	4.765	10731	7159			1.04	Si
SLV 9	15.32	-1724	-2998	5526		0	0	8333	0			0	No, Vu<V
SLV 15	12.17	-8860	3062	-194.61		13281	4.765	10990	7331			2.39	Si
SLV 15	15.32	321	2534	-1951.07		0	0	8333	0			0	No, Vu<V
SLV 11	12.17	-8973	7779	1118.3		13451	4.765	11024	7354			0.95	No, Vu<V
SLV 11	15.32	-603	2896	-1593.82		0	0	8333	0			0	No, Vu<V
SLV 12	12.17	-8973	7779	1118.3		13451	4.765	11024	7354			0.95	No, Vu<V
SLV 12	15.32	-603	2896	-1593.82		0	0	8333	0			0	No, Vu<V
SLV 5	12.17	-7802	-7209	-626.93		11695	4.765	10672	7120			0.99	No, Vu<V
SLV 5	15.32	-2852	-4456	7968.16		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.03 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 8	143750	0.53	0	-3977	286.71	0	0	No, e>t/2
SLV 16	143750	0.53	0	-3652	286.71	0	0	No, e>t/2
SLV 12	143750	0.53	0	-3458	286.71	0	0	No, e>t/2
SLV 11	143750	0.53	0	-3458	286.71	0	0	No, e>t/2
SLV 15	143750	0.53	0	-3652	286.71	0	0	No, e>t/2
SLV 7	143750	0.53	0	-3977	286.71	0	0	No, e>t/2
SLV 14	143750	0.53	6501	-4336	286.71	287.4	1	Si
SLV 13	143750	0.53	6501	-4336	286.71	287.4	1	Si
SLV 3	143750	0.53	8065	-5380	286.71	351.75	1.23	Si
SLV 4	143750	0.53	8065	-5380	286.71	351.75	1.23	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 13.745 Wa = 0.03 Ta = 0.1184

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 15	321	-8860	-15	0	0	0	0	19.2913	No, Trazione
SLV 16	321	-8860	-15	0	0	0	0	19.2913	No, Trazione
SLV 11	-603	-8973	-41	0.022	409.5	0.916	0.35688	16.21392	No
SLV 12	-603	-8973	-41	0.022	409.5	0.916	0.35688	16.21392	No
SLV 5	-2852	-7802	42	0.022	603.9	0.893	0.36269	16.21392	No
SLV 6	-2852	-7802	42	0.022	603.9	0.893	0.36269	16.21392	No
SLV 2	-3776	-7915	15	0.027	693.4	0.9	0.43503	19.2913	No
SLV 1	-3776	-7915	15	0.027	693.4	0.9	0.43503	19.2913	No
SLV 9	-1724	-7997	40	0.023	499	0.889	0.37248	16.21392	No
SLV 10	-1724	-7997	40	0.023	499	0.889	0.37248	16.21392	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.141	SLU 72	Si
V_SLU	0.709	SLU 51	No
PF_SLV	0	SLV 16	No
V_SLV	0	SLV 5	No
PFFP_SLV	0	SLV 7	No
R_SLV	0	SLV 16	No

Maschio 258

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.158	5.811	-5.158	6.006	L6	L7	0.195	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 80	14.17	-3681	55.96	67419	61.86	1.105	Si
SLU 80	14.97	-3279	-89.15	60047	84.02	0.942	No, M>Mu
SLU 71	14.17	-3535	55.72	64743	70.72	1.269	Si
SLU 71	14.97	-3031	-113.75	55515	94.12	0.827	No, M>Mu
SLU 69	14.17	-3498	54.12	64065	72.82	1.346	Si
SLU 69	14.97	-3047	-100.63	55813	93.54	0.93	No, M>Mu
SLU 51	14.17	-3227	51.7	59105	86.34	1.67	Si
SLU 51	14.97	-2695	-120.67	49354	103.55	0.858	No, M>Mu
SLU 49	14.17	-3190	50.1	58427	87.94	1.755	Si
SLU 49	14.97	-2711	-107.55	49652	103.21	0.96	No, M>Mu
SLU 48	14.17	-3197	50.29	58545	87.67	1.743	Si
SLU 48	14.97	-2717	-107.42	49759	103.08	0.96	No, M>Mu
SLU 50	14.17	-3234	51.89	59223	86.06	1.658	Si
SLU 50	14.97	-2701	-120.55	49462	103.43	0.858	No, M>Mu
SLU 72	14.17	-3529	55.52	64625	71.09	1.28	Si
SLU 72	14.97	-3025	-113.88	55408	94.33	0.828	No, M>Mu
SLU 79	14.17	-3688	56.15	67537	61.44	1.094	Si
SLU 79	14.97	-3284	-89.03	60155	83.75	0.941	No, M>Mu



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 70	14.17	-3492	53.92	63947	73.18	1.357	Si
SLU 70	14.97	-3042	-100.75	55705	93.75	0.931	No, M>Mu

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 2	14.17	-1546	12.16	28308	115.78	9.524	Si
SLV 2	14.97	-978	-204.18	0	0	0	No, e>l/2
SLV 8	14.17	-1581	71.41	28962	117.63	1.647	Si
SLV 8	14.97	-85	-278.08	0	0	0	No, e>l/2
SLV 4	14.17	-1481	39.66	27126	112.35	2.833	Si
SLV 4	14.97	-239	-314.86	0	0	0	No, e>l/2
SLV 3	14.17	-1481	39.66	27126	112.35	2.833	Si
SLV 3	14.97	-239	-314.86	0	0	0	No, e>l/2
SLV 12	14.17	-1732	71.12	31718	125.02	1.758	Si
SLV 12	14.97	-691	-135.87	0	0	0	No, e>l/2
SLV 14	14.17	-2047	11.21	37493	138.35	12.344	Si
SLV 14	14.97	-3000	269.84	54943	160.97	0.597	No, M>Mu
SLV 1	14.17	-1546	12.16	28308	115.78	9.524	Si
SLV 1	14.97	-978	-204.18	0	0	0	No, e>l/2
SLV 13	14.17	-2047	11.21	37493	138.35	12.344	Si
SLV 13	14.97	-3000	269.84	54943	160.97	0.597	No, M>Mu
SLV 11	14.17	-1732	71.12	31718	125.02	1.758	Si
SLV 11	14.97	-691	-135.87	0	0	0	No, e>l/2
SLV 7	14.17	-1581	71.41	28962	117.63	1.647	Si
SLV 7	14.97	-85	-278.08	0	0	0	No, e>l/2

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 71	14.17	-3535	52	55.72		64743	0.195	10833	591			11.44	Si
SLU 71	14.97	-3031	471	-113.75		60169	0.1799	10833	546			1.16	Si
SLU 72	14.17	-3529	51	55.52		64625	0.195	10833	591			11.58	Si
SLU 72	14.97	-3025	471	-113.88		60167	0.1796	10833	545			1.16	Si
SLU 48	14.17	-3197	45	50.29		58545	0.195	10833	591			13.1	Si
SLU 48	14.97	-2717	443	-107.42		55803	0.1739	10833	527			1.19	Si
SLU 49	14.17	-3190	45	50.1		58427	0.195	10833	591			13.28	Si
SLU 49	14.97	-2711	443	-107.55		55809	0.1735	10833	526			1.19	Si
SLU 30	14.17	-3142	45	49.57		57538	0.195	10833	591			13.04	Si
SLU 30	14.97	-2703	422	-102.09		53872	0.1792	10833	544			1.29	Si
SLU 8	14.17	-2847	41	45.94		52135	0.195	10833	591			14.54	Si
SLU 8	14.97	-2378	443	-108.76		54691	0.1553	10833	471			1.06	Si
SLU 9	14.17	-2840	40	45.74		52018	0.195	10833	591			14.76	Si
SLU 9	14.97	-2372	443	-108.89		54732	0.1548	10833	470			1.06	Si
SLU 50	14.17	-3234	46	51.89		59223	0.195	10833	591			12.74	Si
SLU 50	14.97	-2701	492	-120.55		60818	0.1586	10833	481			0.98	No, Vu<V
SLU 51	14.17	-3227	46	51.7		59105	0.195	10833	591			12.91	Si
SLU 51	14.97	-2695	492	-120.67		60852	0.1582	10833	480			0.97	No, Vu<V
SLU 29	14.17	-3148	46	49.76		57656	0.195	10833	591			12.87	Si
SLU 29	14.97	-2709	422	-101.97		53873	0.1796	10833	545			1.29	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 7	14.17	-1581	14	71.41		35964	0.157	15526	683			49.01	Si
SLV 7	14.97	-85	1099	-278.08		0	0	8333	0			0	No, Vu<V
SLV 4	14.17	-1481	4	39.66		27126	0.195	13758	751			195.01	Si
SLV 4	14.97	-239	1186	-314.86		0	0	8333	0			0	No, Vu<V
SLV 13	14.17	-2047	51	11.21		37493	0.195	15832	864			16.93	Si
SLV 13	14.97	-3000	-972	269.84		473007	0.0227	16250	103			0.11	No, Vu<V
SLV 8	14.17	-1581	14	71.41		35964	0.157	15526	683			49.01	Si
SLV 8	14.97	-85	1099	-278.08		0	0	8333	0			0	No, Vu<V
SLV 2	14.17	-1546	8	12.16		28308	0.195	13995	764			94.3	Si
SLV 2	14.97	-978	746	-204.18		0	0	8333	0			0	No, Vu<V
SLV 1	14.17	-1546	8	12.16		28308	0.195	13995	764			94.3	Si
SLV 1	14.97	-978	746	-204.18		0	0	8333	0			0	No, Vu<V
SLV 12	14.17	-1732	27	71.12		36533	0.1693	15640	741			27.65	Si
SLV 12	14.97	-691	584	-135.87		0	0	8333	0			0	No, Vu<V
SLV 14	14.17	-2047	51	11.21		37493	0.195	15832	864			16.93	Si
SLV 14	14.97	-3000	-972	269.84		473007	0.0227	16250	103			0.11	No, Vu<V
SLV 11	14.17	-1732	27	71.12		36533	0.1693	15640	741			27.65	Si
SLV 11	14.97	-691	584	-135.87		0	0	8333	0			0	No, Vu<V
SLV 3	14.17	-1481	4	39.66		27126	0.195	13758	751			195.01	Si
SLV 3	14.97	-239	1186	-314.86		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 4	143750	0.53	10561	-577	22.45	73.75	3.29	Si
SLV 3	143750	0.53	10561	-577	22.45	73.75	3.29	Si
SLV 1	143750	0.53	10961	-598	22.45	76.27	3.4	Si
SLV 2	143750	0.53	10961	-598	22.45	76.27	3.4	Si
SLV 8	143750	0.53	11431	-624	22.45	79.21	3.53	Si
SLV 7	143750	0.53	11431	-624	22.45	79.21	3.53	Si
SLV 12	143750	0.53	12577	-687	22.45	86.24	3.84	Si
SLV 11	143750	0.53	12577	-687	22.45	86.24	3.84	Si
SLV 5	143750	0.53	12764	-697	22.45	87.38	3.89	Si
SLV 6	143750	0.53	12764	-697	22.45	87.38	3.89	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	σ_0	M*	e*	a0*	aLim	Verifica
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Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 1	-1694	-491	-102	0	196.7	0.963	0	9.06484	No
SLV 2	-1694	-491	-102	0	196.7	0.963	0	9.06484	No
SLV 10	-1382	-536	83	0	164.9	0.957	0	8.06258	No
SLV 9	-1382	-536	83	0	164.9	0.957	0	8.06258	No
SLV 7	-1150	-750	-85	0	141.4	0.95	0	8.06258	No
SLV 13	-972	-711	129	0	123.4	0.944	0	9.06484	No
SLV 8	-1150	-750	-85	0	141.4	0.95	0	8.06258	No
SLV 14	-972	-711	129	0	123.4	0.944	0	9.06484	No
SLV 3	-1559	-576	-131	0	183	0.961	0	9.06484	No
SLV 4	-1559	-576	-131	0	183	0.961	0	9.06484	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0.827	SLU 71	No
V_SLU	0.975	SLU 51	No
PF_SLV	0	SLV 1	No
V_SLV	0	SLV 1	No
PFFP_SLV	3.286	SLV 3	Si
R_SLV	0	SLV 1	No

Maschio 259

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-5.158	6.506	-5.158	6.521	L6	L7	0.015	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLU 8	14.17	-7	0.04	1769	0.05	1.431	Si
SLU 8	14.97	-1	-0.02	0	0	0	No, $e \geq l/2$
SLU 9	14.17	-6	0.04	1375	0.04	1.115	Si
SLU 9	14.97	0	-0.02	0	0	0	No, Trazione
SLU 49	14.17	-45	0.04	10625	0.29	7.419	Si
SLU 49	14.97	-37	-0.02	8725	0.25	10.202	Si
SLU 72	14.17	-63	0.04	14981	0.39	9.212	Si
SLU 72	14.97	-55	-0.02	13058	0.35	14.097	Si
SLU 6	14.17	-37	0.03	8889	0.25	7.195	Si
SLU 6	14.97	-31	-0.02	7422	0.21	10.142	Si
SLU 50	14.17	-16	0.04	3899	0.12	2.747	Si
SLU 50	14.97	-8	-0.03	1999	0.06	2.264	Si
SLU 51	14.17	-15	0.04	3505	0.11	2.476	Si
SLU 51	14.97	-7	-0.03	1605	0.05	1.814	Si
SLU 48	14.17	-46	0.04	11019	0.3	7.67	Si
SLU 48	14.97	-38	-0.02	9119	0.26	10.69	Si
SLU 7	14.17	-36	0.03	8495	0.24	6.894	Si
SLU 7	14.97	-30	-0.02	7028	0.2	9.567	Si
SLU 30	14.17	-54	0.04	12852	0.34	9.129	Si
SLU 30	14.97	-48	-0.02	11360	0.31	14.264	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma M = 2$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLV 1	14.17	501	0.09	0	0	0	No, Trazione
SLV 1	14.97	516	-0.14	0	0	0	No, Trazione
SLV 14	14.17	-873	-0.12	207811	0	0	No, Rottura per schiacciamento
SLV 14	14.97	-856	0.06	203787	0	0	No, Rottura per schiacciamento
SLV 8	14.17	300	0.14	0	0	0	No, Trazione
SLV 8	14.97	274	0.08	0	0	0	No, Trazione
SLV 9	14.17	-543	-0.11	129171	0	0	No, Rottura per schiacciamento
SLV 9	14.97	-504	-0.09	120061	0.07	0.715	No, $M > \mu$
SLV 3	14.17	630	0.14	0	0	0	No, Trazione
SLV 3	14.97	626	-0.07	0	0	0	No, Trazione
SLV 4	14.17	630	0.14	0	0	0	No, Trazione
SLV 4	14.97	626	-0.07	0	0	0	No, Trazione
SLV 13	14.17	-873	-0.12	207811	0	0	No, Rottura per schiacciamento
SLV 13	14.97	-856	0.06	203787	0	0	No, Rottura per schiacciamento
SLV 2	14.17	501	0.09	0	0	0	No, Trazione
SLV 2	14.97	516	-0.14	0	0	0	No, Trazione
SLV 7	14.17	300	0.14	0	0	0	No, Trazione
SLV 7	14.97	274	0.08	0	0	0	No, Trazione
SLV 10	14.17	-543	-0.11	129171	0	0	No, Rottura per schiacciamento
SLV 10	14.97	-504	-0.09	120061	0.07	0.715	No, $M > \mu$

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	V par	M	$\sigma 0$	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
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Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 51	14.17	-15	0	0.04		3808	0.0138	6063	23			267.88	Si
SLU 51	14.97	-7	0	-0.03		2329	0.0103	5866	17			194.01	Si
SLU 6	14.17	-37	0	0.03		8889	0.015	6741	28			407.18	Si
SLU 6	14.97	-31	0	-0.02		7422	0.015	6545	27			395.13	Si
SLU 50	14.17	-16	0	0.04		3978	0.0147	6086	25			287.52	Si
SLU 50	14.97	-8	0	-0.03		2342	0.0128	5868	21			241.32	Si
SLU 48	14.17	-46	0	0.04		11019	0.015	7025	30			374.7	Si
SLU 48	14.97	-38	0	-0.02		9119	0.015	6771	28			360.92	Si
SLU 8	14.17	-7	0	0.04		3730	0.0071	6053	12			154.74	Si
SLU 8	14.97	-1	0	-0.02		0	0	5556	0			0	No, Vu<V
SLU 49	14.17	-45	0	0.04		10625	0.015	6972	29			370.2	Si
SLU 49	14.97	-37	0	-0.02		8725	0.015	6719	28			356.49	Si
SLU 9	14.17	-6	0	0.04		0	0	5556	0			0	No, Vu<V
SLU 9	14.97	0	0	-0.02		0	0	5556	0			0	No, Vu<V
SLU 71	14.17	-65	0	0.04		15375	0.015	7606	32			387.09	Si
SLU 71	14.97	-56	0	-0.02		13452	0.015	7349	31			373.85	Si
SLU 72	14.17	-63	0	0.04		14981	0.015	7553	32			382.74	Si
SLU 72	14.97	-55	0	-0.02		13058	0.015	7297	31			369.57	Si
SLU 7	14.17	-36	0	0.03		8495	0.015	6688	28			401.93	Si
SLU 7	14.97	-30	0	-0.02		7028	0.015	6493	27			389.94	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 4	14.17	630	0	0.14		0	0	8333	0			0	No, Vu<V
SLV 4	14.97	626	0	-0.07		0	0	8333	0			0	No, Vu<V
SLV 6	14.17	-130	0	-0.05		31038	0.015	14541	61			1000	Si
SLV 6	14.97	-93	1	-0.15		22099	0.015	12753	54			90.38	Si
SLV 11	14.17	-112	0	0.08		26747	0.015	13683	57			1000	Si
SLV 11	14.97	-138	-1	0.15		32739	0.015	14881	63			112.85	Si
SLV 2	14.17	501	0	0.09		0	0	8333	0			0	No, Vu<V
SLV 2	14.97	516	0	-0.14		0	0	8333	0			0	No, Vu<V
SLV 7	14.17	300	0	0.14		0	0	8333	0			0	No, Vu<V
SLV 7	14.97	274	0	0.08		0	0	8333	0			0	No, Vu<V
SLV 8	14.17	300	0	0.14		0	0	8333	0			0	No, Vu<V
SLV 8	14.97	274	0	0.08		0	0	8333	0			0	No, Vu<V
SLV 3	14.17	630	0	0.14		0	0	8333	0			0	No, Vu<V
SLV 3	14.97	626	0	-0.07		0	0	8333	0			0	No, Vu<V
SLV 1	14.17	501	0	0.09		0	0	8333	0			0	No, Vu<V
SLV 1	14.97	516	0	-0.14		0	0	8333	0			0	No, Vu<V
SLV 5	14.17	-130	0	-0.05		31038	0.015	14541	61			1000	Si
SLV 5	14.97	-93	1	-0.15		22099	0.015	12753	54			90.38	Si
SLV 12	14.17	-112	0	0.08		26747	0.015	13683	57			1000	Si
SLV 12	14.97	-138	-1	0.15		32739	0.015	14881	63			112.85	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 7	143750	0.53	0	-3	1.73	0	0	No, $e > t/2$
SLV 1	143750	0.53	0	19	1.73	0	0	No, Trazione
SLV 4	143750	0.53	0	20	1.73	0	0	No, Trazione
SLV 8	143750	0.53	0	-3	1.73	0	0	No, $e > t/2$
SLV 2	143750	0.53	0	19	1.73	0	0	No, Trazione
SLV 6	143750	0.53	0	-7	1.73	0	0	No, $e > t/2$
SLV 3	143750	0.53	0	20	1.73	0	0	No, Trazione
SLV 5	143750	0.53	0	-7	1.73	0	0	No, $e > t/2$
SLV 11	143750	0.53	5651	-24	1.73	3.17	1.84	Si
SLV 12	143750	0.53	5651	-24	1.73	3.17	1.84	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 1	87	-21	-9	0	0	0	0	9.06484	No, Trazione
SLV 7	93	-38	-6	0	0	0	0	8.06258	No, Trazione
SLV 8	93	-38	-6	0	0	0	0	8.06258	No, Trazione
SLV 3	114	-26	-11	0	0	0	0	9.06484	No, Trazione
SLV 10	-43	-27	6	0	6.2	0.921	0	8.06258	No
SLV 6	2	-22	0	0	0	0	0	8.06258	No, Trazione
SLV 4	114	-26	-11	0	0	0	0	9.06484	No, Trazione
SLV 5	2	-22	0	0	0	0	0	8.06258	No, Trazione
SLV 2	87	-21	-9	0	0	0	0	9.06484	No, Trazione
SLV 9	-43	-27	6	0	6.2	0.921	0	8.06258	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0	SLU 9	No
V_SLU	0	SLU 8	No
PF_SLV	0	SLV 8	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 4	No
R_SLV	0	SLV 12	No

Maschio 260

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-6.008	-3.359	-6.513	-3.359	L6	L7	0.505	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 40	14.17	-1038	-81.48	7344	238.56	2.928	Si
SLU 40	14.97	-715	46.03	5058	169.38	3.68	Si
SLU 60	14.17	-1260	-97.75	8911	283.35	2.899	Si
SLU 60	14.97	-811	61.07	5738	190.43	3.118	Si
SLU 52	14.17	-1162	-89.17	8219	263.85	2.959	Si
SLU 52	14.97	-769	44.9	5437	181.17	4.035	Si
SLU 81	14.17	-1359	-104.4	9613	302.72	2.9	Si
SLU 81	14.97	-902	64.34	6379	209.92	3.262	Si
SLU 39	14.17	-1096	-85.3	7751	250.42	2.936	Si
SLU 39	14.97	-740	53.71	5232	174.81	3.255	Si
SLU 61	14.17	-1202	-93.93	8503	271.91	2.895	Si
SLU 61	14.97	-787	53.39	5564	185.08	3.467	Si
SLU 19	14.17	-939	-74.83	6642	217.8	2.91	Si
SLU 19	14.97	-625	42.75	4417	149.15	3.489	Si
SLU 18	14.17	-997	-78.66	7049	229.91	2.923	Si
SLU 18	14.97	-649	50.43	4591	154.68	3.067	Si
SLU 73	14.17	-1261	-95.81	8921	283.64	2.96	Si
SLU 73	14.97	-859	48.17	6078	200.83	4.169	Si
SLU 82	14.17	-1302	-100.58	9205	291.52	2.899	Si
SLU 82	14.97	-877	56.66	6205	204.67	3.612	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 7	14.17	307	96.73	0	0	0	No, Trazione
SLV 7	14.97	452	-98.12	0	0	0	No, Trazione
SLV 13	14.17	-1944	-325.69	13748	435.62	1.338	Si
SLV 13	14.97	-990	338.48	0	0	0	No, e>l/2
SLV 12	14.17	-39	-34.9	0	0	0	No, e>l/2
SLV 12	14.97	464	69.32	0	0	0	No, Trazione
SLV 11	14.17	-39	-34.9	0	0	0	No, e>l/2
SLV 11	14.97	464	69.32	0	0	0	No, Trazione
SLV 3	14.17	-97	176.42	0	0	0	No, e>l/2
SLV 3	14.97	-352	-253.72	0	0	0	No, e>l/2
SLV 8	14.17	307	96.73	0	0	0	No, Trazione
SLV 8	14.97	452	-98.12	0	0	0	No, Trazione
SLV 15	14.17	-1251	-262.36	8850	293.1	1.117	Si
SLV 15	14.97	-313	304.41	0	0	0	No, e>l/2
SLV 4	14.17	-97	176.42	0	0	0	No, e>l/2
SLV 4	14.97	-352	-253.72	0	0	0	No, e>l/2
SLV 16	14.17	-1251	-262.36	8850	293.1	1.117	Si
SLV 16	14.97	-313	304.41	0	0	0	No, e>l/2
SLV 14	14.17	-1944	-325.69	13748	435.62	1.338	Si
SLV 14	14.97	-990	338.48	0	0	0	No, e>l/2

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 78	14.17	-1860	-439	-114.68		13153	0.505	7309	1034			2.35	Si
SLU 78	14.97	-1425	42	44.22		10080	0.505	6900	976			23.47	Si
SLU 83	14.17	-1576	-443	-110.44		11147	0.505	7042	996			2.25	Si
SLU 83	14.97	-1115	50	60.86		7887	0.505	6607	934			18.63	Si
SLU 79	14.17	-1791	-455	-114.27		12670	0.505	7245	1024			2.25	Si
SLU 79	14.97	-1327	49	54		9384	0.505	6807	962			19.64	Si
SLU 62	14.17	-1477	-414	-103.8		10446	0.505	6948	982			2.38	Si
SLU 62	14.97	-1025	43	57.58		7245	0.505	6522	922			21.47	Si
SLU 77	14.17	-1918	-471	-118.5		13561	0.505	7364	1041			2.21	Si
SLU 77	14.97	-1450	52	51.9		10255	0.505	6923	979			18.68	Si
SLU 56	14.17	-1818	-441	-111.86		12859	0.505	7270	1028			2.33	Si
SLU 56	14.97	-1359	45	48.63		9613	0.505	6837	967			21.39	Si
SLU 74	14.17	-1701	-446	-112.46		12026	0.505	7159	1012			2.27	Si
SLU 74	14.97	-1237	48	55.39		8747	0.505	6722	950			19.98	Si
SLU 69	14.17	-1913	-441	-113.33		13532	0.505	7360	1041			2.36	Si
SLU 69	14.97	-1446	38	44.04		10230	0.505	6920	978			25.47	Si
SLU 81	14.17	-1359	-418	-104.4		9613	0.505	6837	967			2.31	Si
SLU 81	14.97	-902	45	64.34		6379	0.505	6406	906			19.99	Si
SLU 58	14.17	-1692	-426	-107.62		11968	0.505	7151	1011			2.38	Si
SLU 58	14.97	-1236	42	50.72		8743	0.505	6721	950			22.74	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, γM = 2

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 16	14.17	-1251	-1140	-262.36		34767	0.1286	15287	550			0.48	No, Vu<V
SLV 16	14.97	-313	209	304.41		0	0	8333	0			0	No, Vu<V
SLV 3	14.17	-97	775	176.42		0	0	8333	0			0	No, Vu<V
SLV 3	14.97	-352	94	-253.72		0	0	8333	0			0	No, Vu<V
SLV 7	14.17	307	358	96.73		0	0	8333	0			0	No, Vu<V
SLV 7	14.97	452	437	-98.12		0	0	8333	0			0	No, Vu<V
SLV 8	14.17	307	358	96.73		0	0	8333	0			0	No, Vu<V
SLV 8	14.97	452	437	-98.12		0	0	8333	0			0	No, Vu<V
SLV 12	14.17	-39	-217	-34.9		0	0	8333	0			0	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 12	14.97	464	471	69.32		0	0	8333	0			0	No, Vu<V
SLV 14	14.17	-1944	-1357	-325.69		27239	0.2549	13781	984			0.72	No, Vu<V
SLV 14	14.97	-990	-50	338.48		0	0	8333	0			0	No, Vu<V
SLV 4	14.17	-97	775	176.42		0	0	8333	0			0	No, Vu<V
SLV 4	14.97	-352	94	-253.72		0	0	8333	0			0	No, Vu<V
SLV 11	14.17	-39	-217	-34.9		0	0	8333	0			0	No, Vu<V
SLV 11	14.97	464	471	69.32		0	0	8333	0			0	No, Vu<V
SLV 15	14.17	-1251	-1140	-262.36		34767	0.1286	15287	550			0.48	No, Vu<V
SLV 15	14.97	-313	209	304.41		0	0	8333	0			0	No, Vu<V
SLV 13	14.17	-1944	-1357	-325.69		27239	0.2549	13781	984			0.72	No, Vu<V
SLV 13	14.97	-990	-50	338.48		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 16	143750	0.53	0	313	56.81	0	0	No, Trazione
SLV 7	143750	0.53	0	-50	56.81	0	0	No, e>t/2
SLV 14	143750	0.53	0	-104	56.81	0	0	No, e>t/2
SLV 8	143750	0.53	0	-50	56.81	0	0	No, e>t/2
SLV 11	143750	0.53	0	342	56.81	0	0	No, Trazione
SLV 12	143750	0.53	0	342	56.81	0	0	No, Trazione
SLV 13	143750	0.53	0	-104	56.81	0	0	No, e>t/2
SLV 15	143750	0.53	0	313	56.81	0	0	No, Trazione
SLV 4	143750	0.53	7030	-994	56.81	131.16	2.31	Si
SLV 3	143750	0.53	7030	-994	56.81	131.16	2.31	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 12	39	-496	-13	0	0	0	0	8.06258	No, Trazione
SLV 8	80	-558	-14	0	0	0	0	8.06258	No, Trazione
SLV 7	80	-558	-14	0	0	0	0	8.06258	No, Trazione
SLV 11	39	-496	-13	0	0	0	0	8.06258	No, Trazione
SLV 10	-815	-672	12	0.05	148.4	0.901	0.79966	8.06258	No
SLV 9	-815	-672	12	0.05	148.4	0.901	0.79966	8.06258	No
SLV 5	-774	-734	10	0.051	144.4	0.899	0.82354	8.06258	No
SLV 6	-774	-734	10	0.051	144.4	0.899	0.82354	8.06258	No
SLV 14	-565	-538	5	0.058	124.2	0.892	0.94455	9.06484	No
SLV 13	-565	-538	5	0.058	124.2	0.892	0.94455	9.06484	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.895	SLV 61	Si
V_SLV	2.212	SLV 77	Si
PF_SLV	0	SLV 12	No
V_SLV	0	SLV 3	No
PFFP_SLV	0	SLV 16	No
R_SLV	0	SLV 12	No

Maschio 261

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-3.183	-3.359	-5.508	-3.359	L6	L7	2.325	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 10	14.17	-2921	-68.47	4487	3208.64	46.86	Si
SLU 10	14.97	-2073	323.94	3185	2316.11	7.15	Si
SLU 2	14.17	-3019	-75.93	4637	3309.48	43.586	Si
SLU 2	14.97	-2089	313.39	3209	2332.93	7.444	Si
SLU 82	14.17	-4009	-131.17	6158	4308.05	32.843	Si
SLU 82	14.97	-2887	412.35	4435	3173.65	7.697	Si
SLU 31	14.17	-3222	-74.23	4949	3518.05	47.392	Si
SLU 31	14.97	-2393	353.58	3675	2656.04	7.512	Si
SLU 19	14.17	-2894	-87.75	4446	3180.88	36.249	Si
SLU 19	14.97	-2058	311.54	3161	2299.06	7.38	Si
SLU 40	14.17	-3195	-93.51	4908	3490.64	37.328	Si
SLU 40	14.97	-2377	341.18	3651	2639.22	7.736	Si
SLU 52	14.17	-3735	-106.13	5737	4035.83	38.026	Si
SLU 52	14.97	-2584	395.11	3969	2857.32	7.232	Si
SLU 61	14.17	-3708	-125.41	5696	4009.02	31.967	Si
SLU 61	14.97	-2568	382.71	3945	2840.63	7.422	Si
SLU 44	14.17	-3832	-113.59	5887	4133.18	36.387	Si
SLU 44	14.97	-2600	384.56	3993	2873.79	7.473	Si
SLU 73	14.17	-4036	-111.89	6199	4334.5	38.738	Si
SLU 73	14.97	-2903	424.75	4459	3190.11	7.511	Si



Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 14	14.17	-2606	-1279.02	4003	2930.41	2.291	Si
SLV 14	14.97	-2449	691.14	3761	2758.86	3.992	Si
SLV 15	14.17	-2434	-1020.01	3739	2742.86	2.689	Si
SLV 15	14.97	-2101	295.18	3228	2378.24	8.057	Si
SLV 6	14.17	-3580	-257.96	5499	3974.24	15.407	Si
SLV 6	14.97	-2695	879.33	4140	3026.95	3.442	Si
SLV 3	14.17	-3623	1015.76	5565	4019.54	3.957	Si
SLV 3	14.97	-1857	-125.99	2853	2108.7	16.738	Si
SLV 9	14.17	-3223	-868.69	4951	3595.13	4.139	Si
SLV 9	14.97	-2768	1005.68	4252	3106.2	3.089	Si
SLV 5	14.17	-3580	-257.96	5499	3974.24	15.407	Si
SLV 5	14.97	-2695	879.33	4140	3026.95	3.442	Si
SLV 16	14.17	-2434	-1020.01	3739	2742.86	2.689	Si
SLV 16	14.97	-2101	295.18	3228	2378.24	8.057	Si
SLV 13	14.17	-2606	-1279.02	4003	2930.41	2.291	Si
SLV 13	14.97	-2449	691.14	3761	2758.86	3.992	Si
SLV 4	14.17	-3623	1015.76	5565	4019.54	3.957	Si
SLV 4	14.97	-1857	-125.99	2853	2108.7	16.738	Si
SLV 10	14.17	-3223	-868.69	4951	3595.13	4.139	Si
SLV 10	14.97	-2768	1005.68	4252	3106.2	3.089	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 82	14.17	-4009	-1076	-131.17		6158	2.325	6377	4151			3.86	Si
SLU 82	14.97	-2887	-644	412.35		4435	2.325	6147	4002			6.21	Si
SLU 84	14.17	-4860	-1045	-173.11		7465	2.325	6551	4265			4.08	Si
SLU 84	14.97	-3663	-601	431.75		5627	2.325	6306	4105			6.83	Si
SLU 76	14.17	-4886	-1020	-153.83		7506	2.325	6556	4268			4.19	Si
SLU 76	14.97	-3679	-584	444.15		5652	2.325	6309	4107			7.03	Si
SLU 60	14.17	-3730	-938	-159.12		5730	2.325	6320	4114			4.39	Si
SLU 60	14.97	-2554	-581	357.33		3923	2.325	6079	3957			6.81	Si
SLU 40	14.17	-3195	-927	-93.51		4908	2.325	6210	4043			4.36	Si
SLU 40	14.97	-2377	-544	341.18		3651	2.325	6042	3934			7.23	Si
SLU 81	14.17	-4031	-1032	-164.88		6193	2.325	6381	4154			4.03	Si
SLU 81	14.97	-2873	-624	386.97		4414	2.325	6144	4000			6.41	Si
SLU 73	14.17	-4036	-1051	-111.89		6199	2.325	6382	4155			3.95	Si
SLU 73	14.97	-2903	-628	424.75		4459	2.325	6150	4004			6.38	Si
SLU 52	14.17	-3735	-957	-106.13		5737	2.325	6320	4115			4.3	Si
SLU 52	14.97	-2584	-585	395.11		3969	2.325	6085	3961			6.77	Si
SLU 61	14.17	-3708	-983	-125.41		5696	2.325	6315	4111			4.18	Si
SLU 61	14.97	-2568	-601	382.71		3945	2.325	6081	3959			6.58	Si
SLU 83	14.17	-4882	-1000	-206.82		7499	2.325	6555	4268			4.27	Si
SLU 83	14.97	-3649	-580	406.37		5606	2.325	6303	4103			7.07	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 3	14.17	-3623	2662	1015.76		5565	2.325	9446	6150			2.31	Si
SLV 3	14.97	-1857	1680	-125.99		2853	2.325	8904	5796			3.45	Si
SLV 8	14.17	-3006	1903	605.43		4617	2.325	9257	6026			3.17	Si
SLV 8	14.97	-1538	1216	-440.52		2362	2.325	8806	5733			4.71	Si
SLV 4	14.17	-3623	2662	1015.76		5565	2.325	9446	6150			2.31	Si
SLV 4	14.97	-1857	1680	-125.99		2853	2.325	8904	5796			3.45	Si
SLV 15	14.17	-2434	-2961	-1020.01		3898	2.2303	9113	5691			1.92	Si
SLV 15	14.97	-2101	-1846	295.18		3228	2.325	8979	5845			3.17	Si
SLV 10	14.17	-3223	-3238	-868.69		4951	2.325	9324	6070			1.87	Si
SLV 10	14.97	-2768	-2044	1005.68		4252	2.325	9184	5979			2.93	Si
SLV 7	14.17	-3006	1903	605.43		4617	2.325	9257	6026			3.17	Si
SLV 7	14.97	-1538	1216	-440.52		2362	2.325	8806	5733			4.71	Si
SLV 13	14.17	-2606	-3998	-1279.02		4619	2.0152	9257	5223			1.31	Si
SLV 13	14.97	-2449	-2507	691.14		3761	2.325	9086	5915			2.36	Si
SLV 16	14.17	-2434	-2961	-1020.01		3898	2.2303	9113	5691			1.92	Si
SLV 16	14.97	-2101	-1846	295.18		3228	2.325	8979	5845			3.17	Si
SLV 14	14.17	-2606	-3998	-1279.02		4619	2.0152	9257	5223			1.31	Si
SLV 14	14.97	-2449	-2507	691.14		3761	2.325	9086	5915			2.36	Si
SLV 9	14.17	-3223	-3238	-868.69		4951	2.325	9324	6070			1.87	Si
SLV 9	14.97	-2768	-2044	1005.68		4252	2.325	9184	5979			2.93	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 4	143750	0.53	3672	-2391	261.54	324.62	1.24	Si
SLV 3	143750	0.53	3672	-2391	261.54	324.62	1.24	Si
SLV 8	143750	0.53	3754	-2444	261.54	331.64	1.27	Si
SLV 7	143750	0.53	3754	-2444	261.54	331.64	1.27	Si
SLV 1	143750	0.53	4427	-2882	261.54	388.87	1.49	Si
SLV 2	143750	0.53	4427	-2882	261.54	388.87	1.49	Si
SLV 12	143750	0.53	4579	-2981	261.54	401.73	1.54	Si
SLV 11	143750	0.53	4579	-2981	261.54	401.73	1.54	Si
SLV 5	143750	0.53	6271	-4082	261.54	542.21	2.07	Si
SLV 6	143750	0.53	6271	-4082	261.54	542.21	2.07	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 6	-1797	-5798	-55	0.052	497.3	0.889	0.84949	8.06258	No
SLV 5	-1797	-5798	-55	0.052	497.3	0.889	0.84949	8.06258	No
SLV 12	-1474	-3137	54	0.053	468.7	0.89	0.86163	8.06258	No



Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 11	-1474	-3137	54	0.053	468.7	0.89	0.86163	8.06258	No
SLV 1	-1754	-4563	-26	0.06	493.4	0.889	0.98165	9.06484	No
SLV 2	-1754	-4563	-26	0.06	493.4	0.889	0.98165	9.06484	No
SLV 10	-1751	-5999	-48	0.054	493.2	0.889	0.87911	8.06258	No
SLV 9	-1751	-5999	-48	0.054	493.2	0.889	0.87911	8.06258	No
SLV 15	-1518	-4372	26	0.061	472.5	0.89	0.99995	9.06484	No
SLV 16	-1518	-4372	26	0.061	472.5	0.89	0.99995	9.06484	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.15	SLU 10	Si
V_SLU	3.856	SLU 82	Si
PF_SLV	2.291	SLV 13	Si
V_SLV	1.307	SLV 13	Si
PFFP_SLV	1.241	SLV 3	Si
R_SLV	0.105	SLV 5	No

Maschio 262

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.123	-3.359	-2.283	-3.359	L6	L7	2.16	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLU 40	13.07	-3568	-1629.06	5899	3574.26	2.194	Si
SLU 40	14.87	-3322	424.98	5493	3346.05	7.873	Si
SLU 81	13.07	-4565	-1702.38	7547	4472.95	2.627	Si
SLU 81	14.87	-3902	603.05	6451	3880.21	6.434	Si
SLU 19	13.07	-3422	-1385.68	5659	3439.3	2.482	Si
SLU 19	14.87	-2971	363.32	4913	3015.45	8.3	Si
SLU 41	13.07	-3987	-1551.64	6593	3957.69	2.551	Si
SLU 41	14.87	-3767	650.99	6228	3757.06	5.771	Si
SLU 82	13.07	-4599	-1807.06	7603	4502.86	2.492	Si
SLU 82	14.87	-4016	532.73	6640	3983.52	7.478	Si
SLU 34	13.07	-4108	-1603.26	6792	4066.73	2.537	Si
SLU 34	14.87	-3913	532.59	6471	3890.73	7.305	Si
SLU 39	13.07	-3534	-1524.38	5843	3542.82	2.324	Si
SLU 39	14.87	-3208	495.3	5305	3239.28	6.54	Si
SLU 73	13.07	-4685	-1753.99	7747	4578.93	2.611	Si
SLU 73	14.87	-4048	484.65	6694	4013.01	8.28	Si
SLU 42	13.07	-4021	-1656.32	6649	3988.46	2.408	Si
SLU 42	14.87	-3881	580.67	6417	3861.04	6.649	Si
SLU 31	13.07	-3655	-1576	6043	3654.26	2.319	Si
SLU 31	14.87	-3355	376.9	5547	3376.54	8.959	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma M = 2$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLV 13	13.07	-3372	-1945.38	5575	3475.6	1.787	Si
SLV 13	14.87	-3767	1676.11	6228	3860.66	2.303	Si
SLV 16	13.07	-2063	-1882.77	3412	2166.3	1.151	Si
SLV 16	14.87	-3158	1968.53	5221	3264.45	1.658	Si
SLV 14	13.07	-3372	-1945.38	5575	3475.6	1.787	Si
SLV 14	14.87	-3767	1676.11	6228	3860.66	2.303	Si
SLV 15	13.07	-2063	-1882.77	3412	2166.3	1.151	Si
SLV 15	14.87	-3158	1968.53	5221	3264.45	1.658	Si
SLV 11	13.07	-1155	-1185.91	1910	1227.86	1.035	Si
SLV 11	14.87	-2013	1347.72	3328	2114.69	1.569	Si
SLV 4	13.07	-3830	-100.46	6332	3921.66	39.035	Si
SLV 4	14.87	-1917	-779.98	3170	2017.09	2.586	Si
SLV 2	13.07	-5138	-163.08	8496	5163.41	31.662	Si
SLV 2	14.87	-2527	-1072.41	4177	2635.37	2.457	Si
SLV 12	13.07	-1155	-1185.91	1910	1227.86	1.035	Si
SLV 12	14.87	-2013	1347.72	3328	2114.69	1.569	Si
SLV 3	13.07	-3830	-100.46	6332	3921.66	39.035	Si
SLV 3	14.87	-1917	-779.98	3170	2017.09	2.586	Si
SLV 1	13.07	-5138	-163.08	8496	5163.41	31.662	Si
SLV 1	14.87	-2527	-1072.41	4177	2635.37	2.457	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	V par	M	$\sigma 0$	σN	l'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 84	13.07	-5052	-2735	-1834.32		8389	2.1507	6674	4019			1.47	Si
SLU 84	14.87	-4574	-2733	688.42		7563	2.16	6564	3970			1.45	Si
SLU 80	13.07	-5569	-2764	-1738.73		9209	2.16	6783	4103			1.48	Si
SLU 80	14.87	-5089	-2768	842.92		8415	2.16	6678	4039			1.46	Si
SLU 40	13.07	-3568	-2254	-1629.06		6813	1.8702	6464	3385			1.5	Si
SLU 40	14.87	-3322	-2240	424.98		5493	2.16	6288	3803			1.7	Si
SLU 82	13.07	-4599	-2573	-1807.06		7968	2.0611	6618	3819			1.48	Si
SLU 82	14.87	-4016	-2563	532.73		6640	2.16	6441	3895			1.52	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 79	13.07	-5535	-2680	-1634.05		9152	2.16	6776	4098			1.53	Si
SLU 79	14.87	-4975	-2720	913.24		8227	2.16	6652	4023			1.48	Si
SLU 78	13.07	-5849	-2820	-1702.02		9672	2.16	6845	4140			1.47	Si
SLU 78	14.87	-5443	-2824	901.02		8999	2.16	6755	4086			1.45	Si
SLU 77	13.07	-5815	-2736	-1597.34		9616	2.16	6838	4135			1.51	Si
SLU 77	14.87	-5329	-2775	971.34		8811	2.16	6730	4071			1.47	Si
SLU 75	13.07	-5396	-2658	-1674.76		8922	2.16	6745	4079			1.53	Si
SLU 75	14.87	-4884	-2654	745.33		8076	2.16	6632	4011			1.51	Si
SLU 76	13.07	-5139	-2657	-1781.25		8497	2.16	6688	4045			1.52	Si
SLU 76	14.87	-4607	-2632	640.35		7617	2.16	6571	3974			1.51	Si
SLU 83	13.07	-5018	-2651	-1729.64		8297	2.16	6662	4029			1.52	Si
SLU 83	14.87	-4460	-2684	758.74		7375	2.16	6539	3955			1.47	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 16	13.07	-2063	-3978	-1882.77		14660	0.5027	11265	1586			0.4	No, Vu<V
SLV 16	14.87	-3158	-2803	1968.53		8233	1.3697	9980	3827			1.37	Si
SLV 11	13.07	-1155	-2538	-1185.91		25845	0.1596	13502	603			0.24	No, Vu<V
SLV 11	14.87	-2013	-2457	1347.72		5838	1.2314	9501	3276			1.33	Si
SLV 8	13.07	-1685	-1153	-651.22		2892	2.0804	8912	5191			4.5	Si
SLV 8	14.87	-1641	-1839	523.16		2713	2.16	8876	5368			2.92	Si
SLV 12	13.07	-1155	-2538	-1185.91		25845	0.1596	13502	603			0.24	No, Vu<V
SLV 12	14.87	-2013	-2457	1347.72		5838	1.2314	9501	3276			1.33	Si
SLV 14	13.07	-3372	-3827	-1945.38		7979	1.5092	9929	4196			1.1	Si
SLV 14	14.87	-3767	-2483	1676.11		7061	1.9051	9746	5198			2.09	Si
SLV 7	13.07	-1685	-1153	-651.22		2892	2.0804	8912	5191			4.5	Si
SLV 7	14.87	-1641	-1839	523.16		2713	2.16	8876	5368			2.92	Si
SLV 9	13.07	-5517	-2035	-1394.63		9122	2.16	10158	6143			3.02	Si
SLV 9	14.87	-4043	-1387	372.96		6685	2.16	9670	5849			4.22	Si
SLV 10	13.07	-5517	-2035	-1394.63		9122	2.16	10158	6143			3.02	Si
SLV 10	14.87	-4043	-1387	372.96		6685	2.16	9670	5849			4.22	Si
SLV 15	13.07	-2063	-3978	-1882.77		14660	0.5027	11265	1586			0.4	No, Vu<V
SLV 15	14.87	-3158	-2803	1968.53		8233	1.3697	9980	3827			1.37	Si
SLV 13	13.07	-3372	-3827	-1945.38		7979	1.5092	9929	4196			1.1	Si
SLV 13	14.87	-3767	-2483	1676.11		7061	1.9051	9746	5198			2.09	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 12	143750	0.53	0	-1456	242.98	0	0	No, e>t/2
SLV 8	143750	0.53	0	-1713	242.98	0	0	No, e>t/2
SLV 7	143750	0.53	0	-1713	242.98	0	0	No, e>t/2
SLV 11	143750	0.53	0	-1456	242.98	0	0	No, e>t/2
SLV 15	143750	0.53	3977	-2406	242.98	325.81	1.34	Si
SLV 16	143750	0.53	3977	-2406	242.98	325.81	1.34	Si
SLV 3	143750	0.53	5395	-3263	242.98	436.61	1.8	Si
SLV 4	143750	0.53	5395	-3263	242.98	436.61	1.8	Si
SLV 14	143750	0.53	5748	-3476	242.98	463.79	1.91	Si
SLV 13	143750	0.53	5748	-3476	242.98	463.79	1.91	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 4	-1680	-3234	13	0.063	462.9	0.889	1.03177	9.06484	No
SLV 3	-1680	-3234	13	0.063	462.9	0.889	1.03177	9.06484	No
SLV 1	-1942	-4614	8	0.063	486.9	0.889	1.03231	9.06484	No
SLV 2	-1942	-4614	8	0.063	486.9	0.889	1.03231	9.06484	No
SLV 14	-1997	-5961	-6	0.063	492	0.889	1.03736	9.06484	No
SLV 13	-1997	-5961	-6	0.063	492	0.889	1.03736	9.06484	No
SLV 15	-1735	-4580	0	0.066	467.9	0.889	1.08591	9.06484	No
SLV 16	-1735	-4580	0	0.066	467.9	0.889	1.08591	9.06484	No
SLV 10	-2284	-7100	-7	0.062	518.8	0.891	1.00806	8.06258	No
SLV 9	-2284	-7100	-7	0.062	518.8	0.891	1.00806	8.06258	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.194	SLU 40	Si
V_SLU	1.447	SLU 78	Si
PF_SLV	1.035	SLV 11	Si
V_SLV	0.238	SLV 11	No
PFFP_SLV	0	SLV 7	No
R_SLV	0.114	SLV 3	No

Maschio 263

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-2.963	5.951	-5.018	5.951	L6	L7	2.055	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2



Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 52	13.07	-5813	-987.33	10103	5232.44	5.3	Si
SLU 52	14.87	-3237	1707.03	5625	3096.15	1.814	Si
SLU 31	13.07	-4883	-956.48	8486	4494.43	4.699	Si
SLU 31	14.87	-2866	1540.28	4981	2764.94	1.795	Si
SLU 18	13.07	-4454	-819.18	7741	4141.94	5.056	Si
SLU 18	14.87	-2465	1337.14	4284	2399.74	1.795	Si
SLU 10	13.07	-4536	-834.8	7884	4209.92	5.043	Si
SLU 10	14.87	-2547	1386.5	4427	2474.86	1.785	Si
SLU 39	13.07	-4801	-940.85	8344	4427.69	4.706	Si
SLU 39	14.87	-2784	1490.92	4839	2690.96	1.805	Si
SLU 82	13.07	-6091	-1133.66	10586	5445.53	4.803	Si
SLU 82	14.87	-3487	1857.8	6061	3316.73	1.785	Si
SLU 19	13.07	-4468	-859.45	7765	4153.02	4.832	Si
SLU 19	14.87	-2478	1383.49	4307	2411.99	1.743	Si
SLU 61	13.07	-5745	-1011.98	9984	5179.38	5.118	Si
SLU 61	14.87	-3168	1704.01	5506	3035.35	1.781	Si
SLU 73	13.07	-6160	-1109.01	10706	5497.54	4.957	Si
SLU 73	14.87	-3556	1860.81	6180	3376.57	1.815	Si
SLU 40	13.07	-4814	-981.13	8367	4438.57	4.524	Si
SLU 40	14.87	-2798	1537.27	4862	2703.03	1.758	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 6	13.07	-2129	-686.01	3700	2121.07	3.092	Si
SLV 6	14.87	-413	-1874.16	0	0	0	No, $e \geq l/2$
SLV 5	13.07	-2129	-686.01	3700	2121.07	3.092	Si
SLV 5	14.87	-413	-1874.16	0	0	0	No, $e \geq l/2$
SLV 1	13.07	-2343	-809.78	4072	2327.27	2.874	Si
SLV 1	14.87	-504	-2277.98	0	0	0	No, $e \geq l/2$
SLV 13	13.07	-5847	-584.81	10162	5508.19	9.419	Si
SLV 13	14.87	-3846	3503.17	6685	3735.98	1.066	Si
SLV 15	13.07	-7082	-623.41	12308	6543.7	10.497	Si
SLV 15	14.87	-4927	4891.39	8563	4707.63	0.962	No, $M > M_u$
SLV 11	13.07	-7296	-747.18	12680	6718.87	8.992	Si
SLV 11	14.87	-5018	4487.57	8720	4787.63	1.067	Si
SLV 16	13.07	-7082	-623.41	12308	6543.7	10.497	Si
SLV 16	14.87	-4927	4891.39	8563	4707.63	0.962	No, $M > M_u$
SLV 12	13.07	-7296	-747.18	12680	6718.87	8.992	Si
SLV 12	14.87	-5018	4487.57	8720	4787.63	1.067	Si
SLV 14	13.07	-5847	-584.81	10162	5508.19	9.419	Si
SLV 14	14.87	-3846	3503.17	6685	3735.98	1.066	Si
SLV 2	13.07	-2343	-809.78	4072	2327.27	2.874	Si
SLV 2	14.87	-504	-2277.98	0	0	0	No, $e \geq l/2$

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 73	13.07	-6160	-1694	-1109.01		10706	2.055	6983	4018			2.37	Si
SLU 73	14.87	-3556	-1694	1860.81		8396	1.5126	6675	2827			1.67	Si
SLU 84	13.07	-7078	-1848	-1151.22		12300	2.055	7196	4140			2.24	Si
SLU 84	14.87	-4474	-1848	2095.23		9525	1.6775	6826	3206			1.74	Si
SLU 82	13.07	-6091	-1706	-1133.66		10586	2.055	6967	4009			2.35	Si
SLU 82	14.87	-3487	-1706	1857.8		8391	1.4844	6674	2774			1.63	Si
SLU 76	13.07	-7146	-1836	-1126.57		12420	2.055	7211	4149			2.26	Si
SLU 76	14.87	-4542	-1836	2098.24		9561	1.6967	6830	3245			1.77	Si
SLU 83	13.07	-7064	-1800	-1110.94		12277	2.055	7193	4139			2.3	Si
SLU 83	14.87	-4460	-1800	2048.88		9346	1.7044	6802	3246			1.8	Si
SLU 40	13.07	-4814	-1433	-981.13		8367	2.055	6671	3839			2.68	Si
SLU 40	14.87	-2798	-1433	1537.27		6967	1.4341	6485	2604			1.82	Si
SLU 60	13.07	-5732	-1505	-971.71		9961	2.055	6884	3961			2.63	Si
SLU 60	14.87	-3155	-1505	1657.66		7481	1.5063	6553	2764			1.84	Si
SLU 61	13.07	-5745	-1553	-1011.98		9984	2.055	6887	3963			2.55	Si
SLU 61	14.87	-3168	-1553	1704.01		7703	1.469	6583	2708			1.74	Si
SLU 52	13.07	-5813	-1541	-987.33		10103	2.055	6903	3972			2.58	Si
SLU 52	14.87	-3237	-1541	1707.03		7705	1.5004	6583	2765			1.79	Si
SLU 81	13.07	-6078	-1658	-1093.38		10563	2.055	6964	4007			2.42	Si
SLU 81	14.87	-3474	-1658	1811.45		8172	1.5183	6645	2825			1.7	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 6	13.07	-2129	851	-686.01		3700	2.055	9073	5221			6.14	Si
SLV 6	14.87	-413	428	-1874.16		0	0	8333	0			0	No, $V_u < V$
SLV 2	13.07	-2343	1311	-809.78		4091	2.0457	9151	5242			4	Si
SLV 2	14.87	-504	206	-2277.98		0	0	8333	0			0	No, $V_u < V$
SLV 16	13.07	-7082	-3627	-623.41		12308	2.055	10795	6211			1.71	Si
SLV 16	14.87	-4927	-2522	4891.39		168998	0.1041	16250	474			0.19	No, $V_u < V$
SLV 13	13.07	-5847	-2790	-584.81		10162	2.055	10366	5964			2.14	Si
SLV 13	14.87	-3846	-1746	3503.17		39225	0.3502	16178	1586			0.91	No, $V_u < V$
SLV 14	13.07	-5847	-2790	-584.81		10162	2.055	10366	5964			2.14	Si
SLV 14	14.87	-3846	-1746	3503.17		39225	0.3502	16178	1586			0.91	No, $V_u < V$
SLV 12	13.07	-7296	-3167	-747.18		12680	2.055	10869	6254			1.97	Si
SLV 12	14.87	-5018	-2744	4487.57		44868	0.3994	16250	1817			0.66	No, $V_u < V$
SLV 1	13.07	-2343	1311	-809.78		4091	2.0457	9151	5242			4	Si
SLV 1	14.87	-504	206	-2277.98		0	0	8333	0			0	No, $V_u < V$
SLV 5	13.07	-2129	851	-686.01		3700	2.055	9073	5221			6.14	Si
SLV 5	14.87	-413	428	-1874.16		0	0	8333	0			0	No, $V_u < V$
SLV 15	13.07	-7082	-3627	-623.41		12308	2.055	10795	6211			1.71	Si
SLV 15	14.87	-4927	-2522	4891.39		168998	0.1041	16250	474			0.19	No, $V_u < V$
SLV 11	13.07	-7296	-3167	-747.18		12680	2.055	10869	6254			1.97	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 11	14.87	-5018	-2744	4487.57		44868	0.3994	16250	1817			0.66	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 5	143750	0.53	0	-1585	231.17	0	0	No, e>t/2
SLV 6	143750	0.53	0	-1585	231.17	0	0	No, e>t/2
SLV 2	143750	0.53	2975	-1712	231.17	233.85	1.01	Si
SLV 1	143750	0.53	2975	-1712	231.17	233.85	1.01	Si
SLV 9	143750	0.53	4563	-2625	231.17	353.82	1.53	Si
SLV 10	143750	0.53	4563	-2625	231.17	353.82	1.53	Si
SLV 3	143750	0.53	4972	-2861	231.17	384.22	1.66	Si
SLV 4	143750	0.53	4972	-2861	231.17	384.22	1.66	Si
SLV 13	143750	0.53	9001	-5179	231.17	671.65	2.91	Si
SLV 14	143750	0.53	9001	-5179	231.17	671.65	2.91	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 2	201	-4070	-104	0	0	0	0	9.06484	No, Trazione
SLV 12	-4951	-5654	389	0	765.8	0.915	0	8.06258	No
SLV 11	-4951	-5654	389	0	765.8	0.915	0	8.06258	No
SLV 9	-1056	-3022	-396	0	393.3	0.893	0	8.06258	No
SLV 7	-3741	-5713	397	0	645.7	0.904	0	8.06258	No
SLV 1	201	-4070	-104	0	0	0	0	9.06484	No, Trazione
SLV 6	153	-3080	-388	0	0	0	0	8.06258	No, Trazione
SLV 5	153	-3080	-388	0	0	0	0	8.06258	No, Trazione
SLV 10	-1056	-3022	-396	0	393.3	0.893	0	8.06258	No
SLV 8	-3741	-5713	397	0	645.7	0.904	0	8.06258	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.743	SLU 19	Si
V_SLU	1.626	SLU 82	Si
PF_SLV	0	SLV 1	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 5	No
R_SLV	0	SLV 6	No

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Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.123	5.951	-2.063	5.951	L6	L7	1.94	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 18	13.07	-2783	-1197.84	5123	2529.69	2.112	Si
SLU 18	14.87	-2701	625.48	4972	2459.71	3.933	Si
SLU 31	13.07	-2829	-1360.18	5207	2568.34	1.888	Si
SLU 31	14.87	-3021	746.38	5561	2730.2	3.658	Si
SLU 40	13.07	-2801	-1447.04	5156	2544.94	1.759	Si
SLU 40	14.87	-3057	746.3	5628	2760.74	3.699	Si
SLU 39	13.07	-2884	-1414.87	5309	2615.01	1.848	Si
SLU 39	14.87	-3048	724.02	5612	2753.23	3.803	Si
SLU 81	13.07	-3767	-1591.5	6935	3342.94	2.1	Si
SLU 81	14.87	-3697	863.11	6806	3286.35	3.808	Si
SLU 41	13.07	-3331	-1417.85	6132	2987.74	2.107	Si
SLU 41	14.87	-3586	892.25	6601	3196.18	3.582	Si
SLU 82	13.07	-3684	-1623.68	6782	3276.08	2.018	Si
SLU 82	14.87	-3706	885.39	6822	3293.61	3.72	Si
SLU 42	13.07	-3248	-1450.02	5979	2919.29	2.013	Si
SLU 42	14.87	-3595	914.52	6617	3203.48	3.503	Si
SLU 73	13.07	-3712	-1536.81	6833	3298.42	2.146	Si
SLU 73	14.87	-3669	885.48	6755	3264.11	3.686	Si
SLU 19	13.07	-2700	-1230.01	4971	2459.25	1.999	Si
SLU 19	14.87	-2710	647.76	4988	2467.36	3.809	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 9	13.07	-1594	-563.24	2934	1508.81	2.679	Si
SLV 9	14.87	-2118	1048.94	3899	1989.04	1.896	Si
SLV 14	13.07	-1625	-1418.86	2992	1537.66	1.084	Si
SLV 14	14.87	-2783	1385.98	5123	2586.21	1.866	Si
SLV 11	13.07	-3828	-1754.75	7048	3499.31	1.994	Si
SLV 11	14.87	-3431	602.42	6316	3156.14	5.239	Si
SLV 5	13.07	-2237	-187.31	4119	2097.06	11.196	Si
SLV 5	14.87	-1942	626.09	3576	1828.88	2.921	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 16	13.07	-2295	-1776.31	4226	2149.53	1.21	Si
SLV 16	14.87	-3177	1252.03	5848	2933.97	2.343	Si
SLV 12	13.07	-3828	-1754.75	7048	3499.31	1.994	Si
SLV 12	14.87	-3431	602.42	6316	3156.14	5.239	Si
SLV 13	13.07	-1625	-1418.86	2992	1537.66	1.084	Si
SLV 13	14.87	-2783	1385.98	5123	2586.21	1.866	Si
SLV 6	13.07	-2237	-187.31	4119	2097.06	11.196	Si
SLV 6	14.87	-1942	626.09	3576	1828.88	2.921	Si
SLV 15	13.07	-2295	-1776.31	4226	2149.53	1.21	Si
SLV 15	14.87	-3177	1252.03	5848	2933.97	2.343	Si
SLV 10	13.07	-1594	-563.24	2934	1508.81	2.679	Si
SLV 10	14.87	-2118	1048.94	3899	1989.04	1.896	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 40	13.07	-2801	-2320	-1447.04		7355	1.3601	6536	2489			1.07	Si
SLU 40	14.87	-3057	-2345	746.3		5628	1.94	6306	3425			1.46	Si
SLU 82	13.07	-3684	-2650	-1623.68		8287	1.5878	6660	2961			1.12	Si
SLU 82	14.87	-3706	-2679	885.39		6822	1.94	6465	3512			1.31	Si
SLU 84	13.07	-4131	-2790	-1626.65		8535	1.7288	6694	3240			1.16	Si
SLU 84	14.87	-4243	-2828	1053.62		7811	1.94	6597	3584			1.27	Si
SLU 76	13.07	-4159	-2708	-1539.79		8255	1.7993	6656	3353			1.24	Si
SLU 76	14.87	-4207	-2745	1053.7		7744	1.94	6588	3579			1.3	Si
SLU 81	13.07	-3767	-2569	-1591.5		8191	1.6426	6648	3057			1.19	Si
SLU 81	14.87	-3697	-2600	863.11		6806	1.94	6463	3511			1.35	Si
SLU 31	13.07	-2829	-2238	-1360.18		6884	1.4674	6473	2660			1.19	Si
SLU 31	14.87	-3021	-2262	746.38		5561	1.94	6297	3421			1.51	Si
SLU 83	13.07	-4214	-2710	-1594.48		8480	1.7749	6686	3323			1.23	Si
SLU 83	14.87	-4234	-2749	1031.34		7795	1.94	6595	3582			1.3	Si
SLU 73	13.07	-3712	-2567	-1536.81		7948	1.6679	6615	3089			1.2	Si
SLU 73	14.87	-3669	-2596	885.48		6755	1.94	6456	3507			1.35	Si
SLU 42	13.07	-3248	-2461	-1450.02		7385	1.5707	6540	2876			1.17	Si
SLU 42	14.87	-3595	-2494	914.52		6617	1.94	6438	3497			1.4	Si
SLU 39	13.07	-2884	-2240	-1414.87		7162	1.4381	6510	2622			1.17	Si
SLU 39	14.87	-3048	-2265	724.02		5612	1.94	6304	3424			1.51	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 12	13.07	-3828	-2198	-1754.75		8908	1.5349	10115	4347			1.98	Si
SLV 12	14.87	-3431	-1858	602.42		6316	1.94	9597	5213			2.81	Si
SLV 13	13.07	-1625	-3535	-1418.86		19973	0.2906	12328	1003			0.28	No, Vu<V
SLV 13	14.87	-2783	-2053	1385.98		7020	1.4159	9737	3860			1.88	Si
SLV 10	13.07	-1594	-2227	-563.24		3077	1.8498	8949	4635			2.08	Si
SLV 10	14.87	-2118	-1725	1048.94		5311	1.4244	9396	3747			2.17	Si
SLV 16	13.07	-2295	-3527	-1776.31		13932	0.5884	11120	1832			0.52	No, Vu<V
SLV 16	14.87	-3177	-2093	1252.03		6567	1.7276	9647	4667			2.23	Si
SLV 11	13.07	-3828	-2198	-1754.75		8908	1.5349	10115	4347			1.98	Si
SLV 11	14.87	-3431	-1858	602.42		6316	1.94	9597	5213			2.81	Si
SLV 14	13.07	-1625	-3535	-1418.86		19973	0.2906	12328	1003			0.28	No, Vu<V
SLV 14	14.87	-2783	-2053	1385.98		7020	1.4159	9737	3860			1.88	Si
SLV 9	13.07	-1594	-2227	-563.24		3077	1.8498	8949	4635			2.08	Si
SLV 9	14.87	-2118	-1725	1048.94		5311	1.4244	9396	3747			2.17	Si
SLV 8	13.07	-4472	-1068	-1378.81		8233	1.94	9980	5421			5.07	Si
SLV 8	14.87	-3255	-1616	179.58		5993	1.94	9532	5178			3.2	Si
SLV 15	13.07	-2295	-3527	-1776.31		13932	0.5884	11120	1832			0.52	No, Vu<V
SLV 15	14.87	-3177	-2093	1252.03		6567	1.7276	9647	4667			2.23	Si
SLV 7	13.07	-4472	-1068	-1378.81		8233	1.94	9980	5421			5.07	Si
SLV 7	14.87	-3255	-1616	179.58		5993	1.94	9532	5178			3.2	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 9	143750	0.53	0	-1512	218.24	0	0	No, e>t/2
SLV 10	143750	0.53	0	-1512	218.24	0	0	No, e>t/2
SLV 13	143750	0.53	3510	-1907	218.24	259.29	1.19	Si
SLV 14	143750	0.53	3510	-1907	218.24	259.29	1.19	Si
SLV 5	143750	0.53	3527	-1916	218.24	260.49	1.19	Si
SLV 6	143750	0.53	3527	-1916	218.24	260.49	1.19	Si
SLV 15	143750	0.53	4877	-2649	218.24	356.1	1.63	Si
SLV 16	143750	0.53	4877	-2649	218.24	356.1	1.63	Si
SLV 1	143750	0.53	5989	-3253	218.24	433.15	1.98	Si
SLV 2	143750	0.53	5989	-3253	218.24	433.15	1.98	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 13	-1998	-4173	-19	0.058	460.9	0.891	0.95239	9.06484	No
SLV 14	-1998	-4173	-19	0.058	460.9	0.891	0.95239	9.06484	No
SLV 16	-2078	-5253	-9	0.061	468.5	0.891	0.99461	9.06484	No
SLV 15	-2078	-5253	-9	0.061	468.5	0.891	0.99461	9.06484	No
SLV 3	-1860	-4256	11	0.061	448	0.89	1.00178	9.06484	No
SLV 4	-1860	-4256	11	0.061	448	0.89	1.00178	9.06484	No
SLV 9	-1827	-2563	-25	0.057	445	0.89	0.93815	8.06258	No
SLV 10	-1827	-2563	-25	0.057	445	0.89	0.93815	8.06258	No
SLV 1	-1779	-3176	0	0.065	440.5	0.889	1.06118	9.06484	No
SLV 2	-1779	-3176	0	0.065	440.5	0.889	1.06118	9.06484	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
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Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.759	SLU 40	Si
V_SLU	1.073	SLU 40	Si
PF_SLV	1.084	SLV 13	Si
V_SLV	0.284	SLV 13	No
PFFP_SLV	0	SLV 9	No
R_SLV	0.105	SLV 13	No

Maschio 265

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.123	-3.359	-0.123	5.951	L6	L7	9.31	0.28	3.15	3.15	3.15			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ ₀	f _{v0}	μ	φ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLU 8	12.17	-26277	791.37	10080	107183.15	135.44	Si
SLU 8	15.32	-6512	-318.22	2498	29382.5	92.335	Si
SLU 37	12.17	-30979	862.98	11884	123167.78	142.724	Si
SLU 37	15.32	-7350	-390.5	2820	33030.02	84.584	Si
SLU 79	12.17	-36999	1067.21	14193	142221.5	133.265	Si
SLU 79	15.32	-8225	-408.92	3155	36806.31	90.009	Si
SLU 77	12.17	-37514	1084.57	14391	143776.14	132.565	Si
SLU 77	15.32	-8136	-397.81	3121	36423.81	91.562	Si
SLU 41	12.17	-30280	847.55	11616	120854.95	142.594	Si
SLU 41	15.32	-6006	-300.1	2304	27168.09	90.53	Si
SLU 14	12.17	-28755	816.12	11031	115729.94	141.805	Si
SLU 14	15.32	-6605	-330.14	2534	29789.86	90.233	Si
SLU 29	12.17	-29015	855.59	11130	116608.92	136.291	Si
SLU 29	15.32	-7168	-367.46	2750	32239.43	87.736	Si
SLU 27	12.17	-29529	872.94	11328	118343.67	135.569	Si
SLU 27	15.32	-7079	-356.35	2715	31852.8	89.386	Si
SLU 16	12.17	-28241	798.76	10834	113977.73	142.693	Si
SLU 16	15.32	-6694	-341.25	2568	30178.34	88.433	Si
SLU 35	12.17	-31493	880.34	12081	124858.23	141.83	Si
SLU 35	15.32	-7261	-379.39	2785	32644.1	86.044	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLV 10	12.17	-26044	-14733.95	9991	111321.37	7.555	Si
SLV 10	15.32	-2460	7698.37	944	11364.48	1.476	Si
SLV 16	12.17	-29303	5964.97	11241	123855.7	20.764	Si
SLV 16	15.32	-3988	-2703.85	1530	18331.16	6.78	Si
SLV 7	12.17	-23037	16283.18	8837	99481.91	6.109	Si
SLV 7	15.32	-5354	-7975.02	2054	24505.71	3.073	Si
SLV 9	12.17	-26044	-14733.95	9991	111321.37	7.555	Si
SLV 9	15.32	-2460	7698.37	944	11364.48	1.476	Si
SLV 5	12.17	-23174	-15029.97	8890	100027.08	6.655	Si
SLV 5	15.32	-2655	7816.45	1018	12255.99	1.568	Si
SLV 8	12.17	-23037	16283.18	8837	99481.91	6.109	Si
SLV 8	15.32	-5354	-7975.02	2054	24505.71	3.073	Si
SLV 11	12.17	-25907	16579.21	9938	110787.69	6.682	Si
SLV 11	15.32	-5160	-8093.1	1979	23629.56	2.92	Si
SLV 12	12.17	-25907	16579.21	9938	110787.69	6.682	Si
SLV 12	15.32	-5160	-8093.1	1979	23629.56	2.92	Si
SLV 15	12.17	-29303	5964.97	11241	123855.7	20.764	Si
SLV 15	15.32	-3988	-2703.85	1530	18331.16	6.78	Si
SLV 6	12.17	-23174	-15029.97	8890	100027.08	6.655	Si
SLV 6	15.32	-2655	7816.45	1018	12255.99	1.568	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	V par	M	σ ₀	σ _N	l'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 13	12.17	-26684	-347	818.39		10236	9.31	6920	18040			51.93	Si
SLU 13	15.32	-5214	-63	1.95		2000	9.31	5822	15177			239.35	Si
SLU 44	12.17	-29201	-347	996.62		11202	9.31	7049	18376			52.95	Si
SLU 44	15.32	-4485	-64	106.84		1721	9.31	5785	15080			236.13	Si
SLU 5	12.17	-24720	-336	810.99		9483	9.31	6820	17778			52.86	Si
SLU 5	15.32	-5032	-53	24.99		1930	9.31	5813	15153			287.41	Si
SLU 73	12.17	-33902	-361	1068.23		13005	9.31	7290	19003			52.65	Si
SLU 73	15.32	-5323	-77	34.56		2042	9.31	5828	15192			196.56	Si
SLU 2	12.17	-23180	-357	792.39		8892	9.31	6741	17573			49.22	Si
SLU 2	15.32	-3610	-73	125.26		1385	9.31	5740	14964			205.28	Si
SLU 31	12.17	-27882	-371	864		10696	9.31	6982	18200			49.07	Si
SLU 31	15.32	-4448	-86	52.98		1706	9.31	5783	15075			174.65	Si
SLU 52	12.17	-31165	-358	1004.01		11955	9.31	7150	18637			52.05	Si
SLU 52	15.32	-4667	-75	83.81		1790	9.31	5794	15105			202.6	Si
SLU 23	12.17	-25918	-360	856.61		9942	9.31	6881	17938			49.85	Si
SLU 23	15.32	-4266	-76	76.02		1636	9.31	5774	15051			199.01	Si
SLU 10	12.17	-25144	-368	799.78		9646	9.31	6842	17835			48.46	Si
SLU 10	15.32	-3792	-84	102.22		1455	9.31	5750	14988			179.32	Si
SLU 34	12.17	-29422	-350	882.61		11287	9.31	7060	18405			52.55	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 34	15.32	-5870	-66	-47.29		2252	9.31	5856	15265			230.77	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 9	12.17	-26044	-10292	-14733.95		9991	9.31	10331	26932			2.62	Si
SLV 9	15.32	-2460	-2886	7698.37		1919	4.5781	8717	11174			3.87	Si
SLV 2	12.17	-19778	-3808	-4415.73		7587	9.31	9851	25679			6.74	Si
SLV 2	15.32	-3827	-1289	2427.2		1468	9.31	8627	22489			17.44	Si
SLV 7	12.17	-23037	10344	16283.18		8837	9.31	10101	26331			2.55	Si
SLV 7	15.32	-5354	2933	-7975.02		2054	9.31	8744	22794			7.77	Si
SLV 11	12.17	-25907	10750	16579.21		9938	9.31	10321	26905			2.5	Si
SLV 11	15.32	-5160	3175	-8093.1		1990	9.2595	8731	22637			7.13	Si
SLV 1	12.17	-19778	-3808	-4415.73		7587	9.31	9851	25679			6.74	Si
SLV 1	15.32	-3827	-1289	2427.2		1468	9.31	8627	22489			17.44	Si
SLV 10	12.17	-26044	-10292	-14733.95		9991	9.31	10331	26932			2.62	Si
SLV 10	15.32	-2460	-2886	7698.37		1919	4.5781	8717	11174			3.87	Si
SLV 12	12.17	-25907	10750	16579.21		9938	9.31	10321	26905			2.5	Si
SLV 12	15.32	-5160	3175	-8093.1		1990	9.2595	8731	22637			7.13	Si
SLV 6	12.17	-23174	-10698	-15029.97		8890	9.31	10111	26358			2.46	Si
SLV 6	15.32	-2655	-3128	7816.45		1847	5.1328	8703	12508			4	Si
SLV 8	12.17	-23037	10344	16283.18		8837	9.31	10101	26331			2.55	Si
SLV 8	15.32	-5354	2933	-7975.02		2054	9.31	8744	22794			7.77	Si
SLV 5	12.17	-23174	-10698	-15029.97		8890	9.31	10111	26358			2.46	Si
SLV 5	15.32	-2655	-3128	7816.45		1847	5.1328	8703	12508			4	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.745 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 4	143750	0.53	4654	-12131	1083.84	1633.7	1.51	Si
SLV 3	143750	0.53	4654	-12131	1083.84	1633.7	1.51	Si
SLV 1	143750	0.53	4803	-12521	1083.84	1684.04	1.55	Si
SLV 2	143750	0.53	4803	-12521	1083.84	1684.04	1.55	Si
SLV 8	143750	0.53	5008	-13054	1083.84	1752.65	1.62	Si
SLV 7	143750	0.53	5008	-13054	1083.84	1752.65	1.62	Si
SLV 11	143750	0.53	5461	-14235	1083.84	1903.78	1.76	Si
SLV 12	143750	0.53	5461	-14235	1083.84	1903.78	1.76	Si
SLV 5	143750	0.53	5506	-14353	1083.84	1918.89	1.77	Si
SLV 6	143750	0.53	5506	-14353	1083.84	1918.89	1.77	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 13.745 Wa = 0.05 Ta = 0.0592

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 14	-3178	-29344	706	0.009	1656.5	0.905	0.13963	9.06484	No
SLV 13	-3178	-29344	706	0.009	1656.5	0.905	0.13963	9.06484	No
SLV 15	-3988	-29303	638	0.017	1717.7	0.898	0.2792	9.06484	No
SLV 16	-3988	-29303	638	0.017	1717.7	0.898	0.2792	9.06484	No
SLV 10	-2460	-26044	438	0.033	1606.9	0.914	0.52909	8.06258	No
SLV 9	-2460	-26044	438	0.033	1606.9	0.914	0.52909	8.06258	No
SLV 3	-4637	-19737	-356	0.042	1769.7	0.894	0.68586	9.06484	No
SLV 4	-4637	-19737	-356	0.042	1769.7	0.894	0.68586	9.06484	No
SLV 1	-3827	-19778	-287	0.048	1705.1	0.899	0.77808	9.06484	No
SLV 2	-3827	-19778	-287	0.048	1705.1	0.899	0.77808	9.06484	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	84.584	SLU 37	Si
V_SLU	48.457	SLU 10	Si
PF_SLV	1.476	SLV 9	Si
V_SLV	2.464	SLV 5	Si
PFFP_SLV	1.507	SLV 3	Si
R_SLV	0.015	SLV 13	No

Maschio 266

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-17.053	-4.934	-17.053	-4.589	L6	F1	0.344	0.3	2.681	2.621	2.742			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 28	12.17	-1197	-151.76	11584	176.69	1.164	Si
SLU 28	14.14	-283	62.19	0	0	0	No, e>/2
SLU 33	12.17	-1214	-161.41	11752	178.83	1.108	Si
SLU 33	14.14	-256	66.09	0	0	0	No, e>/2
SLU 31	12.17	-1155	-224.22	0	0	0	No, e>/2
SLU 31	14.14	-220	88.84	0	0	0	No, e>/2
SLU 36	12.17	-1263	-162.52	12223	184.74	1.137	Si
SLU 36	14.14	-266	67.43	0	0	0	No, e>/2



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 44	12.17	-1306	-210.59	12647	189.97	0.902	No, $M > Mu$
SLU 44	14.14	-355	80.35	0	0	0	No, $e > l/2$
SLU 30	12.17	-1196	-149.98	11574	176.57	1.177	Si
SLU 30	14.14	-291	60.71	0	0	0	No, $e > l/2$
SLU 34	12.17	-1203	-225.33	0	0	0	No, $e > l/2$
SLU 34	14.14	-230	90.17	0	0	0	No, $e > l/2$
SLU 42	12.17	-1241	-164.24	12017	182.16	1.109	Si
SLU 42	14.14	-257	66.86	0	0	0	No, $e > l/2$
SLU 40	12.17	-1193	-163.13	11546	176.21	1.08	Si
SLU 40	14.14	-247	65.53	0	0	0	No, $e > l/2$
SLU 38	12.17	-1262	-160.74	12214	184.62	1.149	Si
SLU 38	14.14	-274	65.95	0	0	0	No, $e > l/2$

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 9	12.17	-1164	1533.09	0	0	0	No, $e > l/2$
SLV 9	14.14	-924	-648.47	0	0	0	No, $e > l/2$
SLV 4	12.17	-1019	-113.81	9869	161.32	1.417	Si
SLV 4	14.14	-208	78.06	0	0	0	No, $e > l/2$
SLV 1	12.17	-1062	912.75	0	0	0	No, $e > l/2$
SLV 1	14.14	-579	-348.84	0	0	0	No, $e > l/2$
SLV 3	12.17	-1019	-113.81	9869	161.32	1.417	Si
SLV 3	14.14	-208	78.06	0	0	0	No, $e > l/2$
SLV 6	12.17	-1139	1799.54	0	0	0	No, $e > l/2$
SLV 6	14.14	-965	-740.05	0	0	0	No, $e > l/2$
SLV 5	12.17	-1139	1799.54	0	0	0	No, $e > l/2$
SLV 5	14.14	-965	-740.05	0	0	0	No, $e > l/2$
SLV 8	12.17	-998	-1622.32	0	0	0	No, $e > l/2$
SLV 8	14.14	272	682.94	0	0	0	No, Trazione
SLV 10	12.17	-1164	1533.09	0	0	0	No, $e > l/2$
SLV 10	14.14	-924	-648.47	0	0	0	No, $e > l/2$
SLV 2	12.17	-1062	912.75	0	0	0	No, $e > l/2$
SLV 2	14.14	-579	-348.84	0	0	0	No, $e > l/2$
SLV 7	12.17	-998	-1622.32	0	0	0	No, $e > l/2$
SLV 7	14.14	272	682.94	0	0	0	No, Trazione

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 42	12.17	-1241	-215	-164.24		34624	0.1195	10172	365			1.7	Si
SLU 42	14.14	-257	134	66.86		0	0	5556	0			0	No, $V_u < V$
SLU 31	12.17	-1155	-293	-224.22		0	0	5556	0			0	No, $V_u < V$
SLU 31	14.14	-220	188	88.84		0	0	5556	0			0	No, $V_u < V$
SLU 33	12.17	-1214	-212	-161.41		34419	0.1176	10145	358			1.68	Si
SLU 33	14.14	-256	132	66.09		0	0	5556	0			0	No, $V_u < V$
SLU 34	12.17	-1203	-296	-225.33		0	0	5556	0			0	No, $V_u < V$
SLU 34	14.14	-230	191	90.17		0	0	5556	0			0	No, $V_u < V$
SLU 28	12.17	-1197	-202	-151.76		29337	0.1359	9467	386			1.91	Si
SLU 28	14.14	-283	123	62.19		0	0	5556	0			0	No, $V_u < V$
SLU 44	12.17	-1306	-276	-210.59		132592	0.0328	10833	107			0.39	No, $V_u < V$
SLU 44	14.14	-355	160	80.35		0	0	5556	0			0	No, $V_u < V$
SLU 40	12.17	-1193	-212	-163.13		37466	0.1061	10551	336			1.58	Si
SLU 40	14.14	-247	131	65.53		0	0	5556	0			0	No, $V_u < V$
SLU 38	12.17	-1262	-212	-160.74		31331	0.1342	9733	392			1.85	Si
SLU 38	14.14	-274	132	65.95		0	0	5556	0			0	No, $V_u < V$
SLU 30	12.17	-1196	-199	-149.98		28444	0.1401	9348	393			1.98	Si
SLU 30	14.14	-291	120	60.71		0	0	5556	0			0	No, $V_u < V$
SLU 36	12.17	-1263	-215	-162.52		32302	0.1303	9862	385			1.79	Si
SLU 36	14.14	-266	135	67.43		0	0	5556	0			0	No, $V_u < V$

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 5	12.17	-1139	2153	1799.54		0	0	8333	0			0	No, $V_u < V$
SLV 5	14.14	-965	-1792	-740.05		0	0	8333	0			0	No, $V_u < V$
SLV 6	12.17	-1139	2153	1799.54		0	0	8333	0			0	No, $V_u < V$
SLV 6	14.14	-965	-1792	-740.05		0	0	8333	0			0	No, $V_u < V$
SLV 8	12.17	-998	-1948	-1622.32		0	0	8333	0			0	No, $V_u < V$
SLV 8	14.14	272	1566	682.94		0	0	8333	0			0	No, $V_u < V$
SLV 1	12.17	-1062	1093	912.75		0	0	8333	0			0	No, $V_u < V$
SLV 1	14.14	-579	-912	-348.84		0	0	8333	0			0	No, $V_u < V$
SLV 4	12.17	-1019	-138	-113.81		18718	0.1815	12077	658			4.78	Si
SLV 4	14.14	-208	95	78.06		0	0	8333	0			0	No, $V_u < V$
SLV 9	12.17	-1164	1832	1533.09		0	0	8333	0			0	No, $V_u < V$
SLV 9	14.14	-924	-1539	-648.47		0	0	8333	0			0	No, $V_u < V$
SLV 3	12.17	-1019	-138	-113.81		18718	0.1815	12077	658			4.78	Si
SLV 3	14.14	-208	95	78.06		0	0	8333	0			0	No, $V_u < V$
SLV 10	12.17	-1164	1832	1533.09		0	0	8333	0			0	No, $V_u < V$
SLV 10	14.14	-924	-1539	-648.47		0	0	8333	0			0	No, $V_u < V$
SLV 7	12.17	-998	-1948	-1622.32		0	0	8333	0			0	No, $V_u < V$
SLV 7	14.14	272	1566	682.94		0	0	8333	0			0	No, $V_u < V$
SLV 2	12.17	-1062	1093	912.75		0	0	8333	0			0	No, $V_u < V$
SLV 2	14.14	-579	-912	-348.84		0	0	8333	0			0	No, $V_u < V$

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.48 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 5	143750	0.52	0	2536	29.07	0	0	No, Trazione
SLV 10	143750	0.52	0	1392	29.07	0	0	No, Trazione
SLV 1	143750	0.52	0	2032	29.07	0	0	No, Trazione
SLV 2	143750	0.52	0	2032	29.07	0	0	No, Trazione



Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 3	143750	0.52	0	455	29.07	0	0	No, Trazione
SLV 9	143750	0.52	0	1392	29.07	0	0	No, Trazione
SLV 6	143750	0.52	0	2536	29.07	0	0	No, Trazione
SLV 4	143750	0.52	0	455	29.07	0	0	No, Trazione
SLV 13	143750	0.52	17257	-1783	29.07	229.61	7.9	Si
SLV 14	143750	0.52	17257	-1783	29.07	229.61	7.9	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 13.48 Wa = 0.05 Ta = 0.04

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 5	680	-1139	-72	0	0	0	0	6.40903	No, Trazione
SLV 6	680	-1139	-72	0	0	0	0	6.40903	No, Trazione
SLV 7	-637	-998	77	0	105.1	0.908	0	6.40903	No
SLV 10	546	-1164	-75	0	0	0	0	6.40903	No, Trazione
SLV 8	-637	-998	77	0	105.1	0.908	0	6.40903	No
SLV 9	546	-1164	-75	0	0	0	0	6.40903	No, Trazione
SLV 1	375	-1062	-17	0	0	0	0	6.90916	No, Trazione
SLV 2	375	-1062	-17	0	0	0	0	6.90916	No, Trazione
SLV 12	-771	-1022	74	0	118.5	0.915	0	6.40903	No
SLV 11	-771	-1022	74	0	118.5	0.915	0	6.40903	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0	SLU 2	No
V_SLU	0	SLU 2	No
PF_SLV	0	SLV 12	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 10	No
R_SLV	0	SLV 10	No

Maschio 267

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.sx	a.s.dx
-16.45	-4.784	-17.053	-4.784	L6	F1	0.602	0.3	2.673	2.673	2.674			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 37	12.17	-1739	146.73	9625	461.97	3.149	Si
SLU 37	14.14	-1126	-67.26	6233	313.3	4.658	Si
SLU 35	12.17	-1736	148.92	9607	461.23	3.097	Si
SLU 35	14.14	-1122	-69.21	6210	312.23	4.511	Si
SLU 83	12.17	-2118	168.62	11722	546.22	3.239	Si
SLU 83	14.14	-1308	-70.52	7238	358.93	5.09	Si
SLU 81	12.17	-2038	163.84	11277	528.81	3.228	Si
SLU 81	14.14	-1226	-63.27	6784	338.47	5.35	Si
SLU 40	12.17	-1717	148.09	9501	456.83	3.085	Si
SLU 40	14.14	-927	-53.47	5132	261.72	4.895	Si
SLU 39	12.17	-1571	151.69	8696	422.77	2.787	Si
SLU 39	14.14	-970	-56.27	5368	272.92	4.85	Si
SLU 41	12.17	-1652	156.46	9141	441.72	2.823	Si
SLU 41	14.14	-1052	-63.52	5822	294.23	4.632	Si
SLU 42	12.17	-1798	152.87	9947	475.29	3.109	Si
SLU 42	14.14	-1009	-60.72	5586	283.18	4.664	Si
SLU 33	12.17	-1801	140.54	9967	476.12	3.388	Si
SLU 33	14.14	-997	-59.15	5520	280.07	4.735	Si
SLU 32	12.17	-1656	144.14	9162	442.57	3.07	Si
SLU 32	14.14	-1040	-61.95	5756	291.15	4.699	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 2	12.17	-1122	460.4	0	0	0	No, e>l/2
SLV 2	14.14	-1428	-204.2	7901	402.25	1.97	Si
SLV 9	12.17	172	617.27	0	0	0	No, Trazione
SLV 9	14.14	-1697	-354.32	9392	471.92	1.332	Si
SLV 1	12.17	-1122	460.4	0	0	0	No, e>l/2
SLV 1	14.14	-1428	-204.2	7901	402.25	1.97	Si
SLV 11	12.17	-3287	-549.19	18189	842.64	1.534	Si
SLV 11	14.14	11	313.25	0	0	0	No, Trazione
SLV 8	12.17	-3325	-433.16	18402	850.73	1.964	Si
SLV 8	14.14	-141	274.7	0	0	0	No, e>l/2
SLV 12	12.17	-3287	-549.19	18189	842.64	1.534	Si
SLV 12	14.14	11	313.25	0	0	0	No, Trazione
SLV 5	12.17	134	733.3	0	0	0	No, Trazione
SLV 5	14.14	-1849	-392.87	10231	510.25	1.299	Si
SLV 7	12.17	-3325	-433.16	18402	850.73	1.964	Si
SLV 7	14.14	-141	274.7	0	0	0	No, e>l/2
SLV 6	12.17	134	733.3	0	0	0	No, Trazione
SLV 6	14.14	-1849	-392.87	10231	510.25	1.299	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 10	12.17	172	617.27	0	0	0	No, Trazione
SLV 10	14.14	-1697	-354.32	9392	471.92	1.332	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 32	12.17	-1656	202	144.14		9162	0.6024	6777	1225			6.06	Si
SLU 32	14.14	-1040	85	-61.95		5756	0.6024	6323	1143			13.48	Si
SLU 35	12.17	-1736	217	148.92		9607	0.6024	6837	1235			5.69	Si
SLU 35	14.14	-1122	89	-69.21		6210	0.6024	6384	1154			12.9	Si
SLU 39	12.17	-1571	198	151.69		8696	0.6024	6715	1213			6.11	Si
SLU 39	14.14	-970	88	-56.27		5368	0.6024	6271	1133			12.93	Si
SLU 37	12.17	-1739	214	146.73		9625	0.6024	6839	1236			5.78	Si
SLU 37	14.14	-1126	90	-67.26		6233	0.6024	6387	1154			12.89	Si
SLU 81	12.17	-2038	222	163.84		11277	0.6024	7059	1276			5.75	Si
SLU 81	14.14	-1226	97	-63.27		6784	0.6024	6460	1167			12.04	Si
SLU 77	12.17	-2203	241	161.07		12188	0.6024	7181	1298			5.39	Si
SLU 77	14.14	-1378	99	-76.2		7626	0.6024	6572	1188			12.02	Si
SLU 74	12.17	-2122	226	156.29		11743	0.6024	7121	1287			5.7	Si
SLU 74	14.14	-1296	94	-68.95		7172	0.6024	6512	1177			12.5	Si
SLU 79	12.17	-2206	237	158.88		12206	0.6024	7183	1298			5.47	Si
SLU 79	14.14	-1382	99	-74.25		7649	0.6024	6575	1188			12.01	Si
SLU 83	12.17	-2118	237	168.62		11722	0.6024	7119	1286			5.43	Si
SLU 83	14.14	-1308	102	-70.52		7238	0.6024	6521	1178			11.59	Si
SLU 41	12.17	-1652	213	156.46		9141	0.6024	6774	1224			5.73	Si
SLU 41	14.14	-1052	92	-63.52		5822	0.6024	6332	1144			12.4	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 10	12.17	172	950	617.27		0	0	8333	0			0	No, Vu<V
SLV 10	14.14	-1697	513	-354.32		20402	0.2773	12414	1033			2.01	Si
SLV 5	12.17	134	1235	733.3		0	0	8333	0			0	No, Vu<V
SLV 5	14.14	-1849	403	-392.87		23160	0.2661	12965	1035			2.57	Si
SLV 11	12.17	-3287	-964	-549.19		27233	0.4023	13780	1663			1.73	Si
SLV 11	14.14	11	-288	313.25		0	0	8333	0			0	No, Vu<V
SLV 6	12.17	134	1235	733.3		0	0	8333	0			0	No, Vu<V
SLV 6	14.14	-1849	403	-392.87		23160	0.2661	12965	1035			2.57	Si
SLV 8	12.17	-3325	-678	-433.16		21616	0.5128	12657	1947			2.87	Si
SLV 8	14.14	-141	-398	274.7		0	0	8333	0			0	No, Vu<V
SLV 2	12.17	-1122	898	460.4		0	0	8333	0			0	No, Vu<V
SLV 2	14.14	-1428	-6	-204.2		10030	0.4745	10339	1472			242.4	Si
SLV 7	12.17	-3325	-678	-433.16		21616	0.5128	12657	1947			2.87	Si
SLV 7	14.14	-141	-398	274.7		0	0	8333	0			0	No, Vu<V
SLV 9	12.17	172	950	617.27		0	0	8333	0			0	No, Vu<V
SLV 9	14.14	-1697	513	-354.32		20402	0.2773	12414	1033			2.01	Si
SLV 1	12.17	-1122	898	460.4		0	0	8333	0			0	No, Vu<V
SLV 1	14.14	-1428	-6	-204.2		10030	0.4745	10339	1472			242.4	Si
SLV 12	12.17	-3287	-964	-549.19		27233	0.4023	13780	1663			1.73	Si
SLV 12	14.14	11	-288	313.25		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.507 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 12	143750	0.52	3875	-700	50.61	101.7	2.01	Si
SLV 11	143750	0.52	3875	-700	50.61	101.7	2.01	Si
SLV 7	143750	0.52	4270	-772	50.61	111.7	2.21	Si
SLV 8	143750	0.52	4270	-772	50.61	111.7	2.21	Si
SLV 15	143750	0.52	5723	-1034	50.61	147.87	2.92	Si
SLV 16	143750	0.52	5723	-1034	50.61	147.87	2.92	Si
SLV 4	143750	0.52	7040	-1272	50.61	179.84	3.55	Si
SLV 3	143750	0.52	7040	-1272	50.61	179.84	3.55	Si
SLV 13	143750	0.52	7703	-1392	50.61	195.63	3.87	Si
SLV 14	143750	0.52	7703	-1392	50.61	195.63	3.87	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzaria = 13.507 Wa = 0.05 Ta = 0.0398

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 8	470	-3325	25	0	0	0	0	6.39735	No, Trazione
SLV 12	517	-3287	23	0	0	0	0	6.39735	No, Trazione
SLV 5	-1288	134	-22	0	0	0	0	6.39735	No, Trazione
SLV 9	-1241	172	-25	0	0	0	0	6.39735	No, Trazione
SLV 10	-1241	172	-25	0	0	0	0	6.39735	No, Trazione
SLV 7	470	-3325	25	0	0	0	0	6.39735	No, Trazione
SLV 11	517	-3287	23	0	0	0	0	6.39735	No, Trazione
SLV 6	-1288	134	-22	0	0	0	0	6.39735	No, Trazione
SLV 13	-572	-994	-11	0.069	130.9	0.891	1.12989	6.89308	No
SLV 14	-572	-994	-11	0.069	130.9	0.891	1.12989	6.89308	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.787	SLU 39	Si
V_SLV	5.392	SLU 77	Si
PF_SLV	0	SLV 12	No
V_SLV	0	SLV 1	No
PFFP_SLV	2.01	SLV 11	Si
R_SLV	0	SLV 12	No



Maschio 268

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-4.784	-14.61	-4.784	L6	F1	0.848	0.3	2.672	2.672	2.672			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 81	12.17	-2299	-192.91	9040	866.15	4.49	Si
SLU 81	14.14	-1353	58.1	5320	535.85	9.223	Si
SLU 19	12.17	-1787	-149.51	7028	692.02	4.628	Si
SLU 19	14.14	-1052	51.15	4135	423.05	8.27	Si
SLU 40	12.17	-1809	-177.57	7115	699.84	3.941	Si
SLU 40	14.14	-1081	48.91	4252	434.28	8.878	Si
SLU 41	12.17	-1900	-173.1	7471	731.35	4.225	Si
SLU 41	14.14	-1171	46.66	4604	468.15	10.033	Si
SLU 18	12.17	-1739	-146.19	6838	675.07	4.618	Si
SLU 18	14.14	-1021	44.52	4014	411.23	9.236	Si
SLU 34	12.17	-2004	-163.05	7880	767.12	4.705	Si
SLU 34	14.14	-1229	59.4	4833	489.94	8.248	Si
SLU 31	12.17	-1865	-164.2	7335	719.3	4.381	Si
SLU 31	14.14	-1108	55.03	4358	444.58	8.079	Si
SLU 42	12.17	-1948	-176.42	7661	747.97	4.24	Si
SLU 42	14.14	-1202	53.29	4726	479.78	9.003	Si
SLU 82	12.17	-2347	-196.23	9230	881.99	4.495	Si
SLU 82	14.14	-1384	64.73	5441	547.25	8.454	Si
SLU 39	12.17	-1761	-174.25	6926	682.94	3.919	Si
SLU 39	14.14	-1050	42.28	4130	422.49	9.992	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 10	12.17	-2554	186.77	10044	993.44	5.319	Si
SLV 10	14.14	-346	-134.45	1360	144.94	1.078	Si
SLV 7	12.17	-1063	-412.08	4179	435.01	1.056	Si
SLV 7	14.14	-1747	231.23	6870	698.77	3.022	Si
SLV 3	12.17	1103	-471.58	0	0	0	No, Trazione
SLV 3	14.14	-254	-34.78	999	106.78	3.07	Si
SLV 5	12.17	-782	9.34	3075	323.03	34.586	Si
SLV 5	14.14	315	-225.45	0	0	0	No, Trazione
SLV 6	12.17	-782	9.34	3075	323.03	34.586	Si
SLV 6	14.14	315	-225.45	0	0	0	No, Trazione
SLV 4	12.17	1103	-471.58	0	0	0	No, Trazione
SLV 4	14.14	-254	-34.78	999	106.78	3.07	Si
SLV 1	12.17	1187	-345.16	0	0	0	No, Trazione
SLV 1	14.14	365	-171.78	0	0	0	No, Trazione
SLV 8	12.17	-1063	-412.08	4179	435.01	1.056	Si
SLV 8	14.14	-1747	231.23	6870	698.77	3.022	Si
SLV 2	12.17	1187	-345.16	0	0	0	No, Trazione
SLV 2	14.14	365	-171.78	0	0	0	No, Trazione
SLV 9	12.17	-2554	186.77	10044	993.44	5.319	Si
SLV 9	14.14	-346	-134.45	1360	144.94	1.078	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 80	12.17	-2648	-457	-178.35		10414	0.8476	6944	1766			3.86	Si
SLU 80	14.14	-1632	-333	75.18		6416	0.8476	6411	1630			4.89	Si
SLU 82	12.17	-2347	-483	-196.23		9230	0.8476	6786	1726			3.57	Si
SLU 82	14.14	-1384	-299	64.73		5441	0.8476	6281	1597			5.35	Si
SLU 73	12.17	-2403	-462	-182.86		9449	0.8476	6815	1733			3.75	Si
SLU 73	14.14	-1411	-310	70.84		5548	0.8476	6295	1601			5.16	Si
SLU 78	12.17	-2665	-451	-176.35		10479	0.8476	6953	1768			3.92	Si
SLU 78	14.14	-1617	-315	72.82		6359	0.8476	6403	1628			5.16	Si
SLU 81	12.17	-2299	-472	-192.91		9040	0.8476	6761	1719			3.65	Si
SLU 81	14.14	-1353	-283	58.1		5320	0.8476	6265	1593			5.63	Si
SLU 75	12.17	-2526	-450	-177.49		9933	0.8476	6880	1749			3.89	Si
SLU 75	14.14	-1496	-299	68.44		5884	0.8476	6340	1612			5.4	Si
SLU 76	12.17	-2542	-464	-181.71		9995	0.8476	6888	1752			3.78	Si
SLU 76	14.14	-1532	-327	75.22		6023	0.8476	6359	1617			4.94	Si
SLU 84	12.17	-2486	-485	-195.08		9775	0.8476	6859	1744			3.6	Si
SLU 84	14.14	-1504	-315	69.11		5916	0.8476	6344	1613			5.11	Si
SLU 83	12.17	-2438	-473	-191.76		9586	0.8476	6834	1738			3.68	Si
SLU 83	14.14	-1473	-300	62.48		5794	0.8476	6328	1609			5.37	Si
SLU 40	12.17	-1809	-423	-177.57		7115	0.8476	6504	1654			3.91	Si
SLU 40	14.14	-1081	-229	48.91		4252	0.8476	6122	1557			6.8	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, γM = 2

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 8	12.17	-1063	-796	-412.08		32739	0.1082	14881	483			0.61	No, Vu<V
SLV 8	14.14	-1747	-1178	231.23		6870	0.8476	9707	2468			2.1	Si
SLV 6	12.17	-782	225	9.34		3075	0.8476	8948	2275			10.12	Si
SLV 6	14.14	315	732	-225.45		0	0	8333	0			0	No, Vu<V
SLV 10	12.17	-2554	205	186.77		10044	0.8476	10342	2630			12.84	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 10	14.14	-346	734	-134.45		10963	0.1051	10526	332			0.45	No, Vu<V
SLV 4	12.17	1103	-415	-471.58		0	0	8333	0			0	No, Vu<V
SLV 4	14.14	-254	-512	-34.78		999	0.8476	8533	2170			4.24	Si
SLV 7	12.17	-1063	-796	-412.08		32739	0.1082	14881	483			0.61	No, Vu<V
SLV 7	14.14	-1747	-1178	231.23		6870	0.8476	9707	2468			2.1	Si
SLV 2	12.17	1187	-109	-345.16		0	0	8333	0			0	No, Vu<V
SLV 2	14.14	365	61	-171.78		0	0	8333	0			0	No, Vu<V
SLV 1	12.17	1187	-109	-345.16		0	0	8333	0			0	No, Vu<V
SLV 1	14.14	365	61	-171.78		0	0	8333	0			0	No, Vu<V
SLV 3	12.17	1103	-415	-471.58		0	0	8333	0			0	No, Vu<V
SLV 3	14.14	-254	-512	-34.78		999	0.8476	8533	2170			4.24	Si
SLV 5	12.17	-782	225	9.34		3075	0.8476	8948	2275			10.12	Si
SLV 5	14.14	315	732	-225.45		0	0	8333	0			0	No, Vu<V
SLV 9	12.17	-2554	205	186.77		10044	0.8476	10342	2630			12.84	Si
SLV 9	14.14	-346	734	-134.45		10963	0.1051	10526	332			0.45	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.506 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 2	143750	0.52	0	705	71.13	0	0	No, Trazione
SLV 5	143750	0.52	0	59	71.13	0	0	No, Trazione
SLV 3	143750	0.52	0	97	71.13	0	0	No, Trazione
SLV 6	143750	0.52	0	59	71.13	0	0	No, Trazione
SLV 1	143750	0.52	0	705	71.13	0	0	No, Trazione
SLV 4	143750	0.52	0	97	71.13	0	0	No, Trazione
SLV 9	143750	0.52	4334	-1102	71.13	159.46	2.24	Si
SLV 10	143750	0.52	4334	-1102	71.13	159.46	2.24	Si
SLV 7	143750	0.52	7733	-1966	71.13	276.28	3.88	Si
SLV 8	143750	0.52	7733	-1966	71.13	276.28	3.88	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 13.506 Wa = 0.05 Ta = 0.0397

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 5	601	-782	68	0	0	0	0	6.39408	No, Trazione
SLV 6	601	-782	68	0	0	0	0	6.39408	No, Trazione
SLV 1	605	1187	45	0	0	0	0	6.88893	No, Trazione
SLV 10	160	-2554	53	0	0	0	0	6.39408	No, Trazione
SLV 3	168	1103	9	0	0	0	0	6.88893	No, Trazione
SLV 2	605	1187	45	0	0	0	0	6.88893	No, Trazione
SLV 9	160	-2554	53	0	0	0	0	6.39408	No, Trazione
SLV 4	168	1103	9	0	0	0	0	6.88893	No, Trazione
SLV 12	-1295	-2835	-67	0.039	231.5	0.902	0.62926	6.39408	No
SLV 11	-1295	-2835	-67	0.039	231.5	0.902	0.62926	6.39408	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.919	SLU 39	Si
V_SLU	3.57	SLU 82	Si
PF_SLV	0	SLV 6	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 6	No
R_SLV	0	SLV 10	No

Maschio 269

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-4.784	-13.763	-3.509	L6	F1	1.274	0.28	2.896	2.672	3.121			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 14	12.17	-3518	-37.33	9859	1970	52.772	Si
SLU 14	14.84	-1293	386.6	3624	787.31	2.037	Si
SLU 28	12.17	-3674	-40.72	10298	2045.18	50.22	Si
SLU 28	14.84	-1391	421.43	3899	843.87	2.002	Si
SLU 78	12.17	-4598	-60.44	12885	2465.92	40.797	Si
SLU 78	14.84	-1582	472.48	4433	952.94	2.017	Si
SLU 35	12.17	-3738	-45.59	10476	2075.27	45.525	Si
SLU 35	14.84	-1385	424.81	3882	840.51	1.979	Si
SLU 32	12.17	-3523	-48.08	9874	1972.59	41.024	Si
SLU 32	14.84	-1157	350.91	3242	707.61	2.016	Si
SLU 36	12.17	-3800	-54.28	10651	2104.79	38.777	Si
SLU 36	14.84	-1387	428.44	3887	841.57	1.964	Si
SLU 27	12.17	-3612	-32.03	10123	2015.32	62.918	Si
SLU 27	14.84	-1389	417.8	3893	842.81	2.017	Si
SLU 77	12.17	-4535	-51.75	12710	2438.59	47.123	Si
SLU 77	14.84	-1580	468.85	4428	951.89	2.03	Si
SLU 33	12.17	-3586	-56.78	10049	2002.7	35.273	Si
SLU 33	14.84	-1158	354.54	3247	708.7	1.999	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 15	12.17	-3580	-46.02	10034	2000.12	43.458	Si
SLU 15	14.84	-1295	390.23	3630	788.38	2.02	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 5	12.17	-2870	-98.83	8043	1708.17	17.285	Si
SLV 5	14.84	-1158	462.8	3247	718.44	1.552	Si
SLV 8	12.17	-2640	314.01	7400	1580.46	5.033	Si
SLV 8	14.84	-355	-202.31	994	224.17	1.108	Si
SLV 7	12.17	-2640	314.01	7400	1580.46	5.033	Si
SLV 7	14.84	-355	-202.31	994	224.17	1.108	Si
SLV 15	12.17	-3815	-453.64	10691	2217.85	4.889	Si
SLV 15	14.84	-734	347.47	2057	459.79	1.323	Si
SLV 16	12.17	-3815	-453.64	10691	2217.85	4.889	Si
SLV 16	14.84	-734	347.47	2057	459.79	1.323	Si
SLV 13	12.17	-3884	-577.49	10884	2253.97	3.903	Si
SLV 13	14.84	-975	547.01	2733	607.38	1.11	Si
SLV 9	12.17	-3375	-386.44	9458	1983.79	5.134	Si
SLV 9	14.84	-1204	609.11	3373	745.7	1.224	Si
SLV 6	12.17	-2870	-98.83	8043	1708.17	17.285	Si
SLV 6	14.84	-1158	462.8	3247	718.44	1.552	Si
SLV 14	12.17	-3884	-577.49	10884	2253.97	3.903	Si
SLV 14	14.84	-975	547.01	2733	607.38	1.11	Si
SLV 10	12.17	-3375	-386.44	9458	1983.79	5.134	Si
SLV 10	14.84	-1204	609.11	3373	745.7	1.224	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 78	12.17	-4598	-411	-60.44		12885	1.2743	7274	2595			6.31	Si
SLU 78	14.84	-1582	-952	472.48		5564	1.0153	6297	1790			1.88	Si
SLU 28	12.17	-3674	-306	-40.72		10298	1.2743	6929	2472			8.08	Si
SLU 28	14.84	-1391	-808	421.43		4955	1.0026	6216	1745			2.16	Si
SLU 36	12.17	-3800	-400	-54.28		10651	1.2743	6976	2489			6.23	Si
SLU 36	14.84	-1387	-883	428.44		5030	0.9848	6226	1717			1.94	Si
SLU 69	12.17	-4409	-273	-38.2		12357	1.2743	7203	2570			9.4	Si
SLU 69	14.84	-1584	-847	461.84		5457	1.0367	6283	1824			2.15	Si
SLU 35	12.17	-3738	-356	-45.59		10476	1.2743	6952	2481			6.97	Si
SLU 35	14.84	-1385	-853	424.81		4990	0.9914	6221	1727			2.02	Si
SLU 70	12.17	-4472	-317	-46.89		12532	1.2743	7227	2578			8.12	Si
SLU 70	14.84	-1586	-877	465.47		5494	1.0308	6288	1815			2.07	Si
SLU 80	12.17	-4544	-386	-61.65		12736	1.2743	7254	2588			6.71	Si
SLU 80	14.84	-1496	-878	431.17		5104	1.0466	6236	1827			2.08	Si
SLU 57	12.17	-4377	-323	-52.19		12268	1.2743	7191	2566			7.95	Si
SLU 57	14.84	-1490	-838	434.27		5131	1.0369	6240	1812			2.16	Si
SLU 77	12.17	-4535	-367	-51.75		12710	1.2743	7250	2587			7.04	Si
SLU 77	14.84	-1580	-922	468.85		5526	1.0211	6292	1799			1.95	Si
SLU 75	12.17	-4383	-406	-62.94		12283	1.2743	7193	2567			6.32	Si
SLU 75	14.84	-1353	-838	398.58		4702	1.0278	6183	1779			2.12	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 13	12.17	-3884	-2681	-577.49		10884	1.2743	10510	3750			1.4	Si
SLV 13	14.84	-975	-2490	547.01		15241	0.2285	11382	728			0.29	No, Vu<V
SLV 7	12.17	-2640	1961	314.01		7400	1.2743	9813	3501			1.79	Si
SLV 7	14.84	-355	1385	-202.31		6322	0.2004	9598	539			0.39	No, Vu<V
SLV 10	12.17	-3375	-2342	-386.44		9458	1.2743	10225	3648			1.56	Si
SLV 10	14.84	-1204	-2216	609.11		10932	0.3932	10520	1158			0.52	No, Vu<V
SLV 8	12.17	-2640	1961	314.01		7400	1.2743	9813	3501			1.79	Si
SLV 8	14.84	-355	1385	-202.31		6322	0.2004	9598	539			0.39	No, Vu<V
SLV 15	12.17	-3815	-1755	-453.64		10691	1.2743	10472	3736			2.13	Si
SLV 15	14.84	-734	-1713	347.47		5336	0.4912	9401	1293			0.75	No, Vu<V
SLV 16	12.17	-3815	-1755	-453.64		10691	1.2743	10472	3736			2.13	Si
SLV 16	14.84	-734	-1713	347.47		5336	0.4912	9401	1293			0.75	No, Vu<V
SLV 4	12.17	-2132	2300	505.06		6341	1.2006	9602	3228			1.4	Si
SLV 4	14.84	-583	1659	-140.21		1750	1.1902	8683	2894			1.74	Si
SLV 14	12.17	-3884	-2681	-577.49		10884	1.2743	10510	3750			1.4	Si
SLV 14	14.84	-975	-2490	547.01		15241	0.2285	11382	728			0.29	No, Vu<V
SLV 3	12.17	-2132	2300	505.06		6341	1.2006	9602	3228			1.4	Si
SLV 3	14.84	-583	1659	-140.21		1750	1.1902	8683	2894			1.74	Si
SLV 9	12.17	-3375	-2342	-386.44		9458	1.2743	10225	3648			1.56	Si
SLV 9	14.84	-1204	-2216	609.11		10932	0.3932	10520	1158			0.52	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.506 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 1	143750	0.52	4663	-1664	122.84	224.04	1.82	Si
SLV 2	143750	0.52	4663	-1664	122.84	224.04	1.82	Si
SLV 3	143750	0.52	4721	-1684	122.84	226.71	1.85	Si
SLV 4	143750	0.52	4721	-1684	122.84	226.71	1.85	Si
SLV 5	143750	0.52	5042	-1799	122.84	241.45	1.97	Si
SLV 6	143750	0.52	5042	-1799	122.84	241.45	1.97	Si
SLV 8	143750	0.52	5234	-1868	122.84	250.26	2.04	Si
SLV 7	143750	0.52	5234	-1868	122.84	250.26	2.04	Si
SLV 10	143750	0.52	5424	-1935	122.84	258.91	2.11	Si
SLV 9	143750	0.52	5424	-1935	122.84	258.91	2.11	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 13.506 Wa = 0.05 Ta = 0.05

Comb.	N top	N base	V orto	σ_0	M*	e*	a0*	aLim	Verifica
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Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 2	-824	-2201	72	0.033	243.3	0.889	0.53533	7.91955	No
SLV 1	-824	-2201	72	0.033	243.3	0.889	0.53533	7.91955	No
SLV 15	-734	-3815	-69	0.034	235.4	0.89	0.55475	7.91955	No
SLV 16	-734	-3815	-69	0.034	235.4	0.89	0.55475	7.91955	No
SLV 11	-400	-3145	-67	0.032	208.5	0.905	0.50867	7.18859	No
SLV 12	-400	-3145	-67	0.032	208.5	0.905	0.50867	7.18859	No
SLV 5	-1158	-2870	71	0.036	273.9	0.89	0.589	7.18859	No
SLV 6	-1158	-2870	71	0.036	273.9	0.89	0.589	7.18859	No
SLV 4	-583	-2132	41	0.051	222.7	0.894	0.82975	7.91955	No
SLV 3	-583	-2132	41	0.051	222.7	0.894	0.82975	7.91955	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.964	SLU 36	Si
V_SLU	1.88	SLU 78	Si
PF_SLV	1.108	SLV 7	Si
V_SLV	0.292	SLV 13	No
PFFP_SLV	1.824	SLV 1	Si
R_SLV	0.068	SLV 1	No

Maschio 270

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-11.013	-4.784	-11.013	-3.509	L6	F1	1.274	0.28	2.895	2.67	3.119			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	M	$\alpha 0$	Mu	c.s.	Verifica
SLU 42	12.17	-3925	179.35	11001	2163.26	12.061	Si
SLU 42	14.84	-2168	728.19	6077	1278.57	1.756	Si
SLU 78	12.17	-4948	201.12	13868	2616.06	13.008	Si
SLU 78	14.84	-2752	915.74	7714	1587.66	1.734	Si
SLU 33	12.17	-3897	173.18	10921	2149.92	12.414	Si
SLU 33	14.84	-2199	747.49	6163	1295.09	1.733	Si
SLU 36	12.17	-4113	180.94	11526	2249.61	12.433	Si
SLU 36	14.84	-2467	843.76	6915	1438.57	1.705	Si
SLU 32	12.17	-3833	177.06	10744	2120.3	11.975	Si
SLU 32	14.84	-2144	721.64	6009	1265.29	1.753	Si
SLU 77	12.17	-4885	205	13691	2589.36	12.631	Si
SLU 77	14.84	-2697	889.89	7560	1559.2	1.752	Si
SLU 35	12.17	-4049	184.82	11349	2220.59	12.015	Si
SLU 35	14.84	-2412	817.91	6761	1409.41	1.723	Si
SLU 28	12.17	-3919	151.7	10983	2160.28	14.24	Si
SLU 28	14.84	-2276	762.62	6380	1336.86	1.753	Si
SLU 38	12.17	-4058	174.58	11374	2224.7	12.743	Si
SLU 38	14.84	-2355	789.68	6600	1378.9	1.746	Si
SLU 34	12.17	-3885	164.23	10887	2144.25	13.056	Si
SLU 34	14.84	-2123	710.65	5951	1254.07	1.765	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma M = 2$

Comb.	Quota	N	M	$\alpha 0$	Mu	c.s.	Verifica
SLV 16	12.17	-2285	567.7	6403	1379.34	2.43	Si
SLV 16	14.84	204	-540.81	0	0	0	No, Trazione
SLV 3	12.17	-3936	-177.12	11031	2281.42	12.881	Si
SLV 3	14.84	-2824	1206.34	7914	1682.62	1.395	Si
SLV 4	12.17	-3936	-177.12	11031	2281.42	12.881	Si
SLV 4	14.84	-2824	1206.34	7914	1682.62	1.395	Si
SLV 13	12.17	-2524	416.93	7074	1515.13	3.634	Si
SLV 13	14.84	-16	-346.47	0	0	0	No, e>l/2
SLV 1	12.17	-4176	-327.88	11703	2405.66	7.337	Si
SLV 1	14.84	-3044	1400.67	8531	1803.99	1.288	Si
SLV 15	12.17	-2285	567.7	6403	1379.34	2.43	Si
SLV 15	14.84	204	-540.81	0	0	0	No, Trazione
SLV 14	12.17	-2524	416.93	7074	1515.13	3.634	Si
SLV 14	14.84	-16	-346.47	0	0	0	No, e>l/2
SLV 6	12.17	-3877	-243.09	10866	2250.58	9.258	Si
SLV 6	14.84	-2241	1015.9	6281	1354.42	1.333	Si
SLV 5	12.17	-3877	-243.09	10866	2250.58	9.258	Si
SLV 5	14.84	-2241	1015.9	6281	1354.42	1.333	Si
SLV 2	12.17	-4176	-327.88	11703	2405.66	7.337	Si
SLV 2	14.84	-3044	1400.67	8531	1803.99	1.288	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	V par	M	$\alpha 0$	αN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 33	12.17	-3897	574	173.18		10921	1.2743	7012	2502			4.36	Si
SLU 33	14.84	-2199	-925	747.49		8807	0.8917	6730	1680			1.82	Si
SLU 78	12.17	-4948	692	201.12		13868	1.2743	7405	2642			3.82	Si
SLU 78	14.84	-2752	-1120	915.74		10763	0.9134	6991	1788			1.6	Si
SLU 80	12.17	-4894	693	194.76		13716	1.2743	7384	2635			3.8	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 80	14.84	-2640	-1038	861.66		10113	0.9324	6904	1802			1.74	Si
SLU 77	12.17	-4885	703	205		13691	1.2743	7381	2634			3.75	Si
SLU 77	14.84	-2697	-1070	889.89		10451	0.9218	6949	1794			1.68	Si
SLU 36	12.17	-4113	592	180.94		11526	1.2743	7092	2531			4.28	Si
SLU 36	14.84	-2467	-1059	843.76		9951	0.8855	6882	1706			1.61	Si
SLU 70	12.17	-4755	622	171.88		13325	1.2743	7332	2616			4.21	Si
SLU 70	14.84	-2562	-1006	834.6		9795	0.9341	6862	1795			1.78	Si
SLU 75	12.17	-4732	674	193.36		13263	1.2743	7324	2613			3.88	Si
SLU 75	14.84	-2484	-986	819.47		9624	0.9218	6839	1765			1.79	Si
SLU 38	12.17	-4058	592	174.58		11374	1.2743	7072	2523			4.26	Si
SLU 38	14.84	-2355	-978	789.68		9289	0.9055	6794	1723			1.76	Si
SLU 35	12.17	-4049	602	184.82		11349	1.2743	7069	2522			4.19	Si
SLU 35	14.84	-2412	-1010	817.91		9634	0.8943	6840	1713			1.7	Si
SLU 28	12.17	-3919	521	151.7		10983	1.2743	7020	2505			4.81	Si
SLU 28	14.84	-2276	-945	762.62		8969	0.9065	6751	1714			1.81	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 3	12.17	-3936	-565	-177.12		11031	1.2743	10540	3761			6.66	Si
SLV 3	14.84	-2824	-2078	1206.34		16012	0.6298	11536	2034			0.98	No, Vu<V
SLV 14	12.17	-2524	1490	416.93		7074	1.2743	9748	3478			2.33	Si
SLV 14	14.84	-16	1151	-346.47		0	0	8333	0			0	No, Vu<V
SLV 5	12.17	-3877	-1433	-243.09		10866	1.2743	10507	3749			2.62	Si
SLV 5	14.84	-2241	-2974	1015.9		14513	0.5514	11236	1735			0.58	No, Vu<V
SLV 2	12.17	-4176	-1439	-327.88		11703	1.2743	10674	3808			2.65	Si
SLV 2	14.84	-3044	-3193	1400.67		20474	0.531	12428	1848			0.58	No, Vu<V
SLV 1	12.17	-4176	-1439	-327.88		11703	1.2743	10674	3808			2.65	Si
SLV 1	14.84	-3044	-3193	1400.67		20474	0.531	12428	1848			0.58	No, Vu<V
SLV 13	12.17	-2524	1490	416.93		7074	1.2743	9748	3478			2.33	Si
SLV 13	14.84	-16	1151	-346.47		0	0	8333	0			0	No, Vu<V
SLV 16	12.17	-2285	2364	567.7		6998	1.166	9733	3178			1.34	Si
SLV 16	14.84	204	2266	-540.81		0	0	8333	0			0	No, Vu<V
SLV 6	12.17	-3877	-1433	-243.09		10866	1.2743	10507	3749			2.62	Si
SLV 6	14.84	-2241	-2974	1015.9		14513	0.5514	11236	1735			0.58	No, Vu<V
SLV 4	12.17	-3936	-565	-177.12		11031	1.2743	10540	3761			6.66	Si
SLV 4	14.84	-2824	-2078	1206.34		16012	0.6298	11536	2034			0.98	No, Vu<V
SLV 15	12.17	-2285	2364	567.7		6998	1.166	9733	3178			1.34	Si
SLV 15	14.84	204	2266	-540.81		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.505 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 16	143750	0.52	3181	-1135	122.7	154.79	1.26	Si
SLV 15	143750	0.52	3181	-1135	122.7	154.79	1.26	Si
SLV 14	143750	0.52	3495	-1247	122.7	169.57	1.38	Si
SLV 13	143750	0.52	3495	-1247	122.7	169.57	1.38	Si
SLV 11	143750	0.52	4974	-1775	122.7	238.34	1.94	Si
SLV 12	143750	0.52	4974	-1775	122.7	238.34	1.94	Si
SLV 9	143750	0.52	6017	-2147	122.7	285.78	2.33	Si
SLV 10	143750	0.52	6017	-2147	122.7	285.78	2.33	Si
SLV 8	143750	0.52	6823	-2435	122.7	321.8	2.62	Si
SLV 7	143750	0.52	6823	-2435	122.7	321.8	2.62	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 13.505 Wa = 0.05 Ta = 0.05

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 16	204	-2285	145	0	0	0	0	7.91347	No, Trazione
SLV 14	-16	-2524	174	0	189.6	0.992	0	7.91347	No
SLV 15	204	-2285	145	0	0	0	0	7.91347	No, Trazione
SLV 13	-16	-2524	174	0	189.6	0.992	0	7.91347	No
SLV 4	-2824	-3936	-175	0.014	436.7	0.915	0.21786	7.91347	No
SLV 3	-2824	-3936	-175	0.014	436.7	0.915	0.21786	7.91347	No
SLV 2	-3044	-4176	-146	0.023	458.7	0.918	0.36257	7.91347	No
SLV 1	-3044	-4176	-146	0.023	458.7	0.918	0.36257	7.91347	No
SLV 10	-1333	-3382	96	0.026	290.2	0.892	0.42248	7.18393	No
SLV 9	-1333	-3382	96	0.026	290.2	0.892	0.42248	7.18393	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.705	SLU 36	Si
V_SLU	1.596	SLU 78	Si
PF_SLV	0	SLV 16	No
V_SLV	0	SLV 13	No
PFFP_SLV	1.261	SLV 15	Si
R_SLV	0	SLV 16	No

Maschio 271

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-10.12	-4.784	-11.013	-4.784	L6	F1	0.892	0.3	2.67	2.67	2.67			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

Sismicad 12.19 - Licenza assegnata a Sidel ingegneria Srl - Via Isonzo, 13 - Villanova di Castenaso (BO)



fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 40	12.17	-1856	242.59	6931	757.48	3.122	Si
SLU 40	14.14	-1239	-93.16	4629	521.52	5.598	Si
SLU 31	12.17	-1897	229.96	7085	772.69	3.36	Si
SLU 31	14.14	-1249	-95.24	4667	525.49	5.518	Si
SLU 41	12.17	-1977	231.89	7385	802.18	3.459	Si
SLU 41	14.14	-1342	-97.05	5014	562.09	5.792	Si
SLU 82	12.17	-2417	266.53	9030	959.04	3.598	Si
SLU 82	14.14	-1555	-113.82	5808	644.28	5.66	Si
SLU 81	12.17	-2393	254.99	8939	950.64	3.728	Si
SLU 81	14.14	-1528	-108.32	5709	634.11	5.854	Si
SLU 33	12.17	-2036	221.91	7606	823.74	3.712	Si
SLU 33	14.14	-1347	-98.82	5030	563.74	5.705	Si
SLU 39	12.17	-1831	231.05	6841	748.52	3.24	Si
SLU 39	14.14	-1213	-87.66	4530	511	5.83	Si
SLU 42	12.17	-2001	243.43	7475	810.99	3.332	Si
SLU 42	14.14	-1369	-102.55	5113	572.46	5.582	Si
SLU 34	12.17	-2042	230.79	7629	825.96	3.579	Si
SLU 34	14.14	-1379	-104.63	5151	576.38	5.509	Si
SLU 19	12.17	-1836	203.62	6858	750.17	3.684	Si
SLU 19	14.14	-1176	-86.87	4393	496.46	5.715	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 13	12.17	1051	360.57	0	0	0	No, Trazione
SLV 13	14.14	63	150.65	0	0	0	No, Trazione
SLV 6	12.17	-2821	-361.6	10538	1150.17	3.181	Si
SLV 6	14.14	-588	120.26	2197	257.67	2.143	Si
SLV 14	12.17	1051	360.57	0	0	0	No, Trazione
SLV 14	14.14	63	150.65	0	0	0	No, Trazione
SLV 15	12.17	1082	606.7	0	0	0	No, Trazione
SLV 15	14.14	-445	3.1	1661	195.76	63.198	Si
SLV 12	12.17	-947	659.62	0	0	0	No, e>l/2
SLV 12	14.14	-1706	-278.11	6374	721.63	2.595	Si
SLV 10	12.17	-1051	-160.83	3925	453.79	2.822	Si
SLV 10	14.14	-14	213.74	0	0	0	No, e>l/2
SLV 9	12.17	-1051	-160.83	3925	453.79	2.822	Si
SLV 9	14.14	-14	213.74	0	0	0	No, e>l/2
SLV 11	12.17	-947	659.62	0	0	0	No, e>l/2
SLV 11	14.14	-1706	-278.11	6374	721.63	2.595	Si
SLV 16	12.17	1082	606.7	0	0	0	No, Trazione
SLV 16	14.14	-445	3.1	1661	195.76	63.198	Si
SLV 5	12.17	-2821	-361.6	10538	1150.17	3.181	Si
SLV 5	14.14	-588	120.26	2197	257.67	2.143	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 68	12.17	-2663	417	207.29		9946	0.8924	6882	1842			4.42	Si
SLU 68	14.14	-1677	491	-121.59		6263	0.8924	6391	1711			3.48	Si
SLU 78	12.17	-2744	491	246.68		10249	0.8924	6922	1853			3.77	Si
SLU 78	14.14	-1792	512	-128.87		6693	0.8924	6448	1726			3.37	Si
SLU 79	12.17	-2710	481	236.32		10122	0.8924	6905	1849			3.84	Si
SLU 79	14.14	-1780	509	-125.51		6649	0.8924	6442	1725			3.39	Si
SLU 83	12.17	-2539	507	255.82		9484	0.8924	6820	1826			3.6	Si
SLU 83	14.14	-1658	490	-117.71		6193	0.8924	6381	1708			3.48	Si
SLU 76	12.17	-2604	499	254.72		9728	0.8924	6853	1835			3.67	Si
SLU 76	14.14	-1695	513	-125.29		6330	0.8924	6400	1713			3.34	Si
SLU 84	12.17	-2563	523	267.36		9574	0.8924	6832	1829			3.49	Si
SLU 84	14.14	-1684	510	-123.21		6292	0.8924	6395	1712			3.36	Si
SLU 80	12.17	-2734	498	247.86		10212	0.8924	6917	1852			3.72	Si
SLU 80	14.14	-1807	528	-131.02		6748	0.8924	6455	1728			3.27	Si
SLU 55	12.17	-2585	431	215.75		9654	0.8924	6843	1832			4.25	Si
SLU 55	14.14	-1631	492	-119		6094	0.8924	6368	1705			3.46	Si
SLU 72	12.17	-2792	415	200.43		10430	0.8924	6946	1860			4.48	Si
SLU 72	14.14	-1789	506	-127.31		6681	0.8924	6446	1726			3.41	Si
SLU 59	12.17	-2714	429	208.89		10138	0.8924	6907	1849			4.31	Si
SLU 59	14.14	-1743	507	-124.72		6512	0.8924	6424	1720			3.39	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 9	12.17	-1051	84	-160.83		3983	0.8794	9130	2409			28.68	Si
SLV 9	14.14	-14	-323	213.74		0	0	8333	0			0	No, Vu<V
SLV 6	12.17	-2821	130	-361.6		10538	0.8924	10441	2795			21.46	Si
SLV 6	14.14	-588	-824	120.26		2704	0.7251	8874	1930			2.34	Si
SLV 13	12.17	1051	166	360.57		0	0	8333	0			0	No, Vu<V
SLV 13	14.14	63	895	150.65		0	0	8333	0			0	No, Vu<V
SLV 16	12.17	1082	282	606.7		0	0	8333	0			0	No, Vu<V
SLV 16	14.14	-445	1439	3.1		1661	0.8924	8666	2320			1.61	Si
SLV 11	12.17	-947	472	659.62		0	0	8333	0			0	No, Vu<V
SLV 11	14.14	-1706	1490	-278.11		6695	0.8496	9672	2465			1.65	Si
SLV 14	12.17	1051	166	360.57		0	0	8333	0			0	No, Vu<V
SLV 14	14.14	63	895	150.65		0	0	8333	0			0	No, Vu<V
SLV 12	12.17	-947	472	659.62		0	0	8333	0			0	No, Vu<V
SLV 12	14.14	-1706	1490	-278.11		6695	0.8496	9672	2465			1.65	Si
SLV 10	12.17	-1051	84	-160.83		3983	0.8794	9130	2409			28.68	Si
SLV 10	14.14	-14	-323	213.74		0	0	8333	0			0	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 5	12.17	-2821	130	-361.6		10538	0.8924	10441	2795			21.46	Si
SLV 5	14.14	-588	-824	120.26		2704	0.7251	8874	1930			2.34	Si
SLV 15	12.17	1082	282	606.7		0	0	8333	0			0	No, Vu<V
SLV 15	14.14	-445	1439	3.1		1661	0.8924	8666	2320			1.61	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.505 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 16	143750	0.52	0	-219	74.77	0	0	No, e>t/2
SLV 10	143750	0.52	0	-286	74.77	0	0	No, e>t/2
SLV 9	143750	0.52	0	-286	74.77	0	0	No, e>t/2
SLV 15	143750	0.52	0	-219	74.77	0	0	No, e>t/2
SLV 14	143750	0.52	0	341	74.77	0	0	No, Trazione
SLV 13	143750	0.52	0	341	74.77	0	0	No, Trazione
SLV 5	143750	0.52	5171	-1384	74.77	198.86	2.66	Si
SLV 6	143750	0.52	5171	-1384	74.77	198.86	2.66	Si
SLV 12	143750	0.52	8046	-2154	74.77	301.82	4.04	Si
SLV 11	143750	0.52	8046	-2154	74.77	301.82	4.04	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 13.505 Wa = 0.05 Ta = 0.0397

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 10	341	-1051	-47	0	0	0	0	6.38948	No, Trazione
SLV 13	843	1051	-58	0	0	0	0	6.88307	No, Trazione
SLV 16	610	1082	-39	0	0	0	0	6.88307	No, Trazione
SLV 9	341	-1051	-47	0	0	0	0	6.38948	No, Trazione
SLV 15	610	1082	-39	0	0	0	0	6.88307	No, Trazione
SLV 14	843	1051	-58	0	0	0	0	6.88307	No, Trazione
SLV 4	-1599	-4819	60	0.046	266.9	0.907	0.73289	6.88307	No
SLV 3	-1599	-4819	60	0.046	266.9	0.907	0.73289	6.88307	No
SLV 7	-1098	-2718	48	0.049	217.7	0.896	0.79975	6.38948	No
SLV 8	-1098	-2718	48	0.049	217.7	0.896	0.79975	6.38948	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.122	SLU 40	Si
V_SLU	3.272	SLU 80	Si
PF_SLV	0	SLV 16	No
V_SLV	0	SLV 9	No
PFFP_SLV	0	SLV 14	No
R_SLV	0	SLV 16	No

Maschio 272

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.723	-4.784	-8.28	-4.784	L6	F1	0.558	0.3	2.668	2.668	2.669			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 34	12.17	-2422	-153.84	14476	555.21	3.609	Si
SLU 34	14.14	-610	21.09	3647	162.48	7.702	Si
SLU 40	12.17	-2147	-143.74	12837	504.37	3.509	Si
SLU 40	14.14	-645	12.42	3854	171.24	13.784	Si
SLU 39	12.17	-1888	-113.65	11286	453.46	3.99	Si
SLU 39	14.14	-818	3.39	4888	214.31	63.163	Si
SLU 42	12.17	-2251	-145.52	13456	523.95	3.601	Si
SLU 42	14.14	-715	15.84	4271	188.78	11.918	Si
SLU 33	12.17	-2243	-136.36	13411	522.53	3.832	Si
SLU 33	14.14	-712	16.9	4256	188.12	11.129	Si
SLU 31	12.17	-2318	-152.07	13857	536.35	3.527	Si
SLU 31	14.14	-540	17.68	3229	144.64	8.182	Si
SLU 73	12.17	-2855	-159.76	17068	629.29	3.939	Si
SLU 73	14.14	-797	16.13	4765	209.24	12.969	Si
SLU 76	12.17	-2959	-161.54	17688	645.86	3.998	Si
SLU 76	14.14	-867	19.55	5183	226.35	11.577	Si
SLU 82	12.17	-2685	-151.44	16048	601.06	3.969	Si
SLU 82	14.14	-902	10.88	5389	234.74	21.577	Si
SLU 36	12.17	-2347	-138.13	14031	541.7	3.922	Si
SLU 36	14.14	-782	20.32	4673	205.47	10.112	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 5	12.17	4218	300.78	0	0	0	No, Trazione
SLV 5	14.14	-4726	-75.32	28249	1012.96	13.449	Si
SLV 6	12.17	4218	300.78	0	0	0	No, Trazione
SLV 6	14.14	-4726	-75.32	28249	1012.96	13.449	Si
SLV 2	12.17	1528	147.09	0	0	0	No, Trazione



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 2	14.14	-2709	-80.19	16192	655.14	8.17	Si
SLV 10	12.17	3190	232.8	0	0	0	No, Trazione
SLV 10	14.14	-4266	-37.64	25499	941.12	25.003	Si
SLV 8	12.17	-6894	-364.91	41212	1273.87	3.491	Si
SLV 8	14.14	2571	36.36	0	0	0	No, Trazione
SLV 11	12.17	-7922	-432.89	47356	1352.72	3.125	Si
SLV 11	14.14	3031	74.03	0	0	0	No, Trazione
SLV 7	12.17	-6894	-364.91	41212	1273.87	3.491	Si
SLV 7	14.14	2571	36.36	0	0	0	No, Trazione
SLV 9	12.17	3190	232.8	0	0	0	No, Trazione
SLV 9	14.14	-4266	-37.64	25499	941.12	25.003	Si
SLV 1	12.17	1528	147.09	0	0	0	No, Trazione
SLV 1	14.14	-2709	-80.19	16192	655.14	8.17	Si
SLV 12	12.17	-7922	-432.89	47356	1352.72	3.125	Si
SLV 12	14.14	3031	74.03	0	0	0	No, Trazione

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 83	12.17	-2529	-56	-123.12		15117	0.5576	7571	1267			22.75	Si
SLU 83	14.14	-1145	-44	5.27		6842	0.5576	6468	1082			24.35	Si
SLU 39	12.17	-1888	-47	-113.65		11286	0.5576	7060	1181			25.07	Si
SLU 39	14.14	-818	-37	3.39		4888	0.5576	6207	1038			28.41	Si
SLU 41	12.17	-1992	-52	-115.42		11906	0.5576	7143	1195			23.14	Si
SLU 41	14.14	-888	-41	6.81		5306	0.5576	6263	1048			25.27	Si
SLU 81	12.17	-2425	-51	-121.34		14498	0.5576	7489	1253			24.49	Si
SLU 81	14.14	-1075	-40	1.85		6424	0.5576	6412	1073			27.14	Si
SLU 74	12.17	-2521	-53	-113.96		15072	0.5576	7565	1266			23.69	Si
SLU 74	14.14	-1142	-41	6.33		6826	0.5576	6466	1082			26.44	Si
SLU 77	12.17	-2625	-58	-115.73		15692	0.5576	7648	1279			22.07	Si
SLU 77	14.14	-1212	-46	9.75		7244	0.5576	6521	1091			23.81	Si
SLU 32	12.17	-1984	-49	-106.26		11860	0.5576	7137	1194			24.18	Si
SLU 32	14.14	-885	-38	7.87		5290	0.5576	6261	1047			27.62	Si
SLU 35	12.17	-2088	-54	-108.04		12480	0.5576	7220	1208			22.4	Si
SLU 35	14.14	-955	-43	11.29		5708	0.5576	6317	1057			24.67	Si
SLU 79	12.17	-2630	-56	-113.16		15723	0.5576	7652	1280			22.92	Si
SLU 79	14.14	-1225	-46	7.92		7324	0.5576	6532	1093			23.73	Si
SLU 37	12.17	-2093	-52	-105.46		12511	0.5576	7224	1208			23.32	Si
SLU 37	14.14	-968	-43	9.46		5789	0.5576	6327	1058			24.58	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 5	12.17	4218	-1232	300.78		0	0	8333	0			0	No, Vu<V
SLV 5	14.14	-4726	-545	-75.32		28249	0.5576	13983	2339			4.29	Si
SLV 7	12.17	-6894	1372	-364.91		41212	0.5576	16250	2718			1.98	Si
SLV 7	14.14	2571	405	36.36		0	0	8333	0			0	No, Vu<V
SLV 11	12.17	-7922	1174	-432.89		47356	0.5576	16250	2718			2.32	Si
SLV 11	14.14	3031	500	74.03		0	0	8333	0			0	No, Vu<V
SLV 10	12.17	3190	-1430	232.8		0	0	8333	0			0	No, Vu<V
SLV 10	14.14	-4266	-450	-37.64		25499	0.5576	13433	2247			4.99	Si
SLV 8	12.17	-6894	1372	-364.91		41212	0.5576	16250	2718			1.98	Si
SLV 8	14.14	2571	405	36.36		0	0	8333	0			0	No, Vu<V
SLV 1	12.17	1528	-90	147.09		0	0	8333	0			0	No, Vu<V
SLV 1	14.14	-2709	-323	-80.19		16192	0.5576	11572	1936			5.98	Si
SLV 6	12.17	4218	-1232	300.78		0	0	8333	0			0	No, Vu<V
SLV 6	14.14	-4726	-545	-75.32		28249	0.5576	13983	2339			4.29	Si
SLV 12	12.17	-7922	1174	-432.89		47356	0.5576	16250	2718			2.32	Si
SLV 12	14.14	3031	500	74.03		0	0	8333	0			0	No, Vu<V
SLV 9	12.17	3190	-1430	232.8		0	0	8333	0			0	No, Vu<V
SLV 9	14.14	-4266	-450	-37.64		25499	0.5576	13433	2247			4.99	Si
SLV 2	12.17	1528	-90	147.09		0	0	8333	0			0	No, Vu<V
SLV 2	14.14	-2709	-323	-80.19		16192	0.5576	11572	1936			5.98	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.504 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 7	143750	0.52	0	1088	46.67	0	0	No, Trazione
SLV 12	143750	0.52	0	1212	46.67	0	0	No, Trazione
SLV 8	143750	0.52	0	1088	46.67	0	0	No, Trazione
SLV 11	143750	0.52	0	1212	46.67	0	0	No, Trazione
SLV 16	143750	0.52	2320	-388	46.67	57.12	1.22	Si
SLV 15	143750	0.52	2320	-388	46.67	57.12	1.22	Si
SLV 4	143750	0.52	4805	-804	46.67	115.82	2.48	Si
SLV 3	143750	0.52	4805	-804	46.67	115.82	2.48	Si
SLV 13	143750	0.52	11266	-1885	46.67	256.63	5.5	Si
SLV 14	143750	0.52	11266	-1885	46.67	256.63	5.5	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 13.504 Wa = 0.05 Ta = 0.0396

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 4	-232	-1806	-64	0	94.6	0.896	0	6.87893	No
SLV 2	-958	1528	-18	0	0	0	0	6.87893	No, Trazione
SLV 9	-1518	3190	90	0	0	0	0	6.38622	No, Trazione
SLV 3	-232	-1806	-64	0	94.6	0.896	0	6.87893	No
SLV 5	-1650	4218	65	0	0	0	0	6.38622	No, Trazione
SLV 7	770	-6894	-89	0	0	0	0	6.38622	No, Trazione
SLV 6	-1650	4218	65	0	0	0	0	6.38622	No, Trazione
SLV 8	770	-6894	-89	0	0	0	0	6.38622	No, Trazione
SLV 10	-1518	3190	90	0	0	0	0	6.38622	No, Trazione
SLV 1	-958	1528	-18	0	0	0	0	6.87893	No, Trazione



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.509	SLU 40	Si
V_SLU	22.074	SLU 77	Si
PF_SLV	0	SLV 16	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 12	No
R_SLV	0	SLV 16	No

Maschio 275

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-4.784	-13.143	-4.784	L2	Z medio 275 cm	0.62	0.3	2.1	2.1	2.1			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 84	0.65	-13413	978.74	72113	477.01	0.487	No, M>Mu
SLU 84	2.75	-11475	173.86	61691	863.2	4.965	Si
SLU 76	0.65	-13126	959.03	70571	543.85	0.567	No, M>Mu
SLU 76	2.75	-11226	170.39	60355	901.59	5.291	Si
SLU 78	0.65	-13195	961.79	70938	528.25	0.549	No, M>Mu
SLU 78	2.75	-11310	173.2	60808	888.84	5.132	Si
SLU 83	0.65	-13266	964.7	71321	511.79	0.531	No, M>Mu
SLU 83	2.75	-11354	173.04	61045	882.06	5.098	Si
SLU 75	0.65	-13070	953.27	70269	556.54	0.584	No, M>Mu
SLU 75	2.75	-11180	170.1	60105	908.47	5.341	Si
SLU 82	0.65	-13289	970.22	71445	506.42	0.522	No, M>Mu
SLU 82	2.75	-11344	170.76	60988	883.7	5.175	Si
SLU 81	0.65	-13141	956.18	70652	540.44	0.565	No, M>Mu
SLU 81	2.75	-11224	169.93	60343	901.92	5.308	Si
SLU 80	0.65	-13152	958.18	70712	537.91	0.561	No, M>Mu
SLU 80	2.75	-11277	172.95	60627	893.97	5.169	Si
SLU 73	0.65	-13002	950.52	69902	571.79	0.602	No, M>Mu
SLU 73	2.75	-11095	167.29	59652	920.76	5.504	Si
SLU 77	0.65	-13047	947.74	70145	561.71	0.593	No, M>Mu
SLU 77	2.75	-11190	172.38	60163	906.9	5.261	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 4	0.65	-359	-363.96	0	0	0	No, e>l/2
SLV 4	2.75	-6924	632.57	37225	1492.49	2.359	Si
SLV 5	0.65	-16102	1162.19	86570	1455.06	1.252	Si
SLV 5	2.75	-14962	313.17	80441	1584.68	5.06	Si
SLV 7	0.65	1417	-313.24	0	0	0	No, Trazione
SLV 7	2.75	-1423	242.69	7651	413.53	1.704	Si
SLV 8	0.65	1417	-313.24	0	0	0	No, Trazione
SLV 8	2.75	-1423	242.69	7651	413.53	1.704	Si
SLV 13	0.65	-18059	1699.01	97090	1149.87	0.677	No, M>Mu
SLV 13	2.75	-8808	-389.75	47355	1672.26	4.291	Si
SLV 10	0.65	-19835	1648.29	106641	782.38	0.475	No, M>Mu
SLV 10	2.75	-14309	0.13	76929	1643	1000	Si
SLV 9	0.65	-19835	1648.29	106641	782.38	0.475	No, M>Mu
SLV 9	2.75	-14309	0.13	76929	1643	1000	Si
SLV 14	0.65	-18059	1699.01	97090	1149.87	0.677	No, M>Mu
SLV 14	2.75	-8808	-389.75	47355	1672.26	4.291	Si
SLV 3	0.65	-359	-363.96	0	0	0	No, e>l/2
SLV 3	2.75	-6924	632.57	37225	1492.49	2.359	Si
SLV 6	0.65	-16102	1162.19	86570	1455.06	1.252	Si
SLV 6	2.75	-14962	313.17	80441	1584.68	5.06	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	l'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 76	0.65	-13126	2447	959.03		70571	0.62	10833	2015			0.82	No, Vu<V
SLU 76	2.75	-11226	-817	170.39		60355	0.62	10833	2015			2.47	Si
SLU 81	0.65	-13141	2445	956.18		70652	0.62	10833	2015			0.82	No, Vu<V
SLU 81	2.75	-11224	-815	169.93		60343	0.62	10833	2015			2.47	Si
SLU 73	0.65	-13002	2423	950.52		69902	0.62	10833	2015			0.83	No, Vu<V
SLU 73	2.75	-11095	-801	167.29		59652	0.62	10833	2015			2.51	Si
SLU 77	0.65	-13047	2423	947.74		70145	0.62	10833	2015			0.83	No, Vu<V
SLU 77	2.75	-11190	-827	172.38		60163	0.62	10833	2015			2.44	Si
SLU 82	0.65	-13289	2480	970.22		71445	0.62	10833	2015			0.81	No, Vu<V
SLU 82	2.75	-11344	-819	170.76		60988	0.62	10833	2015			2.46	Si
SLU 84	0.65	-13413	2503	978.74		72113	0.62	10833	2015			0.8	No, Vu<V
SLU 84	2.75	-11475	-834	173.86		61691	0.62	10833	2015			2.42	Si
SLU 75	0.65	-13070	2433	953.27		70269	0.62	10833	2015			0.83	No, Vu<V
SLU 75	2.75	-11180	-815	170.1		60105	0.62	10833	2015			2.47	Si
SLU 83	0.65	-13266	2469	964.7		71321	0.62	10833	2015			0.82	No, Vu<V
SLU 83	2.75	-11354	-830	173.04		61045	0.62	10833	2015			2.43	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 80	0.65	-13152	2448	958.18		70712	0.62	10833	2015			0.82	No, Vu<V
SLU 80	2.75	-11277	-829	172.95		60627	0.62	10833	2015			2.43	Si
SLU 78	0.65	-13195	2457	961.79		70938	0.62	10833	2015			0.82	No, Vu<V
SLU 78	2.75	-11310	-831	173.2		60808	0.62	10833	2015			2.43	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 5	0.65	-16102	3479	1162.19		86570	0.62	16250	3023			0.87	No, Vu<V
SLV 5	2.75	-14962	-1744	313.17		80441	0.62	16250	3023			1.73	Si
SLV 8	0.65	1417	-480	-313.24		0	0	8333	0			0	No, Vu<V
SLV 8	2.75	-1423	-1399	242.69		11338	0.4184	10601	1331			0.95	No, Vu<V
SLV 9	0.65	-19835	3872	1648.29		106641	0.62	16250	3023			0.78	No, Vu<V
SLV 9	2.75	-14309	239	0.13		76929	0.62	16250	3023			12.63	Si
SLV 1	0.65	-5615	1636	78.67		30187	0.62	14371	2673			1.63	Si
SLV 1	2.75	-10986	-3937	653.71		59062	0.62	16250	3023			0.77	No, Vu<V
SLV 4	0.65	-359	448	-363.96		0	0	8333	0			0	No, Vu<V
SLV 4	2.75	-6924	-3833	632.57		37225	0.62	15778	2935			0.77	No, Vu<V
SLV 7	0.65	1417	-480	-313.24		0	0	8333	0			0	No, Vu<V
SLV 7	2.75	-1423	-1399	242.69		11338	0.4184	10601	1331			0.95	No, Vu<V
SLV 2	0.65	-5615	1636	78.67		30187	0.62	14371	2673			1.63	Si
SLV 2	2.75	-10986	-3937	653.71		59062	0.62	16250	3023			0.77	No, Vu<V
SLV 10	0.65	-19835	3872	1648.29		106641	0.62	16250	3023			0.78	No, Vu<V
SLV 10	2.75	-14309	239	0.13		76929	0.62	16250	3023			12.63	Si
SLV 6	0.65	-16102	3479	1162.19		86570	0.62	16250	3023			0.87	No, Vu<V
SLV 6	2.75	-14962	-1744	313.17		80441	0.62	16250	3023			1.73	Si
SLV 3	0.65	-359	448	-363.96		0	0	8333	0			0	No, Vu<V
SLV 3	2.75	-6924	-3833	632.57		37225	0.62	15778	2935			0.77	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 1.7 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 7	143750	0.28	0	915	17.57	0	0	No, Trazione
SLV 8	143750	0.28	0	915	17.57	0	0	No, Trazione
SLV 4	143750	0.28	2824	-525	17.57	76.98	4.38	Si
SLV 3	143750	0.28	2824	-525	17.57	76.98	4.38	Si
SLV 11	143750	0.28	11407	-2122	17.57	288.55	16.43	Si
SLV 12	143750	0.28	11407	-2122	17.57	288.55	16.43	Si
SLV 1	143750	0.28	25793	-4797	17.57	567.71	32.32	Si
SLV 2	143750	0.28	25793	-4797	17.57	567.71	32.32	Si
SLV 10	143750	0.28	87969	-16362	17.57	687.34	39.13	Si
SLV 9	143750	0.28	87969	-16362	17.57	687.34	39.13	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 1.7 Wa = 0.05 Ta = 0.0245

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 8	-1423	1417	3	0	0	0	0	3.37299	No, Trazione
SLV 7	-1423	1417	3	0	0	0	0	3.37299	No, Trazione
SLV 1	-10986	-5615	-1	0.074	1173.9	0.985	1.08446	3.5234	No
SLV 2	-10986	-5615	-1	0.074	1173.9	0.985	1.08446	3.5234	No
SLV 14	-8808	-18059	0	0.074	952	0.982	1.09751	3.5234	No
SLV 13	-8808	-18059	0	0.074	952	0.982	1.09751	3.5234	No
SLV 3	-6924	-359	1	0.075	760	0.978	1.11225	3.5234	No
SLV 4	-6924	-359	1	0.075	760	0.978	1.11225	3.5234	No
SLV 5	-14962	-16102	-3	0.073	1579.2	0.989	1.07079	3.37299	No
SLV 6	-14962	-16102	-3	0.073	1579.2	0.989	1.07079	3.37299	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0.487	SLU 84	No
V_SLU	0.805	SLU 84	No
PF_SLV	0	SLV 8	No
V_SLV	0	SLV 3	No
PFFP_SLV	0	SLV 8	No
R_SLV	0	SLV 8	No

Maschio 276

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.743	-4.784	-11.013	-4.784	L2	Z medio 275 cm	0.73	0.3	2.1	2.1	2.1			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ_0	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 83	0.65	-15382	-1191.83	70237	773.42	0.649	No, M>Mu
SLU 83	2.75	-13165	-180.36	60116	1259.01	6.98	Si
SLU 81	0.65	-15200	-1175.93	69405	820.93	0.698	No, M>Mu
SLU 81	2.75	-13012	-179.53	59414	1285.26	7.159	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 76	0.65	-15190	-1175.44	69359	823.51	0.701	No, M>Mu
SLU 76	2.75	-13006	-181.1	59390	1286.12	7.102	Si
SLU 82	0.65	-15342	-1186.41	70055	783.92	0.661	No, M>Mu
SLU 82	2.75	-13141	-182.43	60004	1263.27	6.925	Si
SLU 78	0.65	-15319	-1187.78	69948	790.07	0.665	No, M>Mu
SLU 78	2.75	-13112	-180.71	59873	1268.22	7.018	Si
SLU 77	0.65	-15176	-1177.3	69298	826.94	0.702	No, M>Mu
SLU 77	2.75	-12983	-177.8	59282	1290.06	7.256	Si
SLU 75	0.65	-15136	-1171.88	69116	837.11	0.714	No, M>Mu
SLU 75	2.75	-12958	-179.87	59170	1294.14	7.195	Si
SLU 84	0.65	-15524	-1202.31	70887	735.36	0.612	No, M>Mu
SLU 84	2.75	-13295	-183.27	60707	1236.2	6.745	Si
SLU 79	0.65	-15134	-1173.88	69107	837.58	0.714	No, M>Mu
SLU 79	2.75	-12945	-177.1	59109	1296.35	7.32	Si
SLU 80	0.65	-15277	-1184.36	69757	800.96	0.676	No, M>Mu
SLU 80	2.75	-13074	-180.01	59699	1274.71	7.081	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 12	0.65	173	286.55	0	0	0	No, Trazione
SLV 12	2.75	-1898	-226.36	8667	643.63	2.843	Si
SLV 11	0.65	173	286.55	0	0	0	No, Trazione
SLV 11	2.75	-1898	-226.36	8667	643.63	2.843	Si
SLV 15	0.65	-636	655.58	0	0	0	No, e>l/2
SLV 15	2.75	-7810	-750.63	35661	2018.61	2.689	Si
SLV 6	0.65	-21540	-1935.82	98355	1533.47	0.792	No, M>Mu
SLV 6	2.75	-16371	-31.31	74755	2319.67	74.08	Si
SLV 1	0.65	-20731	-2304.85	94663	1704.54	0.74	No, M>Mu
SLV 1	2.75	-10460	492.96	47760	2325.46	4.717	Si
SLV 3	0.65	-15561	-1864.99	71053	2376.87	1.274	Si
SLV 3	2.75	-5950	551.66	27170	1688.89	3.061	Si
SLV 2	0.65	-20731	-2304.85	94663	1704.54	0.74	No, M>Mu
SLV 2	2.75	-10460	492.96	47760	2325.46	4.717	Si
SLV 16	0.65	-636	655.58	0	0	0	No, e>l/2
SLV 16	2.75	-7810	-750.63	35661	2018.61	2.689	Si
SLV 4	0.65	-15561	-1864.99	71053	2376.87	1.274	Si
SLV 4	2.75	-5950	551.66	27170	1688.89	3.061	Si
SLV 5	0.65	-21540	-1935.82	98355	1533.47	0.792	No, M>Mu
SLV 5	2.75	-16371	-31.31	74755	2319.67	74.08	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 83	0.65	-15382	-2833	-1191.83		70237	0.73	10833	2372			0.84	No, Vu<V
SLU 83	2.75	-13165	906	-180.36		60116	0.73	10833	2372			2.62	Si
SLU 80	0.65	-15277	-2818	-1184.36		69757	0.73	10833	2372			0.84	No, Vu<V
SLU 80	2.75	-13074	909	-180.01		59699	0.73	10833	2372			2.61	Si
SLU 81	0.65	-15200	-2798	-1175.93		69405	0.73	10833	2372			0.85	No, Vu<V
SLU 81	2.75	-13012	902	-179.53		59414	0.73	10833	2372			2.63	Si
SLU 77	0.65	-15176	-2792	-1177.3		69298	0.73	10833	2372			0.85	No, Vu<V
SLU 77	2.75	-12983	892	-177.8		59282	0.73	10833	2372			2.66	Si
SLU 78	0.65	-15319	-2828	-1187.78		69948	0.73	10833	2372			0.84	No, Vu<V
SLU 78	2.75	-13112	913	-180.71		59873	0.73	10833	2372			2.6	Si
SLU 79	0.65	-15134	-2782	-1173.88		69107	0.73	10833	2372			0.85	No, Vu<V
SLU 79	2.75	-12945	888	-177.1		59109	0.73	10833	2372			2.67	Si
SLU 76	0.65	-15190	-2806	-1175.44		69359	0.73	10833	2372			0.85	No, Vu<V
SLU 76	2.75	-13006	918	-181.1		59390	0.73	10833	2372			2.58	Si
SLU 82	0.65	-15342	-2834	-1186.41		70055	0.73	10833	2372			0.84	No, Vu<V
SLU 82	2.75	-13141	923	-182.43		60004	0.73	10833	2372			2.57	Si
SLU 75	0.65	-15136	-2792	-1171.88		69116	0.73	10833	2372			0.85	No, Vu<V
SLU 75	2.75	-12958	909	-179.87		59170	0.73	10833	2372			2.61	Si
SLU 84	0.65	-15524	-2869	-1202.31		70887	0.73	10833	2372			0.83	No, Vu<V
SLU 84	2.75	-13295	927	-183.27		60707	0.73	10833	2372			2.56	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 13	0.65	-5806	-1601	215.72		26512	0.73	13636	2986			1.87	Si
SLV 13	2.75	-12319	5180	-809.33		56252	0.73	16250	3559			0.69	No, Vu<V
SLV 5	0.65	-21540	-4365	-1935.82		98355	0.73	16250	3559			0.82	No, Vu<V
SLV 5	2.75	-16371	89	-31.31		74755	0.73	16250	3559			39.93	Si
SLV 14	0.65	-5806	-1601	215.72		26512	0.73	13636	2986			1.87	Si
SLV 14	2.75	-12319	5180	-809.33		56252	0.73	16250	3559			0.69	No, Vu<V
SLV 15	0.65	-636	-328	655.58		0	0	8333	0			0	No, Vu<V
SLV 15	2.75	-7810	4736	-750.63		35661	0.73	15466	3387			0.72	No, Vu<V
SLV 12	0.65	173	469	286.55		0	0	8333	0			0	No, Vu<V
SLV 12	2.75	-1898	1199	-226.36		8667	0.73	10067	2205			1.84	Si
SLV 11	0.65	173	469	286.55		0	0	8333	0			0	No, Vu<V
SLV 11	2.75	-1898	1199	-226.36		8667	0.73	10067	2205			1.84	Si
SLV 6	0.65	-21540	-4365	-1935.82		98355	0.73	16250	3559			0.82	No, Vu<V
SLV 6	2.75	-16371	89	-31.31		74755	0.73	16250	3559			39.93	Si
SLV 4	0.65	-15561	-2296	-1864.99		71053	0.73	16250	3559			1.55	Si
SLV 4	2.75	-5950	-3892	551.66		27170	0.73	13767	3015			0.77	No, Vu<V
SLV 16	0.65	-636	-328	655.58		0	0	8333	0			0	No, Vu<V
SLV 16	2.75	-7810	4736	-750.63		35661	0.73	15466	3387			0.72	No, Vu<V
SLV 3	0.65	-15561	-2296	-1864.99		71053	0.73	16250	3559			1.55	Si
SLV 3	2.75	-5950	-3892	551.66		27170	0.73	13767	3015			0.77	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 1.7 W_a 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
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Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 11	143750	0.28	0	-87	20.68	0	0	No, $e > t/2$
SLV 12	143750	0.28	0	-87	20.68	0	0	No, $e > t/2$
SLV 16	143750	0.28	6307	-1381	20.68	196.5	9.5	Si
SLV 15	143750	0.28	6307	-1381	20.68	196.5	9.5	Si
SLV 8	143750	0.28	15635	-3424	20.68	447.88	21.66	Si
SLV 7	143750	0.28	15635	-3424	20.68	447.88	21.66	Si
SLV 14	143750	0.28	26613	-5828	20.68	683.82	33.06	Si
SLV 13	143750	0.28	26613	-5828	20.68	683.82	33.06	Si
SLV 5	143750	0.28	83319	-18247	20.68	870.66	42.1	Si
SLV 6	143750	0.28	83319	-18247	20.68	870.66	42.1	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 1.7 $W_a = 0.05$ $T_a = 0.0245$

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 11	-1898	173	7	0	0	0	0	3.37299	No, Trazione
SLV 12	-1898	173	7	0	0	0	0	3.37299	No, Trazione
SLV 13	-12319	-5806	-3	0.074	1319.4	0.985	1.08552	3.5234	No
SLV 14	-12319	-5806	-3	0.074	1319.4	0.985	1.08552	3.5234	No
SLV 2	-10460	-20731	-1	0.074	1129.9	0.982	1.09577	3.5234	No
SLV 1	-10460	-20731	-1	0.074	1129.9	0.982	1.09577	3.5234	No
SLV 15	-7810	-636	1	0.075	859.9	0.977	1.11409	3.5234	No
SLV 16	-7810	-636	1	0.075	859.9	0.977	1.11409	3.5234	No
SLV 9	-16929	-17062	-7	0.073	1789.2	0.988	1.06942	3.37299	No
SLV 10	-16929	-17062	-7	0.073	1789.2	0.988	1.06942	3.37299	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0.612	SLU 84	No
V_SLU	0.827	SLU 84	No
PF_SLV	0	SLV 12	No
V_SLV	0	SLV 11	No
PFFP_SLV	0	SLV 11	No
R_SLV	0	SLV 12	No

Maschio 277

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.013	-4.784	-13.763	-4.784	L1	L2	2.75	0.45	1.95	1.95	1.95			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ_0	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 78	-1.3	-43237	-550.89	34939	33951.29	61.63	Si
SLU 78	0.65	-32945	-1430.33	26623	30494.83	21.32	Si
SLU 79	-1.3	-42742	-539.06	34539	33851.12	62.797	Si
SLU 79	0.65	-32517	-1438.71	26276	30288.08	21.052	Si
SLU 77	-1.3	-42861	-540.75	34635	33875.84	62.646	Si
SLU 77	0.65	-32613	-1436.91	26354	30334.98	21.111	Si
SLU 83	-1.3	-43665	-536.29	35285	34032.48	63.459	Si
SLU 83	0.65	-33334	-1456.64	26936	30677.75	21.061	Si
SLU 81	-1.3	-43270	-516.9	34965	33957.68	65.694	Si
SLU 81	0.65	-32991	-1409.73	26660	30516.65	21.647	Si
SLU 62	-1.3	-41308	-498.72	33380	33523.53	67.22	Si
SLU 62	0.65	-31320	-1367.79	25309	29684.5	21.703	Si
SLU 58	-1.3	-40385	-501.48	32634	33282.79	66.369	Si
SLU 58	0.65	-30502	-1349.86	24648	29249.92	21.669	Si
SLU 74	-1.3	-42465	-521.36	34316	33792.36	64.816	Si
SLU 74	0.65	-32270	-1390	26077	30167.15	21.703	Si
SLU 80	-1.3	-43118	-549.2	34843	33927.8	61.776	Si
SLU 80	0.65	-32849	-1432.13	26545	30448.81	21.261	Si
SLU 84	-1.3	-44041	-546.44	35589	34099.69	62.404	Si
SLU 84	0.65	-33666	-1450.06	27205	30831.06	21.262	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 11	-1.3	-5797	-417.89	4685	7665.89	18.344	Si
SLV 11	0.65	-2411	1724.15	1949	3262.65	1.892	Si
SLV 2	-1.3	-37298	-1553.43	30140	38634.4	24.87	Si
SLV 2	0.65	-30026	-12461.33	24263	33087.4	2.655	Si
SLV 16	-1.3	-23230	837.8	18772	27033.98	32.268	Si
SLV 16	0.65	-15443	10577.64	12479	19065.71	1.802	Si
SLV 7	-1.3	-5596	-1218.09	4522	7409.47	6.083	Si
SLV 7	0.65	-3199	-5343.77	0	0	0	No, $e > l/2$
SLV 4	-1.3	-22558	-1829.54	18228	26389.52	14.424	Si
SLV 4	0.65	-18068	-12982.11	14601	21875.15	1.685	Si
SLV 12	-1.3	-5797	-417.89	4685	7665.89	18.344	Si
SLV 12	0.65	-2411	1724.15	1949	3262.65	1.892	Si
SLV 8	-1.3	-5596	-1218.09	4522	7409.47	6.083	Si
SLV 8	0.65	-3199	-5343.77	0	0	0	No, $e > l/2$



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 3	-1.3	-22558	-1829.54	18228	26389.52	14.424	Si
SLV 3	0.65	-18068	-12982.11	14601	21875.15	1.685	Si
SLV 1	-1.3	-37298	-1553.43	30140	38634.4	24.87	Si
SLV 1	0.65	-30026	-12461.33	24263	33087.4	2.655	Si
SLV 15	-1.3	-23230	837.8	18772	27033.98	32.268	Si
SLV 15	0.65	-15443	10577.64	12479	19065.71	1.802	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 78	-1.3	-43237	462	-550.89		34939	2.75	10214	12640			27.34	Si
SLU 78	0.65	-32945	357	-1430.33		26623	2.75	9105	11268			31.59	Si
SLU 71	-1.3	-39664	444	-500.27		32052	2.75	9829	12164			27.4	Si
SLU 71	0.65	-29810	348	-1287.41		24089	2.75	8767	10850			31.17	Si
SLU 58	-1.3	-40385	445	-501.48		32634	2.75	9907	12260			27.56	Si
SLU 58	0.65	-30502	341	-1349.86		24648	2.75	8842	10942			32.12	Si
SLU 74	-1.3	-42465	455	-521.36		34316	2.75	10131	12537			27.55	Si
SLU 74	0.65	-32270	347	-1390		26077	2.75	9033	11178			32.22	Si
SLU 80	-1.3	-43118	463	-549.2		34843	2.75	10201	12624			27.26	Si
SLU 80	0.65	-32849	357	-1432.13		26545	2.75	9095	11255			31.56	Si
SLU 69	-1.3	-39783	443	-501.96		32148	2.75	9842	12179			27.48	Si
SLU 69	0.65	-29907	348	-1285.62		24167	2.75	8778	10863			31.2	Si
SLU 79	-1.3	-42742	475	-539.06		34539	2.75	10161	12574			26.46	Si
SLU 79	0.65	-32517	363	-1438.71		26276	2.75	9059	11211			30.9	Si
SLU 56	-1.3	-40504	444	-503.17		32730	2.75	9920	12276			27.63	Si
SLU 56	0.65	-30599	341	-1348.06		24726	2.75	8852	10955			32.15	Si
SLU 83	-1.3	-43665	469	-536.29		35285	2.75	10260	12697			27.06	Si
SLU 83	0.65	-33334	353	-1456.64		26936	2.75	9147	11320			32.05	Si
SLU 77	-1.3	-42861	474	-540.75		34635	2.75	10174	12590			26.54	Si
SLU 77	0.65	-32613	363	-1436.91		26354	2.75	9069	11223			30.93	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 13	-1.3	-37970	-5553	1113.9		30683	2.75	14470	17907			3.22	Si
SLV 13	0.65	-27401	-2992	11098.41		22142	2.75	12762	15793			5.28	Si
SLV 2	-1.3	-37298	6034	-1553.43		30140	2.75	14361	17772			2.95	Si
SLV 2	0.65	-30026	3516	-12461.33		24263	2.75	13186	16318			4.64	Si
SLV 14	-1.3	-37970	-5553	1113.9		30683	2.75	14470	17907			3.22	Si
SLV 14	0.65	-27401	-2992	11098.41		22142	2.75	12762	15793			5.28	Si
SLV 15	-1.3	-23230	-5406	837.8		18772	2.75	12088	14958			2.77	Si
SLV 15	0.65	-15443	-3030	10577.64		16577	2.0702	11649	10852			3.58	Si
SLV 8	-1.3	-5596	2296	-1218.09		4522	2.75	9238	11432			4.98	Si
SLV 8	0.65	-3199	1155	-5343.77		0	0	8333	0			0	No, Vu<V
SLV 16	-1.3	-23230	-5406	837.8		18772	2.75	12088	14958			2.77	Si
SLV 16	0.65	-15443	-3030	10577.64		16577	2.0702	11649	10852			3.58	Si
SLV 1	-1.3	-37298	6034	-1553.43		30140	2.75	14361	17772			2.95	Si
SLV 1	0.65	-30026	3516	-12461.33		24263	2.75	13186	16318			4.64	Si
SLV 4	-1.3	-22558	6180	-1829.54		18228	2.75	11979	14824			2.4	Si
SLV 4	0.65	-18068	3478	-12982.11		20387	1.9695	12411	10999			3.16	Si
SLV 3	-1.3	-22558	6180	-1829.54		18228	2.75	11979	14824			2.4	Si
SLV 3	0.65	-18068	3478	-12982.11		20387	1.9695	12411	10999			3.16	Si
SLV 7	-1.3	-5596	2296	-1218.09		4522	2.75	9238	11432			4.98	Si
SLV 7	0.65	-3199	1155	-5343.77		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.325 Wa 0.08 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 12	143750	0.24	3124	-3866	86.22	847.71	9.83	Si
SLV 11	143750	0.24	3124	-3866	86.22	847.71	9.83	Si
SLV 8	143750	0.24	3611	-4468	86.22	975.65	11.32	Si
SLV 7	143750	0.24	3611	-4468	86.22	975.65	11.32	Si
SLV 15	143750	0.24	15253	-18875	86.22	3716.77	43.11	Si
SLV 16	143750	0.24	15253	-18875	86.22	3716.77	43.11	Si
SLV 3	143750	0.24	16874	-20881	86.22	4049.44	46.96	Si
SLV 4	143750	0.24	16874	-20881	86.22	4049.44	46.96	Si
SLV 13	143750	0.24	26135	-32341	86.22	5720.4	66.34	Si
SLV 14	143750	0.24	26135	-32341	86.22	5720.4	66.34	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = -0.325 Wa = 0.08 Ta = 0.0141

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 12	-2411	-5797	-641	0.03	612.3	0.889	0.49307	2.71001	No
SLV 11	-2411	-5797	-641	0.03	612.3	0.889	0.49307	2.71001	No
SLV 7	-3199	-5596	-639	0.043	686.2	0.893	0.70113	2.71001	No
SLV 8	-3199	-5596	-639	0.043	686.2	0.893	0.70113	2.71001	No
SLV 9	-42270	-54932	653	0.106	4643.8	0.977	1.58122	2.71001	No
SLV 10	-42270	-54932	653	0.106	4643.8	0.977	1.58122	2.71001	No
SLV 6	-43058	-54730	655	0.106	4724	0.978	1.58228	2.71001	No
SLV 5	-43058	-54730	655	0.106	4724	0.978	1.58228	2.71001	No
SLV 2	-30026	-37298	205	0.117	3396.7	0.97	1.75104	2.7761	No
SLV 1	-30026	-37298	205	0.117	3396.7	0.97	1.75104	2.7761	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	21.052	SLU 79	Si
V_SLU	26.464	SLU 79	Si
PF_SLV	0	SLV 7	No
V_SLV	0	SLV 7	No
PFFP_SLV	9.832	SLV 11	Si
R_SLV	0.182	SLV 11	No



Maschio 278

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s, dx
-13.763	-4.784	-12.933	-4.784	Z medio 985 cm	F1	0.83	0.3	4.992	4.992	4.992			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ ₀	f _{v0}	μ	φ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLU 47	10.61	-4278	182.32	17181	1401.08	7.685	Si
SLU 47	12.61	-2679	99.54	10760	965.11	9.696	Si
SLU 70	10.61	-4627	192.69	18583	1482.36	7.693	Si
SLU 70	12.61	-2926	112.16	11749	1039.1	9.264	Si
SLU 65	10.61	-4388	187.07	17621	1427.12	7.629	Si
SLU 65	12.61	-2636	97.96	10584	951.68	9.715	Si
SLU 44	10.61	-4140	178.05	16626	1367.53	7.681	Si
SLU 44	12.61	-2530	92.45	10158	918.91	9.939	Si
SLU 72	10.61	-4600	190.93	18471	1476.08	7.731	Si
SLU 72	12.61	-2917	112.99	11715	1036.61	9.175	Si
SLU 76	10.61	-4707	195.14	18904	1500.27	7.688	Si
SLU 76	12.61	-2836	109.33	11389	1012.45	9.261	Si
SLU 78	10.61	-4809	196.48	19311	1522.62	7.75	Si
SLU 78	12.61	-2976	116.44	11953	1054.02	9.052	Si
SLU 68	10.61	-4526	191.35	18176	1459.27	7.626	Si
SLU 68	12.61	-2785	105.05	11185	997.24	9.493	Si
SLU 73	10.61	-4569	190.86	18349	1469.15	7.697	Si
SLU 73	12.61	-2686	102.24	10787	967.21	9.46	Si
SLU 67	10.61	-4489	188.41	18028	1450.79	7.7	Si
SLU 67	12.61	-2776	105.07	11148	994.4	9.464	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	M	σ ₀	Mu	c.s.	Verifica
SLV 8	10.61	-490	-268.27	0	0	0	No, e>l/2
SLV 8	12.61	-1440	161.39	5784	569.42	3.528	Si
SLV 13	10.61	-7498	897.55	30112	2345.06	2.613	Si
SLV 13	12.61	-385	-444.1	0	0	0	No, e>l/2
SLV 1	10.61	23	-515.41	0	0	0	No, Trazione
SLV 1	12.61	-4258	645.54	17100	1519.93	2.355	Si
SLV 11	10.61	-2747	155.62	11030	1037.05	6.664	Si
SLV 11	12.61	-278	-165.5	0	0	0	No, e>l/2
SLV 14	10.61	-7498	897.55	30112	2345.06	2.613	Si
SLV 14	12.61	-385	-444.1	0	0	0	No, e>l/2
SLV 12	10.61	-2747	155.62	11030	1037.05	6.664	Si
SLV 12	12.61	-278	-165.5	0	0	0	No, e>l/2
SLV 7	10.61	-490	-268.27	0	0	0	No, e>l/2
SLV 7	12.61	-1440	161.39	5784	569.42	3.528	Si
SLV 2	10.61	23	-515.41	0	0	0	No, Trazione
SLV 2	12.61	-4258	645.54	17100	1519.93	2.355	Si
SLV 3	10.61	1001	-629.59	0	0	0	No, Trazione
SLV 3	12.61	-3583	598.11	14390	1311.99	2.194	Si
SLV 4	10.61	1001	-629.59	0	0	0	No, Trazione
SLV 4	12.61	-3583	598.11	14390	1311.99	2.194	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γ_M = 3

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 34	10.61	-3854	523	159.14		15479	0.83	7619	1897			3.63	Si
SLU 34	12.61	-2290	211	88.96		9198	0.83	6782	1689			8.02	Si
SLU 42	10.61	-3868	522	156.07		15532	0.83	7626	1899			3.64	Si
SLU 42	12.61	-2294	225	91.64		9214	0.83	6784	1689			7.5	Si
SLU 81	10.61	-4486	553	180.76		18013	0.83	7957	1981			3.58	Si
SLU 81	12.61	-2663	233	106.2		10696	0.83	6982	1739			7.47	Si
SLU 82	10.61	-4582	601	187.79		18402	0.83	8009	1994			3.32	Si
SLU 82	12.61	-2690	243	104.93		10803	0.83	6996	1742			7.16	Si
SLU 84	10.61	-4721	592	192.07		18957	0.83	8083	2013			3.4	Si
SLU 84	12.61	-2840	239	112.01		11405	0.83	7076	1762			7.38	Si
SLU 40	10.61	-3729	531	151.79		14977	0.83	7552	1881			3.54	Si
SLU 40	12.61	-2145	230	84.55		8612	0.83	6704	1669			7.26	Si
SLU 75	10.61	-4671	565	192.2		18756	0.83	8056	2006			3.55	Si
SLU 75	12.61	-2827	226	109.35		11351	0.83	7069	1760			7.77	Si
SLU 76	10.61	-4707	593	195.14		18904	0.83	8076	2011			3.39	Si
SLU 76	12.61	-2836	224	109.33		11389	0.83	7074	1762			7.86	Si
SLU 73	10.61	-4569	602	190.86		18349	0.83	8002	1993			3.31	Si
SLU 73	12.61	-2686	229	102.24		10787	0.83	6994	1742			7.61	Si
SLU 31	10.61	-3716	532	154.86		14924	0.83	7545	1879			3.53	Si
SLU 31	12.61	-2141	215	81.87		8597	0.83	6702	1669			7.75	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, γ_M = 2

Comb.	Quota	N	V par	M	σ ₀	σ _N	I'	f _{vd}	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 7	10.61	-490	-89	-268.27		0	0	8333	0			0	No, V<V _c



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 7	12.61	-1440	-1135	161.39		5784	0.83	9490	2363			2.08	Si
SLV 13	10.61	-7498	4223	897.55		30112	0.83	14356	3575			0.85	No, Vu<V
SLV 13	12.61	-385	1506	-444.1		0	0	8333	0			0	No, Vu<V
SLV 4	10.61	1001	-3521	-629.59		0	0	8333	0			0	No, Vu<V
SLV 4	12.61	-3583	-1251	598.11		16047	0.7443	11543	2577			2.06	Si
SLV 8	10.61	-490	-89	-268.27		0	0	8333	0			0	No, Vu<V
SLV 8	12.61	-1440	-1135	161.39		5784	0.83	9490	2363			2.08	Si
SLV 2	10.61	23	-3997	-515.41		0	0	8333	0			0	No, Vu<V
SLV 2	12.61	-4258	-691	645.54		17961	0.7903	11926	2827			4.09	Si
SLV 12	10.61	-2747	2377	155.62		11030	0.83	10539	2624			1.1	Si
SLV 12	12.61	-278	-476	-165.5		0	0	8333	0			0	No, Vu<V
SLV 1	10.61	23	-3997	-515.41		0	0	8333	0			0	No, Vu<V
SLV 1	12.61	-4258	-691	645.54		17961	0.7903	11926	2827			4.09	Si
SLV 14	10.61	-7498	4223	897.55		30112	0.83	14356	3575			0.85	No, Vu<V
SLV 14	12.61	-385	1506	-444.1		0	0	8333	0			0	No, Vu<V
SLV 3	10.61	1001	-3521	-629.59		0	0	8333	0			0	No, Vu<V
SLV 3	12.61	-3583	-1251	598.11		16047	0.7443	11543	2577			2.06	Si
SLV 11	10.61	-2747	2377	155.62		11030	0.83	10539	2624			1.1	Si
SLV 11	12.61	-278	-476	-165.5		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 12.346 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 15	143750	0.5	0	-668	237.16	0	0	No, e>t/2
SLV 14	143750	0.5	0	-831	237.16	0	0	No, e>t/2
SLV 16	143750	0.5	0	-668	237.16	0	0	No, e>t/2
SLV 11	143750	0.5	0	-1546	237.16	0	0	No, e>t/2
SLV 12	143750	0.5	0	-1546	237.16	0	0	No, e>t/2
SLV 13	143750	0.5	0	-831	237.16	0	0	No, e>t/2
SLV 10	143750	0.5	8401	-2092	237.16	292.23	1.23	Si
SLV 9	143750	0.5	8401	-2092	237.16	292.23	1.23	Si
SLV 8	143750	0.5	9892	-2463	237.16	339.56	1.43	Si
SLV 7	143750	0.5	9892	-2463	237.16	339.56	1.43	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 12.346 Wa = 0.05 Ta = 0.1387

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 11	491	-1982	-34	0	0	0	0	18.53338	No, Trazione
SLV 12	491	-1982	-34	0	0	0	0	18.53338	No, Trazione
SLV 8	599	-1729	-26	0	0	0	0	18.53338	No, Trazione
SLV 4	131	-2079	5	0	0	0	0	20.27915	No, Trazione
SLV 3	131	-2079	5	0	0	0	0	20.27915	No, Trazione
SLV 7	599	-1729	-26	0	0	0	0	18.53338	No, Trazione
SLV 6	-1099	-3574	33	0.03	302.4	0.889	0.49529	18.53338	No
SLV 5	-1099	-3574	33	0.03	302.4	0.889	0.49529	18.53338	No
SLV 15	-231	-2924	-23	0.038	235	0.934	0.58597	20.27915	No
SLV 16	-231	-2924	-23	0.038	235	0.934	0.58597	20.27915	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.626	SLU 68	Si
V_SLU	3.309	SLU 73	Si
PF_SLV	0	SLV 16	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 11	No
R_SLV	0	SLV 12	No

Maschio 279

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-11.933	-4.784	-11.013	-4.784	Z medio 985 cm	F1	0.92	0.3	4.991	4.991	4.991			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ_0	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 39	10.61	-3442	-25.81	12472	1340.85	51.947	Si
SLU 39	12.61	-3056	-242.98	11072	1214.5	4.998	Si
SLU 82	10.61	-4357	-38.74	15787	1615.72	41.706	Si
SLU 82	12.61	-3847	-300.19	13941	1466.85	4.886	Si
SLU 84	10.61	-4512	-47.66	16347	1658.75	34.802	Si
SLU 84	12.61	-4001	-306.08	14497	1512.8	4.943	Si
SLU 40	10.61	-3504	-22.03	12697	1360.64	61.752	Si
SLU 40	12.61	-3130	-251.93	11343	1239.41	4.92	Si
SLU 31	10.61	-3493	-25.25	12655	1356.95	53.739	Si
SLU 31	12.61	-3114	-248.17	11285	1234.08	4.973	Si
SLU 42	10.61	-3659	-30.96	13257	1409.06	45.519	Si
SLU 42	12.61	-3284	-257.82	11899	1289.87	5.003	Si
SLU 76	10.61	-4500	-50.88	16305	1655.54	32.539	Si



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 76	12.61	-3985	-302.32	14439	1508.05	4.988	Si
SLU 73	10.61	-4345	-41.96	15745	1612.43	38.43	Si
SLU 73	12.61	-3831	-296.43	13883	1461.99	4.932	Si
SLU 83	10.61	-4449	-51.44	16121	1641.52	31.911	Si
SLU 83	12.61	-3926	-297.12	14226	1490.55	5.017	Si
SLU 81	10.61	-4295	-42.52	15562	1598.1	37.586	Si
SLU 81	12.61	-3773	-291.24	13670	1444.13	4.959	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 16	10.61	156	718.8	0	0	0	No, Trazione
SLV 16	12.61	-4641	-762.58	16815	1840.81	2.414	Si
SLV 8	10.61	-2329	-265.15	8440	997.47	3.762	Si
SLV 8	12.61	-849	462.01	0	0	0	No, $e > l/2$
SLV 15	10.61	156	718.8	0	0	0	No, Trazione
SLV 15	12.61	-4641	-762.58	16815	1840.81	2.414	Si
SLV 14	10.61	-848	714.07	0	0	0	No, $e > l/2$
SLV 14	12.61	-5362	-1034.42	19427	2074.1	2.005	Si
SLV 3	10.61	-5471	-803.46	19823	2108.19	2.624	Si
SLV 3	12.61	-101	633.48	0	0	0	No, $e > l/2$
SLV 1	10.61	-6475	-808.19	23462	2406.54	2.978	Si
SLV 1	12.61	-822	361.64	2979	368.92	1.02	Si
SLV 13	10.61	-848	714.07	0	0	0	No, $e > l/2$
SLV 13	12.61	-5362	-1034.42	19427	2074.1	2.005	Si
SLV 2	10.61	-6475	-808.19	23462	2406.54	2.978	Si
SLV 2	12.61	-822	361.64	2979	368.92	1.02	Si
SLV 7	10.61	-2329	-265.15	8440	997.47	3.762	Si
SLV 7	12.61	-849	462.01	0	0	0	No, $e > l/2$
SLV 4	10.61	-5471	-803.46	19823	2108.19	2.624	Si
SLV 4	12.61	-101	633.48	0	0	0	No, $e > l/2$

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 65	10.61	-4221	28	-55.34		15296	0.92	7595	2096			73.71	Si
SLU 65	12.61	-3678	371	-273.73		13326	0.92	7332	2024			5.45	Si
SLU 55	10.61	-4303	20	-55.9		15591	0.92	7634	2107			105.48	Si
SLU 55	12.61	-3777	372	-279.14		13684	0.92	7380	2037			5.47	Si
SLU 75	10.61	-4471	16	-52.96		16201	0.92	7716	2129			131.36	Si
SLU 75	12.61	-3958	376	-298.47		14340	0.92	7468	2061			5.48	Si
SLU 82	10.61	-4357	9	-38.74		15787	0.92	7661	2114			225.16	Si
SLU 82	12.61	-3847	377	-300.19		13941	0.92	7414	2046			5.43	Si
SLU 61	10.61	-4160	24	-43.76		15073	0.92	7565	2088			88.57	Si
SLU 61	12.61	-3639	368	-277.01		13186	0.92	7314	2018			5.48	Si
SLU 52	10.61	-4148	27	-46.98		15031	0.92	7560	2086			75.9	Si
SLU 52	12.61	-3623	371	-273.25		13128	0.92	7306	2016			5.43	Si
SLU 73	10.61	-4345	13	-41.96		15745	0.92	7655	2113			158.76	Si
SLU 73	12.61	-3831	380	-296.43		13883	0.92	7407	2044			5.38	Si
SLU 68	10.61	-4376	21	-64.26		15855	0.92	7670	2117			101.17	Si
SLU 68	12.61	-3831	372	-279.62		13882	0.92	7406	2044			5.5	Si
SLU 84	10.61	-4512	2	-47.66		16347	0.92	7735	2135			1000	Si
SLU 84	12.61	-4001	378	-306.08		14497	0.92	7488	2067			5.47	Si
SLU 76	10.61	-4500	6	-50.88		16305	0.92	7730	2133			368.3	Si
SLU 76	12.61	-3985	381	-302.32		14439	0.92	7481	2065			5.42	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 2	10.61	-6475	-3702	-808.19		23462	0.92	13026	3595			0.97	No, $V_u < V$
SLV 2	12.61	-822	-1208	361.64		45496	0.0602	16250	294			0.24	No, $V_u < V$
SLV 13	10.61	-848	4449	714.07		0	0	8333	0			0	No, $V_u < V$
SLV 13	12.61	-5362	1360	-1034.42		22308	0.8011	12795	3075			2.26	Si
SLV 1	10.61	-6475	-3702	-808.19		23462	0.92	13026	3595			0.97	No, $V_u < V$
SLV 1	12.61	-822	-1208	361.64		45496	0.0602	16250	294			0.24	No, $V_u < V$
SLV 16	10.61	156	3753	718.8		0	0	8333	0			0	No, $V_u < V$
SLV 16	12.61	-4641	1754	-762.58		17440	0.8869	11821	3145			1.79	Si
SLV 4	10.61	-5471	-4398	-803.46		19823	0.92	12298	3394			0.77	No, $V_u < V$
SLV 4	12.61	-101	-814	633.48		0	0	8333	0			0	No, $V_u < V$
SLV 8	10.61	-2329	-2358	-265.15		8440	0.92	10021	2766			1.17	Si
SLV 8	12.61	-849	545	462.01		0	0	8333	0			0	No, $V_u < V$
SLV 3	10.61	-5471	-4398	-803.46		19823	0.92	12298	3394			0.77	No, $V_u < V$
SLV 3	12.61	-101	-814	633.48		0	0	8333	0			0	No, $V_u < V$
SLV 7	10.61	-2329	-2358	-265.15		8440	0.92	10021	2766			1.17	Si
SLV 7	12.61	-849	545	462.01		0	0	8333	0			0	No, $V_u < V$
SLV 15	10.61	156	3753	718.8		0	0	8333	0			0	No, $V_u < V$
SLV 15	12.61	-4641	1754	-762.58		17440	0.8869	11821	3145			1.79	Si
SLV 14	10.61	-848	4449	714.07		0	0	8333	0			0	No, $V_u < V$
SLV 14	12.61	-5362	1360	-1034.42		22308	0.8011	12795	3075			2.26	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 12.345 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 8	143750	0.5	0	-1286	262.73	0	0	No, $e > t/2$
SLV 7	143750	0.5	0	-1286	262.73	0	0	No, $e > t/2$
SLV 3	143750	0.5	0	-728	262.73	0	0	No, $e > t/2$
SLV 1	143750	0.5	0	-1361	262.73	0	0	No, $e > t/2$
SLV 4	143750	0.5	0	-728	262.73	0	0	No, $e > t/2$
SLV 2	143750	0.5	0	-1361	262.73	0	0	No, $e > t/2$
SLV 11	143750	0.5	8685	-2397	262.73	334	1.27	Si
SLV 12	143750	0.5	8685	-2397	262.73	334	1.27	Si
SLV 5	143750	0.5	12308	-3397	262.73	458.19	1.74	Si



Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 6	143750	0.5	12308	-3397	262.73	458.19	1.74	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 12.345 Wa = 0.05 Ta = 0.1387

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 16	-720	-2775	-100	0	292.2	0.896	0	20.27781	No
SLV 4	225	-2631	83	0	0	0	0	20.27781	No, Trazione
SLV 1	148	-3504	99	0	0	0	0	20.27781	No, Trazione
SLV 2	148	-3504	99	0	0	0	0	20.27781	No, Trazione
SLV 15	-720	-2775	-100	0	292.2	0.896	0	20.27781	No
SLV 3	225	-2631	83	0	0	0	0	20.27781	No, Trazione
SLV 13	-797	-3648	-84	0.007	298.4	0.894	0.11883	20.27781	No
SLV 14	-797	-3648	-84	0.007	298.4	0.894	0.11883	20.27781	No
SLV 12	-300	-1706	-55	0.019	262.7	0.927	0.29174	18.52549	No
SLV 11	-300	-1706	-55	0.019	262.7	0.927	0.29174	18.52549	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.886	SLV 82	Si
V_SLV	5.382	SLV 73	Si
PF_SLV	0	SLV 16	No
V_SLV	0	SLV 3	No
PFFP_SLV	0	SLV 1	No
R_SLV	0	SLV 4	No

Maschio 280

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-4.784	-13.143	-4.784	Z medio 275 cm	Z medio 633 cm	0.62	0.3	3.58	3.58	3.58			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	t0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 80	2.75	-11634	1.61	62547	837.27	519.995	Si
SLV 80	3.15	-11460	528.6	61611	865.56	1.637	Si
SLV 79	2.75	-11511	1.71	61885	857.41	502.521	Si
SLV 79	3.15	-11337	525.37	60949	884.83	1.684	Si
SLV 81	2.75	-11533	1.81	62004	853.85	471.765	Si
SLV 81	3.15	-11359	520.73	61068	881.42	1.693	Si
SLV 83	2.75	-11675	1.34	62769	830.39	620.605	Si
SLV 83	3.15	-11501	529.52	61833	858.97	1.622	Si
SLV 78	2.75	-11668	1.78	62729	831.62	467.277	Si
SLV 78	3.15	-11494	529.53	61793	860.15	1.624	Si
SLV 77	2.75	-11544	1.88	62067	851.94	454.174	Si
SLV 77	3.15	-11370	526.3	61131	879.59	1.671	Si
SLV 82	2.75	-11656	1.71	62666	833.59	486.393	Si
SLV 82	3.15	-11482	523.96	61730	862.04	1.645	Si
SLV 75	2.75	-11525	2.25	61964	855.04	379.749	Si
SLV 75	3.15	-11351	520.74	61028	882.55	1.695	Si
SLV 76	2.75	-11574	2.02	62224	847.19	419.825	Si
SLV 76	3.15	-11399	521.97	61288	875.05	1.676	Si
SLV 84	2.75	-11798	1.24	63431	809.42	651.726	Si
SLV 84	3.15	-11624	532.74	62495	838.88	1.575	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 12	2.75	-137	99.98	0	0	0	No, e>l/2
SLV 12	3.15	-21	-300.87	0	0	0	No, e>l/2
SLV 16	2.75	-1927	416.82	10359	546.65	1.311	Si
SLV 16	3.15	-1874	-1186.8	0	0	0	No, e>l/2
SLV 8	2.75	-2654	-153.68	14266	726.54	4.728	Si
SLV 8	3.15	-2487	592.91	13370	686.54	1.158	Si
SLV 15	2.75	-1927	416.82	10359	546.65	1.311	Si
SLV 15	3.15	-1874	-1186.8	0	0	0	No, e>l/2
SLV 4	2.75	-10314	-428.74	55453	1746.32	4.073	Si
SLV 4	3.15	-10094	1792.48	54271	1739.36	0.97	No, M>Mu
SLV 1	2.75	-14364	-410.83	77228	1638.5	3.988	Si
SLV 1	3.15	-14149	1926.9	76070	1655.49	0.859	No, M>Mu
SLV 3	2.75	-10314	-428.74	55453	1746.32	4.073	Si
SLV 3	3.15	-10094	1792.48	54271	1739.36	0.97	No, M>Mu
SLV 11	2.75	-137	99.98	0	0	0	No, e>l/2
SLV 11	3.15	-21	-300.87	0	0	0	No, e>l/2
SLV 7	2.75	-2654	-153.68	14266	726.54	4.728	Si
SLV 7	3.15	-2487	592.91	13370	686.54	1.158	Si
SLV 2	2.75	-14364	-410.83	77228	1638.5	3.988	Si
SLV 2	3.15	-14149	1926.9	76070	1655.49	0.859	No, M>Mu



Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLU 77	2.75	-11544	-1311	1.88		62067	0.62	10833	2015			1.54	Si
SLU 77	3.15	-11370	-1311	526.3		61131	0.62	10833	2015			1.54	Si
SLU 81	2.75	-11533	-1297	1.81		62004	0.62	10833	2015			1.55	Si
SLU 81	3.15	-11359	-1297	520.73		61068	0.62	10833	2015			1.55	Si
SLU 82	2.75	-11656	-1306	1.71		62666	0.62	10833	2015			1.54	Si
SLU 82	3.15	-11482	-1306	523.96		61730	0.62	10833	2015			1.54	Si
SLU 76	2.75	-11574	-1300	2.02		62224	0.62	10833	2015			1.55	Si
SLU 76	3.15	-11399	-1300	521.97		61288	0.62	10833	2015			1.55	Si
SLU 79	2.75	-11511	-1309	1.71		61885	0.62	10833	2015			1.54	Si
SLU 79	3.15	-11337	-1309	525.37		60949	0.62	10833	2015			1.54	Si
SLU 75	2.75	-11525	-1296	2.25		61964	0.62	10833	2015			1.55	Si
SLU 75	3.15	-11351	-1296	520.74		61028	0.62	10833	2015			1.55	Si
SLU 83	2.75	-11675	-1320	1.34		62769	0.62	10833	2015			1.53	Si
SLU 83	3.15	-11501	-1320	529.53		61833	0.62	10833	2015			1.53	Si
SLU 84	2.75	-11798	-1329	1.24		63431	0.62	10833	2015			1.52	Si
SLU 84	3.15	-11624	-1329	532.74		62495	0.62	10833	2015			1.52	Si
SLU 80	2.75	-11634	-1317	1.61		62547	0.62	10833	2015			1.53	Si
SLU 80	3.15	-11460	-1317	528.6		61611	0.62	10833	2015			1.53	Si
SLU 78	2.75	-11668	-1319	1.78		62729	0.62	10833	2015			1.53	Si
SLU 78	3.15	-11494	-1319	529.53		61793	0.62	10833	2015			1.53	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt _{lim}	c.s.	Verifica
SLV 15	2.75	-1927	4069	416.82		22856	0.281	12905	1088			0.27	No, Vu<V
SLV 15	3.15	-1874	4071	-1186.8		0	0	8333	0			0	No, Vu<V
SLV 4	2.75	-10314	-5507	-428.74		55453	0.62	16250	3023			0.55	No, Vu<V
SLV 4	3.15	-10094	-5513	1792.48		84695	0.3973	16250	1937			0.35	No, Vu<V
SLV 12	2.75	-137	1181	99.98		0	0	8333	0			0	No, Vu<V
SLV 12	3.15	-21	1176	-300.87		0	0	8333	0			0	No, Vu<V
SLV 3	2.75	-10314	-5507	-428.74		55453	0.62	16250	3023			0.55	No, Vu<V
SLV 3	3.15	-10094	-5513	1792.48		84695	0.3973	16250	1937			0.35	No, Vu<V
SLV 13	2.75	-5977	3672	434.73		32133	0.62	14760	2745			0.75	No, Vu<V
SLV 13	3.15	-5929	3677	-1052.38		49718	0.3975	16250	1938			0.53	No, Vu<V
SLV 2	2.75	-14364	-5904	-410.83		77228	0.62	16250	3023			0.51	No, Vu<V
SLV 2	3.15	-14149	-5906	1926.9		90448	0.5214	16250	2542			0.43	No, Vu<V
SLV 11	2.75	-137	1181	99.98		0	0	8333	0			0	No, Vu<V
SLV 11	3.15	-21	1176	-300.87		0	0	8333	0			0	No, Vu<V
SLV 16	2.75	-1927	4069	416.82		22856	0.281	12905	1088			0.27	No, Vu<V
SLV 16	3.15	-1874	4071	-1186.8		0	0	8333	0			0	No, Vu<V
SLV 14	2.75	-5977	3672	434.73		32133	0.62	14760	2745			0.75	No, Vu<V
SLV 14	3.15	-5929	3677	-1052.38		49718	0.3975	16250	1938			0.53	No, Vu<V
SLV 1	2.75	-14364	-5904	-410.83		77228	0.62	16250	3023			0.51	No, Vu<V
SLV 1	3.15	-14149	-5906	1926.9		90448	0.5214	16250	2542			0.43	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 4.54 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 12	143750	0.34	2858	-532	61.72	77.88	1.26	Si
SLV 11	143750	0.34	2858	-532	61.72	77.88	1.26	Si
SLV 15	143750	0.34	11727	-2181	61.72	295.77	4.79	Si
SLV 16	143750	0.34	11727	-2181	61.72	295.77	4.79	Si
SLV 8	143750	0.34	13410	-2494	61.72	333.09	5.4	Si
SLV 7	143750	0.34	13410	-2494	61.72	333.09	5.4	Si
SLV 13	143750	0.34	29880	-5558	61.72	629.79	10.2	Si
SLV 14	143750	0.34	29880	-5558	61.72	629.79	10.2	Si
SLV 4	143750	0.34	46901	-8724	61.72	806.26	13.06	Si
SLV 3	143750	0.34	46901	-8724	61.72	806.26	13.06	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 4.54 Wa = 0.05 Ta = 0.0713

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 11	-812	-137	84	0	182.6	0.891	0.00546	6.60406	No
SLV 12	-812	-137	84	0	182.6	0.891	0.00546	6.60406	No
SLV 7	-2099	-2654	83	0.021	309.4	0.92	0.32403	6.60406	No
SLV 8	-2099	-2654	83	0.021	309.4	0.92	0.32403	6.60406	No
SLV 10	-6173	-13638	-87	0.033	722.3	0.961	0.49484	6.60406	No
SLV 9	-6173	-13638	-87	0.033	722.3	0.961	0.49484	6.60406	No
SLV 5	-7460	-16154	-88	0.034	853.3	0.967	0.51226	6.60406	No
SLV 6	-7460	-16154	-88	0.034	853.3	0.967	0.51226	6.60406	No
SLV 1	-7086	-14364	-29	0.041	815.1	0.965	0.62235	7.62455	No
SLV 2	-7086	-14364	-29	0.041	815.1	0.965	0.62235	7.62455	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.575	SLV 84	Si
V_SLV	1.516	SLV 84	Si
PF_SLV	0	SLV 11	No
V_SLV	0	SLV 11	No
PFFP_SLV	1.262	SLV 11	Si
R_SLV	0.001	SLV 11	No

Maschio 281

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.sx	a.s.dx
-13.763	-4.784	-12.933	-4.784	Z medio 633 cm	Z medio 985 cm	0.83	0.3	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, γM = 3

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLU 68	7.13	-7941	316.39	31890	2005.5	6.339	Si
SLU 68	9.13	-5861	205.46	23538	1729.65	8.418	Si
SLU 78	7.13	-8471	328.66	34019	2047.49	6.23	Si
SLU 78	9.13	-6336	228.53	25444	1808.19	7.912	Si
SLU 75	7.13	-8332	327.37	33458	2037.54	6.224	Si
SLU 75	9.13	-6185	220.99	24840	1784.29	8.074	Si
SLU 73	7.13	-8241	332.47	33094	2030.65	6.108	Si
SLU 73	9.13	-6063	213.11	24346	1764.09	8.278	Si
SLU 82	7.13	-8347	331.37	33518	2038.65	6.152	Si
SLU 82	9.13	-6166	220.93	24763	1781.19	8.062	Si
SLU 84	7.13	-8486	332.66	34079	2048.51	6.158	Si
SLU 84	9.13	-6317	228.47	25367	1805.21	7.901	Si
SLU 80	7.13	-8438	326.51	33884	2045.17	6.264	Si
SLU 80	9.13	-6316	229.51	25366	1805.16	7.865	Si
SLU 81	7.13	-8223	318.56	33021	2029.23	6.37	Si
SLU 81	9.13	-6096	222.89	24479	1769.6	7.939	Si
SLU 76	7.13	-8381	333.76	33655	2041.12	6.116	Si
SLU 76	9.13	-6213	220.66	24951	1788.75	8.107	Si
SLU 65	7.13	-7801	315.1	31329	1992.52	6.323	Si
SLU 65	9.13	-5711	197.92	22933	1702.83	8.604	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, γM = 2

Comb.	Quota	N	M	σ0	Mu	c.s.	Verifica
SLV 1	7.13	-2658	-1676.94	0	0	0	No, e>l/2
SLV 1	9.13	-9246	1647.18	37129	2671.17	1.622	Si
SLV 4	7.13	-299	-1874.65	0	0	0	No, e>l/2
SLV 4	9.13	-8920	1875.88	35821	2616.71	1.395	Si
SLV 13	7.13	-11439	2327.25	45938	2962.63	1.273	Si
SLV 13	9.13	257	-1561.87	0	0	0	No, Trazione
SLV 14	7.13	-11439	2327.25	45938	2962.63	1.273	Si
SLV 14	9.13	257	-1561.87	0	0	0	No, Trazione
SLV 2	7.13	-2658	-1676.94	0	0	0	No, e>l/2
SLV 2	9.13	-9246	1647.18	37129	2671.17	1.622	Si
SLV 8	7.13	-620	-703.85	0	0	0	No, e>l/2
SLV 8	9.13	-5214	1019.54	20939	1793.15	1.759	Si
SLV 15	7.13	-9080	2129.54	36464	2643.84	1.242	Si
SLV 15	9.13	583	-1333.16	0	0	0	No, Trazione
SLV 3	7.13	-299	-1874.65	0	0	0	No, e>l/2
SLV 3	9.13	-8920	1875.88	35821	2616.71	1.395	Si
SLV 16	7.13	-9080	2129.54	36464	2643.84	1.242	Si
SLV 16	9.13	583	-1333.16	0	0	0	No, Trazione
SLV 7	7.13	-620	-703.85	0	0	0	No, e>l/2
SLV 7	9.13	-5214	1019.54	20939	1793.15	1.759	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, γM = 3

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 40	7.13	-6816	513	273.98		27373	0.83	9205	2292			4.47	Si
SLU 40	9.13	-5036	151	179.21		20225	0.83	8252	2055			13.62	Si
SLU 75	7.13	-8332	571	327.37		33458	0.83	10017	2494			4.37	Si
SLU 75	9.13	-6185	141	220.99		24840	0.83	8867	2208			15.62	Si
SLU 76	7.13	-8381	587	333.76		33655	0.83	10043	2501			4.26	Si
SLU 76	9.13	-6213	145	220.66		24951	0.83	8882	2212			15.22	Si
SLU 82	7.13	-8347	595	331.37		33518	0.83	10025	2496			4.2	Si
SLU 82	9.13	-6166	159	220.93		24763	0.83	8857	2206			13.89	Si
SLU 84	7.13	-8486	590	332.66		34079	0.83	10099	2515			4.26	Si
SLU 84	9.13	-6317	147	228.47		25367	0.83	8938	2226			15.09	Si
SLU 83	7.13	-8362	559	319.85		33582	0.83	10033	2498			4.47	Si
SLU 83	9.13	-6246	134	230.43		25084	0.83	8900	2216			16.5	Si
SLU 81	7.13	-8223	564	318.56		33021	0.83	9958	2480			4.4	Si
SLU 81	9.13	-6096	146	222.89		24479	0.83	8819	2196			15.08	Si
SLU 80	7.13	-8438	562	326.51		33884	0.83	10073	2508			4.46	Si
SLU 80	9.13	-6316	125	229.51		25366	0.83	8938	2226			17.76	Si
SLU 78	7.13	-8471	567	328.66		34019	0.83	10091	2513			4.43	Si
SLU 78	9.13	-6336	130	228.53		25444	0.83	8948	2228			17.13	Si
SLU 73	7.13	-8241	591	332.47		33094	0.83	9968	2482			4.2	Si
SLU 73	9.13	-6063	157	213.11		24346	0.83	8802	2192			13.99	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, γM = 2

Comb.	Quota	N	V par	M	σ0	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 7	7.13	-620	-2384	-703.85		0	0	8333	0			0	No, Vu<V
SLV 7	9.13	-5214	-2181	1019.54		26395	0.6585	13612	2689			1.23	Si
SLV 15	7.13	-9080	5503	2129.54		55896	0.5415	16250	2640			0.48	No, Vu<V
SLV 15	9.13	583	4002	-1333.16		0	0	8333	0			0	No, Vu<V
SLV 14	7.13	-11439	6174	2327.25		60073	0.6347	16250	3094			0.5	No, Vu<V
SLV 14	9.13	257	4602	-1561.87		0	0	8333	0			0	No, Vu<V
SLV 16	7.13	-9080	5503	2129.54		55896	0.5415	16250	2640			0.48	No, Vu<V
SLV 16	9.13	583	4002	-1333.16		0	0	8333	0			0	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 1	7.13	-2658	-4754	-1676.94		0	0	8333	0			0	No, Vu<V
SLV 1	9.13	-9246	-3835	1647.18		43370	0.7106	16250	3464			0.9	No, Vu<V
SLV 8	7.13	-620	-2384	-703.85		0	0	8333	0			0	No, Vu<V
SLV 8	9.13	-5214	-2181	1019.54		26395	0.6585	13612	2689			1.23	Si
SLV 13	7.13	-11439	6174	2327.25		60073	0.6347	16250	3094			0.5	No, Vu<V
SLV 13	9.13	257	4602	-1561.87		0	0	8333	0			0	No, Vu<V
SLV 4	7.13	-299	-5426	-1874.65		0	0	8333	0			0	No, Vu<V
SLV 4	9.13	-8920	-4435	1875.88		48412	0.6142	16250	2994			0.68	No, Vu<V
SLV 2	7.13	-2658	-4754	-1676.94		0	0	8333	0			0	No, Vu<V
SLV 2	9.13	-9246	-3835	1647.18		43370	0.7106	16250	3464			0.9	No, Vu<V
SLV 3	7.13	-299	-5426	-1874.65		0	0	8333	0			0	No, Vu<V
SLV 3	9.13	-8920	-4435	1875.88		48412	0.6142	16250	2994			0.68	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 8.09 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 8	143750	0.41	9409	-2343	97.19	324.39	3.34	Si
SLV 7	143750	0.41	9409	-2343	97.19	324.39	3.34	Si
SLV 11	143750	0.41	9576	-2385	97.19	329.65	3.39	Si
SLV 12	143750	0.41	9576	-2385	97.19	329.65	3.39	Si
SLV 3	143750	0.41	17266	-4299	97.19	553.78	5.7	Si
SLV 4	143750	0.41	17266	-4299	97.19	553.78	5.7	Si
SLV 16	143750	0.41	17821	-4438	97.19	568.57	5.85	Si
SLV 15	143750	0.41	17821	-4438	97.19	568.57	5.85	Si
SLV 2	143750	0.41	24166	-6018	97.19	724.13	7.45	Si
SLV 1	143750	0.41	24166	-6018	97.19	724.13	7.45	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 8.09 Wa = 0.05 Ta = 0.069

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 2	-4150	-6951	-14	0.047	547.1	0.937	0.72381	8.54565	No
SLV 1	-4150	-6951	-14	0.047	547.1	0.937	0.72381	8.54565	No
SLV 4	-3579	-5043	1	0.05	489.4	0.931	0.78048	8.54565	No
SLV 3	-3579	-5043	1	0.05	489.4	0.931	0.78048	8.54565	No
SLV 6	-4234	-8427	-27	0.044	555.7	0.938	0.68015	7.43903	No
SLV 5	-4234	-8427	-27	0.044	555.7	0.938	0.68015	7.43903	No
SLV 9	-3737	-7785	-24	0.045	505.4	0.933	0.69727	7.43903	No
SLV 10	-3737	-7785	-24	0.045	505.4	0.933	0.69727	7.43903	No
SLV 16	-1919	-2902	12	0.051	323.1	0.906	0.80992	8.54565	No
SLV 15	-1919	-2902	12	0.051	323.1	0.906	0.80992	8.54565	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.108	SLU 73	Si
V_SLU	4.199	SLU 82	Si
PF_SLV	0	SLV 16	No
V_SLV	0	SLV 1	No
PFFP_SLV	3.338	SLV 7	Si
R_SLV	0.085	SLV 1	No

Maschio 282

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.933	-4.784	-11.067	-4.784	Z medio 633 cm	Z medio 985 cm	0.865	0.3	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _k	f _{vk0}	f _{medio}	τ_0	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 80	7.13	-8136	-121.21	31335	2166.24	17.872	Si
SLU 80	9.13	-6856	-327.34	26405	2004.96	6.125	Si
SLU 83	7.13	-8037	-117.6	30955	2156.19	18.335	Si
SLU 83	9.13	-6773	-328.8	26088	1992.29	6.059	Si
SLU 81	7.13	-7888	-110.37	30381	2140.25	19.392	Si
SLU 81	9.13	-6645	-327.56	25593	1971.97	6.02	Si
SLU 75	7.13	-8007	-113.83	30840	2153.07	18.914	Si
SLU 75	9.13	-6748	-328.06	25992	1988.39	6.061	Si
SLU 73	7.13	-7908	-104.91	30457	2142.4	20.421	Si
SLU 73	9.13	-6677	-331.58	25718	1977.16	5.963	Si
SLU 78	7.13	-8156	-121.06	31414	2168.27	17.91	Si
SLU 78	9.13	-6877	-329.3	26486	2008.16	6.098	Si
SLU 84	7.13	-8142	-114.84	31360	2166.87	18.869	Si
SLU 84	9.13	-6891	-338.87	26541	2010.31	5.932	Si
SLU 61	7.13	-7619	-100.03	29345	2109.2	21.085	Si
SLU 61	9.13	-6415	-314.75	24707	1933.89	6.144	Si
SLU 76	7.13	-8057	-112.14	31031	2158.22	19.246	Si
SLU 76	9.13	-6806	-332.82	26213	1997.3	6.001	Si
SLU 82	7.13	-7993	-107.61	30786	2151.57	19.994	Si
SLU 82	9.13	-6763	-337.63	26046	1990.61	5.896	Si



Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 14	7.13	-3463	1948.5	0	0	0	No, $e > l/2$
SLV 14	9.13	-10953	-2026.3	42185	3103.17	1.531	Si
SLV 2	7.13	-10328	-2178.07	39780	3014.24	1.384	Si
SLV 2	9.13	-199	1480.62	0	0	0	No, $e > l/2$
SLV 4	7.13	-7919	-2111.69	30499	2571.25	1.218	Si
SLV 4	9.13	1504	1580.85	0	0	0	No, Trazione
SLV 7	7.13	-2704	-589.95	10415	1070.4	1.814	Si
SLV 7	9.13	-273	470.36	0	0	0	No, $e > l/2$
SLV 3	7.13	-7919	-2111.69	30499	2571.25	1.218	Si
SLV 3	9.13	1504	1580.85	0	0	0	No, Trazione
SLV 12	7.13	-644	648.02	0	0	0	No, $e > l/2$
SLV 12	9.13	-3499	-581.71	13477	1347.12	2.316	Si
SLV 13	7.13	-3463	1948.5	0	0	0	No, $e > l/2$
SLV 13	9.13	-10953	-2026.3	42185	3103.17	1.531	Si
SLV 1	7.13	-10328	-2178.07	39780	3014.24	1.384	Si
SLV 1	9.13	-199	1480.62	0	0	0	No, $e > l/2$
SLV 11	7.13	-644	648.02	0	0	0	No, $e > l/2$
SLV 11	9.13	-3499	-581.71	13477	1347.12	2.316	Si
SLV 8	7.13	-2704	-589.95	10415	1070.4	1.814	Si
SLV 8	9.13	-273	470.36	0	0	0	No, $e > l/2$

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 73	7.13	-7908	-195	-104.91		30457	0.8654	9616	2497			12.83	Si
SLU 73	9.13	-6677	381	-331.58		25718	0.8654	8985	2333			6.13	Si
SLU 76	7.13	-8057	-209	-112.14		31031	0.8654	9693	2517			12.06	Si
SLU 76	9.13	-6806	376	-332.82		26213	0.8654	9051	2350			6.25	Si
SLU 55	7.13	-7683	-178	-104.56		29590	0.8654	9501	2467			13.85	Si
SLU 55	9.13	-6458	362	-309.94		24873	0.8654	8872	2303			6.37	Si
SLU 82	7.13	-7993	-207	-107.61		30786	0.8654	9660	2508			12.13	Si
SLU 82	9.13	-6763	376	-337.63		26046	0.8654	9028	2344			6.24	Si
SLU 75	7.13	-8007	-210	-113.83		30840	0.8654	9668	2510			11.98	Si
SLU 75	9.13	-6748	363	-328.06		25992	0.8654	9021	2342			6.46	Si
SLU 65	7.13	-7545	-173	-102.9		29060	0.8654	9430	2448			14.19	Si
SLU 65	9.13	-6295	352	-301.81		24247	0.8654	8788	2282			6.48	Si
SLU 63	7.13	-7768	-190	-107.26		29919	0.8654	9545	2478			13.03	Si
SLU 63	9.13	-6543	357	-315.99		25202	0.8654	8916	2315			6.49	Si
SLU 84	7.13	-8142	-221	-114.84		31360	0.8654	9737	2528			11.45	Si
SLU 84	9.13	-6891	371	-338.87		26541	0.8654	9094	2361			6.37	Si
SLU 52	7.13	-7534	-164	-97.33		29016	0.8654	9424	2447			14.91	Si
SLU 52	9.13	-6330	367	-308.7		24379	0.8654	8806	2286			6.24	Si
SLU 61	7.13	-7619	-176	-100.03		29345	0.8654	9468	2458			13.96	Si
SLU 61	9.13	-6415	362	-314.75		24707	0.8654	8850	2298			6.35	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 13	7.13	-3463	5719	1948.5		0	0	8333	0			0	No, Vu<V
SLV 13	9.13	-10953	4980	-2026.3		49127	0.7432	16250	3623			0.73	No, Vu<V
SLV 2	7.13	-10328	-5660	-2178.07		51731	0.6655	16250	3244			0.57	No, Vu<V
SLV 2	9.13	-199	-4164	1480.62		0	0	8333	0			0	No, Vu<V
SLV 4	7.13	-7919	-5994	-2111.69		52988	0.4981	16250	2428			0.41	No, Vu<V
SLV 4	9.13	1504	-4495	1580.85		0	0	8333	0			0	No, Vu<V
SLV 1	7.13	-10328	-5660	-2178.07		51731	0.6655	16250	3244			0.57	No, Vu<V
SLV 1	9.13	-199	-4164	1480.62		0	0	8333	0			0	No, Vu<V
SLV 7	7.13	-2704	-2400	-589.95		14004	0.6437	11134	2150			0.9	No, Vu<V
SLV 7	9.13	-273	-1680	470.36		0	0	8333	0			0	No, Vu<V
SLV 3	7.13	-7919	-5994	-2111.69		52988	0.4981	16250	2428			0.41	No, Vu<V
SLV 3	9.13	1504	-4495	1580.85		0	0	8333	0			0	No, Vu<V
SLV 14	7.13	-3463	5719	1948.5		0	0	8333	0			0	No, Vu<V
SLV 14	9.13	-10953	4980	-2026.3		49127	0.7432	16250	3623			0.73	No, Vu<V
SLV 12	7.13	-644	1014	648.02		0	0	8333	0			0	No, Vu<V
SLV 12	9.13	-3499	1063	-581.71		14590	0.7994	11251	2698			2.54	Si
SLV 8	7.13	-2704	-2400	-589.95		14004	0.6437	11134	2150			0.9	No, Vu<V
SLV 8	9.13	-273	-1680	470.36		0	0	8333	0			0	No, Vu<V
SLV 11	7.13	-644	1014	648.02		0	0	8333	0			0	No, Vu<V
SLV 11	9.13	-3499	1063	-581.71		14590	0.7994	11251	2698			2.54	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 8.09 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 8	143750	0.41	5773	-1499	101.33	214.22	2.11	Si
SLV 7	143750	0.41	5773	-1499	101.33	214.22	2.11	Si
SLV 12	143750	0.41	7807	-2027	101.33	284.61	2.81	Si
SLV 11	143750	0.41	7807	-2027	101.33	284.61	2.81	Si
SLV 4	143750	0.41	12823	-3329	101.33	446.98	4.41	Si
SLV 3	143750	0.41	12823	-3329	101.33	446.98	4.41	Si
SLV 16	143750	0.41	19601	-5089	101.33	640.91	6.32	Si
SLV 15	143750	0.41	19601	-5089	101.33	640.91	6.32	Si
SLV 2	143750	0.41	20899	-5426	101.33	674.7	6.66	Si
SLV 1	143750	0.41	20899	-5426	101.33	674.7	6.66	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 8.09 Wa = 0.05 Ta = 0.069

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 12	-1960	-1768	50	0.037	332.8	0.906	0.5992	7.43903	No
SLV 11	-1960	-1768	50	0.037	332.8	0.906	0.5992	7.43903	No
SLV 7	-1019	-744	45	0.037	241.7	0.89	0.60558	7.43903	No



Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 8	-1019	-744	45	0.037	241.7	0.89	0.60558	7.43903	No
SLV 16	-4250	-5567	22	0.045	562.7	0.936	0.70184	8.54565	No
SLV 15	-4250	-5567	22	0.045	562.7	0.936	0.70184	8.54565	No
SLV 6	-4425	-8183	-49	0.04	580.4	0.938	0.61786	7.43903	No
SLV 5	-4425	-8183	-49	0.04	580.4	0.938	0.61786	7.43903	No
SLV 10	-5366	-9207	-45	0.041	675.8	0.946	0.6305	7.43903	No
SLV 9	-5366	-9207	-45	0.041	675.8	0.946	0.6305	7.43903	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.896	SLU 82	Si
V_SLU	6.126	SLU 73	Si
PF_SLV	0	SLV 4	No
V_SLV	0	SLV 1	No
PFFP_SLV	2.114	SLV 7	Si
R_SLV	0.081	SLV 11	No

Maschio 283

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.743	-4.784	-11.067	-4.784	Z medio 275 cm	Z medio 633 cm	0.675	0.3	3.58	3.58	3.58			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLU 84	2.75	-12538	135.77	61872	1018.24	7.5	Si
SLU 84	3.15	-11972	-335.86	59080	1110.86	3.308	Si
SLU 75	2.75	-12255	131.33	60474	1066.25	8.119	Si
SLU 75	3.15	-11701	-329.37	57741	1150.65	3.493	Si
SLU 78	2.75	-12397	132.19	61177	1042.52	7.886	Si
SLU 78	3.15	-11837	-331.24	58409	1131.18	3.415	Si
SLU 73	2.75	-12163	131.73	60018	1081.2	8.207	Si
SLU 73	3.15	-11617	-331.29	57326	1162.38	3.509	Si
SLU 82	2.75	-12396	134.9	61169	1042.79	7.73	Si
SLU 82	3.15	-11837	-333.99	58412	1131.09	3.387	Si
SLU 76	2.75	-12305	132.6	60721	1058.01	7.979	Si
SLU 76	3.15	-11752	-333.16	57994	1143.37	3.432	Si
SLU 81	2.75	-12265	132.29	60524	1064.6	8.047	Si
SLU 81	3.15	-11706	-325.92	57766	1149.96	3.528	Si
SLU 83	2.75	-12407	133.16	61226	1040.81	7.816	Si
SLU 83	3.15	-11841	-327.79	58434	1130.45	3.449	Si
SLU 77	2.75	-12267	129.59	60531	1064.34	8.213	Si
SLU 77	3.15	-11705	-323.17	57763	1150.04	3.559	Si
SLU 80	2.75	-12360	131.73	60993	1048.79	7.962	Si
SLU 80	3.15	-11800	-329.65	58231	1136.44	3.447	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma M = 2$

Comb.	Quota	N	M	$\sigma 0$	Mu	c.s.	Verifica
SLV 13	2.75	-14797	603.18	73016	2011.11	3.334	Si
SLV 13	3.15	-15896	-1350.77	78442	1922.16	1.423	Si
SLV 3	2.75	-2560	-421.3	12630	775.11	1.84	Si
SLV 3	3.15	-664	888.53	0	0	0	No, e>l/2
SLV 2	2.75	-6858	-380.52	33844	1674.79	4.401	Si
SLV 2	3.15	-4789	726.82	23632	1304.62	1.795	Si
SLV 15	2.75	-10498	562.4	51803	2042.38	3.632	Si
SLV 15	3.15	-11771	-1189.07	58087	2085.67	1.754	Si
SLV 14	2.75	-14797	603.18	73016	2011.11	3.334	Si
SLV 14	3.15	-15896	-1350.77	78442	1922.16	1.423	Si
SLV 8	2.75	-323	-124.58	0	0	0	No, e>l/2
SLV 8	3.15	261	350.03	0	0	0	No, Trazione
SLV 16	2.75	-10498	562.4	51803	2042.38	3.632	Si
SLV 16	3.15	-11771	-1189.07	58087	2085.67	1.754	Si
SLV 1	2.75	-6858	-380.52	33844	1674.79	4.401	Si
SLV 1	3.15	-4789	726.82	23632	1304.62	1.795	Si
SLV 4	2.75	-2560	-421.3	12630	775.11	1.84	Si
SLV 4	3.15	-664	888.53	0	0	0	No, e>l/2
SLV 7	2.75	-323	-124.58	0	0	0	No, e>l/2
SLV 7	3.15	261	350.03	0	0	0	No, Trazione

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma M = 3$

Comb.	Quota	N	V par	M	$\sigma 0$	σN	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 82	2.75	-12396	1318	134.9		61169	0.6755	10833	2195			1.67	Si
SLU 82	3.15	-11837	1644	-333.99		58412	0.6755	10833	2195			1.34	Si
SLU 73	2.75	-12163	1306	131.73		60018	0.6755	10833	2195			1.68	Si
SLU 73	3.15	-11617	1629	-331.29		57326	0.6755	10833	2195			1.35	Si
SLU 80	2.75	-12360	1297	131.73		60993	0.6755	10833	2195			1.69	Si
SLU 80	3.15	-11800	1616	-329.65		58231	0.6755	10833	2195			1.36	Si
SLU 81	2.75	-12265	1286	132.29		60524	0.6755	10833	2195			1.71	Si



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 81	3.15	-11706	1600	-325.92		57766	0.6755	10833	2195			1.37	Si
SLU 75	2.75	-12255	1297	131.33		60474	0.6755	10833	2195			1.69	Si
SLU 75	3.15	-11701	1615	-329.37		57741	0.6755	10833	2195			1.36	Si
SLU 84	2.75	-12538	1324	135.77		61872	0.6755	10833	2195			1.66	Si
SLU 84	3.15	-11972	1652	-335.86		59080	0.6755	10833	2195			1.33	Si
SLU 83	2.75	-12407	1292	133.16		61226	0.6755	10833	2195			1.7	Si
SLU 83	3.15	-11841	1608	-327.79		58434	0.6755	10833	2195			1.37	Si
SLU 76	2.75	-12305	1312	132.6		60721	0.6755	10833	2195			1.67	Si
SLU 76	3.15	-11752	1637	-333.16		57994	0.6755	10833	2195			1.34	Si
SLU 77	2.75	-12267	1271	129.59		60531	0.6755	10833	2195			1.73	Si
SLU 77	3.15	-11705	1579	-323.17		57763	0.6755	10833	2195			1.39	Si
SLU 78	2.75	-12397	1303	132.19		61177	0.6755	10833	2195			1.68	Si
SLU 78	3.15	-11837	1622	-331.24		58409	0.6755	10833	2195			1.35	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 3	2.75	-2560	-4715	-421.3		16425	0.5194	11618	1810			0.38	No, Vu<V
SLV 3	3.15	-664	-5542	888.53		0	0	8333	0			0	No, Vu<V
SLV 15	2.75	-10498	5984	562.4		51803	0.6755	16250	3293			0.55	No, Vu<V
SLV 15	3.15	-11771	7105	-1189.07		58087	0.6755	16250	3293			0.46	No, Vu<V
SLV 14	2.75	-14797	6539	603.18		73016	0.6755	16250	3293			0.5	No, Vu<V
SLV 14	3.15	-15896	7801	-1350.77		78442	0.6755	16250	3293			0.42	No, Vu<V
SLV 4	2.75	-2560	-4715	-421.3		16425	0.5194	11618	1810			0.38	No, Vu<V
SLV 4	3.15	-664	-5542	888.53		0	0	8333	0			0	No, Vu<V
SLV 8	2.75	-323	-1618	-124.58		0	0	8333	0			0	No, Vu<V
SLV 8	3.15	261	-1927	350.03		0	0	8333	0			0	No, Vu<V
SLV 7	2.75	-323	-1618	-124.58		0	0	8333	0			0	No, Vu<V
SLV 7	3.15	261	-1927	350.03		0	0	8333	0			0	No, Vu<V
SLV 16	2.75	-10498	5984	562.4		51803	0.6755	16250	3293			0.55	No, Vu<V
SLV 16	3.15	-11771	7105	-1189.07		58087	0.6755	16250	3293			0.46	No, Vu<V
SLV 13	2.75	-14797	6539	603.18		73016	0.6755	16250	3293			0.5	No, Vu<V
SLV 13	3.15	-15896	7801	-1350.77		78442	0.6755	16250	3293			0.42	No, Vu<V
SLV 1	2.75	-6858	-4160	-380.52		33844	0.6755	15102	3060			0.74	No, Vu<V
SLV 1	3.15	-4789	-4846	726.82		28612	0.5579	14056	2353			0.49	No, Vu<V
SLV 2	2.75	-6858	-4160	-380.52		33844	0.6755	15102	3060			0.74	No, Vu<V
SLV 2	3.15	-4789	-4846	726.82		28612	0.5579	14056	2353			0.49	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 4.54 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 7	143750	0.34	0	-222	67.24	0	0	No, e>t/2
SLV 8	143750	0.34	0	-222	67.24	0	0	No, e>t/2
SLV 4	143750	0.34	8692	-1761	67.24	245.41	3.65	Si
SLV 3	143750	0.34	8692	-1761	67.24	245.41	3.65	Si
SLV 12	143750	0.34	8993	-1823	67.24	253.25	3.77	Si
SLV 11	143750	0.34	8993	-1823	67.24	253.25	3.77	Si
SLV 1	143750	0.34	23101	-4681	67.24	569.44	8.47	Si
SLV 2	143750	0.34	23101	-4681	67.24	569.44	8.47	Si
SLV 15	143750	0.34	35018	-7096	67.24	759.38	11.29	Si
SLV 16	143750	0.34	35018	-7096	67.24	759.38	11.29	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzera = 4.54 Wa = 0.05 Ta = 0.0713

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 7	-336	-323	75	0	150.5	0.899	0	6.60406	No
SLV 8	-336	-323	75	0	150.5	0.899	0	6.60406	No
SLV 12	-1939	-2704	80	0.022	302.2	0.914	0.34202	6.60406	No
SLV 11	-1939	-2704	80	0.022	302.2	0.914	0.34202	6.60406	No
SLV 5	-7449	-14652	-85	0.035	860.5	0.964	0.52474	6.60406	No
SLV 6	-7449	-14652	-85	0.035	860.5	0.964	0.52474	6.60406	No
SLV 2	-3090	-6858	-35	0.04	418	0.933	0.62126	7.62455	No
SLV 1	-3090	-6858	-35	0.04	418	0.933	0.62126	7.62455	No
SLV 16	-6298	-10498	30	0.041	743.4	0.959	0.62835	7.62455	No
SLV 15	-6298	-10498	30	0.041	743.4	0.959	0.62835	7.62455	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.308	SLU 84	Si
V_SLU	1.329	SLU 84	Si
PF_SLV	0	SLV 8	No
V_SLV	0	SLV 3	No
PFFP_SLV	0	SLV 7	No
R_SLV	0	SLV 7	No

Maschio 284

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
-11.067	-4.784	-11.013	-4.784	Z medio 275 cm	Z medio 985 cm	0.055	0.3	7.1	7.1	7.1			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	t0	fv0	μ	ϕ	fv,lim	E	G	FC
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fb	fk	fvk0	fmedio	τ_0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 1	2.75	-590	-84.4	0	0	0	No, e>l/2
SLU 1	9.85	-233	-42.31	0	0	0	No, e>l/2
SLU 60	2.75	-828	-118.34	0	0	0	No, e>l/2
SLU 60	9.85	-323	-58.75	0	0	0	No, e>l/2
SLU 57	2.75	-837	-119.6	0	0	0	No, e>l/2
SLU 57	9.85	-338	-61.48	0	0	0	No, e>l/2
SLU 55	2.75	-829	-118.29	0	0	0	No, e>l/2
SLU 55	9.85	-332	-60.42	0	0	0	No, e>l/2
SLU 61	2.75	-836	-119.33	0	0	0	No, e>l/2
SLU 61	9.85	-328	-59.71	0	0	0	No, e>l/2
SLU 56	2.75	-828	-118.61	0	0	0	No, e>l/2
SLU 56	9.85	-333	-60.52	0	0	0	No, e>l/2
SLU 58	2.75	-826	-118.26	0	0	0	No, e>l/2
SLU 58	9.85	-332	-60.33	0	0	0	No, e>l/2
SLU 59	2.75	-834	-119.25	0	0	0	No, e>l/2
SLU 59	9.85	-337	-61.29	0	0	0	No, e>l/2
SLU 54	2.75	-826	-117.97	0	0	0	No, e>l/2
SLU 54	9.85	-330	-59.97	0	0	0	No, e>l/2
SLU 53	2.75	-818	-116.98	0	0	0	No, e>l/2
SLU 53	9.85	-324	-59.02	0	0	0	No, e>l/2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 4	2.75	-364	-123.2	0	0	0	No, e>l/2
SLV 4	9.85	-149	-23.5	0	0	0	No, e>l/2
SLV 2	2.75	-665	-166.07	0	0	0	No, e>l/2
SLV 2	9.85	-231	-37.11	0	0	0	No, e>l/2
SLV 3	2.75	-364	-123.2	0	0	0	No, e>l/2
SLV 3	9.85	-149	-23.5	0	0	0	No, e>l/2
SLV 6	2.75	-1090	-176.89	0	0	0	No, e>l/2
SLV 6	9.85	-363	-62.64	0	0	0	No, e>l/2
SLV 7	2.75	-86	-34.01	0	0	0	No, e>l/2
SLV 7	9.85	-91	-17.28	0	0	0	No, e>l/2
SLV 10	2.75	-1152	-143.31	0	0	0	No, e>l/2
SLV 10	9.85	-395	-70.92	0	0	0	No, e>l/2
SLV 5	2.75	-1090	-176.89	0	0	0	No, e>l/2
SLV 5	9.85	-363	-62.64	0	0	0	No, e>l/2
SLV 9	2.75	-1152	-143.31	0	0	0	No, e>l/2
SLV 9	9.85	-395	-70.92	0	0	0	No, e>l/2
SLV 8	2.75	-86	-34.01	0	0	0	No, e>l/2
SLV 8	9.85	-91	-17.28	0	0	0	No, e>l/2
SLV 1	2.75	-665	-166.07	0	0	0	No, e>l/2
SLV 1	9.85	-231	-37.11	0	0	0	No, e>l/2

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 61	2.75	-836	60	-119.33		0	0	5556	0			0	No, Vu<V
SLU 61	9.85	-328	-8	-59.71		0	0	5556	0			0	No, Vu<V
SLU 59	2.75	-834	59	-119.25		0	0	5556	0			0	No, Vu<V
SLU 59	9.85	-337	-8	-61.29		0	0	5556	0			0	No, Vu<V
SLU 57	2.75	-837	59	-119.6		0	0	5556	0			0	No, Vu<V
SLU 57	9.85	-338	-8	-61.48		0	0	5556	0			0	No, Vu<V
SLU 53	2.75	-818	57	-116.98		0	0	5556	0			0	No, Vu<V
SLU 53	9.85	-324	-7	-59.02		0	0	5556	0			0	No, Vu<V
SLU 60	2.75	-828	58	-118.34		0	0	5556	0			0	No, Vu<V
SLU 60	9.85	-323	-8	-58.75		0	0	5556	0			0	No, Vu<V
SLU 54	2.75	-826	59	-117.97		0	0	5556	0			0	No, Vu<V
SLU 54	9.85	-330	-8	-59.97		0	0	5556	0			0	No, Vu<V
SLU 1	2.75	-590	41	-84.4		0	0	5556	0			0	No, Vu<V
SLU 1	9.85	-233	-5	-42.31		0	0	5556	0			0	No, Vu<V
SLU 58	2.75	-826	57	-118.26		0	0	5556	0			0	No, Vu<V
SLU 58	9.85	-332	-8	-60.33		0	0	5556	0			0	No, Vu<V
SLU 56	2.75	-828	57	-118.61		0	0	5556	0			0	No, Vu<V
SLU 56	9.85	-333	-7	-60.52		0	0	5556	0			0	No, Vu<V
SLU 55	2.75	-829	60	-118.29		0	0	5556	0			0	No, Vu<V
SLU 55	9.85	-332	-8	-60.42		0	0	5556	0			0	No, Vu<V

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 10	2.75	-1152	195	-143.31		0	0	8333	0			0	No, Vu<V
SLV 10	9.85	-395	4	-70.92		0	0	8333	0			0	No, Vu<V
SLV 2	2.75	-665	-312	-166.07		0	0	8333	0			0	No, Vu<V
SLV 2	9.85	-231	-44	-37.11		0	0	8333	0			0	No, Vu<V
SLV 7	2.75	-86	-109	-34.01		0	0	8333	0			0	No, Vu<V
SLV 7	9.85	-91	-16	-17.28		0	0	8333	0			0	No, Vu<V
SLV 5	2.75	-1090	-26	-176.89		0	0	8333	0			0	No, Vu<V
SLV 5	9.85	-363	-18	-62.64		0	0	8333	0			0	No, Vu<V
SLV 6	2.75	-1090	-26	-176.89		0	0	8333	0			0	No, Vu<V
SLV 6	9.85	-363	-18	-62.64		0	0	8333	0			0	No, Vu<V
SLV 8	2.75	-86	-109	-34.01		0	0	8333	0			0	No, Vu<V
SLV 8	9.85	-91	-16	-17.28		0	0	8333	0			0	No, Vu<V
SLV 3	2.75	-364	-337	-123.2		0	0	8333	0			0	No, Vu<V
SLV 3	9.85	-149	-43	-23.5		0	0	8333	0			0	No, Vu<V
SLV 1	2.75	-665	-312	-166.07		0	0	8333	0			0	No, Vu<V
SLV 1	9.85	-231	-44	-37.11		0	0	8333	0			0	No, Vu<V



Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 9	2.75	-1152	195	-143.31		0	0	8333	0			0	No, Vu<V
SLV 9	9.85	-395	4	-70.92		0	0	8333	0			0	No, Vu<V
SLV 4	2.75	-364	-337	-123.2		0	0	8333	0			0	No, Vu<V
SLV 4	9.85	-149	-43	-23.5		0	0	8333	0			0	No, Vu<V

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.3 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 8	143750	0.37	0	-40	23.63	0	0	No, e>t/2
SLV 4	143750	0.37	0	-128	23.63	0	0	No, e>t/2
SLV 3	143750	0.37	0	-128	23.63	0	0	No, e>t/2
SLV 11	143750	0.37	0	-125	23.63	0	0	No, e>t/2
SLV 7	143750	0.37	0	-40	23.63	0	0	No, e>t/2
SLV 12	143750	0.37	0	-125	23.63	0	0	No, e>t/2
SLV 1	143750	0.37	17630	-288	23.63	37	1.57	Si
SLV 2	143750	0.37	17630	-288	23.63	37	1.57	Si
SLV 16	143750	0.37	25100	-410	23.63	48.92	2.07	Si
SLV 15	143750	0.37	25100	-410	23.63	48.92	2.07	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 6.3 Wa = 0.05 Ta = 0.2806

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 5	-363	-1090	1	0.024	53.7	0.92	0.37791	16.22499	No
SLV 6	-363	-1090	1	0.024	53.7	0.92	0.37791	16.22499	No
SLV 10	-395	-1152	1	0.025	56.8	0.924	0.38567	16.22499	No
SLV 9	-395	-1152	1	0.025	56.8	0.924	0.38567	16.22499	No
SLV 13	-337	-874	0	0.025	51	0.917	0.40097	15.05397	No
SLV 14	-337	-874	0	0.025	51	0.917	0.40097	15.05397	No
SLV 1	-231	-665	1	0.025	40.5	0.903	0.40282	15.05397	No
SLV 2	-231	-665	1	0.025	40.5	0.903	0.40282	15.05397	No
SLV 16	-255	-573	-1	0.025	42.9	0.907	0.4039	15.05397	No
SLV 15	-255	-573	-1	0.025	42.9	0.907	0.4039	15.05397	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0	SLU 1	No
V_SLU	0	SLU 1	No
PF_SLV	0	SLV 1	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 3	No
R_SLV	0.023	SLV 5	No

Maschio 285

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.723	-4.589	-7.723	-4.634	L3	F1	0.045	0.3	13.509	13.517	13.501			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fk	fvk0	fmedio	τ_0	f _{v0}	μ	ϕ	f _{v,lim}	E	G	FC
600000			345000	9000	20000	0.58	0.77	32500	320000000	128000000	1.2

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLU 55	12.17	232	20.4	0	0	0	No, Trazione
SLU 55	14.14	0	0	0	0	1000	Si
SLU 1	12.17	-96	2.91	0	0	0	No, e>l/2
SLU 1	14.14	0	0	0	0	1000	Si
SLU 56	12.17	-125	4.67	0	0	0	No, e>l/2
SLU 56	14.14	0	0	0	0	1000	Si
SLU 54	12.17	92	14.11	0	0	0	No, Trazione
SLU 54	14.14	0	0	0	0	1000	Si
SLU 61	12.17	101	14.06	0	0	0	No, Trazione
SLU 61	14.14	0	0	0	0	1000	Si
SLU 59	12.17	85	14.16	0	0	0	No, Trazione
SLU 59	14.14	0	0	0	0	1000	Si
SLU 58	12.17	-128	4.53	0	0	0	No, e>l/2
SLU 58	14.14	0	0	0	0	1000	Si
SLU 53	12.17	-120	4.48	0	0	0	No, e>l/2
SLU 53	14.14	0	0	0	0	1000	Si
SLU 60	12.17	-111	4.43	0	0	0	No, e>l/2
SLU 60	14.14	0	0	0	0	1000	Si
SLU 57	12.17	87	14.3	0	0	0	No, Trazione
SLU 57	14.14	0	0	0	0	1000	Si

Verifica a pressoflessione nel piano secondo D.M. 17-01-18 NTC §7.8.2.2.1 in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 6	12.17	-4592	-167.4	0	0	0	No, e>l/2
SLV 6	14.14	0	0	0	0	1000	Si
SLV 4	12.17	27	5.27	0	0	0	No, Trazione
SLV 4	14.14	0	0	0	0	1000	Si
SLV 10	12.17	-3913	-140.31	0	0	0	No, e>l/2



Comb.	Quota	N	M	σ_0	Mu	c.s.	Verifica
SLV 10	14.14	0	0	0	0	1000	Si
SLV 9	12.17	-3913	-140.31	0	0	0	No, $e>l/2$
SLV 9	14.14	0	0	0	0	1000	Si
SLV 3	12.17	27	5.27	0	0	0	No, Trazione
SLV 3	14.14	0	0	0	0	1000	Si
SLV 2	12.17	-2471	-89.02	0	0	0	No, $e>l/2$
SLV 2	14.14	0	0	0	0	1000	Si
SLV 1	12.17	-2471	-89.02	0	0	0	No, $e>l/2$
SLV 1	14.14	0	0	0	0	1000	Si
SLV 7	12.17	3734	146.87	0	0	0	No, Trazione
SLV 7	14.14	0	0	0	0	1000	Si
SLV 8	12.17	3734	146.87	0	0	0	No, Trazione
SLV 8	14.14	0	0	0	0	1000	Si
SLV 5	12.17	-4592	-167.4	0	0	0	No, $e>l/2$
SLV 5	14.14	0	0	0	0	1000	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni non sismiche, $\gamma_M = 3$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLU 60	12.17	-111	20	4.43	0	0	0	5556	0			0	No, $V_u < V$
SLU 60	14.14	0	0	0	0	0	0	5556	0			1000	Si
SLU 57	12.17	87	64	14.3	0	0	0	5556	0			0	No, $V_u < V$
SLU 57	14.14	0	0	0	0	0	0	5556	0			1000	Si
SLU 1	12.17	-96	13	2.91	0	0	0	5556	0			0	No, $V_u < V$
SLU 1	14.14	0	0	0	0	0	0	5556	0			1000	Si
SLU 61	12.17	101	63	14.06	0	0	0	5556	0			0	No, $V_u < V$
SLU 61	14.14	0	0	0	0	0	0	5556	0			1000	Si
SLU 54	12.17	92	64	14.11	0	0	0	5556	0			0	No, $V_u < V$
SLU 54	14.14	0	0	0	0	0	0	5556	0			1000	Si
SLU 58	12.17	-128	20	4.53	0	0	0	5556	0			0	No, $V_u < V$
SLU 58	14.14	0	0	0	0	0	0	5556	0			1000	Si
SLU 56	12.17	-125	21	4.67	0	0	0	5556	0			0	No, $V_u < V$
SLU 56	14.14	0	0	0	0	0	0	5556	0			1000	Si
SLU 53	12.17	-120	20	4.48	0	0	0	5556	0			0	No, $V_u < V$
SLU 53	14.14	0	0	0	0	0	0	5556	0			1000	Si
SLU 59	12.17	85	64	14.16	0	0	0	5556	0			0	No, $V_u < V$
SLU 59	14.14	0	0	0	0	0	0	5556	0			1000	Si
SLU 55	12.17	232	92	20.4	0	0	0	5556	0			0	No, $V_u < V$
SLU 55	14.14	0	0	0	0	0	0	5556	0			1000	Si

Verifica a taglio nel piano secondo D.M. 17-01-18 (N.T.C.) §7.8.2.2.2 con rottura per scorrimento in combinazioni sismiche, $\gamma_M = 2$

Comb.	Quota	N	V par	M	σ_0	σ_N	I'	fvd	Vt scorr.	Vt fess.diag.	Vt,lim	c.s.	Verifica
SLV 1	12.17	-2471	-399	-89.02	0	0	0	8333	0			0	No, $V_u < V$
SLV 1	14.14	0	0	0	0	0	0	8333	0			1000	Si
SLV 5	12.17	-4592	-745	-167.4	0	0	0	8333	0			0	No, $V_u < V$
SLV 5	14.14	0	0	0	0	0	0	8333	0			1000	Si
SLV 6	12.17	-4592	-745	-167.4	0	0	0	8333	0			0	No, $V_u < V$
SLV 6	14.14	0	0	0	0	0	0	8333	0			1000	Si
SLV 10	12.17	-3913	-623	-140.31	0	0	0	8333	0			0	No, $V_u < V$
SLV 10	14.14	0	0	0	0	0	0	8333	0			1000	Si
SLV 2	12.17	-2471	-399	-89.02	0	0	0	8333	0			0	No, $V_u < V$
SLV 2	14.14	0	0	0	0	0	0	8333	0			1000	Si
SLV 7	12.17	3734	652	146.87	0	0	0	8333	0			0	No, $V_u < V$
SLV 7	14.14	0	0	0	0	0	0	8333	0			1000	Si
SLV 3	12.17	27	20	5.27	0	0	0	8333	0			0	No, $V_u < V$
SLV 3	14.14	0	0	0	0	0	0	8333	0			1000	Si
SLV 8	12.17	3734	652	146.87	0	0	0	8333	0			0	No, $V_u < V$
SLV 8	14.14	0	0	0	0	0	0	8333	0			1000	Si
SLV 9	12.17	-3913	-623	-140.31	0	0	0	8333	0			0	No, $V_u < V$
SLV 9	14.14	0	0	0	0	0	0	8333	0			1000	Si
SLV 4	12.17	27	20	5.27	0	0	0	8333	0			0	No, $V_u < V$
SLV 4	14.14	0	0	0	0	0	0	8333	0			1000	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 8.141 Wa 0.05 denominatore 8 $\gamma_M = 2$

Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 13	143750	0.41	0	-110	76.11	0	0	No, $e>t/2$
SLV 2	143750	0.41	0	-424	76.11	0	0	No, $e>t/2$
SLV 14	143750	0.41	0	-110	76.11	0	0	No, $e>t/2$
SLV 3	143750	0.41	0	-131	76.11	0	0	No, $e>t/2$
SLV 1	143750	0.41	0	-424	76.11	0	0	No, $e>t/2$
SLV 4	143750	0.41	0	-131	76.11	0	0	No, $e>t/2$
SLV 11	143750	0.41	0	415	76.11	0	0	No, Trazione
SLV 8	143750	0.41	0	320	76.11	0	0	No, Trazione
SLV 12	143750	0.41	0	415	76.11	0	0	No, Trazione
SLV 7	143750	0.41	0	320	76.11	0	0	No, Trazione

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 0 quota mezzeria = 8.141 Wa = 0.05 Ta = 1.0158

Comb.	N top	N base	V orto	α_0	M*	e*	α_0^*	aLim	Verifica
SLV 4	3	-873	4	0	0	0	0	2.39674	No, Trazione
SLV 2	98	1130	3	0	0	0	0	2.39674	No, Trazione
SLV 14	-8	-476	-4	0	33.5	0.978	0	2.39674	No
SLV 5	172	2904	-2	0	0	0	0	2.39674	No, Trazione
SLV 3	3	-873	4	0	0	0	0	2.39674	No, Trazione
SLV 6	172	2904	-2	0	0	0	0	2.39674	No, Trazione
SLV 9	140	2422	-4	0	0	0	0	2.39674	No, Trazione
SLV 10	140	2422	-4	0	0	0	0	2.39674	No, Trazione
SLV 1	98	1130	3	0	0	0	0	2.39674	No, Trazione
SLV 13	-8	-476	-4	0	33.5	0.978	0	2.39674	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	0	SLU 84	No
V_SLU	0	SLU 1	No
PF_SLV	0	SLV 16	No
V_SLV	0	SLV 1	No
PFFP_SLV	0	SLV 16	No
R_SLV	0	SLV 10	No

2.4 Verifiche travi di accoppiamento in muratura

Le unità di misura elencate nel capitolo sono in [m, daN] ove non espressamente specificato.

- X ini.*: coordinata punto iniziale. [m]
Y ini.: coordinata punto iniziale. [m]
Z ini.inf.: coordinata punto iniziale. [m]
Z ini.sup.: coordinata punto iniziale. [m]
H ini.: altezza della sezione iniziale. [m]
X fin.: coordinata punto finale. [m]
Y fin.: coordinata punto finale. [m]
Z fin.inf.: coordinata punto finale. [m]
Z fin.sup.: coordinata punto finale. [m]
H fin.: altezza della sezione finale. [m]
Luce: lunghezza della trave. [m]
Spessore: spessore. [m]
R. Trazione: resistenza a trazione dell'elemento teso disposto orizzontalmente. [daN]
fb: resistenza normalizzata a compressione in direzione orizzontale dei blocchi. [daN/m²]
fhk: resistenza caratteristica a compressione della muratura utilizzata in direzione orizzontale. [daN/m²]
fvk0: resistenza caratteristica a taglio in assenza di carichi verticali. [daN/m²]
fhmmedio: resistenza media a compressione della muratura utilizzata in direzione orizzontale. [daN/m²]
τ0: resistenza media a taglio in assenza di azioni normali [C8.7.1.16]. [daN/m²]
fv0: resistenza media a taglio in assenza di azioni normali [C8.7.1.17]. [daN/m²]
μ: coefficiente di attrito [C8.7.1.17].
φ: coefficiente di ammorsamento o ingranamento secondo Circolare 7 21-01-19 §C8.7.1.3.1.1.
fvk,lim: valore caratteristico massimo della resistenza a taglio che può essere impiegata nel calcolo (§11.10.3.3). [daN/m²]
E: modulo di elasticità longitudinale della muratura utilizzato. [daN/m²]
G: modulo di elasticità tangenziale della muratura utilizzato. [daN/m²]
FC: fattore di confidenza della muratura.
Sezione: sezione di verifica.
γM: fattore parziale di sicurezza del materiale.
N: sforzo normale. [daN]
M: momento flettente nel piano. [daN*m]
Mu: momento ultimo. [daN*m]
Comb.: combinazione.
c.s.: coefficiente di sicurezza.
Verifica: stato di verifica.
M: momento flettente. [daN*m]
V: taglio nel piano. [daN]
Vt: resistenza a taglio secondo [7.8.4]. [daN]
Vp: resistenza a taglio secondo [7.8.6]. [daN]
Vt fess. diag.: resistenza a taglio per fessurazione diagonale secondo §C8.7.1.3.1.1 formule [C8.7.1.16] ovvero [C8.7.1.17]. [daN]
Vt,lim: taglio limite [C8.1.7.18]. [daN]
Stato limite: pF_SLV=Presso flessione per azioni sismiche; V_SLV=Taglio per azioni sismiche.
Coeff.s.: coefficiente di sicurezza.

Trave di accoppiamento 1

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-21.763	5.876	-1.3	0.7	2	-22.763	5.876	-1.3	0.7	2	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fhmmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	γM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1504	-1879.88	9132.35	SLU 84	4.86	Si
fin.	3	184	-1434.33	9132.35	SLU 84	6.37	Si
ini.	3	-1490	-1812.83	9132.35	SLU 77	5.04	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	3	220	-1440.53	9132.35	SLU 77	6.34	Si
ini.	3	-1456	-1801.68	9132.35	SLU 76	5.07	Si
fin.	3	178	-1383.41	9132.35	SLU 76	6.6	Si
ini.	3	-1447	-1836.33	9132.35	SLU 74	4.97	Si
fin.	3	164	-1390.87	9132.35	SLU 74	6.57	Si
ini.	3	-1461	-1903.39	9132.35	SLU 82	4.8	Si
fin.	3	128	-1384.66	9132.35	SLU 82	6.6	Si
ini.	3	-1454	-1914.09	9132.35	SLU 81	4.77	Si
fin.	3	121	-1386.41	9132.35	SLU 81	6.59	Si
ini.	3	-1498	-1802.12	9132.35	SLU 78	5.07	Si
fin.	3	227	-1438.79	9132.35	SLU 78	6.35	Si
ini.	3	-1414	-1825.19	9132.35	SLU 73	5	Si
fin.	3	121	-1333.74	9132.35	SLU 73	6.85	Si
ini.	3	-1455	-1825.63	9132.35	SLU 75	5	Si
fin.	3	171	-1389.12	9132.35	SLU 75	6.57	Si
ini.	3	-1496	-1890.59	9132.35	SLU 83	4.83	Si
fin.	3	177	-1436.08	9132.35	SLU 83	6.36	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1504	-1879.88	-4609			4068	1598	SLU 84	0.35	No
fin.	3	184	-1434.33	2288			3466	1264	SLU 84	0.55	No
ini.	3	-1455	-1825.63	-4411			4048	1590	SLU 75	0.36	No
fin.	3	171	-1389.12	2187			3466	1267	SLU 75	0.58	No
ini.	3	-1496	-1890.59	-4590			4064	1597	SLU 83	0.35	No
fin.	3	177	-1436.08	2321			3466	1265	SLU 83	0.55	No
ini.	3	-1490	-1812.83	-4581			4062	1596	SLU 77	0.35	No
fin.	3	220	-1440.53	2069			3466	1256	SLU 77	0.61	No
ini.	3	-1493	-1785.31	-4594			4063	1596	SLU 80	0.35	No
fin.	3	229	-1434.24	2012			3466	1254	SLU 80	0.62	No
ini.	3	-1456	-1801.68	-4417			4049	1590	SLU 76	0.36	No
fin.	3	178	-1383.41	2141			3466	1265	SLU 76	0.59	No
ini.	3	-1498	-1802.12	-4600			4065	1597	SLU 78	0.35	No
fin.	3	227	-1438.79	2036			3466	1254	SLU 78	0.62	No
ini.	3	-1485	-1796.01	-4575			4060	1595	SLU 79	0.35	No
fin.	3	222	-1435.98	2045			3466	1255	SLU 79	0.61	No
ini.	3	-1454	-1914.09	-4401			4047	1589	SLU 81	0.36	No
fin.	3	121	-1386.41	2471			3466	1278	SLU 81	0.52	No
ini.	3	-1461	-1903.39	-4420			4051	1591	SLU 82	0.36	No
fin.	3	128	-1384.66	2439			3466	1276	SLU 82	0.52	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-6843	2543.24	13698.53	SLV 7	5.39	Si
fin.	2	2149	-4830.81	13698.53	SLV 7	2.84	Si
ini.	2	3587	-3852.95	13698.53	SLV 5	3.56	Si
fin.	2	-327	1704.43	13698.53	SLV 5	8.04	Si
ini.	2	-4683	1823.79	13698.53	SLV 3	7.51	Si
fin.	2	3260	-3986.42	13698.53	SLV 3	3.44	Si
ini.	2	2706	-4435.68	13698.53	SLV 13	3.09	Si
fin.	2	-3133	2096.84	13698.53	SLV 13	6.53	Si
ini.	2	3587	-3852.95	13698.53	SLV 6	3.56	Si
fin.	2	-327	1704.43	13698.53	SLV 6	8.04	Si
ini.	2	2706	-4435.68	13698.53	SLV 14	3.09	Si
fin.	2	-3133	2096.84	13698.53	SLV 14	6.53	Si
ini.	2	4865	-5155.13	13698.53	SLV 10	2.66	Si
fin.	2	-2022	2941.24	13698.53	SLV 10	4.66	Si
ini.	2	4865	-5155.13	13698.53	SLV 9	2.66	Si
fin.	2	-2022	2941.24	13698.53	SLV 9	4.66	Si
ini.	2	-6843	2543.24	13698.53	SLV 8	5.39	Si
fin.	2	2149	-4830.81	13698.53	SLV 8	2.84	Si
ini.	2	-4683	1823.79	13698.53	SLV 4	7.51	Si
fin.	2	3260	-3986.42	13698.53	SLV 4	3.44	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	2706	-4435.68	7177			5199	1235	SLV 13	0.17	No
fin.	2	-3133	2096.84	11807			6452	2548	SLV 13	0.22	No
ini.	2	2706	-4435.68	7177			5199	1235	SLV 14	0.17	No
fin.	2	-3133	2096.84	11807			6452	2548	SLV 14	0.22	No
ini.	2	-424	-2516.82	5423			5369	2047	SLV 16	0.38	No
fin.	2	-2391	136.27	9521			6155	2421	SLV 16	0.25	No
ini.	2	-1554	-95.07	-11214			5821	2269	SLV 1	0.2	No
fin.	2	2517	-2025.85	-6274			5199	1299	SLV 1	0.21	No
ini.	2	-4683	1823.79	-12968			7072	2795	SLV 4	0.22	No
fin.	2	3260	-3986.42	-8561			5199	1027	SLV 4	0.12	No
ini.	2	-1554	-95.07	-11214			5821	2269	SLV 2	0.2	No
fin.	2	2517	-2025.85	-6274			5199	1299	SLV 2	0.21	No
ini.	2	-424	-2516.82	5423			5369	2047	SLV 15	0.38	No
fin.	2	-2391	136.27	9521			6155	2421	SLV 15	0.25	No
ini.	2	4865	-5155.13	2786			5199	0	SLV 9	0	No
fin.	2	-2022	2941.24	8146			6008	2355	SLV 9	0.29	No
ini.	2	4865	-5155.13	2786			5199	0	SLV 10	0	No
fin.	2	-2022	2941.24	8146			6008	2355	SLV 10	0.29	No
ini.	2	-4683	1823.79	-12968			7072	2795	SLV 3	0.22	No
fin.	2	3260	-3986.42	-8561			5199	1027	SLV 3	0.12	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
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Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.657	SLV 9	Si
V_SLV	0	SLV 9	No
PF_SLU	4.771	SLU 81	Si
V_SLU	0.347	SLU 84	No

Trave di accoppiamento 2

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-21.763	5.876	1.1	1.39	0.29	-22.763	5.876	1.1	1.39	0.29	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fmed	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	1210	-248.13	192.01	SLU 83	0.77	No
fin.	3	1162	-134.69	192.01	SLU 83	1.43	Si
ini.	3	1196	-234.59	192.01	SLU 74	0.82	No
fin.	3	1157	-123.21	192.01	SLU 74	1.56	Si
ini.	3	1209	-247.44	192.01	SLU 84	0.78	No
fin.	3	1152	-135.61	192.01	SLU 84	1.42	Si
ini.	3	1233	-229.77	192.01	SLU 78	0.84	No
fin.	3	1144	-129.55	192.01	SLU 78	1.48	Si
ini.	3	1235	-230.45	192.01	SLU 77	0.83	No
fin.	3	1154	-128.63	192.01	SLU 77	1.49	Si
ini.	3	1145	-236.03	192.01	SLU 73	0.81	No
fin.	3	1129	-119.87	192.01	SLU 73	1.6	Si
ini.	3	1170	-251.58	192.01	SLU 82	0.76	No
fin.	3	1155	-130.18	192.01	SLU 82	1.47	Si
ini.	3	1171	-252.26	192.01	SLU 81	0.76	No
fin.	3	1165	-129.26	192.01	SLU 81	1.49	Si
ini.	3	1183	-231.89	192.01	SLU 76	0.83	No
fin.	3	1125	-125.3	192.01	SLU 76	1.53	Si
ini.	3	1195	-233.9	192.01	SLU 75	0.82	No
fin.	3	1147	-124.13	192.01	SLU 75	1.55	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	1102	-205.13	1313			335	0	SLU 55	0	No
fin.	3	1068	-104.33	-771			335	0	SLU 55	0	No
ini.	3	1113	-207.14	1322			335	0	SLU 54	0	No
fin.	3	1089	-103.16	-769			335	0	SLU 54	0	No
ini.	3	1152	-203	1313			335	0	SLU 57	0	No
fin.	3	1086	-108.59	-788			335	0	SLU 57	0	No
ini.	3	1090	-225.5	1418			335	0	SLU 60	0	No
fin.	3	1108	-108.3	-817			335	0	SLU 60	0	No
ini.	3	1154	-203.69	1315			335	0	SLU 56	0	No
fin.	3	1097	-107.67	-786			335	0	SLU 56	0	No
ini.	3	798	-141.83	900			335	0	SLU 1	0	No
fin.	3	817	-60.82	-485			335	0	SLU 1	0	No
ini.	3	1142	-201.45	1305			335	0	SLU 59	0	No
fin.	3	1072	-109.15	-789			335	0	SLU 59	0	No
ini.	3	1143	-202.14	1307			335	0	SLU 58	0	No
fin.	3	1082	-108.23	-787			335	0	SLU 58	0	No
ini.	3	1089	-224.82	1416			335	0	SLU 61	0	No
fin.	3	1098	-109.22	-819			335	0	SLU 61	0	No
ini.	3	1115	-207.83	1324			335	0	SLU 53	0	No
fin.	3	1100	-102.24	-766			335	0	SLU 53	0	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	366	-1313.39	288.01	SLV 10	0.22	No
fin.	2	7377	-157.8	288.01	SLV 10	1.83	Si
ini.	2	1308	994.31	288.01	SLV 7	0.29	No
fin.	2	-5684	9.61	288.01	SLV 7	29.97	Si
ini.	2	-249	-816.88	288.01	SLV 13	0.35	No
fin.	2	3643	231.68	288.01	SLV 13	1.24	Si
ini.	2	989	-1108.22	288.01	SLV 5	0.26	No
fin.	2	6825	-375.96	288.01	SLV 5	0.77	No
ini.	2	-249	-816.88	288.01	SLV 14	0.35	No
fin.	2	3643	231.68	288.01	SLV 14	1.24	Si
ini.	2	366	-1313.39	288.01	SLV 9	0.22	No
fin.	2	7377	-157.8	288.01	SLV 9	1.83	Si
ini.	2	1308	994.31	288.01	SLV 8	0.29	No
fin.	2	-5684	9.61	288.01	SLV 8	29.97	Si
ini.	2	685	789.14	288.01	SLV 11	0.36	No
fin.	2	-5132	227.78	288.01	SLV 11	1.26	Si
ini.	2	989	-1108.22	288.01	SLV 6	0.26	No
fin.	2	6825	-375.96	288.01	SLV 6	0.77	No
ini.	2	685	789.14	288.01	SLV 12	0.36	No
fin.	2	-5132	227.78	288.01	SLV 12	1.26	Si



Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	1923	497.8	-217			503	0	SLV 4	0	No
fin.	2	-1950	-379.87	-1308			1022	378	SLV 4	0.29	No
ini.	2	989	-1108.22	1446			503	0	SLV 6	0	No
fin.	2	6825	-375.96	-2067			503	0	SLV 6	0	No
ini.	2	1827	-132.96	226			503	0	SLV 2	0	No
fin.	2	1803	-495.54	-2011			503	0	SLV 2	0	No
ini.	2	989	-1108.22	1446			503	0	SLV 5	0	No
fin.	2	6825	-375.96	-2067			503	0	SLV 5	0	No
ini.	2	366	-1313.39	2049			503	125	SLV 10	0.06	No
fin.	2	7377	-157.8	-1412			503	0	SLV 10	0	No
ini.	2	1308	994.31	-30			503	0	SLV 8	0	No
fin.	2	-5684	9.61	276			2018	589	SLV 8	2.14	Si
ini.	2	1923	497.8	-217			503	0	SLV 3	0	No
fin.	2	-1950	-379.87	-1308			1022	378	SLV 3	0.29	No
ini.	2	1827	-132.96	226			503	0	SLV 1	0	No
fin.	2	1803	-495.54	-2011			503	0	SLV 1	0	No
ini.	2	1308	994.31	-30			503	0	SLV 7	0	No
fin.	2	-5684	9.61	276			2018	589	SLV 7	2.14	Si
ini.	2	366	-1313.39	2049			503	125	SLV 9	0.06	No
fin.	2	7377	-157.8	-1412			503	0	SLV 9	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.219	SLV 9	No
V_SLV	0	SLV 1	No
PF_SLU	0.761	SLU 81	No
V_SLU	0	SLU 1	No

Trave di accoppiamento 3

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-19.618	1.271	0.7	1.39	0.69	-19.618	2.071	0.7	1.39	0.69	0.8	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _{tk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	141	113.97	724.65	SLU 83	6.36	Si
fin.	3	-609	-819.16	724.65	SLU 83	0.88	No
ini.	3	159	104.11	724.65	SLU 79	6.96	Si
fin.	3	-552	-783.67	724.65	SLU 79	0.92	No
ini.	3	154	104.88	724.65	SLU 74	6.91	Si
fin.	3	-557	-781.6	724.65	SLU 74	0.93	No
ini.	3	160	102.72	724.65	SLU 78	7.05	Si
fin.	3	-547	-781	724.65	SLU 78	0.93	No
ini.	3	131	111.94	724.65	SLU 82	6.47	Si
fin.	3	-604	-801.27	724.65	SLU 82	0.9	No
ini.	3	162	104.81	724.65	SLU 77	6.91	Si
fin.	3	-555	-790.25	724.65	SLU 77	0.92	No
ini.	3	157	102.01	724.65	SLU 80	7.1	Si
fin.	3	-544	-774.42	724.65	SLU 80	0.94	No
ini.	3	152	102.78	724.65	SLU 75	7.05	Si
fin.	3	-549	-772.36	724.65	SLU 75	0.94	No
ini.	3	139	111.87	724.65	SLU 84	6.48	Si
fin.	3	-601	-809.91	724.65	SLU 84	0.89	No
ini.	3	133	114.04	724.65	SLU 81	6.35	Si
fin.	3	-611	-810.51	724.65	SLU 81	0.89	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	154	104.88	12			688	228	SLU 74	18.65	Si
fin.	3	-557	-781.6	-2999			880	348	SLU 74	0.12	No
ini.	3	160	102.72	20			688	227	SLU 78	11.38	Si
fin.	3	-547	-781	-2997			876	346	SLU 78	0.12	No
ini.	3	157	102.01	20			688	227	SLU 80	11.57	Si
fin.	3	-544	-774.42	-2972			875	346	SLU 80	0.12	No
ini.	3	139	111.87	-9			688	231	SLU 84	24.88	Si
fin.	3	-601	-809.91	-3095			895	354	SLU 84	0.11	No
ini.	3	133	114.04	-17			688	233	SLU 81	13.68	Si
fin.	3	-611	-810.51	-3097			898	355	SLU 81	0.11	No
ini.	3	162	104.81	17			688	226	SLU 77	13.4	Si
fin.	3	-555	-790.25	-3033			879	348	SLU 77	0.11	No
ini.	3	141	113.97	-12			688	231	SLU 83	18.73	Si
fin.	3	-609	-819.16	-3131			898	355	SLU 83	0.11	No
ini.	3	159	104.11	17			688	227	SLU 79	13.65	Si
fin.	3	-552	-783.67	-3007			878	347	SLU 79	0.12	No
ini.	3	131	111.94	-14			688	233	SLU 82	16.68	Si
fin.	3	-604	-801.27	-3062			896	354	SLU 82	0.12	No
ini.	3	152	102.78	15			688	229	SLU 75	14.97	Si



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	3	-549	-772.36	-2963			877	347	SLU 75	0.12	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-2097	335.06	1086.98	SLV 12	3.24	Si
fin.	2	-3477	-1348.77	1086.98	SLV 12	0.81	No
ini.	2	-905	417.51	1086.98	SLV 3	2.6	Si
fin.	2	-2311	-1131.17	1086.98	SLV 3	0.96	No
ini.	2	-2097	335.06	1086.98	SLV 11	3.24	Si
fin.	2	-3477	-1348.77	1086.98	SLV 11	0.81	No
ini.	2	486	211	1086.98	SLV 1	5.15	Si
fin.	2	-262	-573.88	1086.98	SLV 1	1.89	Si
ini.	2	2538	-353.28	1086.98	SLV 10	3.08	Si
fin.	2	3352	508.84	1086.98	SLV 10	2.14	Si
ini.	2	-2295	484.31	1086.98	SLV 8	2.24	Si
fin.	2	-4042	-1548.42	1086.98	SLV 8	0.7	No
ini.	2	-2295	484.31	1086.98	SLV 7	2.24	Si
fin.	2	-4042	-1548.42	1086.98	SLV 7	0.7	No
ini.	2	-905	417.51	1086.98	SLV 4	2.6	Si
fin.	2	-2311	-1131.17	1086.98	SLV 4	0.96	No
ini.	2	2538	-353.28	1086.98	SLV 9	3.08	Si
fin.	2	3352	508.84	1086.98	SLV 9	2.14	Si
ini.	2	486	211	1086.98	SLV 2	5.15	Si
fin.	2	-262	-573.88	1086.98	SLV 2	1.89	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	2538	-353.28	2125			1031	0	SLV 10	0	No
fin.	2	3352	508.84	1163			1031	0	SLV 10	0	No
ini.	2	1148	-286.48	1000			1031	0	SLV 13	0	No
fin.	2	1621	91.59	46			1031	0	SLV 13	0	No
ini.	2	2340	-204.04	1904			1031	0	SLV 5	0	No
fin.	2	2787	309.2	434			1031	0	SLV 5	0	No
ini.	2	-905	417.51	-920			1344	531	SLV 3	0.58	No
fin.	2	-2311	-1131.17	-4071			1829	698	SLV 3	0.17	No
ini.	2	-2295	484.31	-2044			1823	696	SLV 7	0.34	No
fin.	2	-4042	-1548.42	-5188			2426	860	SLV 7	0.17	No
ini.	2	2538	-353.28	2125			1031	0	SLV 9	0	No
fin.	2	3352	508.84	1163			1031	0	SLV 9	0	No
ini.	2	1148	-286.48	1000			1031	0	SLV 14	0	No
fin.	2	1621	91.59	46			1031	0	SLV 14	0	No
ini.	2	2340	-204.04	1904			1031	0	SLV 6	0	No
fin.	2	2787	309.2	434			1031	0	SLV 6	0	No
ini.	2	-2295	484.31	-2044			1823	696	SLV 8	0.34	No
fin.	2	-4042	-1548.42	-5188			2426	860	SLV 8	0.17	No
ini.	2	-905	417.51	-920			1344	531	SLV 4	0.58	No
fin.	2	-2311	-1131.17	-4071			1829	698	SLV 4	0.17	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.702	SLV 7	No
V_SLV	0	SLV 5	No
PF_SLU	0.885	SLU 83	No
V_SLU	0.113	SLU 83	No

Trave di accoppiamento 4

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-19.618	4.851	0.7	1.39	0.69	-19.618	5.651	0.7	1.39	0.69	0.8	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1494	-427.97	724.65	SLU 81	1.69	Si
fin.	3	-1249	-618.69	724.65	SLU 81	1.17	Si
ini.	3	-1416	-409.16	724.65	SLU 75	1.77	Si
fin.	3	-1227	-615.45	724.65	SLU 75	1.18	Si
ini.	3	-1436	-413.41	724.65	SLU 78	1.75	Si
fin.	3	-1250	-622.7	724.65	SLU 78	1.16	Si
ini.	3	-1455	-418.21	724.65	SLU 77	1.73	Si
fin.	3	-1247	-618.71	724.65	SLU 77	1.17	Si
ini.	3	-1476	-423.17	724.65	SLU 82	1.71	Si
fin.	3	-1253	-622.68	724.65	SLU 82	1.16	Si
ini.	3	-1395	-403	724.65	SLU 76	1.8	Si
fin.	3	-1219	-612.2	724.65	SLU 76	1.18	Si
ini.	3	-1514	-432.22	724.65	SLU 83	1.68	Si
fin.	3	-1273	-625.94	724.65	SLU 83	1.16	Si
ini.	3	-1446	-415.25	724.65	SLU 79	1.75	Si
fin.	3	-1237	-612.8	724.65	SLU 79	1.18	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1496	-427.42	724.65	SLU 84	1.7	Si
fin.	3	-1276	-629.93	724.65	SLU 84	1.15	Si
ini.	3	-1427	-410.45	724.65	SLU 80	1.77	Si
fin.	3	-1240	-616.79	724.65	SLU 80	1.17	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1434	-413.96	5226			1182	454	SLU 74	0.09	No
fin.	3	-1223	-611.46	-4717			1110	431	SLU 74	0.09	No
ini.	3	-1455	-418.21	5278			1189	456	SLU 77	0.09	No
fin.	3	-1247	-618.71	-4769			1118	434	SLU 77	0.09	No
ini.	3	-1514	-432.22	5408			1210	462	SLU 83	0.09	No
fin.	3	-1273	-625.94	-4831			1127	436	SLU 83	0.09	No
ini.	3	-1416	-409.16	5195			1176	452	SLU 75	0.09	No
fin.	3	-1227	-615.45	-4733			1111	431	SLU 75	0.09	No
ini.	3	-1496	-427.42	5377			1204	461	SLU 84	0.09	No
fin.	3	-1276	-629.93	-4848			1128	437	SLU 84	0.09	No
ini.	3	-1476	-423.17	5324			1197	458	SLU 82	0.09	No
fin.	3	-1253	-622.68	-4796			1120	434	SLU 82	0.09	No
ini.	3	-1494	-427.97	5356			1203	460	SLU 81	0.09	No
fin.	3	-1249	-618.69	-4780			1119	434	SLU 81	0.09	No
ini.	3	-1436	-413.41	5247			1183	454	SLU 78	0.09	No
fin.	3	-1250	-622.7	-4785			1119	434	SLU 78	0.09	No
ini.	3	-1446	-415.25	5236			1186	455	SLU 79	0.09	No
fin.	3	-1237	-612.8	-4726			1114	432	SLU 79	0.09	No
ini.	3	-1427	-410.45	5205			1180	453	SLU 80	0.09	No
fin.	3	-1240	-616.79	-4743			1115	433	SLU 80	0.09	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	2457	583.87	1086.98	SLV 11	1.86	Si
fin.	2	-906	-1589.48	1086.98	SLV 11	0.68	No
ini.	2	1638	509.39	1086.98	SLV 7	2.13	Si
fin.	2	-2041	-1586.5	1086.98	SLV 7	0.69	No
ini.	2	1638	509.39	1086.98	SLV 8	2.13	Si
fin.	2	-2041	-1586.5	1086.98	SLV 8	0.69	No
ini.	2	-4343	-1142.38	1086.98	SLV 6	0.95	No
fin.	2	-734	737.32	1086.98	SLV 6	1.47	Si
ini.	2	2457	583.87	1086.98	SLV 12	1.86	Si
fin.	2	-906	-1589.48	1086.98	SLV 12	0.68	No
ini.	2	1320	92.65	1086.98	SLV 15	11.73	Si
fin.	2	876	-779.62	1086.98	SLV 15	1.39	Si
ini.	2	-4343	-1142.38	1086.98	SLV 5	0.95	No
fin.	2	-734	737.32	1086.98	SLV 5	1.47	Si
ini.	2	-3524	-1067.9	1086.98	SLV 10	1.02	Si
fin.	2	401	734.34	1086.98	SLV 10	1.48	Si
ini.	2	-3524	-1067.9	1086.98	SLV 9	1.02	Si
fin.	2	401	734.34	1086.98	SLV 9	1.48	Si
ini.	2	1320	92.65	1086.98	SLV 16	11.73	Si
fin.	2	876	-779.62	1086.98	SLV 16	1.39	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	2457	583.87	-481			1031	0	SLV 11	0	No
fin.	2	-906	-1589.48	-8421			1344	531	SLV 11	0.06	No
ini.	2	-474	-402.89	4077			1195	469	SLV 13	0.11	No
fin.	2	1268	-82.47	-1609			1031	0	SLV 13	0	No
ini.	2	-3524	-1067.9	7254			2247	815	SLV 9	0.11	No
fin.	2	401	734.34	1913			1031	304	SLV 9	0.16	No
ini.	2	1320	92.65	1757			1031	0	SLV 15	0	No
fin.	2	876	-779.62	-4709			1031	152	SLV 15	0.03	No
ini.	2	1638	509.39	-79			1031	0	SLV 7	0	No
fin.	2	-2041	-1586.5	-8502			1735	669	SLV 7	0.08	No
ini.	2	1320	92.65	1757			1031	0	SLV 16	0	No
fin.	2	876	-779.62	-4709			1031	152	SLV 16	0.03	No
ini.	2	1638	509.39	-79			1031	0	SLV 8	0	No
fin.	2	-2041	-1586.5	-8502			1735	669	SLV 8	0.08	No
ini.	2	-3524	-1067.9	7254			2247	815	SLV 10	0.11	No
fin.	2	401	734.34	1913			1031	304	SLV 10	0.16	No
ini.	2	-474	-402.89	4077			1195	469	SLV 14	0.11	No
fin.	2	1268	-82.47	-1609			1031	0	SLV 14	0	No
ini.	2	2457	583.87	-481			1031	0	SLV 12	0	No
fin.	2	-906	-1589.48	-8421			1344	531	SLV 12	0.06	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.684	SLV 11	No
V_SLV	0	SLV 7	No
PF_SLU	1.15	SLU 84	Si
V_SLU	0.086	SLU 83	No

Trave di accoppiamento 5

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
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X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-21.543	-3.284	-1.3	0.7	2	-22.543	-3.284	-1.3	0.7	2	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fnk	fvk0	fhmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	γM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-893	-298.52	9132.35	SLU 74	30.59	Si
fin.	3	531	-1807.32	9132.35	SLU 74	5.05	Si
ini.	3	-931	-304.38	9132.35	SLU 83	30	Si
fin.	3	546	-1867.17	9132.35	SLU 83	4.89	Si
ini.	3	-852	-260.06	9132.35	SLU 56	35.12	Si
fin.	3	487	-1693.11	9132.35	SLU 56	5.39	Si
ini.	3	-901	-277.49	9132.35	SLU 77	32.91	Si
fin.	3	562	-1847.17	9132.35	SLU 77	4.94	Si
ini.	3	-824	-252.24	9132.35	SLU 69	36.21	Si
fin.	3	506	-1688.42	9132.35	SLU 69	5.41	Si
ini.	3	-857	-255.09	9132.35	SLU 58	35.8	Si
fin.	3	478	-1684.92	9132.35	SLU 58	5.42	Si
ini.	3	-829	-247.27	9132.35	SLU 71	36.93	Si
fin.	3	498	-1680.23	9132.35	SLU 71	5.44	Si
ini.	3	-881	-286.95	9132.35	SLU 62	31.83	Si
fin.	3	471	-1713.11	9132.35	SLU 62	5.33	Si
ini.	3	-922	-325.4	9132.35	SLU 81	28.06	Si
fin.	3	516	-1827.33	9132.35	SLU 81	5	Si
ini.	3	-906	-272.53	9132.35	SLU 79	33.51	Si
fin.	3	553	-1838.98	9132.35	SLU 79	4.97	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	γM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-857	-255.09	-3746			3809	1479	SLU 58	0.39	No
fin.	3	478	-1684.92	-1487			3466	1196	SLU 58	0.8	No
ini.	3	-901	-277.49	-4165			3827	1487	SLU 77	0.36	No
fin.	3	562	-1847.17	-1563			3466	1176	SLU 77	0.75	No
ini.	3	-1546	-20.83	-4042			4084	1606	SLU 84	0.4	No
fin.	3	-122	-1489.8	-1405			3515	1331	SLU 84	0.95	No
ini.	3	-852	-260.06	-3757			3807	1478	SLU 56	0.39	No
fin.	3	487	-1693.11	-1488			3466	1194	SLU 56	0.8	No
ini.	3	-893	-298.52	-4057			3823	1486	SLU 74	0.37	No
fin.	3	531	-1807.32	-1474			3466	1183	SLU 74	0.8	No
ini.	3	-824	-252.24	-3715			3796	1473	SLU 69	0.4	No
fin.	3	506	-1688.42	-1529			3466	1189	SLU 69	0.78	No
ini.	3	-922	-325.4	-4130			3835	1491	SLU 81	0.36	No
fin.	3	516	-1827.33	-1398			3466	1187	SLU 81	0.85	No
ini.	3	-931	-304.38	-4239			3838	1493	SLU 83	0.35	No
fin.	3	546	-1867.17	-1487			3466	1180	SLU 83	0.79	No
ini.	3	-881	-286.95	-3830			3819	1484	SLU 62	0.39	No
fin.	3	471	-1713.11	-1412			3466	1198	SLU 62	0.85	No
ini.	3	-906	-272.53	-4154			3829	1488	SLU 79	0.36	No
fin.	3	553	-1838.98	-1562			3466	1178	SLU 79	0.75	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	γM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	4411	-2698.15	13698.53	SLV 8	5.08	Si
fin.	2	8908	-5329.85	13698.53	SLV 8	2.57	Si
ini.	2	2888	-5067.13	13698.53	SLV 15	2.7	Si
fin.	2	130	1297.54	13698.53	SLV 15	10.56	Si
ini.	2	-799	2454.93	13698.53	SLV 3	5.58	Si
fin.	2	5225	-5613.25	13698.53	SLV 3	2.44	Si
ini.	2	2888	-5067.13	13698.53	SLV 16	2.7	Si
fin.	2	130	1297.54	13698.53	SLV 16	10.56	Si
ini.	2	4411	-2698.15	13698.53	SLV 7	5.08	Si
fin.	2	8908	-5329.85	13698.53	SLV 7	2.57	Si
ini.	2	5517	-4954.77	13698.53	SLV 12	2.76	Si
fin.	2	7380	-3256.61	13698.53	SLV 12	4.21	Si
ini.	2	-4159	4615.25	13698.53	SLV 2	2.97	Si
fin.	2	539	-3782.92	13698.53	SLV 2	3.62	Si
ini.	2	-799	2454.93	13698.53	SLV 4	5.58	Si
fin.	2	5225	-5613.25	13698.53	SLV 4	2.44	Si
ini.	2	5517	-4954.77	13698.53	SLV 11	2.76	Si
fin.	2	7380	-3256.61	13698.53	SLV 11	4.21	Si
ini.	2	-4159	4615.25	13698.53	SLV 1	2.97	Si
fin.	2	539	-3782.92	13698.53	SLV 1	3.62	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	γM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-799	2454.93	-13820			5519	2123	SLV 4	0.15	No
fin.	2	5225	-5613.25	-13324			5199	0	SLV 4	0	No
ini.	2	-4159	4615.25	-14950			6863	2714	SLV 2	0.18	No
fin.	2	539	-3782.92	-11599			5199	1836	SLV 2	0.16	No
ini.	2	5517	-4954.77	2662			5199	0	SLV 12	0	No
fin.	2	7380	-3256.61	-477			5199	0	SLV 12	0	No
ini.	2	5517	-4954.77	2662			5199	0	SLV 11	0	No
fin.	2	7380	-3256.61	-477			5199	0	SLV 11	0	No
ini.	2	2888	-5067.13	9508			5199	1171	SLV 15	0.12	No
fin.	2	130	1297.54	9537			5199	1928	SLV 15	0.2	No
ini.	2	-4159	4615.25	-14950			6863	2714	SLV 1	0.18	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	2	539	-3782.92	-11599			5199	1836	SLV 1	0.16	No
ini.	2	4411	-2698.15	-4336			5199	275	SLV 7	0.06	No
fin.	2	8908	-5329.85	-7335			5199	0	SLV 7	0	No
ini.	2	-799	2454.93	-13820			5519	2123	SLV 3	0.15	No
fin.	2	5225	-5613.25	-13324			5199	0	SLV 3	0	No
ini.	2	4411	-2698.15	-4336			5199	275	SLV 8	0.06	No
fin.	2	8908	-5329.85	-7335			5199	0	SLV 8	0	No
ini.	2	2888	-5067.13	9508			5199	1171	SLV 16	0.12	No
fin.	2	130	1297.54	9537			5199	1928	SLV 16	0.2	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.44	SLV 3	Si
V_SLV	0	SLV 3	No
PF_SLU	4.891	SLU 83	Si
V_SLU	0.352	SLU 83	No

Trave di accoppiamento 6

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-21.543	-3.284	1.1	1.39	0.29	-22.543	-3.284	1.1	1.39	0.29	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	628	-145.08	192.01	SLU 74	1.32	Si
fin.	3	303	-165.65	192.01	SLU 74	1.16	Si
ini.	3	650	-143.01	192.01	SLU 77	1.34	Si
fin.	3	303	-168.97	192.01	SLU 77	1.14	Si
ini.	3	573	-138.52	192.01	SLU 60	1.39	Si
fin.	3	289	-152.4	192.01	SLU 60	1.26	Si
ini.	3	595	-136.44	192.01	SLU 62	1.41	Si
fin.	3	289	-155.71	192.01	SLU 62	1.23	Si
ini.	3	617	-123.77	192.01	SLU 56	1.55	Si
fin.	3	305	-148.25	192.01	SLU 56	1.3	Si
ini.	3	628	-155.68	192.01	SLU 83	1.23	Si
fin.	3	287	-176.44	192.01	SLU 83	1.09	Si
ini.	3	487	-139.5	192.01	SLU 39	1.38	Si
fin.	3	214	-151.79	192.01	SLU 39	1.26	Si
ini.	3	509	-137.43	192.01	SLU 41	1.4	Si
fin.	3	214	-155.11	192.01	SLU 41	1.24	Si
ini.	3	606	-157.76	192.01	SLU 81	1.22	Si
fin.	3	287	-173.12	192.01	SLU 81	1.11	Si
ini.	3	645	-142.37	192.01	SLU 79	1.35	Si
fin.	3	296	-168.87	192.01	SLU 79	1.14	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	595	-125.85	1035			335	0	SLU 53	0	No
fin.	3	305	-144.93	-892			335	69	SLU 53	0.08	No
ini.	3	468	-102.06	831			335	0	SLU 22	0	No
fin.	3	242	-115.5	-713			335	84	SLU 22	0.12	No
ini.	3	476	-118.19	948			335	0	SLU 20	0	No
fin.	3	215	-134.38	-828			335	90	SLU 20	0.11	No
ini.	3	518	-98.54	832			335	0	SLU 27	0	No
fin.	3	249	-122.24	-737			335	82	SLU 27	0.11	No
ini.	3	617	-123.77	1033			335	0	SLU 56	0	No
fin.	3	305	-148.25	-903			335	69	SLU 56	0.08	No
ini.	3	599	-96.92	848			335	0	SLU 50	0	No
fin.	3	318	-122.74	-741			335	65	SLU 50	0.09	No
ini.	3	512	-97.91	827			335	0	SLU 29	0	No
fin.	3	242	-122.14	-736			335	84	SLU 29	0.11	No
ini.	3	604	-97.56	852			335	0	SLU 48	0	No
fin.	3	325	-122.85	-742			335	63	SLU 48	0.09	No
ini.	3	435	-82.82	692			335	0	SLU 1	0	No
fin.	3	244	-94.78	-586			335	83	SLU 1	0.14	No
ini.	3	496	-100.62	833			335	0	SLU 24	0	No
fin.	3	249	-118.92	-725			335	82	SLU 24	0.11	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-5963	-339.24	288.01	SLV 10	0.85	No
fin.	2	-1565	437.03	288.01	SLV 10	0.66	No
ini.	2	-5963	-339.24	288.01	SLV 9	0.85	No
fin.	2	-1565	437.03	288.01	SLV 9	0.66	No
ini.	2	6859	147.63	288.01	SLV 7	1.95	Si
fin.	2	2041	-652.94	288.01	SLV 7	0.44	No
ini.	2	6859	147.63	288.01	SLV 8	1.95	Si
fin.	2	2041	-652.94	288.01	SLV 8	0.44	No



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	3657	362.58	288.01	SLV 4	0.79	No
fin.	2	-588	-652.14	288.01	SLV 4	0.44	No
ini.	2	832	-484.37	288.01	SLV 15	0.59	No
fin.	2	2417	184.54	288.01	SLV 15	1.56	Si
ini.	2	-2760	-554.2	288.01	SLV 13	0.52	No
fin.	2	1064	436.23	288.01	SLV 13	0.66	No
ini.	2	3657	362.58	288.01	SLV 3	0.79	No
fin.	2	-588	-652.14	288.01	SLV 3	0.44	No
ini.	2	-2760	-554.2	288.01	SLV 14	0.52	No
fin.	2	1064	436.23	288.01	SLV 14	0.66	No
ini.	2	832	-484.37	288.01	SLV 16	0.59	No
fin.	2	2417	184.54	288.01	SLV 16	1.56	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	6859	147.63	554			503	0	SLV 7	0	No
fin.	2	2041	-652.94	-2207			503	0	SLV 7	0	No
ini.	2	-2760	-554.2	2019			1239	433	SLV 13	0.21	No
fin.	2	1064	436.23	1074			503	0	SLV 13	0	No
ini.	2	6012	-106.46	1323			503	0	SLV 12	0	No
fin.	2	2943	-401.94	-1362			503	0	SLV 12	0	No
ini.	2	3657	362.58	-453			503	0	SLV 3	0	No
fin.	2	-588	-652.14	-2410			659	261	SLV 3	0.11	No
ini.	2	832	-484.37	2113			503	0	SLV 16	0	No
fin.	2	2417	184.54	404			503	0	SLV 16	0	No
ini.	2	-2760	-554.2	2019			1239	433	SLV 14	0.21	No
fin.	2	1064	436.23	1074			503	0	SLV 14	0	No
ini.	2	3657	362.58	-453			503	0	SLV 4	0	No
fin.	2	-588	-652.14	-2410			659	261	SLV 4	0.11	No
ini.	2	832	-484.37	2113			503	0	SLV 15	0	No
fin.	2	2417	184.54	404			503	0	SLV 15	0	No
ini.	2	6859	147.63	554			503	0	SLV 8	0	No
fin.	2	2041	-652.94	-2207			503	0	SLV 8	0	No
ini.	2	6012	-106.46	1323			503	0	SLV 11	0	No
fin.	2	2943	-401.94	-1362			503	0	SLV 11	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.441	SLV 7	No
V_SLV	0	SLV 3	No
PF_SLU	1.088	SLU 83	Si
V_SLU	0	SLU 1	No

Trave di accoppiamento 7

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-17.313	-3.284	-1.3	0.7	2	-18.313	-3.284	-1.3	0.7	2	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	224	-4959.19	9132.35	SLU 78	1.84	Si
fin.	3	-548	-1754.95	9132.35	SLU 78	5.2	Si
ini.	3	506	-4745.66	9132.35	SLU 52	1.92	Si
fin.	3	-168	-1744.49	9132.35	SLU 52	5.23	Si
ini.	3	475	-5177.97	9132.35	SLU 76	1.76	Si
fin.	3	-240	-1901.28	9132.35	SLU 76	4.8	Si
ini.	3	149	-5074.84	9132.35	SLU 84	1.8	Si
fin.	3	-634	-1791.33	9132.35	SLU 84	5.1	Si
ini.	3	147	-5043.84	9132.35	SLU 82	1.81	Si
fin.	3	-648	-1769.04	9132.35	SLU 82	5.16	Si
ini.	3	205	-4925.94	9132.35	SLU 80	1.85	Si
fin.	3	-554	-1749.48	9132.35	SLU 80	5.22	Si
ini.	3	473	-5146.97	9132.35	SLU 73	1.77	Si
fin.	3	-253	-1878.99	9132.35	SLU 73	4.86	Si
ini.	3	600	-4758.22	9132.35	SLU 68	1.92	Si
fin.	3	-83	-1751.62	9132.35	SLU 68	5.21	Si
ini.	3	221	-4928.19	9132.35	SLU 75	1.85	Si
fin.	3	-562	-1732.66	9132.35	SLU 75	5.27	Si
ini.	3	508	-4776.65	9132.35	SLU 55	1.91	Si
fin.	3	-154	-1766.77	9132.35	SLU 55	5.17	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	508	-4776.65	-3531			3466	1189	SLU 55	0.34	No
fin.	3	-154	-1766.77	8607			3528	1337	SLU 55	0.16	No
ini.	3	205	-4925.94	-3839			3466	1259	SLU 80	0.33	No
fin.	3	-554	-1749.48	9276			3687	1420	SLU 80	0.15	No
ini.	3	224	-4959.19	-3832			3466	1255	SLU 78	0.33	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	3	-548	-1754.95	9344			3685	1419	SLU 78	0.15	No
ini.	3	600	-4758.22	-3399			3466	1167	SLU 68	0.34	No
fin.	3	-83	-1751.62	8548			3499	1322	SLU 68	0.15	No
ini.	3	147	-5043.84	-3925			3466	1272	SLU 82	0.32	No
fin.	3	-648	-1769.04	9556			3725	1438	SLU 82	0.15	No
ini.	3	473	-5146.97	-3830			3466	1197	SLU 73	0.31	No
fin.	3	-253	-1878.99	9377			3567	1358	SLU 73	0.14	No
ini.	3	475	-5177.97	-3893			3466	1197	SLU 76	0.31	No
fin.	3	-240	-1901.28	9425			3562	1355	SLU 76	0.14	No
ini.	3	598	-4727.23	-3336			3466	1167	SLU 65	0.35	No
fin.	3	-96	-1729.33	8500			3505	1325	SLU 65	0.16	No
ini.	3	149	-5074.84	-3988			3466	1272	SLU 84	0.32	No
fin.	3	-634	-1791.33	9604			3720	1436	SLU 84	0.15	No
ini.	3	221	-4928.19	-3770			3466	1255	SLU 75	0.33	No
fin.	3	-562	-1732.66	9296			3691	1421	SLU 75	0.15	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-5748	3541.05	13698.53	SLV 4	3.87	Si
fin.	2	-556	-2275.29	13698.53	SLV 4	6.02	Si
ini.	2	5560	-9788.6	13698.53	SLV 13	1.4	Si
fin.	2	-904	257.96	13698.53	SLV 13	53.1	Si
ini.	2	-5748	3541.05	13698.53	SLV 3	3.87	Si
fin.	2	-556	-2275.29	13698.53	SLV 3	6.02	Si
ini.	2	3469	-8965.34	13698.53	SLV 10	1.53	Si
fin.	2	-1025	-192.13	13698.53	SLV 10	71.3	Si
ini.	2	4329	-7255.34	13698.53	SLV 15	1.89	Si
fin.	2	-743	-29.87	13698.53	SLV 15	458.58	Si
ini.	2	446	-5726.42	13698.53	SLV 6	2.39	Si
fin.	2	-969	-865.76	13698.53	SLV 6	15.82	Si
ini.	2	5560	-9788.6	13698.53	SLV 14	1.4	Si
fin.	2	-904	257.96	13698.53	SLV 14	53.1	Si
ini.	2	4329	-7255.34	13698.53	SLV 16	1.89	Si
fin.	2	-743	-29.87	13698.53	SLV 16	458.58	Si
ini.	2	3469	-8965.34	13698.53	SLV 9	1.53	Si
fin.	2	-1025	-192.13	13698.53	SLV 9	71.3	Si
ini.	2	446	-5726.42	13698.53	SLV 5	2.39	Si
fin.	2	-969	-865.76	13698.53	SLV 5	15.82	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-4517	1007.79	-11673			7006	2770	SLV 1	0.24	No
fin.	2	-717	-1987.46	-5064			5486	2107	SLV 1	0.42	No
ini.	2	3469	-8965.34	835			5199	936	SLV 10	1.12	Si
fin.	2	-1025	-192.13	14824			5609	2168	SLV 10	0.15	No
ini.	2	3469	-8965.34	835			5199	936	SLV 9	1.12	Si
fin.	2	-1025	-192.13	14824			5609	2168	SLV 9	0.15	No
ini.	2	-5748	3541.05	-11925			7498	2953	SLV 4	0.25	No
fin.	2	-556	-2275.29	-7930			5422	2074	SLV 4	0.26	No
ini.	2	-5748	3541.05	-11925			7498	2953	SLV 3	0.25	No
fin.	2	-556	-2275.29	-7930			5422	2074	SLV 3	0.26	No
ini.	2	4329	-7255.34	6865			5199	381	SLV 15	0.06	No
fin.	2	-743	-29.87	17524			5496	2112	SLV 15	0.12	No
ini.	2	4329	-7255.34	6865			5199	381	SLV 16	0.06	No
fin.	2	-743	-29.87	17524			5496	2112	SLV 16	0.12	No
ini.	2	5560	-9788.6	7117			5199	0	SLV 14	0	No
fin.	2	-904	257.96	20390			5561	2144	SLV 14	0.11	No
ini.	2	-4517	1007.79	-11673			7006	2770	SLV 2	0.24	No
fin.	2	-717	-1987.46	-5064			5486	2107	SLV 2	0.42	No
ini.	2	5560	-9788.6	7117			5199	0	SLV 13	0	No
fin.	2	-904	257.96	20390			5561	2144	SLV 13	0.11	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.399	SLV 13	Si
V_SLV	0	SLV 13	No
PF_SLU	1.764	SLU 76	Si
V_SLU	0.144	SLU 76	No

Trave di accoppiamento 8

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-17.313	-3.284	1.1	1.39	0.29	-18.313	-3.284	1.1	1.39	0.29	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	1554	-404.79	192.01	SLU 78	0.47	No
fin.	3	3107	-170.06	192.01	SLU 78	1.13	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	1626	-420.99	192.01	SLU 82	0.46	No
fin.	3	3174	-177.71	192.01	SLU 82	1.08	Si
ini.	3	1635	-422.71	192.01	SLU 84	0.45	No
fin.	3	3183	-180.2	192.01	SLU 84	1.07	Si
ini.	3	1589	-415.81	192.01	SLU 76	0.46	No
fin.	3	3610	-161.24	192.01	SLU 76	1.19	Si
ini.	3	1564	-400.73	192.01	SLU 83	0.48	No
fin.	3	2387	-189.91	192.01	SLU 83	1.01	Si
ini.	3	1482	-382.81	192.01	SLU 77	0.5	No
fin.	3	2311	-179.77	192.01	SLU 77	1.07	Si
ini.	3	1550	-402.88	192.01	SLU 80	0.48	No
fin.	3	3088	-170.21	192.01	SLU 80	1.13	Si
ini.	3	1554	-399.01	192.01	SLU 81	0.48	No
fin.	3	2378	-187.41	192.01	SLU 81	1.02	Si
ini.	3	1580	-414.09	192.01	SLU 73	0.46	No
fin.	3	3602	-158.75	192.01	SLU 73	1.21	Si
ini.	3	1545	-403.07	192.01	SLU 75	0.48	No
fin.	3	3099	-167.57	192.01	SLU 75	1.15	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	1366	-361.5	2634			335	0	SLU 54	0	No
fin.	3	2873	-145.67	-2233			335	0	SLU 54	0	No
ini.	3	1300	-339.34	2424			335	0	SLU 58	0	No
fin.	3	2066	-158.02	-2281			335	0	SLU 58	0	No
ini.	3	1371	-361.32	2638			335	0	SLU 59	0	No
fin.	3	2862	-148.31	-2252			335	0	SLU 59	0	No
ini.	3	863	-230.67	1655			335	0	SLU 1	0	No
fin.	3	1451	-101.07	-1524			335	0	SLU 1	0	No
ini.	3	1375	-363.22	2651			335	0	SLU 57	0	No
fin.	3	2882	-148.16	-2258			335	0	SLU 57	0	No
ini.	3	1375	-357.45	2534			335	0	SLU 60	0	No
fin.	3	2153	-165.52	-2378			335	0	SLU 60	0	No
ini.	3	1303	-341.25	2437			335	0	SLU 56	0	No
fin.	3	2086	-157.87	-2288			335	0	SLU 56	0	No
ini.	3	1410	-374.24	2764			335	0	SLU 55	0	No
fin.	3	3384	-139.35	-2206			335	0	SLU 55	0	No
ini.	3	1294	-339.53	2420			335	0	SLU 53	0	No
fin.	3	2077	-155.37	-2263			335	0	SLU 53	0	No
ini.	3	1447	-379.42	2748			335	0	SLU 61	0	No
fin.	3	2949	-155.81	-2348			335	0	SLU 61	0	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	335	-581.63	288.01	SLV 16	0.5	No
fin.	2	3977	162.61	288.01	SLV 16	1.77	Si
ini.	2	863	-858.97	288.01	SLV 10	0.34	No
fin.	2	9353	56.27	288.01	SLV 10	5.12	Si
ini.	2	378	-859.42	288.01	SLV 13	0.34	No
fin.	2	7859	211.3	288.01	SLV 13	1.36	Si
ini.	2	1577	345.6	288.01	SLV 4	0.83	No
fin.	2	-4691	-442.6	288.01	SLV 4	0.65	No
ini.	2	1577	345.6	288.01	SLV 3	0.83	No
fin.	2	-4691	-442.6	288.01	SLV 3	0.65	No
ini.	2	335	-581.63	288.01	SLV 15	0.5	No
fin.	2	3977	162.61	288.01	SLV 15	1.77	Si
ini.	2	1235	-580.8	288.01	SLV 6	0.5	No
fin.	2	6753	-125.3	288.01	SLV 6	2.3	Si
ini.	2	863	-858.97	288.01	SLV 9	0.34	No
fin.	2	9353	56.27	288.01	SLV 9	5.12	Si
ini.	2	378	-859.42	288.01	SLV 14	0.34	No
fin.	2	7859	211.3	288.01	SLV 14	1.36	Si
ini.	2	1235	-580.8	288.01	SLV 5	0.5	No
fin.	2	6753	-125.3	288.01	SLV 5	2.3	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	1577	345.6	312			503	0	SLV 3	0	No
fin.	2	-4691	-442.6	-2898			1753	541	SLV 3	0.19	No
ini.	2	1092	345.15	260			503	0	SLV 8	0	No
fin.	2	-6186	-287.57	-1679			2152	612	SLV 8	0.36	No
ini.	2	1235	-580.8	2710			503	0	SLV 5	0	No
fin.	2	6753	-125.3	-2519			503	0	SLV 5	0	No
ini.	2	1620	67.82	1047			503	0	SLV 1	0	No
fin.	2	-810	-393.92	-3150			718	283	SLV 1	0.09	No
ini.	2	863	-858.97	3401			503	0	SLV 10	0	No
fin.	2	9353	56.27	-1726			503	0	SLV 10	0	No
ini.	2	863	-858.97	3401			503	0	SLV 9	0	No
fin.	2	9353	56.27	-1726			503	0	SLV 9	0	No
ini.	2	1577	345.6	312			503	0	SLV 4	0	No
fin.	2	-4691	-442.6	-2898			1753	541	SLV 4	0.19	No
ini.	2	1620	67.82	1047			503	0	SLV 2	0	No
fin.	2	-810	-393.92	-3150			718	283	SLV 2	0.09	No
ini.	2	1235	-580.8	2710			503	0	SLV 6	0	No
fin.	2	6753	-125.3	-2519			503	0	SLV 6	0	No
ini.	2	1092	345.15	260			503	0	SLV 7	0	No
fin.	2	-6186	-287.57	-1679			2152	612	SLV 7	0.36	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.335	SLV 13	No
V_SLV	0	SLV 1	No
PF_SLU	0.454	SLU 84	No
V_SLU	0	SLU 1	No

Trave di accoppiamento 9

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-14.223	-3.284	0.8	1.39	0.59	-16.523	-3.284	0.8	1.39	0.59	2.3	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	1236	-1306.82	794.74	SLU 76	0.61	No
fin.	3	2897	-664.95	794.74	SLU 76	1.2	Si
ini.	3	1194	-1287.28	794.74	SLU 80	0.62	No
fin.	3	2880	-708.75	794.74	SLU 80	1.12	Si
ini.	3	1194	-1285.63	794.74	SLU 75	0.62	No
fin.	3	2877	-698.4	794.74	SLU 75	1.14	Si
ini.	3	1144	-1304.15	794.74	SLU 83	0.61	No
fin.	3	2926	-803.41	794.74	SLU 83	0.99	No
ini.	3	1133	-1296.43	794.74	SLU 81	0.61	No
fin.	3	2904	-794.8	794.74	SLU 81	1	No
ini.	3	1211	-1337.31	794.74	SLU 82	0.59	No
fin.	3	2963	-742.03	794.74	SLU 82	1.07	Si
ini.	3	1205	-1293.35	794.74	SLU 78	0.61	No
fin.	3	2899	-707.01	794.74	SLU 78	1.12	Si
ini.	3	1225	-1299.1	794.74	SLU 73	0.61	No
fin.	3	2876	-656.33	794.74	SLU 73	1.21	Si
ini.	3	1127	-1252.46	794.74	SLU 77	0.63	No
fin.	3	2840	-759.79	794.74	SLU 77	1.05	Si
ini.	3	1222	-1345.03	794.74	SLU 84	0.59	No
fin.	3	2984	-750.64	794.74	SLU 84	1.06	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	1100	-1160.65	3266			682	0	SLU 54	0	No
fin.	3	2600	-617.03	-2995			682	0	SLU 54	0	No
ini.	3	1032	-1127.49	3222			682	0	SLU 56	0	No
fin.	3	2563	-678.42	-3040			682	0	SLU 56	0	No
ini.	3	1039	-1171.45	3370			682	0	SLU 60	0	No
fin.	3	2627	-713.43	-3222			682	0	SLU 60	0	No
ini.	3	1022	-1119.77	3203			682	0	SLU 53	0	No
fin.	3	2542	-669.8	-3018			682	0	SLU 53	0	No
ini.	3	726	-766.22	2182			682	109	SLU 1	0.05	No
fin.	3	1771	-440.75	-1994			682	0	SLU 1	0	No
ini.	3	1142	-1181.84	3295			682	0	SLU 55	0	No
fin.	3	2620	-583.58	-2976			682	0	SLU 55	0	No
ini.	3	1111	-1168.37	3285			682	0	SLU 57	0	No
fin.	3	2622	-625.64	-3017			682	0	SLU 57	0	No
ini.	3	1100	-1162.31	3273			682	0	SLU 59	0	No
fin.	3	2603	-627.37	-3013			682	0	SLU 59	0	No
ini.	3	1022	-1121.43	3210			682	0	SLU 58	0	No
fin.	3	2544	-680.15	-3037			682	0	SLU 58	0	No
ini.	3	1117	-1212.33	3433			682	0	SLU 61	0	No
fin.	3	2685	-660.65	-3199			682	0	SLU 61	0	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	2603	-1508.62	1192.11	SLV 9	0.79	No
fin.	2	5371	-72.52	1192.11	SLV 9	16.44	Si
ini.	2	2962	-1604.55	1192.11	SLV 15	0.74	No
fin.	2	3470	997.86	1192.11	SLV 15	1.19	Si
ini.	2	-1406	-86.59	1192.11	SLV 1	13.77	Si
fin.	2	398	-1993.19	1192.11	SLV 1	0.6	No
ini.	2	-1406	-86.59	1192.11	SLV 2	13.77	Si
fin.	2	398	-1993.19	1192.11	SLV 2	0.6	No
ini.	2	-2050	153.05	1192.11	SLV 4	7.79	Si
fin.	2	-1240	-1980.25	1192.11	SLV 4	0.6	No
ini.	2	-2050	153.05	1192.11	SLV 3	7.79	Si
fin.	2	-1240	-1980.25	1192.11	SLV 3	0.6	No
ini.	2	3606	-1844.19	1192.11	SLV 14	0.65	No
fin.	2	5108	984.92	1192.11	SLV 14	1.21	Si
ini.	2	2962	-1604.55	1192.11	SLV 16	0.74	No
fin.	2	3470	997.86	1192.11	SLV 16	1.19	Si
ini.	2	3606	-1844.19	1192.11	SLV 13	0.65	No
fin.	2	5108	984.92	1192.11	SLV 13	1.21	Si
ini.	2	2603	-1508.62	1192.11	SLV 10	0.79	No



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	2	5371	-72.52	1192.11	SLV 10	16.44	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	3606	-1844.19	4150			1022	0	SLV 14	0	No
fin.	2	5108	984.92	-983			1022	0	SLV 14	0	No
ini.	2	1100	-981.33	2198			1022	159	SLV 6	0.07	No
fin.	2	3958	-965.95	-2596			1022	0	SLV 6	0	No
ini.	2	-1406	-86.59	854			1397	552	SLV 2	0.65	No
fin.	2	398	-1993.19	-3517			1022	322	SLV 2	0.09	No
ini.	2	2962	-1604.55	3987			1022	0	SLV 16	0	No
fin.	2	3470	997.86	-1012			1022	0	SLV 16	0	No
ini.	2	2603	-1508.62	3187			1022	0	SLV 9	0	No
fin.	2	5371	-72.52	-1836			1022	0	SLV 9	0	No
ini.	2	2603	-1508.62	3187			1022	0	SLV 10	0	No
fin.	2	5371	-72.52	-1836			1022	0	SLV 10	0	No
ini.	2	3606	-1844.19	4150			1022	0	SLV 13	0	No
fin.	2	5108	984.92	-983			1022	0	SLV 13	0	No
ini.	2	-1406	-86.59	854			1397	552	SLV 1	0.65	No
fin.	2	398	-1993.19	-3517			1022	322	SLV 1	0.09	No
ini.	2	1100	-981.33	2198			1022	159	SLV 5	0.07	No
fin.	2	3958	-965.95	-2596			1022	0	SLV 5	0	No
ini.	2	2962	-1604.55	3987			1022	0	SLV 15	0	No
fin.	2	3470	997.86	-1012			1022	0	SLV 15	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.598	SLV 1	No
V_SLV	0	SLV 5	No
PF_SLU	0.591	SLU 84	No
V_SLU	0	SLU 1	No

Trave di accoppiamento 10

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-14.758	3.311	0.86	1.39	0.53	-13.758	3.311	0.86	1.39	0.53	1	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	348	-81.62	427.55	SLU 80	5.24	Si
fin.	3	1137	-16.08	427.55	SLU 80	26.58	Si
ini.	3	349	-81.48	427.55	SLU 74	5.25	Si
fin.	3	1142	-15.28	427.55	SLU 74	27.98	Si
ini.	3	360	-82.9	427.55	SLU 82	5.16	Si
fin.	3	1199	-11.59	427.55	SLU 82	36.89	Si
ini.	3	364	-84.26	427.55	SLU 83	5.07	Si
fin.	3	1208	-12.99	427.55	SLU 83	32.91	Si
ini.	3	349	-81.77	427.55	SLU 79	5.23	Si
fin.	3	1138	-16.21	427.55	SLU 79	26.38	Si
ini.	3	352	-82.69	427.55	SLU 77	5.17	Si
fin.	3	1150	-16.56	427.55	SLU 77	25.82	Si
ini.	3	348	-81.33	427.55	SLU 75	5.26	Si
fin.	3	1141	-15.16	427.55	SLU 75	28.21	Si
ini.	3	361	-83.06	427.55	SLU 81	5.15	Si
fin.	3	1200	-11.71	427.55	SLU 81	36.5	Si
ini.	3	352	-82.53	427.55	SLU 78	5.18	Si
fin.	3	1149	-16.43	427.55	SLU 78	26.02	Si
ini.	3	364	-84.11	427.55	SLU 84	5.08	Si
fin.	3	1207	-12.87	427.55	SLU 84	33.23	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	309	-73.24	2643			408	99	SLU 58	0.04	No
fin.	3	990	-17.57	-4000			408	0	SLU 58	0	No
ini.	3	305	-71.78	2604			408	100	SLU 55	0.04	No
fin.	3	980	-16.08	-3940			408	0	SLU 55	0	No
ini.	3	321	-74.37	2743			408	97	SLU 61	0.04	No
fin.	3	1051	-12.95	-4127			408	0	SLU 61	0	No
ini.	3	309	-73.09	2638			408	99	SLU 59	0.04	No
fin.	3	989	-17.44	-3994			408	0	SLU 59	0	No
ini.	3	321	-74.53	2747			408	96	SLU 60	0.04	No
fin.	3	1052	-13.07	-4134			408	0	SLU 60	0	No
ini.	3	309	-72.95	2637			408	99	SLU 53	0.04	No
fin.	3	994	-16.64	-3989			408	0	SLU 53	0	No
ini.	3	313	-74.16	2669			408	98	SLU 56	0.04	No
fin.	3	1001	-17.92	-4038			408	0	SLU 56	0	No
ini.	3	208	-50.12	1775			408	120	SLU 1	0.07	No
fin.	3	651	-14.67	-2715			408	0	SLU 1	0	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	309	-72.8	2633			408	99	SLU 54	0.04	No
fin.	3	993	-16.52	-3982			408	0	SLU 54	0	No
ini.	3	312	-74	2664			408	98	SLU 57	0.04	No
fin.	3	1000	-17.79	-4031			408	0	SLU 57	0	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-148	-22.96	641.32	SLV 14	27.93	Si
fin.	2	-3110	-385.15	641.32	SLV 14	1.67	Si
ini.	2	574	-110.16	641.32	SLV 2	5.82	Si
fin.	2	4156	267.36	641.32	SLV 2	2.4	Si
ini.	2	-109	0.14	641.32	SLV 15	4733.81	Si
fin.	2	-2667	-293.34	641.32	SLV 15	2.19	Si
ini.	2	574	-110.16	641.32	SLV 1	5.82	Si
fin.	2	4156	267.36	641.32	SLV 1	2.4	Si
ini.	2	-148	-22.96	641.32	SLV 13	27.93	Si
fin.	2	-3110	-385.15	641.32	SLV 13	1.67	Si
ini.	2	613	-87.06	641.32	SLV 4	7.37	Si
fin.	2	4600	359.17	641.32	SLV 4	1.79	Si
ini.	2	59	-80.43	641.32	SLV 10	7.97	Si
fin.	2	-1084	-263.88	641.32	SLV 10	2.43	Si
ini.	2	613	-87.06	641.32	SLV 3	7.37	Si
fin.	2	4600	359.17	641.32	SLV 3	1.79	Si
ini.	2	59	-80.43	641.32	SLV 9	7.97	Si
fin.	2	-1084	-263.88	641.32	SLV 9	2.43	Si
ini.	2	-109	0.14	641.32	SLV 16	4733.81	Si
fin.	2	-2667	-293.34	641.32	SLV 16	2.19	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	189	-3.43	1440			612	201	SLV 11	0.14	No
fin.	2	394	42.14	-2808			612	164	SLV 11	0.06	No
ini.	2	275	-106.59	2530			612	186	SLV 5	0.07	No
fin.	2	1096	-68.13	-3207			612	0	SLV 5	0	No
ini.	2	406	-29.59	2141			612	161	SLV 8	0.08	No
fin.	2	2574	237.9	-1651			612	0	SLV 8	0	No
ini.	2	406	-29.59	2141			612	161	SLV 7	0.08	No
fin.	2	2574	237.9	-1651			612	0	SLV 7	0	No
ini.	2	275	-106.59	2530			612	186	SLV 6	0.07	No
fin.	2	1096	-68.13	-3207			612	0	SLV 6	0	No
ini.	2	613	-87.06	3095			612	110	SLV 3	0.04	No
fin.	2	4600	359.17	-845			612	0	SLV 3	0	No
ini.	2	574	-110.16	3211			612	122	SLV 1	0.04	No
fin.	2	4156	267.36	-1312			612	0	SLV 1	0	No
ini.	2	574	-110.16	3211			612	122	SLV 2	0.04	No
fin.	2	4156	267.36	-1312			612	0	SLV 2	0	No
ini.	2	613	-87.06	3095			612	110	SLV 4	0.04	No
fin.	2	4600	359.17	-845			612	0	SLV 4	0	No
ini.	2	189	-3.43	1440			612	201	SLV 12	0.14	No
fin.	2	394	42.14	-2808			612	164	SLV 12	0.06	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.665	SLV 13	Si
V_SLV	0	SLV 1	No
PF_SLU	5.074	SLU 83	Si
V_SLU	0	SLU 1	No

Trave di accoppiamento 11

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-17.768	6.576	-1.3	0.7	2	-16.768	6.576	-1.3	0.7	2	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-2937	-3041.64	9132.35	SLU 75	3	Si
fin.	3	-5539	40.12	9132.35	SLU 75	227.63	Si
ini.	3	-3016	-3099.95	9132.35	SLU 81	2.95	Si
fin.	3	-5672	35.44	9132.35	SLU 81	257.68	Si
ini.	3	-2926	-3048.29	9132.35	SLU 79	3	Si
fin.	3	-5545	41.89	9132.35	SLU 79	217.99	Si
ini.	3	-2943	-3079.02	9132.35	SLU 78	2.97	Si
fin.	3	-5587	45.93	9132.35	SLU 78	198.83	Si
ini.	3	-3022	-3137.33	9132.35	SLU 83	2.91	Si
fin.	3	-5720	41.25	9132.35	SLU 83	221.39	Si
ini.	3	-2926	-3054.27	9132.35	SLU 80	2.99	Si
fin.	3	-5548	42.89	9132.35	SLU 80	212.92	Si
ini.	3	-2938	-3035.66	9132.35	SLU 74	3.01	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	3	-5536	39.12	9132.35	SLU 74	233.43	Si
ini.	3	-3021	-3143.32	9132.35	SLU 84	2.91	Si
fin.	3	-5722	42.25	9132.35	SLU 84	216.16	Si
ini.	3	-2944	-3073.04	9132.35	SLU 77	2.97	Si
fin.	3	-5584	44.93	9132.35	SLU 77	203.25	Si
ini.	3	-3015	-3105.93	9132.35	SLU 82	2.94	Si
fin.	3	-5674	36.44	9132.35	SLU 82	250.63	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-3022	-3137.33	-1381			4675	1848	SLU 83	1.34	Si
fin.	3	-5720	41.25	10534			5754	2224	SLU 83	0.21	No
ini.	3	-2926	-3054.27	-1268			4636	1833	SLU 80	1.45	Si
fin.	3	-5548	42.89	10181			5685	2202	SLU 80	0.22	No
ini.	3	-2937	-3041.64	-1293			4641	1835	SLU 75	1.42	Si
fin.	3	-5539	40.12	10136			5681	2201	SLU 75	0.22	No
ini.	3	-3015	-3105.93	-1407			4672	1847	SLU 82	1.31	Si
fin.	3	-5674	36.44	10422			5736	2218	SLU 82	0.21	No
ini.	3	-2943	-3079.02	-1262			4643	1836	SLU 78	1.45	Si
fin.	3	-5587	45.93	10262			5701	2207	SLU 78	0.22	No
ini.	3	-3016	-3099.95	-1412			4672	1847	SLU 81	1.31	Si
fin.	3	-5672	35.44	10409			5735	2218	SLU 81	0.21	No
ini.	3	-3021	-3143.32	-1376			4675	1848	SLU 84	1.34	Si
fin.	3	-5722	42.25	10547			5755	2224	SLU 84	0.21	No
ini.	3	-2938	-3035.66	-1298			4641	1835	SLU 74	1.41	Si
fin.	3	-5536	39.12	10123			5680	2200	SLU 74	0.22	No
ini.	3	-2944	-3073.04	-1267			4644	1836	SLU 77	1.45	Si
fin.	3	-5584	44.93	10249			5700	2206	SLU 77	0.22	No
ini.	3	-2926	-3048.29	-1273			4637	1833	SLU 79	1.44	Si
fin.	3	-5545	41.89	10168			5684	2201	SLU 79	0.22	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-4443	825.26	13698.53	SLV 14	16.6	Si
fin.	2	-1270	-2214.2	13698.53	SLV 14	6.19	Si
ini.	2	284	-4991.54	13698.53	SLV 3	2.74	Si
fin.	2	-6399	2242.31	13698.53	SLV 3	6.11	Si
ini.	2	-4443	825.26	13698.53	SLV 13	16.6	Si
fin.	2	-1270	-2214.2	13698.53	SLV 13	6.19	Si
ini.	2	-2108	-5379.32	13698.53	SLV 7	2.55	Si
fin.	2	-7645	2121	13698.53	SLV 7	6.46	Si
ini.	2	-3671	-4113.69	13698.53	SLV 12	3.33	Si
fin.	2	-6708	1068.57	13698.53	SLV 12	12.82	Si
ini.	2	770	-3393.51	13698.53	SLV 1	4.04	Si
fin.	2	-4393	1293.88	13698.53	SLV 1	10.59	Si
ini.	2	284	-4991.54	13698.53	SLV 4	2.74	Si
fin.	2	-6399	2242.31	13698.53	SLV 4	6.11	Si
ini.	2	-3671	-4113.69	13698.53	SLV 11	3.33	Si
fin.	2	-6708	1068.57	13698.53	SLV 11	12.82	Si
ini.	2	770	-3393.51	13698.53	SLV 2	4.04	Si
fin.	2	-4393	1293.88	13698.53	SLV 2	10.59	Si
ini.	2	-2108	-5379.32	13698.53	SLV 8	2.55	Si
fin.	2	-7645	2121	13698.53	SLV 8	6.46	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-4929	-772.76	-9748			7171	2832	SLV 16	0.29	No
fin.	2	-3275	-1265.76	-889			6509	2572	SLV 16	2.89	Si
ini.	2	770	-3393.51	7919			5199	1781	SLV 2	0.22	No
fin.	2	-4393	1293.88	14576			6956	2751	SLV 2	0.19	No
ini.	2	-2108	-5379.32	-818			6042	2371	SLV 7	2.9	Si
fin.	2	-7645	2121	12242			8257	3214	SLV 7	0.26	No
ini.	2	-488	-52.58	3867			5394	2060	SLV 6	0.53	No
fin.	2	-961	-1040.46	6593			5583	2155	SLV 6	0.33	No
ini.	2	284	-4991.54	6513			5199	1894	SLV 4	0.29	No
fin.	2	-6399	2242.31	16271			7759	3045	SLV 4	0.19	No
ini.	2	-4929	-772.76	-9748			7171	2832	SLV 15	0.29	No
fin.	2	-3275	-1265.76	-889			6509	2572	SLV 15	2.89	Si
ini.	2	-488	-52.58	3867			5394	2060	SLV 5	0.53	No
fin.	2	-961	-1040.46	6593			5583	2155	SLV 5	0.33	No
ini.	2	284	-4991.54	6513			5199	1894	SLV 3	0.29	No
fin.	2	-6399	2242.31	16271			7759	3045	SLV 3	0.19	No
ini.	2	770	-3393.51	7919			5199	1781	SLV 1	0.22	No
fin.	2	-4393	1293.88	14576			6956	2751	SLV 1	0.19	No
ini.	2	-2108	-5379.32	-818			6042	2371	SLV 8	2.9	Si
fin.	2	-7645	2121	12242			8257	3214	SLV 8	0.26	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.547	SLV 7	Si
V_SLV	0.187	SLV 3	No
PF_SLU	2.905	SLU 84	Si
V_SLU	0.211	SLU 84	No

Trave di accoppiamento 12

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-17.768	6.576	1.1	1.39	0.29	-16.768	6.576	1.1	1.39	0.29	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	1055	-401.07	192.01	SLU 77	0.48	No
fin.	3	2063	-93.29	192.01	SLU 77	2.06	Si
ini.	3	1045	-399.18	192.01	SLU 80	0.48	No
fin.	3	2045	-93.52	192.01	SLU 80	2.05	Si
ini.	3	1042	-418.87	192.01	SLU 84	0.46	No
fin.	3	2067	-105.35	192.01	SLU 84	1.82	Si
ini.	3	1027	-414.94	192.01	SLU 82	0.46	No
fin.	3	2031	-106.69	192.01	SLU 82	1.8	Si
ini.	3	1042	-398.66	192.01	SLU 79	0.48	No
fin.	3	2041	-93.84	192.01	SLU 79	2.05	Si
ini.	3	1040	-418.35	192.01	SLU 83	0.46	No
fin.	3	2062	-105.66	192.01	SLU 83	1.82	Si
ini.	3	1040	-397.14	192.01	SLU 74	0.48	No
fin.	3	2027	-94.63	192.01	SLU 74	2.03	Si
ini.	3	1043	-397.66	192.01	SLU 75	0.48	No
fin.	3	2032	-94.31	192.01	SLU 75	2.04	Si
ini.	3	1025	-414.42	192.01	SLU 81	0.46	No
fin.	3	2026	-107	192.01	SLU 81	1.79	Si
ini.	3	1057	-401.59	192.01	SLU 78	0.48	No
fin.	3	2068	-92.97	192.01	SLU 78	2.07	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	989	-352.06	1803			335	0	SLU 58	0	No
fin.	3	1885	-77.16	-885			335	0	SLU 58	0	No
ini.	3	731	-234.67	1202			335	0	SLU 1	0	No
fin.	3	1333	-47	-574			335	0	SLU 1	0	No
ini.	3	1002	-354.47	1814			335	0	SLU 56	0	No
fin.	3	1907	-76.62	-886			335	0	SLU 56	0	No
ini.	3	1004	-354.98	1816			335	0	SLU 57	0	No
fin.	3	1912	-76.3	-885			335	0	SLU 57	0	No
ini.	3	989	-351.05	1799			335	0	SLU 54	0	No
fin.	3	1876	-77.64	-886			335	0	SLU 54	0	No
ini.	3	987	-350.54	1797			335	0	SLU 53	0	No
fin.	3	1871	-77.96	-886			335	0	SLU 53	0	No
ini.	3	991	-352.57	1805			335	0	SLU 59	0	No
fin.	3	1889	-76.85	-885			335	0	SLU 59	0	No
ini.	3	971	-367.81	1894			335	0	SLU 60	0	No
fin.	3	1870	-90.33	-967			335	0	SLU 60	0	No
ini.	3	978	-348.99	1790			335	0	SLU 55	0	No
fin.	3	1857	-77.98	-884			335	0	SLU 55	0	No
ini.	3	974	-368.33	1896			335	0	SLU 61	0	No
fin.	3	1875	-90.01	-966			335	0	SLU 61	0	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-756	47.15	288.01	SLV 14	6.11	Si
fin.	2	-1319	-359.67	288.01	SLV 14	0.8	No
ini.	2	3270	89.03	288.01	SLV 15	3.23	Si
fin.	2	1296	-451.23	288.01	SLV 15	0.64	No
ini.	2	3270	89.03	288.01	SLV 16	3.23	Si
fin.	2	1296	-451.23	288.01	SLV 16	0.64	No
ini.	2	-6107	-433.09	288.01	SLV 5	0.67	No
fin.	2	-2514	197.85	288.01	SLV 5	1.46	Si
ini.	2	-1763	-616.5	288.01	SLV 2	0.47	No
fin.	2	1536	333.73	288.01	SLV 2	0.86	No
ini.	2	-1763	-616.5	288.01	SLV 1	0.47	No
fin.	2	1536	333.73	288.01	SLV 1	0.86	No
ini.	2	2263	-574.62	288.01	SLV 3	0.5	No
fin.	2	4151	242.17	288.01	SLV 3	1.19	Si
ini.	2	-6107	-433.09	288.01	SLV 6	0.67	No
fin.	2	-2514	197.85	288.01	SLV 6	1.46	Si
ini.	2	2263	-574.62	288.01	SLV 4	0.5	No
fin.	2	4151	242.17	288.01	SLV 4	1.19	Si
ini.	2	-756	47.15	288.01	SLV 13	6.11	Si
fin.	2	-1319	-359.67	288.01	SLV 13	0.8	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	2263	-574.62	2489			503	0	SLV 3	0	No
fin.	2	4151	242.17	179			503	0	SLV 3	0	No
ini.	2	3270	89.03	445			503	0	SLV 15	0	No
fin.	2	1296	-451.23	-1682			503	0	SLV 15	0	No
ini.	2	7615	-94.38	1425			503	0	SLV 12	0	No
fin.	2	5346	-315.36	-1226			503	0	SLV 12	0	No
ini.	2	3270	89.03	445			503	0	SLV 16	0	No
fin.	2	1296	-451.23	-1682			503	0	SLV 16	0	No
ini.	2	7313	-293.48	2038			503	0	SLV 8	0	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	2	6203	-107.33	-668			503	0	SLV 8	0	No
ini.	2	-1763	-616.5	2262			973	364	SLV 2	0.16	No
fin.	2	1536	333.73	346			503	0	SLV 2	0	No
ini.	2	7615	-94.38	1425			503	0	SLV 11	0	No
fin.	2	5346	-315.36	-1226			503	0	SLV 11	0	No
ini.	2	-1763	-616.5	2262			973	364	SLV 1	0.16	No
fin.	2	1536	333.73	346			503	0	SLV 1	0	No
ini.	2	2263	-574.62	2489			503	0	SLV 4	0	No
fin.	2	4151	242.17	179			503	0	SLV 4	0	No
ini.	2	7313	-293.48	2038			503	0	SLV 7	0	No
fin.	2	6203	-107.33	-668			503	0	SLV 7	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF SLV	0.467	SLV 1	No
V SLV	0	SLV 1	No
PF SLU	0.458	SLU 84	No
V SLU	0	SLU 1	No

Trave di accoppiamento 13

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-12.888	6.576	-1.3	0.7	2	-11.888	6.576	-1.3	0.7	2	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fthk	fvk0	fthmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-5911	-481.72	9132.35	SLU 76	18.96	Si
fin.	3	-6320	-365.78	9132.35	SLU 76	24.97	Si
ini.	3	-5953	-483.02	9132.35	SLU 74	18.91	Si
fin.	3	-6362	-370.13	9132.35	SLU 74	24.67	Si
ini.	3	-5950	-485.02	9132.35	SLU 75	18.83	Si
fin.	3	-6362	-368.83	9132.35	SLU 75	24.76	Si
ini.	3	-6008	-485.67	9132.35	SLU 77	18.8	Si
fin.	3	-6419	-375.9	9132.35	SLU 77	24.29	Si
ini.	3	-6099	-496.6	9132.35	SLU 82	18.39	Si
fin.	3	-6521	-374.89	9132.35	SLU 82	24.36	Si
ini.	3	-6157	-497.24	9132.35	SLU 83	18.37	Si
fin.	3	-6577	-381.96	9132.35	SLU 83	23.91	Si
ini.	3	-6005	-487.67	9132.35	SLU 78	18.73	Si
fin.	3	-6419	-374.6	9132.35	SLU 78	24.38	Si
ini.	3	-5968	-483.03	9132.35	SLU 80	18.91	Si
fin.	3	-6377	-372.42	9132.35	SLU 80	24.52	Si
ini.	3	-6101	-494.6	9132.35	SLU 81	18.46	Si
fin.	3	-6521	-376.19	9132.35	SLU 81	24.28	Si
ini.	3	-6154	-499.25	9132.35	SLU 84	18.29	Si
fin.	3	-6577	-380.66	9132.35	SLU 84	23.99	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-5968	-483.03	-5119			5853	2255	SLU 80	0.44	No
fin.	3	-6377	-372.42	6066			6017	2306	SLU 80	0.38	No
ini.	3	-6008	-485.67	-5154			5869	2260	SLU 77	0.44	No
fin.	3	-6419	-375.9	6104			6033	2311	SLU 77	0.38	No
ini.	3	-6101	-494.6	-5249			5907	2272	SLU 81	0.43	No
fin.	3	-6521	-376.19	6232			6074	2324	SLU 81	0.37	No
ini.	3	-6099	-496.6	-5243			5905	2272	SLU 82	0.43	No
fin.	3	-6521	-374.89	6238			6074	2324	SLU 82	0.37	No
ini.	3	-5971	-481.03	-5126			5854	2256	SLU 79	0.44	No
fin.	3	-6377	-373.72	6060			6017	2306	SLU 79	0.38	No
ini.	3	-5953	-483.02	-5102			5847	2253	SLU 74	0.44	No
fin.	3	-6362	-370.13	6056			6011	2304	SLU 74	0.38	No
ini.	3	-5950	-485.02	-5095			5846	2253	SLU 75	0.44	No
fin.	3	-6362	-368.83	6062			6011	2304	SLU 75	0.38	No
ini.	3	-6154	-499.25	-5295			5927	2278	SLU 84	0.43	No
fin.	3	-6577	-380.66	6286			6097	2331	SLU 84	0.37	No
ini.	3	-6157	-497.24	-5302			5929	2279	SLU 83	0.43	No
fin.	3	-6577	-381.96	6280			6097	2331	SLU 83	0.37	No
ini.	3	-6005	-487.67	-5148			5868	2260	SLU 78	0.44	No
fin.	3	-6419	-374.6	6110			6033	2311	SLU 78	0.38	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-4592	857.02	13698.53	SLV 14	15.98	Si
fin.	2	-587	-2620.82	13698.53	SLV 14	5.23	Si
ini.	2	-4592	857.02	13698.53	SLV 13	15.98	Si
fin.	2	-587	-2620.82	13698.53	SLV 13	5.23	Si
ini.	2	588	-1456.85	13698.53	SLV 10	9.4	Si
fin.	2	1692	-2616.37	13698.53	SLV 10	5.24	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-455	-2504.03	13698.53	SLV 1	5.47	Si
fin.	2	-4960	1019.83	13698.53	SLV 1	13.43	Si
ini.	2	-455	-2504.03	13698.53	SLV 2	5.47	Si
fin.	2	-4960	1019.83	13698.53	SLV 2	13.43	Si
ini.	2	-3655	-1529.02	13698.53	SLV 3	8.96	Si
fin.	2	-8225	2108.22	13698.53	SLV 3	6.5	Si
ini.	2	588	-1456.85	13698.53	SLV 9	9.4	Si
fin.	2	1692	-2616.37	13698.53	SLV 9	5.24	Si
ini.	2	-3655	-1529.02	13698.53	SLV 4	8.96	Si
fin.	2	-8225	2108.22	13698.53	SLV 4	6.5	Si
ini.	2	1829	-2465.17	13698.53	SLV 6	5.56	Si
fin.	2	381	-1524.18	13698.53	SLV 6	8.99	Si
ini.	2	1829	-2465.17	13698.53	SLV 5	5.56	Si
fin.	2	381	-1524.18	13698.53	SLV 5	8.99	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-8835	784.85	-3202			8733	3368	SLV 8	1.05	Si
fin.	2	-10504	2103.77	9120			9401	3573	SLV 8	0.39	No
ini.	2	-4592	857.02	-10889			7036	2781	SLV 13	0.26	No
fin.	2	-587	-2620.82	-4550			5434	2080	SLV 13	0.46	No
ini.	2	-8835	784.85	-3202			8733	3368	SLV 7	1.05	Si
fin.	2	-10504	2103.77	9120			9401	3573	SLV 7	0.39	No
ini.	2	-4592	857.02	-10889			7036	2781	SLV 14	0.26	No
fin.	2	-587	-2620.82	-4550			5434	2080	SLV 14	0.46	No
ini.	2	-3655	-1529.02	3891			6661	2634	SLV 4	0.68	No
fin.	2	-8225	2108.22	12873			8489	3290	SLV 4	0.26	No
ini.	2	-7791	1832.03	-12154			8315	3233	SLV 16	0.27	No
fin.	2	-3852	-1532.44	-3004			6740	2666	SLV 16	0.89	No
ini.	2	-3655	-1529.02	3891			6661	2634	SLV 3	0.68	No
fin.	2	-8225	2108.22	12873			8489	3290	SLV 3	0.26	No
ini.	2	-455	-2504.03	5157			5381	2053	SLV 2	0.4	No
fin.	2	-4960	1019.83	11327			7183	2837	SLV 2	0.25	No
ini.	2	-455	-2504.03	5157			5381	2053	SLV 1	0.4	No
fin.	2	-4960	1019.83	11327			7183	2837	SLV 1	0.25	No
ini.	2	-7791	1832.03	-12154			8315	3233	SLV 15	0.27	No
fin.	2	-3852	-1532.44	-3004			6740	2666	SLV 15	0.89	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.227	SLV 13	Si
V_SLV	0.25	SLV 1	No
PF_SLU	18.292	SLU 84	Si
V_SLU	0.371	SLU 84	No

Trave di accoppiamento 14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-12.888	6.576	1.1	1.39	0.29	-11.888	6.576	1.1	1.39	0.29	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fkhmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	122	-200.62	192.01	SLU 77	0.96	No
fin.	3	162	-178.26	192.01	SLU 77	1.08	Si
ini.	3	114	-199.69	192.01	SLU 74	0.96	No
fin.	3	156	-176.64	192.01	SLU 74	1.09	Si
ini.	3	114	-200.01	192.01	SLU 75	0.96	No
fin.	3	157	-176.32	192.01	SLU 75	1.09	Si
ini.	3	92	-209.93	192.01	SLU 82	0.91	No
fin.	3	139	-185	192.01	SLU 82	1.04	Si
ini.	3	92	-209.61	192.01	SLU 81	0.92	No
fin.	3	138	-185.32	192.01	SLU 81	1.04	Si
ini.	3	118	-199.45	192.01	SLU 79	0.96	No
fin.	3	156	-177.59	192.01	SLU 79	1.08	Si
ini.	3	100	-210.55	192.01	SLU 83	0.91	No
fin.	3	143	-186.94	192.01	SLU 83	1.03	Si
ini.	3	122	-200.95	192.01	SLU 78	0.96	No
fin.	3	162	-177.94	192.01	SLU 78	1.08	Si
ini.	3	100	-210.87	192.01	SLU 84	0.91	No
fin.	3	144	-186.62	192.01	SLU 84	1.03	Si
ini.	3	118	-199.78	192.01	SLU 80	0.96	No
fin.	3	157	-177.28	192.01	SLU 80	1.08	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	122	-200.95	1073			335	107	SLU 78	0.1	No
fin.	3	162	-177.94	-1003			335	100	SLU 78	0.1	No
ini.	3	92	-209.61	1115			335	112	SLU 81	0.1	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	3	138	-185.32	-1042			335	104	SLU 81	0.1	No
ini.	3	114	-199.69	1066			335	108	SLU 74	0.1	No
fin.	3	156	-176.64	-997			335	101	SLU 74	0.1	No
ini.	3	100	-210.55	1120			335	111	SLU 83	0.1	No
fin.	3	143	-186.94	-1049			335	103	SLU 83	0.1	No
ini.	3	118	-199.45	1066			335	108	SLU 79	0.1	No
fin.	3	156	-177.59	-1000			335	101	SLU 79	0.1	No
ini.	3	92	-209.93	1116			335	112	SLU 82	0.1	No
fin.	3	139	-185	-1041			335	104	SLU 82	0.1	No
ini.	3	114	-200.01	1067			335	108	SLU 75	0.1	No
fin.	3	157	-176.32	-996			335	101	SLU 75	0.1	No
ini.	3	118	-199.78	1067			335	108	SLU 80	0.1	No
fin.	3	157	-177.28	-999			335	101	SLU 80	0.1	No
ini.	3	100	-210.87	1121			335	111	SLU 84	0.1	No
fin.	3	144	-186.62	-1049			335	103	SLU 84	0.1	No
ini.	3	122	-200.62	1072			335	107	SLU 77	0.1	No
fin.	3	162	-178.26	-1004			335	100	SLU 77	0.1	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-182	702.17	288.01	SLV 10	0.41	No
fin.	2	-827	439.85	288.01	SLV 10	0.65	No
ini.	2	-487	-679.62	288.01	SLV 3	0.42	No
fin.	2	960	16.63	288.01	SLV 3	17.32	Si
ini.	2	365	-968.82	288.01	SLV 8	0.3	No
fin.	2	1069	-674.13	288.01	SLV 8	0.43	No
ini.	2	800	-773.9	288.01	SLV 11	0.37	No
fin.	2	704	-872.5	288.01	SLV 11	0.33	No
ini.	2	964	-29.86	288.01	SLV 15	9.65	Si
fin.	2	-258	-644.61	288.01	SLV 15	0.45	No
ini.	2	365	-968.82	288.01	SLV 7	0.3	No
fin.	2	1069	-674.13	288.01	SLV 7	0.43	No
ini.	2	800	-773.9	288.01	SLV 12	0.37	No
fin.	2	704	-872.5	288.01	SLV 12	0.33	No
ini.	2	-182	702.17	288.01	SLV 9	0.41	No
fin.	2	-827	439.85	288.01	SLV 9	0.65	No
ini.	2	964	-29.86	288.01	SLV 16	9.65	Si
fin.	2	-258	-644.61	288.01	SLV 16	0.45	No
ini.	2	-487	-679.62	288.01	SLV 4	0.42	No
fin.	2	960	16.63	288.01	SLV 4	17.32	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	964	-29.86	54			503	0	SLV 15	0	No
fin.	2	-258	-644.61	-1715			571	223	SLV 15	0.13	No
ini.	2	800	-773.9	1052			503	0	SLV 12	0	No
fin.	2	704	-872.5	-1516			503	0	SLV 12	0	No
ini.	2	964	-29.86	54			503	0	SLV 16	0	No
fin.	2	-258	-644.61	-1715			571	223	SLV 16	0.13	No
ini.	2	365	-968.82	1556			503	126	SLV 7	0.08	No
fin.	2	1069	-674.13	-995			503	0	SLV 7	0	No
ini.	2	800	-773.9	1052			503	0	SLV 11	0	No
fin.	2	704	-872.5	-1516			503	0	SLV 11	0	No
ini.	2	-487	-679.62	1734			632	250	SLV 3	0.14	No
fin.	2	960	16.63	23			503	0	SLV 3	0	No
ini.	2	670	412.96	-297			503	0	SLV 13	0	No
fin.	2	-717	-250.91	-1363			694	274	SLV 13	0.2	No
ini.	2	365	-968.82	1556			503	126	SLV 8	0.08	No
fin.	2	1069	-674.13	-995			503	0	SLV 8	0	No
ini.	2	670	412.96	-297			503	0	SLV 14	0	No
fin.	2	-717	-250.91	-1363			694	274	SLV 14	0.2	No
ini.	2	-487	-679.62	1734			632	250	SLV 4	0.14	No
fin.	2	960	16.63	23			503	0	SLV 4	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.297	SLV 7	No
V_SLV	0	SLV 3	No
PF_SLU	0.911	SLU 84	No
V_SLU	0.098	SLU 84	No

Trave di accoppiamento 15

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-8.008	6.576	-1.3	0.7	2	-7.008	6.576	-1.3	0.7	2	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
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Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-6179	49.62	9132.35	SLU 77	184.05	Si
fin.	3	-2891	-1492.03	9132.35	SLU 77	6.12	Si
ini.	3	-6136	46.23	9132.35	SLU 79	197.55	Si
fin.	3	-2879	-1477.34	9132.35	SLU 79	6.18	Si
ini.	3	-6308	41.65	9132.35	SLU 84	219.26	Si
fin.	3	-2939	-1544.43	9132.35	SLU 84	5.91	Si
ini.	3	-6247	37.64	9132.35	SLU 81	242.62	Si
fin.	3	-2907	-1536.98	9132.35	SLU 81	5.94	Si
ini.	3	-6113	44.38	9132.35	SLU 74	205.77	Si
fin.	3	-2857	-1483.73	9132.35	SLU 74	6.16	Si
ini.	3	-6174	48.39	9132.35	SLU 78	188.72	Si
fin.	3	-2889	-1491.18	9132.35	SLU 78	6.12	Si
ini.	3	-6313	42.88	9132.35	SLU 83	212.99	Si
fin.	3	-2941	-1545.28	9132.35	SLU 83	5.91	Si
ini.	3	-6242	36.41	9132.35	SLU 82	250.79	Si
fin.	3	-2905	-1536.13	9132.35	SLU 82	5.95	Si
ini.	3	-6131	45	9132.35	SLU 80	202.93	Si
fin.	3	-2877	-1476.49	9132.35	SLU 80	6.19	Si
ini.	3	-6108	43.15	9132.35	SLU 75	211.62	Si
fin.	3	-2856	-1482.88	9132.35	SLU 75	6.16	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-6136	46.23	-10607			5920	2276	SLU 79	0.21	No
fin.	3	-2879	-1477.34	455			4617	1826	SLU 79	4.01	Si
ini.	3	-6179	49.62	-10691			5937	2282	SLU 77	0.21	No
fin.	3	-2891	-1492.03	440			4623	1828	SLU 77	4.16	Si
ini.	3	-6308	41.65	-11005			5989	2298	SLU 84	0.21	No
fin.	3	-2939	-1544.43	491			4641	1835	SLU 84	3.74	Si
ini.	3	-6242	36.41	-10906			5963	2289	SLU 82	0.21	No
fin.	3	-2905	-1536.13	488			4628	1830	SLU 82	3.75	Si
ini.	3	-6313	42.88	-11012			5991	2298	SLU 83	0.21	No
fin.	3	-2941	-1545.28	490			4642	1835	SLU 83	3.75	Si
ini.	3	-6108	43.15	-10585			5909	2273	SLU 75	0.21	No
fin.	3	-2856	-1482.88	438			4608	1822	SLU 75	4.16	Si
ini.	3	-6247	37.64	-10914			5965	2290	SLU 81	0.21	No
fin.	3	-2907	-1536.98	487			4629	1830	SLU 81	3.76	Si
ini.	3	-6113	44.38	-10592			5911	2273	SLU 74	0.21	No
fin.	3	-2857	-1483.73	437			4609	1823	SLU 74	4.17	Si
ini.	3	-6174	48.39	-10684			5936	2281	SLU 78	0.21	No
fin.	3	-2889	-1491.18	441			4622	1828	SLU 78	4.14	Si
ini.	3	-6131	45	-10599			5918	2276	SLU 80	0.21	No
fin.	3	-2877	-1476.49	457			4617	1826	SLU 80	4	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-4864	1047.71	13698.53	SLV 14	13.07	Si
fin.	2	1641	-4639.55	13698.53	SLV 14	2.95	Si
ini.	2	-8099	2095.36	13698.53	SLV 16	6.54	Si
fin.	2	-2003	-3021.67	13698.53	SLV 16	4.53	Si
ini.	2	-3590	-1001.94	13698.53	SLV 4	13.67	Si
fin.	2	-5656	2632.03	13698.53	SLV 4	5.2	Si
ini.	2	-8099	2095.36	13698.53	SLV 15	6.54	Si
fin.	2	-2003	-3021.67	13698.53	SLV 15	4.53	Si
ini.	2	1842	-2187.8	13698.53	SLV 5	6.26	Si
fin.	2	3519	-2852.17	13698.53	SLV 5	4.8	Si
ini.	2	489	-1258.61	13698.53	SLV 10	10.88	Si
fin.	2	4615	-4548.28	13698.53	SLV 10	3.01	Si
ini.	2	-4864	1047.71	13698.53	SLV 13	13.07	Si
fin.	2	1641	-4639.55	13698.53	SLV 13	2.95	Si
ini.	2	1842	-2187.8	13698.53	SLV 6	6.26	Si
fin.	2	3519	-2852.17	13698.53	SLV 6	4.8	Si
ini.	2	-3590	-1001.94	13698.53	SLV 3	13.67	Si
fin.	2	-5656	2632.03	13698.53	SLV 3	5.2	Si
ini.	2	489	-1258.61	13698.53	SLV 9	10.88	Si
fin.	2	4615	-4548.28	13698.53	SLV 9	3.01	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	489	-1258.61	-7271			5199	1847	SLV 10	0.25	No
fin.	2	4615	-4548.28	-3877			5199	0	SLV 10	0	No
ini.	2	-4864	1047.71	-15651			7144	2822	SLV 14	0.18	No
fin.	2	1641	-4639.55	-7941			5199	1559	SLV 14	0.2	No
ini.	2	-10296	2233.56	-12696			9317	3548	SLV 11	0.28	No
fin.	2	-7534	844.65	-142			8212	3199	SLV 11	22.55	Si
ini.	2	-355	-2049.6	2866			5341	2032	SLV 2	0.71	No
fin.	2	-2012	1014.15	7405			6004	2354	SLV 2	0.32	No
ini.	2	-4864	1047.71	-15651			7144	2822	SLV 13	0.18	No
fin.	2	1641	-4639.55	-7941			5199	1559	SLV 13	0.2	No
ini.	2	-8099	2095.36	-17278			8439	3274	SLV 16	0.19	No
fin.	2	-2003	-3021.67	-6820			6000	2352	SLV 16	0.34	No
ini.	2	-355	-2049.6	2866			5341	2032	SLV 1	0.71	No
fin.	2	-2012	1014.15	7405			6004	2354	SLV 1	0.32	No
ini.	2	489	-1258.61	-7271			5199	1847	SLV 9	0.25	No
fin.	2	4615	-4548.28	-3877			5199	0	SLV 9	0	No
ini.	2	-10296	2233.56	-12696			9317	3548	SLV 12	0.28	No
fin.	2	-7534	844.65	-142			8212	3199	SLV 12	22.55	Si
ini.	2	-8099	2095.36	-17278			8439	3274	SLV 15	0.19	No
fin.	2	-2003	-3021.67	-6820			6000	2352	SLV 15	0.34	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.953	SLV 13	Si
V_SLV	0	SLV 9	No
PF_SLU	5.91	SLU 83	Si
V_SLU	0.209	SLU 83	No

Trave di accoppiamento 16

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-8.008	6.576	1.1	1.39	0.29	-7.008	6.576	1.1	1.39	0.29	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	446	-138.36	192.01	SLU 83	1.39	Si
fin.	3	-509	-407.6	192.01	SLU 83	0.47	No
ini.	3	460	-126.83	192.01	SLU 77	1.51	Si
fin.	3	-472	-389.54	192.01	SLU 77	0.49	No
ini.	3	448	-127.44	192.01	SLU 80	1.51	Si
fin.	3	-472	-386.76	192.01	SLU 80	0.5	No
ini.	3	441	-138.29	192.01	SLU 82	1.39	Si
fin.	3	-504	-404.34	192.01	SLU 82	0.47	No
ini.	3	448	-127.29	192.01	SLU 79	1.51	Si
fin.	3	-473	-387.06	192.01	SLU 79	0.5	No
ini.	3	459	-126.98	192.01	SLU 78	1.51	Si
fin.	3	-471	-389.24	192.01	SLU 78	0.49	No
ini.	3	455	-126.61	192.01	SLU 74	1.52	Si
fin.	3	-468	-386.59	192.01	SLU 74	0.5	No
ini.	3	445	-138.51	192.01	SLU 84	1.39	Si
fin.	3	-508	-407.3	192.01	SLU 84	0.47	No
ini.	3	441	-138.14	192.01	SLU 81	1.39	Si
fin.	3	-505	-404.64	192.01	SLU 81	0.47	No
ini.	3	455	-126.76	192.01	SLU 75	1.51	Si
fin.	3	-467	-386.28	192.01	SLU 75	0.5	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	450	-100.25	884			335	0	SLU 66	0	No
fin.	3	-373	-331.76	-1801			434	172	SLU 66	0.1	No
ini.	3	438	-107.72	934			335	0	SLU 57	0	No
fin.	3	-398	-343.41	-1866			441	174	SLU 57	0.09	No
ini.	3	454	-100.62	888			335	0	SLU 70	0	No
fin.	3	-376	-334.41	-1815			435	172	SLU 70	0.09	No
ini.	3	438	-107.57	933			335	0	SLU 56	0	No
fin.	3	-399	-343.72	-1867			441	175	SLU 56	0.09	No
ini.	3	446	-138.36	1155			335	0	SLU 83	0	No
fin.	3	-509	-407.6	-2213			471	186	SLU 83	0.08	No
ini.	3	442	-100.93	887			335	0	SLU 71	0	No
fin.	3	-377	-332.24	-1805			436	172	SLU 71	0.1	No
ini.	3	442	-101.08	887			335	0	SLU 72	0	No
fin.	3	-376	-331.93	-1803			435	172	SLU 72	0.1	No
ini.	3	438	-100.96	885			335	0	SLU 68	0	No
fin.	3	-371	-328.77	-1787			434	172	SLU 68	0.1	No
ini.	3	450	-100.4	885			335	0	SLU 67	0	No
fin.	3	-371	-331.46	-1800			434	172	SLU 67	0.1	No
ini.	3	445	-138.51	1156			335	0	SLU 84	0	No
fin.	3	-508	-407.3	-2211			471	186	SLU 84	0.08	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-557	-402.5	288.01	SLV 2	0.72	No
fin.	2	2317	148.44	288.01	SLV 2	1.94	Si
ini.	2	4024	71.26	288.01	SLV 13	4.04	Si
fin.	2	1376	-566.24	288.01	SLV 13	0.51	No
ini.	2	-557	-402.5	288.01	SLV 1	0.72	No
fin.	2	2317	148.44	288.01	SLV 1	1.94	Si
ini.	2	4320	-435.09	288.01	SLV 6	0.66	No
fin.	2	6985	9.62	288.01	SLV 6	29.95	Si
ini.	2	1217	241.31	288.01	SLV 15	1.19	Si
fin.	2	-2907	-661.66	288.01	SLV 15	0.44	No
ini.	2	1217	241.31	288.01	SLV 16	1.19	Si
fin.	2	-2907	-661.66	288.01	SLV 16	0.44	No
ini.	2	4024	71.26	288.01	SLV 14	4.04	Si
fin.	2	1376	-566.24	288.01	SLV 14	0.51	No
ini.	2	-3660	273.9	288.01	SLV 11	1.05	Si
fin.	2	-7574	-522.84	288.01	SLV 11	0.55	No
ini.	2	-3660	273.9	288.01	SLV 12	1.05	Si
fin.	2	-7574	-522.84	288.01	SLV 12	0.55	No
ini.	2	4320	-435.09	288.01	SLV 5	0.66	No



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	2	6985	9.62	288.01	SLV 5	29.95	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	1217	241.31	-129			503	0	SLV 16	0	No
fin.	2	-2907	-661.66	-2573			1278	442	SLV 16	0.17	No
ini.	2	-557	-402.5	1529			651	257	SLV 1	0.17	No
fin.	2	2317	148.44	-218			503	0	SLV 1	0	No
ini.	2	4320	-435.09	731			503	0	SLV 5	0	No
fin.	2	6985	9.62	-740			503	0	SLV 5	0	No
ini.	2	4024	71.26	-273			503	0	SLV 14	0	No
fin.	2	1376	-566.24	-2374			503	0	SLV 14	0	No
ini.	2	4024	71.26	-273			503	0	SLV 13	0	No
fin.	2	1376	-566.24	-2374			503	0	SLV 13	0	No
ini.	2	5694	-292.96	190			503	0	SLV 10	0	No
fin.	2	6702	-204.79	-1387			503	0	SLV 10	0	No
ini.	2	4320	-435.09	731			503	0	SLV 6	0	No
fin.	2	6985	9.62	-740			503	0	SLV 6	0	No
ini.	2	1217	241.31	-129			503	0	SLV 15	0	No
fin.	2	-2907	-661.66	-2573			1278	442	SLV 15	0.17	No
ini.	2	-557	-402.5	1529			651	257	SLV 2	0.17	No
fin.	2	2317	148.44	-218			503	0	SLV 2	0	No
ini.	2	5694	-292.96	190			503	0	SLV 9	0	No
fin.	2	6702	-204.79	-1387			503	0	SLV 9	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.435	SLV 15	No
V_SLV	0	SLV 1	No
PF_SLU	0.471	SLU 83	No
V_SLU	0	SLU 56	No

Trave di accoppiamento 17

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-18.838	1.046	0.8	1.39	0.59	-19.638	1.046	0.8	1.39	0.59	0.8	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-3139	-356.63	794.74	SLU 80	2.23	Si
fin.	3	-5262	-78.9	794.74	SLU 80	10.07	Si
ini.	3	-3134	-336.33	794.74	SLU 79	2.36	Si
fin.	3	-5371	-84.06	794.74	SLU 79	9.45	Si
ini.	3	-3129	-352.23	794.74	SLU 75	2.26	Si
fin.	3	-5251	-80.13	794.74	SLU 75	9.92	Si
ini.	3	-3272	-369.71	794.74	SLU 84	2.15	Si
fin.	3	-5482	-85.57	794.74	SLU 84	9.29	Si
ini.	3	-3113	-366.46	794.74	SLU 76	2.17	Si
fin.	3	-5127	-76.06	794.74	SLU 76	10.45	Si
ini.	3	-3267	-349.41	794.74	SLU 83	2.27	Si
fin.	3	-5591	-90.72	794.74	SLU 83	8.76	Si
ini.	3	-3237	-345.7	794.74	SLU 81	2.3	Si
fin.	3	-5528	-91.31	794.74	SLU 81	8.7	Si
ini.	3	-3159	-355.94	794.74	SLU 78	2.23	Si
fin.	3	-5313	-79.53	794.74	SLU 78	9.99	Si
ini.	3	-3083	-362.75	794.74	SLU 73	2.19	Si
fin.	3	-5064	-76.65	794.74	SLU 73	10.37	Si
ini.	3	-3242	-366	794.74	SLU 82	2.17	Si
fin.	3	-5419	-86.16	794.74	SLU 82	9.22	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-3159	-355.94	3273			1686	607	SLU 78	0.19	No
fin.	3	-5313	-79.53	-11086			2321	751	SLU 78	0.07	No
ini.	3	-3124	-331.93	3201			1676	604	SLU 74	0.19	No
fin.	3	-5360	-85.28	-11161			2335	754	SLU 74	0.07	No
ini.	3	-3267	-349.41	3350			1718	615	SLU 83	0.18	No
fin.	3	-5591	-90.72	-11648			2403	768	SLU 83	0.07	No
ini.	3	-3139	-356.63	3257			1680	605	SLU 80	0.19	No
fin.	3	-5262	-78.9	-10976			2306	748	SLU 80	0.07	No
ini.	3	-3242	-366	3336			1710	613	SLU 82	0.18	No
fin.	3	-5419	-86.16	-11245			2353	757	SLU 82	0.07	No
ini.	3	-3272	-369.71	3379			1719	615	SLU 84	0.18	No
fin.	3	-5482	-85.57	-11409			2371	761	SLU 84	0.07	No
ini.	3	-3154	-335.64	3244			1685	606	SLU 77	0.19	No
fin.	3	-5422	-84.69	-11326			2354	758	SLU 77	0.07	No
ini.	3	-3134	-336.33	3228			1679	605	SLU 79	0.19	No
fin.	3	-5371	-84.06	-11215			2338	754	SLU 79	0.07	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-3129	-352.23	3230			1677	604	SLU 75	0.19	No
fin.	3	-5251	-80.13	-10922			2303	747	SLU 75	0.07	No
ini.	3	-3237	-345.7	3307			1709	612	SLU 81	0.19	No
fin.	3	-5528	-91.31	-11484			2385	764	SLU 81	0.07	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-1587	-983.49	1192.11	SLV 10	1.21	Si
fin.	2	74	489.9	1192.11	SLV 10	2.43	Si
ini.	2	-1587	-983.49	1192.11	SLV 9	1.21	Si
fin.	2	74	489.9	1192.11	SLV 9	2.43	Si
ini.	2	-684	-1357.52	1192.11	SLV 13	0.88	No
fin.	2	3797	305.24	1192.11	SLV 13	3.91	Si
ini.	2	-684	-1357.52	1192.11	SLV 14	0.88	No
fin.	2	3797	305.24	1192.11	SLV 14	3.91	Si
ini.	2	-748	-1082.07	1192.11	SLV 16	1.1	Si
fin.	2	2842	16.35	1192.11	SLV 16	72.93	Si
ini.	2	-3542	904.74	1192.11	SLV 4	1.32	Si
fin.	2	-10979	-419.03	1192.11	SLV 4	2.84	Si
ini.	2	-3478	629.29	1192.11	SLV 2	1.89	Si
fin.	2	-10024	-130.13	1192.11	SLV 2	9.16	Si
ini.	2	-3542	904.74	1192.11	SLV 3	1.32	Si
fin.	2	-10979	-419.03	1192.11	SLV 3	2.84	Si
ini.	2	-748	-1082.07	1192.11	SLV 15	1.1	Si
fin.	2	2842	16.35	1192.11	SLV 15	72.93	Si
ini.	2	-3478	629.29	1192.11	SLV 1	1.89	Si
fin.	2	-10024	-130.13	1192.11	SLV 1	9.16	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-3478	629.29	-254			2157	810	SLV 1	3.19	Si
fin.	2	-10024	-130.13	-14458			4088	1245	SLV 1	0.09	No
ini.	2	-748	-1082.07	4558			1352	532	SLV 15	0.12	No
fin.	2	2842	16.35	-380			1131	0	SLV 15	0	No
ini.	2	-1587	-983.49	4939			1599	631	SLV 9	0.13	No
fin.	2	74	489.9	-5606			1131	414	SLV 9	0.07	No
ini.	2	-2425	-387.45	3155			1847	716	SLV 6	0.23	No
fin.	2	-4073	359.29	-9780			2332	859	SLV 6	0.09	No
ini.	2	-2425	-387.45	3155			1847	716	SLV 5	0.23	No
fin.	2	-4073	359.29	-9780			2332	859	SLV 5	0.09	No
ini.	2	-684	-1357.52	5695			1333	524	SLV 14	0.09	No
fin.	2	3797	305.24	-545			1131	0	SLV 14	0	No
ini.	2	-1587	-983.49	4939			1599	631	SLV 10	0.13	No
fin.	2	74	489.9	-5606			1131	414	SLV 10	0.07	No
ini.	2	-3478	629.29	-254			2157	810	SLV 2	3.19	Si
fin.	2	-10024	-130.13	-14458			4088	1245	SLV 2	0.09	No
ini.	2	-684	-1357.52	5695			1333	524	SLV 13	0.09	No
fin.	2	3797	305.24	-545			1131	0	SLV 13	0	No
ini.	2	-748	-1082.07	4558			1352	532	SLV 16	0.12	No
fin.	2	2842	16.35	-380			1131	0	SLV 16	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.878	SLV 13	No
V_SLV	0	SLV 13	No
PF_SLU	2.15	SLU 84	Si
V_SLU	0.066	SLU 83	No

Trave di accoppiamento 18

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-14.163	1.046	0.8	1.39	0.59	-14.963	1.046	0.8	1.39	0.59	0.8	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fkhmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1571	-650.34	794.74	SLU 80	1.22	Si
fin.	3	-2020	-694.06	794.74	SLU 80	1.15	Si
ini.	3	-1658	-663.45	794.74	SLU 82	1.2	Si
fin.	3	-2114	-709.17	794.74	SLU 82	1.12	Si
ini.	3	-1681	-669.51	794.74	SLU 81	1.19	Si
fin.	3	-2121	-710.41	794.74	SLU 81	1.12	Si
ini.	3	-1662	-674.62	794.74	SLU 84	1.18	Si
fin.	3	-2121	-718.6	794.74	SLU 84	1.11	Si
ini.	3	-1600	-660.76	794.74	SLU 77	1.2	Si
fin.	3	-2044	-702.77	794.74	SLU 77	1.13	Si
ini.	3	-1594	-656.39	794.74	SLU 79	1.21	Si
fin.	3	-2027	-695.31	794.74	SLU 79	1.14	Si
ini.	3	-1573	-643.53	794.74	SLU 75	1.23	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	3	-2030	-692.09	794.74	SLU 75	1.15	Si
ini.	3	-1685	-680.68	794.74	SLU 83	1.17	Si
fin.	3	-2128	-719.85	794.74	SLU 83	1.1	Si
ini.	3	-1596	-649.59	794.74	SLU 74	1.22	Si
fin.	3	-2037	-693.34	794.74	SLU 74	1.15	Si
ini.	3	-1577	-654.7	794.74	SLU 78	1.21	Si
fin.	3	-2037	-701.53	794.74	SLU 78	1.13	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1662	-674.62	5416			1244	481	SLU 84	0.09	No
fin.	3	-2121	-718.6	-6142			1380	523	SLU 84	0.09	No
ini.	3	-1681	-669.51	5367			1250	483	SLU 81	0.09	No
fin.	3	-2121	-710.41	-6068			1380	523	SLU 81	0.09	No
ini.	3	-1658	-663.45	5330			1243	481	SLU 82	0.09	No
fin.	3	-2114	-709.17	-6054			1378	522	SLU 82	0.09	No
ini.	3	-1573	-643.53	5177			1218	473	SLU 75	0.09	No
fin.	3	-2030	-692.09	-5902			1353	515	SLU 75	0.09	No
ini.	3	-1577	-654.7	5264			1219	473	SLU 78	0.09	No
fin.	3	-2037	-701.53	-5991			1355	516	SLU 78	0.09	No
ini.	3	-1600	-660.76	5301			1226	475	SLU 77	0.09	No
fin.	3	-2044	-702.77	-6005			1357	516	SLU 77	0.09	No
ini.	3	-1571	-650.34	5226			1218	473	SLU 80	0.09	No
fin.	3	-2020	-694.06	-5934			1350	514	SLU 80	0.09	No
ini.	3	-1685	-680.68	5453			1251	484	SLU 83	0.09	No
fin.	3	-2128	-719.85	-6157			1382	524	SLU 83	0.09	No
ini.	3	-1596	-649.59	5214			1225	475	SLU 74	0.09	No
fin.	3	-2037	-693.34	-5917			1355	516	SLU 74	0.09	No
ini.	3	-1594	-656.39	5263			1224	475	SLU 79	0.09	No
fin.	3	-2027	-695.31	-5949			1352	515	SLU 79	0.09	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-836	-72.68	1192.11	SLV 7	16.4	Si
fin.	2	-4202	-1025.53	1192.11	SLV 7	1.16	Si
ini.	2	7	-1112.61	1192.11	SLV 14	1.07	Si
fin.	2	3749	475.98	1192.11	SLV 14	2.5	Si
ini.	2	-836	-72.68	1192.11	SLV 8	16.4	Si
fin.	2	-4202	-1025.53	1192.11	SLV 8	1.16	Si
ini.	2	376	-1011.15	1192.11	SLV 16	1.18	Si
fin.	2	2908	294.7	1192.11	SLV 16	4.05	Si
ini.	2	376	-1011.15	1192.11	SLV 15	1.18	Si
fin.	2	2908	294.7	1192.11	SLV 15	4.05	Si
ini.	2	7	-1112.61	1192.11	SLV 13	1.07	Si
fin.	2	3749	475.98	1192.11	SLV 13	2.5	Si
ini.	2	-2152	250.53	1192.11	SLV 3	4.76	Si
fin.	2	-6520	-1411.05	1192.11	SLV 3	0.84	No
ini.	2	-2152	250.53	1192.11	SLV 4	4.76	Si
fin.	2	-6520	-1411.05	1192.11	SLV 4	0.84	No
ini.	2	-2521	149.06	1192.11	SLV 2	8	Si
fin.	2	-5679	-1229.78	1192.11	SLV 2	0.97	No
ini.	2	-2521	149.06	1192.11	SLV 1	8	Si
fin.	2	-5679	-1229.78	1192.11	SLV 1	0.97	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-1309	-789.41	6201			1517	600	SLV 10	0.1	No
fin.	2	1431	90.46	79			1131	0	SLV 10	0	No
ini.	2	-836	-72.68	747			1378	543	SLV 8	0.73	No
fin.	2	-4202	-1025.53	-8033			2371	869	SLV 8	0.11	No
ini.	2	7	-1112.61	7465			1131	425	SLV 13	0.06	No
fin.	2	3749	475.98	406			1131	0	SLV 13	0	No
ini.	2	7	-1112.61	7465			1131	425	SLV 14	0.06	No
fin.	2	3749	475.98	406			1131	0	SLV 14	0	No
ini.	2	-836	-72.68	747			1378	543	SLV 7	0.73	No
fin.	2	-4202	-1025.53	-8033			2371	869	SLV 7	0.11	No
ini.	2	-1309	-789.41	6201			1517	600	SLV 9	0.1	No
fin.	2	1431	90.46	79			1131	0	SLV 9	0	No
ini.	2	376	-1011.15	6456			1131	360	SLV 16	0.06	No
fin.	2	2908	294.7	-1401			1131	0	SLV 16	0	No
ini.	2	-78	-451.18	2839			1154	438	SLV 11	0.15	No
fin.	2	-1374	-513.8	-5945			1536	607	SLV 11	0.1	No
ini.	2	376	-1011.15	6456			1131	360	SLV 15	0.06	No
fin.	2	2908	294.7	-1401			1131	0	SLV 15	0	No
ini.	2	-78	-451.18	2839			1154	438	SLV 12	0.15	No
fin.	2	-1374	-513.8	-5945			1536	607	SLV 12	0.1	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.845	SLV 3	No
V_SLV	0	SLV 9	No
PF_SLU	1.104	SLU 83	Si
V_SLU	0.085	SLU 83	No

Trave di accoppiamento 19

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-12.613	1.046	0.86	1.39	0.53	-13.583	1.046	0.86	1.39	0.53	0.97	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-2847	-622.75	641.32	SLU 74	1.03	Si
fin.	3	-1308	-623.34	641.32	SLU 74	1.03	Si
ini.	3	-2826	-621.91	641.32	SLU 80	1.03	Si
fin.	3	-1278	-623.75	641.32	SLU 80	1.03	Si
ini.	3	-2935	-641.51	641.32	SLU 82	1	No
fin.	3	-1370	-639.71	641.32	SLU 82	1	Si
ini.	3	-2836	-626.8	641.32	SLU 78	1.02	Si
fin.	3	-1279	-628.76	641.32	SLU 78	1.02	Si
ini.	3	-2962	-649.05	641.32	SLU 84	0.99	No
fin.	3	-1368	-648.9	641.32	SLU 84	0.99	No
ini.	3	-2972	-645	641.32	SLU 81	0.99	No
fin.	3	-1397	-643.48	641.32	SLU 81	1	No
ini.	3	-2998	-652.54	641.32	SLU 83	0.98	No
fin.	3	-1395	-652.68	641.32	SLU 83	0.98	No
ini.	3	-2863	-625.4	641.32	SLU 79	1.03	Si
fin.	3	-1305	-627.53	641.32	SLU 79	1.02	Si
ini.	3	-2810	-619.26	641.32	SLU 75	1.04	Si
fin.	3	-1281	-619.56	641.32	SLU 75	1.04	Si
ini.	3	-2873	-630.29	641.32	SLU 77	1.02	Si
fin.	3	-1306	-632.53	641.32	SLU 77	1.01	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-2826	-621.91	7301			1366	492	SLU 80	0.07	No
fin.	3	-1278	-623.75	-6116			953	372	SLU 80	0.06	No
ini.	3	-2847	-622.75	7265			1371	493	SLU 74	0.07	No
fin.	3	-1308	-623.34	-6087			961	375	SLU 74	0.06	No
ini.	3	-2935	-641.51	7416			1395	499	SLU 82	0.07	No
fin.	3	-1370	-639.71	-6215			978	380	SLU 82	0.06	No
ini.	3	-2810	-619.26	7238			1362	491	SLU 75	0.07	No
fin.	3	-1281	-619.56	-6065			954	372	SLU 75	0.06	No
ini.	3	-2836	-626.8	7362			1369	492	SLU 78	0.07	No
fin.	3	-1279	-628.76	-6170			953	372	SLU 78	0.06	No
ini.	3	-2873	-630.29	7389			1378	495	SLU 77	0.07	No
fin.	3	-1306	-632.53	-6192			960	375	SLU 77	0.06	No
ini.	3	-2863	-625.4	7328			1376	494	SLU 79	0.07	No
fin.	3	-1305	-627.53	-6137			960	375	SLU 79	0.06	No
ini.	3	-2972	-645	7443			1405	502	SLU 81	0.07	No
fin.	3	-1397	-643.48	-6237			985	383	SLU 81	0.06	No
ini.	3	-2998	-652.54	7567			1412	503	SLU 83	0.07	No
fin.	3	-1395	-652.68	-6342			984	382	SLU 83	0.06	No
ini.	3	-2962	-649.05	7540			1402	501	SLU 84	0.07	No
fin.	3	-1368	-648.9	-6320			977	380	SLU 84	0.06	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-1501	-554.06	961.98	SLV 11	1.74	Si
fin.	2	380	-404.18	961.98	SLV 11	2.38	Si
ini.	2	-255	-598.52	961.98	SLV 4	1.61	Si
fin.	2	-1338	-431.48	961.98	SLV 4	2.23	Si
ini.	2	-2300	-275.62	961.98	SLV 5	3.49	Si
fin.	2	-2119	-424.78	961.98	SLV 5	2.26	Si
ini.	2	-255	-598.52	961.98	SLV 3	1.61	Si
fin.	2	-1338	-431.48	961.98	SLV 3	2.23	Si
ini.	2	-1501	-554.06	961.98	SLV 12	1.74	Si
fin.	2	380	-404.18	961.98	SLV 12	2.38	Si
ini.	2	-747	-491.55	961.98	SLV 2	1.96	Si
fin.	2	-1948	-434.34	961.98	SLV 2	2.21	Si
ini.	2	-747	-491.55	961.98	SLV 1	1.96	Si
fin.	2	-1948	-434.34	961.98	SLV 1	2.21	Si
ini.	2	-662	-632.17	961.98	SLV 7	1.52	Si
fin.	2	-84	-415.24	961.98	SLV 7	2.32	Si
ini.	2	-2300	-275.62	961.98	SLV 6	3.49	Si
fin.	2	-2119	-424.78	961.98	SLV 6	2.26	Si
ini.	2	-662	-632.17	961.98	SLV 8	1.52	Si
fin.	2	-84	-415.24	961.98	SLV 8	2.32	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-662	-632.17	5615			1095	431	SLV 7	0.08	No
fin.	2	-84	-415.24	-3923			941	358	SLV 7	0.09	No
ini.	2	-662	-632.17	5615			1095	431	SLV 8	0.08	No
fin.	2	-84	-415.24	-3923			941	358	SLV 8	0.09	No
ini.	2	-1501	-554.06	7155			1319	520	SLV 11	0.07	No
fin.	2	380	-404.18	-4753			919	285	SLV 11	0.06	No
ini.	2	-3055	-338.12	7891			1733	652	SLV 15	0.08	No
fin.	2	209	-394.61	-5535			919	314	SLV 15	0.06	No
ini.	2	-3055	-338.12	7891			1733	652	SLV 16	0.08	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	2	209	-394.61	-5535			919	314	SLV 16	0.06	No
ini.	2	-3140	-197.5	4126			1756	659	SLV 10	0.16	No
fin.	2	-1655	-413.72	-4224			1360	534	SLV 10	0.13	No
ini.	2	-1501	-554.06	7155			1319	520	SLV 12	0.07	No
fin.	2	380	-404.18	-4753			919	285	SLV 12	0.06	No
ini.	2	-3546	-231.16	6982			1864	689	SLV 14	0.1	No
fin.	2	-401	-397.48	-5376			1025	400	SLV 14	0.07	No
ini.	2	-3140	-197.5	4126			1756	659	SLV 9	0.16	No
fin.	2	-1655	-413.72	-4224			1360	534	SLV 9	0.13	No
ini.	2	-3546	-231.16	6982			1864	689	SLV 13	0.1	No
fin.	2	-401	-397.48	-5376			1025	400	SLV 13	0.07	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF SLV	1.522	SLV 7	Si
V SLV	0.057	SLV 15	No
PF SLU	0.983	SLU 83	No
V SLU	0.06	SLU 84	No

Trave di accoppiamento 20

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-11.238	1.046	0.86	1.39	0.53	-12.238	1.046	0.86	1.39	0.53	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fthk	fvk0	fthmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-4357	-90.14	641.32	SLU 82	7.11	Si
fin.	3	-5402	-283.7	641.32	SLU 82	2.26	Si
ini.	3	-4255	-97.39	641.32	SLU 78	6.59	Si
fin.	3	-5311	-264.1	641.32	SLU 78	2.43	Si
ini.	3	-4103	-86.19	641.32	SLU 73	7.44	Si
fin.	3	-5095	-263.97	641.32	SLU 73	2.43	Si
ini.	3	-4407	-96.35	641.32	SLU 84	6.66	Si
fin.	3	-5479	-281.73	641.32	SLU 84	2.28	Si
ini.	3	-4250	-89.4	641.32	SLU 74	7.17	Si
fin.	3	-5285	-267.6	641.32	SLU 74	2.4	Si
ini.	3	-4451	-94.57	641.32	SLU 83	6.78	Si
fin.	3	-5530	-283.27	641.32	SLU 83	2.26	Si
ini.	3	-4206	-91.18	641.32	SLU 75	7.03	Si
fin.	3	-5234	-266.06	641.32	SLU 75	2.41	Si
ini.	3	-4402	-88.35	641.32	SLU 81	7.26	Si
fin.	3	-5453	-285.24	641.32	SLU 81	2.25	Si
ini.	3	-4299	-95.61	641.32	SLU 77	6.71	Si
fin.	3	-5362	-265.64	641.32	SLU 77	2.41	Si
ini.	3	-4275	-95.65	641.32	SLU 79	6.71	Si
fin.	3	-5334	-262.6	641.32	SLU 79	2.44	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-3947	-89.86	413			1665	563	SLU 62	1.36	Si
fin.	3	-4919	-250.17	-303			1924	618	SLU 62	2.04	Si
ini.	3	-4231	-97.43	424			1741	579	SLU 80	1.37	Si
fin.	3	-5283	-261.07	-286			2021	637	SLU 80	2.23	Si
ini.	3	-3853	-85.43	408			1640	557	SLU 61	1.37	Si
fin.	3	-4791	-250.6	-322			1890	611	SLU 61	1.9	Si
ini.	3	-3903	-91.64	417			1653	560	SLU 63	1.34	Si
fin.	3	-4868	-248.64	-303			1910	615	SLU 63	2.03	Si
ini.	3	-3727	-92.72	400			1606	550	SLU 59	1.38	Si
fin.	3	-4672	-227.97	-249			1858	604	SLU 59	2.43	Si
ini.	3	-4407	-96.35	442			1787	589	SLU 84	1.33	Si
fin.	3	-5479	-281.73	-340			2073	647	SLU 84	1.9	Si
ini.	3	-4451	-94.57	438			1799	592	SLU 83	1.35	Si
fin.	3	-5530	-283.27	-340			2087	650	SLU 83	1.91	Si
ini.	3	-4152	-92.4	418			1720	575	SLU 76	1.38	Si
fin.	3	-5172	-262.01	-305			1992	631	SLU 76	2.07	Si
ini.	3	-4357	-90.14	433			1774	587	SLU 82	1.36	Si
fin.	3	-5402	-283.7	-359			2053	643	SLU 82	1.79	Si
ini.	3	-4402	-88.35	429			1786	589	SLU 81	1.37	Si
fin.	3	-5453	-285.24	-359			2066	646	SLU 81	1.8	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-1726	1016.21	961.98	SLV 4	0.95	No
fin.	2	1072	-1403.23	961.98	SLV 4	0.69	No
ini.	2	-3792	-1052.23	961.98	SLV 16	0.91	No
fin.	2	-7637	857.64	961.98	SLV 16	1.12	Si
ini.	2	-3971	-1130.6	961.98	SLV 14	0.85	No
fin.	2	-8155	1049.91	961.98	SLV 14	0.92	No



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-1726	1016.21	961.98	SLV 3	0.95	No
fin.	2	1072	-1403.23	961.98	SLV 3	0.69	No
ini.	2	-2239	383.69	961.98	SLV 7	2.51	Si
fin.	2	-1371	-836.24	961.98	SLV 7	1.15	Si
ini.	2	-3971	-1130.6	961.98	SLV 13	0.85	No
fin.	2	-8155	1049.91	961.98	SLV 13	0.92	No
ini.	2	-2239	383.69	961.98	SLV 8	2.51	Si
fin.	2	-1371	-836.24	961.98	SLV 8	1.15	Si
ini.	2	-1905	937.84	961.98	SLV 2	1.03	Si
fin.	2	554	-1210.95	961.98	SLV 2	0.79	No
ini.	2	-1905	937.84	961.98	SLV 1	1.03	Si
fin.	2	554	-1210.95	961.98	SLV 1	0.79	No
ini.	2	-3792	-1052.23	961.98	SLV 15	0.91	No
fin.	2	-7637	857.64	961.98	SLV 15	1.12	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-1726	1016.21	-2623			1379	541	SLV 4	0.21	No
fin.	2	1072	-1403.23	-3546			919	110	SLV 4	0.03	No
ini.	2	-3792	-1052.23	2770			1930	707	SLV 16	0.26	No
fin.	2	-7637	857.64	2565			2955	941	SLV 16	0.37	No
ini.	2	-3792	-1052.23	2770			1930	707	SLV 15	0.26	No
fin.	2	-7637	857.64	2565			2955	941	SLV 15	0.37	No
ini.	2	-1905	937.84	-2221			1427	557	SLV 2	0.25	No
fin.	2	554	-1210.95	-2968			919	253	SLV 2	0.09	No
ini.	2	-1905	937.84	-2221			1427	557	SLV 1	0.25	No
fin.	2	554	-1210.95	-2968			919	253	SLV 1	0.09	No
ini.	2	-2239	383.69	-1204			1516	586	SLV 7	0.49	No
fin.	2	-1371	-836.24	-2081			1284	507	SLV 7	0.24	No
ini.	2	-3971	-1130.6	3172			1977	719	SLV 14	0.23	No
fin.	2	-8155	1049.91	3143			3093	968	SLV 14	0.31	No
ini.	2	-2239	383.69	-1204			1516	586	SLV 8	0.49	No
fin.	2	-1371	-836.24	-2081			1284	507	SLV 8	0.24	No
ini.	2	-1726	1016.21	-2623			1379	541	SLV 3	0.21	No
fin.	2	1072	-1403.23	-3546			919	110	SLV 3	0.03	No
ini.	2	-3971	-1130.6	3172			1977	719	SLV 13	0.23	No
fin.	2	-8155	1049.91	3143			3093	968	SLV 13	0.31	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.686	SLV 3	No
V_SLV	0.031	SLV 3	No
PF_SLU	2.248	SLU 81	Si
V_SLU	1.334	SLU 84	Si

Trave di accoppiamento 21

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-6.528	1.046	0.8	1.39	0.59	-7.428	1.046	0.8	1.39	0.59	0.9	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fkhmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-3587	-752.87	794.74	SLU 84	1.06	Si
fin.	3	-2089	-362.28	794.74	SLU 84	2.19	Si
ini.	3	-3420	-716.09	794.74	SLU 75	1.11	Si
fin.	3	-1999	-345.45	794.74	SLU 75	2.3	Si
ini.	3	-3485	-744.74	794.74	SLU 83	1.07	Si
fin.	3	-2120	-394.04	794.74	SLU 83	2.02	Si
ini.	3	-3450	-720.36	794.74	SLU 80	1.1	Si
fin.	3	-2004	-342.35	794.74	SLU 80	2.32	Si
ini.	3	-3542	-743.28	794.74	SLU 82	1.07	Si
fin.	3	-2082	-363.67	794.74	SLU 82	2.19	Si
ini.	3	-3348	-712.23	794.74	SLU 79	1.12	Si
fin.	3	-2035	-374.11	794.74	SLU 79	2.12	Si
ini.	3	-3363	-717.55	794.74	SLU 77	1.11	Si
fin.	3	-2037	-375.83	794.74	SLU 77	2.11	Si
ini.	3	-3466	-725.68	794.74	SLU 78	1.1	Si
fin.	3	-2006	-344.06	794.74	SLU 78	2.31	Si
ini.	3	-3473	-716.19	794.74	SLU 76	1.11	Si
fin.	3	-1976	-322.56	794.74	SLU 76	2.46	Si
ini.	3	-3439	-735.15	794.74	SLU 81	1.08	Si
fin.	3	-2112	-395.44	794.74	SLU 81	2.01	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-3420	-716.09	8105			1594	566	SLU 75	0.07	No
fin.	3	-1999	-345.45	-3097			1215	463	SLU 75	0.15	No
ini.	3	-3466	-725.68	8213			1606	569	SLU 78	0.07	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	3	-2006	-344.06	-3115			1217	464	SLU 78	0.15	No
ini.	3	-3485	-744.74	8517			1611	570	SLU 83	0.07	No
fin.	3	-2120	-394.04	-3386			1247	473	SLU 83	0.14	No
ini.	3	-3348	-712.23	8137			1574	561	SLU 79	0.07	No
fin.	3	-2035	-374.11	-3230			1224	466	SLU 79	0.14	No
ini.	3	-3317	-707.96	8093			1566	559	SLU 74	0.07	No
fin.	3	-2030	-377.22	-3234			1223	466	SLU 74	0.14	No
ini.	3	-3587	-752.87	8528			1638	577	SLU 84	0.07	No
fin.	3	-2089	-362.28	-3249			1239	470	SLU 84	0.14	No
ini.	3	-3363	-717.55	8202			1578	562	SLU 77	0.07	No
fin.	3	-2037	-375.83	-3251			1225	466	SLU 77	0.14	No
ini.	3	-3450	-720.36	8148			1602	568	SLU 80	0.07	No
fin.	3	-2004	-342.35	-3094			1216	464	SLU 80	0.15	No
ini.	3	-3439	-735.15	8409			1599	567	SLU 81	0.07	No
fin.	3	-2112	-395.44	-3369			1245	472	SLU 81	0.14	No
ini.	3	-3542	-743.28	8420			1626	574	SLU 82	0.07	No
fin.	3	-2082	-363.67	-3232			1237	470	SLU 82	0.15	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-72	-178.04	1192.11	SLV 4	6.7	Si
fin.	2	-3762	-1376.83	1192.11	SLV 4	0.87	No
ini.	2	-4368	-755.4	1192.11	SLV 13	1.58	Si
fin.	2	947	857.27	1192.11	SLV 13	1.39	Si
ini.	2	-3728	-661.37	1192.11	SLV 15	1.8	Si
fin.	2	1872	954.25	1192.11	SLV 15	1.25	Si
ini.	2	-2738	-550.94	1192.11	SLV 6	2.16	Si
fin.	2	-3794	-771.07	1192.11	SLV 6	1.55	Si
ini.	2	-2738	-550.94	1192.11	SLV 5	2.16	Si
fin.	2	-3794	-771.07	1192.11	SLV 5	1.55	Si
ini.	2	-712	-272.08	1192.11	SLV 2	4.38	Si
fin.	2	-4687	-1473.81	1192.11	SLV 2	0.81	No
ini.	2	-4368	-755.4	1192.11	SLV 14	1.58	Si
fin.	2	947	857.27	1192.11	SLV 14	1.39	Si
ini.	2	-72	-178.04	1192.11	SLV 3	6.7	Si
fin.	2	-3762	-1376.83	1192.11	SLV 3	0.87	No
ini.	2	-3728	-661.37	1192.11	SLV 16	1.8	Si
fin.	2	1872	954.25	1192.11	SLV 16	1.25	Si
ini.	2	-712	-272.08	1192.11	SLV 1	4.38	Si
fin.	2	-4687	-1473.81	1192.11	SLV 1	0.81	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-3835	-695.94	7025			2045	759	SLV 9	0.11	No
fin.	2	-2104	-71.74	204			1584	619	SLV 9	3.03	Si
ini.	2	-1701	-382.5	5213			1476	581	SLV 12	0.11	No
fin.	2	979	251.5	-2343			1022	197	SLV 12	0.08	No
ini.	2	-605	-237.5	3618			1184	464	SLV 7	0.13	No
fin.	2	-711	-447.82	-4568			1212	477	SLV 7	0.1	No
ini.	2	-3728	-661.37	7707			2016	751	SLV 16	0.1	No
fin.	2	1872	954.25	1146			1022	0	SLV 16	0	No
ini.	2	-4368	-755.4	8251			2187	797	SLV 13	0.1	No
fin.	2	947	857.27	1910			1022	206	SLV 13	0.11	No
ini.	2	-3835	-695.94	7025			2045	759	SLV 10	0.11	No
fin.	2	-2104	-71.74	204			1584	619	SLV 10	3.03	Si
ini.	2	-1701	-382.5	5213			1476	581	SLV 11	0.11	No
fin.	2	979	251.5	-2343			1022	197	SLV 11	0.08	No
ini.	2	-4368	-755.4	8251			2187	797	SLV 14	0.1	No
fin.	2	947	857.27	1910			1022	206	SLV 14	0.11	No
ini.	2	-605	-237.5	3618			1184	464	SLV 8	0.13	No
fin.	2	-711	-447.82	-4568			1212	477	SLV 8	0.1	No
ini.	2	-3728	-661.37	7707			2016	751	SLV 15	0.1	No
fin.	2	1872	954.25	1146			1022	0	SLV 15	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.809	SLV 1	No
V_SLV	0	SLV 15	No
PF_SLU	1.056	SLU 84	Si
V_SLU	0.067	SLU 83	No

Trave di accoppiamento 22

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-5.088	1.046	0.8	1.39	0.59	-5.988	1.046	0.8	1.39	0.59	0.9	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
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Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-6090	-502.07	794.74	SLU 78	1.58	Si
fin.	3	-3787	-457.98	794.74	SLU 78	1.74	Si
ini.	3	-6041	-497.42	794.74	SLU 80	1.6	Si
fin.	3	-3769	-455.48	794.74	SLU 80	1.74	Si
ini.	3	-6142	-507.5	794.74	SLU 82	1.57	Si
fin.	3	-3867	-474.11	794.74	SLU 82	1.68	Si
ini.	3	-6112	-508.32	794.74	SLU 79	1.56	Si
fin.	3	-3662	-444.24	794.74	SLU 79	1.79	Si
ini.	3	-6255	-515.95	794.74	SLU 84	1.54	Si
fin.	3	-3920	-478.29	794.74	SLU 84	1.66	Si
ini.	3	-5977	-493.61	794.74	SLU 75	1.61	Si
fin.	3	-3735	-453.79	794.74	SLU 75	1.75	Si
ini.	3	-6326	-526.84	794.74	SLU 83	1.51	Si
fin.	3	-3813	-467.05	794.74	SLU 83	1.7	Si
ini.	3	-6047	-504.51	794.74	SLU 74	1.58	Si
fin.	3	-3628	-442.55	794.74	SLU 74	1.8	Si
ini.	3	-6160	-512.96	794.74	SLU 77	1.55	Si
fin.	3	-3680	-446.73	794.74	SLU 77	1.78	Si
ini.	3	-6213	-518.39	794.74	SLU 81	1.53	Si
fin.	3	-3761	-462.87	794.74	SLU 81	1.72	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-6047	-504.51	11224			2294	718	SLU 74	0.06	No
fin.	3	-3628	-442.55	-7801			1649	579	SLU 74	0.07	No
ini.	3	-6255	-515.95	11495			2350	729	SLU 84	0.06	No
fin.	3	-3920	-478.29	-8189			1727	598	SLU 84	0.07	No
ini.	3	-6090	-502.07	11149			2306	720	SLU 78	0.06	No
fin.	3	-3787	-457.98	-7869			1692	589	SLU 78	0.07	No
ini.	3	-5977	-493.61	10973			2275	714	SLU 75	0.07	No
fin.	3	-3735	-453.79	-7785			1678	586	SLU 75	0.08	No
ini.	3	-6041	-497.42	11049			2293	718	SLU 80	0.06	No
fin.	3	-3769	-455.48	-7812			1687	588	SLU 80	0.08	No
ini.	3	-6213	-518.39	11569			2338	726	SLU 81	0.06	No
fin.	3	-3761	-462.87	-8120			1684	588	SLU 81	0.07	No
ini.	3	-6160	-512.96	11400			2324	724	SLU 77	0.06	No
fin.	3	-3680	-446.73	-7885			1663	583	SLU 77	0.07	No
ini.	3	-6112	-508.32	11299			2311	721	SLU 79	0.06	No
fin.	3	-3662	-444.24	-7828			1658	581	SLU 79	0.07	No
ini.	3	-6326	-526.84	11745			2368	732	SLU 83	0.06	No
fin.	3	-3813	-467.05	-8204			1698	591	SLU 83	0.07	No
ini.	3	-6142	-507.5	11319			2319	723	SLU 82	0.06	No
fin.	3	-3867	-474.11	-8104			1713	594	SLU 82	0.07	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-7822	-861.83	1192.11	SLV 11	1.38	Si
fin.	2	-2177	-129.02	1192.11	SLV 11	9.24	Si
ini.	2	-199	191.23	1192.11	SLV 5	6.23	Si
fin.	2	-2661	-457.23	1192.11	SLV 5	2.61	Si
ini.	2	-11688	-804.79	1192.11	SLV 13	1.48	Si
fin.	2	-5504	-271.33	1192.11	SLV 13	4.39	Si
ini.	2	-12518	-1017.09	1192.11	SLV 15	1.17	Si
fin.	2	-4861	-184.59	1192.11	SLV 15	6.46	Si
ini.	2	-7822	-861.83	1192.11	SLV 12	1.38	Si
fin.	2	-2177	-129.02	1192.11	SLV 12	9.24	Si
ini.	2	-199	191.23	1192.11	SLV 6	6.23	Si
fin.	2	-2661	-457.23	1192.11	SLV 6	2.61	Si
ini.	2	-2966	-516.45	1192.11	SLV 7	2.31	Si
fin.	2	-519	-168.12	1192.11	SLV 7	7.09	Si
ini.	2	-12518	-1017.09	1192.11	SLV 16	1.17	Si
fin.	2	-4861	-184.59	1192.11	SLV 16	6.46	Si
ini.	2	-2966	-516.45	1192.11	SLV 8	2.31	Si
fin.	2	-519	-168.12	1192.11	SLV 8	7.09	Si
ini.	2	-11688	-804.79	1192.11	SLV 14	1.48	Si
fin.	2	-5504	-271.33	1192.11	SLV 14	4.39	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	3667	134.19	1959			1022	0	SLV 4	0	No
fin.	2	666	-314.92	-6499			1022	272	SLV 4	0.04	No
ini.	2	-199	191.23	6116			1076	413	SLV 5	0.07	No
fin.	2	-2661	-457.23	-7617			1732	667	SLV 5	0.09	No
ini.	2	4497	346.49	2141			1022	0	SLV 1	0	No
fin.	2	23	-401.65	-7630			1022	381	SLV 1	0.05	No
ini.	2	-5055	-154.15	9340			2370	844	SLV 9	0.09	No
fin.	2	-4319	-418.13	-6475			2174	794	SLV 9	0.12	No
ini.	2	-11688	-804.79	12890			4139	1205	SLV 14	0.09	No
fin.	2	-5504	-271.33	-3823			2490	873	SLV 14	0.23	No
ini.	2	4497	346.49	2141			1022	0	SLV 2	0	No
fin.	2	23	-401.65	-7630			1022	381	SLV 2	0.05	No
ini.	2	-5055	-154.15	9340			2370	844	SLV 10	0.09	No
fin.	2	-4319	-418.13	-6475			2174	794	SLV 10	0.12	No
ini.	2	-199	191.23	6116			1076	413	SLV 6	0.07	No
fin.	2	-2661	-457.23	-7617			1732	667	SLV 6	0.09	No
ini.	2	-11688	-804.79	12890			4139	1205	SLV 13	0.09	No
fin.	2	-5504	-271.33	-3823			2490	873	SLV 13	0.23	No
ini.	2	3667	134.19	1959			1022	0	SLV 3	0	No
fin.	2	666	-314.92	-6499			1022	272	SLV 3	0.04	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.172	SLV 15	Si
V_SLV	0	SLV 1	No
PF_SLU	1.508	SLU 83	Si
V_SLU	0.062	SLU 83	No

Trave di accoppiamento 23

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-9.728	1.271	0.9	1.39	0.49	-9.728	2.201	0.9	1.39	0.49	0.93	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	397	78.97	365.45	SLU 77	4.63	Si
fin.	3	941	-356.42	365.45	SLU 77	1.03	Si
ini.	3	391	77.85	365.45	SLU 80	4.69	Si
fin.	3	928	-351.75	365.45	SLU 80	1.04	Si
ini.	3	393	78.48	365.45	SLU 79	4.66	Si
fin.	3	933	-354.33	365.45	SLU 79	1.03	Si
ini.	3	395	78.34	365.45	SLU 78	4.66	Si
fin.	3	936	-353.85	365.45	SLU 78	1.03	Si
ini.	3	402	79.73	365.45	SLU 82	4.58	Si
fin.	3	952	-359.95	365.45	SLU 82	1.02	Si
ini.	3	409	81.53	365.45	SLU 83	4.48	Si
fin.	3	969	-367.53	365.45	SLU 83	0.99	No
ini.	3	390	77.17	365.45	SLU 75	4.74	Si
fin.	3	924	-348.84	365.45	SLU 75	1.05	Si
ini.	3	392	77.79	365.45	SLU 74	4.7	Si
fin.	3	929	-351.42	365.45	SLU 74	1.04	Si
ini.	3	408	80.91	365.45	SLU 84	4.52	Si
fin.	3	964	-364.96	365.45	SLU 84	1	Si
ini.	3	404	80.36	365.45	SLU 81	4.55	Si
fin.	3	957	-362.53	365.45	SLU 81	1.01	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	344	69.55	319			377	78	SLU 59	0.24	No
fin.	3	831	-316.01	0			377	0	SLU 59	0	No
ini.	3	357	72.05	324			377	74	SLU 60	0.23	No
fin.	3	860	-326.78	9			377	0	SLU 60	0	No
ini.	3	343	68.87	317			377	78	SLU 54	0.25	No
fin.	3	827	-313.1	4			377	0	SLU 54	0	No
ini.	3	345	70.17	321			377	77	SLU 58	0.24	No
fin.	3	836	-318.58	-1			377	0	SLU 58	0	No
ini.	3	350	70.67	323			377	76	SLU 56	0.24	No
fin.	3	843	-320.68	3			377	0	SLU 56	0	No
ini.	3	337	67.95	314			377	79	SLU 55	0.25	No
fin.	3	816	-309.29	1			377	0	SLU 55	0	No
ini.	3	345	69.49	319			377	77	SLU 53	0.24	No
fin.	3	832	-315.68	4			377	0	SLU 53	0	No
ini.	3	232	46.76	226			377	103	SLU 1	0.46	No
fin.	3	567	-214.12	-8			377	0	SLU 1	0	No
ini.	3	355	71.43	323			377	75	SLU 61	0.23	No
fin.	3	854	-324.21	9			377	0	SLU 61	0	No
ini.	3	348	70.04	321			377	76	SLU 57	0.24	No
fin.	3	838	-318.11	4			377	0	SLU 57	0	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	2225	-190.64	548.17	SLV 5	2.88	Si
fin.	2	229	417.27	548.17	SLV 5	1.31	Si
ini.	2	-1705	294.54	548.17	SLV 12	1.86	Si
fin.	2	1023	-890.2	548.17	SLV 12	0.62	No
ini.	2	2225	-190.64	548.17	SLV 6	2.88	Si
fin.	2	229	417.27	548.17	SLV 6	1.31	Si
ini.	2	1967	-187.38	548.17	SLV 10	2.93	Si
fin.	2	126	524.15	548.17	SLV 10	1.05	Si
ini.	2	-1448	291.28	548.17	SLV 7	1.88	Si
fin.	2	1126	-997.08	548.17	SLV 7	0.55	No
ini.	2	137	118.81	548.17	SLV 4	4.61	Si
fin.	2	932	-626.75	548.17	SLV 4	0.87	No
ini.	2	-1448	291.28	548.17	SLV 8	1.88	Si
fin.	2	1126	-997.08	548.17	SLV 8	0.55	No
ini.	2	137	118.81	548.17	SLV 3	4.61	Si
fin.	2	932	-626.75	548.17	SLV 3	0.87	No
ini.	2	-1705	294.54	548.17	SLV 11	1.86	Si
fin.	2	1023	-890.2	548.17	SLV 11	0.62	No
ini.	2	1967	-187.38	548.17	SLV 9	2.93	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	2	126	524.15	548.17	SLV 9	1.05	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	137	118.81	319			566	192	SLV 3	0.6	No
fin.	2	932	-626.75	-725			566	0	SLV 3	0	No
ini.	2	-1448	291.28	402			952	367	SLV 7	0.91	No
fin.	2	1126	-997.08	-1481			566	0	SLV 7	0	No
ini.	2	137	118.81	319			566	192	SLV 4	0.6	No
fin.	2	932	-626.75	-725			566	0	SLV 4	0	No
ini.	2	1239	-25.77	228			566	0	SLV 2	0	No
fin.	2	663	-202.44	111			566	67	SLV 2	0.6	No
ini.	2	1967	-187.38	81			566	0	SLV 9	0	No
fin.	2	126	524.15	1490			566	194	SLV 9	0.13	No
ini.	2	-1448	291.28	402			952	367	SLV 8	0.91	No
fin.	2	1126	-997.08	-1481			566	0	SLV 8	0	No
ini.	2	1239	-25.77	228			566	0	SLV 1	0	No
fin.	2	663	-202.44	111			566	67	SLV 1	0.6	No
ini.	2	1967	-187.38	81			566	0	SLV 10	0	No
fin.	2	126	524.15	1490			566	194	SLV 10	0.13	No
ini.	2	2225	-190.64	100			566	0	SLV 5	0	No
fin.	2	229	417.27	1303			566	177	SLV 5	0.14	No
ini.	2	2225	-190.64	100			566	0	SLV 6	0	No
fin.	2	229	417.27	1303			566	177	SLV 6	0.14	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.55	SLV 7	No
V_SLV	0	SLV 1	No
PF_SLU	0.994	SLU 83	No
V_SLU	0	SLU 1	No

Trave di accoppiamento 24

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-10.553	-3.284	0.75	1.39	0.64	-8.253	-3.284	0.75	1.39	0.64	2.3	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	867	-1162.34	935.15	SLU 73	0.8	No
fin.	3	2246	-769.34	935.15	SLU 73	1.22	Si
ini.	3	866	-1161.7	935.15	SLU 78	0.8	No
fin.	3	2314	-806.86	935.15	SLU 78	1.16	Si
ini.	3	811	-1164.08	935.15	SLU 83	0.8	No
fin.	3	2356	-909.84	935.15	SLU 83	1.03	Si
ini.	3	807	-1121.23	935.15	SLU 77	0.83	No
fin.	3	2294	-856.95	935.15	SLU 77	1.09	Si
ini.	3	858	-1156.31	935.15	SLU 80	0.81	No
fin.	3	2298	-807.69	935.15	SLU 80	1.16	Si
ini.	3	854	-1194.07	935.15	SLU 82	0.78	No
fin.	3	2343	-857.28	935.15	SLU 82	1.09	Si
ini.	3	795	-1153.61	935.15	SLU 81	0.81	No
fin.	3	2324	-907.37	935.15	SLU 81	1.03	Si
ini.	3	870	-1204.55	935.15	SLU 84	0.78	No
fin.	3	2375	-859.75	935.15	SLU 84	1.09	Si
ini.	3	851	-1151.22	935.15	SLU 75	0.81	No
fin.	3	2282	-804.38	935.15	SLU 75	1.16	Si
ini.	3	882	-1172.81	935.15	SLU 76	0.8	No
fin.	3	2278	-771.82	935.15	SLU 76	1.21	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	802	-1054.58	3530			739	113	SLU 55	0.03	No
fin.	3	2023	-687.12	-2818			739	0	SLU 55	0	No
ini.	3	785	-1043.47	3522			739	119	SLU 57	0.03	No
fin.	3	2058	-722.16	-2843			739	0	SLU 57	0	No
ini.	3	711	-992.52	3426			739	142	SLU 53	0.04	No
fin.	3	2007	-769.78	-2843			739	0	SLU 53	0	No
ini.	3	777	-1038.08	3510			739	121	SLU 59	0.03	No
fin.	3	2043	-722.99	-2839			739	0	SLU 59	0	No
ini.	3	726	-1003	3452			739	137	SLU 56	0.04	No
fin.	3	2039	-772.25	-2855			739	0	SLU 56	0	No
ini.	3	718	-997.61	3440			739	140	SLU 58	0.04	No
fin.	3	2023	-773.08	-2851			739	0	SLU 58	0	No
ini.	3	770	-1032.99	3496			739	124	SLU 54	0.04	No
fin.	3	2026	-719.69	-2831			739	0	SLU 54	0	No
ini.	3	502	-677.07	2317			739	192	SLU 1	0.08	No
fin.	3	1378	-515.32	-1900			739	0	SLU 1	0	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	774	-1075.84	3679			739	123	SLU 61	0.03	No
fin.	3	2088	-772.58	-3019			739	0	SLU 61	0	No
ini.	3	714	-1035.38	3609			739	141	SLU 60	0.04	No
fin.	3	2069	-822.67	-3031			739	0	SLU 60	0	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-1771	311.81	1402.73	SLV 16	4.5	Si
fin.	2	-2144	-2302.82	1402.73	SLV 16	0.61	No
ini.	2	2300	-1548.31	1402.73	SLV 4	0.91	No
fin.	2	4786	736.05	1402.73	SLV 4	1.91	Si
ini.	2	-995	-31.83	1402.73	SLV 12	44.07	Si
fin.	2	-193	-1723.4	1402.73	SLV 12	0.81	No
ini.	2	-1214	48.32	1402.73	SLV 14	29.03	Si
fin.	2	-1737	-1887.81	1402.73	SLV 14	0.74	No
ini.	2	2300	-1548.31	1402.73	SLV 3	0.91	No
fin.	2	4786	736.05	1402.73	SLV 3	1.91	Si
ini.	2	-995	-31.83	1402.73	SLV 11	44.07	Si
fin.	2	-193	-1723.4	1402.73	SLV 11	0.81	No
ini.	2	-1771	311.81	1402.73	SLV 15	4.5	Si
fin.	2	-2144	-2302.82	1402.73	SLV 15	0.61	No
ini.	2	2857	-1811.8	1402.73	SLV 2	0.77	No
fin.	2	5192	1151.07	1402.73	SLV 2	1.22	Si
ini.	2	2857	-1811.8	1402.73	SLV 1	0.77	No
fin.	2	5192	1151.07	1402.73	SLV 1	1.22	Si
ini.	2	-1214	48.32	1402.73	SLV 13	29.03	Si
fin.	2	-1737	-1887.81	1402.73	SLV 13	0.74	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	2300	-1548.31	4321			1109	0	SLV 3	0	No
fin.	2	4786	736.05	-959			1109	0	SLV 3	0	No
ini.	2	226	-589.87	2766			1109	383	SLV 7	0.14	No
fin.	2	1886	-811.74	-2082			1109	0	SLV 7	0	No
ini.	2	2857	-1811.8	4545			1109	0	SLV 1	0	No
fin.	2	5192	1151.07	-763			1109	0	SLV 1	0	No
ini.	2	2857	-1811.8	4545			1109	0	SLV 2	0	No
fin.	2	5192	1151.07	-763			1109	0	SLV 2	0	No
ini.	2	860	-910.12	2403			1109	265	SLV 9	0.11	No
fin.	2	1163	-340.01	-2194			1109	183	SLV 9	0.08	No
ini.	2	2081	-1468.16	3513			1109	0	SLV 6	0	No
fin.	2	3241	571.65	-1428			1109	0	SLV 6	0	No
ini.	2	2300	-1548.31	4321			1109	0	SLV 4	0	No
fin.	2	4786	736.05	-959			1109	0	SLV 4	0	No
ini.	2	2081	-1468.16	3513			1109	0	SLV 5	0	No
fin.	2	3241	571.65	-1428			1109	0	SLV 5	0	No
ini.	2	860	-910.12	2403			1109	265	SLV 10	0.11	No
fin.	2	1163	-340.01	-2194			1109	183	SLV 10	0.08	No
ini.	2	226	-589.87	2766			1109	383	SLV 8	0.14	No
fin.	2	1886	-811.74	-2082			1109	0	SLV 8	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.609	SLV 15	No
V_SLV	0	SLV 1	No
PF_SLU	0.776	SLU 84	No
V_SLU	0	SLU 1	No

Trave di accoppiamento 25

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-5.158	1.271	0.8	1.39	0.59	-5.158	2.071	0.8	1.39	0.59	0.8	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	98	192.32	529.83	SLU 77	2.75	Si
fin.	3	-996	-780.6	529.83	SLU 77	0.68	No
ini.	3	96	190.86	529.83	SLU 79	2.78	Si
fin.	3	-990	-774.56	529.83	SLU 79	0.68	No
ini.	3	70	198.73	529.83	SLU 84	2.67	Si
fin.	3	-1054	-799.38	529.83	SLU 84	0.66	No
ini.	3	94	186.97	529.83	SLU 80	2.83	Si
fin.	3	-975	-763.57	529.83	SLU 80	0.69	No
ini.	3	72	202.63	529.83	SLU 83	2.61	Si
fin.	3	-1069	-810.37	529.83	SLU 83	0.65	No
ini.	3	87	187.07	529.83	SLU 75	2.83	Si
fin.	3	-981	-761.32	529.83	SLU 75	0.7	No
ini.	3	96	188.42	529.83	SLU 78	2.81	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	3	-981	-769.6	529.83	SLU 78	0.69	No
ini.	3	62	201.28	529.83	SLU 81	2.63	Si
fin.	3	-1069	-802.09	529.83	SLU 81	0.66	No
ini.	3	61	197.38	529.83	SLU 82	2.68	Si
fin.	3	-1054	-791.1	529.83	SLU 82	0.67	No
ini.	3	89	190.97	529.83	SLU 74	2.77	Si
fin.	3	-996	-772.31	529.83	SLU 74	0.69	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	61	197.38	-101			503	179	SLU 82	1.78	Si
fin.	3	-1054	-791.1	-3218			814	316	SLU 82	0.1	No
ini.	3	96	190.86	-69			503	173	SLU 79	2.5	Si
fin.	3	-990	-774.56	-3169			795	310	SLU 79	0.1	No
ini.	3	87	187.07	-69			503	175	SLU 75	2.52	Si
fin.	3	-981	-761.32	-3113			792	309	SLU 75	0.1	No
ini.	3	70	198.73	-95			503	178	SLU 84	1.86	Si
fin.	3	-1054	-799.38	-3254			814	316	SLU 84	0.1	No
ini.	3	98	192.32	-70			503	173	SLU 77	2.48	Si
fin.	3	-996	-780.6	-3194			796	310	SLU 77	0.1	No
ini.	3	62	201.28	-106			503	179	SLU 81	1.69	Si
fin.	3	-1069	-802.09	-3262			818	317	SLU 81	0.1	No
ini.	3	96	188.42	-64			503	173	SLU 78	2.7	Si
fin.	3	-981	-769.6	-3149			792	309	SLU 78	0.1	No
ini.	3	94	186.97	-64			503	173	SLU 80	2.71	Si
fin.	3	-975	-763.57	-3124			790	308	SLU 80	0.1	No
ini.	3	89	190.97	-75			503	174	SLU 74	2.33	Si
fin.	3	-996	-772.31	-3157			796	310	SLU 74	0.1	No
ini.	3	72	202.63	-101			503	177	SLU 83	1.76	Si
fin.	3	-1069	-810.37	-3299			818	317	SLU 83	0.1	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	5	62.57	794.74	SLV 3	12.7	Si
fin.	2	-1039	-387.77	794.74	SLV 3	2.05	Si
ini.	2	-2163	364.41	794.74	SLV 7	2.18	Si
fin.	2	-4008	-1036.6	794.74	SLV 7	0.77	No
ini.	2	5	62.57	794.74	SLV 4	12.7	Si
fin.	2	-1039	-387.77	794.74	SLV 4	2.05	Si
ini.	2	-2163	364.41	794.74	SLV 8	2.18	Si
fin.	2	-4008	-1036.6	794.74	SLV 8	0.77	No
ini.	2	-2559	452.69	794.74	SLV 12	1.76	Si
fin.	2	-4412	-1222.93	794.74	SLV 12	0.65	No
ini.	2	-2559	452.69	794.74	SLV 11	1.76	Si
fin.	2	-4412	-1222.93	794.74	SLV 11	0.65	No
ini.	2	-1315	356.84	794.74	SLV 15	2.23	Si
fin.	2	-2386	-1008.86	794.74	SLV 15	0.79	No
ini.	2	-1315	356.84	794.74	SLV 16	2.23	Si
fin.	2	-2386	-1008.86	794.74	SLV 16	0.79	No
ini.	2	148	186.4	794.74	SLV 13	4.26	Si
fin.	2	-245	-639.05	794.74	SLV 13	1.24	Si
ini.	2	148	186.4	794.74	SLV 14	4.26	Si
fin.	2	-245	-639.05	794.74	SLV 14	1.24	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	1467	-107.87	685			754	0	SLV 2	0	No
fin.	2	1102	-17.96	-622			754	0	SLV 2	0	No
ini.	2	148	186.4	122			754	259	SLV 13	2.13	Si
fin.	2	-245	-639.05	-2347			826	321	SLV 13	0.14	No
ini.	2	2316	-115.45	1315			754	0	SLV 10	0	No
fin.	2	2724	9.78	-267			754	0	SLV 10	0	No
ini.	2	-1315	356.84	-732			1142	447	SLV 15	0.61	No
fin.	2	-2386	-1008.86	-3612			1458	546	SLV 15	0.15	No
ini.	2	2712	-203.73	1484			754	0	SLV 6	0	No
fin.	2	3129	196.1	250			754	0	SLV 6	0	No
ini.	2	-1315	356.84	-732			1142	447	SLV 16	0.61	No
fin.	2	-2386	-1008.86	-3612			1458	546	SLV 16	0.15	No
ini.	2	2712	-203.73	1484			754	0	SLV 5	0	No
fin.	2	3129	196.1	250			754	0	SLV 5	0	No
ini.	2	1467	-107.87	685			754	0	SLV 1	0	No
fin.	2	1102	-17.96	-622			754	0	SLV 1	0	No
ini.	2	2316	-115.45	1315			754	0	SLV 9	0	No
fin.	2	2724	9.78	-267			754	0	SLV 9	0	No
ini.	2	148	186.4	122			754	259	SLV 14	2.13	Si
fin.	2	-245	-639.05	-2347			826	321	SLV 14	0.14	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.65	SLV 11	No
V_SLV	0	SLV 1	No
PF_SLU	0.654	SLU 83	No
V_SLU	0.096	SLU 83	No

Trave di accoppiamento 26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-7.463	-3.284	-1.3	0.7	2	-6.463	-3.284	-1.3	0.7	2	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-127	-4852.15	9132.35	SLU 76	1.88	Si
fin.	3	-476	-2297.6	9132.35	SLU 76	3.97	Si
ini.	3	-389	-4639.92	9132.35	SLU 80	1.97	Si
fin.	3	-791	-2143.54	9132.35	SLU 80	4.26	Si
ini.	3	-71	-4448.25	9132.35	SLU 55	2.05	Si
fin.	3	-385	-2118.83	9132.35	SLU 55	4.31	Si
ini.	3	-376	-4671.37	9132.35	SLU 78	1.95	Si
fin.	3	-786	-2153.94	9132.35	SLU 78	4.24	Si
ini.	3	12	-4398.55	9132.35	SLU 65	2.08	Si
fin.	3	-324	-2079.39	9132.35	SLU 65	4.39	Si
ini.	3	-473	-4759.45	9132.35	SLU 84	1.92	Si
fin.	3	-872	-2204.58	9132.35	SLU 84	4.14	Si
ini.	3	-490	-4707.04	9132.35	SLU 82	1.94	Si
fin.	3	-884	-2181.84	9132.35	SLU 82	4.19	Si
ini.	3	-144	-4799.74	9132.35	SLU 73	1.9	Si
fin.	3	-487	-2274.86	9132.35	SLU 73	4.01	Si
ini.	3	-394	-4618.97	9132.35	SLU 75	1.98	Si
fin.	3	-798	-2131.2	9132.35	SLU 75	4.29	Si
ini.	3	29	-4450.96	9132.35	SLU 68	2.05	Si
fin.	3	-313	-2102.13	9132.35	SLU 68	4.34	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-473	-4759.45	-2167			3655	1403	SLU 84	0.65	No
fin.	3	-872	-2204.58	10629			3815	1482	SLU 84	0.14	No
ini.	3	12	-4398.55	-1736			3466	1302	SLU 65	0.75	No
fin.	3	-324	-2079.39	9383			3596	1373	SLU 65	0.15	No
ini.	3	-376	-4671.37	-2035			3617	1384	SLU 78	0.68	No
fin.	3	-786	-2153.94	10396			3781	1465	SLU 78	0.14	No
ini.	3	-144	-4799.74	-2077			3524	1335	SLU 73	0.64	No
fin.	3	-487	-2274.86	10332			3661	1406	SLU 73	0.14	No
ini.	3	-490	-4707.04	-2151			3662	1407	SLU 82	0.65	No
fin.	3	-884	-2181.84	10522			3819	1484	SLU 82	0.14	No
ini.	3	29	-4450.96	-1752			3466	1298	SLU 68	0.74	No
fin.	3	-313	-2102.13	9490			3591	1371	SLU 68	0.14	No
ini.	3	-389	-4639.92	-2037			3622	1386	SLU 80	0.68	No
fin.	3	-791	-2143.54	10330			3782	1466	SLU 80	0.14	No
ini.	3	-394	-4618.97	-2019			3623	1387	SLU 75	0.69	No
fin.	3	-798	-2131.2	10289			3785	1468	SLU 75	0.14	No
ini.	3	-127	-4852.15	-2093			3517	1332	SLU 76	0.64	No
fin.	3	-476	-2297.6	10439			3656	1404	SLU 76	0.13	No
ini.	3	-71	-4448.25	-1868			3495	1320	SLU 55	0.71	No
fin.	3	-385	-2118.83	9530			3620	1386	SLU 55	0.15	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-59	-4731.12	13698.53	SLV 9	2.9	Si
fin.	2	-3125	-400.24	13698.53	SLV 9	34.23	Si
ini.	2	3057	-7713.41	13698.53	SLV 3	1.78	Si
fin.	2	-575	-929.87	13698.53	SLV 3	14.73	Si
ini.	2	2425	-8266.61	13698.53	SLV 6	1.66	Si
fin.	2	-3348	1.3	13698.53	SLV 6	10529.48	Si
ini.	2	3057	-7713.41	13698.53	SLV 4	1.78	Si
fin.	2	-575	-929.87	13698.53	SLV 4	14.73	Si
ini.	2	2425	-8266.61	13698.53	SLV 5	1.66	Si
fin.	2	-3348	1.3	13698.53	SLV 5	10529.48	Si
ini.	2	4102	-9872.46	13698.53	SLV 2	1.39	Si
fin.	2	-1975	-283.88	13698.53	SLV 2	48.25	Si
ini.	2	-59	-4731.12	13698.53	SLV 10	2.9	Si
fin.	2	-3125	-400.24	13698.53	SLV 10	34.23	Si
ini.	2	-5220	4071.58	13698.53	SLV 16	3.36	Si
fin.	2	168	-2268.33	13698.53	SLV 16	6.04	Si
ini.	2	4102	-9872.46	13698.53	SLV 1	1.39	Si
fin.	2	-1975	-283.88	13698.53	SLV 1	48.25	Si
ini.	2	-5220	4071.58	13698.53	SLV 15	3.36	Si
fin.	2	168	-2268.33	13698.53	SLV 15	6.04	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	4102	-9872.46	8857			5199	582	SLV 2	0.07	No
fin.	2	-1975	-283.88	20531			5989	2347	SLV 2	0.11	No
ini.	2	4102	-9872.46	8857			5199	582	SLV 1	0.07	No
fin.	2	-1975	-283.88	20531			5989	2347	SLV 1	0.11	No
ini.	2	-5220	4071.58	-11346			7287	2876	SLV 15	0.25	No
fin.	2	168	-2268.33	-6784			5199	1920	SLV 15	0.28	No
ini.	2	2425	-8266.61	2221			5199	1329	SLV 6	0.6	No
fin.	2	-3348	1.3	15483			6538	2584	SLV 6	0.17	No
ini.	2	2425	-8266.61	2221			5199	1329	SLV 5	0.6	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	2	-3348	1.3	15483			6538	2584	SLV 5	0.17	No
ini.	2	3057	-7713.41	8570			5199	1108	SLV 4	0.13	No
fin.	2	-575	-929.87	17555			5429	2078	SLV 4	0.12	No
ini.	2	-4175	1912.52	-11059			6869	2717	SLV 14	0.25	No
fin.	2	-1232	-1622.35	-3808			5692	2208	SLV 14	0.58	No
ini.	2	-4175	1912.52	-11059			6869	2717	SLV 13	0.25	No
fin.	2	-1232	-1622.35	-3808			5692	2208	SLV 13	0.58	No
ini.	2	3057	-7713.41	8570			5199	1108	SLV 3	0.13	No
fin.	2	-575	-929.87	17555			5429	2078	SLV 3	0.12	No
ini.	2	-5220	4071.58	-11346			7287	2876	SLV 16	0.25	No
fin.	2	168	-2268.33	-6784			5199	1920	SLV 16	0.28	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.388	SLV 1	Si
V_SLV	0.066	SLV 1	No
PF_SLU	1.882	SLU 76	Si
V_SLU	0.134	SLU 76	No

Trave di accoppiamento 27

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-7.463	-3.284	1.1	1.39	0.29	-6.463	-3.284	1.1	1.39	0.29	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fthk	fvk0	fthmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	1733	-318.56	192.01	SLU 75	0.6	No
fin.	3	2585	-93.02	192.01	SLU 75	2.06	Si
ini.	3	1742	-318.65	192.01	SLU 80	0.6	No
fin.	3	2592	-93.87	192.01	SLU 80	2.05	Si
ini.	3	1831	-335.15	192.01	SLU 84	0.57	No
fin.	3	2667	-103.58	192.01	SLU 84	1.85	Si
ini.	3	1747	-319.94	192.01	SLU 78	0.6	No
fin.	3	2605	-93.59	192.01	SLU 78	2.05	Si
ini.	3	1604	-308.51	192.01	SLU 55	0.62	No
fin.	3	2801	-57.83	192.01	SLU 55	3.32	Si
ini.	3	1597	-305.34	192.01	SLU 34	0.63	No
fin.	3	2730	-60.35	192.01	SLU 34	3.18	Si
ini.	3	1794	-341.43	192.01	SLU 73	0.56	No
fin.	3	2990	-73.92	192.01	SLU 73	2.6	Si
ini.	3	1817	-333.76	192.01	SLU 82	0.58	No
fin.	3	2646	-103.01	192.01	SLU 82	1.86	Si
ini.	3	1808	-342.81	192.01	SLU 76	0.56	No
fin.	3	3011	-74.49	192.01	SLU 76	2.58	Si
ini.	3	1590	-307.13	192.01	SLU 52	0.63	No
fin.	3	2780	-57.26	192.01	SLU 52	3.35	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	1409	-245.95	1984			335	0	SLU 53	0	No
fin.	3	1715	-104.58	-1560			335	0	SLU 53	0	No
ini.	3	1604	-308.51	2337			335	0	SLU 55	0	No
fin.	3	2801	-57.83	-1437			335	0	SLU 55	0	No
ini.	3	1417	-246.04	1991			335	0	SLU 58	0	No
fin.	3	1722	-105.43	-1569			335	0	SLU 58	0	No
ini.	3	1613	-299.46	2297			335	0	SLU 61	0	No
fin.	3	2436	-86.35	-1573			335	0	SLU 61	0	No
ini.	3	1492	-261.15	2079			335	0	SLU 60	0	No
fin.	3	1777	-114.57	-1643			335	0	SLU 60	0	No
ini.	3	1537	-284.35	2209			335	0	SLU 59	0	No
fin.	3	2382	-77.21	-1498			335	0	SLU 59	0	No
ini.	3	1543	-285.64	2219			335	0	SLU 57	0	No
fin.	3	2395	-76.94	-1504			335	0	SLU 57	0	No
ini.	3	936	-164.08	1347			335	0	SLU 1	0	No
fin.	3	1177	-66.16	-1051			335	0	SLU 1	0	No
ini.	3	1529	-284.26	2202			335	0	SLU 54	0	No
fin.	3	2374	-76.37	-1490			335	0	SLU 54	0	No
ini.	3	1423	-247.33	2001			335	0	SLU 56	0	No
fin.	3	1736	-105.15	-1574			335	0	SLU 56	0	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-1865	25.16	288.01	SLV 15	11.45	Si
fin.	2	-4002	-495.26	288.01	SLV 15	0.58	No
ini.	2	3992	-396.76	288.01	SLV 1	0.73	No
fin.	2	6603	339.72	288.01	SLV 1	0.85	No
ini.	2	-2863	-87.48	288.01	SLV 11	3.29	Si
fin.	2	-5325	-341.21	288.01	SLV 11	0.84	No



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-2863	-87.48	288.01	SLV 12	3.29	Si
fin.	2	-5325	-341.21	288.01	SLV 12	0.84	No
ini.	2	3992	-396.76	288.01	SLV 2	0.73	No
fin.	2	6603	339.72	288.01	SLV 2	0.85	No
ini.	2	1983	-373.66	288.01	SLV 3	0.77	No
fin.	2	3284	248.61	288.01	SLV 3	1.16	Si
ini.	2	144	2.06	288.01	SLV 13	140.11	Si
fin.	2	-683	-404.15	288.01	SLV 13	0.71	No
ini.	2	1983	-373.66	288.01	SLV 4	0.77	No
fin.	2	3284	248.61	288.01	SLV 4	1.16	Si
ini.	2	144	2.06	288.01	SLV 14	140.11	Si
fin.	2	-683	-404.15	288.01	SLV 14	0.71	No
ini.	2	-1865	25.16	288.01	SLV 16	11.45	Si
fin.	2	-4002	-495.26	288.01	SLV 16	0.58	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	144	2.06	768			503	167	SLV 14	0.22	No
fin.	2	-683	-404.15	-2540			685	271	SLV 14	0.11	No
ini.	2	1983	-373.66	2229			503	0	SLV 3	0	No
fin.	2	3284	248.61	190			503	0	SLV 3	0	No
ini.	2	3992	-396.76	2937			503	0	SLV 2	0	No
fin.	2	6603	339.72	60			503	0	SLV 2	0	No
ini.	2	1983	-373.66	2229			503	0	SLV 4	0	No
fin.	2	3284	248.61	190			503	0	SLV 4	0	No
ini.	2	144	2.06	768			503	167	SLV 13	0.22	No
fin.	2	-683	-404.15	-2540			685	271	SLV 13	0.11	No
ini.	2	4990	-284.13	3004			503	0	SLV 5	0	No
fin.	2	7926	185.67	-1001			503	0	SLV 5	0	No
ini.	2	3836	-164.48	2353			503	0	SLV 10	0	No
fin.	2	5740	-37.5	-1781			503	0	SLV 10	0	No
ini.	2	3992	-396.76	2937			503	0	SLV 1	0	No
fin.	2	6603	339.72	60			503	0	SLV 1	0	No
ini.	2	3836	-164.48	2353			503	0	SLV 9	0	No
fin.	2	5740	-37.5	-1781			503	0	SLV 9	0	No
ini.	2	4990	-284.13	3004			503	0	SLV 6	0	No
fin.	2	7926	185.67	-1001			503	0	SLV 6	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.582	SLV 15	No
V_SLV	0	SLV 1	No
PF_SLU	0.56	SLU 76	No
V_SLU	0	SLU 1	No

Trave di accoppiamento 28

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-3.233	-3.284	-1.3	0.7	2	-2.233	-3.284	-1.3	0.7	2	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fhmmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-3244	-245.41	9132.35	SLU 81	37.21	Si
fin.	3	-2177	-2537.39	9132.35	SLU 81	3.6	Si
ini.	3	-2953	-214.1	9132.35	SLU 56	42.66	Si
fin.	3	-1988	-2312.95	9132.35	SLU 56	3.95	Si
ini.	3	-2940	-212.25	9132.35	SLU 58	43.03	Si
fin.	3	-1979	-2297.19	9132.35	SLU 58	3.98	Si
ini.	3	-3271	-241.85	9132.35	SLU 83	37.76	Si
fin.	3	-2187	-2570.85	9132.35	SLU 83	3.55	Si
ini.	3	-2911	-214.13	9132.35	SLU 69	42.65	Si
fin.	3	-1962	-2297.13	9132.35	SLU 69	3.98	Si
ini.	3	-3179	-230.48	9132.35	SLU 79	39.62	Si
fin.	3	-2124	-2507.43	9132.35	SLU 79	3.64	Si
ini.	3	-3033	-223.62	9132.35	SLU 62	40.84	Si
fin.	3	-2043	-2360.61	9132.35	SLU 62	3.87	Si
ini.	3	-3192	-232.33	9132.35	SLU 77	39.31	Si
fin.	3	-2133	-2523.19	9132.35	SLU 77	3.62	Si
ini.	3	-3006	-227.18	9132.35	SLU 60	40.2	Si
fin.	3	-2033	-2327.15	9132.35	SLU 60	3.92	Si
ini.	3	-3164	-235.89	9132.35	SLU 74	38.71	Si
fin.	3	-2123	-2489.73	9132.35	SLU 74	3.67	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-3271	-241.85	-6217			4775	1886	SLU 83	0.3	No
fin.	3	-2187	-2570.85	-1139			4341	1715	SLU 83	1.51	Si
ini.	3	-4025	85.73	-5982			5076	1996	SLU 82	0.33	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	3	-3029	-2118.28	-943			4678	1849	SLU 82	1.96	Si
ini.	3	-3006	-227.18	-5550			4668	1846	SLU 60	0.33	No
fin.	3	-2033	-2327.15	-1073			4279	1689	SLU 60	1.57	Si
ini.	3	-3179	-230.48	-6009			4737	1872	SLU 79	0.31	No
fin.	3	-2124	-2507.43	-1162			4316	1705	SLU 79	1.47	Si
ini.	3	-3192	-232.33	-6042			4743	1874	SLU 77	0.31	No
fin.	3	-2133	-2523.19	-1167			4319	1706	SLU 77	1.46	Si
ini.	3	-3164	-235.89	-5962			4732	1870	SLU 74	0.31	No
fin.	3	-2123	-2489.73	-1134			4315	1704	SLU 74	1.5	Si
ini.	3	-3244	-245.41	-6137			4764	1882	SLU 81	0.31	No
fin.	3	-2177	-2537.39	-1106			4337	1714	SLU 81	1.55	Si
ini.	3	-4053	89.29	-6062			5087	2000	SLU 84	0.33	No
fin.	3	-3039	-2151.74	-976			4682	1851	SLU 84	1.9	Si
ini.	3	-3033	-223.62	-5630			4679	1850	SLU 62	0.33	No
fin.	3	-2043	-2360.61	-1105			4283	1691	SLU 62	1.53	Si
ini.	3	-2953	-214.1	-5455			4647	1837	SLU 56	0.34	No
fin.	3	-1988	-2312.95	-1134			4261	1682	SLU 56	1.48	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	6648	-3580.53	13698.53	SLV 7	3.83	Si
fin.	2	6715	-4063.58	13698.53	SLV 7	3.37	Si
ini.	2	-2443	1599.07	13698.53	SLV 15	8.57	Si
fin.	2	2481	-6627.93	13698.53	SLV 15	2.07	Si
ini.	2	2855	-3524.25	13698.53	SLV 3	3.89	Si
fin.	2	-306	1085.08	13698.53	SLV 3	12.62	Si
ini.	2	5059	-2043.53	13698.53	SLV 11	6.7	Si
fin.	2	7551	-6377.48	13698.53	SLV 11	2.15	Si
ini.	2	-2443	1599.07	13698.53	SLV 16	8.57	Si
fin.	2	2481	-6627.93	13698.53	SLV 16	2.07	Si
ini.	2	-7284	3184.3	13698.53	SLV 14	4.3	Si
fin.	2	-2702	-4528.69	13698.53	SLV 14	3.02	Si
ini.	2	-7284	3184.3	13698.53	SLV 13	4.3	Si
fin.	2	-2702	-4528.69	13698.53	SLV 13	3.02	Si
ini.	2	6648	-3580.53	13698.53	SLV 8	3.83	Si
fin.	2	6715	-4063.58	13698.53	SLV 8	3.37	Si
ini.	2	5059	-2043.53	13698.53	SLV 12	6.7	Si
fin.	2	7551	-6377.48	13698.53	SLV 12	2.15	Si
ini.	2	2855	-3524.25	13698.53	SLV 4	3.89	Si
fin.	2	-306	1085.08	13698.53	SLV 4	12.62	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-7284	3184.3	-15140			8113	3166	SLV 14	0.21	No
fin.	2	-2702	-4528.69	-9967			6280	2475	SLV 14	0.25	No
ini.	2	6648	-3580.53	952			5199	0	SLV 7	0	No
fin.	2	6715	-4063.58	348			5199	0	SLV 7	0	No
ini.	2	5059	-2043.53	-5375			5199	0	SLV 11	0	No
fin.	2	7551	-6377.48	-5447			5199	0	SLV 11	0	No
ini.	2	2855	-3524.25	7050			5199	1183	SLV 4	0.17	No
fin.	2	-306	1085.08	8314			5322	2022	SLV 4	0.24	No
ini.	2	6648	-3580.53	952			5199	0	SLV 8	0	No
fin.	2	6715	-4063.58	348			5199	0	SLV 8	0	No
ini.	2	2855	-3524.25	7050			5199	1183	SLV 3	0.17	No
fin.	2	-306	1085.08	8314			5322	2022	SLV 3	0.24	No
ini.	2	5059	-2043.53	-5375			5199	0	SLV 12	0	No
fin.	2	7551	-6377.48	-5447			5199	0	SLV 12	0	No
ini.	2	-2443	1599.07	-14040			6176	2430	SLV 16	0.17	No
fin.	2	2481	-6627.93	-11001			5199	1311	SLV 16	0.12	No
ini.	2	-7284	3184.3	-15140			8113	3166	SLV 13	0.21	No
fin.	2	-2702	-4528.69	-9967			6280	2475	SLV 13	0.25	No
ini.	2	-2443	1599.07	-14040			6176	2430	SLV 15	0.17	No
fin.	2	2481	-6627.93	-11001			5199	1311	SLV 15	0.12	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.067	SLV 15	Si
V_SLV	0	SLV 7	No
PF_SLU	3.552	SLU 83	Si
V_SLU	0.303	SLU 83	No

Trave di accoppiamento 29

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-3.233	-3.284	1.1	1.39	0.29	-2.233	-3.284	1.1	1.39	0.29	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
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Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	1252	-126.78	192.01	SLU 79	1.51	Si
fin.	3	641	-284.65	192.01	SLU 79	0.67	No
ini.	3	1035	-122.96	192.01	SLU 41	1.56	Si
fin.	3	505	-258.39	192.01	SLU 41	0.74	No
ini.	3	1175	-119.29	192.01	SLU 62	1.61	Si
fin.	3	607	-266.69	192.01	SLU 62	0.72	No
ini.	3	1012	-123.35	192.01	SLU 39	1.56	Si
fin.	3	495	-255.6	192.01	SLU 39	0.75	No
ini.	3	1181	-108.6	192.01	SLU 56	1.77	Si
fin.	3	623	-254.25	192.01	SLU 56	0.76	No
ini.	3	1264	-126.98	192.01	SLU 77	1.51	Si
fin.	3	650	-285.86	192.01	SLU 77	0.67	No
ini.	3	1258	-137.66	192.01	SLU 83	1.39	Si
fin.	3	634	-298.3	192.01	SLU 83	0.64	No
ini.	3	1235	-138.06	192.01	SLU 81	1.39	Si
fin.	3	624	-295.5	192.01	SLU 81	0.65	No
ini.	3	1241	-127.37	192.01	SLU 74	1.51	Si
fin.	3	640	-283.06	192.01	SLU 74	0.68	No
ini.	3	1152	-119.68	192.01	SLU 60	1.6	Si
fin.	3	598	-263.89	192.01	SLU 60	0.73	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	1175	-119.29	1052			335	0	SLU 62	0	No
fin.	3	607	-266.69	-1371			335	0	SLU 62	0	No
ini.	3	742	-77.26	777			335	0	SLU 54	0	No
fin.	3	247	-203.24	-1016			335	83	SLU 54	0.08	No
ini.	3	452	-55.91	639			335	0	SLU 55	0	No
fin.	3	-5	-169.89	-828			336	127	SLU 55	0.15	No
ini.	3	765	-76.87	781			335	0	SLU 57	0	No
fin.	3	257	-206.04	-1027			335	81	SLU 57	0.08	No
ini.	3	1181	-108.6	984			335	0	SLU 56	0	No
fin.	3	623	-254.25	-1301			335	0	SLU 56	0	No
ini.	3	735	-87.95	845			335	0	SLU 61	0	No
fin.	3	231	-215.68	-1085			335	86	SLU 61	0.08	No
ini.	3	835	-70.01	651			335	0	SLU 1	0	No
fin.	3	460	-169.15	-868			335	0	SLU 1	0	No
ini.	3	1152	-119.68	1049			335	0	SLU 60	0	No
fin.	3	598	-263.89	-1359			335	0	SLU 60	0	No
ini.	3	753	-76.68	778			335	0	SLU 59	0	No
fin.	3	249	-204.83	-1022			335	83	SLU 59	0.08	No
ini.	3	1170	-108.41	981			335	0	SLU 58	0	No
fin.	3	615	-253.04	-1296			335	0	SLU 58	0	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-635	-786.51	288.01	SLV 3	0.37	No
fin.	2	1600	18.08	288.01	SLV 3	15.93	Si
ini.	2	2213	80.84	288.01	SLV 16	3.56	Si
fin.	2	-39	-850.16	288.01	SLV 16	0.34	No
ini.	2	1598	949.79	288.01	SLV 9	0.3	No
fin.	2	-815	436.9	288.01	SLV 9	0.66	No
ini.	2	157	-1114.3	288.01	SLV 8	0.26	No
fin.	2	1754	-815.21	288.01	SLV 8	0.35	No
ini.	2	1011	-854.09	288.01	SLV 11	0.34	No
fin.	2	1262	-1075.68	288.01	SLV 11	0.27	No
ini.	2	157	-1114.3	288.01	SLV 7	0.26	No
fin.	2	1754	-815.21	288.01	SLV 7	0.35	No
ini.	2	1011	-854.09	288.01	SLV 12	0.34	No
fin.	2	1262	-1075.68	288.01	SLV 12	0.27	No
ini.	2	-635	-786.51	288.01	SLV 4	0.37	No
fin.	2	1600	18.08	288.01	SLV 4	15.93	Si
ini.	2	1598	949.79	288.01	SLV 10	0.3	No
fin.	2	-815	436.9	288.01	SLV 10	0.66	No
ini.	2	2213	80.84	288.01	SLV 15	3.56	Si
fin.	2	-39	-850.16	288.01	SLV 15	0.34	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	743	689.58	143			503	0	SLV 6	0	No
fin.	2	-323	697.38	775			589	231	SLV 6	0.3	No
ini.	2	-459	-245.35	1577			625	247	SLV 2	0.16	No
fin.	2	978	471.86	766			503	0	SLV 2	0	No
ini.	2	157	-1114.3	2007			503	165	SLV 7	0.08	No
fin.	2	1754	-815.21	-1917			503	0	SLV 7	0	No
ini.	2	-635	-786.51	2137			672	266	SLV 4	0.12	No
fin.	2	1600	18.08	-41			503	0	SLV 4	0	No
ini.	2	-459	-245.35	1577			625	247	SLV 1	0.16	No
fin.	2	978	471.86	766			503	0	SLV 1	0	No
ini.	2	-635	-786.51	2137			672	266	SLV 3	0.12	No
fin.	2	1600	18.08	-41			503	0	SLV 3	0	No
ini.	2	1598	949.79	-527			503	0	SLV 10	0	No
fin.	2	-815	436.9	-26			720	284	SLV 10	10.98	Si
ini.	2	157	-1114.3	2007			503	165	SLV 8	0.08	No
fin.	2	1754	-815.21	-1917			503	0	SLV 8	0	No
ini.	2	743	689.58	143			503	0	SLV 5	0	No
fin.	2	-323	697.38	775			589	231	SLV 5	0.3	No
ini.	2	1598	949.79	-527			503	0	SLV 9	0	No
fin.	2	-815	436.9	-26			720	284	SLV 9	10.98	Si



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.258	SLV 7	No
V_SLV	0	SLV 1	No
PF_SLU	0.644	SLU 83	No
V_SLU	0	SLU 1	No

Trave di accoppiamento 30

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-3.013	5.876	-1.3	0.7	2	-2.013	5.876	-1.3	0.7	2	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-2960	451.52	9132.35	SLU 82	20.23	Si
fin.	3	-1968	-2625	9132.35	SLU 82	3.48	Si
ini.	3	-3008	558.45	9132.35	SLU 78	16.35	Si
fin.	3	-1939	-2711.79	9132.35	SLU 78	3.37	Si
ini.	3	-3054	495.25	9132.35	SLU 83	18.44	Si
fin.	3	-2031	-2718.48	9132.35	SLU 83	3.36	Si
ini.	3	-3027	510.13	9132.35	SLU 84	17.9	Si
fin.	3	-1978	-2712	9132.35	SLU 84	3.37	Si
ini.	3	-2942	499.83	9132.35	SLU 75	18.27	Si
fin.	3	-1929	-2624.79	9132.35	SLU 75	3.48	Si
ini.	3	-3035	543.56	9132.35	SLU 77	16.8	Si
fin.	3	-1992	-2718.27	9132.35	SLU 77	3.36	Si
ini.	3	-3020	540.32	9132.35	SLU 79	16.9	Si
fin.	3	-1981	-2707.16	9132.35	SLU 79	3.37	Si
ini.	3	-2969	484.95	9132.35	SLU 74	18.83	Si
fin.	3	-1982	-2631.28	9132.35	SLU 74	3.47	Si
ini.	3	-2993	555.2	9132.35	SLU 80	16.45	Si
fin.	3	-1928	-2700.67	9132.35	SLU 80	3.38	Si
ini.	3	-2987	436.63	9132.35	SLU 81	20.92	Si
fin.	3	-2021	-2631.49	9132.35	SLU 81	3.47	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-3008	558.45	-6842			4669	1846	SLU 78	0.27	No
fin.	3	-1939	-2711.79	-2284			4242	1674	SLU 78	0.73	No
ini.	3	-2993	555.2	-6810			4663	1844	SLU 80	0.27	No
fin.	3	-1928	-2700.67	-2277			4237	1672	SLU 80	0.73	No
ini.	3	-2908	506.51	-6575			4629	1830	SLU 76	0.28	No
fin.	3	-1882	-2609.35	-2150			4219	1664	SLU 76	0.77	No
ini.	3	-3035	543.56	-6838			4680	1850	SLU 77	0.27	No
fin.	3	-1992	-2718.27	-2222			4263	1683	SLU 77	0.76	No
ini.	3	-3020	540.32	-6807			4674	1848	SLU 79	0.27	No
fin.	3	-1981	-2707.16	-2216			4258	1681	SLU 79	0.76	No
ini.	3	-2942	499.83	-6605			4643	1836	SLU 75	0.28	No
fin.	3	-1929	-2624.79	-2116			4238	1672	SLU 75	0.79	No
ini.	3	-2960	451.52	-6630			4650	1838	SLU 82	0.28	No
fin.	3	-1968	-2625	-1975			4253	1679	SLU 82	0.85	No
ini.	3	-3054	495.25	-6863			4687	1853	SLU 83	0.27	No
fin.	3	-2031	-2718.48	-2081			4279	1689	SLU 83	0.81	No
ini.	3	-3027	510.13	-6867			4677	1849	SLU 84	0.27	No
fin.	3	-1978	-2712	-2142			4257	1680	SLU 84	0.78	No
ini.	3	-2987	436.63	-6626			4661	1843	SLU 81	0.28	No
fin.	3	-2021	-2631.49	-1913			4275	1687	SLU 81	0.88	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-5889	5164.99	13698.53	SLV 16	2.65	Si
fin.	2	-1641	-6050.79	13698.53	SLV 16	2.26	Si
ini.	2	5405	-6754.86	13698.53	SLV 5	2.03	Si
fin.	2	2333	1747.32	13698.53	SLV 5	7.84	Si
ini.	2	-9517	7349.64	13698.53	SLV 11	1.86	Si
fin.	2	-5156	-5319.17	13698.53	SLV 11	2.58	Si
ini.	2	4353	-4940.41	13698.53	SLV 10	2.77	Si
fin.	2	2922	-365.8	13698.53	SLV 10	37.45	Si
ini.	2	-5889	5164.99	13698.53	SLV 15	2.65	Si
fin.	2	-1641	-6050.79	13698.53	SLV 15	2.26	Si
ini.	2	4353	-4940.41	13698.53	SLV 9	2.77	Si
fin.	2	2922	-365.8	13698.53	SLV 9	37.45	Si
ini.	2	-8466	5535.19	13698.53	SLV 8	2.47	Si
fin.	2	-5745	-3206.05	13698.53	SLV 8	4.27	Si
ini.	2	-8466	5535.19	13698.53	SLV 7	2.47	Si
fin.	2	-5745	-3206.05	13698.53	SLV 7	4.27	Si
ini.	2	-9517	7349.64	13698.53	SLV 12	1.86	Si
fin.	2	-5156	-5319.17	13698.53	SLV 12	2.58	Si
ini.	2	5405	-6754.86	13698.53	SLV 6	2.03	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	2	2333	1747.32	13698.53	SLV 6	7.84	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-1728	1477.98	-13285			5890	2302	SLV 13	0.17	No
fin.	2	783	-4564.78	-10358			5199	1778	SLV 13	0.17	No
ini.	2	-1728	1477.98	-13285			5890	2302	SLV 14	0.17	No
fin.	2	783	-4564.78	-10358			5199	1778	SLV 14	0.17	No
ini.	2	5405	-6754.86	2236			5199	0	SLV 6	0	No
fin.	2	2333	1747.32	3379			5199	1358	SLV 6	0.4	No
ini.	2	-5889	5164.99	-15463			7555	2973	SLV 15	0.19	No
fin.	2	-1641	-6050.79	-11491			5855	2286	SLV 15	0.2	No
ini.	2	4353	-4940.41	-3755			5199	353	SLV 10	0.09	No
fin.	2	2922	-365.8	-2351			5199	1159	SLV 10	0.49	No
ini.	2	5405	-6754.86	2236			5199	0	SLV 5	0	No
fin.	2	2333	1747.32	3379			5199	1358	SLV 5	0.4	No
ini.	2	-5889	5164.99	-15463			7555	2973	SLV 16	0.19	No
fin.	2	-1641	-6050.79	-11491			5855	2286	SLV 16	0.2	No
ini.	2	1777	-4570.21	6684			5199	1522	SLV 1	0.23	No
fin.	2	-1182	2478.95	8741			5672	2199	SLV 1	0.25	No
ini.	2	1777	-4570.21	6684			5199	1522	SLV 2	0.23	No
fin.	2	-1182	2478.95	8741			5672	2199	SLV 2	0.25	No
ini.	2	4353	-4940.41	-3755			5199	353	SLV 9	0.09	No
fin.	2	2922	-365.8	-2351			5199	1159	SLV 9	0.49	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.864	SLV 11	Si
V_SLV	0	SLV 5	No
PF_SLU	3.359	SLU 83	Si
V_SLU	0.269	SLU 84	No

Trave di accoppiamento 31

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-3.013	5.876	1.1	1.39	0.29	-2.013	5.876	1.1	1.39	0.29	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	606	-125.31	192.01	SLU 83	1.53	Si
fin.	3	-91	-337.64	192.01	SLU 83	0.57	No
ini.	3	609	-115.03	192.01	SLU 74	1.67	Si
fin.	3	-63	-320.72	192.01	SLU 74	0.6	No
ini.	3	561	-128.97	192.01	SLU 82	1.49	Si
fin.	3	-101	-328.25	192.01	SLU 82	0.58	No
ini.	3	596	-114.08	192.01	SLU 75	1.68	Si
fin.	3	-87	-319.85	192.01	SLU 75	0.6	No
ini.	3	574	-129.92	192.01	SLU 81	1.48	Si
fin.	3	-77	-329.12	192.01	SLU 81	0.58	No
ini.	3	593	-124.36	192.01	SLU 84	1.54	Si
fin.	3	-115	-336.77	192.01	SLU 84	0.57	No
ini.	3	628	-109.47	192.01	SLU 78	1.75	Si
fin.	3	-100	-328.38	192.01	SLU 78	0.58	No
ini.	3	641	-110.42	192.01	SLU 77	1.74	Si
fin.	3	-76	-329.25	192.01	SLU 77	0.58	No
ini.	3	637	-110.06	192.01	SLU 79	1.74	Si
fin.	3	-78	-328.24	192.01	SLU 79	0.58	No
ini.	3	624	-109.11	192.01	SLU 80	1.76	Si
fin.	3	-102	-327.37	192.01	SLU 80	0.59	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	557	-96.3	1002			335	0	SLU 55	0	No
fin.	3	-59	-281.22	-1392			351	134	SLU 55	0.1	No
ini.	3	535	-112.18	1090			335	0	SLU 61	0	No
fin.	3	-55	-291.2	-1460			350	134	SLU 61	0.09	No
ini.	3	548	-113.13	1094			335	0	SLU 60	0	No
fin.	3	-31	-292.08	-1467			343	131	SLU 60	0.09	No
ini.	3	602	-92.67	1001			335	0	SLU 57	0	No
fin.	3	-54	-291.33	-1432			349	134	SLU 57	0.09	No
ini.	3	570	-97.28	1008			335	0	SLU 54	0	No
fin.	3	-41	-282.81	-1401			346	132	SLU 54	0.09	No
ini.	3	615	-93.62	1005			335	0	SLU 56	0	No
fin.	3	-30	-292.2	-1440			343	130	SLU 56	0.09	No
ini.	3	474	-110.86	1068			335	0	SLU 42	0	No
fin.	3	-139	-292.93	-1457			372	145	SLU 42	0.1	No
ini.	3	598	-92.32	998			335	0	SLU 59	0	No
fin.	3	-56	-290.33	-1428			350	134	SLU 59	0.09	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	583	-98.23	1012			335	0	SLU 53	0	No
fin.	3	-17	-283.68	-1409			340	129	SLU 53	0.09	No
ini.	3	611	-93.27	1001			335	0	SLU 58	0	No
fin.	3	-33	-291.2	-1435			344	131	SLU 58	0.09	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	172	-1454.38	288.01	SLV 5	0.2	No
fin.	2	7832	-181.15	288.01	SLV 5	1.59	Si
ini.	2	172	-1454.38	288.01	SLV 6	0.2	No
fin.	2	7832	-181.15	288.01	SLV 6	1.59	Si
ini.	2	80	1051.68	288.01	SLV 8	0.27	No
fin.	2	-7303	29.51	288.01	SLV 8	9.76	Si
ini.	2	788	-1203.84	288.01	SLV 10	0.24	No
fin.	2	7302	-451.55	288.01	SLV 10	0.64	No
ini.	2	-578	-869.56	288.01	SLV 1	0.33	No
fin.	2	3152	208.05	288.01	SLV 1	1.38	Si
ini.	2	696	1302.23	288.01	SLV 12	0.22	No
fin.	2	-7833	-240.89	288.01	SLV 12	1.2	Si
ini.	2	80	1051.68	288.01	SLV 7	0.27	No
fin.	2	-7303	29.51	288.01	SLV 7	9.76	Si
ini.	2	788	-1203.84	288.01	SLV 9	0.24	No
fin.	2	7302	-451.55	288.01	SLV 9	0.64	No
ini.	2	-578	-869.56	288.01	SLV 2	0.33	No
fin.	2	3152	208.05	288.01	SLV 2	1.38	Si
ini.	2	696	1302.23	288.01	SLV 11	0.22	No
fin.	2	-7833	-240.89	288.01	SLV 11	1.2	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	172	-1454.38	2062			503	162	SLV 5	0.08	No
fin.	2	7832	-181.15	-49			503	0	SLV 5	0	No
ini.	2	696	1302.23	-523			503	0	SLV 12	0	No
fin.	2	-7833	-240.89	-2056			2591	682	SLV 12	0.33	No
ini.	2	-578	-869.56	2100			657	260	SLV 1	0.12	No
fin.	2	3152	208.05	441			503	0	SLV 1	0	No
ini.	2	172	-1454.38	2062			503	162	SLV 6	0.08	No
fin.	2	7832	-181.15	-49			503	0	SLV 6	0	No
ini.	2	788	-1203.84	1441			503	0	SLV 10	0	No
fin.	2	7302	-451.55	-836			503	0	SLV 10	0	No
ini.	2	788	-1203.84	1441			503	0	SLV 9	0	No
fin.	2	7302	-451.55	-836			503	0	SLV 9	0	No
ini.	2	1474	-34.42	28			503	0	SLV 14	0	No
fin.	2	1387	-693.29	-2181			503	0	SLV 14	0	No
ini.	2	-578	-869.56	2100			657	260	SLV 2	0.12	No
fin.	2	3152	208.05	441			503	0	SLV 2	0	No
ini.	2	1474	-34.42	28			503	0	SLV 13	0	No
fin.	2	1387	-693.29	-2181			503	0	SLV 13	0	No
ini.	2	696	1302.23	-523			503	0	SLV 11	0	No
fin.	2	-7833	-240.89	-2056			2591	682	SLV 11	0.33	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.198	SLV 5	No
V_SLV	0	SLV 1	No
PF_SLU	0.569	SLU 83	No
V_SLU	0	SLU 3	No

Trave di accoppiamento 32

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-21.763	5.951	1.39	2.29	0.9	-22.763	5.951	1.39	2.29	0.9	1	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	4471	1289.16	1150.68	SLU 76	0.89	No
fin.	3	4529	-785.7	1150.68	SLU 76	1.46	Si
ini.	3	4585	1332.4	1150.68	SLU 77	0.86	No
fin.	3	4666	-817.93	1150.68	SLU 77	1.41	Si
ini.	3	4553	1340.32	1150.68	SLU 78	0.86	No
fin.	3	4642	-827.19	1150.68	SLU 78	1.39	Si
ini.	3	4530	1290.4	1150.68	SLU 75	0.89	No
fin.	3	4578	-782.16	1150.68	SLU 75	1.47	Si
ini.	3	4659	1281.74	1150.68	SLU 82	0.9	No
fin.	3	4674	-767.2	1150.68	SLU 82	1.5	Si
ini.	3	4548	1325.88	1150.68	SLU 79	0.87	No
fin.	3	4633	-815.29	1150.68	SLU 79	1.41	Si
ini.	3	4563	1282.48	1150.68	SLU 74	0.9	No



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	3	4602	-772.9	1150.68	SLU 74	1.49	Si
ini.	3	4714	1323.74	1150.68	SLU 83	0.87	No
fin.	3	4762	-802.96	1150.68	SLU 83	1.43	Si
ini.	3	4515	1333.8	1150.68	SLU 80	0.86	No
fin.	3	4609	-824.55	1150.68	SLU 80	1.4	Si
ini.	3	4681	1331.66	1150.68	SLU 84	0.86	No
fin.	3	4738	-812.22	1150.68	SLU 84	1.42	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	4142	1217.57	-2066			873	0	SLU 57	0	No
fin.	3	4208	-741.24	-2184			873	0	SLU 57	0	No
ini.	3	4060	1166.41	-1949			873	0	SLU 55	0	No
fin.	3	4094	-699.76	-2082			873	0	SLU 55	0	No
ini.	3	4152	1159.72	-1925			873	0	SLU 53	0	No
fin.	3	4167	-686.96	-2052			873	0	SLU 53	0	No
ini.	3	4104	1211.05	-2054			873	0	SLU 59	0	No
fin.	3	4175	-738.61	-2178			873	0	SLU 59	0	No
ini.	3	4137	1203.12	-2032			873	0	SLU 58	0	No
fin.	3	4198	-729.35	-2156			873	0	SLU 58	0	No
ini.	3	4248	1158.98	-1906			873	0	SLU 61	0	No
fin.	3	4239	-681.25	-2047			873	0	SLU 61	0	No
ini.	3	4119	1167.65	-1947			873	0	SLU 54	0	No
fin.	3	4143	-696.22	-2073			873	0	SLU 54	0	No
ini.	3	2918	795.3	-1279			873	0	SLU 1	0	No
fin.	3	2898	-455.77	-1390			873	0	SLU 1	0	No
ini.	3	4174	1209.65	-2044			873	0	SLU 56	0	No
fin.	3	4232	-731.99	-2162			873	0	SLU 56	0	No
ini.	3	4281	1151.06	-1884			873	0	SLU 60	0	No
fin.	3	4263	-671.99	-2025			873	0	SLU 60	0	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	7132	3135.95	1726.01	SLV 3	0.55	No
fin.	2	8979	-2272.34	1726.01	SLV 3	0.76	No
ini.	2	-15661	392.78	1726.01	SLV 6	4.39	Si
fin.	2	-14028	-1785.74	1726.01	SLV 6	0.97	No
ini.	2	-15661	392.78	1726.01	SLV 5	4.39	Si
fin.	2	-14028	-1785.74	1726.01	SLV 5	0.97	No
ini.	2	21060	2505.74	1726.01	SLV 7	0.69	No
fin.	2	20701	-404.9	1726.01	SLV 7	4.26	Si
ini.	2	10206	-777.61	1726.01	SLV 16	2.22	Si
fin.	2	7742	1682.36	1726.01	SLV 16	1.03	Si
ini.	2	7132	3135.95	1726.01	SLV 4	0.55	No
fin.	2	8979	-2272.34	1726.01	SLV 4	0.76	No
ini.	2	-3885	2502.06	1726.01	SLV 2	0.69	No
fin.	2	-1440	-2686.59	1726.01	SLV 2	0.64	No
ini.	2	-3885	2502.06	1726.01	SLV 1	0.69	No
fin.	2	-1440	-2686.59	1726.01	SLV 1	0.64	No
ini.	2	21060	2505.74	1726.01	SLV 8	0.69	No
fin.	2	20701	-404.9	1726.01	SLV 8	4.26	Si
ini.	2	10206	-777.61	1726.01	SLV 15	2.22	Si
fin.	2	7742	1682.36	1726.01	SLV 15	1.03	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	21060	2505.74	-5664			1310	0	SLV 7	0	No
fin.	2	20701	-404.9	-5503			1310	0	SLV 7	0	No
ini.	2	-3885	2502.06	-5198			2709	996	SLV 1	0.19	No
fin.	2	-1440	-2686.59	-5535			1829	722	SLV 1	0.13	No
ini.	2	7132	3135.95	-6914			1310	0	SLV 4	0	No
fin.	2	8979	-2272.34	-7066			1310	0	SLV 4	0	No
ini.	2	-3885	2502.06	-5198			2709	996	SLV 2	0.19	No
fin.	2	-1440	-2686.59	-5535			1829	722	SLV 2	0.13	No
ini.	2	21983	1331.67	-2876			1310	0	SLV 12	0	No
fin.	2	20330	781.51	-2631			1310	0	SLV 12	0	No
ini.	2	7132	3135.95	-6914			1310	0	SLV 3	0	No
fin.	2	8979	-2272.34	-7066			1310	0	SLV 3	0	No
ini.	2	10206	-777.61	2378			1310	0	SLV 16	0	No
fin.	2	7742	1682.36	2505			1310	0	SLV 16	0	No
ini.	2	21983	1331.67	-2876			1310	0	SLV 11	0	No
fin.	2	20330	781.51	-2631			1310	0	SLV 11	0	No
ini.	2	10206	-777.61	2378			1310	0	SLV 15	0	No
fin.	2	7742	1682.36	2505			1310	0	SLV 15	0	No
ini.	2	21060	2505.74	-5664			1310	0	SLV 8	0	No
fin.	2	20701	-404.9	-5503			1310	0	SLV 8	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.55	SLV 3	No
V_SLV	0	SLV 3	No
PF_SLU	0.859	SLU 78	No
V_SLU	0	SLU 1	No

Trave di accoppiamento 33

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-21.763	5.951	4.19	5.07	0.88	-22.763	5.951	4.19	5.07	0.88	1	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	298	412.17	1100.1	SLU 82	2.67	Si
fin.	3	-440	-373.19	1100.1	SLU 82	2.95	Si
ini.	3	359	417.75	1100.1	SLU 76	2.63	Si
fin.	3	-496	-390.55	1100.1	SLU 76	2.82	Si
ini.	3	349	431.01	1100.1	SLU 83	2.55	Si
fin.	3	-465	-390.05	1100.1	SLU 83	2.82	Si
ini.	3	322	414.47	1100.1	SLU 74	2.65	Si
fin.	3	-452	-374.63	1100.1	SLU 74	2.94	Si
ini.	3	371	433.47	1100.1	SLU 84	2.54	Si
fin.	3	-490	-400.12	1100.1	SLU 84	2.75	Si
ini.	3	416	438.23	1100.1	SLU 78	2.51	Si
fin.	3	-526	-411.62	1100.1	SLU 78	2.67	Si
ini.	3	417	437.41	1100.1	SLU 80	2.52	Si
fin.	3	-529	-410.76	1100.1	SLU 80	2.68	Si
ini.	3	343	416.93	1100.1	SLU 75	2.64	Si
fin.	3	-477	-384.69	1100.1	SLU 75	2.86	Si
ini.	3	394	435.77	1100.1	SLU 77	2.52	Si
fin.	3	-501	-401.55	1100.1	SLU 77	2.74	Si
ini.	3	396	434.95	1100.1	SLU 79	2.53	Si
fin.	3	-504	-400.7	1100.1	SLU 79	2.75	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	396	434.95	2618			835	226	SLU 79	0.09	No
fin.	3	-504	-400.7	-3760			1013	399	SLU 79	0.11	No
ini.	3	277	409.71	2874			835	256	SLU 81	0.09	No
fin.	3	-415	-363.13	-3653			981	386	SLU 81	0.11	No
ini.	3	417	437.41	2568			835	220	SLU 80	0.09	No
fin.	3	-529	-410.76	-3781			1021	403	SLU 80	0.11	No
ini.	3	322	414.47	2708			835	245	SLU 74	0.09	No
fin.	3	-452	-374.63	-3641			994	391	SLU 74	0.11	No
ini.	3	394	435.77	2650			835	227	SLU 77	0.09	No
fin.	3	-501	-401.55	-3778			1012	399	SLU 77	0.11	No
ini.	3	343	416.93	2659			835	240	SLU 75	0.09	No
fin.	3	-477	-384.69	-3662			1003	395	SLU 75	0.11	No
ini.	3	416	438.23	2601			835	221	SLU 78	0.08	No
fin.	3	-526	-411.62	-3798			1020	403	SLU 78	0.11	No
ini.	3	371	433.47	2767			835	233	SLU 84	0.08	No
fin.	3	-490	-400.12	-3810			1007	397	SLU 84	0.1	No
ini.	3	298	412.17	2825			835	251	SLU 82	0.09	No
fin.	3	-440	-373.19	-3674			990	389	SLU 82	0.11	No
ini.	3	349	431.01	2816			835	238	SLU 83	0.08	No
fin.	3	-465	-390.05	-3790			999	393	SLU 83	0.1	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	1270	815.2	1650.16	SLV 7	2.02	Si
fin.	2	-1676	-884.24	1650.16	SLV 7	1.87	Si
ini.	2	-3684	-704.38	1650.16	SLV 13	2.34	Si
fin.	2	2100	1051.82	1650.16	SLV 13	1.57	Si
ini.	2	3997	1085.01	1650.16	SLV 1	1.52	Si
fin.	2	-2237	-1358.6	1650.16	SLV 1	1.21	Si
ini.	2	3997	1085.01	1650.16	SLV 2	1.52	Si
fin.	2	-2237	-1358.6	1650.16	SLV 2	1.21	Si
ini.	2	3979	1249.54	1650.16	SLV 4	1.32	Si
fin.	2	-2679	-1529.04	1650.16	SLV 4	1.08	Si
ini.	2	3979	1249.54	1650.16	SLV 3	1.32	Si
fin.	2	-2679	-1529.04	1650.16	SLV 3	1.08	Si
ini.	2	-3702	-539.86	1650.16	SLV 16	3.06	Si
fin.	2	1659	881.38	1650.16	SLV 16	1.87	Si
ini.	2	1270	815.2	1650.16	SLV 8	2.02	Si
fin.	2	-1676	-884.24	1650.16	SLV 8	1.87	Si
ini.	2	-3684	-704.38	1650.16	SLV 14	2.34	Si
fin.	2	2100	1051.82	1650.16	SLV 14	1.57	Si
ini.	2	-3702	-539.86	1650.16	SLV 15	3.06	Si
fin.	2	1659	881.38	1650.16	SLV 15	1.87	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	1270	815.2	-1180			1253	0	SLV 7	0	No
fin.	2	-1676	-884.24	-4941			1843	724	SLV 7	0.15	No
ini.	2	3997	1085.01	-2230			1253	0	SLV 1	0	No
fin.	2	-2237	-1358.6	-7207			2040	791	SLV 1	0.11	No
ini.	2	1270	815.2	-1180			1253	0	SLV 8	0	No
fin.	2	-1676	-884.24	-4941			1843	724	SLV 8	0.15	No
ini.	2	-3684	-704.38	7010			2549	942	SLV 13	0.13	No
fin.	2	2100	1051.82	2994			1253	0	SLV 13	0	No
ini.	2	3997	1085.01	-2230			1253	0	SLV 2	0	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	2	-2237	-1358.6	-7207			2040	791	SLV 2	0.11	No
ini.	2	3979	1249.54	-3238			1253	0	SLV 4	0	No
fin.	2	-2679	-1529.04	-7809			2196	840	SLV 4	0.11	No
ini.	2	-3684	-704.38	7010			2549	942	SLV 14	0.13	No
fin.	2	2100	1051.82	2994			1253	0	SLV 14	0	No
ini.	2	3979	1249.54	-3238			1253	0	SLV 3	0	No
fin.	2	-2679	-1529.04	-7809			2196	840	SLV 3	0.11	No
ini.	2	1330	266.78	2180			1253	0	SLV 6	0	No
fin.	2	-204	-316.11	-2934			1324	509	SLV 6	0.17	No
ini.	2	1330	266.78	2180			1253	0	SLV 5	0	No
fin.	2	-204	-316.11	-2934			1324	509	SLV 5	0.17	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF SLV	1.079	SLV 3	Si
V SLV	0	SLV 1	No
PF SLU	2.51	SLU 78	Si
V SLU	0.084	SLU 84	No

Trave di accoppiamento 34

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-21.543	-3.359	1.39	2.29	0.9	-22.543	-3.359	1.39	2.29	0.9	1	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fthk	fvk0	fthmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	8084	1658.99	1150.68	SLU 84	0.69	No
fin.	3	8286	-1236.43	1150.68	SLU 84	0.93	No
ini.	3	9392	1667.1	1150.68	SLU 73	0.69	No
fin.	3	9464	-1129.17	1150.68	SLU 73	1.02	Si
ini.	3	7889	1607.42	1150.68	SLU 75	0.72	No
fin.	3	8075	-1188.23	1150.68	SLU 75	0.97	No
ini.	3	8949	1569.91	1150.68	SLU 55	0.73	No
fin.	3	9008	-1041.23	1150.68	SLU 55	1.11	Si
ini.	3	8915	1565.58	1150.68	SLU 68	0.73	No
fin.	3	8976	-1036.51	1150.68	SLU 68	1.11	Si
ini.	3	9458	1701.78	1150.68	SLU 76	0.68	No
fin.	3	9552	-1162.29	1150.68	SLU 76	0.99	No
ini.	3	7917	1635.3	1150.68	SLU 80	0.7	No
fin.	3	8126	-1215.64	1150.68	SLU 80	0.95	No
ini.	3	8019	1624.3	1150.68	SLU 82	0.71	No
fin.	3	8198	-1203.31	1150.68	SLU 82	0.96	No
ini.	3	8884	1535.23	1150.68	SLU 52	0.75	No
fin.	3	8920	-1008.11	1150.68	SLU 52	1.14	Si
ini.	3	7955	1642.1	1150.68	SLU 78	0.7	No
fin.	3	8162	-1221.35	1150.68	SLU 78	0.94	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	5037	1358.49	-2644			873	0	SLU 56	0	No
fin.	3	5349	-1130.63	-2803			873	0	SLU 56	0	No
ini.	3	4971	1323.8	-2559			873	0	SLU 53	0	No
fin.	3	5262	-1097.51	-2729			873	0	SLU 53	0	No
ini.	3	3462	916.41	-1741			873	0	SLU 1	0	No
fin.	3	3653	-749.54	-1885			873	0	SLU 1	0	No
ini.	3	7381	1475.55	-2382			873	0	SLU 54	0	No
fin.	3	7531	-1067.16	-3061			873	0	SLU 54	0	No
ini.	3	5101	1340.69	-2586			873	0	SLU 60	0	No
fin.	3	5385	-1112.59	-2766			873	0	SLU 60	0	No
ini.	3	7510	1492.44	-2409			873	0	SLU 61	0	No
fin.	3	7654	-1082.25	-3099			873	0	SLU 61	0	No
ini.	3	7446	1510.23	-2467			873	0	SLU 57	0	No
fin.	3	7619	-1100.28	-3136			873	0	SLU 57	0	No
ini.	3	7409	1503.43	-2451			873	0	SLU 59	0	No
fin.	3	7583	-1094.57	-3126			873	0	SLU 59	0	No
ini.	3	8949	1569.91	-2249			873	0	SLU 55	0	No
fin.	3	9008	-1041.23	-3273			873	0	SLU 55	0	No
ini.	3	4999	1351.69	-2628			873	0	SLU 58	0	No
fin.	3	5313	-1124.92	-2793			873	0	SLU 58	0	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-3045	3489.15	1726.01	SLV 3	0.49	No
fin.	2	1319	-3714.18	1726.01	SLV 3	0.46	No
ini.	2	10569	-1503.15	1726.01	SLV 14	1.15	Si
fin.	2	6626	2074.04	1726.01	SLV 14	0.83	No
ini.	2	-13788	961.4	1726.01	SLV 8	1.8	Si
fin.	2	-10635	-2031.55	1726.01	SLV 8	0.85	No



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	10569	-1503.15	1726.01	SLV 13	1.15	Si
fin.	2	6626	2074.04	1726.01	SLV 13	0.83	No
ini.	2	20296	2676.66	1726.01	SLV 5	0.64	No
fin.	2	19720	-1277.17	1726.01	SLV 5	1.35	Si
ini.	2	20296	2676.66	1726.01	SLV 6	0.64	No
fin.	2	19720	-1277.17	1726.01	SLV 6	1.35	Si
ini.	2	7181	4003.73	1726.01	SLV 2	0.43	No
fin.	2	10426	-3487.87	1726.01	SLV 2	0.49	No
ini.	2	7181	4003.73	1726.01	SLV 1	0.43	No
fin.	2	10426	-3487.87	1726.01	SLV 1	0.49	No
ini.	2	-3045	3489.15	1726.01	SLV 4	0.49	No
fin.	2	1319	-3714.18	1726.01	SLV 4	0.46	No
ini.	2	-13788	961.4	1726.01	SLV 7	1.8	Si
fin.	2	-10635	-2031.55	1726.01	SLV 7	0.85	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	20296	2676.66	-2573			1310	0	SLV 6	0	No
fin.	2	19720	-1277.17	-4548			1310	0	SLV 6	0	No
ini.	2	7181	4003.73	-8379			1310	0	SLV 1	0	No
fin.	2	10426	-3487.87	-9043			1310	0	SLV 1	0	No
ini.	2	10569	-1503.15	5404			1310	0	SLV 13	0	No
fin.	2	6626	2074.04	4687			1310	0	SLV 13	0	No
ini.	2	21312	1024.6	1562			1310	0	SLV 9	0	No
fin.	2	18580	391.41	-429			1310	0	SLV 9	0	No
ini.	2	-3045	3489.15	-9221			2406	911	SLV 4	0.1	No
fin.	2	1319	-3714.18	-8777			1310	0	SLV 4	0	No
ini.	2	-3045	3489.15	-9221			2406	911	SLV 3	0.1	No
fin.	2	1319	-3714.18	-8777			1310	0	SLV 3	0	No
ini.	2	10569	-1503.15	5404			1310	0	SLV 14	0	No
fin.	2	6626	2074.04	4687			1310	0	SLV 14	0	No
ini.	2	20296	2676.66	-2573			1310	0	SLV 5	0	No
fin.	2	19720	-1277.17	-4548			1310	0	SLV 5	0	No
ini.	2	21312	1024.6	1562			1310	0	SLV 10	0	No
fin.	2	18580	391.41	-429			1310	0	SLV 10	0	No
ini.	2	7181	4003.73	-8379			1310	0	SLV 2	0	No
fin.	2	10426	-3487.87	-9043			1310	0	SLV 2	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.431	SLV 1	No
V_SLV	0	SLV 1	No
PF_SLU	0.676	SLU 76	No
V_SLU	0	SLU 1	No

Trave di accoppiamento 35

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-21.543	-3.359	4.19	5.07	0.88	-22.543	-3.359	4.19	5.07	0.88	1	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fhmmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	1853	756.09	1100.1	SLU 82	1.45	Si
fin.	3	-1263	-617.82	1100.1	SLU 82	1.78	Si
ini.	3	1724	721.2	1100.1	SLU 68	1.53	Si
fin.	3	-1229	-555.3	1100.1	SLU 68	1.98	Si
ini.	3	1914	761.99	1100.1	SLU 78	1.44	Si
fin.	3	-1288	-630.49	1100.1	SLU 78	1.74	Si
ini.	3	1901	758.91	1100.1	SLU 80	1.45	Si
fin.	3	-1290	-628.18	1100.1	SLU 80	1.75	Si
ini.	3	1724	724.13	1100.1	SLU 55	1.52	Si
fin.	3	-1234	-557.74	1100.1	SLU 55	1.97	Si
ini.	3	1861	774.03	1100.1	SLU 73	1.42	Si
fin.	3	-1295	-600.09	1100.1	SLU 73	1.83	Si
ini.	3	1921	772.3	1100.1	SLU 84	1.42	Si
fin.	3	-1298	-636.63	1100.1	SLU 84	1.73	Si
ini.	3	1846	745.79	1100.1	SLU 75	1.48	Si
fin.	3	-1253	-611.68	1100.1	SLU 75	1.8	Si
ini.	3	1929	790.24	1100.1	SLU 76	1.39	Si
fin.	3	-1330	-618.89	1100.1	SLU 76	1.78	Si
ini.	3	1656	707.92	1100.1	SLU 52	1.55	Si
fin.	3	-1199	-538.94	1100.1	SLU 52	2.04	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	1505	618.7	1011			835	0	SLU 60	0	No
fin.	3	-1053	-542.4	-4826			1206	475	SLU 60	0.1	No
ini.	3	1709	695.89	481			835	0	SLU 57	0	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	3	-1192	-569.34	-4924			1255	492	SLU 57	0.1	No
ini.	3	1724	724.13	206			835	0	SLU 55	0	No
fin.	3	-1234	-557.74	-4827			1269	497	SLU 55	0.1	No
ini.	3	1553	621.52	890			835	0	SLU 58	0	No
fin.	3	-1080	-552.75	-4819			1215	478	SLU 58	0.1	No
ini.	3	1498	608.39	935			835	0	SLU 53	0	No
fin.	3	-1043	-536.26	-4731			1202	473	SLU 53	0.1	No
ini.	3	1696	692.81	463			835	0	SLU 59	0	No
fin.	3	-1194	-567.03	-4895			1255	492	SLU 59	0.1	No
ini.	3	1648	689.98	584			835	0	SLU 61	0	No
fin.	3	-1166	-556.67	-4902			1246	489	SLU 61	0.1	No
ini.	3	1566	624.6	908			835	0	SLU 56	0	No
fin.	3	-1078	-555.06	-4849			1215	478	SLU 56	0.1	No
ini.	3	987	417.49	642			835	0	SLU 1	0	No
fin.	3	-723	-363.48	-3230			1090	431	SLU 1	0.13	No
ini.	3	1641	679.68	509			835	0	SLU 54	0	No
fin.	3	-1157	-550.53	-4806			1242	488	SLU 54	0.1	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-3392	-752.54	1650.16	SLV 14	2.19	Si
fin.	2	3709	1231.78	1650.16	SLV 14	1.34	Si
ini.	2	6409	1951.21	1650.16	SLV 1	0.85	No
fin.	2	-5549	-2246.91	1650.16	SLV 1	0.73	No
ini.	2	-4201	-1039	1650.16	SLV 15	1.59	Si
fin.	2	3990	1448.67	1650.16	SLV 15	1.14	Si
ini.	2	6409	1951.21	1650.16	SLV 2	0.85	No
fin.	2	-5549	-2246.91	1650.16	SLV 2	0.73	No
ini.	2	-3392	-752.54	1650.16	SLV 13	2.19	Si
fin.	2	3709	1231.78	1650.16	SLV 13	1.34	Si
ini.	2	-4201	-1039	1650.16	SLV 16	1.59	Si
fin.	2	3990	1448.67	1650.16	SLV 16	1.14	Si
ini.	2	5600	1664.75	1650.16	SLV 3	0.99	No
fin.	2	-5268	-2030.01	1650.16	SLV 3	0.81	No
ini.	2	3922	1339.1	1650.16	SLV 5	1.23	Si
fin.	2	-2637	-1282.41	1650.16	SLV 5	1.29	Si
ini.	2	5600	1664.75	1650.16	SLV 4	0.99	No
fin.	2	-5268	-2030.01	1650.16	SLV 4	0.81	No
ini.	2	3922	1339.1	1650.16	SLV 6	1.23	Si
fin.	2	-2637	-1282.41	1650.16	SLV 6	1.29	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	3922	1339.1	-2601			1253	0	SLV 5	0	No
fin.	2	-2637	-1282.41	-6746			2181	835	SLV 5	0.12	No
ini.	2	6409	1951.21	-6653			1253	0	SLV 1	0	No
fin.	2	-5549	-2246.91	-11812			3206	1106	SLV 1	0.09	No
ini.	2	5600	1664.75	-5921			1253	0	SLV 3	0	No
fin.	2	-5268	-2030.01	-11336			3107	1083	SLV 3	0.1	No
ini.	2	-4201	-1039	8095			2731	990	SLV 15	0.12	No
fin.	2	3990	1448.67	4722			1253	0	SLV 15	0	No
ini.	2	-3392	-752.54	7364			2447	913	SLV 14	0.12	No
fin.	2	3709	1231.78	4246			1253	0	SLV 14	0	No
ini.	2	-4201	-1039	8095			2731	990	SLV 16	0.12	No
fin.	2	3990	1448.67	4722			1253	0	SLV 16	0	No
ini.	2	5600	1664.75	-5921			1253	0	SLV 4	0	No
fin.	2	-5268	-2030.01	-11336			3107	1083	SLV 4	0.1	No
ini.	2	3922	1339.1	-2601			1253	0	SLV 6	0	No
fin.	2	-2637	-1282.41	-6746			2181	835	SLV 6	0.12	No
ini.	2	6409	1951.21	-6653			1253	0	SLV 2	0	No
fin.	2	-5549	-2246.91	-11812			3206	1106	SLV 2	0.09	No
ini.	2	-3392	-752.54	7364			2447	913	SLV 13	0.12	No
fin.	2	3709	1231.78	4246			1253	0	SLV 13	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.734	SLV 1	No
V_SLV	0	SLV 1	No
PF_SLU	1.392	SLU 76	Si
V_SLU	0	SLU 1	No

Trave di accoppiamento 36

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-18.868	-3.359	1.39	3.39	2	-19.368	-3.359	1.39	3.39	2	0.5	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fhmmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
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Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-338	-45.59	5682.35	SLU 80	124.65	Si
fin.	3	901	4435.58	5682.35	SLU 80	1.28	Si
ini.	3	-44	285.59	5682.35	SLU 83	19.9	Si
fin.	3	724	4327.9	5682.35	SLU 83	1.31	Si
ini.	3	-509	-273.59	5682.35	SLU 73	20.77	Si
fin.	3	1009	4519.45	5682.35	SLU 73	1.26	Si
ini.	3	-89	267.41	5682.35	SLU 77	21.25	Si
fin.	3	677	4222.83	5682.35	SLU 77	1.35	Si
ini.	3	-343	-48.39	5682.35	SLU 78	117.43	Si
fin.	3	899	4465.84	5682.35	SLU 78	1.27	Si
ini.	3	-344	-57.13	5682.35	SLU 75	99.47	Si
fin.	3	880	4426.77	5682.35	SLU 75	1.28	Si
ini.	3	-298	-30.2	5682.35	SLU 84	188.13	Si
fin.	3	947	4570.92	5682.35	SLU 84	1.24	Si
ini.	3	-299	-38.94	5682.35	SLU 82	145.91	Si
fin.	3	927	4531.85	5682.35	SLU 82	1.25	Si
ini.	3	-509	-264.85	5682.35	SLU 76	21.45	Si
fin.	3	1029	4558.52	5682.35	SLU 76	1.25	Si
ini.	3	-45	276.85	5682.35	SLU 81	20.52	Si
fin.	3	704	4288.83	5682.35	SLU 81	1.32	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-344	-57.13	6638			2294	883	SLU 75	0.13	No
fin.	3	880	4426.77	8362			2157	590	SLU 75	0.07	No
ini.	3	-298	-30.2	6822			2276	874	SLU 84	0.13	No
fin.	3	947	4570.92	8615			2157	570	SLU 84	0.07	No
ini.	3	-44	285.59	6587			2174	821	SLU 83	0.12	No
fin.	3	724	4327.9	8418			2157	635	SLU 83	0.08	No
ini.	3	-45	276.85	6567			2175	821	SLU 81	0.13	No
fin.	3	704	4288.83	8369			2157	641	SLU 81	0.08	No
ini.	3	-509	-273.59	6718			2360	916	SLU 73	0.14	No
fin.	3	1009	4519.45	8371			2157	550	SLU 73	0.07	No
ini.	3	-576	-310.73	6216			2387	928	SLU 55	0.15	No
fin.	3	903	4181.46	7714			2157	583	SLU 55	0.08	No
ini.	3	-343	-48.39	6658			2294	883	SLU 78	0.13	No
fin.	3	899	4465.84	8411			2157	584	SLU 78	0.07	No
ini.	3	-509	-264.85	6738			2360	915	SLU 76	0.14	No
fin.	3	1029	4558.52	8420			2157	544	SLU 76	0.06	No
ini.	3	-338	-45.59	6600			2292	882	SLU 80	0.13	No
fin.	3	901	4435.58	8338			2157	584	SLU 80	0.07	No
ini.	3	-299	-38.94	6802			2276	874	SLU 82	0.13	No
fin.	3	927	4531.85	8566			2157	576	SLU 82	0.07	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-3525	-1763.3	8523.53	SLV 9	4.83	Si
fin.	2	-239	5256.27	8523.53	SLV 9	1.62	Si
ini.	2	3058	1412.15	8523.53	SLV 11	6.04	Si
fin.	2	-449	2087.98	8523.53	SLV 11	4.08	Si
ini.	2	505	-475.53	8523.53	SLV 15	17.92	Si
fin.	2	-2087	5032.83	8523.53	SLV 15	1.69	Si
ini.	2	-3525	-1763.3	8523.53	SLV 10	4.83	Si
fin.	2	-239	5256.27	8523.53	SLV 10	1.62	Si
ini.	2	-1470	-1428.17	8523.53	SLV 13	5.97	Si
fin.	2	-2024	5983.32	8523.53	SLV 13	1.42	Si
ini.	2	-1470	-1428.17	8523.53	SLV 14	5.97	Si
fin.	2	-2024	5983.32	8523.53	SLV 14	1.42	Si
ini.	2	3058	1412.15	8523.53	SLV 12	6.04	Si
fin.	2	-449	2087.98	8523.53	SLV 12	4.08	Si
ini.	2	505	-475.53	8523.53	SLV 16	17.92	Si
fin.	2	-2087	5032.83	8523.53	SLV 16	1.69	Si
ini.	2	-3313	-1097.93	8523.53	SLV 5	7.76	Si
fin.	2	1228	3682.6	8523.53	SLV 5	2.31	Si
ini.	2	-3313	-1097.93	8523.53	SLV 6	7.76	Si
fin.	2	1228	3682.6	8523.53	SLV 6	2.31	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	3271	2077.53	933			3235	0	SLV 8	0	No
fin.	2	1017	514.31	-200			3235	971	SLV 8	4.86	Si
ini.	2	1215	1742.39	-7000			3235	916	SLV 3	0.13	No
fin.	2	2802	-212.74	-6695			3235	0	SLV 3	0	No
ini.	2	1215	1742.39	-7000			3235	916	SLV 4	0.13	No
fin.	2	2802	-212.74	-6695			3235	0	SLV 4	0	No
ini.	2	505	-475.53	15892			3235	1102	SLV 16	0.07	No
fin.	2	-2087	5032.83	16602			4070	1608	SLV 16	0.1	No
ini.	2	3271	2077.53	933			3235	0	SLV 7	0	No
fin.	2	1017	514.31	-200			3235	971	SLV 7	4.86	Si
ini.	2	505	-475.53	15892			3235	1102	SLV 15	0.07	No
fin.	2	-2087	5032.83	16602			4070	1608	SLV 15	0.1	No
ini.	2	3058	1412.15	7801			3235	0	SLV 11	0	No
fin.	2	-449	2087.98	6790			3415	1311	SLV 11	0.19	No
ini.	2	-760	789.76	-6933			3539	1373	SLV 1	0.2	No
fin.	2	2865	737.75	-5274			3235	0	SLV 1	0	No
ini.	2	-760	789.76	-6933			3539	1373	SLV 2	0.2	No
fin.	2	2865	737.75	-5274			3235	0	SLV 2	0	No
ini.	2	3058	1412.15	7801			3235	0	SLV 12	0	No
fin.	2	-449	2087.98	6790			3415	1311	SLV 12	0.19	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.425	SLV 13	Si
V_SLV	0	SLV 1	No
PF_SLU	1.243	SLU 84	Si
V_SLU	0.065	SLU 76	No

Trave di accoppiamento 37

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-18.868	-3.359	4.19	5.07	0.88	-19.368	-3.359	4.19	5.07	0.88	0.5	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	971	-687.19	1100.1	SLU 80	1.6	Si
fin.	3	1789	422.31	1100.1	SLU 80	2.6	Si
ini.	3	1160	-691.13	1100.1	SLU 73	1.59	Si
fin.	3	2008	479.67	1100.1	SLU 73	2.29	Si
ini.	3	1171	-696.54	1100.1	SLU 76	1.58	Si
fin.	3	2022	479.62	1100.1	SLU 76	2.29	Si
ini.	3	964	-707.82	1100.1	SLU 82	1.55	Si
fin.	3	1811	433.75	1100.1	SLU 82	2.54	Si
ini.	3	659	-691.09	1100.1	SLU 83	1.59	Si
fin.	3	1455	347.81	1100.1	SLU 83	3.16	Si
ini.	3	983	-685.95	1100.1	SLU 75	1.6	Si
fin.	3	1803	427.18	1100.1	SLU 75	2.58	Si
ini.	3	648	-685.69	1100.1	SLU 81	1.6	Si
fin.	3	1440	347.85	1100.1	SLU 81	3.16	Si
ini.	3	975	-713.22	1100.1	SLU 84	1.54	Si
fin.	3	1826	433.7	1100.1	SLU 84	2.54	Si
ini.	3	677	-669.22	1100.1	SLU 77	1.64	Si
fin.	3	1446	341.24	1100.1	SLU 77	3.22	Si
ini.	3	994	-691.35	1100.1	SLU 78	1.59	Si
fin.	3	1817	427.13	1100.1	SLU 78	2.58	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	585	-603.73	3468			949	191	SLU 58	0.06	No
fin.	3	1278	307.97	95			949	0	SLU 58	0	No
ini.	3	913	-624.62	3714			949	0	SLU 54	0	No
fin.	3	1663	398.74	438			949	0	SLU 54	0	No
ini.	3	607	-607.89	3499			949	182	SLU 56	0.05	No
fin.	3	1306	312.8	97			949	0	SLU 56	0	No
ini.	3	924	-630.02	3746			949	0	SLU 57	0	No
fin.	3	1677	398.69	408			949	0	SLU 57	0	No
ini.	3	1102	-635.21	3847			949	0	SLU 55	0	No
fin.	3	1883	451.17	644			949	0	SLU 55	0	No
ini.	3	578	-624.36	3571			949	194	SLU 60	0.05	No
fin.	3	1300	319.41	151			949	0	SLU 60	0	No
ini.	3	902	-625.86	3714			949	0	SLU 59	0	No
fin.	3	1650	393.86	406			949	0	SLU 59	0	No
ini.	3	596	-602.49	3468			949	187	SLU 53	0.05	No
fin.	3	1292	312.85	127			949	0	SLU 53	0	No
ini.	3	425	-415.84	2414			949	248	SLU 1	0.1	No
fin.	3	906	224.13	119			949	0	SLU 1	0	No
ini.	3	895	-646.49	3817			949	0	SLU 61	0	No
fin.	3	1672	405.3	463			949	0	SLU 61	0	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-3620	-226.81	1650.16	SLV 1	7.28	Si
fin.	2	-3942	-928.4	1650.16	SLV 1	1.78	Si
ini.	2	-3620	-226.81	1650.16	SLV 2	7.28	Si
fin.	2	-3942	-928.4	1650.16	SLV 2	1.78	Si
ini.	2	4529	-681.84	1650.16	SLV 16	2.42	Si
fin.	2	5902	1408.03	1650.16	SLV 16	1.17	Si
ini.	2	4529	-681.84	1650.16	SLV 15	2.42	Si
fin.	2	5902	1408.03	1650.16	SLV 15	1.17	Si
ini.	2	-5724	-261.44	1650.16	SLV 4	6.31	Si
fin.	2	-5957	-1053.39	1650.16	SLV 4	1.57	Si
ini.	2	5499	-459.66	1650.16	SLV 9	3.59	Si
fin.	2	6116	817.34	1650.16	SLV 9	2.02	Si
ini.	2	6633	-647.2	1650.16	SLV 14	2.55	Si
fin.	2	7917	1533.02	1650.16	SLV 14	1.08	Si
ini.	2	6633	-647.2	1650.16	SLV 13	2.55	Si
fin.	2	7917	1533.02	1650.16	SLV 13	1.08	Si
ini.	2	-5724	-261.44	1650.16	SLV 3	6.31	Si
fin.	2	-5957	-1053.39	1650.16	SLV 3	1.57	Si
ini.	2	5499	-459.66	1650.16	SLV 10	3.59	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	2	6116	817.34	1650.16	SLV 10	2.02	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	4529	-681.84	6222			1423	0	SLV 16	0	No
fin.	2	5902	1408.03	4642			1423	0	SLV 16	0	No
ini.	2	6633	-647.2	6414			1423	0	SLV 13	0	No
fin.	2	7917	1533.02	3532			1423	0	SLV 13	0	No
ini.	2	2423	-333.55	1834			1423	0	SLV 6	0	No
fin.	2	2559	78.92	-2932			1423	0	SLV 6	0	No
ini.	2	5499	-459.66	4052			1423	0	SLV 9	0	No
fin.	2	6116	817.34	-547			1423	0	SLV 9	0	No
ini.	2	6633	-647.2	6414			1423	0	SLV 14	0	No
fin.	2	7917	1533.02	3532			1423	0	SLV 14	0	No
ini.	2	-1514	-575.1	3411			2029	800	SLV 12	0.23	No
fin.	2	-599	400.71	3155			1663	653	SLV 12	0.21	No
ini.	2	5499	-459.66	4052			1423	0	SLV 10	0	No
fin.	2	6116	817.34	-547			1423	0	SLV 10	0	No
ini.	2	-1514	-575.1	3411			2029	800	SLV 11	0.23	No
fin.	2	-599	400.71	3155			1663	653	SLV 11	0.21	No
ini.	2	4529	-681.84	6222			1423	0	SLV 15	0	No
fin.	2	5902	1408.03	4642			1423	0	SLV 15	0	No
ini.	2	2423	-333.55	1834			1423	0	SLV 5	0	No
fin.	2	2559	78.92	-2932			1423	0	SLV 5	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.076	SLV 13	Si
V_SLV	0	SLV 5	No
PF_SLU	1.542	SLU 84	Si
V_SLU	0	SLU 1	No

Trave di accoppiamento 38

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-17.313	-3.359	1.39	2.29	0.9	-18.313	-3.359	1.39	2.29	0.9	1	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-2406	-624.9	1150.68	SLU 55	1.84	Si
fin.	3	-4381	-1634.8	1150.68	SLU 55	0.7	No
ini.	3	-2340	-628.96	1150.68	SLU 78	1.83	Si
fin.	3	-3894	-1638.4	1150.68	SLU 78	0.7	No
ini.	3	-2525	-678.12	1150.68	SLU 76	1.7	Si
fin.	3	-4546	-1760.98	1150.68	SLU 76	0.65	No
ini.	3	-2304	-630.24	1150.68	SLU 75	1.83	Si
fin.	3	-3859	-1615.35	1150.68	SLU 75	0.71	No
ini.	3	-2370	-626.18	1150.68	SLU 52	1.84	Si
fin.	3	-4345	-1611.74	1150.68	SLU 52	0.71	No
ini.	3	-2314	-639.56	1150.68	SLU 82	1.8	Si
fin.	3	-3862	-1648.44	1150.68	SLU 82	0.7	No
ini.	3	-2350	-638.28	1150.68	SLU 84	1.8	Si
fin.	3	-3897	-1671.5	1150.68	SLU 84	0.69	No
ini.	3	-2333	-619.07	1150.68	SLU 80	1.86	Si
fin.	3	-3870	-1632.91	1150.68	SLU 80	0.7	No
ini.	3	-2400	-636.27	1150.68	SLU 68	1.81	Si
fin.	3	-4400	-1617.13	1150.68	SLU 68	0.71	No
ini.	3	-2489	-679.39	1150.68	SLU 73	1.69	Si
fin.	3	-4511	-1737.92	1150.68	SLU 73	0.66	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1871	-479.21	-1268			1547	590	SLU 58	0.47	No
fin.	3	-2637	-1280.02	757			1823	669	SLU 58	0.88	No
ini.	3	-1971	-552.91	-1390			1583	601	SLU 81	0.43	No
fin.	3	-2795	-1421.75	846			1880	684	SLU 81	0.81	No
ini.	3	-1998	-542.31	-1397			1593	604	SLU 77	0.43	No
fin.	3	-2827	-1411.71	853			1891	687	SLU 77	0.81	No
ini.	3	-1852	-499.69	-1257			1540	588	SLU 60	0.47	No
fin.	3	-2629	-1295.56	773			1820	668	SLU 60	0.86	No
ini.	3	-1888	-498.42	-1300			1553	592	SLU 62	0.46	No
fin.	3	-2664	-1318.62	772			1833	671	SLU 62	0.87	No
ini.	3	-1652	-464.14	-1235			1468	566	SLU 41	0.46	No
fin.	3	-2315	-1226.53	698			1707	637	SLU 41	0.91	No
ini.	3	-1962	-543.59	-1355			1580	600	SLU 74	0.44	No
fin.	3	-2792	-1388.65	853			1878	683	SLU 74	0.8	No
ini.	3	-2007	-551.63	-1433			1596	605	SLU 83	0.42	No
fin.	3	-2830	-1444.8	845			1892	687	SLU 83	0.81	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1879	-489.1	-1264			1550	591	SLU 56	0.47	No
fin.	3	-2661	-1285.52	780			1831	671	SLU 56	0.86	No
ini.	3	-1990	-532.42	-1401			1590	603	SLU 79	0.43	No
fin.	3	-2803	-1406.21	830			1882	684	SLU 79	0.82	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-5081	1777.02	1726.01	SLV 2	0.97	No
fin.	2	-3532	-2752.98	1726.01	SLV 2	0.63	No
ini.	2	-4385	-3214.74	1726.01	SLV 9	0.54	No
fin.	2	-11880	-1029.24	1726.01	SLV 9	1.68	Si
ini.	2	2304	-2536.2	1726.01	SLV 15	0.68	No
fin.	2	-458	855.1	1726.01	SLV 15	2.02	Si
ini.	2	-2822	2981.52	1726.01	SLV 4	0.58	No
fin.	2	2163	-2410.86	1726.01	SLV 4	0.72	No
ini.	2	-2822	2981.52	1726.01	SLV 3	0.58	No
fin.	2	2163	-2410.86	1726.01	SLV 3	0.72	No
ini.	2	2304	-2536.2	1726.01	SLV 16	0.68	No
fin.	2	-458	855.1	1726.01	SLV 16	2.02	Si
ini.	2	45	-3740.7	1726.01	SLV 14	0.46	No
fin.	2	-6153	512.98	1726.01	SLV 14	3.36	Si
ini.	2	45	-3740.7	1726.01	SLV 13	0.46	No
fin.	2	-6153	512.98	1726.01	SLV 13	3.36	Si
ini.	2	-5081	1777.02	1726.01	SLV 1	0.97	No
fin.	2	-3532	-2752.98	1726.01	SLV 1	0.63	No
ini.	2	-4385	-3214.74	1726.01	SLV 10	0.54	No
fin.	2	-11880	-1029.24	1726.01	SLV 10	1.68	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	3146	800.25	598			1310	0	SLV 12	0	No
fin.	2	7104	111.15	-13			1310	0	SLV 12	0	No
ini.	2	2304	-2536.2	5451			1310	0	SLV 16	0	No
fin.	2	-458	855.1	6079			1475	576	SLV 16	0.09	No
ini.	2	1608	2455.56	-3293			1310	0	SLV 8	0	No
fin.	2	7890	-868.64	-3745			1310	0	SLV 8	0	No
ini.	2	45	-3740.7	5720			1310	484	SLV 13	0.08	No
fin.	2	-6153	512.98	7570			3525	1196	SLV 13	0.16	No
ini.	2	3146	800.25	598			1310	0	SLV 11	0	No
fin.	2	7104	111.15	-13			1310	0	SLV 11	0	No
ini.	2	1608	2455.56	-3293			1310	0	SLV 7	0	No
fin.	2	7890	-868.64	-3745			1310	0	SLV 7	0	No
ini.	2	45	-3740.7	5720			1310	484	SLV 14	0.08	No
fin.	2	-6153	512.98	7570			3525	1196	SLV 14	0.16	No
ini.	2	2304	-2536.2	5451			1310	0	SLV 15	0	No
fin.	2	-458	855.1	6079			1475	576	SLV 15	0.09	No
ini.	2	-2822	2981.52	-7518			2326	887	SLV 4	0.12	No
fin.	2	2163	-2410.86	-6359			1310	0	SLV 4	0	No
ini.	2	-2822	2981.52	-7518			2326	887	SLV 3	0.12	No
fin.	2	2163	-2410.86	-6359			1310	0	SLV 3	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.461	SLV 13	No
V_SLV	0	SLV 3	No
PF_SLU	0.653	SLU 76	No
V_SLU	0.422	SLU 83	No

Trave di accoppiamento 39

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-17.313	-3.359	4.19	5.07	0.88	-18.313	-3.359	4.19	5.07	0.88	1	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	972	180.74	1100.1	SLU 56	6.09	Si
fin.	3	599	-272	1100.1	SLU 56	4.04	Si
ini.	3	1023	197.05	1100.1	SLU 62	5.58	Si
fin.	3	587	-285.85	1100.1	SLU 62	3.85	Si
ini.	3	1126	217.42	1100.1	SLU 79	5.06	Si
fin.	3	653	-306.05	1100.1	SLU 79	3.59	Si
ini.	3	1109	214.23	1100.1	SLU 74	5.14	Si
fin.	3	670	-297	1100.1	SLU 74	3.7	Si
ini.	3	1159	230.55	1100.1	SLU 81	4.77	Si
fin.	3	658	-310.86	1100.1	SLU 81	3.54	Si
ini.	3	1057	213.52	1100.1	SLU 41	5.15	Si
fin.	3	562	-277.92	1100.1	SLU 41	3.96	Si
ini.	3	999	193.91	1100.1	SLU 60	5.67	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	3	582	-278.36	1100.1	SLU 60	3.95	Si
ini.	3	966	180.78	1100.1	SLU 58	6.09	Si
fin.	3	577	-273.55	1100.1	SLU 58	4.02	Si
ini.	3	1133	217.37	1100.1	SLU 77	5.06	Si
fin.	3	676	-304.5	1100.1	SLU 77	3.61	Si
ini.	3	1183	233.68	1100.1	SLU 83	4.71	Si
fin.	3	664	-318.36	1100.1	SLU 83	3.46	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	1087	180.21	2128			835	0	SLU 63	0	No
fin.	3	960	-223.37	-3393			835	0	SLU 63	0	No
ini.	3	1023	197.05	1926			835	0	SLU 62	0	No
fin.	3	587	-285.85	-3611			835	168	SLU 62	0.05	No
ini.	3	1064	177.07	2106			835	0	SLU 61	0	No
fin.	3	954	-215.87	-3329			835	0	SLU 61	0	No
ini.	3	1122	196.68	1919			835	0	SLU 42	0	No
fin.	3	935	-215.44	-3233			835	0	SLU 42	0	No
ini.	3	999	193.91	1904			835	0	SLU 60	0	No
fin.	3	582	-278.36	-3547			835	170	SLU 60	0.05	No
ini.	3	1037	163.89	2119			835	0	SLU 57	0	No
fin.	3	972	-209.51	-3261			835	0	SLU 57	0	No
ini.	3	972	180.74	1917			835	0	SLU 56	0	No
fin.	3	599	-272	-3478			835	163	SLU 56	0.05	No
ini.	3	1050	149.57	2208			835	0	SLU 55	0	No
fin.	3	1192	-161.91	-3042			835	0	SLU 55	0	No
ini.	3	1031	163.94	2095			835	0	SLU 59	0	No
fin.	3	949	-211.06	-3251			835	0	SLU 59	0	No
ini.	3	966	180.78	1893			835	0	SLU 58	0	No
fin.	3	577	-273.55	-3469			835	171	SLU 58	0.05	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-137	-230.84	1650.16	SLV 16	7.15	Si
fin.	2	5338	1041.67	1650.16	SLV 16	1.58	Si
ini.	2	1545	495.79	1650.16	SLV 1	3.33	Si
fin.	2	-4420	-1430.48	1650.16	SLV 1	1.15	Si
ini.	2	-220	-476.03	1650.16	SLV 14	3.47	Si
fin.	2	7125	1357.45	1650.16	SLV 14	1.22	Si
ini.	2	1628	740.97	1650.16	SLV 4	2.23	Si
fin.	2	-6207	-1746.26	1650.16	SLV 4	0.94	No
ini.	2	1545	495.79	1650.16	SLV 2	3.33	Si
fin.	2	-4420	-1430.48	1650.16	SLV 2	1.15	Si
ini.	2	-220	-476.03	1650.16	SLV 13	3.47	Si
fin.	2	7125	1357.45	1650.16	SLV 13	1.22	Si
ini.	2	-137	-230.84	1650.16	SLV 15	7.15	Si
fin.	2	5338	1041.67	1650.16	SLV 15	1.58	Si
ini.	2	1107	686.88	1650.16	SLV 7	2.4	Si
fin.	2	-4252	-1138.89	1650.16	SLV 7	1.45	Si
ini.	2	1628	740.97	1650.16	SLV 3	2.23	Si
fin.	2	-6207	-1746.26	1650.16	SLV 3	0.94	No
ini.	2	1107	686.88	1650.16	SLV 8	2.4	Si
fin.	2	-4252	-1138.89	1650.16	SLV 8	1.45	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-220	-476.03	6093			1330	512	SLV 14	0.08	No
fin.	2	7125	1357.45	3423			1253	0	SLV 14	0	No
ini.	2	301	-421.94	5353			1253	410	SLV 10	0.08	No
fin.	2	5170	750.08	1030			1253	0	SLV 10	0	No
ini.	2	1628	740.97	-3207			1253	0	SLV 3	0	No
fin.	2	-6207	-1746.26	-8535			3437	1158	SLV 3	0.14	No
ini.	2	1628	740.97	-3207			1253	0	SLV 4	0	No
fin.	2	-6207	-1746.26	-8535			3437	1158	SLV 4	0.14	No
ini.	2	-220	-476.03	6093			1330	512	SLV 13	0.08	No
fin.	2	7125	1357.45	3423			1253	0	SLV 13	0	No
ini.	2	831	-130.39	3061			1253	269	SLV 6	0.09	No
fin.	2	1707	-86.3	-2202			1253	0	SLV 6	0	No
ini.	2	1545	495.79	-1548			1253	0	SLV 2	0	No
fin.	2	-4420	-1430.48	-7353			2808	1010	SLV 2	0.14	No
ini.	2	301	-421.94	5353			1253	410	SLV 9	0.08	No
fin.	2	5170	750.08	1030			1253	0	SLV 9	0	No
ini.	2	831	-130.39	3061			1253	269	SLV 5	0.09	No
fin.	2	1707	-86.3	-2202			1253	0	SLV 5	0	No
ini.	2	1545	495.79	-1548			1253	0	SLV 1	0	No
fin.	2	-4420	-1430.48	-7353			2808	1010	SLV 1	0.14	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.945	SLV 3	No
V_SLV	0	SLV 1	No
PF_SLU	3.456	SLU 83	Si
V_SLU	0	SLU 2	No

Trave di accoppiamento 40

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-17.053	-4.589	4.5	5.07	0.57	-17.053	-3.499	4.5	5.07	0.57	1.09	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	417	-307.59	494.52	SLU 83	1.61	Si
fin.	3	-20	-56.66	494.52	SLU 83	8.73	Si
ini.	3	352	-263.9	494.52	SLU 60	1.87	Si
fin.	3	-23	-47.4	494.52	SLU 60	10.43	Si
ini.	3	362	-264.34	494.52	SLU 39	1.87	Si
fin.	3	-14	-49.35	494.52	SLU 39	10.02	Si
ini.	3	361	-263.52	494.52	SLU 35	1.88	Si
fin.	3	-13	-49.13	494.52	SLU 35	10.07	Si
ini.	3	400	-296.08	494.52	SLU 79	1.67	Si
fin.	3	-20	-54.31	494.52	SLU 79	9.11	Si
ini.	3	408	-301.28	494.52	SLU 77	1.64	Si
fin.	3	-20	-55.18	494.52	SLU 77	8.96	Si
ini.	3	360	-269.39	494.52	SLU 62	1.84	Si
fin.	3	-22	-48.66	494.52	SLU 62	10.16	Si
ini.	3	371	-269.83	494.52	SLU 41	1.83	Si
fin.	3	-13	-50.61	494.52	SLU 41	9.77	Si
ini.	3	400	-295.79	494.52	SLU 74	1.67	Si
fin.	3	-20	-53.92	494.52	SLU 74	9.17	Si
ini.	3	409	-302.1	494.52	SLU 81	1.64	Si
fin.	3	-20	-55.4	494.52	SLU 81	8.93	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	360	-269.39	303			439	100	SLU 62	0.33	No
fin.	3	-22	-48.66	101			445	168	SLU 62	1.66	Si
ini.	3	400	-296.08	320			439	90	SLU 79	0.28	No
fin.	3	-20	-54.31	132			444	168	SLU 79	1.28	Si
ini.	3	409	-302.1	324			439	88	SLU 81	0.27	No
fin.	3	-20	-55.4	139			444	168	SLU 81	1.21	Si
ini.	3	408	-301.28	324			439	88	SLU 77	0.27	No
fin.	3	-20	-55.18	138			444	168	SLU 77	1.22	Si
ini.	3	352	-263.9	300			439	102	SLU 60	0.34	No
fin.	3	-23	-47.4	95			445	168	SLU 60	1.77	Si
ini.	3	417	-307.59	328			439	85	SLU 83	0.26	No
fin.	3	-20	-56.66	145			444	168	SLU 83	1.16	Si
ini.	3	343	-257.59	297			439	104	SLU 53	0.35	No
fin.	3	-22	-45.91	88			445	168	SLU 53	1.92	Si
ini.	3	351	-263.08	300			439	102	SLU 56	0.34	No
fin.	3	-22	-47.17	94			445	168	SLU 56	1.79	Si
ini.	3	349	-261.62	300			439	103	SLU 69	0.34	No
fin.	3	-22	-46.74	92			445	168	SLU 69	1.82	Si
ini.	3	400	-295.79	321			439	90	SLU 74	0.28	No
fin.	3	-20	-53.92	131			444	168	SLU 74	1.28	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-4109	3318.41	741.78	SLV 8	0.22	No
fin.	2	353	200.6	741.78	SLV 8	3.7	Si
ini.	2	-3671	2889.7	741.78	SLV 11	0.26	No
fin.	2	316	174.19	741.78	SLV 11	4.26	Si
ini.	2	-4109	3318.41	741.78	SLV 7	0.22	No
fin.	2	353	200.6	741.78	SLV 7	3.7	Si
ini.	2	-3671	2889.7	741.78	SLV 12	0.26	No
fin.	2	316	174.19	741.78	SLV 12	4.26	Si
ini.	2	4617	-3701.88	741.78	SLV 9	0.2	No
fin.	2	-388	-268.59	741.78	SLV 9	2.76	Si
ini.	2	4617	-3701.88	741.78	SLV 10	0.2	No
fin.	2	-388	-268.59	741.78	SLV 10	2.76	Si
ini.	2	2227	-1894.99	741.78	SLV 13	0.39	No
fin.	2	-185	-144.43	741.78	SLV 13	5.14	Si
ini.	2	4179	-3273.17	741.78	SLV 5	0.23	No
fin.	2	-351	-242.18	741.78	SLV 5	3.06	Si
ini.	2	4179	-3273.17	741.78	SLV 6	0.23	No
fin.	2	-351	-242.18	741.78	SLV 6	3.06	Si
ini.	2	2227	-1894.99	741.78	SLV 14	0.39	No
fin.	2	-185	-144.43	741.78	SLV 14	5.14	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	4179	-3273.17	2647			659	0	SLV 6	0	No
fin.	2	-351	-242.18	4309			752	294	SLV 6	0.07	No
ini.	2	4179	-3273.17	2647			659	0	SLV 5	0	No
fin.	2	-351	-242.18	4309			752	294	SLV 5	0.07	No
ini.	2	4617	-3701.88	3043			659	0	SLV 9	0	No
fin.	2	-388	-268.59	4781			762	299	SLV 9	0.06	No
ini.	2	-3671	2889.7	-2198			1637	570	SLV 12	0.26	No
fin.	2	316	174.19	-4189			659	197	SLV 12	0.05	No
ini.	2	-4109	3318.41	-2594			1754	597	SLV 7	0.23	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	2	353	200.6	-4661			659	190	SLV 7	0.04	No
ini.	2	4617	-3701.88	3043			659	0	SLV 10	0	No
fin.	2	-388	-268.59	4781			762	299	SLV 10	0.06	No
ini.	2	-4109	3318.41	-2594			1754	597	SLV 8	0.23	No
fin.	2	353	200.6	-4661			659	190	SLV 8	0.04	No
ini.	2	-3671	2889.7	-2198			1637	570	SLV 11	0.26	No
fin.	2	316	174.19	-4189			659	197	SLV 11	0.05	No
ini.	2	2227	-1894.99	1672			659	0	SLV 14	0	No
fin.	2	-185	-144.43	2193			708	273	SLV 14	0.12	No
ini.	2	2227	-1894.99	1672			659	0	SLV 13	0	No
fin.	2	-185	-144.43	2193			708	273	SLV 13	0.12	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF SLV	0.2	SLV 9	No
V SLV	0	SLV 5	No
PF SLU	1.608	SLU 83	Si
V SLU	0.261	SLU 83	No

Trave di accoppiamento 41

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-15.483	-3.359	3.49	5.07	1.58	-16.383	-3.359	3.49	5.07	1.58	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fthk	fvk0	fthmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1572	-1124.69	3546.36	SLU 75	3.15	Si
fin.	3	-969	-1211.99	3546.36	SLU 75	2.93	Si
ini.	3	-1579	-1151.71	3546.36	SLU 84	3.08	Si
fin.	3	-961	-1232.12	3546.36	SLU 84	2.88	Si
ini.	3	-1555	-949.09	3546.36	SLU 59	3.74	Si
fin.	3	-1006	-1200.24	3546.36	SLU 59	2.95	Si
ini.	3	-1607	-1296.45	3546.36	SLU 73	2.74	Si
fin.	3	-999	-1212.83	3546.36	SLU 73	2.92	Si
ini.	3	-1586	-1116.78	3546.36	SLU 78	3.18	Si
fin.	3	-979	-1246.48	3546.36	SLU 78	2.85	Si
ini.	3	-1621	-1288.54	3546.36	SLU 76	2.75	Si
fin.	3	-1009	-1247.32	3546.36	SLU 76	2.84	Si
ini.	3	-1584	-1093.21	3546.36	SLU 80	3.24	Si
fin.	3	-983	-1243.81	3546.36	SLU 80	2.85	Si
ini.	3	-1591	-1144.43	3546.36	SLU 55	3.1	Si
fin.	3	-1032	-1203.74	3546.36	SLU 55	2.95	Si
ini.	3	-1557	-972.67	3546.36	SLU 57	3.65	Si
fin.	3	-1002	-1202.91	3546.36	SLU 57	2.95	Si
ini.	3	-1285	-1203.9	3546.36	SLU 31	2.95	Si
fin.	3	-772	-988.68	3546.36	SLU 31	3.59	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1572	-1124.69	1656			2333	922	SLU 75	0.56	No
fin.	3	-969	-1211.99	-4531			2091	825	SLU 75	0.18	No
ini.	3	-1579	-1151.71	1752			2335	923	SLU 84	0.53	No
fin.	3	-961	-1232.12	-4744			2088	824	SLU 84	0.17	No
ini.	3	-1565	-1159.62	1793			2330	921	SLU 82	0.51	No
fin.	3	-951	-1197.63	-4648			2084	822	SLU 82	0.18	No
ini.	3	-1508	-812.07	1306			2307	912	SLU 79	0.7	No
fin.	3	-929	-1186.82	-4744			2075	819	SLU 79	0.17	No
ini.	3	-1584	-1093.21	1584			2337	923	SLU 80	0.58	No
fin.	3	-983	-1243.81	-4621			2097	828	SLU 80	0.18	No
ini.	3	-1496	-843.56	1377			2302	910	SLU 74	0.66	No
fin.	3	-914	-1155.01	-4654			2070	816	SLU 74	0.18	No
ini.	3	-1503	-870.58	1474			2305	911	SLU 83	0.62	No
fin.	3	-907	-1175.13	-4867			2067	815	SLU 83	0.17	No
ini.	3	-1586	-1116.78	1615			2338	924	SLU 78	0.57	No
fin.	3	-979	-1246.48	-4627			2095	827	SLU 78	0.18	No
ini.	3	-1489	-878.49	1515			2299	909	SLU 81	0.6	No
fin.	3	-897	-1140.64	-4771			2062	813	SLU 81	0.17	No
ini.	3	-1510	-835.65	1337			2308	912	SLU 77	0.68	No
fin.	3	-925	-1189.49	-4750			2074	818	SLU 77	0.17	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-2737	6012.82	5319.53	SLV 2	0.88	No
fin.	2	-3277	-4222.61	5319.53	SLV 2	1.26	Si
ini.	2	-85	-8375.41	5319.53	SLV 14	0.64	No
fin.	2	1899	2562.36	5319.53	SLV 14	2.08	Si
ini.	2	-1688	-4817.02	5319.53	SLV 10	1.1	Si
fin.	2	151	174.69	5319.53	SLV 10	30.45	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-1688	-4817.02	5319.53	SLV 9	1.1	Si
fin.	2	151	174.69	5319.53	SLV 9	30.45	Si
ini.	2	-2737	6012.82	5319.53	SLV 1	0.88	No
fin.	2	-3277	-4222.61	5319.53	SLV 1	1.26	Si
ini.	2	-85	-8375.41	5319.53	SLV 13	0.64	No
fin.	2	1899	2562.36	5319.53	SLV 13	2.08	Si
ini.	2	493	-7109	5319.53	SLV 16	0.75	No
fin.	2	1844	2573.43	5319.53	SLV 16	2.07	Si
ini.	2	-2158	7279.24	5319.53	SLV 4	0.73	No
fin.	2	-3332	-4211.53	5319.53	SLV 4	1.26	Si
ini.	2	-2158	7279.24	5319.53	SLV 3	0.73	No
fin.	2	-3332	-4211.53	5319.53	SLV 3	1.26	Si
ini.	2	493	-7109	5319.53	SLV 15	0.75	No
fin.	2	1844	2573.43	5319.53	SLV 15	2.07	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-2158	7279.24	-13316			3419	1352	SLV 4	0.1	No
fin.	2	-3332	-4211.53	-13040			3888	1523	SLV 4	0.12	No
ini.	2	-2737	6012.82	-11154			3650	1439	SLV 2	0.13	No
fin.	2	-3277	-4222.61	-12926			3866	1515	SLV 2	0.12	No
ini.	2	-1688	-4817.02	8385			3231	1277	SLV 9	0.15	No
fin.	2	151	174.69	-28			2556	928	SLV 9	33.48	Si
ini.	2	-2737	6012.82	-11154			3650	1439	SLV 1	0.13	No
fin.	2	-3277	-4222.61	-12926			3866	1515	SLV 1	0.12	No
ini.	2	-1688	-4817.02	8385			3231	1277	SLV 10	0.15	No
fin.	2	151	174.69	-28			2556	928	SLV 10	33.48	Si
ini.	2	-85	-8375.41	15026			2590	980	SLV 14	0.07	No
fin.	2	1899	2562.36	6713			2556	362	SLV 14	0.05	No
ini.	2	493	-7109	12864			2556	848	SLV 16	0.07	No
fin.	2	1844	2573.43	6600			2556	392	SLV 16	0.06	No
ini.	2	-85	-8375.41	15026			2590	980	SLV 13	0.07	No
fin.	2	1899	2562.36	6713			2556	362	SLV 13	0.05	No
ini.	2	493	-7109	12864			2556	848	SLV 15	0.07	No
fin.	2	1844	2573.43	6600			2556	392	SLV 15	0.06	No
ini.	2	-2158	7279.24	-13316			3419	1352	SLV 3	0.1	No
fin.	2	-3332	-4211.53	-13040			3888	1523	SLV 3	0.12	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.635	SLV 13	No
V_SLV	0.054	SLV 13	No
PF_SLU	2.735	SLU 73	Si
V_SLU	0.167	SLU 83	No

Trave di accoppiamento 42

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-14.61	-4.784	4.5	5.07	0.57	-16.45	-4.784	4.5	5.07	0.57	1.84	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fhmmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	235	-96.96	494.52	SLU 82	5.1	Si
fin.	3	632	-58.54	494.52	SLU 82	8.45	Si
ini.	3	233	-103.84	494.52	SLU 81	4.76	Si
fin.	3	594	-51.59	494.52	SLU 81	9.58	Si
ini.	3	206	-85.95	494.52	SLU 60	5.75	Si
fin.	3	534	-39.74	494.52	SLU 60	12.44	Si
ini.	3	228	-93.06	494.52	SLU 84	5.31	Si
fin.	3	641	-60.23	494.52	SLU 84	8.21	Si
ini.	3	205	-86.29	494.52	SLU 79	5.73	Si
fin.	3	580	-48.43	494.52	SLU 79	10.21	Si
ini.	3	226	-99.93	494.52	SLU 83	4.95	Si
fin.	3	603	-53.28	494.52	SLU 83	9.28	Si
ini.	3	203	-96.21	494.52	SLU 39	5.14	Si
fin.	3	511	-50.58	494.52	SLU 39	9.78	Si
ini.	3	196	-92.31	494.52	SLU 41	5.36	Si
fin.	3	519	-52.27	494.52	SLU 41	9.46	Si
ini.	3	205	-89.34	494.52	SLU 40	5.54	Si
fin.	3	549	-57.53	494.52	SLU 40	8.6	Si
ini.	3	211	-89.19	494.52	SLU 74	5.54	Si
fin.	3	574	-47.42	494.52	SLU 74	10.43	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	228	-93.06	470			439	128	SLU 84	0.27	No
fin.	3	641	-60.23	501			439	0	SLU 84	0	No
ini.	3	216	-78.74	423			439	130	SLU 76	0.31	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	3	635	-58.32	515			439	0	SLU 76	0	No
ini.	3	213	-82.32	429			439	131	SLU 75	0.3	No
fin.	3	612	-54.37	507			439	0	SLU 75	0	No
ini.	3	201	-75.17	399			439	133	SLU 63	0.33	No
fin.	3	581	-48.37	505			439	0	SLU 63	0	No
ini.	3	189	-60.85	352			439	135	SLU 55	0.38	No
fin.	3	575	-46.46	518			439	0	SLU 55	0	No
ini.	3	208	-79.08	405			439	132	SLU 61	0.32	No
fin.	3	572	-46.68	495			439	0	SLU 61	0	No
ini.	3	223	-82.64	429			439	129	SLU 73	0.3	No
fin.	3	626	-56.63	505			439	0	SLU 73	0	No
ini.	3	211	-89.19	441			439	131	SLU 74	0.3	No
fin.	3	574	-47.42	494			439	0	SLU 74	0	No
ini.	3	206	-78.41	423			439	132	SLU 78	0.31	No
fin.	3	621	-56.06	516			439	0	SLU 78	0	No
ini.	3	205	-86.29	436			439	132	SLU 79	0.3	No
fin.	3	580	-48.43	503			439	0	SLU 79	0	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	3598	-1528.31	741.78	SLV 13	0.49	No
fin.	2	-2125	1011.83	741.78	SLV 13	0.73	No
ini.	2	4004	-1757.87	741.78	SLV 15	0.42	No
fin.	2	-2624	1167.08	741.78	SLV 15	0.64	No
ini.	2	4004	-1757.87	741.78	SLV 16	0.42	No
fin.	2	-2624	1167.08	741.78	SLV 16	0.64	No
ini.	2	3598	-1528.31	741.78	SLV 14	0.49	No
fin.	2	-2125	1011.83	741.78	SLV 14	0.73	No
ini.	2	-3709	1642.94	741.78	SLV 1	0.45	No
fin.	2	3391	-1216.41	741.78	SLV 1	0.61	No
ini.	2	1919	-915.74	741.78	SLV 11	0.81	No
fin.	2	-1274	568.31	741.78	SLV 11	1.31	Si
ini.	2	1919	-915.74	741.78	SLV 12	0.81	No
fin.	2	-1274	568.31	741.78	SLV 12	1.31	Si
ini.	2	-3303	1413.39	741.78	SLV 3	0.52	No
fin.	2	2893	-1061.16	741.78	SLV 3	0.7	No
ini.	2	-3709	1642.94	741.78	SLV 2	0.45	No
fin.	2	3391	-1216.41	741.78	SLV 2	0.61	No
ini.	2	-3303	1413.39	741.78	SLV 4	0.52	No
fin.	2	2893	-1061.16	741.78	SLV 4	0.7	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	1919	-915.74	1167			659	0	SLV 11	0	No
fin.	2	-1274	568.31	713			998	391	SLV 11	0.55	No
ini.	2	-1625	800.81	-596			1092	422	SLV 5	0.71	No
fin.	2	2042	-617.64	44			659	0	SLV 5	0	No
ini.	2	-3709	1642.94	-1488			1648	573	SLV 2	0.38	No
fin.	2	3391	-1216.41	-385			659	0	SLV 2	0	No
ini.	2	-1625	800.81	-596			1092	422	SLV 6	0.71	No
fin.	2	2042	-617.64	44			659	0	SLV 6	0	No
ini.	2	-3303	1413.39	-1257			1539	547	SLV 3	0.43	No
fin.	2	2893	-1061.16	-315			659	0	SLV 3	0	No
ini.	2	-3303	1413.39	-1257			1539	547	SLV 4	0.43	No
fin.	2	2893	-1061.16	-315			659	0	SLV 4	0	No
ini.	2	3598	-1528.31	1828			659	0	SLV 14	0	No
fin.	2	-2125	1011.83	1073			1225	463	SLV 14	0.43	No
ini.	2	-3709	1642.94	-1488			1648	573	SLV 1	0.38	No
fin.	2	3391	-1216.41	-385			659	0	SLV 1	0	No
ini.	2	1919	-915.74	1167			659	0	SLV 12	0	No
fin.	2	-1274	568.31	713			998	391	SLV 12	0.55	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.422	SLV 15	No
V_SLV	0	SLV 1	No
PF_SLU	4.762	SLU 81	Si
V_SLU	0	SLU 55	No

Trave di accoppiamento 43

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-15.058	1.406	3.49	5.07	1.58	-15.058	2.206	3.49	5.07	1.58	0.8	0.14	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
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Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-417	-156.27	1773.18	SLU 81	11.35	Si
fin.	3	-417	-2651.37	1773.18	SLU 81	0.67	No
ini.	3	-428	-157.42	1773.18	SLU 83	11.26	Si
fin.	3	-428	-2707.89	1773.18	SLU 83	0.65	No
ini.	3	-405	-145.53	1773.18	SLU 74	12.18	Si
fin.	3	-405	-2586.59	1773.18	SLU 74	0.69	No
ini.	3	-414	-145.94	1773.18	SLU 79	12.15	Si
fin.	3	-414	-2630.4	1773.18	SLU 79	0.67	No
ini.	3	-406	-144.19	1773.18	SLU 80	12.3	Si
fin.	3	-406	-2606.27	1773.18	SLU 80	0.68	No
ini.	3	-397	-143.78	1773.18	SLU 75	12.33	Si
fin.	3	-397	-2562.46	1773.18	SLU 75	0.69	No
ini.	3	-408	-144.94	1773.18	SLU 78	12.23	Si
fin.	3	-408	-2618.98	1773.18	SLU 78	0.68	No
ini.	3	-408	-154.52	1773.18	SLU 82	11.48	Si
fin.	3	-408	-2627.24	1773.18	SLU 82	0.67	No
ini.	3	-419	-155.67	1773.18	SLU 84	11.39	Si
fin.	3	-419	-2683.76	1773.18	SLU 84	0.66	No
ini.	3	-416	-146.69	1773.18	SLU 77	12.09	Si
fin.	3	-416	-2643.11	1773.18	SLU 77	0.67	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-414	-145.94	-2877			1018	401	SLU 79	0.14	No
fin.	3	-414	-2630.4	-3334			1018	401	SLU 79	0.12	No
ini.	3	-416	-146.69	-2892			1018	401	SLU 77	0.14	No
fin.	3	-416	-2643.11	-3349			1018	401	SLU 77	0.12	No
ini.	3	-405	-145.53	-2823			1014	399	SLU 74	0.14	No
fin.	3	-405	-2586.59	-3280			1014	399	SLU 74	0.12	No
ini.	3	-397	-143.78	-2795			1011	398	SLU 75	0.14	No
fin.	3	-397	-2562.46	-3252			1011	398	SLU 75	0.12	No
ini.	3	-417	-156.27	-2891			1019	401	SLU 81	0.14	No
fin.	3	-417	-2651.37	-3348			1019	401	SLU 81	0.12	No
ini.	3	-419	-155.67	-2932			1020	401	SLU 84	0.14	No
fin.	3	-419	-2683.76	-3389			1020	401	SLU 84	0.12	No
ini.	3	-428	-157.42	-2960			1023	403	SLU 83	0.14	No
fin.	3	-428	-2707.89	-3417			1023	403	SLU 83	0.12	No
ini.	3	-408	-154.52	-2863			1015	400	SLU 82	0.14	No
fin.	3	-408	-2627.24	-3320			1015	400	SLU 82	0.12	No
ini.	3	-406	-144.19	-2849			1014	399	SLU 80	0.14	No
fin.	3	-406	-2606.27	-3306			1014	399	SLU 80	0.12	No
ini.	3	-408	-144.94	-2864			1015	399	SLU 78	0.14	No
fin.	3	-408	-2618.98	-3321			1015	399	SLU 78	0.12	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	3870	2459.47	2659.77	SLV 9	1.08	Si
fin.	2	2827	4228.11	2659.77	SLV 9	0.63	No
ini.	2	-2378	-1532.63	2659.77	SLV 16	1.74	Si
fin.	2	-1713	-6595.07	2659.77	SLV 16	0.4	No
ini.	2	4351	2831.21	2659.77	SLV 6	0.94	No
fin.	2	3114	5924.73	2659.77	SLV 6	0.45	No
ini.	2	-4399	-2643.26	2659.77	SLV 7	1.01	Si
fin.	2	-3356	-7681.1	2659.77	SLV 7	0.35	No
ini.	2	-4880	-3015	2659.77	SLV 12	0.88	No
fin.	2	-3643	-9377.72	2659.77	SLV 12	0.28	No
ini.	2	-2378	-1532.63	2659.77	SLV 15	1.74	Si
fin.	2	-1713	-6595.07	2659.77	SLV 15	0.4	No
ini.	2	-4399	-2643.26	2659.77	SLV 8	1.01	Si
fin.	2	-3356	-7681.1	2659.77	SLV 8	0.35	No
ini.	2	4351	2831.21	2659.77	SLV 5	0.94	No
fin.	2	3114	5924.73	2659.77	SLV 5	0.45	No
ini.	2	-4880	-3015	2659.77	SLV 11	0.88	No
fin.	2	-3643	-9377.72	2659.77	SLV 11	0.28	No
ini.	2	3870	2459.47	2659.77	SLV 10	1.08	Si
fin.	2	2827	4228.11	2659.77	SLV 10	0.63	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	3870	2459.47	11350			1278	0	SLV 10	0	No
fin.	2	2827	4228.11	3343			1278	0	SLV 10	0	No
ini.	2	3870	2459.47	11350			1278	0	SLV 9	0	No
fin.	2	2827	4228.11	3343			1278	0	SLV 9	0	No
ini.	2	-4399	-2643.26	-15091			3037	1073	SLV 7	0.07	No
fin.	2	-3356	-7681.1	-7776			2620	966	SLV 7	0.12	No
ini.	2	-4880	-3015	-17590			3230	1119	SLV 12	0.06	No
fin.	2	-3643	-9377.72	-9730			2735	996	SLV 12	0.1	No
ini.	2	-4880	-3015	-17590			3230	1119	SLV 11	0.06	No
fin.	2	-3643	-9377.72	-9730			2735	996	SLV 11	0.1	No
ini.	2	4351	2831.21	13849			1278	0	SLV 6	0	No
fin.	2	3114	5924.73	5297			1278	0	SLV 6	0	No
ini.	2	1849	1348.84	6635			1278	0	SLV 2	0	No
fin.	2	1184	3142.08	3001			1278	0	SLV 2	0	No
ini.	2	1849	1348.84	6635			1278	0	SLV 1	0	No
fin.	2	1184	3142.08	3001			1278	0	SLV 1	0	No
ini.	2	-4399	-2643.26	-15091			3037	1073	SLV 8	0.07	No
fin.	2	-3356	-7681.1	-7776			2620	966	SLV 8	0.12	No
ini.	2	4351	2831.21	13849			1278	0	SLV 5	0	No
fin.	2	3114	5924.73	5297			1278	0	SLV 5	0	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.284	SLV 11	No
V_SLV	0	SLV 1	No
PF_SLU	0.655	SLU 83	No
V_SLU	0.118	SLU 83	No

Trave di accoppiamento 44

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-13.753	-0.228	3.49	5.07	1.58	-13.753	0.672	3.49	5.07	1.58	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	191	754.27	3546.36	SLU 61	4.7	Si
fin.	3	191	256.81	3546.36	SLU 61	13.81	Si
ini.	3	187	716.41	3546.36	SLU 52	4.95	Si
fin.	3	187	239.81	3546.36	SLU 52	14.79	Si
ini.	3	194	673.79	3546.36	SLU 73	5.26	Si
fin.	3	194	271.28	3546.36	SLU 73	13.07	Si
ini.	3	185	663.54	3546.36	SLU 54	5.34	Si
fin.	3	185	246.28	3546.36	SLU 54	14.4	Si
ini.	3	185	690	3546.36	SLU 60	5.14	Si
fin.	3	185	260.22	3546.36	SLU 60	13.63	Si
ini.	3	188	705.79	3546.36	SLU 55	5.02	Si
fin.	3	188	242.84	3546.36	SLU 55	14.6	Si
ini.	3	199	701.03	3546.36	SLU 84	5.06	Si
fin.	3	199	291.31	3546.36	SLU 84	12.17	Si
ini.	3	186	679.39	3546.36	SLU 62	5.22	Si
fin.	3	186	263.25	3546.36	SLU 62	13.47	Si
ini.	3	198	711.65	3546.36	SLU 82	4.98	Si
fin.	3	198	288.28	3546.36	SLU 82	12.3	Si
ini.	3	192	743.65	3546.36	SLU 63	4.77	Si
fin.	3	192	259.84	3546.36	SLU 63	13.65	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	185	663.54	-50			1704	600	SLU 54	11.96	Si
fin.	3	185	246.28	-929			1704	600	SLU 54	0.65	No
ini.	3	198	711.65	-45			1704	597	SLU 82	13.23	Si
fin.	3	198	288.28	-950			1704	597	SLU 82	0.63	No
ini.	3	194	673.79	-22			1704	597	SLU 73	27.27	Si
fin.	3	194	271.28	-926			1704	597	SLU 73	0.64	No
ini.	3	186	679.39	-49			1704	599	SLU 62	12.26	Si
fin.	3	186	263.25	-927			1704	599	SLU 62	0.65	No
ini.	3	187	716.41	-116			1704	599	SLU 52	5.16	Si
fin.	3	187	239.81	-995			1704	599	SLU 52	0.6	No
ini.	3	192	743.65	-124			1704	598	SLU 63	4.82	Si
fin.	3	192	259.84	-1003			1704	598	SLU 63	0.6	No
ini.	3	191	754.27	-139			1704	598	SLU 61	4.3	Si
fin.	3	191	256.81	-1018			1704	598	SLU 61	0.59	No
ini.	3	188	705.79	-101			1704	599	SLU 55	5.94	Si
fin.	3	188	242.84	-979			1704	599	SLU 55	0.61	No
ini.	3	199	701.03	-30			1704	596	SLU 84	19.92	Si
fin.	3	199	291.31	-934			1704	596	SLU 84	0.64	No
ini.	3	185	690	-64			1704	600	SLU 60	9.36	Si
fin.	3	185	260.22	-943			1704	600	SLU 60	0.64	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-629	-7919.01	5319.53	SLV 6	0.67	No
fin.	2	-720	1230.99	5319.53	SLV 6	4.32	Si
ini.	2	-629	-7919.01	5319.53	SLV 5	0.67	No
fin.	2	-720	1230.99	5319.53	SLV 5	4.32	Si
ini.	2	893	8627.46	5319.53	SLV 11	0.62	No
fin.	2	985	-851.96	5319.53	SLV 11	6.24	Si
ini.	2	-655	-7649.59	5319.53	SLV 10	0.7	No
fin.	2	-529	1263.37	5319.53	SLV 10	4.21	Si
ini.	2	-655	-7649.59	5319.53	SLV 9	0.7	No
fin.	2	-529	1263.37	5319.53	SLV 9	4.21	Si
ini.	2	893	8627.46	5319.53	SLV 12	0.62	No
fin.	2	985	-851.96	5319.53	SLV 12	6.24	Si
ini.	2	321	3244.81	5319.53	SLV 16	1.64	Si
fin.	2	677	-73.82	5319.53	SLV 16	72.06	Si
ini.	2	321	3244.81	5319.53	SLV 15	1.64	Si
fin.	2	677	-73.82	5319.53	SLV 15	72.06	Si
ini.	2	919	8358.05	5319.53	SLV 7	0.64	No
fin.	2	794	-884.34	5319.53	SLV 7	6.02	Si
ini.	2	919	8358.05	5319.53	SLV 8	0.64	No



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	2	794	-884.34	5319.53	SLV 8	6.02	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt _{lim}	Comb.	c.s.	Verifica
ini.	2	-629	-7919.01	10792			2807	1090	SLV 6	0.1	No
fin.	2	-720	1230.99	9786			2844	1107	SLV 6	0.11	No
ini.	2	919	8358.05	-9957			2556	735	SLV 7	0.07	No
fin.	2	794	-884.34	-10265			2556	770	SLV 7	0.08	No
ini.	2	321	3244.81	-3891			2556	889	SLV 16	0.23	No
fin.	2	677	-73.82	-4586			2556	801	SLV 16	0.17	No
ini.	2	-655	-7649.59	10240			2818	1095	SLV 10	0.11	No
fin.	2	-529	1263.37	9168			2767	1071	SLV 10	0.12	No
ini.	2	893	8627.46	-10509			2556	743	SLV 12	0.07	No
fin.	2	985	-851.96	-10883			2556	716	SLV 12	0.07	No
ini.	2	321	3244.81	-3891			2556	889	SLV 15	0.23	No
fin.	2	677	-73.82	-4586			2556	801	SLV 15	0.17	No
ini.	2	-655	-7649.59	10240			2818	1095	SLV 9	0.11	No
fin.	2	-529	1263.37	9168			2767	1071	SLV 9	0.12	No
ini.	2	919	8358.05	-9957			2556	735	SLV 8	0.07	No
fin.	2	794	-884.34	-10265			2556	770	SLV 8	0.08	No
ini.	2	-629	-7919.01	10792			2807	1090	SLV 5	0.1	No
fin.	2	-720	1230.99	9786			2844	1107	SLV 5	0.11	No
ini.	2	893	8627.46	-10509			2556	743	SLV 11	0.07	No
fin.	2	985	-851.96	-10883			2556	716	SLV 11	0.07	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.617	SLV 11	No
V_SLV	0.066	SLV 11	No
PF_SLU	4.702	SLU 61	Si
V_SLU	0.588	SLU 61	No

Trave di accoppiamento 45

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-19.868	1.046	3.49	5.07	1.58	-20.668	1.046	3.49	5.07	1.58	0.8	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-2278	228.68	3546.36	SLU 74	15.51	Si
fin.	3	-2278	-1552.22	3546.36	SLU 74	2.28	Si
ini.	3	-2360	128.8	3546.36	SLU 80	27.53	Si
fin.	3	-2360	-1435.79	3546.36	SLU 80	2.47	Si
ini.	3	-2299	237.51	3546.36	SLU 79	14.93	Si
fin.	3	-2299	-1566.48	3546.36	SLU 79	2.26	Si
ini.	3	-2388	112.56	3546.36	SLU 84	31.51	Si
fin.	3	-2388	-1462.03	3546.36	SLU 84	2.43	Si
ini.	3	-2327	221.27	3546.36	SLU 83	16.03	Si
fin.	3	-2327	-1592.72	3546.36	SLU 83	2.23	Si
ini.	3	-2355	145.06	3546.36	SLU 78	24.45	Si
fin.	3	-2355	-1472.48	3546.36	SLU 78	2.41	Si
ini.	3	-2340	119.97	3546.36	SLU 75	29.56	Si
fin.	3	-2340	-1421.52	3546.36	SLU 75	2.49	Si
ini.	3	-2293	253.77	3546.36	SLU 77	13.97	Si
fin.	3	-2293	-1603.17	3546.36	SLU 77	2.21	Si
ini.	3	-2312	196.18	3546.36	SLU 81	18.08	Si
fin.	3	-2312	-1541.77	3546.36	SLU 81	2.3	Si
ini.	3	-2193	233.13	3546.36	SLU 69	15.21	Si
fin.	3	-2193	-1423.05	3546.36	SLU 69	2.49	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt _{lim}	Comb.	c.s.	Verifica
ini.	3	-2299	237.51	-1254			2623	1026	SLU 79	0.82	No
fin.	3	-2299	-1566.48	-3242			2623	1026	SLU 79	0.32	No
ini.	3	-1829	237.81	-1157			2435	960	SLU 35	0.83	No
fin.	3	-1829	-1405.21	-2940			2435	960	SLU 35	0.33	No
ini.	3	-2312	196.18	-1088			2628	1027	SLU 81	0.94	No
fin.	3	-2312	-1541.77	-3243			2628	1027	SLU 81	0.32	No
ini.	3	-2293	253.77	-1320			2621	1025	SLU 77	0.78	No
fin.	3	-2293	-1603.17	-3308			2621	1025	SLU 77	0.31	No
ini.	3	-1814	212.72	-1062			2429	958	SLU 32	0.9	No
fin.	3	-1814	-1354.26	-2844			2429	958	SLU 32	0.34	No
ini.	3	-1848	180.22	-925			2443	962	SLU 39	1.04	Si
fin.	3	-1848	-1343.81	-2875			2443	962	SLU 39	0.33	No
ini.	3	-1863	205.31	-1020			2449	965	SLU 41	0.95	No
fin.	3	-1863	-1394.76	-2970			2449	965	SLU 41	0.32	No
ini.	3	-2278	228.68	-1225			2615	1023	SLU 74	0.83	No
fin.	3	-2278	-1552.22	-3213			2615	1023	SLU 74	0.32	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1835	221.55	-1091			2438	961	SLU 37	0.88	No
fin.	3	-1835	-1368.52	-2873			2438	961	SLU 37	0.33	No
ini.	3	-2327	221.27	-1183			2634	1029	SLU 83	0.87	No
fin.	3	-2327	-1592.72	-3338			2634	1029	SLU 83	0.31	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-1091	2951.25	5319.53	SLV 5	1.8	Si
fin.	2	-1091	-4128.77	5319.53	SLV 5	1.29	Si
ini.	2	-1838	6533.68	5319.53	SLV 2	0.81	No
fin.	2	-1845	-8574.01	5319.53	SLV 2	0.62	No
ini.	2	-1838	6533.68	5319.53	SLV 1	0.81	No
fin.	2	-1845	-8574.01	5319.53	SLV 1	0.62	No
ini.	2	-1103	-5689.24	5319.53	SLV 13	0.94	No
fin.	2	-1096	6015.79	5319.53	SLV 13	0.88	No
ini.	2	-2258	5937.46	5319.53	SLV 3	0.9	No
fin.	2	-2266	-8007.28	5319.53	SLV 3	0.66	No
ini.	2	-1523	-6285.45	5319.53	SLV 15	0.85	No
fin.	2	-1517	6582.52	5319.53	SLV 15	0.81	No
ini.	2	-2258	5937.46	5319.53	SLV 4	0.9	No
fin.	2	-2266	-8007.28	5319.53	SLV 4	0.66	No
ini.	2	-1523	-6285.45	5319.53	SLV 16	0.85	No
fin.	2	-1517	6582.52	5319.53	SLV 16	0.81	No
ini.	2	-1103	-5689.24	5319.53	SLV 14	0.94	No
fin.	2	-1096	6015.79	5319.53	SLV 14	0.88	No
ini.	2	-1091	2951.25	5319.53	SLV 6	1.8	Si
fin.	2	-1091	-4128.77	5319.53	SLV 6	1.29	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-1523	-6285.45	16906			3165	1250	SLV 16	0.07	No
fin.	2	-1517	6582.52	15535			3162	1249	SLV 16	0.08	No
ini.	2	-2258	5937.46	-16861			3459	1367	SLV 4	0.08	No
fin.	2	-2266	-8007.28	-18091			3462	1368	SLV 4	0.08	No
ini.	2	-1091	2951.25	-8437			2992	1175	SLV 6	0.14	No
fin.	2	-1091	-4128.77	-9572			2992	1175	SLV 6	0.12	No
ini.	2	-1523	-6285.45	16906			3165	1250	SLV 15	0.07	No
fin.	2	-1517	6582.52	15535			3162	1249	SLV 15	0.08	No
ini.	2	-1103	-5689.24	15340			2997	1177	SLV 13	0.08	No
fin.	2	-1096	6015.79	14034			2994	1176	SLV 13	0.08	No
ini.	2	-1091	2951.25	-8437			2992	1175	SLV 5	0.14	No
fin.	2	-1091	-4128.77	-9572			2992	1175	SLV 5	0.12	No
ini.	2	-1838	6533.68	-18428			3291	1301	SLV 1	0.07	No
fin.	2	-1845	-8574.01	-19591			3294	1302	SLV 1	0.07	No
ini.	2	-1103	-5689.24	15340			2997	1177	SLV 14	0.08	No
fin.	2	-1096	6015.79	14034			2994	1176	SLV 14	0.08	No
ini.	2	-1838	6533.68	-18428			3291	1301	SLV 2	0.07	No
fin.	2	-1845	-8574.01	-19591			3294	1302	SLV 2	0.07	No
ini.	2	-2258	5937.46	-16861			3459	1367	SLV 3	0.08	No
fin.	2	-2266	-8007.28	-18091			3462	1368	SLV 3	0.08	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.62	SLV 1	No
V_SLV	0.066	SLV 1	No
PF_SLU	2.212	SLU 77	Si
V_SLU	0.308	SLU 83	No

Trave di accoppiamento 46

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-11.163	1.046	3.89	5.07	1.18	-12.283	1.046	3.89	5.07	1.18	1.12	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-5393	-1167.86	1978.03	SLU 80	1.69	Si
fin.	3	-5393	958.6	1978.03	SLU 80	2.06	Si
ini.	3	-5313	-1170.28	1978.03	SLU 79	1.69	Si
fin.	3	-5313	935.2	1978.03	SLU 79	2.12	Si
ini.	3	-5308	-1127.58	1978.03	SLU 75	1.75	Si
fin.	3	-5308	900.55	1978.03	SLU 75	2.2	Si
ini.	3	-5312	-1131.45	1978.03	SLU 81	1.75	Si
fin.	3	-5312	818.14	1978.03	SLU 81	2.42	Si
ini.	3	-5393	-1129.03	1978.03	SLU 82	1.75	Si
fin.	3	-5393	841.55	1978.03	SLU 82	2.35	Si
ini.	3	-5422	-1170.44	1978.03	SLU 78	1.69	Si
fin.	3	-5422	962.82	1978.03	SLU 78	2.05	Si
ini.	3	-5426	-1174.31	1978.03	SLU 83	1.68	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	3	-5426	880.41	1978.03	SLU 83	2.25	Si
ini.	3	-5341	-1172.86	1978.03	SLU 77	1.69	Si
fin.	3	-5341	939.41	1978.03	SLU 77	2.11	Si
ini.	3	-5506	-1171.89	1978.03	SLU 84	1.69	Si
fin.	3	-5506	903.81	1978.03	SLU 84	2.19	Si
ini.	3	-5228	-1130	1978.03	SLU 74	1.75	Si
fin.	3	-5228	877.15	1978.03	SLU 74	2.26	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-5393	-1129.03	2712			3430	1163	SLU 82	0.43	No
fin.	3	-5393	841.55	862			3430	1163	SLU 82	1.35	Si
ini.	3	-5341	-1172.86	2777			3409	1158	SLU 77	0.42	No
fin.	3	-5341	939.41	1050			3409	1158	SLU 77	1.1	Si
ini.	3	-5506	-1171.89	2806			3475	1173	SLU 84	0.42	No
fin.	3	-5506	903.81	956			3475	1173	SLU 84	1.23	Si
ini.	3	-5228	-1130	2684			3363	1148	SLU 74	0.43	No
fin.	3	-5228	877.15	957			3363	1148	SLU 74	1.2	Si
ini.	3	-5426	-1174.31	2788			3443	1166	SLU 83	0.42	No
fin.	3	-5426	880.41	938			3443	1166	SLU 83	1.24	Si
ini.	3	-5393	-1167.86	2790			3430	1163	SLU 80	0.42	No
fin.	3	-5393	958.6	1063			3430	1163	SLU 80	1.09	Si
ini.	3	-5422	-1170.44	2796			3441	1165	SLU 78	0.42	No
fin.	3	-5422	962.82	1069			3441	1165	SLU 78	1.09	Si
ini.	3	-5313	-1170.28	2771			3397	1156	SLU 79	0.42	No
fin.	3	-5313	935.2	1044			3397	1156	SLU 79	1.11	Si
ini.	3	-5334	-1123.39	2709			3406	1157	SLU 76	0.43	No
fin.	3	-5334	911.94	982			3406	1157	SLU 76	1.18	Si
ini.	3	-5308	-1127.58	2702			3396	1155	SLU 75	0.43	No
fin.	3	-5308	900.55	975			3396	1155	SLU 75	1.18	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-4948	-3782.62	2967.04	SLV 10	0.78	No
fin.	2	-5057	3518.08	2967.04	SLV 10	0.84	No
ini.	2	-10429	-5803.59	2967.04	SLV 16	0.51	No
fin.	2	-10632	7927.85	2967.04	SLV 16	0.37	No
ini.	2	2975	5133.95	2967.04	SLV 4	0.58	No
fin.	2	3204	-7109.03	2967.04	SLV 4	0.42	No
ini.	2	-10064	-6637.66	2967.04	SLV 14	0.45	No
fin.	2	-10294	8321.61	2967.04	SLV 14	0.36	No
ini.	2	-4948	-3782.62	2967.04	SLV 9	0.78	No
fin.	2	-5057	3518.08	2967.04	SLV 9	0.84	No
ini.	2	2975	5133.95	2967.04	SLV 3	0.58	No
fin.	2	3204	-7109.03	2967.04	SLV 3	0.42	No
ini.	2	3339	4299.87	2967.04	SLV 2	0.69	No
fin.	2	3542	-6715.27	2967.04	SLV 2	0.44	No
ini.	2	-10064	-6637.66	2967.04	SLV 13	0.45	No
fin.	2	-10294	8321.61	2967.04	SLV 13	0.36	No
ini.	2	-10429	-5803.59	2967.04	SLV 15	0.51	No
fin.	2	-10632	7927.85	2967.04	SLV 15	0.37	No
ini.	2	3339	4299.87	2967.04	SLV 1	0.69	No
fin.	2	3542	-6715.27	2967.04	SLV 1	0.44	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-10064	-6637.66	14302			5934	1913	SLV 13	0.13	No
fin.	2	-10294	8321.61	12960			6026	1931	SLV 13	0.15	No
ini.	2	3339	4299.87	-8904			1909	0	SLV 1	0	No
fin.	2	3542	-6715.27	-10336			1909	0	SLV 1	0	No
ini.	2	2975	5133.95	-10688			1909	0	SLV 4	0	No
fin.	2	3204	-7109.03	-11636			1909	0	SLV 4	0	No
ini.	2	-10429	-5803.59	12519			6080	1942	SLV 16	0.16	No
fin.	2	-10632	7927.85	11660			6161	1959	SLV 16	0.17	No
ini.	2	3339	4299.87	-8904			1909	0	SLV 2	0	No
fin.	2	3542	-6715.27	-10336			1909	0	SLV 2	0	No
ini.	2	-10064	-6637.66	14302			5934	1913	SLV 14	0.13	No
fin.	2	-10294	8321.61	12960			6026	1931	SLV 14	0.15	No
ini.	2	-4948	-3782.62	8261			3888	1436	SLV 9	0.17	No
fin.	2	-5057	3518.08	6323			3931	1447	SLV 9	0.23	No
ini.	2	-10429	-5803.59	12519			6080	1942	SLV 15	0.16	No
fin.	2	-10632	7927.85	11660			6161	1959	SLV 15	0.17	No
ini.	2	-4948	-3782.62	8261			3888	1436	SLV 10	0.17	No
fin.	2	-5057	3518.08	6323			3931	1447	SLV 10	0.23	No
ini.	2	2975	5133.95	-10688			1909	0	SLV 3	0	No
fin.	2	3204	-7109.03	-11636			1909	0	SLV 3	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.357	SLV 13	No
V_SLV	0	SLV 1	No
PF_SLU	1.684	SLU 83	Si
V_SLU	0.417	SLU 78	No

Trave di accoppiamento 47

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-4.168	1.046	3.49	5.07	1.58	-4.968	1.046	3.49	5.07	1.58	0.8	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-3255	-1556.19	3546.36	SLU 79	2.28	Si
fin.	3	-3255	855.03	3546.36	SLU 79	4.15	Si
ini.	3	-2947	-1398.47	3546.36	SLU 56	2.54	Si
fin.	3	-2947	746.31	3546.36	SLU 56	4.75	Si
ini.	3	-3356	-1554.51	3546.36	SLU 83	2.28	Si
fin.	3	-3356	840.8	3546.36	SLU 83	4.22	Si
ini.	3	-3214	-1511.52	3546.36	SLU 74	2.35	Si
fin.	3	-3214	817.1	3546.36	SLU 74	4.34	Si
ini.	3	-2933	-1414.01	3546.36	SLU 69	2.51	Si
fin.	3	-2933	771.01	3546.36	SLU 69	4.6	Si
ini.	3	-3365	-1424.63	3546.36	SLU 84	2.49	Si
fin.	3	-3365	692.38	3546.36	SLU 84	5.12	Si
ini.	3	-3321	-1478.44	3546.36	SLU 81	2.4	Si
fin.	3	-3321	781.33	3546.36	SLU 81	4.54	Si
ini.	3	-3249	-1587.58	3546.36	SLU 77	2.23	Si
fin.	3	-3249	876.57	3546.36	SLU 77	4.05	Si
ini.	3	-3258	-1457.7	3546.36	SLU 78	2.43	Si
fin.	3	-3258	728.14	3546.36	SLU 78	4.87	Si
ini.	3	-3264	-1426.31	3546.36	SLU 80	2.49	Si
fin.	3	-3264	706.61	3546.36	SLU 80	5.02	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-2736	-1397.14	3635			2798	1083	SLU 35	0.3	No
fin.	3	-2736	795.47	1856			2798	1083	SLU 35	0.58	No
ini.	3	-3321	-1478.44	3906			3032	1156	SLU 81	0.3	No
fin.	3	-3321	781.33	1756			3032	1156	SLU 81	0.66	No
ini.	3	-3356	-1554.51	4075			3046	1160	SLU 83	0.28	No
fin.	3	-3356	840.8	1925			3046	1160	SLU 83	0.6	No
ini.	3	-3214	-1511.52	3908			2989	1143	SLU 74	0.29	No
fin.	3	-3214	817.1	1926			2989	1143	SLU 74	0.59	No
ini.	3	-2843	-1364.07	3633			2841	1097	SLU 41	0.3	No
fin.	3	-2843	759.7	1686			2841	1097	SLU 41	0.65	No
ini.	3	-2742	-1365.75	3569			2800	1084	SLU 37	0.3	No
fin.	3	-2742	773.94	1790			2800	1084	SLU 37	0.61	No
ini.	3	-3255	-1556.19	4012			3006	1148	SLU 79	0.29	No
fin.	3	-3255	855.03	2029			3006	1148	SLU 79	0.57	No
ini.	3	-3249	-1587.58	4078			3003	1147	SLU 77	0.28	No
fin.	3	-3249	876.57	2095			3003	1147	SLU 77	0.55	No
ini.	3	-2701	-1321.08	3466			2784	1079	SLU 32	0.31	No
fin.	3	-2701	736	1687			2784	1079	SLU 32	0.64	No
ini.	3	-3258	-1457.7	3730			3007	1149	SLU 78	0.31	No
fin.	3	-3258	728.14	1747			3007	1149	SLU 78	0.66	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-5330	6185.78	5319.53	SLV 4	0.86	No
fin.	2	-5291	-4411.35	5319.53	SLV 4	1.21	Si
ini.	2	867	-8094.88	5319.53	SLV 14	0.66	No
fin.	2	828	5384.47	5319.53	SLV 14	0.99	No
ini.	2	-1509	-3863.77	5319.53	SLV 10	1.38	Si
fin.	2	-1514	2882.64	5319.53	SLV 10	1.85	Si
ini.	2	-5467	5679.99	5319.53	SLV 2	0.94	No
fin.	2	-5424	-3800.34	5319.53	SLV 2	1.4	Si
ini.	2	-5467	5679.99	5319.53	SLV 1	0.94	No
fin.	2	-5424	-3800.34	5319.53	SLV 1	1.4	Si
ini.	2	1003	-7589.09	5319.53	SLV 16	0.7	No
fin.	2	960	4773.45	5319.53	SLV 16	1.11	Si
ini.	2	-5330	6185.78	5319.53	SLV 3	0.86	No
fin.	2	-5291	-4411.35	5319.53	SLV 3	1.21	Si
ini.	2	867	-8094.88	5319.53	SLV 13	0.66	No
fin.	2	828	5384.47	5319.53	SLV 13	0.99	No
ini.	2	-1509	-3863.77	5319.53	SLV 9	1.38	Si
fin.	2	-1514	2882.64	5319.53	SLV 9	1.85	Si
ini.	2	1003	-7589.09	5319.53	SLV 15	0.7	No
fin.	2	960	4773.45	5319.53	SLV 15	1.11	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	867	-8094.88	17643			2556	750	SLV 13	0.04	No
fin.	2	828	5384.47	16159			2556	761	SLV 13	0.05	No
ini.	2	-5467	5679.99	-11371			4742	1792	SLV 2	0.16	No
fin.	2	-5424	-3800.34	-12416			4725	1787	SLV 2	0.14	No
ini.	2	-5467	5679.99	-11371			4742	1792	SLV 1	0.16	No
fin.	2	-5424	-3800.34	-12416			4725	1787	SLV 1	0.14	No
ini.	2	1003	-7589.09	16247			2556	711	SLV 15	0.04	No
fin.	2	960	4773.45	14765			2556	723	SLV 15	0.05	No
ini.	2	-5330	6185.78	-12768			4688	1776	SLV 4	0.14	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	2	-5291	-4411.35	-13810			4672	1771	SLV 4	0.13	No
ini.	2	-1509	-3863.77	9117			3159	1247	SLV 10	0.14	No
fin.	2	-1514	2882.64	7784			3161	1248	SLV 10	0.16	No
ini.	2	1003	-7589.09	16247			2556	711	SLV 16	0.04	No
fin.	2	960	4773.45	14765			2556	723	SLV 16	0.05	No
ini.	2	-1509	-3863.77	9117			3159	1247	SLV 9	0.14	No
fin.	2	-1514	2882.64	7784			3161	1248	SLV 9	0.16	No
ini.	2	-5330	6185.78	-12768			4688	1776	SLV 3	0.14	No
fin.	2	-5291	-4411.35	-13810			4672	1771	SLV 3	0.13	No
ini.	2	867	-8094.88	17643			2556	750	SLV 14	0.04	No
fin.	2	828	5384.47	16159			2556	761	SLV 14	0.05	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF SLV	0.657	SLV 13	No
V SLV	0.043	SLV 13	No
PF SLU	2.234	SLU 77	Si
V SLU	0.281	SLU 77	No

Trave di accoppiamento 48

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-11.448	3.311	2.89	5.07	2.18	-9.948	3.311	2.89	5.07	2.18	1.5	0.14	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fthk	fvk0	fthmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-12	1416.89	3375.6	SLU 73	2.38	Si
fin.	3	-12	199.42	3375.6	SLU 73	16.93	Si
ini.	3	-7	1631.76	3375.6	SLU 81	2.07	Si
fin.	3	-7	216.23	3375.6	SLU 81	15.61	Si
ini.	3	-10	1602.61	3375.6	SLU 83	2.11	Si
fin.	3	-10	218.14	3375.6	SLU 83	15.47	Si
ini.	3	0	1579.18	3375.6	SLU 41	2.14	Si
fin.	3	0	196	3375.6	SLU 41	17.22	Si
ini.	3	-7	1638.15	3375.6	SLU 82	2.06	Si
fin.	3	-7	215.7	3375.6	SLU 82	15.65	Si
ini.	3	-9	1609	3375.6	SLU 84	2.1	Si
fin.	3	-9	217.61	3375.6	SLU 84	15.51	Si
ini.	3	3	1608.33	3375.6	SLU 39	2.1	Si
fin.	3	3	194.09	3375.6	SLU 39	17.39	Si
ini.	3	1	1585.57	3375.6	SLU 42	2.13	Si
fin.	3	1	195.47	3375.6	SLU 42	17.27	Si
ini.	3	-15	1397.94	3375.6	SLU 75	2.41	Si
fin.	3	-15	199.78	3375.6	SLU 75	16.9	Si
ini.	3	3	1614.72	3375.6	SLU 40	2.09	Si
fin.	3	3	193.56	3375.6	SLU 40	17.44	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	3	1608.33	618			1175	442	SLU 39	0.71	No
fin.	3	3	194.09	-2458			1175	442	SLU 39	0.18	No
ini.	3	-12	1416.89	764			1180	445	SLU 73	0.58	No
fin.	3	-12	199.42	-2328			1180	445	SLU 73	0.19	No
ini.	3	-7	1631.76	774			1178	444	SLU 81	0.57	No
fin.	3	-7	216.23	-2602			1178	444	SLU 81	0.17	No
ini.	3	1	1585.57	634			1175	442	SLU 42	0.7	No
fin.	3	1	195.47	-2442			1175	442	SLU 42	0.18	No
ini.	3	0	1579.18	639			1175	442	SLU 41	0.69	No
fin.	3	0	196	-2437			1175	442	SLU 41	0.18	No
ini.	3	-15	1397.94	777			1181	446	SLU 75	0.57	No
fin.	3	-15	199.78	-2315			1181	446	SLU 75	0.19	No
ini.	3	-9	1609	790			1179	444	SLU 84	0.56	No
fin.	3	-9	217.61	-2586			1179	444	SLU 84	0.17	No
ini.	3	-7	1638.15	770			1178	444	SLU 82	0.58	No
fin.	3	-7	215.7	-2607			1178	444	SLU 82	0.17	No
ini.	3	3	1614.72	614			1175	442	SLU 40	0.72	No
fin.	3	3	193.56	-2463			1175	442	SLU 40	0.18	No
ini.	3	-10	1602.61	795			1179	444	SLU 83	0.56	No
fin.	3	-10	218.14	-2581			1179	444	SLU 83	0.17	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-29	4646.24	5063.4	SLV 11	1.09	Si
fin.	2	-96	149.35	5063.4	SLV 11	33.9	Si
ini.	2	-211	-8206.42	5063.4	SLV 2	0.62	No
fin.	2	-200	468.91	5063.4	SLV 2	10.8	Si
ini.	2	219	8901.75	5063.4	SLV 14	0.57	No
fin.	2	250	-290.94	5063.4	SLV 14	17.4	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-29	4646.24	5063.4	SLV 12	1.09	Si
fin.	2	-96	149.35	5063.4	SLV 12	33.9	Si
ini.	2	219	8901.75	5063.4	SLV 13	0.57	No
fin.	2	250	-290.94	5063.4	SLV 13	17.4	Si
ini.	2	174	9701.29	5063.4	SLV 15	0.52	No
fin.	2	163	-210.48	5063.4	SLV 15	24.06	Si
ini.	2	174	9701.29	5063.4	SLV 16	0.52	No
fin.	2	163	-210.48	5063.4	SLV 16	24.06	Si
ini.	2	-211	-8206.42	5063.4	SLV 1	0.62	No
fin.	2	-200	468.91	5063.4	SLV 1	10.8	Si
ini.	2	-256	-7406.87	5063.4	SLV 3	0.68	No
fin.	2	-286	549.38	5063.4	SLV 3	9.22	Si
ini.	2	-256	-7406.87	5063.4	SLV 4	0.68	No
fin.	2	-286	549.38	5063.4	SLV 4	9.22	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-211	-8206.42	6906			1848	708	SLV 1	0.1	No
fin.	2	-200	468.91	4821			1843	706	SLV 1	0.15	No
ini.	2	219	8901.75	-5198			1763	614	SLV 13	0.12	No
fin.	2	250	-290.94	-7105			1763	607	SLV 13	0.09	No
ini.	2	-29	4646.24	-2140			1775	670	SLV 12	0.31	No
fin.	2	-96	149.35	-3876			1801	684	SLV 12	0.18	No
ini.	2	174	9701.29	-5742			1763	624	SLV 16	0.11	No
fin.	2	163	-210.48	-7541			1763	627	SLV 16	0.08	No
ini.	2	-211	-8206.42	6906			1848	708	SLV 2	0.1	No
fin.	2	-200	468.91	4821			1843	706	SLV 2	0.15	No
ini.	2	-256	-7406.87	6362			1866	717	SLV 4	0.11	No
fin.	2	-286	549.38	4384			1878	723	SLV 4	0.16	No
ini.	2	219	8901.75	-5198			1763	614	SLV 14	0.12	No
fin.	2	250	-290.94	-7105			1763	607	SLV 14	0.09	No
ini.	2	-256	-7406.87	6362			1866	717	SLV 3	0.11	No
fin.	2	-286	549.38	4384			1878	723	SLV 3	0.16	No
ini.	2	174	9701.29	-5742			1763	624	SLV 15	0.11	No
fin.	2	163	-210.48	-7541			1763	627	SLV 15	0.08	No
ini.	2	-29	4646.24	-2140			1775	670	SLV 11	0.31	No
fin.	2	-96	149.35	-3876			1801	684	SLV 11	0.18	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.522	SLV 15	No
V_SLV	0.083	SLV 15	No
PF_SLU	2.061	SLU 82	Si
V_SLU	0.17	SLU 82	No

Trave di accoppiamento 49

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-17.768	6.661	1.39	2.29	0.9	-16.768	6.661	1.39	2.29	0.9	1	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fhmmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	4786	774.38	1150.68	SLU 79	1.49	Si
fin.	3	3788	463.82	1150.68	SLU 79	2.48	Si
ini.	3	4827	779.51	1150.68	SLU 78	1.48	Si
fin.	3	3817	470.73	1150.68	SLU 78	2.44	Si
ini.	3	4732	779.6	1150.68	SLU 74	1.48	Si
fin.	3	3745	456.76	1150.68	SLU 74	2.52	Si
ini.	3	4916	798.68	1150.68	SLU 83	1.44	Si
fin.	3	3894	473.04	1150.68	SLU 83	2.43	Si
ini.	3	4921	798	1150.68	SLU 84	1.44	Si
fin.	3	3896	474.85	1150.68	SLU 84	2.42	Si
ini.	3	4826	798.1	1150.68	SLU 81	1.44	Si
fin.	3	3825	460.87	1150.68	SLU 81	2.5	Si
ini.	3	4831	797.42	1150.68	SLU 82	1.44	Si
fin.	3	3827	462.68	1150.68	SLU 82	2.49	Si
ini.	3	4822	780.18	1150.68	SLU 77	1.47	Si
fin.	3	3815	468.93	1150.68	SLU 77	2.45	Si
ini.	3	4791	773.7	1150.68	SLU 80	1.49	Si
fin.	3	3790	465.63	1150.68	SLU 80	2.47	Si
ini.	3	4737	778.93	1150.68	SLU 75	1.48	Si
fin.	3	3748	458.57	1150.68	SLU 75	2.51	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	4339	741.34	-93			873	0	SLU 60	0	No
fin.	3	3440	411.05	204			873	0	SLU 60	0	No
ini.	3	4303	716.95	-67			873	0	SLU 59	0	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	3	3405	415.81	238			873	0	SLU 59	0	No
ini.	3	4335	723.43	-72			873	0	SLU 56	0	No
fin.	3	3430	419.11	243			873	0	SLU 56	0	No
ini.	3	2901	521.44	-77			873	0	SLU 1	0	No
fin.	3	2299	274.48	105			873	0	SLU 1	0	No
ini.	3	4343	740.67	-91			873	0	SLU 61	0	No
fin.	3	3442	412.86	208			873	0	SLU 61	0	No
ini.	3	4340	722.75	-70			873	0	SLU 57	0	No
fin.	3	3432	420.92	247			873	0	SLU 57	0	No
ini.	3	4245	722.85	-85			873	0	SLU 53	0	No
fin.	3	3361	406.94	214			873	0	SLU 53	0	No
ini.	3	4249	722.17	-83			873	0	SLU 54	0	No
fin.	3	3363	408.75	218			873	0	SLU 54	0	No
ini.	3	4216	715.92	-78			873	0	SLU 55	0	No
fin.	3	3338	404.85	212			873	0	SLU 55	0	No
ini.	3	4299	717.62	-70			873	0	SLU 58	0	No
fin.	3	3403	414	235			873	0	SLU 58	0	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	4222	3370.31	1726.01	SLV 15	0.51	No
fin.	2	6428	-1330.86	1726.01	SLV 15	1.3	Si
ini.	2	8073	-396.73	1726.01	SLV 4	4.35	Si
fin.	2	5464	2454.51	1726.01	SLV 4	0.7	No
ini.	2	13632	3097.68	1726.01	SLV 7	0.56	No
fin.	2	13783	1733.6	1726.01	SLV 7	1	No
ini.	2	4222	3370.31	1726.01	SLV 16	0.51	No
fin.	2	6428	-1330.86	1726.01	SLV 16	1.3	Si
ini.	2	8073	-396.73	1726.01	SLV 3	4.35	Si
fin.	2	5464	2454.51	1726.01	SLV 3	0.7	No
ini.	2	-6102	-3119.31	1726.01	SLV 6	0.55	No
fin.	2	-9021	7.97	1726.01	SLV 6	216.7	Si
ini.	2	13632	3097.68	1726.01	SLV 8	0.56	No
fin.	2	13783	1733.6	1726.01	SLV 8	1	No
ini.	2	-6102	-3119.31	1726.01	SLV 5	0.55	No
fin.	2	-9021	7.97	1726.01	SLV 5	216.7	Si
ini.	2	12477	4227.79	1726.01	SLV 11	0.41	No
fin.	2	14072	597.99	1726.01	SLV 11	2.89	Si
ini.	2	12477	4227.79	1726.01	SLV 12	0.41	No
fin.	2	14072	597.99	1726.01	SLV 12	2.89	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	12477	4227.79	-2573			1310	0	SLV 11	0	No
fin.	2	14072	597.99	-4165			1310	0	SLV 11	0	No
ini.	2	4222	3370.31	-5061			1310	0	SLV 16	0	No
fin.	2	6428	-1330.86	-5486			1310	0	SLV 16	0	No
ini.	2	8073	-396.73	4249			1310	0	SLV 3	0	No
fin.	2	5464	2454.51	4044			1310	0	SLV 3	0	No
ini.	2	8073	-396.73	4249			1310	0	SLV 4	0	No
fin.	2	5464	2454.51	4044			1310	0	SLV 4	0	No
ini.	2	13632	3097.68	220			1310	0	SLV 8	0	No
fin.	2	13783	1733.6	-1306			1310	0	SLV 8	0	No
ini.	2	13632	3097.68	220			1310	0	SLV 7	0	No
fin.	2	13783	1733.6	-1306			1310	0	SLV 7	0	No
ini.	2	4222	3370.31	-5061			1310	0	SLV 15	0	No
fin.	2	6428	-1330.86	-5486			1310	0	SLV 15	0	No
ini.	2	2152	-2261.83	4910			1310	0	SLV 2	0	No
fin.	2	-1377	1936.82	5771			1806	713	SLV 2	0.12	No
ini.	2	12477	4227.79	-2573			1310	0	SLV 12	0	No
fin.	2	14072	597.99	-4165			1310	0	SLV 12	0	No
ini.	2	2152	-2261.83	4910			1310	0	SLV 1	0	No
fin.	2	-1377	1936.82	5771			1806	713	SLV 1	0.12	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.408	SLV 11	No
V_SLV	0	SLV 1	No
PF_SLU	1.441	SLU 83	Si
V_SLU	0	SLU 1	No

Trave di accoppiamento 50

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-17.768	6.661	4.19	5.07	0.88	-16.768	6.661	4.19	5.07	0.88	1	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fhmmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
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Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-3126	-244.69	1100.1	SLU 78	4.5	Si
fin.	3	-2570	-413.07	1100.1	SLU 78	2.66	Si
ini.	3	-3063	-239.03	1100.1	SLU 74	4.6	Si
fin.	3	-2560	-413.64	1100.1	SLU 74	2.66	Si
ini.	3	-3113	-239.35	1100.1	SLU 81	4.6	Si
fin.	3	-2637	-427.05	1100.1	SLU 81	2.58	Si
ini.	3	-3093	-240.4	1100.1	SLU 79	4.58	Si
fin.	3	-2550	-410.49	1100.1	SLU 79	2.68	Si
ini.	3	-3098	-241.57	1100.1	SLU 80	4.55	Si
fin.	3	-2547	-409.57	1100.1	SLU 80	2.69	Si
ini.	3	-3118	-240.51	1100.1	SLU 82	4.57	Si
fin.	3	-2634	-426.13	1100.1	SLU 82	2.58	Si
ini.	3	-3121	-243.52	1100.1	SLU 77	4.52	Si
fin.	3	-2573	-413.99	1100.1	SLU 77	2.66	Si
ini.	3	-3176	-245	1100.1	SLU 84	4.49	Si
fin.	3	-2648	-426.48	1100.1	SLU 84	2.58	Si
ini.	3	-3068	-240.19	1100.1	SLU 75	4.58	Si
fin.	3	-2557	-412.72	1100.1	SLU 75	2.67	Si
ini.	3	-3171	-243.84	1100.1	SLU 83	4.51	Si
fin.	3	-2651	-427.4	1100.1	SLU 83	2.57	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-3118	-240.51	4762			1932	688	SLU 82	0.14	No
fin.	3	-2634	-426.13	-3779			1762	645	SLU 82	0.17	No
ini.	3	-3176	-245	4860			1953	693	SLU 84	0.14	No
fin.	3	-2648	-426.48	-3813			1767	646	SLU 84	0.17	No
ini.	3	-3068	-240.19	4658			1915	684	SLU 75	0.15	No
fin.	3	-2557	-412.72	-3652			1735	637	SLU 75	0.17	No
ini.	3	-3113	-239.35	4753			1931	688	SLU 81	0.14	No
fin.	3	-2637	-427.05	-3782			1763	645	SLU 81	0.17	No
ini.	3	-3063	-239.03	4649			1913	683	SLU 74	0.15	No
fin.	3	-2560	-413.64	-3656			1736	638	SLU 74	0.17	No
ini.	3	-3171	-243.84	4851			1951	693	SLU 83	0.14	No
fin.	3	-2651	-427.4	-3816			1768	646	SLU 83	0.17	No
ini.	3	-3098	-241.57	4714			1926	687	SLU 80	0.15	No
fin.	3	-2547	-409.57	-3657			1732	636	SLU 80	0.17	No
ini.	3	-3093	-240.4	4705			1924	686	SLU 79	0.15	No
fin.	3	-2550	-410.49	-3661			1733	637	SLU 79	0.17	No
ini.	3	-3126	-244.69	4757			1936	689	SLU 78	0.14	No
fin.	3	-2570	-413.07	-3686			1740	639	SLU 78	0.17	No
ini.	3	-3121	-243.52	4748			1934	688	SLU 77	0.15	No
fin.	3	-2573	-413.99	-3690			1741	639	SLU 77	0.17	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-7186	-904.37	1650.16	SLV 3	1.82	Si
fin.	2	54	759.04	1650.16	SLV 3	2.17	Si
ini.	2	3050	575.25	1650.16	SLV 13	2.87	Si
fin.	2	-3570	-1334.1	1650.16	SLV 13	1.24	Si
ini.	2	-6426	-891.74	1650.16	SLV 2	1.85	Si
fin.	2	1065	961.3	1650.16	SLV 2	1.72	Si
ini.	2	-7186	-904.37	1650.16	SLV 4	1.82	Si
fin.	2	54	759.04	1650.16	SLV 4	2.17	Si
ini.	2	-1913	34.44	1650.16	SLV 11	47.92	Si
fin.	2	-4139	-968.95	1650.16	SLV 11	1.7	Si
ini.	2	-1913	34.44	1650.16	SLV 12	47.92	Si
fin.	2	-4139	-968.95	1650.16	SLV 12	1.7	Si
ini.	2	2290	562.62	1650.16	SLV 15	2.93	Si
fin.	2	-4582	-1536.37	1650.16	SLV 15	1.07	Si
ini.	2	3050	575.25	1650.16	SLV 14	2.87	Si
fin.	2	-3570	-1334.1	1650.16	SLV 14	1.24	Si
ini.	2	-6426	-891.74	1650.16	SLV 1	1.85	Si
fin.	2	1065	961.3	1650.16	SLV 1	1.72	Si
ini.	2	2290	562.62	1650.16	SLV 16	2.93	Si
fin.	2	-4582	-1536.37	1650.16	SLV 16	1.07	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-4755	-405.66	6405			2926	1039	SLV 8	0.16	No
fin.	2	-2748	-280.33	-1949			2220	847	SLV 8	0.43	No
ini.	2	3050	575.25	-3368			1253	0	SLV 13	0	No
fin.	2	-3570	-1334.1	-6973			2509	931	SLV 13	0.13	No
ini.	2	2290	562.62	-2445			1253	0	SLV 15	0	No
fin.	2	-4582	-1536.37	-7526			2865	1024	SLV 15	0.14	No
ini.	2	-6426	-891.74	8593			3514	1175	SLV 1	0.14	No
fin.	2	1065	961.3	2603			1253	173	SLV 1	0.07	No
ini.	2	-4755	-405.66	6405			2926	1039	SLV 7	0.16	No
fin.	2	-2748	-280.33	-1949			2220	847	SLV 7	0.43	No
ini.	2	3050	575.25	-3368			1253	0	SLV 14	0	No
fin.	2	-3570	-1334.1	-6973			2509	931	SLV 14	0.13	No
ini.	2	-7186	-904.37	9515			3782	1232	SLV 3	0.13	No
fin.	2	54	759.04	2049			1253	461	SLV 3	0.22	No
ini.	2	2290	562.62	-2445			1253	0	SLV 16	0	No
fin.	2	-4582	-1536.37	-7526			2865	1024	SLV 16	0.14	No
ini.	2	-6426	-891.74	8593			3514	1175	SLV 2	0.14	No
fin.	2	1065	961.3	2603			1253	173	SLV 2	0.07	No
ini.	2	-7186	-904.37	9515			3782	1232	SLV 4	0.13	No
fin.	2	54	759.04	2049			1253	461	SLV 4	0.22	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.074	SLV 15	Si
V_SLV	0	SLV 13	No
PF_SLU	2.574	SLU 83	Si
V_SLU	0.143	SLU 84	No

Trave di accoppiamento 51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-12.888	6.661	1.39	2.29	0.9	-11.888	6.661	1.39	2.29	0.9	1	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	3042	601.15	1150.68	SLU 77	1.91	Si
fin.	3	3003	465.64	1150.68	SLU 77	2.47	Si
ini.	3	3019	595.8	1150.68	SLU 80	1.93	Si
fin.	3	2979	461.16	1150.68	SLU 80	2.5	Si
ini.	3	3093	604.96	1150.68	SLU 84	1.9	Si
fin.	3	3049	485.15	1150.68	SLU 84	2.37	Si
ini.	3	3088	607.29	1150.68	SLU 83	1.89	Si
fin.	3	3046	483.15	1150.68	SLU 83	2.38	Si
ini.	3	3014	598.13	1150.68	SLU 79	1.92	Si
fin.	3	2976	459.16	1150.68	SLU 79	2.51	Si
ini.	3	3003	584.6	1150.68	SLU 75	1.97	Si
fin.	3	2960	470.31	1150.68	SLU 75	2.45	Si
ini.	3	3047	598.82	1150.68	SLU 78	1.92	Si
fin.	3	3006	467.64	1150.68	SLU 78	2.46	Si
ini.	3	2999	586.93	1150.68	SLU 74	1.96	Si
fin.	3	2957	468.31	1150.68	SLU 74	2.46	Si
ini.	3	3050	590.74	1150.68	SLU 82	1.95	Si
fin.	3	3003	487.81	1150.68	SLU 82	2.36	Si
ini.	3	3045	593.07	1150.68	SLU 81	1.94	Si
fin.	3	2999	485.82	1150.68	SLU 81	2.37	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	2732	531.92	-257			873	0	SLU 53	0	No
fin.	3	2694	423.11	64			873	0	SLU 53	0	No
ini.	3	2780	543.82	-277			873	0	SLU 57	0	No
fin.	3	2744	422.44	57			873	0	SLU 57	0	No
ini.	3	1904	368.46	-158			873	0	SLU 1	0	No
fin.	3	1877	296.19	31			873	0	SLU 1	0	No
ini.	3	2775	546.15	-282			873	0	SLU 56	0	No
fin.	3	2740	420.44	52			873	0	SLU 56	0	No
ini.	3	2747	543.13	-281			873	0	SLU 58	0	No
fin.	3	2713	413.96	43			873	0	SLU 58	0	No
ini.	3	2737	529.59	-252			873	0	SLU 54	0	No
fin.	3	2697	425.1	69			873	0	SLU 54	0	No
ini.	3	2783	535.73	-244			873	0	SLU 61	0	No
fin.	3	2740	442.61	87			873	0	SLU 61	0	No
ini.	3	2778	538.06	-249			873	0	SLU 60	0	No
fin.	3	2737	440.61	82			873	0	SLU 60	0	No
ini.	3	2711	525.02	-248			873	0	SLU 55	0	No
fin.	3	2673	419.96	63			873	0	SLU 55	0	No
ini.	3	2752	540.8	-276			873	0	SLU 59	0	No
fin.	3	2717	415.96	48			873	0	SLU 59	0	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	9345	2518.44	1726.01	SLV 8	0.69	No
fin.	2	8886	3525.17	1726.01	SLV 8	0.49	No
ini.	2	4879	-645.05	1726.01	SLV 4	2.68	Si
fin.	2	3613	2960.42	1726.01	SLV 4	0.58	No
ini.	2	4879	-645.05	1726.01	SLV 3	2.68	Si
fin.	2	3613	2960.42	1726.01	SLV 3	0.58	No
ini.	2	3485	3048.17	1726.01	SLV 15	0.57	No
fin.	2	4653	-724.3	1726.01	SLV 15	2.38	Si
ini.	2	9345	2518.44	1726.01	SLV 7	0.69	No
fin.	2	8886	3525.17	1726.01	SLV 7	0.49	No
ini.	2	8927	3626.4	1726.01	SLV 12	0.48	No
fin.	2	9198	2419.75	1726.01	SLV 12	0.71	No
ini.	2	-5227	-1718.92	1726.01	SLV 9	1	Si
fin.	2	-4828	-2878.53	1726.01	SLV 9	0.6	No
ini.	2	-5227	-1718.92	1726.01	SLV 10	1	Si
fin.	2	-4828	-2878.53	1726.01	SLV 10	0.6	No
ini.	2	3485	3048.17	1726.01	SLV 16	0.57	No
fin.	2	4653	-724.3	1726.01	SLV 16	2.38	Si
ini.	2	8927	3626.4	1726.01	SLV 11	0.48	No



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	2	9198	2419.75	1726.01	SLV 11	0.71	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	8927	3626.4	-2234			1310	0	SLV 11	0	No
fin.	2	9198	2419.75	-634			1310	0	SLV 11	0	No
ini.	2	4879	-645.05	3894			1310	0	SLV 4	0	No
fin.	2	3613	2960.42	4498			1310	0	SLV 4	0	No
ini.	2	633	-2248.65	4350			1310	348	SLV 2	0.08	No
fin.	2	-595	1370.94	4140			1524	598	SLV 2	0.14	No
ini.	2	9345	2518.44	349			1310	0	SLV 7	0	No
fin.	2	8886	3525.17	1928			1310	0	SLV 7	0	No
ini.	2	3485	3048.17	-4716			1310	0	SLV 16	0	No
fin.	2	4653	-724.3	-4041			1310	0	SLV 16	0	No
ini.	2	633	-2248.65	4350			1310	348	SLV 1	0.08	No
fin.	2	-595	1370.94	4140			1524	598	SLV 1	0.14	No
ini.	2	8927	3626.4	-2234			1310	0	SLV 12	0	No
fin.	2	9198	2419.75	-634			1310	0	SLV 12	0	No
ini.	2	4879	-645.05	3894			1310	0	SLV 3	0	No
fin.	2	3613	2960.42	4498			1310	0	SLV 3	0	No
ini.	2	3485	3048.17	-4716			1310	0	SLV 15	0	No
fin.	2	4653	-724.3	-4041			1310	0	SLV 15	0	No
ini.	2	9345	2518.44	349			1310	0	SLV 8	0	No
fin.	2	8886	3525.17	1928			1310	0	SLV 8	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.476	SLV 11	No
V_SLV	0	SLV 3	No
PF_SLU	1.895	SLU 83	Si
V_SLU	0	SLU 1	No

Trave di accoppiamento 52

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-12.888	6.661	4.19	5.07	0.88	-11.888	6.661	4.19	5.07	0.88	1	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-2164	-265.71	1100.1	SLU 78	4.14	Si
fin.	3	-2755	-461.6	1100.1	SLU 78	2.38	Si
ini.	3	-2171	-265.65	1100.1	SLU 74	4.14	Si
fin.	3	-2733	-452.41	1100.1	SLU 74	2.43	Si
ini.	3	-2273	-278.02	1100.1	SLU 82	3.96	Si
fin.	3	-2807	-457.03	1100.1	SLU 82	2.41	Si
ini.	3	-2136	-260.24	1100.1	SLU 79	4.23	Si
fin.	3	-2742	-460.24	1100.1	SLU 79	2.39	Si
ini.	3	-2263	-275.45	1100.1	SLU 83	3.99	Si
fin.	3	-2848	-469.52	1100.1	SLU 83	2.34	Si
ini.	3	-2271	-276.71	1100.1	SLU 81	3.98	Si
fin.	3	-2817	-458.67	1100.1	SLU 81	2.4	Si
ini.	3	-2163	-264.4	1100.1	SLU 77	4.16	Si
fin.	3	-2765	-463.25	1100.1	SLU 77	2.37	Si
ini.	3	-2137	-261.55	1100.1	SLU 80	4.21	Si
fin.	3	-2733	-458.59	1100.1	SLU 80	2.4	Si
ini.	3	-2172	-266.97	1100.1	SLU 75	4.12	Si
fin.	3	-2724	-450.76	1100.1	SLU 75	2.44	Si
ini.	3	-2265	-276.77	1100.1	SLU 84	3.97	Si
fin.	3	-2839	-467.87	1100.1	SLU 84	2.35	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-2273	-278.02	3443			1635	610	SLU 82	0.18	No
fin.	3	-2807	-457.03	-4230			1823	661	SLU 82	0.16	No
ini.	3	-2172	-266.97	3337			1600	600	SLU 75	0.18	No
fin.	3	-2724	-450.76	-4150			1794	653	SLU 75	0.16	No
ini.	3	-2271	-276.71	3434			1635	610	SLU 81	0.18	No
fin.	3	-2817	-458.67	-4237			1827	661	SLU 81	0.16	No
ini.	3	-2263	-275.45	3460			1632	609	SLU 83	0.18	No
fin.	3	-2848	-469.52	-4319			1838	664	SLU 83	0.15	No
ini.	3	-2164	-265.71	3363			1597	599	SLU 78	0.18	No
fin.	3	-2755	-461.6	-4232			1805	656	SLU 78	0.15	No
ini.	3	-2171	-265.65	3329			1599	600	SLU 74	0.18	No
fin.	3	-2733	-452.41	-4157			1797	654	SLU 74	0.16	No
ini.	3	-2137	-261.55	3322			1587	596	SLU 80	0.18	No
fin.	3	-2733	-458.59	-4198			1797	654	SLU 80	0.16	No
ini.	3	-2136	-260.24	3314			1587	596	SLU 79	0.18	No
fin.	3	-2742	-460.24	-4205			1800	655	SLU 79	0.16	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-2163	-264.4	3354			1596	599	SLU 77	0.18	No
fin.	3	-2765	-463.25	-4239			1808	657	SLU 77	0.15	No
ini.	3	-2265	-276.77	3468			1632	609	SLU 84	0.18	No
fin.	3	-2839	-467.87	-4312			1834	663	SLU 84	0.15	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-5278	-1231.94	1650.16	SLV 4	1.34	Si
fin.	2	1177	646.87	1650.16	SLV 4	2.55	Si
ini.	2	2345	872.15	1650.16	SLV 14	1.89	Si
fin.	2	-4859	-1255.76	1650.16	SLV 14	1.31	Si
ini.	2	1652	769.04	1650.16	SLV 15	2.15	Si
fin.	2	-5776	-1412.86	1650.16	SLV 15	1.17	Si
ini.	2	-4585	-1128.83	1650.16	SLV 1	1.46	Si
fin.	2	2094	803.96	1650.16	SLV 1	2.05	Si
ini.	2	-5278	-1231.94	1650.16	SLV 3	1.34	Si
fin.	2	1177	646.87	1650.16	SLV 3	2.55	Si
ini.	2	-1582	-51.59	1650.16	SLV 12	31.98	Si
fin.	2	-4412	-875.23	1650.16	SLV 12	1.89	Si
ini.	2	-4585	-1128.83	1650.16	SLV 2	1.46	Si
fin.	2	2094	803.96	1650.16	SLV 2	2.05	Si
ini.	2	1652	769.04	1650.16	SLV 16	2.15	Si
fin.	2	-5776	-1412.86	1650.16	SLV 16	1.17	Si
ini.	2	2345	872.15	1650.16	SLV 13	1.89	Si
fin.	2	-4859	-1255.76	1650.16	SLV 13	1.31	Si
ini.	2	-1582	-51.59	1650.16	SLV 11	31.98	Si
fin.	2	-4412	-875.23	1650.16	SLV 11	1.89	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	2345	872.15	-3150			1253	0	SLV 13	0	No
fin.	2	-4859	-1255.76	-7592			2963	1048	SLV 13	0.14	No
ini.	2	-5278	-1231.94	7622			3110	1084	SLV 4	0.14	No
fin.	2	1177	646.87	2013			1253	100	SLV 4	0.05	No
ini.	2	-4585	-1128.83	7098			2866	1024	SLV 2	0.14	No
fin.	2	2094	803.96	2805			1253	0	SLV 2	0	No
ini.	2	1652	769.04	-2626			1253	0	SLV 16	0	No
fin.	2	-5776	-1412.86	-8384			3286	1124	SLV 16	0.13	No
ini.	2	-1582	-51.59	1572			1809	712	SLV 11	0.45	No
fin.	2	-4412	-875.23	-5669			2805	1009	SLV 11	0.18	No
ini.	2	-5278	-1231.94	7622			3110	1084	SLV 3	0.14	No
fin.	2	1177	646.87	2013			1253	100	SLV 3	0.05	No
ini.	2	1652	769.04	-2626			1253	0	SLV 15	0	No
fin.	2	-5776	-1412.86	-8384			3286	1124	SLV 15	0.13	No
ini.	2	2345	872.15	-3150			1253	0	SLV 14	0	No
fin.	2	-4859	-1255.76	-7592			2963	1048	SLV 14	0.14	No
ini.	2	-4585	-1128.83	7098			2866	1024	SLV 1	0.14	No
fin.	2	2094	803.96	2805			1253	0	SLV 1	0	No
ini.	2	-1582	-51.59	1572			1809	712	SLV 12	0.45	No
fin.	2	-4412	-875.23	-5669			2805	1009	SLV 12	0.18	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.168	SLV 15	Si
V_SLV	0	SLV 1	No
PF_SLU	2.343	SLU 83	Si
V_SLU	0.154	SLU 83	No

Trave di accoppiamento 53

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-8.008	6.661	1.39	2.29	0.9	-7.008	6.661	1.39	2.29	0.9	1	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{vd}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	3001	369.09	1150.68	SLU 77	3.12	Si
fin.	3	3933	966.83	1150.68	SLU 77	1.19	Si
ini.	3	3114	372.37	1150.68	SLU 82	3.09	Si
fin.	3	4059	961.24	1150.68	SLU 82	1.2	Si
ini.	3	2963	363.22	1150.68	SLU 80	3.17	Si
fin.	3	3882	960.38	1150.68	SLU 80	1.2	Si
ini.	3	3120	376.8	1150.68	SLU 83	3.05	Si
fin.	3	4074	978.55	1150.68	SLU 83	1.18	Si
ini.	3	2965	363.57	1150.68	SLU 79	3.16	Si
fin.	3	3886	961.86	1150.68	SLU 79	1.2	Si
ini.	3	2995	364.65	1150.68	SLU 75	3.16	Si
fin.	3	3917	949.51	1150.68	SLU 75	1.21	Si
ini.	3	2998	365	1150.68	SLU 74	3.15	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	3	3921	950.99	1150.68	SLU 74	1.21	Si
ini.	3	3116	372.71	1150.68	SLU 81	3.09	Si
fin.	3	4062	962.71	1150.68	SLU 81	1.2	Si
ini.	3	2999	368.74	1150.68	SLU 78	3.12	Si
fin.	3	3929	965.35	1150.68	SLU 78	1.19	Si
ini.	3	3117	376.45	1150.68	SLU 84	3.06	Si
fin.	3	4071	977.08	1150.68	SLU 84	1.18	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	2675	326.33	110			873	0	SLU 53	0	No
fin.	3	3503	873.65	521			873	0	SLU 53	0	No
ini.	3	1829	222.76	110			873	0	SLU 1	0	No
fin.	3	2398	618.03	371			873	0	SLU 1	0	No
ini.	3	2640	324.55	121			873	0	SLU 59	0	No
fin.	3	3464	883.05	538			873	0	SLU 59	0	No
ini.	3	2676	330.07	110			873	0	SLU 57	0	No
fin.	3	3512	888.02	539			873	0	SLU 57	0	No
ini.	3	2793	334.04	106			873	0	SLU 60	0	No
fin.	3	3645	885.37	516			873	0	SLU 60	0	No
ini.	3	2791	333.7	106			873	0	SLU 61	0	No
fin.	3	3641	883.9	514			873	0	SLU 61	0	No
ini.	3	2672	325.99	110			873	0	SLU 54	0	No
fin.	3	3500	872.18	520			873	0	SLU 54	0	No
ini.	3	2642	324.9	122			873	0	SLU 58	0	No
fin.	3	3468	884.52	539			873	0	SLU 58	0	No
ini.	3	2635	320.23	120			873	0	SLU 55	0	No
fin.	3	3450	866.23	518			873	0	SLU 55	0	No
ini.	3	2678	330.42	111			873	0	SLU 56	0	No
fin.	3	3515	889.49	540			873	0	SLU 56	0	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	12261	603.29	1726.01	SLV 7	2.86	Si
fin.	2	12356	3684.41	1726.01	SLV 7	0.47	No
ini.	2	6124	2369.62	1726.01	SLV 15	0.73	No
fin.	2	8418	-300.96	1726.01	SLV 15	5.73	Si
ini.	2	12261	603.29	1726.01	SLV 8	2.86	Si
fin.	2	12356	3684.41	1726.01	SLV 8	0.47	No
ini.	2	4239	-1331.09	1726.01	SLV 3	1.3	Si
fin.	2	3180	3129.42	1726.01	SLV 3	0.55	No
ini.	2	6124	2369.62	1726.01	SLV 16	0.73	No
fin.	2	8418	-300.96	1726.01	SLV 16	5.73	Si
ini.	2	12827	1713.51	1726.01	SLV 11	1.01	Si
fin.	2	13927	2655.3	1726.01	SLV 11	0.65	No
ini.	2	4239	-1331.09	1726.01	SLV 4	1.3	Si
fin.	2	3180	3129.42	1726.01	SLV 4	0.55	No
ini.	2	-8208	-112.59	1726.01	SLV 9	15.33	Si
fin.	2	-7052	-2360.78	1726.01	SLV 9	0.73	No
ini.	2	12827	1713.51	1726.01	SLV 12	1.01	Si
fin.	2	13927	2655.3	1726.01	SLV 12	0.65	No
ini.	2	-8208	-112.59	1726.01	SLV 10	15.33	Si
fin.	2	-7052	-2360.78	1726.01	SLV 10	0.73	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	12261	603.29	2757			1310	0	SLV 8	0	No
fin.	2	12356	3684.41	3026			1310	0	SLV 8	0	No
ini.	2	-186	1821.79	-4692			1377	528	SLV 13	0.11	No
fin.	2	2124	-1805.79	-4326			1310	0	SLV 13	0	No
ini.	2	-186	1821.79	-4692			1377	528	SLV 14	0.11	No
fin.	2	2124	-1805.79	-4326			1310	0	SLV 14	0	No
ini.	2	12827	1713.51	131			1310	0	SLV 12	0	No
fin.	2	13927	2655.3	435			1310	0	SLV 12	0	No
ini.	2	4239	-1331.09	4874			1310	0	SLV 4	0	No
fin.	2	3180	3129.42	5113			1310	0	SLV 4	0	No
ini.	2	6124	2369.62	-3880			1310	0	SLV 16	0	No
fin.	2	8418	-300.96	-3524			1310	0	SLV 16	0	No
ini.	2	4239	-1331.09	4874			1310	0	SLV 3	0	No
fin.	2	3180	3129.42	5113			1310	0	SLV 3	0	No
ini.	2	12827	1713.51	131			1310	0	SLV 11	0	No
fin.	2	13927	2655.3	435			1310	0	SLV 11	0	No
ini.	2	6124	2369.62	-3880			1310	0	SLV 15	0	No
fin.	2	8418	-300.96	-3524			1310	0	SLV 15	0	No
ini.	2	12261	603.29	2757			1310	0	SLV 7	0	No
fin.	2	12356	3684.41	3026			1310	0	SLV 7	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.468	SLV 7	No
V_SLV	0	SLV 3	No
PF_SLU	1.176	SLU 83	Si
V_SLU	0	SLU 1	No

Trave di accoppiamento 54

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-8.008	6.661	4.19	5.07	0.88	-7.008	6.661	4.19	5.07	0.88	1	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-3138	-501.43	1100.1	SLU 81	2.19	Si
fin.	3	-2867	-264.48	1100.1	SLU 81	4.16	Si
ini.	3	-3172	-509.47	1100.1	SLU 83	2.16	Si
fin.	3	-2912	-272.5	1100.1	SLU 83	4.04	Si
ini.	3	-3048	-494.11	1100.1	SLU 75	2.23	Si
fin.	3	-2811	-264.7	1100.1	SLU 75	4.16	Si
ini.	3	-3131	-500.71	1100.1	SLU 82	2.2	Si
fin.	3	-2860	-263.88	1100.1	SLU 82	4.17	Si
ini.	3	-3165	-508.75	1100.1	SLU 84	2.16	Si
fin.	3	-2905	-271.9	1100.1	SLU 84	4.05	Si
ini.	3	-3060	-498.54	1100.1	SLU 80	2.21	Si
fin.	3	-2830	-269.87	1100.1	SLU 80	4.08	Si
ini.	3	-3082	-502.16	1100.1	SLU 78	2.19	Si
fin.	3	-2857	-272.72	1100.1	SLU 78	4.03	Si
ini.	3	-3067	-499.26	1100.1	SLU 79	2.2	Si
fin.	3	-2837	-270.47	1100.1	SLU 79	4.07	Si
ini.	3	-3090	-502.88	1100.1	SLU 77	2.19	Si
fin.	3	-2864	-273.32	1100.1	SLU 77	4.02	Si
ini.	3	-3056	-494.83	1100.1	SLU 74	2.22	Si
fin.	3	-2818	-265.3	1100.1	SLU 74	4.15	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-3048	-494.11	5264			1908	682	SLU 75	0.13	No
fin.	3	-2811	-264.7	-2602			1825	661	SLU 75	0.25	No
ini.	3	-3090	-502.88	5315			1923	686	SLU 77	0.13	No
fin.	3	-2864	-273.32	-2636			1843	666	SLU 77	0.25	No
ini.	3	-3138	-501.43	5445			1940	690	SLU 81	0.13	No
fin.	3	-2867	-264.48	-2680			1844	666	SLU 81	0.25	No
ini.	3	-3172	-509.47	5493			1952	693	SLU 83	0.13	No
fin.	3	-2912	-272.5	-2712			1860	670	SLU 83	0.25	No
ini.	3	-3060	-498.54	5262			1912	683	SLU 80	0.13	No
fin.	3	-2830	-269.87	-2603			1831	663	SLU 80	0.25	No
ini.	3	-3165	-508.75	5489			1949	692	SLU 84	0.13	No
fin.	3	-2905	-271.9	-2710			1858	669	SLU 84	0.25	No
ini.	3	-3131	-500.71	5442			1937	689	SLU 82	0.13	No
fin.	3	-2860	-263.88	-2678			1842	665	SLU 82	0.25	No
ini.	3	-3082	-502.16	5311			1920	685	SLU 78	0.13	No
fin.	3	-2857	-272.72	-2634			1841	665	SLU 78	0.25	No
ini.	3	-3067	-499.26	5265			1915	684	SLU 79	0.13	No
fin.	3	-2837	-270.47	-2606			1834	663	SLU 79	0.25	No
ini.	3	-3056	-494.83	5267			1911	683	SLU 74	0.13	No
fin.	3	-2818	-265.3	-2605			1827	662	SLU 74	0.25	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-4532	-1031.99	1650.16	SLV 2	1.6	Si
fin.	2	1702	1131.52	1650.16	SLV 2	1.46	Si
ini.	2	-5488	-1181.3	1650.16	SLV 4	1.4	Si
fin.	2	758	1056.67	1650.16	SLV 4	1.56	Si
ini.	2	-5488	-1181.3	1650.16	SLV 3	1.4	Si
fin.	2	758	1056.67	1650.16	SLV 3	1.56	Si
ini.	2	-4555	-820.01	1650.16	SLV 8	2.01	Si
fin.	2	-2545	78.37	1650.16	SLV 8	21.06	Si
ini.	2	365	348.67	1650.16	SLV 16	4.73	Si
fin.	2	-5536	-1488.97	1650.16	SLV 16	1.11	Si
ini.	2	1321	497.98	1650.16	SLV 14	3.31	Si
fin.	2	-4592	-1414.12	1650.16	SLV 14	1.17	Si
ini.	2	1321	497.98	1650.16	SLV 13	3.31	Si
fin.	2	-4592	-1414.12	1650.16	SLV 13	1.17	Si
ini.	2	365	348.67	1650.16	SLV 15	4.73	Si
fin.	2	-5536	-1488.97	1650.16	SLV 15	1.11	Si
ini.	2	-4555	-820.01	1650.16	SLV 7	2.01	Si
fin.	2	-2545	78.37	1650.16	SLV 7	21.06	Si
ini.	2	-4532	-1031.99	1650.16	SLV 1	1.6	Si
fin.	2	1702	1131.52	1650.16	SLV 1	1.46	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-5488	-1181.3	7942			3184	1101	SLV 3	0.14	No
fin.	2	758	1056.67	3231			1253	292	SLV 3	0.09	No
ini.	2	-4532	-1031.99	7132			2848	1020	SLV 1	0.14	No
fin.	2	1702	1131.52	3842			1253	0	SLV 1	0	No
ini.	2	-5488	-1181.3	7942			3184	1101	SLV 4	0.14	No
fin.	2	758	1056.67	3231			1253	292	SLV 4	0.09	No
ini.	2	365	348.67	-54			1253	395	SLV 15	7.29	Si
fin.	2	-5536	-1488.97	-7310			3201	1105	SLV 15	0.15	No
ini.	2	365	348.67	-54			1253	395	SLV 16	7.29	Si



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	2	-5536	-1488.97	-7310			3201	1105	SLV 16	0.15	No
ini.	2	1321	497.98	-864			1253	0	SLV 13	0	No
fin.	2	-4592	-1414.12	-6700			2869	1025	SLV 13	0.15	No
ini.	2	-4532	-1031.99	7132			2848	1020	SLV 2	0.14	No
fin.	2	1702	1131.52	3842			1253	0	SLV 2	0	No
ini.	2	-4555	-820.01	6087			2856	1022	SLV 7	0.17	No
fin.	2	-2545	78.37	-1171			2149	825	SLV 7	0.7	No
ini.	2	1321	497.98	-864			1253	0	SLV 14	0	No
fin.	2	-4592	-1414.12	-6700			2869	1025	SLV 14	0.15	No
ini.	2	-4555	-820.01	6087			2856	1022	SLV 8	0.17	No
fin.	2	-2545	78.37	-1171			2149	825	SLV 8	0.7	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.108	SLV 15	Si
V_SLV	0	SLV 1	No
PF_SLU	2.159	SLU 83	Si
V_SLU	0.126	SLU 84	No

Trave di accoppiamento 55

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-9.728	1.406	3.49	5.07	1.58	-9.728	2.206	3.49	5.07	1.58	0.8	0.14	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fthk	fvk0	fthmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	19	-159.06	1773.18	SLU 77	11.15	Si
fin.	3	19	-2156.48	1773.18	SLU 77	0.82	No
ini.	3	20	-168.95	1773.18	SLU 84	10.49	Si
fin.	3	20	-2201.34	1773.18	SLU 84	0.81	No
ini.	3	21	-156.65	1773.18	SLU 78	11.32	Si
fin.	3	21	-2136.03	1773.18	SLU 78	0.83	No
ini.	3	20	-154.87	1773.18	SLU 75	11.45	Si
fin.	3	20	-2094.59	1773.18	SLU 75	0.85	No
ini.	3	19	-167.18	1773.18	SLU 82	10.61	Si
fin.	3	19	-2159.89	1773.18	SLU 82	0.82	No
ini.	3	18	-171.37	1773.18	SLU 83	10.35	Si
fin.	3	18	-2221.78	1773.18	SLU 83	0.8	No
ini.	3	21	-156.82	1773.18	SLU 80	11.31	Si
fin.	3	21	-2130.54	1773.18	SLU 80	0.83	No
ini.	3	17	-169.59	1773.18	SLU 81	10.46	Si
fin.	3	17	-2180.34	1773.18	SLU 81	0.81	No
ini.	3	19	-159.24	1773.18	SLU 79	11.14	Si
fin.	3	19	-2150.98	1773.18	SLU 79	0.82	No
ini.	3	18	-157.28	1773.18	SLU 74	11.27	Si
fin.	3	18	-2115.03	1773.18	SLU 74	0.84	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	18	-171.37	-2307			852	317	SLU 83	0.14	No
fin.	3	18	-2221.78	-2791			852	317	SLU 83	0.11	No
ini.	3	20	-168.95	-2284			852	316	SLU 84	0.14	No
fin.	3	20	-2201.34	-2769			852	316	SLU 84	0.11	No
ini.	3	19	-159.24	-2233			852	316	SLU 79	0.14	No
fin.	3	19	-2150.98	-2718			852	316	SLU 79	0.12	No
ini.	3	18	-157.28	-2191			852	317	SLU 74	0.14	No
fin.	3	18	-2115.03	-2676			852	317	SLU 74	0.12	No
ini.	3	19	-159.06	-2241			852	317	SLU 77	0.14	No
fin.	3	19	-2156.48	-2725			852	317	SLU 77	0.12	No
ini.	3	17	-169.59	-2257			852	317	SLU 81	0.14	No
fin.	3	17	-2180.34	-2742			852	317	SLU 81	0.12	No
ini.	3	19	-167.18	-2235			852	316	SLU 82	0.14	No
fin.	3	19	-2159.89	-2719			852	316	SLU 82	0.12	No
ini.	3	21	-156.65	-2218			852	316	SLU 78	0.14	No
fin.	3	21	-2136.03	-2703			852	316	SLU 78	0.12	No
ini.	3	21	-156.82	-2211			852	316	SLU 80	0.14	No
fin.	3	21	-2130.54	-2696			852	316	SLU 80	0.12	No
ini.	3	20	-154.87	-2168			852	316	SLU 75	0.15	No
fin.	3	20	-2094.59	-2653			852	316	SLU 75	0.12	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-84	40.01	2659.77	SLV 9	66.47	Si
fin.	2	202	4692.13	2659.77	SLV 9	0.57	No
ini.	2	26	-77.77	2659.77	SLV 5	34.2	Si
fin.	2	210	3602.04	2659.77	SLV 5	0.74	No
ini.	2	115	-237.98	2659.77	SLV 8	11.18	Si
fin.	2	-171	-7527.13	2659.77	SLV 8	0.35	No



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-84	40.01	2659.77	SLV 10	66.47	Si
fin.	2	202	4692.13	2659.77	SLV 10	0.57	No
ini.	2	212	-319.32	2659.77	SLV 4	8.33	Si
fin.	2	-28	-4903.69	2659.77	SLV 4	0.54	No
ini.	2	6	-120.2	2659.77	SLV 11	22.13	Si
fin.	2	-179	-6437.04	2659.77	SLV 11	0.41	No
ini.	2	115	-237.98	2659.77	SLV 7	11.18	Si
fin.	2	-171	-7527.13	2659.77	SLV 7	0.35	No
ini.	2	212	-319.32	2659.77	SLV 3	8.33	Si
fin.	2	-28	-4903.69	2659.77	SLV 3	0.54	No
ini.	2	6	-120.2	2659.77	SLV 12	22.13	Si
fin.	2	-179	-6437.04	2659.77	SLV 12	0.41	No
ini.	2	26	-77.77	2659.77	SLV 6	34.2	Si
fin.	2	210	3602.04	2659.77	SLV 6	0.74	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	26	-77.77	4649			1278	475	SLV 6	0.1	No
fin.	2	210	3602.04	4341			1278	433	SLV 6	0.1	No
ini.	2	26	-77.77	4649			1278	475	SLV 5	0.1	No
fin.	2	210	3602.04	4341			1278	433	SLV 5	0.1	No
ini.	2	-84	40.01	5959			1311	499	SLV 9	0.08	No
fin.	2	202	4692.13	5617			1278	435	SLV 9	0.08	No
ini.	2	6	-120.2	-7555			1278	480	SLV 12	0.06	No
fin.	2	-179	-6437.04	-7984			1349	518	SLV 12	0.06	No
ini.	2	6	-120.2	-7555			1278	480	SLV 11	0.06	No
fin.	2	-179	-6437.04	-7984			1349	518	SLV 11	0.06	No
ini.	2	212	-319.32	-5662			1278	432	SLV 4	0.08	No
fin.	2	-28	-4903.69	-5989			1289	487	SLV 4	0.08	No
ini.	2	115	-237.98	-8864			1278	455	SLV 7	0.05	No
fin.	2	-171	-7527.13	-9260			1346	517	SLV 7	0.06	No
ini.	2	-84	40.01	5959			1311	499	SLV 10	0.08	No
fin.	2	202	4692.13	5617			1278	435	SLV 10	0.08	No
ini.	2	115	-237.98	-8864			1278	455	SLV 8	0.05	No
fin.	2	-171	-7527.13	-9260			1346	517	SLV 8	0.06	No
ini.	2	212	-319.32	-5662			1278	432	SLV 3	0.08	No
fin.	2	-28	-4903.69	-5989			1289	487	SLV 3	0.08	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.353	SLV 7	No
V_SLV	0.051	SLV 7	No
PF_SLU	0.798	SLU 83	No
V_SLU	0.113	SLU 83	No

Trave di accoppiamento 56

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-8.28	-4.784	4.5	5.07	0.57	-10.12	-4.784	4.5	5.07	0.57	1.84	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fhmmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	465	-116.25	494.52	SLU 44	4.25	Si
fin.	3	246	154.09	494.52	SLU 44	3.21	Si
ini.	3	560	-145.99	494.52	SLU 76	3.39	Si
fin.	3	369	135.73	494.52	SLU 76	3.64	Si
ini.	3	558	-146.03	494.52	SLU 73	3.39	Si
fin.	3	367	132.83	494.52	SLU 73	3.72	Si
ini.	3	519	-132.97	494.52	SLU 55	3.72	Si
fin.	3	315	144.54	494.52	SLU 55	3.42	Si
ini.	3	424	-103.74	494.52	SLU 51	4.77	Si
fin.	3	255	149.34	494.52	SLU 51	3.31	Si
ini.	3	467	-116.21	494.52	SLU 47	4.26	Si
fin.	3	248	156.99	494.52	SLU 47	3.15	Si
ini.	3	429	-105.83	494.52	SLU 49	4.67	Si
fin.	3	251	152.35	494.52	SLU 49	3.25	Si
ini.	3	427	-105.87	494.52	SLU 46	4.67	Si
fin.	3	249	149.44	494.52	SLU 46	3.31	Si
ini.	3	506	-129.27	494.52	SLU 65	3.83	Si
fin.	3	300	145.29	494.52	SLU 65	3.4	Si
ini.	3	508	-129.24	494.52	SLU 68	3.83	Si
fin.	3	303	148.19	494.52	SLU 68	3.34	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	470	-122.08	-223			439	69	SLU 83	0.31	No
fin.	3	408	104	986			439	88	SLU 83	0.09	No
ini.	3	537	-140.74	-223			439	40	SLU 84	0.18	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	3	402	119.84	1014			439	90	SLU 84	0.09	No
ini.	3	520	-135.65	-232			439	49	SLU 75	0.21	No
fin.	3	370	128.18	1016			439	98	SLU 75	0.1	No
ini.	3	455	-116.96	-242			439	74	SLU 77	0.31	No
fin.	3	378	115.25	1009			439	96	SLU 77	0.1	No
ini.	3	522	-135.62	-241			439	48	SLU 78	0.2	No
fin.	3	372	131.09	1037			439	97	SLU 78	0.09	No
ini.	3	560	-145.99	-234			439	22	SLU 76	0.09	No
fin.	3	369	135.73	1029			439	98	SLU 76	0.1	No
ini.	3	450	-114.86	-244			439	76	SLU 79	0.31	No
fin.	3	382	112.25	1003			439	95	SLU 79	0.09	No
ini.	3	535	-140.77	-213			439	41	SLU 82	0.19	No
fin.	3	399	116.93	993			439	90	SLU 82	0.09	No
ini.	3	517	-133.52	-243			439	50	SLU 80	0.21	No
fin.	3	376	128.08	1031			439	96	SLU 80	0.09	No
ini.	3	468	-122.12	-214			439	70	SLU 81	0.33	No
fin.	3	405	101.09	965			439	89	SLU 81	0.09	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	2907	-1063.57	741.78	SLV 16	0.7	No
fin.	2	-2342	1400.93	741.78	SLV 16	0.53	No
ini.	2	-2289	908.67	741.78	SLV 2	0.82	No
fin.	2	2833	-1221.27	741.78	SLV 2	0.61	No
ini.	2	3360	-1299.09	741.78	SLV 13	0.57	No
fin.	2	-2457	1675.54	741.78	SLV 13	0.44	No
ini.	2	-2743	1144.19	741.78	SLV 4	0.65	No
fin.	2	2948	-1495.88	741.78	SLV 4	0.5	No
ini.	2	1912	-801.15	741.78	SLV 10	0.93	No
fin.	2	-739	982.03	741.78	SLV 10	0.76	No
ini.	2	3360	-1299.09	741.78	SLV 14	0.57	No
fin.	2	-2457	1675.54	741.78	SLV 14	0.44	No
ini.	2	-2743	1144.19	741.78	SLV 3	0.65	No
fin.	2	2948	-1495.88	741.78	SLV 3	0.5	No
ini.	2	-2289	908.67	741.78	SLV 1	0.82	No
fin.	2	2833	-1221.27	741.78	SLV 1	0.61	No
ini.	2	2907	-1063.57	741.78	SLV 15	0.7	No
fin.	2	-2342	1400.93	741.78	SLV 15	0.53	No
ini.	2	1912	-801.15	741.78	SLV 9	0.93	No
fin.	2	-739	982.03	741.78	SLV 9	0.76	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	3360	-1299.09	1065			659	0	SLV 14	0	No
fin.	2	-2457	1675.54	1864			1314	488	SLV 14	0.26	No
ini.	2	-2289	908.67	-1510			1269	475	SLV 2	0.31	No
fin.	2	2833	-1221.27	244			659	0	SLV 2	0	No
ini.	2	-1295	646.25	-468			1004	393	SLV 7	0.84	No
fin.	2	1230	-802.37	-580			659	0	SLV 7	0	No
ini.	2	-2289	908.67	-1510			1269	475	SLV 1	0.31	No
fin.	2	2833	-1221.27	244			659	0	SLV 1	0	No
ini.	2	-2743	1144.19	-1445			1390	508	SLV 3	0.35	No
fin.	2	2948	-1495.88	-398			659	0	SLV 3	0	No
ini.	2	-2743	1144.19	-1445			1390	508	SLV 4	0.35	No
fin.	2	2948	-1495.88	-398			659	0	SLV 4	0	No
ini.	2	1912	-801.15	88			659	0	SLV 9	0	No
fin.	2	-739	982.03	2046			856	338	SLV 9	0.17	No
ini.	2	1912	-801.15	88			659	0	SLV 10	0	No
fin.	2	-739	982.03	2046			856	338	SLV 10	0.17	No
ini.	2	3360	-1299.09	1065			659	0	SLV 13	0	No
fin.	2	-2457	1675.54	1864			1314	488	SLV 13	0.26	No
ini.	2	-1295	646.25	-468			1004	393	SLV 8	0.84	No
fin.	2	1230	-802.37	-580			659	0	SLV 8	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.443	SLV 13	No
V_SLV	0	SLV 1	No
PF_SLU	3.15	SLU 47	Si
V_SLU	0.089	SLU 84	No

Trave di accoppiamento 57

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-8.548	-3.359	3.49	5.07	1.58	-9.448	-3.359	3.49	5.07	1.58	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
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Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-2691	-1007.97	3546.36	SLU 73	3.52	Si
fin.	3	-2691	-531.92	3546.36	SLU 73	6.67	Si
ini.	3	-2537	-1046.55	3546.36	SLU 55	3.39	Si
fin.	3	-2537	-495.45	3546.36	SLU 55	7.16	Si
ini.	3	-2514	-1033.51	3546.36	SLU 52	3.43	Si
fin.	3	-2514	-484.58	3546.36	SLU 52	7.32	Si
ini.	3	-2531	-1030.38	3546.36	SLU 68	3.44	Si
fin.	3	-2531	-530.18	3546.36	SLU 68	6.69	Si
ini.	3	-2354	-1055.92	3546.36	SLU 47	3.36	Si
fin.	3	-2354	-482.84	3546.36	SLU 47	7.34	Si
ini.	3	-2302	-1014.66	3546.36	SLU 51	3.5	Si
fin.	3	-2302	-360.82	3546.36	SLU 51	9.83	Si
ini.	3	-2312	-1015.95	3546.36	SLU 49	3.49	Si
fin.	3	-2312	-372.61	3546.36	SLU 49	9.52	Si
ini.	3	-2508	-1017.34	3546.36	SLU 65	3.49	Si
fin.	3	-2508	-519.31	3546.36	SLU 65	6.83	Si
ini.	3	-2714	-1021.02	3546.36	SLU 76	3.47	Si
fin.	3	-2714	-542.79	3546.36	SLU 76	6.53	Si
ini.	3	-2331	-1042.88	3546.36	SLU 44	3.4	Si
fin.	3	-2331	-471.97	3546.36	SLU 44	7.51	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-2361	-912.09	1680			2648	1034	SLU 53	0.62	No
fin.	3	-2361	-175.04	-97			2648	1034	SLU 53	10.65	Si
ini.	3	-2550	-898.31	1765			2724	1059	SLU 79	0.6	No
fin.	3	-2550	-221.45	-315			2724	1059	SLU 79	3.36	Si
ini.	3	-2429	-906.79	1760			2675	1043	SLU 62	0.59	No
fin.	3	-2429	-168.65	-175			2675	1043	SLU 62	5.97	Si
ini.	3	-2561	-899.59	1753			2728	1061	SLU 77	0.61	No
fin.	3	-2561	-233.24	-327			2728	1061	SLU 77	3.24	Si
ini.	3	-2373	-923.85	1694			2653	1036	SLU 58	0.61	No
fin.	3	-2373	-174.11	-83			2653	1036	SLU 58	12.47	Si
ini.	3	-2606	-881.25	1830			2746	1067	SLU 83	0.58	No
fin.	3	-2606	-215.99	-407			2746	1067	SLU 83	2.62	Si
ini.	3	-2538	-886.55	1751			2719	1058	SLU 74	0.6	No
fin.	3	-2538	-222.38	-330			2719	1058	SLU 74	3.21	Si
ini.	3	-2406	-893.75	1757			2666	1040	SLU 60	0.59	No
fin.	3	-2406	-157.79	-177			2666	1040	SLU 60	5.87	Si
ini.	3	-2583	-868.21	1828			2737	1064	SLU 81	0.58	No
fin.	3	-2583	-205.13	-409			2737	1064	SLU 81	2.6	Si
ini.	3	-2384	-925.13	1682			2657	1037	SLU 56	0.62	No
fin.	3	-2384	-185.9	-95			2657	1037	SLU 56	10.95	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-2599	4134.67	5319.53	SLV 2	1.29	Si
fin.	2	-2848	-6178.74	5319.53	SLV 2	0.86	No
ini.	2	-4516	7.64	5319.53	SLV 5	696.37	Si
fin.	2	-4310	-3913.74	5319.53	SLV 5	1.36	Si
ini.	2	-966	4633.14	5319.53	SLV 3	1.15	Si
fin.	2	-1400	-4883.71	5319.53	SLV 3	1.09	Si
ini.	2	-2632	-5995.3	5319.53	SLV 14	0.89	No
fin.	2	-2198	4609.45	5319.53	SLV 14	1.15	Si
ini.	2	-2599	4134.67	5319.53	SLV 1	1.29	Si
fin.	2	-2848	-6178.74	5319.53	SLV 1	0.86	No
ini.	2	-2632	-5995.3	5319.53	SLV 13	0.89	No
fin.	2	-2198	4609.45	5319.53	SLV 13	1.15	Si
ini.	2	-966	4633.14	5319.53	SLV 4	1.15	Si
fin.	2	-1400	-4883.71	5319.53	SLV 4	1.09	Si
ini.	2	-999	-5496.84	5319.53	SLV 15	0.97	No
fin.	2	-750	5904.48	5319.53	SLV 15	0.9	No
ini.	2	-999	-5496.84	5319.53	SLV 16	0.97	No
fin.	2	-750	5904.48	5319.53	SLV 16	0.9	No
ini.	2	-4516	7.64	5319.53	SLV 6	696.37	Si
fin.	2	-4310	-3913.74	5319.53	SLV 6	1.36	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-999	-5496.84	12739			2955	1159	SLV 15	0.09	No
fin.	2	-750	5904.48	12023			2856	1113	SLV 15	0.09	No
ini.	2	-2632	-5995.3	12625			3609	1423	SLV 13	0.11	No
fin.	2	-2198	4609.45	11164			3435	1358	SLV 13	0.12	No
ini.	2	-2599	4134.67	-10217			3595	1418	SLV 2	0.14	No
fin.	2	-2848	-6178.74	-12212			3695	1455	SLV 2	0.12	No
ini.	2	-2599	4134.67	-10217			3595	1418	SLV 1	0.14	No
fin.	2	-2848	-6178.74	-12212			3695	1455	SLV 1	0.12	No
ini.	2	-999	-5496.84	12739			2955	1159	SLV 16	0.09	No
fin.	2	-750	5904.48	12023			2856	1113	SLV 16	0.09	No
ini.	2	-966	4633.14	-10103			2942	1153	SLV 4	0.11	No
fin.	2	-1400	-4883.71	-11353			3116	1229	SLV 4	0.11	No
ini.	2	918	-1369.81	4878			2556	736	SLV 12	0.15	No
fin.	2	712	3639.48	4843			2556	792	SLV 12	0.16	No
ini.	2	-966	4633.14	-10103			2942	1153	SLV 3	0.11	No
fin.	2	-1400	-4883.71	-11353			3116	1229	SLV 3	0.11	No
ini.	2	-2632	-5995.3	12625			3609	1423	SLV 14	0.11	No
fin.	2	-2198	4609.45	11164			3435	1358	SLV 14	0.12	No
ini.	2	918	-1369.81	4878			2556	736	SLV 11	0.15	No
fin.	2	712	3639.48	4843			2556	792	SLV 11	0.16	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.861	SLV 1	No
V_SLV	0.091	SLV 15	No
PF_SLU	3.359	SLU 47	Si
V_SLU	0.582	SLU 81	No

Trave di accoppiamento 58

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-7.723	-3.499	4.5	5.07	0.57	-7.723	-4.589	4.5	5.07	0.57	1.09	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	52	-60.01	494.52	SLU 76	8.24	Si
fin.	3	-19	5.97	494.52	SLU 76	82.85	Si
ini.	3	57	-55.34	494.52	SLU 55	8.94	Si
fin.	3	-18	13.04	494.52	SLU 55	37.94	Si
ini.	3	68	-57.62	494.52	SLU 34	8.58	Si
fin.	3	-1	11.42	494.52	SLU 34	43.3	Si
ini.	3	73	-52.95	494.52	SLU 13	9.34	Si
fin.	3	-1	18.49	494.52	SLU 13	26.75	Si
ini.	3	58	-54.27	494.52	SLU 65	9.11	Si
fin.	3	-16	14.18	494.52	SLU 65	34.89	Si
ini.	3	58	-55.09	494.52	SLU 68	8.98	Si
fin.	3	-16	12.54	494.52	SLU 68	39.43	Si
ini.	3	69	-56.8	494.52	SLU 31	8.71	Si
fin.	3	-1	13.05	494.52	SLU 31	37.88	Si
ini.	3	74	-52.7	494.52	SLU 26	9.38	Si
fin.	3	1	17.99	494.52	SLU 26	27.49	Si
ini.	3	58	-54.52	494.52	SLU 52	9.07	Si
fin.	3	-18	14.67	494.52	SLU 52	33.71	Si
ini.	3	53	-59.19	494.52	SLU 73	8.36	Si
fin.	3	-19	7.6	494.52	SLU 73	65.04	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	62	-50.42	332			439	156	SLU 47	0.47	No
fin.	3	-16	19.61	-38			443	167	SLU 47	4.47	Si
ini.	3	58	-54.52	332			439	157	SLU 52	0.47	No
fin.	3	-18	14.67	-23			444	168	SLU 52	7.32	Si
ini.	3	58	-54.27	331			439	157	SLU 65	0.47	No
fin.	3	-16	14.18	-26			443	168	SLU 65	6.37	Si
ini.	3	79	-47.21	281			439	153	SLU 2	0.55	No
fin.	3	2	26.69	-20			439	165	SLU 2	8.12	Si
ini.	3	57	-55.34	331			439	157	SLU 55	0.47	No
fin.	3	-18	13.04	-21			444	168	SLU 55	7.97	Si
ini.	3	52	-60.01	330			439	157	SLU 76	0.48	No
fin.	3	-19	5.97	-8			444	168	SLU 76	21	Si
ini.	3	53	-59.19	330			439	157	SLU 73	0.48	No
fin.	3	-19	7.6	-10			444	168	SLU 73	17.04	Si
ini.	3	58	-55.09	330			439	157	SLU 68	0.47	No
fin.	3	-16	12.54	-24			443	168	SLU 68	6.85	Si
ini.	3	63	-49.6	332			439	156	SLU 44	0.47	No
fin.	3	-16	21.24	-39			443	167	SLU 44	4.25	Si
ini.	3	78	-48.03	281			439	153	SLU 5	0.55	No
fin.	3	1	25.06	-18			439	165	SLU 5	8.94	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	177	-208.04	741.78	SLV 12	3.57	Si
fin.	2	-77	783.72	741.78	SLV 12	0.95	No
ini.	2	-270	155.84	741.78	SLV 9	4.76	Si
fin.	2	-304	-651.13	741.78	SLV 9	1.14	Si
ini.	2	147	-187.91	741.78	SLV 7	3.95	Si
fin.	2	185	590.85	741.78	SLV 7	1.26	Si
ini.	2	-270	155.84	741.78	SLV 10	4.76	Si
fin.	2	-304	-651.13	741.78	SLV 10	1.14	Si
ini.	2	-300	175.96	741.78	SLV 6	4.22	Si
fin.	2	-42	-844	741.78	SLV 6	0.88	No
ini.	2	-179	72.08	741.78	SLV 2	10.29	Si
fin.	2	343	-566.83	741.78	SLV 2	1.31	Si
ini.	2	177	-208.04	741.78	SLV 11	3.57	Si
fin.	2	-77	783.72	741.78	SLV 11	0.95	No
ini.	2	-179	72.08	741.78	SLV 1	10.29	Si
fin.	2	343	-566.83	741.78	SLV 1	1.31	Si
ini.	2	147	-187.91	741.78	SLV 8	3.95	Si
fin.	2	185	590.85	741.78	SLV 8	1.26	Si
ini.	2	-300	175.96	741.78	SLV 5	4.22	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	2	-42	-844	741.78	SLV 5	0.88	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	147	-187.91	1544			659	226	SLV 7	0.15	No
fin.	2	185	590.85	312			659	219	SLV 7	0.7	No
ini.	2	55	-104.16	634			659	240	SLV 15	0.38	No
fin.	2	-461	506.55	251			782	308	SLV 15	1.22	Si
ini.	2	-270	155.84	-1208			731	284	SLV 10	0.24	No
fin.	2	-304	-651.13	-392			740	289	SLV 10	0.74	No
ini.	2	-300	175.96	-1238			739	288	SLV 5	0.23	No
fin.	2	-42	-844	-494			670	254	SLV 5	0.51	No
ini.	2	55	-104.16	634			659	240	SLV 16	0.38	No
fin.	2	-461	506.55	251			782	308	SLV 16	1.22	Si
ini.	2	-300	175.96	-1238			739	288	SLV 6	0.23	No
fin.	2	-42	-844	-494			670	254	SLV 6	0.51	No
ini.	2	177	-208.04	1573			659	221	SLV 11	0.14	No
fin.	2	-77	783.72	414			679	259	SLV 11	0.62	No
ini.	2	147	-187.91	1544			659	226	SLV 8	0.15	No
fin.	2	185	590.85	312			659	219	SLV 8	0.7	No
ini.	2	-270	155.84	-1208			731	284	SLV 9	0.24	No
fin.	2	-304	-651.13	-392			740	289	SLV 9	0.74	No
ini.	2	177	-208.04	1573			659	221	SLV 12	0.14	No
fin.	2	-77	783.72	414			679	259	SLV 12	0.62	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.879	SLV 5	No
V_SLV	0.14	SLV 11	No
PF_SLU	8.241	SLU 76	Si
V_SLU	0.469	SLU 44	No

Trave di accoppiamento 59

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-5.158	6.006	1.39	3.39	2	-5.158	6.506	1.39	3.39	2	0.5	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	708	-3052.91	5682.35	SLU 74	1.86	Si
fin.	3	-477	-1777.74	5682.35	SLU 74	3.2	Si
ini.	3	739	-3174.83	5682.35	SLU 83	1.79	Si
fin.	3	-497	-1837.49	5682.35	SLU 83	3.09	Si
ini.	3	713	-3072.45	5682.35	SLU 77	1.85	Si
fin.	3	-475	-1805.24	5682.35	SLU 77	3.15	Si
ini.	3	705	-3052.77	5682.35	SLU 75	1.86	Si
fin.	3	-476	-1774.82	5682.35	SLU 75	3.2	Si
ini.	3	734	-3155.28	5682.35	SLU 81	1.8	Si
fin.	3	-498	-1809.99	5682.35	SLU 81	3.14	Si
ini.	3	732	-3155.14	5682.35	SLU 82	1.8	Si
fin.	3	-498	-1807.08	5682.35	SLU 82	3.14	Si
ini.	3	737	-3174.69	5682.35	SLU 84	1.79	Si
fin.	3	-497	-1834.58	5682.35	SLU 84	3.1	Si
ini.	3	703	-3035.05	5682.35	SLU 80	1.87	Si
fin.	3	-467	-1788.02	5682.35	SLU 80	3.18	Si
ini.	3	710	-3072.31	5682.35	SLU 78	1.85	Si
fin.	3	-475	-1802.32	5682.35	SLU 78	3.15	Si
ini.	3	706	-3035.19	5682.35	SLU 79	1.87	Si
fin.	3	-468	-1790.94	5682.35	SLU 79	3.17	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	739	-3174.83	-2371			2157	631	SLU 83	0.27	No
fin.	3	-497	-1837.49	18290			2355	913	SLU 83	0.05	No
ini.	3	713	-3072.45	-2470			2157	638	SLU 77	0.26	No
fin.	3	-475	-1805.24	17815			2347	909	SLU 77	0.05	No
ini.	3	732	-3155.14	-2231			2157	633	SLU 82	0.28	No
fin.	3	-498	-1807.08	18093			2356	913	SLU 82	0.05	No
ini.	3	705	-3052.77	-2330			2157	640	SLU 75	0.27	No
fin.	3	-476	-1774.82	17618			2347	909	SLU 75	0.05	No
ini.	3	734	-3155.28	-2253			2157	632	SLU 81	0.28	No
fin.	3	-498	-1809.99	18119			2356	914	SLU 81	0.05	No
ini.	3	708	-3052.91	-2352			2157	639	SLU 74	0.27	No
fin.	3	-477	-1777.74	17644			2347	909	SLU 74	0.05	No
ini.	3	703	-3035.05	-2464			2157	641	SLU 80	0.26	No
fin.	3	-467	-1788.02	17610			2344	908	SLU 80	0.05	No
ini.	3	706	-3035.19	-2485			2157	640	SLU 79	0.26	No
fin.	3	-468	-1790.94	17636			2344	908	SLU 79	0.05	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	710	-3072.31	-2448			2157	639	SLU 78	0.26	No
fin.	3	-475	-1802.32	17789			2347	909	SLU 78	0.05	No
ini.	3	737	-3174.69	-2349			2157	631	SLU 84	0.27	No
fin.	3	-497	-1834.58	18264			2355	913	SLU 84	0.05	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	1260	-5792.24	8523.53	SLV 13	1.47	Si
fin.	2	-886	-1580.63	8523.53	SLV 13	5.39	Si
ini.	2	1337	-4217.82	8523.53	SLV 9	2.02	Si
fin.	2	-47	-880.79	8523.53	SLV 9	9.68	Si
ini.	2	847	-5104.14	8523.53	SLV 15	1.67	Si
fin.	2	-1178	-1873.22	8523.53	SLV 15	4.55	Si
ini.	2	1337	-4217.82	8523.53	SLV 10	2.02	Si
fin.	2	-47	-880.79	8523.53	SLV 10	9.68	Si
ini.	2	990	-2180.2	8523.53	SLV 6	3.91	Si
fin.	2	381	-573.51	8523.53	SLV 6	14.86	Si
ini.	2	-40	-1924.12	8523.53	SLV 11	4.43	Si
fin.	2	-1018	-1856.1	8523.53	SLV 11	4.59	Si
ini.	2	847	-5104.14	8523.53	SLV 16	1.67	Si
fin.	2	-1178	-1873.22	8523.53	SLV 16	4.55	Si
ini.	2	1260	-5792.24	8523.53	SLV 14	1.47	Si
fin.	2	-886	-1580.63	8523.53	SLV 14	5.39	Si
ini.	2	-40	-1924.12	8523.53	SLV 12	4.43	Si
fin.	2	-1018	-1856.1	8523.53	SLV 12	4.59	Si
ini.	2	990	-2180.2	8523.53	SLV 5	3.91	Si
fin.	2	381	-573.51	8523.53	SLV 5	14.86	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	847	-5104.14	5228			3235	1017	SLV 15	0.19	No
fin.	2	-1178	-1873.22	23379			3706	1451	SLV 15	0.06	No
ini.	2	847	-5104.14	5228			3235	1017	SLV 16	0.19	No
fin.	2	-1178	-1873.22	23379			3706	1451	SLV 16	0.06	No
ini.	2	-40	-1924.12	-2742			3251	1226	SLV 11	0.45	No
fin.	2	-1018	-1856.1	18225			3642	1422	SLV 11	0.08	No
ini.	2	1337	-4217.82	4112			3235	880	SLV 10	0.21	No
fin.	2	-47	-880.79	12017			3254	1228	SLV 10	0.1	No
ini.	2	1260	-5792.24	7284			3235	903	SLV 14	0.12	No
fin.	2	-886	-1580.63	21517			3590	1397	SLV 14	0.06	No
ini.	2	-387	113.5	-7518			3390	1299	SLV 7	0.17	No
fin.	2	-590	-1548.83	11944			3471	1339	SLV 7	0.11	No
ini.	2	1260	-5792.24	7284			3235	903	SLV 13	0.12	No
fin.	2	-886	-1580.63	21517			3590	1397	SLV 13	0.06	No
ini.	2	-40	-1924.12	-2742			3251	1226	SLV 12	0.45	No
fin.	2	-1018	-1856.1	18225			3642	1422	SLV 12	0.08	No
ini.	2	1337	-4217.82	4112			3235	880	SLV 9	0.21	No
fin.	2	-47	-880.79	12017			3254	1228	SLV 9	0.1	No
ini.	2	-387	113.5	-7518			3390	1299	SLV 8	0.17	No
fin.	2	-590	-1548.83	11944			3471	1339	SLV 8	0.11	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.472	SLV 13	Si
V_SLV	0.062	SLV 15	No
PF_SLU	1.79	SLU 83	Si
V_SLU	0.05	SLU 83	No

Trave di accoppiamento 60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-5.158	6.006	4.19	5.07	0.88	-5.158	6.506	4.19	5.07	0.88	0.5	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fkhmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-580	-472.97	1100.1	SLU 78	2.33	Si
fin.	3	-29	278.29	1100.1	SLU 78	3.95	Si
ini.	3	-621	-485.17	1100.1	SLU 74	2.27	Si
fin.	3	-50	278.5	1100.1	SLU 74	3.95	Si
ini.	3	-707	-524.36	1100.1	SLU 81	2.1	Si
fin.	3	-83	289.77	1100.1	SLU 81	3.8	Si
ini.	3	-707	-525.28	1100.1	SLU 82	2.09	Si
fin.	3	-84	289.52	1100.1	SLU 82	3.8	Si
ini.	3	-580	-472.05	1100.1	SLU 77	2.33	Si
fin.	3	-29	278.54	1100.1	SLU 77	3.95	Si
ini.	3	-666	-511.24	1100.1	SLU 83	2.15	Si
fin.	3	-62	289.8	1100.1	SLU 83	3.8	Si
ini.	3	-666	-512.16	1100.1	SLU 84	2.15	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	3	-63	289.56	1100.1	SLU 84	3.8	Si
ini.	3	-621	-486.1	1100.1	SLU 75	2.26	Si
fin.	3	-50	278.25	1100.1	SLU 75	3.95	Si
ini.	3	-638	-487.3	1100.1	SLU 73	2.26	Si
fin.	3	-64	274.27	1100.1	SLU 73	4.01	Si
ini.	3	-597	-474.18	1100.1	SLU 76	2.32	Si
fin.	3	-43	274.3	1100.1	SLU 76	4.01	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-707	-525.28	3328			1232	487	SLU 82	0.15	No
fin.	3	-84	289.52	512			982	375	SLU 82	0.73	No
ini.	3	-707	-524.36	3330			1232	487	SLU 81	0.15	No
fin.	3	-83	289.77	508			982	375	SLU 81	0.74	No
ini.	3	-621	-486.1	3215			1197	473	SLU 75	0.15	No
fin.	3	-50	278.25	311			969	368	SLU 75	1.18	Si
ini.	3	-580	-472.05	3227			1181	466	SLU 77	0.14	No
fin.	3	-29	278.54	184			960	363	SLU 77	1.98	Si
ini.	3	-666	-511.24	3340			1215	481	SLU 83	0.14	No
fin.	3	-62	289.8	384			974	370	SLU 83	0.96	No
ini.	3	-556	-460.44	3179			1171	462	SLU 80	0.15	No
fin.	3	-21	274.51	140			957	362	SLU 80	2.58	Si
ini.	3	-580	-472.97	3225			1181	466	SLU 78	0.14	No
fin.	3	-29	278.29	188			961	363	SLU 78	1.93	Si
ini.	3	-556	-459.51	3181			1171	462	SLU 79	0.15	No
fin.	3	-21	274.76	136			957	362	SLU 79	2.65	Si
ini.	3	-666	-512.16	3338			1215	481	SLU 84	0.14	No
fin.	3	-63	289.56	388			974	370	SLU 84	0.95	No
ini.	3	-621	-485.17	3217			1197	473	SLU 74	0.15	No
fin.	3	-50	278.5	307			969	368	SLU 74	1.2	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	2182	1117.54	1650.16	SLV 3	1.48	Si
fin.	2	891	-146.13	1650.16	SLV 3	11.29	Si
ini.	2	-2372	-1501.3	1650.16	SLV 16	1.1	Si
fin.	2	-626	479.43	1650.16	SLV 16	3.44	Si
ini.	2	-2050	-1117.59	1650.16	SLV 10	1.48	Si
fin.	2	-750	351.19	1650.16	SLV 10	4.7	Si
ini.	2	-2372	-1501.3	1650.16	SLV 15	1.1	Si
fin.	2	-626	479.43	1650.16	SLV 15	3.44	Si
ini.	2	-2959	-1747.25	1650.16	SLV 14	0.94	No
fin.	2	-928	521.29	1650.16	SLV 14	3.17	Si
ini.	2	-2959	-1747.25	1650.16	SLV 13	0.94	No
fin.	2	-928	521.29	1650.16	SLV 13	3.17	Si
ini.	2	1595	871.6	1650.16	SLV 1	1.89	Si
fin.	2	588	-104.26	1650.16	SLV 1	15.83	Si
ini.	2	-2050	-1117.59	1650.16	SLV 9	1.48	Si
fin.	2	-750	351.19	1650.16	SLV 9	4.7	Si
ini.	2	2182	1117.54	1650.16	SLV 4	1.48	Si
fin.	2	891	-146.13	1650.16	SLV 4	11.29	Si
ini.	2	1595	871.6	1650.16	SLV 2	1.89	Si
fin.	2	588	-104.26	1650.16	SLV 2	15.83	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	1273	487.88	967			1423	0	SLV 8	0	No
fin.	2	712	23.98	-3770			1423	348	SLV 8	0.09	No
ini.	2	2182	1117.54	-1656			1423	0	SLV 3	0	No
fin.	2	891	-146.13	-6632			1423	282	SLV 3	0.04	No
ini.	2	-2372	-1501.3	5953			2372	916	SLV 15	0.15	No
fin.	2	-626	479.43	5637			1674	658	SLV 15	0.12	No
ini.	2	2182	1117.54	-1656			1423	0	SLV 4	0	No
fin.	2	891	-146.13	-6632			1423	282	SLV 4	0.04	No
ini.	2	-2372	-1501.3	5953			2372	916	SLV 16	0.15	No
fin.	2	-626	479.43	5637			1674	658	SLV 16	0.12	No
ini.	2	1595	871.6	-1622			1423	0	SLV 2	0	No
fin.	2	588	-104.26	-5404			1423	387	SLV 2	0.07	No
ini.	2	-2959	-1747.25	5987			2607	988	SLV 14	0.17	No
fin.	2	-928	521.29	6865			1795	709	SLV 14	0.1	No
ini.	2	1273	487.88	967			1423	0	SLV 7	0	No
fin.	2	712	23.98	-3770			1423	348	SLV 7	0.09	No
ini.	2	1595	871.6	-1622			1423	0	SLV 1	0	No
fin.	2	588	-104.26	-5404			1423	387	SLV 1	0.07	No
ini.	2	-2959	-1747.25	5987			2607	988	SLV 13	0.17	No
fin.	2	-928	521.29	6865			1795	709	SLV 13	0.1	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.944	SLV 13	No
V_SLV	0	SLV 1	No
PF_SLU	2.094	SLU 82	Si
V_SLU	0.144	SLU 83	No

Trave di accoppiamento 61

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-6.463	-3.359	1.39	2.29	0.9	-7.463	-3.359	1.39	2.29	0.9	1	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-4437	-2127.14	1150.68	SLU 84	0.54	No
fin.	3	-3602	-328.13	1150.68	SLU 84	3.51	Si
ini.	3	-4802	-1960.83	1150.68	SLU 68	0.59	No
fin.	3	-3581	-383.33	1150.68	SLU 68	3	Si
ini.	3	-4391	-2062.77	1150.68	SLU 80	0.56	No
fin.	3	-3541	-333.42	1150.68	SLU 80	3.45	Si
ini.	3	-4740	-1964.19	1150.68	SLU 52	0.59	No
fin.	3	-3549	-357.3	1150.68	SLU 52	3.22	Si
ini.	3	-4389	-2104.29	1150.68	SLU 82	0.55	No
fin.	3	-3560	-321.31	1150.68	SLU 82	3.58	Si
ini.	3	-5023	-2164.33	1150.68	SLU 76	0.53	No
fin.	3	-3820	-386.91	1150.68	SLU 76	2.97	Si
ini.	3	-4974	-2141.48	1150.68	SLU 73	0.54	No
fin.	3	-3778	-380.09	1150.68	SLU 73	3.03	Si
ini.	3	-4418	-2072.85	1150.68	SLU 78	0.56	No
fin.	3	-3560	-339.39	1150.68	SLU 78	3.39	Si
ini.	3	-4788	-1987.05	1150.68	SLU 55	0.58	No
fin.	3	-3591	-364.12	1150.68	SLU 55	3.16	Si
ini.	3	-4369	-2049.99	1150.68	SLU 75	0.56	No
fin.	3	-3518	-332.57	1150.68	SLU 75	3.46	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-3135	-1740.38	648			2002	715	SLU 60	1.1	Si
fin.	3	-2851	-208.06	2037			1900	689	SLU 60	0.34	No
ini.	3	-2780	-1629.89	630			1874	682	SLU 39	1.08	Si
fin.	3	-2560	-190.03	1952			1795	661	SLU 39	0.34	No
ini.	3	-3418	-1940.52	716			2104	740	SLU 83	1.03	Si
fin.	3	-3121	-237.67	2295			1997	714	SLU 83	0.31	No
ini.	3	-3183	-1763.23	645			2019	719	SLU 62	1.12	Si
fin.	3	-2892	-214.88	2065			1915	693	SLU 62	0.34	No
ini.	3	-2829	-1652.74	627			1892	687	SLU 41	1.1	Si
fin.	3	-2602	-196.84	1981			1810	665	SLU 41	0.34	No
ini.	3	-3369	-1917.67	719			2086	736	SLU 81	1.02	Si
fin.	3	-3079	-230.85	2267			1982	710	SLU 81	0.31	No
ini.	3	-3372	-1876.16	659			2087	736	SLU 79	1.12	Si
fin.	3	-3060	-242.95	2201			1975	708	SLU 79	0.32	No
ini.	3	-3350	-1863.37	655			2079	734	SLU 74	1.12	Si
fin.	3	-3038	-242.1	2181			1967	706	SLU 74	0.32	No
ini.	3	-4437	-2127.14	495			2471	824	SLU 84	1.66	Si
fin.	3	-3602	-328.13	2223			2170	756	SLU 84	0.34	No
ini.	3	-3398	-1886.23	652			2097	738	SLU 77	1.13	Si
fin.	3	-3079	-248.92	2209			1982	710	SLU 77	0.32	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-12147	-1698.65	1726.01	SLV 6	1.02	Si
fin.	2	-7731	-3058.95	1726.01	SLV 6	0.56	No
ini.	2	-5659	-3362.93	1726.01	SLV 13	0.51	No
fin.	2	-5512	1935.16	1726.01	SLV 13	0.89	No
ini.	2	273	-2781.83	1726.01	SLV 15	0.62	No
fin.	2	-1866	3178.01	1726.01	SLV 15	0.54	No
ini.	2	-12346	-2779.68	1726.01	SLV 10	0.62	No
fin.	2	-8670	-1423.2	1726.01	SLV 10	1.21	Si
ini.	2	-4995	240.49	1726.01	SLV 1	7.18	Si
fin.	2	-2382	-3517.33	1726.01	SLV 1	0.49	No
ini.	2	273	-2781.83	1726.01	SLV 16	0.62	No
fin.	2	-1866	3178.01	1726.01	SLV 16	0.54	No
ini.	2	-12147	-1698.65	1726.01	SLV 5	1.02	Si
fin.	2	-7731	-3058.95	1726.01	SLV 5	0.56	No
ini.	2	-5659	-3362.93	1726.01	SLV 14	0.51	No
fin.	2	-5512	1935.16	1726.01	SLV 14	0.89	No
ini.	2	-12346	-2779.68	1726.01	SLV 9	0.62	No
fin.	2	-8670	-1423.2	1726.01	SLV 9	1.21	Si
ini.	2	-4995	240.49	1726.01	SLV 2	7.18	Si
fin.	2	-2382	-3517.33	1726.01	SLV 2	0.49	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	7425	-842.69	2938			1310	0	SLV 11	0	No
fin.	2	3483	2719.63	3068			1310	0	SLV 11	0	No
ini.	2	273	-2781.83	6229			1310	436	SLV 16	0.07	No
fin.	2	-1866	3178.01	6698			1982	777	SLV 16	0.12	No
ini.	2	936	821.58	-4855			1310	250	SLV 3	0.05	No
fin.	2	1264	-2274.48	-3756			1310	0	SLV 3	0	No
ini.	2	7624	238.33	-387			1310	0	SLV 7	0	No
fin.	2	4422	1083.89	-68			1310	0	SLV 7	0	No
ini.	2	936	821.58	-4855			1310	250	SLV 4	0.05	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	2	1264	-2274.48	-3756			1310	0	SLV 4	0	No
ini.	2	-5659	-3362.93	5725			3347	1155	SLV 14	0.2	No
fin.	2	-5512	1935.16	6674			3294	1143	SLV 14	0.17	No
ini.	2	-5659	-3362.93	5725			3347	1155	SLV 13	0.2	No
fin.	2	-5512	1935.16	6674			3294	1143	SLV 13	0.17	No
ini.	2	7425	-842.69	2938			1310	0	SLV 12	0	No
fin.	2	3483	2719.63	3068			1310	0	SLV 12	0	No
ini.	2	273	-2781.83	6229			1310	436	SLV 15	0.07	No
fin.	2	-1866	3178.01	6698			1982	777	SLV 15	0.12	No
ini.	2	7624	238.33	-387			1310	0	SLV 8	0	No
fin.	2	4422	1083.89	-68			1310	0	SLV 8	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF SLV	0.491	SLV 1	No
V SLV	0	SLV 3	No
PF SLU	0.532	SLU 76	No
V SLU	0.311	SLU 83	No

Trave di accoppiamento 62

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-6.463	-3.359	4.19	5.07	0.88	-7.463	-3.359	4.19	5.07	0.88	1	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fthk	fvk0	fthmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	372	-433.43	1100.1	SLU 78	2.54	Si
fin.	3	1305	539.78	1100.1	SLU 78	2.04	Si
ini.	3	12	-478.9	1100.1	SLU 74	2.3	Si
fin.	3	1230	543.89	1100.1	SLU 74	2.02	Si
ini.	3	359	-432.55	1100.1	SLU 80	2.54	Si
fin.	3	1297	536.82	1100.1	SLU 80	2.05	Si
ini.	3	310	-457.38	1100.1	SLU 84	2.41	Si
fin.	3	1353	567.42	1100.1	SLU 84	1.94	Si
ini.	3	-33	-507.47	1100.1	SLU 83	2.17	Si
fin.	3	1299	578.51	1100.1	SLU 83	1.9	Si
ini.	3	355	-428.81	1100.1	SLU 75	2.57	Si
fin.	3	1284	532.8	1100.1	SLU 75	2.06	Si
ini.	3	29	-483.52	1100.1	SLU 77	2.28	Si
fin.	3	1251	550.87	1100.1	SLU 77	2	Si
ini.	3	16	-482.64	1100.1	SLU 79	2.28	Si
fin.	3	1242	547.91	1100.1	SLU 79	2.01	Si
ini.	3	-50	-502.85	1100.1	SLU 81	2.19	Si
fin.	3	1278	571.53	1100.1	SLU 81	1.92	Si
ini.	3	293	-452.76	1100.1	SLU 82	2.43	Si
fin.	3	1332	560.44	1100.1	SLU 82	1.96	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	313	-401.01	4897			835	247	SLU 61	0.05	No
fin.	3	1181	485.78	-1506			835	0	SLU 61	0	No
ini.	3	-30	-451.1	5042			846	320	SLU 60	0.06	No
fin.	3	1126	496.87	-1295			835	0	SLU 60	0	No
ini.	3	36	-430.89	4879			835	307	SLU 58	0.06	No
fin.	3	1091	473.25	-1327			835	0	SLU 58	0	No
ini.	3	379	-380.8	4735			835	231	SLU 59	0.05	No
fin.	3	1145	462.15	-1538			835	0	SLU 59	0	No
ini.	3	392	-381.68	4763			835	227	SLU 57	0.05	No
fin.	3	1154	465.12	-1555			835	0	SLU 57	0	No
ini.	3	375	-377.06	4694			835	232	SLU 54	0.05	No
fin.	3	1132	458.13	-1528			835	0	SLU 54	0	No
ini.	3	590	-342.78	4570			835	167	SLU 55	0.04	No
fin.	3	1160	447.78	-1651			835	0	SLU 55	0	No
ini.	3	32	-427.15	4839			835	308	SLU 53	0.06	No
fin.	3	1078	469.23	-1316			835	0	SLU 53	0	No
ini.	3	287	-389.59	4783			835	254	SLU 42	0.05	No
fin.	3	1193	501.37	-1366			835	0	SLU 42	0	No
ini.	3	49	-431.77	4908			835	305	SLU 56	0.06	No
fin.	3	1099	476.21	-1344			835	0	SLU 56	0	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-3150	-928.88	1650.16	SLV 12	1.78	Si
fin.	2	139	280.22	1650.16	SLV 12	5.89	Si
ini.	2	-3476	-1438.08	1650.16	SLV 13	1.15	Si
fin.	2	2866	749.27	1650.16	SLV 13	2.2	Si
ini.	2	3530	798.99	1650.16	SLV 4	2.07	Si
fin.	2	-1261	-45.46	1650.16	SLV 4	36.3	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	4700	949.69	1650.16	SLV 2	1.74	Si
fin.	2	-555	59.63	1650.16	SLV 2	27.67	Si
ini.	2	-4647	-1588.78	1650.16	SLV 15	1.04	Si
fin.	2	2161	644.19	1650.16	SLV 15	2.56	Si
ini.	2	-3150	-928.88	1650.16	SLV 11	1.78	Si
fin.	2	139	280.22	1650.16	SLV 11	5.89	Si
ini.	2	-3476	-1438.08	1650.16	SLV 14	1.15	Si
fin.	2	2866	749.27	1650.16	SLV 14	2.2	Si
ini.	2	4700	949.69	1650.16	SLV 1	1.74	Si
fin.	2	-555	59.63	1650.16	SLV 1	27.67	Si
ini.	2	3530	798.99	1650.16	SLV 3	2.07	Si
fin.	2	-1261	-45.46	1650.16	SLV 3	36.3	Si
ini.	2	-4647	-1588.78	1650.16	SLV 16	1.04	Si
fin.	2	2161	644.19	1650.16	SLV 16	2.56	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-3476	-1438.08	8462			2476	921	SLV 14	0.11	No
fin.	2	2866	749.27	2138			1253	0	SLV 14	0	No
ini.	2	4700	949.69	-1083			1253	0	SLV 2	0	No
fin.	2	-555	59.63	-4995			1448	568	SLV 2	0.11	No
ini.	2	751	-426.54	5249			1253	295	SLV 10	0.06	No
fin.	2	2492	630.49	-1356			1253	0	SLV 10	0	No
ini.	2	4700	949.69	-1083			1253	0	SLV 1	0	No
fin.	2	-555	59.63	-4995			1448	568	SLV 1	0.11	No
ini.	2	3204	289.8	2386			1253	0	SLV 6	0	No
fin.	2	1466	423.6	-3496			1253	0	SLV 6	0	No
ini.	2	751	-426.54	5249			1253	295	SLV 9	0.06	No
fin.	2	2492	630.49	-1356			1253	0	SLV 9	0	No
ini.	2	-3476	-1438.08	8462			2476	921	SLV 13	0.11	No
fin.	2	2866	749.27	2138			1253	0	SLV 13	0	No
ini.	2	3530	798.99	-1192			1253	0	SLV 4	0	No
fin.	2	-1261	-45.46	-4140			1697	671	SLV 4	0.16	No
ini.	2	3204	289.8	2386			1253	0	SLV 5	0	No
fin.	2	1466	423.6	-3496			1253	0	SLV 5	0	No
ini.	2	3530	798.99	-1192			1253	0	SLV 3	0	No
fin.	2	-1261	-45.46	-4140			1697	671	SLV 3	0.16	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.039	SLV 15	Si
V_SLV	0	SLV 1	No
PF_SLU	1.902	SLU 83	Si
V_SLU	0	SLU 10	No

Trave di accoppiamento 63

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-5.508	-3.359	1.39	3.39	2	-6.008	-3.359	1.39	3.39	2	0.5	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fhmmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-855	3499.37	5682.35	SLU 84	1.62	Si
fin.	3	-3075	-2351.2	5682.35	SLU 84	2.42	Si
ini.	3	-587	3558.31	5682.35	SLU 81	1.6	Si
fin.	3	-2228	-1583.58	5682.35	SLU 81	3.59	Si
ini.	3	-632	3515.15	5682.35	SLU 77	1.62	Si
fin.	3	-2272	-1602.77	5682.35	SLU 77	3.55	Si
ini.	3	-880	3388.54	5682.35	SLU 80	1.68	Si
fin.	3	-3065	-2333.71	5682.35	SLU 80	2.43	Si
ini.	3	-621	3472.32	5682.35	SLU 74	1.64	Si
fin.	3	-2237	-1579.71	5682.35	SLU 74	3.6	Si
ini.	3	-623	3490.3	5682.35	SLU 79	1.63	Si
fin.	3	-2252	-1589.15	5682.35	SLU 79	3.58	Si
ini.	3	-598	3601.14	5682.35	SLU 83	1.58	Si
fin.	3	-2263	-1606.64	5682.35	SLU 83	3.54	Si
ini.	3	-878	3370.56	5682.35	SLU 75	1.69	Si
fin.	3	-3050	-2324.27	5682.35	SLU 75	2.44	Si
ini.	3	-844	3456.54	5682.35	SLU 82	1.64	Si
fin.	3	-3040	-2328.15	5682.35	SLU 82	2.44	Si
ini.	3	-889	3413.38	5682.35	SLU 78	1.66	Si
fin.	3	-3085	-2347.33	5682.35	SLU 78	2.42	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-880	3388.54	-8939			2509	984	SLU 80	0.11	No
fin.	3	-3065	-2333.71	-5532			3383	1319	SLU 80	0.24	No
ini.	3	-598	3601.14	-8884			2396	933	SLU 83	0.1	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	3	-2263	-1606.64	-5484			3062	1207	SLU 83	0.22	No
ini.	3	-623	3490.3	-8646			2406	937	SLU 79	0.11	No
fin.	3	-2252	-1589.15	-5343			3058	1206	SLU 79	0.23	No
ini.	3	-632	3515.15	-8715			2409	939	SLU 77	0.11	No
fin.	3	-2272	-1602.77	-5385			3066	1209	SLU 77	0.22	No
ini.	3	-855	3499.37	-9177			2499	980	SLU 84	0.11	No
fin.	3	-3075	-2351.2	-5673			3387	1321	SLU 84	0.23	No
ini.	3	-878	3370.56	-8897			2508	984	SLU 75	0.11	No
fin.	3	-3050	-2324.27	-5514			3377	1317	SLU 75	0.24	No
ini.	3	-621	3472.32	-8603			2405	937	SLU 74	0.11	No
fin.	3	-2237	-1579.71	-5325			3052	1203	SLU 74	0.23	No
ini.	3	-889	3413.38	-9009			2512	986	SLU 78	0.11	No
fin.	3	-3085	-2347.33	-5575			3391	1322	SLU 78	0.24	No
ini.	3	-587	3558.31	-8772			2392	931	SLU 81	0.11	No
fin.	3	-2228	-1583.58	-5424			3048	1202	SLU 81	0.22	No
ini.	3	-844	3456.54	-9066			2494	978	SLU 82	0.11	No
fin.	3	-3040	-2328.15	-5613			3373	1316	SLU 82	0.23	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	2345	5166.18	8523.53	SLV 8	1.65	Si
fin.	2	6868	4579.82	8523.53	SLV 8	1.86	Si
ini.	2	-925	6058.6	8523.53	SLV 4	1.41	Si
fin.	2	615	422.6	8523.53	SLV 4	20.17	Si
ini.	2	-3305	-422.64	8523.53	SLV 10	20.17	Si
fin.	2	-10068	-6816.73	8523.53	SLV 10	1.25	Si
ini.	2	-4158	1455.49	8523.53	SLV 6	5.86	Si
fin.	2	-10283	-6927.78	8523.53	SLV 6	1.23	Si
ini.	2	2345	5166.18	8523.53	SLV 7	1.65	Si
fin.	2	6868	4579.82	8523.53	SLV 7	1.86	Si
ini.	2	-2876	4945.39	8523.53	SLV 1	1.72	Si
fin.	2	-4530	-3029.68	8523.53	SLV 1	2.81	Si
ini.	2	-925	6058.6	8523.53	SLV 3	1.41	Si
fin.	2	615	422.6	8523.53	SLV 3	20.17	Si
ini.	2	-4158	1455.49	8523.53	SLV 5	5.86	Si
fin.	2	-10283	-6927.78	8523.53	SLV 5	1.23	Si
ini.	2	-2876	4945.39	8523.53	SLV 2	1.72	Si
fin.	2	-4530	-3029.68	8523.53	SLV 2	2.81	Si
ini.	2	-3305	-422.64	8523.53	SLV 9	20.17	Si
fin.	2	-10068	-6816.73	8523.53	SLV 9	1.25	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	3198	3288.04	-1318			3235	0	SLV 12	0	No
fin.	2	7083	4690.87	-1495			3235	0	SLV 12	0	No
ini.	2	-925	6058.6	-14915			3605	1404	SLV 3	0.09	No
fin.	2	615	422.6	-13182			3235	1075	SLV 3	0.08	No
ini.	2	2345	5166.18	-7033			3235	491	SLV 8	0.07	No
fin.	2	6868	4579.82	-7082			3235	0	SLV 8	0	No
ini.	2	-2876	4945.39	-15957			4385	1733	SLV 1	0.11	No
fin.	2	-4530	-3029.68	-12823			5047	1970	SLV 1	0.15	No
ini.	2	-2876	4945.39	-15957			4385	1733	SLV 2	0.11	No
fin.	2	-4530	-3029.68	-12823			5047	1970	SLV 2	0.15	No
ini.	2	-925	6058.6	-14915			3605	1404	SLV 4	0.09	No
fin.	2	615	422.6	-13182			3235	1075	SLV 4	0.08	No
ini.	2	1916	-201.86	4135			3235	684	SLV 15	0.17	No
fin.	2	1330	792.78	5443			3235	882	SLV 15	0.16	No
ini.	2	3198	3288.04	-1318			3235	0	SLV 11	0	No
fin.	2	7083	4690.87	-1495			3235	0	SLV 11	0	No
ini.	2	1916	-201.86	4135			3235	684	SLV 16	0.17	No
fin.	2	1330	792.78	5443			3235	882	SLV 16	0.16	No
ini.	2	2345	5166.18	-7033			3235	491	SLV 7	0.07	No
fin.	2	6868	4579.82	-7082			3235	0	SLV 7	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.23	SLV 5	Si
V_SLV	0	SLV 7	No
PF_SLU	1.578	SLU 83	Si
V_SLU	0.105	SLU 83	No

Trave di accoppiamento 64

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-5.508	-3.359	4.19	5.07	0.88	-6.008	-3.359	4.19	5.07	0.88	0.5	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
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Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	1266	570.35	1100.1	SLU 82	1.93	Si
fin.	3	294	-715.7	1100.1	SLU 82	1.54	Si
ini.	3	985	481.33	1100.1	SLU 77	2.29	Si
fin.	3	83	-692.39	1100.1	SLU 77	1.59	Si
ini.	3	966	476.65	1100.1	SLU 79	2.31	Si
fin.	3	69	-688.41	1100.1	SLU 79	1.6	Si
ini.	3	1306	565.36	1100.1	SLU 75	1.95	Si
fin.	3	358	-693.99	1100.1	SLU 75	1.59	Si
ini.	3	945	486.32	1100.1	SLU 83	2.26	Si
fin.	3	19	-714.11	1100.1	SLU 83	1.54	Si
ini.	3	1297	577	1100.1	SLU 84	1.91	Si
fin.	3	315	-723.87	1100.1	SLU 84	1.52	Si
ini.	3	1317	567.33	1100.1	SLU 80	1.94	Si
fin.	3	365	-698.18	1100.1	SLU 80	1.58	Si
ini.	3	914	479.67	1100.1	SLU 81	2.29	Si
fin.	3	-1	-705.93	1100.1	SLU 81	1.56	Si
ini.	3	1337	572.01	1100.1	SLU 78	1.92	Si
fin.	3	378	-702.16	1100.1	SLU 78	1.57	Si
ini.	3	1521	621.13	1100.1	SLU 76	1.77	Si
fin.	3	542	-696.52	1100.1	SLU 76	1.58	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	899	436.32	-1541			949	0	SLU 58	0	No
fin.	3	87	-620.34	-5566			949	338	SLU 58	0.06	No
ini.	3	1455	580.79	-1934			949	0	SLU 55	0	No
fin.	3	560	-628.44	-5913			949	201	SLU 55	0.03	No
ini.	3	1127	498.8	-1738			949	0	SLU 42	0	No
fin.	3	283	-620.68	-5682			949	289	SLU 42	0.05	No
ini.	3	888	434.35	-1536			949	0	SLU 53	0	No
fin.	3	81	-616.15	-5525			949	339	SLU 53	0.06	No
ini.	3	1271	531.68	-1800			949	0	SLU 57	0	No
fin.	3	396	-634.09	-5875			949	257	SLU 57	0.04	No
ini.	3	1240	525.03	-1782			949	0	SLU 54	0	No
fin.	3	376	-625.92	-5786			949	263	SLU 54	0.05	No
ini.	3	919	441	-1554			949	0	SLU 56	0	No
fin.	3	101	-624.32	-5614			949	334	SLU 56	0.06	No
ini.	3	1251	527	-1788			949	0	SLU 59	0	No
fin.	3	383	-630.11	-5828			949	261	SLU 59	0.04	No
ini.	3	848	439.34	-1581			949	0	SLU 60	0	No
fin.	3	17	-637.86	-5667			949	353	SLU 60	0.06	No
ini.	3	1200	530.01	-1827			949	0	SLU 61	0	No
fin.	3	312	-647.63	-5929			949	281	SLU 61	0.05	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	4535	918.47	1650.16	SLV 6	1.8	Si
fin.	2	3593	-429.35	1650.16	SLV 6	3.84	Si
ini.	2	5711	1577.08	1650.16	SLV 2	1.05	Si
fin.	2	4170	-317.43	1650.16	SLV 2	5.2	Si
ini.	2	4159	1435.36	1650.16	SLV 4	1.15	Si
fin.	2	2654	-311.19	1650.16	SLV 4	5.3	Si
ini.	2	4159	1435.36	1650.16	SLV 3	1.15	Si
fin.	2	2654	-311.19	1650.16	SLV 3	5.3	Si
ini.	2	-4374	-918.79	1650.16	SLV 15	1.8	Si
fin.	2	-4049	-610.16	1650.16	SLV 15	2.7	Si
ini.	2	5711	1577.08	1650.16	SLV 1	1.05	Si
fin.	2	4170	-317.43	1650.16	SLV 1	5.2	Si
ini.	2	4535	918.47	1650.16	SLV 5	1.8	Si
fin.	2	3593	-429.35	1650.16	SLV 5	3.84	Si
ini.	2	-4374	-918.79	1650.16	SLV 16	1.8	Si
fin.	2	-4049	-610.16	1650.16	SLV 16	2.7	Si
ini.	2	-2822	-777.07	1650.16	SLV 14	2.12	Si
fin.	2	-2533	-616.4	1650.16	SLV 14	2.68	Si
ini.	2	-2822	-777.07	1650.16	SLV 13	2.12	Si
fin.	2	-2533	-616.4	1650.16	SLV 13	2.68	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	4535	918.47	-1358			1423	0	SLV 5	0	No
fin.	2	3593	-429.35	-6239			1423	0	SLV 5	0	No
ini.	2	1975	212.23	462			1423	0	SLV 10	0	No
fin.	2	1582	-519.04	-4496			1423	0	SLV 10	0	No
ini.	2	-638	446.06	-2782			1679	660	SLV 7	0.24	No
fin.	2	-1461	-408.55	-3824			2008	792	SLV 7	0.21	No
ini.	2	-638	446.06	-2782			1679	660	SLV 8	0.24	No
fin.	2	-1461	-408.55	-3824			2008	792	SLV 8	0.21	No
ini.	2	5711	1577.08	-3979			1423	0	SLV 1	0	No
fin.	2	4170	-317.43	-7427			1423	0	SLV 1	0	No
ini.	2	4159	1435.36	-4406			1423	0	SLV 3	0	No
fin.	2	2654	-311.19	-6702			1423	0	SLV 3	0	No
ini.	2	4159	1435.36	-4406			1423	0	SLV 4	0	No
fin.	2	2654	-311.19	-6702			1423	0	SLV 4	0	No
ini.	2	4535	918.47	-1358			1423	0	SLV 6	0	No
fin.	2	3593	-429.35	-6239			1423	0	SLV 6	0	No
ini.	2	5711	1577.08	-3979			1423	0	SLV 2	0	No
fin.	2	4170	-317.43	-7427			1423	0	SLV 2	0	No
ini.	2	1975	212.23	462			1423	0	SLV 9	0	No
fin.	2	1582	-519.04	-4496			1423	0	SLV 9	0	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.046	SLV 1	Si
V_SLV	0	SLV 1	No
PF_SLU	1.52	SLU 84	Si
V_SLU	0	SLU 2	No

Trave di accoppiamento 65

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-2.233	-3.359	1.39	2.29	0.9	-3.233	-3.359	1.39	2.29	0.9	1	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	11028	-298.8	1150.68	SLU 80	3.85	Si
fin.	3	10468	1251.33	1150.68	SLU 80	0.92	No
ini.	3	11258	-312.49	1150.68	SLU 84	3.68	Si
fin.	3	10685	1280.57	1150.68	SLU 84	0.9	No
ini.	3	12503	-225.99	1150.68	SLU 73	5.09	Si
fin.	3	12003	1310.5	1150.68	SLU 73	0.88	No
ini.	3	11816	-179.99	1150.68	SLU 68	6.39	Si
fin.	3	11363	1216.54	1150.68	SLU 68	0.95	No
ini.	3	11742	-177.71	1150.68	SLU 52	6.48	Si
fin.	3	11298	1205.92	1150.68	SLU 52	0.95	No
ini.	3	12616	-236.54	1150.68	SLU 76	4.86	Si
fin.	3	12103	1329.81	1150.68	SLU 76	0.87	No
ini.	3	11088	-299.74	1150.68	SLU 78	3.84	Si
fin.	3	10524	1257.84	1150.68	SLU 78	0.91	No
ini.	3	10975	-289.19	1150.68	SLU 75	3.98	Si
fin.	3	10424	1238.53	1150.68	SLU 75	0.93	No
ini.	3	11855	-188.26	1150.68	SLU 55	6.11	Si
fin.	3	11397	1225.23	1150.68	SLU 55	0.94	No
ini.	3	11145	-301.94	1150.68	SLU 82	3.81	Si
fin.	3	10585	1261.26	1150.68	SLU 82	0.91	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	11855	-188.26	1985			873	0	SLU 55	0	No
fin.	3	11397	1225.23	1424			873	0	SLU 55	0	No
ini.	3	10326	-251.46	1822			873	0	SLU 57	0	No
fin.	3	9819	1153.26	1602			873	0	SLU 57	0	No
ini.	3	7662	-318.48	1496			873	0	SLU 53	0	No
fin.	3	7117	987.27	1739			873	0	SLU 53	0	No
ini.	3	5346	-205.38	1024			873	0	SLU 1	0	No
fin.	3	4972	680.04	1174			873	0	SLU 1	0	No
ini.	3	10384	-253.66	1837			873	0	SLU 61	0	No
fin.	3	9880	1156.68	1597			873	0	SLU 61	0	No
ini.	3	7775	-329.03	1525			873	0	SLU 56	0	No
fin.	3	7217	1006.58	1783			873	0	SLU 56	0	No
ini.	3	10267	-250.52	1817			873	0	SLU 59	0	No
fin.	3	9762	1146.76	1589			873	0	SLU 59	0	No
ini.	3	7715	-328.09	1520			873	0	SLU 58	0	No
fin.	3	7160	1000.08	1770			873	0	SLU 58	0	No
ini.	3	7832	-331.23	1541			873	0	SLU 60	0	No
fin.	3	7278	1010.01	1778			873	0	SLU 60	0	No
ini.	3	10213	-240.91	1792			873	0	SLU 54	0	No
fin.	3	9719	1133.95	1558			873	0	SLU 54	0	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-1159	1683.7	1726.01	SLV 4	1.03	Si
fin.	2	1458	-1829.04	1726.01	SLV 4	0.94	No
ini.	2	-1159	1683.7	1726.01	SLV 3	1.03	Si
fin.	2	1458	-1829.04	1726.01	SLV 3	0.94	No
ini.	2	9079	2024.4	1726.01	SLV 2	0.85	No
fin.	2	12319	-1363.21	1726.01	SLV 2	1.27	Si
ini.	2	2506	-2495.06	1726.01	SLV 16	0.69	No
fin.	2	-1550	2847.77	1726.01	SLV 16	0.61	No
ini.	2	12744	-2154.36	1726.01	SLV 13	0.8	No
fin.	2	9311	3313.6	1726.01	SLV 13	0.52	No
ini.	2	23406	-294.31	1726.01	SLV 9	5.86	Si
fin.	2	23036	2220.18	1726.01	SLV 9	0.78	No
ini.	2	9079	2024.4	1726.01	SLV 1	0.85	No
fin.	2	12319	-1363.21	1726.01	SLV 1	1.27	Si
ini.	2	23406	-294.31	1726.01	SLV 10	5.86	Si
fin.	2	23036	2220.18	1726.01	SLV 10	0.78	No
ini.	2	2506	-2495.06	1726.01	SLV 15	0.69	No
fin.	2	-1550	2847.77	1726.01	SLV 15	0.61	No
ini.	2	12744	-2154.36	1726.01	SLV 14	0.8	No



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	2	9311	3313.6	1726.01	SLV 14	0.52	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	9079	2024.4	-3894			1310	0	SLV 2	0	No
fin.	2	12319	-1363.21	-4430			1310	0	SLV 2	0	No
ini.	2	23406	-294.31	3652			1310	0	SLV 9	0	No
fin.	2	23036	2220.18	1936			1310	0	SLV 9	0	No
ini.	2	12744	-2154.36	6704			1310	0	SLV 14	0	No
fin.	2	9311	3313.6	6433			1310	0	SLV 14	0	No
ini.	2	-1159	1683.7	-4457			1728	683	SLV 4	0.15	No
fin.	2	1458	-1829.04	-3835			1310	0	SLV 4	0	No
ini.	2	23406	-294.31	3652			1310	0	SLV 10	0	No
fin.	2	23036	2220.18	1936			1310	0	SLV 10	0	No
ini.	2	9079	2024.4	-3894			1310	0	SLV 1	0	No
fin.	2	12319	-1363.21	-4430			1310	0	SLV 1	0	No
ini.	2	22306	959.32	473			1310	0	SLV 5	0	No
fin.	2	23938	817.14	-1322			1310	0	SLV 5	0	No
ini.	2	22306	959.32	473			1310	0	SLV 6	0	No
fin.	2	23938	817.14	-1322			1310	0	SLV 6	0	No
ini.	2	-1159	1683.7	-4457			1728	683	SLV 3	0.15	No
fin.	2	1458	-1829.04	-3835			1310	0	SLV 3	0	No
ini.	2	12744	-2154.36	6704			1310	0	SLV 13	0	No
fin.	2	9311	3313.6	6433			1310	0	SLV 13	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.521	SLV 13	No
V_SLV	0	SLV 1	No
PF_SLU	0.865	SLU 76	No
V_SLU	0	SLU 1	No

Trave di accoppiamento 66

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-2.233	-3.359	4.19	5.07	0.88	-3.233	-3.359	4.19	5.07	0.88	1	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-2692	-878.96	1100.1	SLU 77	1.25	Si
fin.	3	-396	303.28	1100.1	SLU 77	3.63	Si
ini.	3	-2825	-898.04	1100.1	SLU 75	1.23	Si
fin.	3	-380	364.25	1100.1	SLU 75	3.02	Si
ini.	3	-2885	-899.66	1100.1	SLU 73	1.22	Si
fin.	3	-371	401.37	1100.1	SLU 73	2.74	Si
ini.	3	-2862	-914.21	1100.1	SLU 78	1.2	Si
fin.	3	-368	371.72	1100.1	SLU 78	2.96	Si
ini.	3	-2706	-881	1100.1	SLU 81	1.25	Si
fin.	3	-418	302.07	1100.1	SLU 81	3.64	Si
ini.	3	-2845	-908.5	1100.1	SLU 80	1.21	Si
fin.	3	-366	370.69	1100.1	SLU 80	2.97	Si
ini.	3	-2913	-932.42	1100.1	SLU 84	1.18	Si
fin.	3	-377	377.98	1100.1	SLU 84	2.91	Si
ini.	3	-2876	-916.25	1100.1	SLU 82	1.2	Si
fin.	3	-389	370.51	1100.1	SLU 82	2.97	Si
ini.	3	-2922	-915.83	1100.1	SLU 76	1.2	Si
fin.	3	-359	408.84	1100.1	SLU 76	2.69	Si
ini.	3	-2742	-897.17	1100.1	SLU 83	1.23	Si
fin.	3	-405	309.54	1100.1	SLU 83	3.55	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-2674	-873.24	4099			1776	648	SLU 79	0.16	No
fin.	3	-394	302.25	-211			974	382	SLU 79	1.81	Si
ini.	3	-2876	-916.25	4256			1847	667	SLU 82	0.16	No
fin.	3	-389	370.51	59			972	382	SLU 82	6.42	Si
ini.	3	-2825	-898.04	4161			1830	662	SLU 75	0.16	No
fin.	3	-380	364.25	80			969	380	SLU 75	4.73	Si
ini.	3	-2913	-932.42	4327			1860	670	SLU 84	0.15	No
fin.	3	-377	377.98	73			968	380	SLU 84	5.23	Si
ini.	3	-2655	-862.79	4056			1770	646	SLU 74	0.16	No
fin.	3	-408	295.81	-229			979	384	SLU 74	1.68	Si
ini.	3	-2692	-878.96	4127			1782	650	SLU 77	0.16	No
fin.	3	-396	303.28	-216			974	383	SLU 77	1.77	Si
ini.	3	-2862	-914.21	4232			1842	665	SLU 78	0.16	No
fin.	3	-368	371.72	93			965	378	SLU 78	4.05	Si
ini.	3	-2706	-881	4151			1787	651	SLU 81	0.16	No
fin.	3	-418	302.07	-250			982	386	SLU 81	1.55	Si



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-2742	-897.17	4222			1800	655	SLU 83	0.16	No
fin.	3	-405	309.54	-236			978	384	SLU 83	1.62	Si
ini.	3	-2845	-908.5	4204			1836	664	SLU 80	0.16	No
fin.	3	-366	370.69	98			964	378	SLU 80	3.87	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-4881	-2347.89	1650.16	SLV 15	0.7	No
fin.	2	3013	1702.49	1650.16	SLV 15	0.97	No
ini.	2	1219	1182.54	1650.16	SLV 2	1.4	Si
fin.	2	-3655	-1307.25	1650.16	SLV 2	1.26	Si
ini.	2	-5832	-2462.98	1650.16	SLV 14	0.67	No
fin.	2	1671	1566.82	1650.16	SLV 14	1.05	Si
ini.	2	2169	1297.62	1650.16	SLV 3	1.27	Si
fin.	2	-2313	-1171.57	1650.16	SLV 3	1.41	Si
ini.	2	-4881	-2347.89	1650.16	SLV 16	0.7	No
fin.	2	3013	1702.49	1650.16	SLV 16	0.97	No
ini.	2	2169	1297.62	1650.16	SLV 4	1.27	Si
fin.	2	-2313	-1171.57	1650.16	SLV 4	1.41	Si
ini.	2	-4473	-1321.32	1650.16	SLV 9	1.25	Si
fin.	2	-1759	402.61	1650.16	SLV 9	4.1	Si
ini.	2	1219	1182.54	1650.16	SLV 1	1.4	Si
fin.	2	-3655	-1307.25	1650.16	SLV 1	1.26	Si
ini.	2	-5832	-2462.98	1650.16	SLV 13	0.67	No
fin.	2	1671	1566.82	1650.16	SLV 13	1.05	Si
ini.	2	-4473	-1321.32	1650.16	SLV 10	1.25	Si
fin.	2	-1759	402.61	1650.16	SLV 10	4.1	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-4881	-2347.89	8908			2971	1050	SLV 15	0.12	No
fin.	2	3013	1702.49	6331			1253	0	SLV 15	0	No
ini.	2	-5832	-2462.98	9207			3305	1129	SLV 13	0.12	No
fin.	2	1671	1566.82	5389			1253	0	SLV 13	0	No
ini.	2	1219	1182.54	-3437			1253	49	SLV 2	0.01	No
fin.	2	-3655	-1307.25	-6659			2539	939	SLV 2	0.14	No
ini.	2	1219	1182.54	-3437			1253	49	SLV 1	0.01	No
fin.	2	-3655	-1307.25	-6659			2539	939	SLV 1	0.14	No
ini.	2	2169	1297.62	-3736			1253	0	SLV 3	0	No
fin.	2	-2313	-1171.57	-5716			2067	800	SLV 3	0.14	No
ini.	2	-1305	-937.69	4133			1712	676	SLV 11	0.16	No
fin.	2	2715	854.86	3215			1253	0	SLV 11	0	No
ini.	2	2169	1297.62	-3736			1253	0	SLV 4	0	No
fin.	2	-2313	-1171.57	-5716			2067	800	SLV 4	0.14	No
ini.	2	-1305	-937.69	4133			1712	676	SLV 12	0.16	No
fin.	2	2715	854.86	3215			1253	0	SLV 12	0	No
ini.	2	-4881	-2347.89	8908			2971	1050	SLV 16	0.12	No
fin.	2	3013	1702.49	6331			1253	0	SLV 16	0	No
ini.	2	-5832	-2462.98	9207			3305	1129	SLV 14	0.12	No
fin.	2	1671	1566.82	5389			1253	0	SLV 14	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.67	SLV 13	No
V_SLV	0	SLV 3	No
PF_SLU	1.18	SLU 84	Si
V_SLU	0.155	SLU 84	No

Trave di accoppiamento 67

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-2.013	5.951	1.39	2.29	0.9	-3.013	5.951	1.39	2.29	0.9	1	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	7000	-299.87	1150.68	SLU 84	3.84	Si
fin.	3	6292	1327.85	1150.68	SLU 84	0.87	No
ini.	3	6863	-248.17	1150.68	SLU 74	4.64	Si
fin.	3	6192	1269.66	1150.68	SLU 74	0.91	No
ini.	3	7017	-280.62	1150.68	SLU 77	4.1	Si
fin.	3	6300	1322.7	1150.68	SLU 77	0.87	No
ini.	3	6777	-283.21	1150.68	SLU 75	4.06	Si
fin.	3	6094	1285.96	1150.68	SLU 75	0.89	No
ini.	3	7086	-264.83	1150.68	SLU 83	4.34	Si
fin.	3	6390	1311.55	1150.68	SLU 83	0.88	No
ini.	3	6893	-316.85	1150.68	SLU 80	3.63	Si
fin.	3	6167	1333.33	1150.68	SLU 80	0.86	No
ini.	3	6931	-315.66	1150.68	SLU 78	3.65	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	3	6203	1339	1150.68	SLU 78	0.86	No
ini.	3	6682	-307.76	1150.68	SLU 76	3.74	Si
fin.	3	5994	1291.17	1150.68	SLU 76	0.89	No
ini.	3	6980	-281.81	1150.68	SLU 79	4.08	Si
fin.	3	6265	1317.03	1150.68	SLU 79	0.87	No
ini.	3	6846	-267.42	1150.68	SLU 82	4.3	Si
fin.	3	6184	1274.81	1150.68	SLU 82	0.9	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	6231	-225.8	1680			873	0	SLU 61	0	No
fin.	3	5641	1152.95	1855			873	0	SLU 61	0	No
ini.	3	6402	-239	1734			873	0	SLU 56	0	No
fin.	3	5757	1200.83	1962			873	0	SLU 56	0	No
ini.	3	6316	-274.04	1800			873	0	SLU 57	0	No
fin.	3	5660	1217.13	2017			873	0	SLU 57	0	No
ini.	3	6249	-206.55	1639			873	0	SLU 53	0	No
fin.	3	5649	1147.8	1844			873	0	SLU 53	0	No
ini.	3	6068	-266.14	1747			873	0	SLU 55	0	No
fin.	3	5451	1169.3	1924			873	0	SLU 55	0	No
ini.	3	6162	-241.59	1705			873	0	SLU 54	0	No
fin.	3	5551	1164.1	1898			873	0	SLU 54	0	No
ini.	3	4355	-118.04	1105			873	0	SLU 1	0	No
fin.	3	3959	784.56	1226			873	0	SLU 1	0	No
ini.	3	6318	-190.76	1615			873	0	SLU 60	0	No
fin.	3	5739	1136.65	1801			873	0	SLU 60	0	No
ini.	3	6279	-275.23	1798			873	0	SLU 59	0	No
fin.	3	5625	1211.47	2007			873	0	SLU 59	0	No
ini.	3	6365	-240.19	1733			873	0	SLU 58	0	No
fin.	3	5722	1195.17	1952			873	0	SLU 58	0	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-1258	-2584.7	1726.01	SLV 14	0.67	No
fin.	2	-3272	2432.29	1726.01	SLV 14	0.71	No
ini.	2	-1258	-2584.7	1726.01	SLV 13	0.67	No
fin.	2	-3272	2432.29	1726.01	SLV 13	0.71	No
ini.	2	23663	734.41	1726.01	SLV 12	2.35	Si
fin.	2	23576	2512.67	1726.01	SLV 12	0.69	No
ini.	2	23663	734.41	1726.01	SLV 11	2.35	Si
fin.	2	23576	2512.67	1726.01	SLV 11	0.69	No
ini.	2	10163	-1699.57	1726.01	SLV 16	1.02	Si
fin.	2	8601	3085.8	1726.01	SLV 16	0.56	No
ini.	2	10666	2304.2	1726.01	SLV 3	0.75	No
fin.	2	11811	-730.12	1726.01	SLV 3	2.36	Si
ini.	2	-14406	-2216.04	1726.01	SLV 10	0.78	No
fin.	2	-16000	334.27	1726.01	SLV 10	5.16	Si
ini.	2	10163	-1699.57	1726.01	SLV 15	1.02	Si
fin.	2	8601	3085.8	1726.01	SLV 15	0.56	No
ini.	2	-14406	-2216.04	1726.01	SLV 9	0.78	No
fin.	2	-16000	334.27	1726.01	SLV 9	5.16	Si
ini.	2	10666	2304.2	1726.01	SLV 4	0.75	No
fin.	2	11811	-730.12	1726.01	SLV 4	2.36	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	23663	734.41	9730			1310	0	SLV 11	0	No
fin.	2	23576	2512.67	7055			1310	0	SLV 11	0	No
ini.	2	23814	1935.54	6973			1310	0	SLV 7	0	No
fin.	2	24540	1367.89	4199			1310	0	SLV 7	0	No
ini.	2	10163	-1699.57	7943			1310	0	SLV 15	0	No
fin.	2	8601	3085.8	7391			1310	0	SLV 15	0	No
ini.	2	10666	2304.2	-1245			1310	0	SLV 3	0	No
fin.	2	11811	-730.12	-2128			1310	0	SLV 3	0	No
ini.	2	-754	1419.07	-5533			1582	623	SLV 1	0.11	No
fin.	2	-62	-1383.64	-4696			1332	505	SLV 1	0.11	No
ini.	2	-754	1419.07	-5533			1582	623	SLV 2	0.11	No
fin.	2	-62	-1383.64	-4696			1332	505	SLV 2	0.11	No
ini.	2	23814	1935.54	6973			1310	0	SLV 8	0	No
fin.	2	24540	1367.89	4199			1310	0	SLV 8	0	No
ini.	2	10163	-1699.57	7943			1310	0	SLV 16	0	No
fin.	2	8601	3085.8	7391			1310	0	SLV 16	0	No
ini.	2	23663	734.41	9730			1310	0	SLV 12	0	No
fin.	2	23576	2512.67	7055			1310	0	SLV 12	0	No
ini.	2	10666	2304.2	-1245			1310	0	SLV 4	0	No
fin.	2	11811	-730.12	-2128			1310	0	SLV 4	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.559	SLV 15	No
V_SLV	0	SLV 3	No
PF_SLU	0.859	SLU 78	No
V_SLU	0	SLU 1	No

Trave di accoppiamento 68

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-2.013	5.951	4.19	5.07	0.88	-3.013	5.951	4.19	5.07	0.88	1	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fhmmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-3230	-901.62	1100.1	SLU 80	1.22	Si
fin.	3	-1059	170.73	1100.1	SLU 80	6.44	Si
ini.	3	-3251	-893.63	1100.1	SLU 79	1.23	Si
fin.	3	-1135	157.97	1100.1	SLU 79	6.96	Si
ini.	3	-3154	-856.73	1100.1	SLU 74	1.28	Si
fin.	3	-1183	140.64	1100.1	SLU 74	7.82	Si
ini.	3	-3134	-864.72	1100.1	SLU 75	1.27	Si
fin.	3	-1107	153.4	1100.1	SLU 75	7.17	Si
ini.	3	-3111	-854.45	1100.1	SLU 82	1.29	Si
fin.	3	-1160	147.44	1100.1	SLU 82	7.46	Si
ini.	3	-3105	-866.43	1100.1	SLU 76	1.27	Si
fin.	3	-1044	163.1	1100.1	SLU 76	6.74	Si
ini.	3	-3223	-894.97	1100.1	SLU 84	1.23	Si
fin.	3	-1123	163.58	1100.1	SLU 84	6.73	Si
ini.	3	-3265	-897.25	1100.1	SLU 77	1.23	Si
fin.	3	-1146	156.77	1100.1	SLU 77	7.02	Si
ini.	3	-3245	-905.24	1100.1	SLU 78	1.22	Si
fin.	3	-1070	169.53	1100.1	SLU 78	6.49	Si
ini.	3	-3243	-886.98	1100.1	SLU 83	1.24	Si
fin.	3	-1200	150.82	1100.1	SLU 83	7.29	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-3134	-864.72	4335			1938	690	SLU 75	0.16	No
fin.	3	-1107	153.4	-2137			1225	481	SLU 75	0.23	No
ini.	3	-3111	-854.45	4329			1930	688	SLU 82	0.16	No
fin.	3	-1160	147.44	-2263			1244	488	SLU 82	0.22	No
ini.	3	-3245	-905.24	4509			1977	699	SLU 78	0.16	No
fin.	3	-1070	169.53	-2110			1212	477	SLU 78	0.23	No
ini.	3	-3105	-866.43	4332			1928	687	SLU 76	0.16	No
fin.	3	-1044	163.1	-2059			1203	474	SLU 76	0.23	No
ini.	3	-3230	-901.62	4491			1972	698	SLU 80	0.16	No
fin.	3	-1059	170.73	-2088			1208	475	SLU 80	0.23	No
ini.	3	-3131	-846.46	4307			1937	689	SLU 81	0.16	No
fin.	3	-1237	134.68	-2347			1270	497	SLU 81	0.21	No
ini.	3	-3251	-893.63	4469			1979	700	SLU 79	0.16	No
fin.	3	-1135	157.97	-2173			1235	485	SLU 79	0.22	No
ini.	3	-3243	-886.98	4481			1976	699	SLU 83	0.16	No
fin.	3	-1200	150.82	-2320			1257	493	SLU 83	0.21	No
ini.	3	-3223	-894.97	4503			1969	697	SLU 84	0.15	No
fin.	3	-1123	163.58	-2236			1230	484	SLU 84	0.22	No
ini.	3	-3265	-897.25	4487			1984	701	SLU 77	0.16	No
fin.	3	-1146	156.77	-2195			1239	486	SLU 77	0.22	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-4810	-1876.38	1650.16	SLV 14	0.88	No
fin.	2	3025	915.65	1650.16	SLV 14	1.8	Si
ini.	2	1585	1093.91	1650.16	SLV 2	1.51	Si
fin.	2	-3802	-674.98	1650.16	SLV 2	2.44	Si
ini.	2	-4810	-1876.38	1650.16	SLV 13	0.88	No
fin.	2	3025	915.65	1650.16	SLV 13	1.8	Si
ini.	2	-4908	-1602.38	1650.16	SLV 12	1.03	Si
fin.	2	-1515	191.2	1650.16	SLV 12	8.63	Si
ini.	2	-4908	-1602.38	1650.16	SLV 11	1.03	Si
fin.	2	-1515	191.2	1650.16	SLV 11	8.63	Si
ini.	2	506	740.55	1650.16	SLV 3	2.23	Si
fin.	2	-4795	-752.39	1650.16	SLV 3	2.19	Si
ini.	2	-5889	-2229.74	1650.16	SLV 15	0.74	No
fin.	2	2032	838.24	1650.16	SLV 15	1.97	Si
ini.	2	506	740.55	1650.16	SLV 4	2.23	Si
fin.	2	-4795	-752.39	1650.16	SLV 4	2.19	Si
ini.	2	1585	1093.91	1650.16	SLV 1	1.51	Si
fin.	2	-3802	-674.98	1650.16	SLV 1	2.44	Si
ini.	2	-5889	-2229.74	1650.16	SLV 16	0.74	No
fin.	2	2032	838.24	1650.16	SLV 16	1.97	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-4810	-1876.38	7872			2946	1044	SLV 14	0.13	No
fin.	2	3025	915.65	4227			1253	0	SLV 14	0	No
ini.	2	1585	1093.91	-3072			1253	0	SLV 2	0	No
fin.	2	-3802	-674.98	-6236			2591	953	SLV 2	0.15	No
ini.	2	-1314	-424.53	2964			1715	678	SLV 9	0.23	No
fin.	2	1793	449.25	1776			1253	0	SLV 9	0	No
ini.	2	-5889	-2229.74	8796			3325	1133	SLV 15	0.13	No
fin.	2	2032	838.24	3189			1253	0	SLV 15	0	No
ini.	2	1585	1093.91	-3072			1253	0	SLV 1	0	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	2	-3802	-674.98	-6236			2591	953	SLV 1	0.15	No
ini.	2	-1314	-424.53	2964			1715	678	SLV 10	0.23	No
fin.	2	1793	449.25	1776			1253	0	SLV 10	0	No
ini.	2	506	740.55	-2148			1253	362	SLV 3	0.17	No
fin.	2	-4795	-752.39	-7273			2940	1043	SLV 3	0.14	No
ini.	2	-4810	-1876.38	7872			2946	1044	SLV 13	0.13	No
fin.	2	3025	915.65	4227			1253	0	SLV 13	0	No
ini.	2	-5889	-2229.74	8796			3325	1133	SLV 16	0.13	No
fin.	2	2032	838.24	3189			1253	0	SLV 16	0	No
ini.	2	506	740.55	-2148			1253	362	SLV 4	0.17	No
fin.	2	-4795	-752.39	-7273			2940	1043	SLV 4	0.14	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF SLV	0.74	SLV 15	No
V SLV	0	SLV 1	No
PF SLU	1.215	SLU 78	Si
V SLU	0.155	SLU 84	No

Trave di accoppiamento 69

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-24.678	1.266	7.17	8.62	1.45	-24.678	2.066	7.17	8.62	1.45	0.8	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fthk	fvk0	fthmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-8181	1082.31	2986.79	SLU 83	2.76	Si
fin.	3	-8181	-1402.29	2986.79	SLU 83	2.13	Si
ini.	3	-8090	932.29	2986.79	SLU 84	3.2	Si
fin.	3	-8090	-1269.3	2986.79	SLU 84	2.35	Si
ini.	3	-6643	1070.74	2986.79	SLU 39	2.79	Si
fin.	3	-6643	-1331.76	2986.79	SLU 39	2.24	Si
ini.	3	-7958	1090.53	2986.79	SLU 81	2.74	Si
fin.	3	-7958	-1410.36	2986.79	SLU 81	2.12	Si
ini.	3	-6658	965.79	2986.79	SLU 32	3.09	Si
fin.	3	-6658	-1216.5	2986.79	SLU 32	2.46	Si
ini.	3	-8196	977.36	2986.79	SLU 77	3.06	Si
fin.	3	-8196	-1287.03	2986.79	SLU 77	2.32	Si
ini.	3	-7973	985.58	2986.79	SLU 74	3.03	Si
fin.	3	-7973	-1295.1	2986.79	SLU 74	2.31	Si
ini.	3	-7867	940.51	2986.79	SLU 82	3.18	Si
fin.	3	-7867	-1277.37	2986.79	SLU 82	2.34	Si
ini.	3	-6866	1062.51	2986.79	SLU 41	2.81	Si
fin.	3	-6866	-1323.69	2986.79	SLU 41	2.26	Si
ini.	3	-8141	941.93	2986.79	SLU 79	3.17	Si
fin.	3	-8141	-1253.62	2986.79	SLU 79	2.38	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-8181	1082.31	-2772			4836	1562	SLU 83	0.56	No
fin.	3	-8181	-1402.29	-3497			4836	1562	SLU 83	0.45	No
ini.	3	-6551	920.72	-2390			4184	1422	SLU 40	0.6	No
fin.	3	-6551	-1198.77	-2952			4184	1422	SLU 40	0.48	No
ini.	3	-6658	965.79	-2468			4227	1432	SLU 32	0.58	No
fin.	3	-6658	-1216.5	-3031			4227	1432	SLU 32	0.47	No
ini.	3	-6866	1062.51	-2723			4310	1450	SLU 41	0.53	No
fin.	3	-6866	-1323.69	-3285			4310	1450	SLU 41	0.44	No
ini.	3	-6880	957.57	-2448			4316	1451	SLU 35	0.59	No
fin.	3	-6880	-1208.43	-3010			4316	1451	SLU 35	0.48	No
ini.	3	-7867	940.51	-2438			4710	1536	SLU 82	0.63	No
fin.	3	-7867	-1277.37	-3164			4710	1536	SLU 82	0.49	No
ini.	3	-8196	977.36	-2496			4842	1563	SLU 77	0.63	No
fin.	3	-8196	-1287.03	-3222			4842	1563	SLU 77	0.49	No
ini.	3	-7958	1090.53	-2792			4747	1543	SLU 81	0.55	No
fin.	3	-7958	-1410.36	-3518			4747	1543	SLU 81	0.44	No
ini.	3	-7973	985.58	-2517			4753	1545	SLU 74	0.61	No
fin.	3	-7973	-1295.1	-3243			4753	1545	SLU 74	0.48	No
ini.	3	-6643	1070.74	-2744			4221	1430	SLU 39	0.52	No
fin.	3	-6643	-1331.76	-3306			4221	1430	SLU 39	0.43	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-6900	3005.81	4480.18	SLV 8	1.49	Si
fin.	2	-6916	-3324.47	4480.18	SLV 8	1.35	Si
ini.	2	-4883	1972.25	4480.18	SLV 11	2.27	Si
fin.	2	-4957	-2232.91	4480.18	SLV 11	2.01	Si
ini.	2	-8966	2840.47	4480.18	SLV 3	1.58	Si
fin.	2	-8883	-3182.4	4480.18	SLV 3	1.41	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-6900	3005.81	4480.18	SLV 7	1.49	Si
fin.	2	-6916	-3324.47	4480.18	SLV 7	1.35	Si
ini.	2	-4063	-1945.33	4480.18	SLV 10	2.3	Si
fin.	2	-4047	1811.51	4480.18	SLV 10	2.47	Si
ini.	2	-4063	-1945.33	4480.18	SLV 9	2.3	Si
fin.	2	-4047	1811.51	4480.18	SLV 9	2.47	Si
ini.	2	-4883	1972.25	4480.18	SLV 12	2.27	Si
fin.	2	-4957	-2232.91	4480.18	SLV 12	2.01	Si
ini.	2	-8720	1665.2	4480.18	SLV 1	2.69	Si
fin.	2	-8610	-1969.07	4480.18	SLV 1	2.28	Si
ini.	2	-8720	1665.2	4480.18	SLV 2	2.69	Si
fin.	2	-8610	-1969.07	4480.18	SLV 2	2.28	Si
ini.	2	-8966	2840.47	4480.18	SLV 4	1.58	Si
fin.	2	-8883	-3182.4	4480.18	SLV 4	1.41	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-4063	-1945.33	4949			3970	1529	SLV 10	0.31	No
fin.	2	-4047	1811.51	4356			3964	1527	SLV 10	0.35	No
ini.	2	-8966	2840.47	-7188			5932	2054	SLV 3	0.29	No
fin.	2	-8883	-3182.4	-7681			5898	2046	SLV 3	0.27	No
ini.	2	-6900	3005.81	-7654			5105	1851	SLV 8	0.24	No
fin.	2	-6916	-3324.47	-8175			5112	1853	SLV 8	0.23	No
ini.	2	-1997	-1779.99	4483			3144	1243	SLV 14	0.28	No
fin.	2	-2080	1669.44	3863			3177	1256	SLV 14	0.33	No
ini.	2	-4063	-1945.33	4949			3970	1529	SLV 9	0.31	No
fin.	2	-4047	1811.51	4356			3964	1527	SLV 9	0.35	No
ini.	2	-4883	1972.25	-5053			4299	1629	SLV 11	0.32	No
fin.	2	-4957	-2232.91	-5608			4328	1637	SLV 11	0.29	No
ini.	2	-8966	2840.47	-7188			5932	2054	SLV 4	0.29	No
fin.	2	-8883	-3182.4	-7681			5898	2046	SLV 4	0.27	No
ini.	2	-6900	3005.81	-7654			5105	1851	SLV 7	0.24	No
fin.	2	-6916	-3324.47	-8175			5112	1853	SLV 7	0.23	No
ini.	2	-1997	-1779.99	4483			3144	1243	SLV 13	0.28	No
fin.	2	-2080	1669.44	3863			3177	1256	SLV 13	0.33	No
ini.	2	-4883	1972.25	-5053			4299	1629	SLV 12	0.32	No
fin.	2	-4957	-2232.91	-5608			4328	1637	SLV 12	0.29	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV		SLV 7	Si
V_SLV	0.227	SLV 7	No
PF_SLU	2.118	SLU 81	Si
V_SLU	0.433	SLU 39	No

Trave di accoppiamento 70

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-21.813	5.951	5.07	5.97	0.9	-22.713	5.951	5.07	5.97	0.9	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fhmmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-3344	624.94	1150.68	SLU 76	1.84	Si
fin.	3	-2443	248.23	1150.68	SLU 76	4.64	Si
ini.	3	-3400	620.54	1150.68	SLU 74	1.85	Si
fin.	3	-2553	271.58	1150.68	SLU 74	4.24	Si
ini.	3	-3454	645.58	1150.68	SLU 84	1.78	Si
fin.	3	-2531	259.95	1150.68	SLU 84	4.43	Si
ini.	3	-3502	657.25	1150.68	SLU 77	1.75	Si
fin.	3	-2565	260.11	1150.68	SLU 77	4.42	Si
ini.	3	-3479	641.8	1150.68	SLU 83	1.79	Si
fin.	3	-2588	272.09	1150.68	SLU 83	4.23	Si
ini.	3	-3375	624.31	1150.68	SLU 75	1.84	Si
fin.	3	-2496	259.45	1150.68	SLU 75	4.44	Si
ini.	3	-3487	655.36	1150.68	SLU 79	1.76	Si
fin.	3	-2549	256.98	1150.68	SLU 79	4.48	Si
ini.	3	-3477	661.03	1150.68	SLU 78	1.74	Si
fin.	3	-2509	247.98	1150.68	SLU 78	4.64	Si
ini.	3	-3462	659.14	1150.68	SLU 80	1.75	Si
fin.	3	-2493	244.85	1150.68	SLU 80	4.7	Si
ini.	3	-3352	608.86	1150.68	SLU 82	1.89	Si
fin.	3	-2519	271.42	1150.68	SLU 82	4.24	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-3375	624.31	-1601			2320	818	SLU 75	0.51	No
fin.	3	-2496	259.45	375			1969	728	SLU 75	1.94	Si
ini.	3	-3462	659.14	-1711			2355	827	SLU 80	0.48	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	3	-2493	244.85	291			1967	727	SLU 80	2.5	Si
ini.	3	-3344	624.94	-1607			2308	815	SLU 76	0.51	No
fin.	3	-2443	248.23	325			1947	722	SLU 76	2.22	Si
ini.	3	-3454	645.58	-1645			2352	826	SLU 84	0.5	No
fin.	3	-2531	259.95	331			1983	732	SLU 84	2.21	Si
ini.	3	-3243	605.12	-1585			2268	805	SLU 72	0.51	No
fin.	3	-2373	236.36	347			1920	714	SLU 72	2.06	Si
ini.	3	-3477	661.03	-1722			2361	828	SLU 78	0.48	No
fin.	3	-2509	247.98	311			1974	729	SLU 78	2.34	Si
ini.	3	-3479	641.8	-1619			2362	828	SLU 83	0.51	No
fin.	3	-2588	272.09	377			2006	738	SLU 83	1.96	Si
ini.	3	-3258	607.01	-1595			2274	807	SLU 70	0.51	No
fin.	3	-2389	239.5	367			1926	716	SLU 70	1.95	Si
ini.	3	-3487	655.36	-1686			2365	829	SLU 79	0.49	No
fin.	3	-2549	256.98	337			1990	734	SLU 79	2.18	Si
ini.	3	-3502	657.25	-1697			2371	830	SLU 77	0.49	No
fin.	3	-2565	260.11	357			1996	735	SLU 77	2.06	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-286	-1015.6	1726.01	SLV 16	1.7	Si
fin.	2	-3834	1126.77	1726.01	SLV 16	1.53	Si
ini.	2	-5879	2046.99	1726.01	SLV 3	0.84	No
fin.	2	-919	-636.19	1726.01	SLV 3	2.71	Si
ini.	2	1152	-1231.57	1726.01	SLV 14	1.4	Si
fin.	2	-2789	1055.75	1726.01	SLV 14	1.63	Si
ini.	2	-4442	1831.02	1726.01	SLV 2	0.94	No
fin.	2	126	-707.21	1726.01	SLV 2	2.44	Si
ini.	2	1152	-1231.57	1726.01	SLV 13	1.4	Si
fin.	2	-2789	1055.75	1726.01	SLV 13	1.63	Si
ini.	2	-4442	1831.02	1726.01	SLV 1	0.94	No
fin.	2	126	-707.21	1726.01	SLV 1	2.44	Si
ini.	2	-5879	2046.99	1726.01	SLV 4	0.84	No
fin.	2	-919	-636.19	1726.01	SLV 4	2.71	Si
ini.	2	-5599	1227.05	1726.01	SLV 7	1.41	Si
fin.	2	-3157	63.7	1726.01	SLV 7	27.09	Si
ini.	2	-286	-1015.6	1726.01	SLV 15	1.7	Si
fin.	2	-3834	1126.77	1726.01	SLV 15	1.53	Si
ini.	2	-5599	1227.05	1726.01	SLV 8	1.41	Si
fin.	2	-3157	63.7	1726.01	SLV 8	27.09	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	871	-411.62	1219			1456	304	SLV 9	0.25	No
fin.	2	-551	355.86	1099			1676	657	SLV 9	0.6	No
ini.	2	-4442	1831.02	-5841			3232	1165	SLV 2	0.2	No
fin.	2	126	-707.21	-4195			1456	520	SLV 2	0.12	No
ini.	2	-286	-1015.6	3814			1570	607	SLV 16	0.16	No
fin.	2	-3834	1126.77	4988			2989	1101	SLV 16	0.22	No
ini.	2	1152	-1231.57	4246			1456	160	SLV 14	0.04	No
fin.	2	-2789	1055.75	4617			2571	982	SLV 14	0.21	No
ini.	2	-4442	1831.02	-5841			3232	1165	SLV 1	0.2	No
fin.	2	126	-707.21	-4195			1456	520	SLV 1	0.12	No
ini.	2	1152	-1231.57	4246			1456	160	SLV 13	0.04	No
fin.	2	-2789	1055.75	4617			2571	982	SLV 13	0.21	No
ini.	2	871	-411.62	1219			1456	304	SLV 10	0.25	No
fin.	2	-551	355.86	1099			1676	657	SLV 10	0.6	No
ini.	2	-5879	2046.99	-6273			3807	1304	SLV 3	0.21	No
fin.	2	-919	-636.19	-3824			1823	720	SLV 3	0.19	No
ini.	2	-5879	2046.99	-6273			3807	1304	SLV 4	0.21	No
fin.	2	-919	-636.19	-3824			1823	720	SLV 4	0.19	No
ini.	2	-286	-1015.6	3814			1570	607	SLV 15	0.16	No
fin.	2	-3834	1126.77	4988			2989	1101	SLV 15	0.22	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.843	SLV 3	No
V_SLV	0.038	SLV 13	No
PF_SLU	1.741	SLU 78	Si
V_SLU	0.481	SLU 78	No

Trave di accoppiamento 71

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-21.813	5.951	7.77	8.62	0.85	-22.713	5.951	7.77	8.62	0.85	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
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Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-364	26.86	1026.38	SLU 80	38.22	Si
fin.	3	-2570	-973.77	1026.38	SLU 80	1.05	Si
ini.	3	-365	26.33	1026.38	SLU 78	38.98	Si
fin.	3	-2582	-979.23	1026.38	SLU 78	1.05	Si
ini.	3	-395	21.07	1026.38	SLU 79	48.72	Si
fin.	3	-2593	-974.29	1026.38	SLU 79	1.05	Si
ini.	3	-447	9.82	1026.38	SLU 74	104.54	Si
fin.	3	-2544	-941.27	1026.38	SLU 74	1.09	Si
ini.	3	-466	15.18	1026.38	SLU 83	67.61	Si
fin.	3	-2638	-974.97	1026.38	SLU 83	1.05	Si
ini.	3	-396	20.54	1026.38	SLU 77	49.96	Si
fin.	3	-2605	-979.75	1026.38	SLU 77	1.05	Si
ini.	3	-417	15.6	1026.38	SLU 75	65.78	Si
fin.	3	-2521	-940.75	1026.38	SLU 75	1.09	Si
ini.	3	-518	4.45	1026.38	SLU 81	230.42	Si
fin.	3	-2577	-936.49	1026.38	SLU 81	1.1	Si
ini.	3	-487	10.24	1026.38	SLU 82	100.22	Si
fin.	3	-2554	-935.97	1026.38	SLU 82	1.1	Si
ini.	3	-435	20.97	1026.38	SLU 84	48.95	Si
fin.	3	-2615	-974.45	1026.38	SLU 84	1.05	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-364	26.86	577			1003	393	SLU 80	0.68	No
fin.	3	-2570	-973.77	-3903			1837	671	SLU 80	0.17	No
ini.	3	-396	20.54	622			1015	399	SLU 77	0.64	No
fin.	3	-2605	-979.75	-3932			1850	674	SLU 77	0.17	No
ini.	3	-365	26.33	598			1003	394	SLU 78	0.66	No
fin.	3	-2582	-979.23	-3932			1841	672	SLU 78	0.17	No
ini.	3	-487	10.24	756			1050	414	SLU 82	0.55	No
fin.	3	-2554	-935.97	-3806			1830	669	SLU 82	0.18	No
ini.	3	-447	9.82	691			1035	407	SLU 74	0.59	No
fin.	3	-2544	-941.27	-3800			1827	668	SLU 74	0.18	No
ini.	3	-417	15.6	667			1023	402	SLU 75	0.6	No
fin.	3	-2521	-940.75	-3799			1818	666	SLU 75	0.18	No
ini.	3	-395	21.07	601			1015	399	SLU 79	0.66	No
fin.	3	-2593	-974.29	-3903			1845	673	SLU 79	0.17	No
ini.	3	-435	20.97	687			1030	405	SLU 84	0.59	No
fin.	3	-2615	-974.45	-3938			1853	675	SLU 84	0.17	No
ini.	3	-466	15.18	711			1042	410	SLU 83	0.58	No
fin.	3	-2638	-974.97	-3939			1862	678	SLU 83	0.17	No
ini.	3	-395	19.99	630			1015	399	SLU 76	0.63	No
fin.	3	-2493	-934.94	-3770			1808	663	SLU 76	0.18	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	2442	734.49	1539.56	SLV 1	2.1	Si
fin.	2	-3191	-2010.39	1539.56	SLV 1	0.77	No
ini.	2	2705	775.62	1539.56	SLV 4	1.98	Si
fin.	2	-3939	-2287.28	1539.56	SLV 4	0.67	No
ini.	2	-3156	-751.07	1539.56	SLV 15	2.05	Si
fin.	2	-264	760.33	1539.56	SLV 15	2.02	Si
ini.	2	-3419	-792.2	1539.56	SLV 13	1.94	Si
fin.	2	484	1037.22	1539.56	SLV 13	1.48	Si
ini.	2	960	289.26	1539.56	SLV 7	5.32	Si
fin.	2	-3525	-1543.66	1539.56	SLV 7	1	No
ini.	2	2705	775.62	1539.56	SLV 3	1.98	Si
fin.	2	-3939	-2287.28	1539.56	SLV 3	0.67	No
ini.	2	-3156	-751.07	1539.56	SLV 16	2.05	Si
fin.	2	-264	760.33	1539.56	SLV 16	2.02	Si
ini.	2	-3419	-792.2	1539.56	SLV 14	1.94	Si
fin.	2	484	1037.22	1539.56	SLV 14	1.48	Si
ini.	2	960	289.26	1539.56	SLV 8	5.32	Si
fin.	2	-3525	-1543.66	1539.56	SLV 8	1	No
ini.	2	2442	734.49	1539.56	SLV 2	2.1	Si
fin.	2	-3191	-2010.39	1539.56	SLV 2	0.77	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	2705	775.62	-4297			1298	0	SLV 4	0	No
fin.	2	-3939	-2287.28	-7762			2786	1014	SLV 4	0.13	No
ini.	2	-3419	-792.2	5313			2590	962	SLV 14	0.18	No
fin.	2	484	1037.22	2716			1298	376	SLV 14	0.14	No
ini.	2	2705	775.62	-4297			1298	0	SLV 3	0	No
fin.	2	-3939	-2287.28	-7762			2786	1014	SLV 3	0.13	No
ini.	2	960	289.26	-1480			1298	215	SLV 8	0.15	No
fin.	2	-3525	-1543.66	-5113			2630	973	SLV 8	0.19	No
ini.	2	2442	734.49	-3936			1298	0	SLV 1	0	No
fin.	2	-3191	-2010.39	-7091			2504	938	SLV 1	0.13	No
ini.	2	-3419	-792.2	5313			2590	962	SLV 13	0.18	No
fin.	2	484	1037.22	2716			1298	376	SLV 13	0.14	No
ini.	2	2442	734.49	-3936			1298	0	SLV 2	0	No
fin.	2	-3191	-2010.39	-7091			2504	938	SLV 2	0.13	No
ini.	2	960	289.26	-1480			1298	215	SLV 7	0.15	No
fin.	2	-3525	-1543.66	-5113			2630	973	SLV 7	0.19	No
ini.	2	-3156	-751.07	4953			2491	934	SLV 16	0.19	No
fin.	2	-264	760.33	2045			1398	540	SLV 16	0.26	No
ini.	2	-3156	-751.07	4953			2491	934	SLV 15	0.19	No
fin.	2	-264	760.33	2045			1398	540	SLV 15	0.26	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.673	SLV 3	No
V_SLV	0	SLV 1	No
PF_SLU	1.048	SLU 77	Si
V_SLU	0.171	SLU 78	No

Trave di accoppiamento 72

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-21.593	-3.359	5.07	5.97	0.9	-22.493	-3.359	5.07	5.97	0.9	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-4366	1222.8	1150.68	SLU 80	0.94	No
fin.	3	-1758	26.71	1150.68	SLU 80	43.08	Si
ini.	3	-4324	1200.04	1150.68	SLU 75	0.96	No
fin.	3	-1782	36.48	1150.68	SLU 75	31.55	Si
ini.	3	-4388	1229.32	1150.68	SLU 78	0.94	No
fin.	3	-1770	28.18	1150.68	SLU 78	40.84	Si
ini.	3	-4130	1158.79	1150.68	SLU 83	0.99	No
fin.	3	-1686	54.88	1150.68	SLU 83	20.97	Si
ini.	3	-4503	1247.47	1150.68	SLU 76	0.92	No
fin.	3	-1837	18.77	1150.68	SLU 76	61.31	Si
ini.	3	-4088	1148.39	1150.68	SLU 77	1	Si
fin.	3	-1669	52.53	1150.68	SLU 77	21.9	Si
ini.	3	-4430	1239.72	1150.68	SLU 84	0.93	No
fin.	3	-1787	30.52	1150.68	SLU 84	37.7	Si
ini.	3	-4366	1210.45	1150.68	SLU 82	0.95	No
fin.	3	-1799	38.82	1150.68	SLU 82	29.64	Si
ini.	3	-4439	1218.2	1150.68	SLU 73	0.94	No
fin.	3	-1850	27.07	1150.68	SLU 73	42.51	Si
ini.	3	-4066	1141.87	1150.68	SLU 79	1.01	Si
fin.	3	-1657	51.06	1150.68	SLU 79	22.53	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-4366	1210.45	-3151			2717	909	SLU 82	0.29	No
fin.	3	-1799	38.82	-1275			1690	647	SLU 82	0.51	No
ini.	3	-4088	1148.39	-3111			2606	885	SLU 77	0.28	No
fin.	3	-1669	52.53	-928			1638	631	SLU 77	0.68	No
ini.	3	-4024	1119.11	-3010			2580	879	SLU 74	0.29	No
fin.	3	-1681	60.83	-886			1643	633	SLU 74	0.71	No
ini.	3	-4130	1158.79	-3112			2622	888	SLU 83	0.29	No
fin.	3	-1686	54.88	-978			1645	633	SLU 83	0.65	No
ini.	3	-4503	1247.47	-3221			2771	921	SLU 76	0.29	No
fin.	3	-1837	18.77	-1459			1705	652	SLU 76	0.45	No
ini.	3	-4388	1229.32	-3250			2726	911	SLU 78	0.28	No
fin.	3	-1770	28.18	-1267			1678	644	SLU 78	0.51	No
ini.	3	-4430	1239.72	-3252			2742	915	SLU 84	0.28	No
fin.	3	-1787	30.52	-1317			1685	646	SLU 84	0.49	No
ini.	3	-4066	1141.87	-3090			2597	883	SLU 79	0.29	No
fin.	3	-1657	51.06	-936			1633	630	SLU 79	0.67	No
ini.	3	-4324	1200.04	-3149			2700	906	SLU 75	0.29	No
fin.	3	-1782	36.48	-1225			1683	645	SLU 75	0.53	No
ini.	3	-4366	1222.8	-3229			2717	909	SLU 80	0.28	No
fin.	3	-1758	26.71	-1275			1674	642	SLU 80	0.5	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-6627	2794.44	1726.01	SLV 4	0.62	No
fin.	2	1638	-1144.91	1726.01	SLV 4	1.51	Si
ini.	2	-6627	2794.44	1726.01	SLV 3	0.62	No
fin.	2	1638	-1144.91	1726.01	SLV 3	1.51	Si
ini.	2	-7661	3101.41	1726.01	SLV 2	0.56	No
fin.	2	586	-913.7	1726.01	SLV 2	1.89	Si
ini.	2	-7661	3101.41	1726.01	SLV 1	0.56	No
fin.	2	586	-913.7	1726.01	SLV 1	1.89	Si
ini.	2	2021	-1585.7	1726.01	SLV 16	1.09	Si
fin.	2	-3114	1032.17	1726.01	SLV 16	1.67	Si
ini.	2	-5839	1926.49	1726.01	SLV 6	0.9	No
fin.	2	-2305	118.01	1726.01	SLV 6	14.63	Si
ini.	2	987	-1278.73	1726.01	SLV 14	1.35	Si
fin.	2	-4166	1263.37	1726.01	SLV 14	1.37	Si
ini.	2	-5839	1926.49	1726.01	SLV 5	0.9	No
fin.	2	-2305	118.01	1726.01	SLV 5	14.63	Si
ini.	2	2021	-1585.7	1726.01	SLV 15	1.09	Si
fin.	2	-3114	1032.17	1726.01	SLV 15	1.67	Si
ini.	2	987	-1278.73	1726.01	SLV 13	1.35	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	2	-4166	1263.37	1726.01	SLV 13	1.37	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	987	-1278.73	5278			1456	255	SLV 13	0.05	No
fin.	2	-4166	1263.37	5953			3122	1137	SLV 13	0.19	No
ini.	2	-6627	2794.44	-9311			4107	1371	SLV 4	0.15	No
fin.	2	1638	-1144.91	-7000			1456	0	SLV 4	0	No
ini.	2	-2395	903.26	-3881			2414	933	SLV 7	0.24	No
fin.	2	1202	-652.67	-3085			1456	118	SLV 7	0.04	No
ini.	2	-2395	903.26	-3881			2414	933	SLV 8	0.24	No
fin.	2	1202	-652.67	-3085			1456	118	SLV 8	0.04	No
ini.	2	2021	-1585.7	5491			1456	0	SLV 16	0	No
fin.	2	-3114	1032.17	5546			2701	1021	SLV 16	0.18	No
ini.	2	-7661	3101.41	-9524			4520	1458	SLV 2	0.15	No
fin.	2	586	-913.7	-6592			1456	401	SLV 2	0.06	No
ini.	2	2021	-1585.7	5491			1456	0	SLV 15	0	No
fin.	2	-3114	1032.17	5546			2701	1021	SLV 15	0.18	No
ini.	2	987	-1278.73	5278			1456	255	SLV 14	0.05	No
fin.	2	-4166	1263.37	5953			3122	1137	SLV 14	0.19	No
ini.	2	-6627	2794.44	-9311			4107	1371	SLV 3	0.15	No
fin.	2	1638	-1144.91	-7000			1456	0	SLV 3	0	No
ini.	2	-7661	3101.41	-9524			4520	1458	SLV 1	0.15	No
fin.	2	586	-913.7	-6592			1456	401	SLV 1	0.06	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.557	SLV 1	No
V_SLV	0	SLV 3	No
PF_SLU	0.922	SLU 76	No
V_SLU	0.28	SLU 78	No

Trave di accoppiamento 73

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-21.593	-3.359	7.77	8.62	0.85	-22.493	-3.359	7.77	8.62	0.85	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1893	643.92	1026.38	SLU 84	1.59	Si
fin.	3	-5255	-1160.24	1026.38	SLU 84	0.88	No
ini.	3	-1724	593.98	1026.38	SLU 79	1.73	Si
fin.	3	-4838	-1082.89	1026.38	SLU 79	0.95	No
ini.	3	-1830	641.95	1026.38	SLU 78	1.6	Si
fin.	3	-5163	-1148.37	1026.38	SLU 78	0.89	No
ini.	3	-1726	597.94	1026.38	SLU 77	1.72	Si
fin.	3	-4863	-1090.73	1026.38	SLU 77	0.94	No
ini.	3	-1839	618.96	1026.38	SLU 75	1.66	Si
fin.	3	-5080	-1123.48	1026.38	SLU 75	0.91	No
ini.	3	-1790	599.91	1026.38	SLU 83	1.71	Si
fin.	3	-4955	-1102.6	1026.38	SLU 83	0.93	No
ini.	3	-1827	637.99	1026.38	SLU 80	1.61	Si
fin.	3	-5139	-1140.53	1026.38	SLU 80	0.9	No
ini.	3	-1902	620.93	1026.38	SLU 82	1.65	Si
fin.	3	-5172	-1135.35	1026.38	SLU 82	0.9	No
ini.	3	-1905	644.34	1026.38	SLU 76	1.59	Si
fin.	3	-5255	-1154.06	1026.38	SLU 76	0.89	No
ini.	3	-1914	621.36	1026.38	SLU 73	1.65	Si
fin.	3	-5172	-1129.17	1026.38	SLU 73	0.91	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1902	620.93	-1681			1584	600	SLU 82	0.36	No
fin.	3	-5172	-1135.35	-6373			2819	893	SLU 82	0.14	No
ini.	3	-1726	597.94	-1536			1518	581	SLU 77	0.38	No
fin.	3	-4863	-1090.73	-6240			2703	870	SLU 77	0.14	No
ini.	3	-1790	599.91	-1537			1542	588	SLU 83	0.38	No
fin.	3	-4955	-1102.6	-6316			2737	877	SLU 83	0.14	No
ini.	3	-1827	637.99	-1738			1556	592	SLU 80	0.34	No
fin.	3	-5139	-1140.53	-6396			2807	891	SLU 80	0.14	No
ini.	3	-1799	576.93	-1472			1545	589	SLU 81	0.4	No
fin.	3	-4871	-1077.7	-6166			2706	870	SLU 81	0.14	No
ini.	3	-1830	641.95	-1745			1557	592	SLU 78	0.34	No
fin.	3	-5163	-1148.37	-6447			2816	893	SLU 78	0.14	No
ini.	3	-1893	643.92	-1746			1581	600	SLU 84	0.34	No
fin.	3	-5255	-1160.24	-6523			2851	900	SLU 84	0.14	No
ini.	3	-1839	618.96	-1681			1560	593	SLU 75	0.35	No
fin.	3	-5080	-1123.48	-6297			2785	886	SLU 75	0.14	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1905	644.34	-1813			1585	601	SLU 76	0.33	No
fin.	3	-5255	-1154.06	-6384			2851	900	SLU 76	0.14	No
ini.	3	-1724	593.98	-1529			1517	580	SLU 79	0.38	No
fin.	3	-4838	-1082.89	-6189			2693	868	SLU 79	0.14	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-1445	-1398.11	1539.56	SLV 16	1.1	Si
fin.	2	2554	824.42	1539.56	SLV 16	1.87	Si
ini.	2	-2272	-1360.2	1539.56	SLV 14	1.13	Si
fin.	2	1457	597.72	1539.56	SLV 14	2.58	Si
ini.	2	-1445	-1398.11	1539.56	SLV 15	1.1	Si
fin.	2	2554	824.42	1539.56	SLV 15	1.87	Si
ini.	2	-2444	963.35	1539.56	SLV 5	1.6	Si
fin.	2	-6680	-1529.71	1539.56	SLV 5	1.01	Si
ini.	2	-1053	2146.44	1539.56	SLV 2	0.72	No
fin.	2	-9093	-2268.36	1539.56	SLV 2	0.68	No
ini.	2	-2272	-1360.2	1539.56	SLV 13	1.13	Si
fin.	2	1457	597.72	1539.56	SLV 13	2.58	Si
ini.	2	-2444	963.35	1539.56	SLV 6	1.6	Si
fin.	2	-6680	-1529.71	1539.56	SLV 6	1.01	Si
ini.	2	-226	2108.53	1539.56	SLV 4	0.73	No
fin.	2	-7996	-2041.67	1539.56	SLV 4	0.75	No
ini.	2	-1053	2146.44	1539.56	SLV 1	0.72	No
fin.	2	-9093	-2268.36	1539.56	SLV 1	0.68	No
ini.	2	-226	2108.53	1539.56	SLV 3	0.73	No
fin.	2	-7996	-2041.67	1539.56	SLV 3	0.75	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-2444	963.35	-4149			2222	854	SLV 6	0.21	No
fin.	2	-6680	-1529.71	-7780			3822	1257	SLV 6	0.16	No
ini.	2	-2444	963.35	-4149			2222	854	SLV 5	0.21	No
fin.	2	-6680	-1529.71	-7780			3822	1257	SLV 5	0.16	No
ini.	2	-226	2108.53	-6556			1384	533	SLV 4	0.08	No
fin.	2	-7996	-2041.67	-10503			4319	1358	SLV 4	0.13	No
ini.	2	-2272	-1360.2	4642			2157	834	SLV 14	0.18	No
fin.	2	1457	597.72	2342			1298	0	SLV 14	0	No
ini.	2	-1053	2146.44	-7388			1696	671	SLV 1	0.09	No
fin.	2	-9093	-2268.36	-11479			4733	1436	SLV 1	0.13	No
ini.	2	-226	2108.53	-6556			1384	533	SLV 3	0.08	No
fin.	2	-7996	-2041.67	-10503			4319	1358	SLV 3	0.13	No
ini.	2	-1053	2146.44	-7388			1696	671	SLV 2	0.09	No
fin.	2	-9093	-2268.36	-11479			4733	1436	SLV 2	0.13	No
ini.	2	-1445	-1398.11	5475			1845	727	SLV 15	0.13	No
fin.	2	2554	824.42	3317			1298	0	SLV 15	0	No
ini.	2	-1445	-1398.11	5475			1845	727	SLV 16	0.13	No
fin.	2	2554	824.42	3317			1298	0	SLV 16	0	No
ini.	2	-2272	-1360.2	4642			2157	834	SLV 13	0.18	No
fin.	2	1457	597.72	2342			1298	0	SLV 13	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.679	SLV 1	No
V_SLV	0	SLV 13	No
PF_SLU	0.885	SLU 84	No
V_SLU	0.138	SLU 84	No

Trave di accoppiamento 74

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-18.868	-3.359	5.07	7.07	2	-19.368	-3.359	5.07	7.07	2	0.5	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-887	433.96	5682.35	SLU 81	13.09	Si
fin.	3	-1680	971.13	5682.35	SLU 81	5.85	Si
ini.	3	-1045	375.36	5682.35	SLU 80	15.14	Si
fin.	3	-1863	956.11	5682.35	SLU 80	5.94	Si
ini.	3	-1055	373.39	5682.35	SLU 78	15.22	Si
fin.	3	-1878	965.24	5682.35	SLU 78	5.89	Si
ini.	3	-894	449.65	5682.35	SLU 83	12.64	Si
fin.	3	-1690	975.97	5682.35	SLU 83	5.82	Si
ini.	3	-1120	322.21	5682.35	SLU 76	17.64	Si
fin.	3	-1971	970.22	5682.35	SLU 76	5.86	Si
ini.	3	-1048	357.69	5682.35	SLU 75	15.89	Si
fin.	3	-1868	960.4	5682.35	SLU 75	5.92	Si
ini.	3	-933	429.57	5682.35	SLU 77	13.23	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	3	-1702	936.81	5682.35	SLU 77	6.07	Si
ini.	3	-1016	393.47	5682.35	SLU 84	14.44	Si
fin.	3	-1866	1004.39	5682.35	SLU 84	5.66	Si
ini.	3	-1114	306.51	5682.35	SLU 73	18.54	Si
fin.	3	-1961	965.39	5682.35	SLU 73	5.89	Si
ini.	3	-1009	377.77	5682.35	SLU 82	15.04	Si
fin.	3	-1856	999.55	5682.35	SLU 82	5.68	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-887	433.96	2207			2512	986	SLU 81	0.45	No
fin.	3	-1680	971.13	4422			2828	1119	SLU 81	0.25	No
ini.	3	-1016	393.47	2472			2563	1009	SLU 84	0.41	No
fin.	3	-1866	1004.39	4683			2903	1148	SLU 84	0.25	No
ini.	3	-1114	306.51	2615			2602	1025	SLU 73	0.39	No
fin.	3	-1961	965.39	4635			2941	1162	SLU 73	0.25	No
ini.	3	-933	429.57	2082			2530	994	SLU 77	0.48	No
fin.	3	-1702	936.81	4361			2837	1122	SLU 77	0.26	No
ini.	3	-894	449.65	2175			2514	987	SLU 83	0.45	No
fin.	3	-1690	975.97	4451			2832	1120	SLU 83	0.25	No
ini.	3	-1009	377.77	2504			2560	1007	SLU 82	0.4	No
fin.	3	-1856	999.55	4653			2899	1146	SLU 82	0.25	No
ini.	3	-1120	322.21	2584			2605	1027	SLU 76	0.4	No
fin.	3	-1971	970.22	4664			2945	1164	SLU 76	0.25	No
ini.	3	-1048	357.69	2411			2576	1014	SLU 75	0.42	No
fin.	3	-1868	960.4	4564			2904	1148	SLU 75	0.25	No
ini.	3	-1055	373.39	2379			2579	1015	SLU 78	0.43	No
fin.	3	-1878	965.24	4593			2908	1150	SLU 78	0.25	No
ini.	3	-1045	375.36	2354			2575	1014	SLU 80	0.43	No
fin.	3	-1863	956.11	4539			2902	1147	SLU 80	0.25	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	85	-607	8523.53	SLV 12	14.04	Si
fin.	2	-430	1818.15	8523.53	SLV 12	4.69	Si
ini.	2	-2603	-2210.99	8523.53	SLV 13	3.86	Si
fin.	2	-3727	2068.07	8523.53	SLV 13	4.12	Si
ini.	2	1144	2722.14	8523.53	SLV 4	3.13	Si
fin.	2	1218	-822.34	8523.53	SLV 4	10.36	Si
ini.	2	-1845	-2278.48	8523.53	SLV 15	3.74	Si
fin.	2	-2865	2487.37	8523.53	SLV 15	3.43	Si
ini.	2	387	2789.63	8523.53	SLV 1	3.06	Si
fin.	2	356	-1241.64	8523.53	SLV 1	6.86	Si
ini.	2	85	-607	8523.53	SLV 11	14.04	Si
fin.	2	-430	1818.15	8523.53	SLV 11	4.69	Si
ini.	2	-1845	-2278.48	8523.53	SLV 16	3.74	Si
fin.	2	-2865	2487.37	8523.53	SLV 16	3.43	Si
ini.	2	387	2789.63	8523.53	SLV 2	3.06	Si
fin.	2	356	-1241.64	8523.53	SLV 2	6.86	Si
ini.	2	-2603	-2210.99	8523.53	SLV 14	3.86	Si
fin.	2	-3727	2068.07	8523.53	SLV 14	4.12	Si
ini.	2	1144	2722.14	8523.53	SLV 3	3.13	Si
fin.	2	1218	-822.34	8523.53	SLV 3	10.36	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	85	-607	5751			3235	1199	SLV 11	0.21	No
fin.	2	-430	1818.15	6983			3407	1308	SLV 11	0.19	No
ini.	2	-2603	-2210.99	10865			4276	1691	SLV 14	0.16	No
fin.	2	-3727	2068.07	12129			4726	1859	SLV 14	0.15	No
ini.	2	387	2789.63	-8668			3235	1130	SLV 1	0.13	No
fin.	2	356	-1241.64	-6832			3235	1137	SLV 1	0.17	No
ini.	2	85	-607	5751			3235	1199	SLV 12	0.21	No
fin.	2	-430	1818.15	6983			3407	1308	SLV 12	0.19	No
ini.	2	1144	2722.14	-7873			3235	936	SLV 3	0.12	No
fin.	2	1218	-822.34	-6144			3235	915	SLV 3	0.15	No
ini.	2	387	2789.63	-8668			3235	1130	SLV 2	0.13	No
fin.	2	356	-1241.64	-6832			3235	1137	SLV 2	0.17	No
ini.	2	-2603	-2210.99	10865			4276	1691	SLV 13	0.16	No
fin.	2	-3727	2068.07	12129			4726	1859	SLV 13	0.15	No
ini.	2	1144	2722.14	-7873			3235	936	SLV 4	0.12	No
fin.	2	1218	-822.34	-6144			3235	915	SLV 4	0.15	No
ini.	2	-1845	-2278.48	11660			3973	1568	SLV 15	0.13	No
fin.	2	-2865	2487.37	12817			4381	1732	SLV 15	0.14	No
ini.	2	-1845	-2278.48	11660			3973	1568	SLV 16	0.13	No
fin.	2	-2865	2487.37	12817			4381	1732	SLV 16	0.14	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.055	SLV 1	Si
V_SLV	0.119	SLV 3	No
PF_SLU	5.658	SLU 84	Si
V_SLU	0.245	SLU 84	No

Trave di accoppiamento 75

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-18.868	-3.359	7.87	8.62	0.75	-19.368	-3.359	7.87	8.62	0.75	0.5	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-436	-151.57	799.08	SLU 81	5.27	Si
fin.	3	-366	-21.09	799.08	SLU 81	37.88	Si
ini.	3	-387	-133.52	799.08	SLU 39	5.98	Si
fin.	3	-318	-18.58	799.08	SLU 39	43	Si
ini.	3	-367	-142.02	799.08	SLU 74	5.63	Si
fin.	3	-311	-21.04	799.08	SLU 74	37.98	Si
ini.	3	-426	-151.93	799.08	SLU 83	5.26	Si
fin.	3	-359	-24.57	799.08	SLU 83	32.52	Si
ini.	3	-377	-141.13	799.08	SLU 79	5.66	Si
fin.	3	-326	-26.26	799.08	SLU 79	30.44	Si
ini.	3	-382	-135.04	799.08	SLU 62	5.92	Si
fin.	3	-327	-22.59	799.08	SLU 62	35.37	Si
ini.	3	-392	-134.68	799.08	SLU 60	5.93	Si
fin.	3	-334	-19.11	799.08	SLU 60	41.81	Si
ini.	3	-357	-142.37	799.08	SLU 77	5.61	Si
fin.	3	-304	-24.52	799.08	SLU 77	32.59	Si
ini.	3	-376	-133.88	799.08	SLU 41	5.97	Si
fin.	3	-312	-22.06	799.08	SLU 41	36.22	Si
ini.	3	-307	-128.16	799.08	SLU 84	6.24	Si
fin.	3	-263	3.16	799.08	SLU 84	252.86	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-267	-116.36	922			916	358	SLU 69	0.39	No
fin.	3	-241	-20.34	-1364			905	353	SLU 69	0.26	No
ini.	3	-426	-151.93	1085			979	386	SLU 83	0.36	No
fin.	3	-359	-24.57	-1448			952	374	SLU 83	0.26	No
ini.	3	-357	-142.37	1054			951	374	SLU 77	0.35	No
fin.	3	-304	-24.52	-1474			931	365	SLU 77	0.25	No
ini.	3	-238	-118.6	1019			904	352	SLU 78	0.35	No
fin.	3	-208	3.21	-1417			892	347	SLU 78	0.24	No
ini.	3	-377	-141.13	1037			959	377	SLU 79	0.36	No
fin.	3	-326	-26.26	-1457			939	368	SLU 79	0.25	No
ini.	3	-149	-92.59	887			868	335	SLU 70	0.38	No
fin.	3	-144	7.4	-1307			866	334	SLU 70	0.26	No
ini.	3	-249	-118.25	1010			908	354	SLU 75	0.35	No
fin.	3	-214	6.69	-1361			894	348	SLU 75	0.26	No
ini.	3	-258	-117.37	1003			912	356	SLU 80	0.35	No
fin.	3	-229	1.48	-1401			900	351	SLU 80	0.25	No
ini.	3	-307	-128.16	1051			932	365	SLU 84	0.35	No
fin.	3	-263	3.16	-1392			914	357	SLU 84	0.26	No
ini.	3	-367	-142.02	1044			956	376	SLU 74	0.36	No
fin.	3	-311	-21.04	-1417			933	366	SLU 74	0.26	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-4773	-13.75	1198.62	SLV 3	87.16	Si
fin.	2	-5570	-973	1198.62	SLV 3	1.23	Si
ini.	2	-4773	-13.75	1198.62	SLV 4	87.16	Si
fin.	2	-5570	-973	1198.62	SLV 4	1.23	Si
ini.	2	-4106	209.67	1198.62	SLV 2	5.72	Si
fin.	2	-4997	-841.86	1198.62	SLV 2	1.42	Si
ini.	2	-110	-520.99	1198.62	SLV 12	2.3	Si
fin.	2	340	37.56	1198.62	SLV 12	31.91	Si
ini.	2	4267	-169.7	1198.62	SLV 14	7.06	Si
fin.	2	5125	948.22	1198.62	SLV 14	1.26	Si
ini.	2	3599	-393.12	1198.62	SLV 16	3.05	Si
fin.	2	4552	817.08	1198.62	SLV 16	1.47	Si
ini.	2	4267	-169.7	1198.62	SLV 13	7.06	Si
fin.	2	5125	948.22	1198.62	SLV 13	1.26	Si
ini.	2	3599	-393.12	1198.62	SLV 15	3.05	Si
fin.	2	4552	817.08	1198.62	SLV 15	1.47	Si
ini.	2	-4106	209.67	1198.62	SLV 1	5.72	Si
fin.	2	-4997	-841.86	1198.62	SLV 1	1.42	Si
ini.	2	-110	-520.99	1198.62	SLV 11	2.3	Si
fin.	2	340	37.56	1198.62	SLV 11	31.91	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	2115	223.73	282			1213	0	SLV 9	0	No
fin.	2	2252	474.69	-1627			1213	0	SLV 9	0	No
ini.	2	2115	223.73	282			1213	0	SLV 10	0	No
fin.	2	2252	474.69	-1627			1213	0	SLV 10	0	No
ini.	2	4267	-169.7	2965			1213	0	SLV 14	0	No
fin.	2	5125	948.22	1665			1213	0	SLV 14	0	No
ini.	2	-397	337.54	-1296			1372	536	SLV 5	0.41	No
fin.	2	-785	-62.34	-3486			1527	603	SLV 5	0.17	No
ini.	2	4267	-169.7	2965			1213	0	SLV 13	0	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	2	5125	948.22	1665			1213	0	SLV 13	0	No
ini.	2	-397	337.54	-1296			1372	536	SLV 6	0.41	No
fin.	2	-785	-62.34	-3486			1527	603	SLV 6	0.17	No
ini.	2	-110	-520.99	2690			1257	480	SLV 12	0.18	No
fin.	2	340	37.56	1580			1213	375	SLV 12	0.24	No
ini.	2	3599	-393.12	3688			1213	0	SLV 15	0	No
fin.	2	4552	817.08	2627			1213	0	SLV 15	0	No
ini.	2	-110	-520.99	2690			1257	480	SLV 11	0.18	No
fin.	2	340	37.56	1580			1213	375	SLV 11	0.24	No
ini.	2	3599	-393.12	3688			1213	0	SLV 16	0	No
fin.	2	4552	817.08	2627			1213	0	SLV 16	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.232	SLV 3	Si
V_SLV	0	SLV 9	No
PF_SLU	5.26	SLU 83	Si
V_SLU	0.245	SLU 78	No

Trave di accoppiamento 76

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-17.363	-3.359	5.07	5.97	0.9	-18.263	-3.359	5.07	5.97	0.9	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fthk	fvk0	fthmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	11	-159.46	1150.68	SLU 68	7.22	Si
fin.	3	-197	383.16	1150.68	SLU 68	3	Si
ini.	3	15	-163.13	1150.68	SLU 65	7.05	Si
fin.	3	-210	382.13	1150.68	SLU 65	3.01	Si
ini.	3	-6	-146.1	1150.68	SLU 55	7.88	Si
fin.	3	-147	370.61	1150.68	SLU 55	3.1	Si
ini.	3	-106	-101.33	1150.68	SLU 78	11.36	Si
fin.	3	44	335.12	1150.68	SLU 78	3.43	Si
ini.	3	-104	-107.94	1150.68	SLU 70	10.66	Si
fin.	3	-104	335.13	1150.68	SLU 70	3.43	Si
ini.	3	-4	-152.71	1150.68	SLU 47	7.54	Si
fin.	3	-295	370.62	1150.68	SLU 47	3.1	Si
ini.	3	9	-152.85	1150.68	SLU 76	7.53	Si
fin.	3	-49	383.15	1150.68	SLU 76	3	Si
ini.	3	-1	-149.77	1150.68	SLU 52	7.68	Si
fin.	3	-160	369.58	1150.68	SLU 52	3.11	Si
ini.	3	14	-156.52	1150.68	SLU 73	7.35	Si
fin.	3	-62	382.12	1150.68	SLU 73	3.01	Si
ini.	3	1	-156.38	1150.68	SLU 44	7.36	Si
fin.	3	-308	369.59	1150.68	SLU 44	3.11	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-109	-99.63	-976			1014	388	SLU 82	0.4	No
fin.	3	85	327.62	2148			970	346	SLU 82	0.16	No
ini.	3	-297	-14.88	-1376			1089	425	SLU 83	0.31	No
fin.	3	222	246.92	1850			970	313	SLU 83	0.17	No
ini.	3	-118	-95.12	-1019			1018	390	SLU 80	0.38	No
fin.	3	47	329.69	2212			970	355	SLU 80	0.16	No
ini.	3	-114	-95.96	-1028			1016	389	SLU 84	0.38	No
fin.	3	98	328.65	2181			970	343	SLU 84	0.16	No
ini.	3	-101	-105	-962			1011	387	SLU 75	0.4	No
fin.	3	31	334.09	2218			970	359	SLU 75	0.16	No
ini.	3	-106	-101.33	-1014			1013	388	SLU 78	0.38	No
fin.	3	44	335.12	2252			970	356	SLU 78	0.16	No
ini.	3	14	-156.52	-684			970	362	SLU 73	0.53	No
fin.	3	-62	382.12	2367			995	378	SLU 73	0.16	No
ini.	3	9	-152.85	-736			970	363	SLU 76	0.49	No
fin.	3	-49	383.15	2400			990	376	SLU 76	0.16	No
ini.	3	-289	-20.25	-1361			1086	423	SLU 77	0.31	No
fin.	3	168	253.39	1920			970	327	SLU 77	0.17	No
ini.	3	11	-159.46	-593			970	363	SLU 68	0.61	No
fin.	3	-197	383.16	2394			1049	406	SLU 68	0.17	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	2592	-1196.44	1726.01	SLV 9	1.44	Si
fin.	2	-2133	1150.51	1726.01	SLV 9	1.5	Si
ini.	2	2933	-1856.02	1726.01	SLV 16	0.93	No
fin.	2	-2281	1348.75	1726.01	SLV 16	1.28	Si
ini.	2	3963	-2201.11	1726.01	SLV 14	0.78	No
fin.	2	-3086	1687.51	1726.01	SLV 14	1.02	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-4416	2164.79	1726.01	SLV 3	0.8	No
fin.	2	3123	-1314.7	1726.01	SLV 3	1.31	Si
ini.	2	3963	-2201.11	1726.01	SLV 13	0.78	No
fin.	2	-3086	1687.51	1726.01	SLV 13	1.02	Si
ini.	2	2592	-1196.44	1726.01	SLV 10	1.44	Si
fin.	2	-2133	1150.51	1726.01	SLV 10	1.5	Si
ini.	2	-3386	1819.7	1726.01	SLV 2	0.95	No
fin.	2	2318	-975.94	1726.01	SLV 2	1.77	Si
ini.	2	-3386	1819.7	1726.01	SLV 1	0.95	No
fin.	2	2318	-975.94	1726.01	SLV 1	1.77	Si
ini.	2	-4416	2164.79	1726.01	SLV 4	0.8	No
fin.	2	3123	-1314.7	1726.01	SLV 4	1.31	Si
ini.	2	2933	-1856.02	1726.01	SLV 15	0.93	No
fin.	2	-2281	1348.75	1726.01	SLV 15	1.28	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	2592	-1196.44	3867			1456	0	SLV 9	0	No
fin.	2	-2133	1150.51	6438			2309	899	SLV 9	0.14	No
ini.	2	-4416	2164.79	-9388			3222	1163	SLV 4	0.12	No
fin.	2	3123	-1314.7	-5738			1456	0	SLV 4	0	No
ini.	2	-3386	1819.7	-7938			2810	1052	SLV 2	0.13	No
fin.	2	2318	-975.94	-3807			1456	0	SLV 2	0	No
ini.	2	3963	-2201.11	7622			1456	0	SLV 14	0	No
fin.	2	-3086	1687.51	8488			2690	1017	SLV 14	0.12	No
ini.	2	3963	-2201.11	7622			1456	0	SLV 13	0	No
fin.	2	-3086	1687.51	8488			2690	1017	SLV 13	0.12	No
ini.	2	-3386	1819.7	-7938			2810	1052	SLV 1	0.13	No
fin.	2	2318	-975.94	-3807			1456	0	SLV 1	0	No
ini.	2	2592	-1196.44	3867			1456	0	SLV 10	0	No
fin.	2	-2133	1150.51	6438			2309	899	SLV 10	0.14	No
ini.	2	-3046	1160.12	-5632			2674	1013	SLV 8	0.18	No
fin.	2	2170	-777.7	-3688			1456	0	SLV 8	0	No
ini.	2	-4416	2164.79	-9388			3222	1163	SLV 3	0.12	No
fin.	2	3123	-1314.7	-5738			1456	0	SLV 3	0	No
ini.	2	-3046	1160.12	-5632			2674	1013	SLV 7	0.18	No
fin.	2	2170	-777.7	-3688			1456	0	SLV 7	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.784	SLV 13	No
V_SLV	0	SLV 1	No
PF_SLU	3.003	SLU 68	Si
V_SLU	0.156	SLU 76	No

Trave di accoppiamento 77

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-17.363	-3.359	7.77	8.62	0.85	-18.263	-3.359	7.77	8.62	0.85	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fhmmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-415	39.1	1026.38	SLU 74	26.25	Si
fin.	3	-649	-129.84	1026.38	SLU 74	7.91	Si
ini.	3	-398	40.74	1026.38	SLU 77	25.19	Si
fin.	3	-652	-136.06	1026.38	SLU 77	7.54	Si
ini.	3	-423	30.67	1026.38	SLU 60	33.46	Si
fin.	3	-647	-121.07	1026.38	SLU 60	8.48	Si
ini.	3	-400	41.38	1026.38	SLU 79	24.81	Si
fin.	3	-669	-137.84	1026.38	SLU 79	7.45	Si
ini.	3	-307	47.53	1026.38	SLU 37	21.6	Si
fin.	3	-577	-122.45	1026.38	SLU 37	8.38	Si
ini.	3	-388	23.04	1026.38	SLU 58	44.54	Si
fin.	3	-603	-122.47	1026.38	SLU 58	8.38	Si
ini.	3	-406	32.31	1026.38	SLU 62	31.76	Si
fin.	3	-651	-127.29	1026.38	SLU 62	8.06	Si
ini.	3	-326	56.8	1026.38	SLU 41	18.07	Si
fin.	3	-624	-127.27	1026.38	SLU 41	8.06	Si
ini.	3	-435	49.01	1026.38	SLU 81	20.94	Si
fin.	3	-714	-136.44	1026.38	SLU 81	7.52	Si
ini.	3	-419	50.65	1026.38	SLU 83	20.27	Si
fin.	3	-717	-142.66	1026.38	SLU 83	7.19	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-400	41.38	1702			1017	400	SLU 79	0.23	No
fin.	3	-669	-137.84	-2465			1118	442	SLU 79	0.18	No
ini.	3	-406	32.31	1586			1019	401	SLU 62	0.25	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	3	-651	-127.29	-2269			1112	440	SLU 62	0.19	No
ini.	3	-564	14.32	1922			1079	426	SLU 82	0.22	No
fin.	3	-516	-68.22	-2146			1060	418	SLU 82	0.19	No
ini.	3	-547	15.96	1949			1072	423	SLU 84	0.22	No
fin.	3	-519	-74.44	-2213			1062	419	SLU 84	0.19	No
ini.	3	-398	40.74	1732			1016	399	SLU 77	0.23	No
fin.	3	-652	-136.06	-2477			1112	440	SLU 77	0.18	No
ini.	3	-528	6.69	1938			1065	420	SLU 80	0.22	No
fin.	3	-471	-69.62	-2135			1044	411	SLU 80	0.19	No
ini.	3	-419	50.65	1714			1024	403	SLU 83	0.23	No
fin.	3	-717	-142.66	-2543			1137	449	SLU 83	0.18	No
ini.	3	-435	49.01	1686			1030	405	SLU 81	0.24	No
fin.	3	-714	-136.44	-2476			1135	449	SLU 81	0.18	No
ini.	3	-526	6.06	1967			1065	420	SLU 78	0.21	No
fin.	3	-454	-67.83	-2147			1037	409	SLU 78	0.19	No
ini.	3	-415	39.1	1704			1022	402	SLU 74	0.24	No
fin.	3	-649	-129.84	-2410			1111	439	SLU 74	0.18	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-1076	-403.35	1539.56	SLV 15	3.82	Si
fin.	2	4356	1070.53	1539.56	SLV 15	1.44	Si
ini.	2	507	422.89	1539.56	SLV 8	3.64	Si
fin.	2	-3703	-924.46	1539.56	SLV 8	1.67	Si
ini.	2	-1076	-403.35	1539.56	SLV 16	3.82	Si
fin.	2	4356	1070.53	1539.56	SLV 16	1.44	Si
ini.	2	507	422.89	1539.56	SLV 7	3.64	Si
fin.	2	-3703	-924.46	1539.56	SLV 7	1.67	Si
ini.	2	-1413	-560.25	1539.56	SLV 13	2.75	Si
fin.	2	5362	1344.93	1539.56	SLV 13	1.14	Si
ini.	2	419	429.27	1539.56	SLV 1	3.59	Si
fin.	2	-5230	-1231.79	1539.56	SLV 1	1.25	Si
ini.	2	419	429.27	1539.56	SLV 2	3.59	Si
fin.	2	-5230	-1231.79	1539.56	SLV 2	1.25	Si
ini.	2	756	586.17	1539.56	SLV 3	2.63	Si
fin.	2	-6236	-1506.18	1539.56	SLV 3	1.02	Si
ini.	2	-1413	-560.25	1539.56	SLV 14	2.75	Si
fin.	2	5362	1344.93	1539.56	SLV 14	1.14	Si
ini.	2	756	586.17	1539.56	SLV 4	2.63	Si
fin.	2	-6236	-1506.18	1539.56	SLV 4	1.02	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	419	429.27	-2302			1298	393	SLV 1	0.17	No
fin.	2	-5230	-1231.79	-6531			3274	1135	SLV 1	0.17	No
ini.	2	756	586.17	-3568			1298	295	SLV 3	0.08	No
fin.	2	-6236	-1506.18	-7732			3654	1221	SLV 3	0.16	No
ini.	2	-1076	-403.35	4691			1705	674	SLV 15	0.14	No
fin.	2	4356	1070.53	3390			1298	0	SLV 15	0	No
ini.	2	-1076	-403.35	4691			1705	674	SLV 16	0.14	No
fin.	2	4356	1070.53	3390			1298	0	SLV 16	0	No
ini.	2	-1413	-560.25	5957			1832	723	SLV 14	0.12	No
fin.	2	5362	1344.93	4591			1298	0	SLV 14	0	No
ini.	2	-1164	-396.96	4543			1738	687	SLV 9	0.15	No
fin.	2	2828	763.21	2100			1298	0	SLV 9	0	No
ini.	2	-1413	-560.25	5957			1832	723	SLV 13	0.12	No
fin.	2	5362	1344.93	4591			1298	0	SLV 13	0	No
ini.	2	756	586.17	-3568			1298	295	SLV 4	0.08	No
fin.	2	-6236	-1506.18	-7732			3654	1221	SLV 4	0.16	No
ini.	2	419	429.27	-2302			1298	393	SLV 2	0.17	No
fin.	2	-5230	-1231.79	-6531			3274	1135	SLV 2	0.17	No
ini.	2	-1164	-396.96	4543			1738	687	SLV 10	0.15	No
fin.	2	2828	763.21	2100			1298	0	SLV 10	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV		1.022	SLV 3
V_SLV		0	SLV 9
PF_SLU		7.194	SLU 83
V_SLU		0.177	SLU 83

Trave di accoppiamento 78

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-17.053	-4.589	8.18	8.62	0.44	-17.053	-3.499	8.18	8.62	0.44	1.09	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
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Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	451	-152.34	294.67	SLU 68	1.93	Si
fin.	3	212	-26.3	294.67	SLU 68	11.21	Si
ini.	3	508	-170	294.67	SLU 73	1.73	Si
fin.	3	222	-28.33	294.67	SLU 73	10.4	Si
ini.	3	518	-172.4	294.67	SLU 76	1.71	Si
fin.	3	224	-28.89	294.67	SLU 76	10.2	Si
ini.	3	480	-165.86	294.67	SLU 34	1.78	Si
fin.	3	235	-28.7	294.67	SLU 34	10.27	Si
ini.	3	441	-149.93	294.67	SLU 65	1.97	Si
fin.	3	210	-25.74	294.67	SLU 65	11.45	Si
ini.	3	450	-152.84	294.67	SLU 55	1.93	Si
fin.	3	211	-26.35	294.67	SLU 55	11.18	Si
ini.	3	440	-150.44	294.67	SLU 52	1.96	Si
fin.	3	210	-25.79	294.67	SLU 52	11.43	Si
ini.	3	493	-149.15	294.67	SLU 84	1.98	Si
fin.	3	138	-22.22	294.67	SLU 84	13.26	Si
ini.	3	484	-146.74	294.67	SLU 82	2.01	Si
fin.	3	137	-21.66	294.67	SLU 82	13.61	Si
ini.	3	470	-163.45	294.67	SLU 31	1.8	Si
fin.	3	233	-28.14	294.67	SLU 31	10.47	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	486	-146.19	26			339	0	SLU 78	0	No
fin.	3	137	-22.08	-18			339	106	SLU 78	6.05	Si
ini.	3	484	-146.74	30			339	0	SLU 82	0	No
fin.	3	137	-21.66	-17			339	106	SLU 82	6.39	Si
ini.	3	450	-152.84	145			339	0	SLU 55	0	No
fin.	3	211	-26.35	-58			339	92	SLU 55	1.58	Si
ini.	3	451	-152.34	147			339	0	SLU 68	0	No
fin.	3	212	-26.3	-58			339	92	SLU 68	1.57	Si
ini.	3	441	-149.93	152			339	0	SLU 65	0	No
fin.	3	210	-25.74	-61			339	92	SLU 65	1.5	Si
ini.	3	476	-143.78	32			339	0	SLU 75	0	No
fin.	3	135	-21.52	-20			339	106	SLU 75	5.19	Si
ini.	3	518	-172.4	127			339	0	SLU 76	0	No
fin.	3	224	-28.89	-32			339	89	SLU 76	2.75	Si
ini.	3	508	-170	133			339	0	SLU 73	0	No
fin.	3	222	-28.33	-35			339	90	SLU 73	2.53	Si
ini.	3	456	-142.6	35			339	0	SLU 42	0	No
fin.	3	149	-22.03	9			339	104	SLU 42	11.8	Si
ini.	3	475	-142.96	27			339	0	SLU 80	0	No
fin.	3	135	-21.67	-22			339	106	SLU 80	4.88	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-1393	296.83	442.01	SLV 4	1.49	Si
fin.	2	244	-74.72	442.01	SLV 4	5.92	Si
ini.	2	3170	-327.2	442.01	SLV 6	1.35	Si
fin.	2	-701	38.58	442.01	SLV 6	11.46	Si
ini.	2	-1393	296.83	442.01	SLV 3	1.49	Si
fin.	2	244	-74.72	442.01	SLV 3	5.92	Si
ini.	2	1876	-407.85	442.01	SLV 14	1.08	Si
fin.	2	-270	64.7	442.01	SLV 14	6.83	Si
ini.	2	-3103	365.27	442.01	SLV 7	1.21	Si
fin.	2	703	-79.77	442.01	SLV 7	5.54	Si
ini.	2	3170	-327.2	442.01	SLV 5	1.35	Si
fin.	2	-701	38.58	442.01	SLV 5	11.46	Si
ini.	2	3587	-476.28	442.01	SLV 10	0.93	No
fin.	2	-729	69.75	442.01	SLV 10	6.34	Si
ini.	2	-3103	365.27	442.01	SLV 8	1.21	Si
fin.	2	703	-79.77	442.01	SLV 8	5.54	Si
ini.	2	3587	-476.28	442.01	SLV 9	0.93	No
fin.	2	-729	69.75	442.01	SLV 9	6.34	Si
ini.	2	1876	-407.85	442.01	SLV 13	1.08	Si
fin.	2	-270	64.7	442.01	SLV 13	6.83	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	3170	-327.2	-1653			508	0	SLV 5	0	No
fin.	2	-701	38.58	848			695	275	SLV 5	0.32	No
ini.	2	1876	-407.85	51			508	0	SLV 14	0	No
fin.	2	-270	64.7	612			580	227	SLV 14	0.37	No
ini.	2	-2687	216.18	1522			1225	431	SLV 12	0.28	No
fin.	2	675	-48.6	-909			508	0	SLV 12	0	No
ini.	2	3587	-476.28	-1327			508	0	SLV 9	0	No
fin.	2	-729	69.75	1057			703	278	SLV 9	0.26	No
ini.	2	1876	-407.85	51			508	0	SLV 13	0	No
fin.	2	-270	64.7	612			580	227	SLV 13	0.37	No
ini.	2	3170	-327.2	-1653			508	0	SLV 6	0	No
fin.	2	-701	38.58	848			695	275	SLV 6	0.32	No
ini.	2	-3103	365.27	1196			1336	457	SLV 7	0.38	No
fin.	2	703	-79.77	-1118			508	0	SLV 7	0	No
ini.	2	-2687	216.18	1522			1225	431	SLV 11	0.28	No
fin.	2	675	-48.6	-909			508	0	SLV 11	0	No
ini.	2	3587	-476.28	-1327			508	0	SLV 10	0	No
fin.	2	-729	69.75	1057			703	278	SLV 10	0.26	No
ini.	2	-3103	365.27	1196			1336	457	SLV 8	0.38	No
fin.	2	703	-79.77	-1118			508	0	SLV 8	0	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.928	SLV 9	No
V_SLV	0	SLV 5	No
PF_SLU	1.709	SLU 76	Si
V_SLU	0	SLU 31	No

Trave di accoppiamento 79

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-15.433	-3.359	7.17	8.62	1.45	-16.333	-3.359	7.17	8.62	1.45	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb_	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1205	-1821.88	2986.79	SLU 82	1.64	Si
fin.	3	-1205	1384.44	2986.79	SLU 82	2.16	Si
ini.	3	-959	-1667.38	2986.79	SLU 34	1.79	Si
fin.	3	-959	1303.3	2986.79	SLU 34	2.29	Si
ini.	3	-1095	-1669.51	2986.79	SLU 68	1.79	Si
fin.	3	-1095	1245.25	2986.79	SLU 68	2.4	Si
ini.	3	-1199	-1835.55	2986.79	SLU 84	1.63	Si
fin.	3	-1199	1380.07	2986.79	SLU 84	2.16	Si
ini.	3	-1157	-1762.62	2986.79	SLU 80	1.69	Si
fin.	3	-1157	1297.04	2986.79	SLU 80	2.3	Si
ini.	3	-1102	-1655.83	2986.79	SLU 65	1.8	Si
fin.	3	-1102	1249.62	2986.79	SLU 65	2.39	Si
ini.	3	-1176	-1871.59	2986.79	SLU 76	1.6	Si
fin.	3	-1176	1428.78	2986.79	SLU 76	2.09	Si
ini.	3	-1183	-1857.91	2986.79	SLU 73	1.61	Si
fin.	3	-1183	1433.15	2986.79	SLU 73	2.08	Si
ini.	3	-1153	-1781.1	2986.79	SLU 75	1.68	Si
fin.	3	-1153	1318	2986.79	SLU 75	2.27	Si
ini.	3	-1146	-1794.77	2986.79	SLU 78	1.66	Si
fin.	3	-1146	1313.63	2986.79	SLU 78	2.27	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-966	-1653.7	4036			1950	770	SLU 31	0.19	No
fin.	3	-966	1307.67	2544			1950	770	SLU 31	0.3	No
ini.	3	-1183	-1857.91	4509			2037	806	SLU 73	0.18	No
fin.	3	-1183	1433.15	2800			2037	806	SLU 73	0.29	No
ini.	3	-1205	-1821.88	4474			2046	809	SLU 82	0.18	No
fin.	3	-1205	1384.44	2647			2046	809	SLU 82	0.31	No
ini.	3	-959	-1667.38	4046			1947	769	SLU 34	0.19	No
fin.	3	-959	1303.3	2554			1947	769	SLU 34	0.3	No
ini.	3	-1153	-1781.1	4296			2025	801	SLU 75	0.19	No
fin.	3	-1153	1318	2587			2025	801	SLU 75	0.31	No
ini.	3	-1199	-1835.55	4485			2043	808	SLU 84	0.18	No
fin.	3	-1199	1380.07	2657			2043	808	SLU 84	0.3	No
ini.	3	-982	-1631.34	4011			1956	773	SLU 42	0.19	No
fin.	3	-982	1254.59	2401			1956	773	SLU 42	0.32	No
ini.	3	-1146	-1794.77	4306			2022	800	SLU 78	0.19	No
fin.	3	-1146	1313.63	2597			2022	800	SLU 78	0.31	No
ini.	3	-1157	-1762.62	4252			2026	801	SLU 80	0.19	No
fin.	3	-1157	1297.04	2543			2026	801	SLU 80	0.32	No
ini.	3	-1176	-1871.59	4520			2034	804	SLU 76	0.18	No
fin.	3	-1176	1428.78	2810			2034	804	SLU 76	0.29	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	1779	-7090.9	4480.18	SLV 14	0.63	No
fin.	2	2057	5123.85	4480.18	SLV 14	0.87	No
ini.	2	1779	-7090.9	4480.18	SLV 13	0.63	No
fin.	2	2057	5123.85	4480.18	SLV 13	0.87	No
ini.	2	-3223	4121.88	4480.18	SLV 1	1.09	Si
fin.	2	-3447	-3015.33	4480.18	SLV 1	1.49	Si
ini.	2	-3223	4121.88	4480.18	SLV 2	1.09	Si
fin.	2	-3447	-3015.33	4480.18	SLV 2	1.49	Si
ini.	2	-3445	4994.93	4480.18	SLV 3	0.9	No
fin.	2	-3723	-3665.85	4480.18	SLV 3	1.22	Si
ini.	2	1557	-6217.85	4480.18	SLV 16	0.72	No
fin.	2	1781	4473.34	4480.18	SLV 16	1	Si
ini.	2	1557	-6217.85	4480.18	SLV 15	0.72	No
fin.	2	1781	4473.34	4480.18	SLV 15	1	Si
ini.	2	287	-4184.98	4480.18	SLV 9	1.07	Si
fin.	2	453	3034.08	4480.18	SLV 9	1.48	Si
ini.	2	-3445	4994.93	4480.18	SLV 4	0.9	No
fin.	2	-3723	-3665.85	4480.18	SLV 4	1.22	Si
ini.	2	287	-4184.98	4480.18	SLV 10	1.07	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	2	453	3034.08	4480.18	SLV 10	1.48	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	1779	-7090.9	14288			2345	310	SLV 14	0.02	No
fin.	2	2057	5123.85	13128			2345	0	SLV 14	0	No
ini.	2	1557	-6217.85	12464			2345	426	SLV 15	0.03	No
fin.	2	1781	4473.34	11347			2345	309	SLV 15	0.03	No
ini.	2	287	-4184.98	8829			2345	818	SLV 9	0.09	No
fin.	2	453	3034.08	7625			2345	778	SLV 9	0.1	No
ini.	2	-3445	4994.93	-9211			3723	1449	SLV 3	0.16	No
fin.	2	-3723	-3665.85	-10315			3834	1486	SLV 3	0.14	No
ini.	2	-3223	4121.88	-7387			3635	1420	SLV 1	0.19	No
fin.	2	-3447	-3015.33	-8534			3724	1450	SLV 1	0.17	No
ini.	2	287	-4184.98	8829			2345	818	SLV 10	0.09	No
fin.	2	453	3034.08	7625			2345	778	SLV 10	0.1	No
ini.	2	1779	-7090.9	14288			2345	310	SLV 13	0.02	No
fin.	2	2057	5123.85	13128			2345	0	SLV 13	0	No
ini.	2	1557	-6217.85	12464			2345	426	SLV 16	0.03	No
fin.	2	1781	4473.34	11347			2345	309	SLV 16	0.03	No
ini.	2	-3223	4121.88	-7387			3635	1420	SLV 2	0.19	No
fin.	2	-3447	-3015.33	-8534			3724	1450	SLV 2	0.17	No
ini.	2	-3445	4994.93	-9211			3723	1449	SLV 4	0.16	No
fin.	2	-3723	-3665.85	-10315			3834	1486	SLV 4	0.14	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.632	SLV 13	No
V_SLV	0	SLV 13	No
PF_SLU	1.596	SLU 76	Si
V_SLU	0.178	SLU 76	No

Trave di accoppiamento 80

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-14.61	-4.784	8.18	8.62	0.44	-16.45	-4.784	8.18	8.62	0.44	1.84	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	240	-65.02	294.67	SLU 80	4.53	Si
fin.	3	147	-171.43	294.67	SLU 80	1.72	Si
ini.	3	272	-83.17	294.67	SLU 82	3.54	Si
fin.	3	152	-179.77	294.67	SLU 82	1.64	Si
ini.	3	222	-64.35	294.67	SLU 79	4.58	Si
fin.	3	134	-171.86	294.67	SLU 79	1.71	Si
ini.	3	242	-67.08	294.67	SLU 75	4.39	Si
fin.	3	146	-170.39	294.67	SLU 75	1.73	Si
ini.	3	237	-63.06	294.67	SLU 78	4.67	Si
fin.	3	150	-173.04	294.67	SLU 78	1.7	Si
ini.	3	255	-82.5	294.67	SLU 81	3.57	Si
fin.	3	139	-180.2	294.67	SLU 81	1.64	Si
ini.	3	267	-79.15	294.67	SLU 84	3.72	Si
fin.	3	156	-182.42	294.67	SLU 84	1.62	Si
ini.	3	220	-62.4	294.67	SLU 77	4.72	Si
fin.	3	137	-173.47	294.67	SLU 77	1.7	Si
ini.	3	225	-66.42	294.67	SLU 74	4.44	Si
fin.	3	133	-170.82	294.67	SLU 74	1.73	Si
ini.	3	250	-78.48	294.67	SLU 83	3.75	Si
fin.	3	143	-182.86	294.67	SLU 83	1.61	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	237	-63.06	-593			339	87	SLU 78	0.15	No
fin.	3	150	-173.04	-474			339	104	SLU 78	0.22	No
ini.	3	240	-65.02	-587			339	86	SLU 80	0.15	No
fin.	3	147	-171.43	-472			339	104	SLU 80	0.22	No
ini.	3	256	-69.48	-570			339	82	SLU 76	0.14	No
fin.	3	151	-168.49	-468			339	103	SLU 76	0.22	No
ini.	3	261	-73.5	-546			339	81	SLU 73	0.15	No
fin.	3	147	-165.83	-466			339	104	SLU 73	0.22	No
ini.	3	222	-64.35	-576			339	90	SLU 79	0.16	No
fin.	3	134	-171.86	-475			339	106	SLU 79	0.22	No
ini.	3	220	-62.4	-582			339	90	SLU 77	0.15	No
fin.	3	137	-173.47	-477			339	106	SLU 77	0.22	No
ini.	3	242	-67.08	-569			339	85	SLU 75	0.15	No
fin.	3	146	-170.39	-472			339	104	SLU 75	0.22	No
ini.	3	250	-78.48	-544			339	84	SLU 83	0.15	No
fin.	3	143	-182.86	-512			339	105	SLU 83	0.2	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	272	-83.17	-531			339	79	SLU 82	0.15	No
fin.	3	152	-179.77	-507			339	103	SLU 82	0.2	No
ini.	3	267	-79.15	-555			339	80	SLU 84	0.14	No
fin.	3	156	-182.42	-509			339	103	SLU 84	0.2	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-410	530.28	442.01	SLV 5	0.83	No
fin.	2	1225	-618.25	442.01	SLV 5	0.71	No
ini.	2	818	-667.24	442.01	SLV 13	0.66	No
fin.	2	-1601	552.18	442.01	SLV 13	0.8	No
ini.	2	-722	796.86	442.01	SLV 2	0.55	No
fin.	2	2109	-938.63	442.01	SLV 2	0.47	No
ini.	2	1012	-877.96	442.01	SLV 15	0.5	No
fin.	2	-1957	724.81	442.01	SLV 15	0.61	No
ini.	2	-528	586.14	442.01	SLV 4	0.75	No
fin.	2	1754	-766.01	442.01	SLV 4	0.58	No
ini.	2	818	-667.24	442.01	SLV 14	0.66	No
fin.	2	-1601	552.18	442.01	SLV 14	0.8	No
ini.	2	-410	530.28	442.01	SLV 6	0.83	No
fin.	2	1225	-618.25	442.01	SLV 6	0.71	No
ini.	2	-722	796.86	442.01	SLV 1	0.55	No
fin.	2	2109	-938.63	442.01	SLV 1	0.47	No
ini.	2	1012	-877.96	442.01	SLV 16	0.5	No
fin.	2	-1957	724.81	442.01	SLV 16	0.61	No
ini.	2	-528	586.14	442.01	SLV 3	0.75	No
fin.	2	1754	-766.01	442.01	SLV 3	0.58	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-528	586.14	-477			649	257	SLV 4	0.54	No
fin.	2	1754	-766.01	-910			508	0	SLV 4	0	No
ini.	2	-410	530.28	-1214			618	244	SLV 5	0.2	No
fin.	2	1225	-618.25	-1082			508	0	SLV 5	0	No
ini.	2	-528	586.14	-477			649	257	SLV 3	0.54	No
fin.	2	1754	-766.01	-910			508	0	SLV 3	0	No
ini.	2	699	-611.38	383			508	0	SLV 12	0	No
fin.	2	-1072	404.42	477			794	310	SLV 12	0.65	No
ini.	2	818	-667.24	-353			508	0	SLV 14	0	No
fin.	2	-1601	552.18	305			935	354	SLV 14	1.16	Si
ini.	2	818	-667.24	-353			508	0	SLV 13	0	No
fin.	2	-1601	552.18	305			935	354	SLV 13	1.16	Si
ini.	2	-410	530.28	-1214			618	244	SLV 6	0.2	No
fin.	2	1225	-618.25	-1082			508	0	SLV 6	0	No
ini.	2	-722	796.86	-907			701	277	SLV 2	0.31	No
fin.	2	2109	-938.63	-1239			508	0	SLV 2	0	No
ini.	2	-722	796.86	-907			701	277	SLV 1	0.31	No
fin.	2	2109	-938.63	-1239			508	0	SLV 1	0	No
ini.	2	699	-611.38	383			508	0	SLV 11	0	No
fin.	2	-1072	404.42	477			794	310	SLV 11	0.65	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.471	SLV 1	No
V_SLV	0	SLV 1	No
PF_SLU	1.611	SLU 83	Si
V_SLU	0.144	SLU 84	No

Trave di accoppiamento 81

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-15.058	1.406	7.17	8.62	1.45	-15.058	2.206	7.17	8.62	1.45	0.8	0.14	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fkhmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	56	286.68	1493.39	SLU 78	5.21	Si
fin.	3	56	-1312.94	1493.39	SLU 78	1.14	Si
ini.	3	51	289.88	1493.39	SLU 77	5.15	Si
fin.	3	51	-1333.83	1493.39	SLU 77	1.12	Si
ini.	3	64	275.7	1493.39	SLU 75	5.42	Si
fin.	3	64	-1250.76	1493.39	SLU 75	1.19	Si
ini.	3	50	289.11	1493.39	SLU 79	5.17	Si
fin.	3	50	-1334.7	1493.39	SLU 79	1.12	Si
ini.	3	73	275.05	1493.39	SLU 82	5.43	Si
fin.	3	73	-1251.05	1493.39	SLU 82	1.19	Si
ini.	3	58	278.91	1493.39	SLU 74	5.35	Si
fin.	3	58	-1271.66	1493.39	SLU 74	1.17	Si
ini.	3	56	285.91	1493.39	SLU 80	5.22	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	3	56	-1313.81	1493.39	SLU 80	1.14	Si
ini.	3	65	286.02	1493.39	SLU 84	5.22	Si
fin.	3	65	-1313.22	1493.39	SLU 84	1.14	Si
ini.	3	68	278.25	1493.39	SLU 81	5.37	Si
fin.	3	68	-1271.94	1493.39	SLU 81	1.17	Si
ini.	3	60	289.23	1493.39	SLU 83	5.16	Si
fin.	3	60	-1334.11	1493.39	SLU 83	1.12	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	73	275.05	-1698			782	278	SLU 82	0.16	No
fin.	3	73	-1251.05	-2118			782	278	SLU 82	0.13	No
ini.	3	68	278.25	-1728			782	279	SLU 81	0.16	No
fin.	3	68	-1271.94	-2148			782	279	SLU 81	0.13	No
ini.	3	50	289.11	-1820			782	283	SLU 79	0.16	No
fin.	3	50	-1334.7	-2240			782	283	SLU 79	0.13	No
ini.	3	56	285.91	-1790			782	282	SLU 80	0.16	No
fin.	3	56	-1313.81	-2210			782	282	SLU 80	0.13	No
ini.	3	56	286.68	-1790			782	282	SLU 78	0.16	No
fin.	3	56	-1312.94	-2210			782	282	SLU 78	0.13	No
ini.	3	58	278.91	-1729			782	281	SLU 74	0.16	No
fin.	3	58	-1271.66	-2148			782	281	SLU 74	0.13	No
ini.	3	60	289.23	-1820			782	281	SLU 83	0.15	No
fin.	3	60	-1334.11	-2239			782	281	SLU 83	0.13	No
ini.	3	65	286.02	-1790			782	280	SLU 84	0.16	No
fin.	3	65	-1313.22	-2209			782	280	SLU 84	0.13	No
ini.	3	51	289.88	-1820			782	283	SLU 77	0.16	No
fin.	3	51	-1333.83	-2240			782	283	SLU 77	0.13	No
ini.	3	64	275.7	-1699			782	280	SLU 75	0.16	No
fin.	3	64	-1250.76	-2118			782	280	SLU 75	0.13	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-1613	1191.47	2240.09	SLV 7	1.88	Si
fin.	2	-1620	-5368.16	2240.09	SLV 7	0.42	No
ini.	2	-393	734.67	2240.09	SLV 16	3.05	Si
fin.	2	-412	-4673.37	2240.09	SLV 16	0.48	No
ini.	2	1674	-952.1	2240.09	SLV 5	2.35	Si
fin.	2	1690	5065.24	2240.09	SLV 5	0.44	No
ini.	2	1706	-816.66	2240.09	SLV 9	2.74	Si
fin.	2	1713	3700.52	2240.09	SLV 9	0.61	No
ini.	2	-1613	1191.47	2240.09	SLV 8	1.88	Si
fin.	2	-1620	-5368.16	2240.09	SLV 8	0.42	No
ini.	2	-1581	1326.91	2240.09	SLV 12	1.69	Si
fin.	2	-1597	-6732.88	2240.09	SLV 12	0.33	No
ini.	2	1674	-952.1	2240.09	SLV 6	2.35	Si
fin.	2	1690	5065.24	2240.09	SLV 6	0.44	No
ini.	2	-1581	1326.91	2240.09	SLV 11	1.69	Si
fin.	2	-1597	-6732.88	2240.09	SLV 11	0.33	No
ini.	2	1706	-816.66	2240.09	SLV 10	2.74	Si
fin.	2	1713	3700.52	2240.09	SLV 10	0.61	No
ini.	2	-393	734.67	2240.09	SLV 15	3.05	Si
fin.	2	-412	-4673.37	2240.09	SLV 15	0.48	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	486	-359.86	4365			1173	319	SLV 1	0.07	No
fin.	2	505	3005.72	3997			1173	313	SLV 1	0.08	No
ini.	2	-1581	1326.91	-9833			1805	706	SLV 11	0.07	No
fin.	2	-1597	-6732.88	-10041			1812	708	SLV 11	0.07	No
ini.	2	-1581	1326.91	-9833			1805	706	SLV 12	0.07	No
fin.	2	-1597	-6732.88	-10041			1812	708	SLV 12	0.07	No
ini.	2	1706	-816.66	5706			1173	0	SLV 10	0	No
fin.	2	1713	3700.52	5290			1173	0	SLV 10	0	No
ini.	2	486	-359.86	4365			1173	319	SLV 2	0.07	No
fin.	2	505	3005.72	3997			1173	313	SLV 2	0.08	No
ini.	2	1674	-952.1	7597			1173	0	SLV 5	0	No
fin.	2	1690	5065.24	7170			1173	0	SLV 5	0	No
ini.	2	1706	-816.66	5706			1173	0	SLV 9	0	No
fin.	2	1713	3700.52	5290			1173	0	SLV 9	0	No
ini.	2	-393	734.67	-6601			1330	520	SLV 15	0.08	No
fin.	2	-412	-4673.37	-6868			1337	523	SLV 15	0.08	No
ini.	2	1674	-952.1	7597			1173	0	SLV 6	0	No
fin.	2	1690	5065.24	7170			1173	0	SLV 6	0	No
ini.	2	-393	734.67	-6601			1330	520	SLV 16	0.08	No
fin.	2	-412	-4673.37	-6868			1337	523	SLV 16	0.08	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.333	SLV 11	No
V_SLV	0	SLV 5	No
PF_SLU	1.119	SLU 79	Si
V_SLU	0.125	SLU 83	No

Trave di accoppiamento 82

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-13.763	-0.228	7.17	8.62	1.45	-13.763	0.672	7.17	8.62	1.45	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-108	570.81	2986.79	SLU 62	5.23	Si
fin.	3	-108	112.52	2986.79	SLU 62	26.54	Si
ini.	3	-87	632.66	2986.79	SLU 52	4.72	Si
fin.	3	-87	90.32	2986.79	SLU 52	33.07	Si
ini.	3	-95	608.27	2986.79	SLU 55	4.91	Si
fin.	3	-95	96.89	2986.79	SLU 55	30.83	Si
ini.	3	-119	562.84	2986.79	SLU 84	5.31	Si
fin.	3	-119	125.73	2986.79	SLU 84	23.75	Si
ini.	3	-97	648.97	2986.79	SLU 61	4.6	Si
fin.	3	-97	96.6	2986.79	SLU 61	30.92	Si
ini.	3	-100	595.2	2986.79	SLU 60	5.02	Si
fin.	3	-100	105.95	2986.79	SLU 60	28.19	Si
ini.	3	-101	570.92	2986.79	SLU 73	5.23	Si
fin.	3	-101	112.89	2986.79	SLU 73	26.46	Si
ini.	3	-105	624.58	2986.79	SLU 63	4.78	Si
fin.	3	-105	103.16	2986.79	SLU 63	28.95	Si
ini.	3	-110	587.23	2986.79	SLU 82	5.09	Si
fin.	3	-110	119.17	2986.79	SLU 82	25.06	Si
ini.	3	-100	570.35	2986.79	SLU 54	5.24	Si
fin.	3	-100	105.25	2986.79	SLU 54	28.38	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-119	562.84	-39			1611	614	SLU 84	15.62	Si
fin.	3	-119	125.73	-832			1611	614	SLU 84	0.74	No
ini.	3	-105	624.58	-143			1606	611	SLU 63	4.27	Si
fin.	3	-105	103.16	-915			1606	611	SLU 63	0.67	No
ini.	3	-108	570.81	-73			1607	611	SLU 62	8.39	Si
fin.	3	-108	112.52	-845			1607	611	SLU 62	0.72	No
ini.	3	-110	587.23	-74			1608	612	SLU 82	8.31	Si
fin.	3	-110	119.17	-866			1608	612	SLU 82	0.71	No
ini.	3	-97	648.97	-177			1602	609	SLU 61	3.43	Si
fin.	3	-97	96.6	-949			1602	609	SLU 61	0.64	No
ini.	3	-95	608.27	-132			1602	609	SLU 55	4.62	Si
fin.	3	-95	96.89	-904			1602	609	SLU 55	0.67	No
ini.	3	-87	632.66	-166			1598	607	SLU 52	3.65	Si
fin.	3	-87	90.32	-938			1598	607	SLU 52	0.65	No
ini.	3	-101	570.92	-63			1604	610	SLU 73	9.76	Si
fin.	3	-101	112.89	-855			1604	610	SLU 73	0.71	No
ini.	3	-100	570.35	-80			1604	610	SLU 54	7.58	Si
fin.	3	-100	105.25	-852			1604	610	SLU 54	0.72	No
ini.	3	-100	595.2	-107			1603	610	SLU 60	5.68	Si
fin.	3	-100	105.95	-879			1603	610	SLU 60	0.69	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	838	8360.37	4480.18	SLV 8	0.54	No
fin.	2	992	-1219.77	4480.18	SLV 8	3.67	Si
ini.	2	-978	-7710.48	4480.18	SLV 10	0.58	No
fin.	2	-1132	1407.46	4480.18	SLV 10	3.18	Si
ini.	2	838	8360.37	4480.18	SLV 7	0.54	No
fin.	2	992	-1219.77	4480.18	SLV 7	3.67	Si
ini.	2	352	4107.6	4480.18	SLV 3	1.09	Si
fin.	2	535	148.67	4480.18	SLV 3	30.13	Si
ini.	2	739	7455.74	4480.18	SLV 11	0.6	No
fin.	2	803	-1515.76	4480.18	SLV 11	2.96	Si
ini.	2	-879	-6805.84	4480.18	SLV 5	0.66	No
fin.	2	-943	1703.44	4480.18	SLV 5	2.63	Si
ini.	2	-978	-7710.48	4480.18	SLV 9	0.58	No
fin.	2	-1132	1407.46	4480.18	SLV 9	3.18	Si
ini.	2	739	7455.74	4480.18	SLV 12	0.6	No
fin.	2	803	-1515.76	4480.18	SLV 12	2.96	Si
ini.	2	-879	-6805.84	4480.18	SLV 6	0.66	No
fin.	2	-943	1703.44	4480.18	SLV 6	2.63	Si
ini.	2	352	4107.6	4480.18	SLV 4	1.09	Si
fin.	2	535	148.67	4480.18	SLV 4	30.13	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-879	-6805.84	9890			2697	1056	SLV 5	0.11	No
fin.	2	-943	1703.44	9351			2723	1068	SLV 5	0.11	No
ini.	2	838	8360.37	-9859			2345	676	SLV 7	0.07	No
fin.	2	992	-1219.77	-10405			2345	631	SLV 7	0.06	No
ini.	2	352	4107.6	-3106			2345	802	SLV 3	0.26	No
fin.	2	535	148.67	-3505			2345	757	SLV 3	0.22	No
ini.	2	838	8360.37	-9859			2345	676	SLV 8	0.07	No
fin.	2	992	-1219.77	-10405			2345	631	SLV 8	0.06	No
ini.	2	739	7455.74	-9722			2345	704	SLV 11	0.07	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	2	803	-1515.76	-10393			2345	686	SLV 11	0.07	No
ini.	2	-978	-7710.48	10027			2736	1074	SLV 10	0.11	No
fin.	2	-1132	1407.46	9363			2798	1101	SLV 10	0.12	No
ini.	2	-978	-7710.48	10027			2736	1074	SLV 9	0.11	No
fin.	2	-1132	1407.46	9363			2798	1101	SLV 9	0.12	No
ini.	2	739	7455.74	-9722			2345	704	SLV 12	0.07	No
fin.	2	803	-1515.76	-10393			2345	686	SLV 12	0.07	No
ini.	2	-879	-6805.84	9890			2697	1056	SLV 6	0.11	No
fin.	2	-943	1703.44	9351			2723	1068	SLV 6	0.11	No
ini.	2	352	4107.6	-3106			2345	802	SLV 4	0.26	No
fin.	2	535	148.67	-3505			2345	757	SLV 4	0.22	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF SLV	0.536	SLV 7	No
V SLV	0.061	SLV 7	No
PF SLU	4.602	SLU 61	Si
V SLU	0.642	SLU 61	No

Trave di accoppiamento 83

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-11.448	3.311	6.57	8.62	2.05	-9.948	3.311	6.57	8.62	2.05	1.5	0.14	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fthk	fvk0	fthmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	12	1760.8	2985.01	SLU 42	1.7	Si
fin.	3	12	193.48	2985.01	SLU 42	15.43	Si
ini.	3	14	1803.1	2985.01	SLU 82	1.66	Si
fin.	3	14	218.34	2985.01	SLU 82	13.67	Si
ini.	3	11	1738.36	2985.01	SLU 83	1.72	Si
fin.	3	11	224.61	2985.01	SLU 83	13.29	Si
ini.	3	12	1549.51	2985.01	SLU 31	1.93	Si
fin.	3	12	176.65	2985.01	SLU 31	16.9	Si
ini.	3	13	1793.3	2985.01	SLU 81	1.66	Si
fin.	3	13	219.47	2985.01	SLU 81	13.6	Si
ini.	3	11	1748.16	2985.01	SLU 84	1.71	Si
fin.	3	11	223.48	2985.01	SLU 84	13.36	Si
ini.	3	11	1536.87	2985.01	SLU 73	1.94	Si
fin.	3	11	206.65	2985.01	SLU 73	14.44	Si
ini.	3	12	1751	2985.01	SLU 41	1.7	Si
fin.	3	12	194.61	2985.01	SLU 41	15.34	Si
ini.	3	14	1805.94	2985.01	SLU 39	1.65	Si
fin.	3	14	189.46	2985.01	SLU 39	15.76	Si
ini.	3	14	1815.74	2985.01	SLU 40	1.64	Si
fin.	3	14	188.33	2985.01	SLU 40	15.85	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	12	1760.8	491			1105	413	SLU 42	0.84	No
fin.	3	12	193.48	-2538			1105	413	SLU 42	0.16	No
ini.	3	14	1803.1	629			1105	413	SLU 82	0.66	No
fin.	3	14	218.34	-2686			1105	413	SLU 82	0.15	No
ini.	3	14	1805.94	458			1105	413	SLU 39	0.9	No
fin.	3	14	189.46	-2570			1105	413	SLU 39	0.16	No
ini.	3	12	1517.4	671			1105	413	SLU 75	0.62	No
fin.	3	12	208.8	-2360			1105	413	SLU 75	0.18	No
ini.	3	11	1738.36	676			1105	414	SLU 83	0.61	No
fin.	3	11	224.61	-2638			1105	414	SLU 83	0.16	No
ini.	3	14	1815.74	451			1105	413	SLU 40	0.92	No
fin.	3	14	188.33	-2578			1105	413	SLU 40	0.16	No
ini.	3	13	1793.3	636			1105	413	SLU 81	0.65	No
fin.	3	13	219.47	-2679			1105	413	SLU 81	0.15	No
ini.	3	11	1748.16	669			1105	413	SLU 84	0.62	No
fin.	3	11	223.48	-2646			1105	413	SLU 84	0.16	No
ini.	3	11	1536.87	656			1105	413	SLU 73	0.63	No
fin.	3	11	206.65	-2374			1105	413	SLU 73	0.17	No
ini.	3	12	1751	498			1105	413	SLU 41	0.83	No
fin.	3	12	194.61	-2530			1105	413	SLU 41	0.16	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	260	3965.06	4477.52	SLV 12	1.13	Si
fin.	2	58	97.42	4477.52	SLV 12	45.96	Si
ini.	2	-874	-7390.98	4477.52	SLV 1	0.61	No
fin.	2	-413	618.96	4477.52	SLV 1	7.23	Si
ini.	2	891	8426.09	4477.52	SLV 14	0.53	No
fin.	2	471	-398.09	4477.52	SLV 14	11.25	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	260	3965.06	4477.52	SLV 11	1.13	Si
fin.	2	58	97.42	4477.52	SLV 11	45.96	Si
ini.	2	885	8922.22	4477.52	SLV 15	0.5	No
fin.	2	423	-333.69	4477.52	SLV 15	13.42	Si
ini.	2	-874	-7390.98	4477.52	SLV 2	0.61	No
fin.	2	-413	618.96	4477.52	SLV 2	7.23	Si
ini.	2	891	8426.09	4477.52	SLV 13	0.53	No
fin.	2	471	-398.09	4477.52	SLV 13	11.25	Si
ini.	2	-881	-6894.85	4477.52	SLV 4	0.65	No
fin.	2	-461	683.36	4477.52	SLV 4	6.55	Si
ini.	2	885	8922.22	4477.52	SLV 16	0.5	No
fin.	2	423	-333.69	4477.52	SLV 16	13.42	Si
ini.	2	-881	-6894.85	4477.52	SLV 3	0.65	No
fin.	2	-461	683.36	4477.52	SLV 3	6.55	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	891	8426.09	-5100			1658	384	SLV 14	0.08	No
fin.	2	471	-398.09	-7063			1658	511	SLV 14	0.07	No
ini.	2	-874	-7390.98	6539			2008	792	SLV 2	0.12	No
fin.	2	-413	618.96	4551			1823	708	SLV 2	0.16	No
ini.	2	891	8426.09	-5100			1658	384	SLV 13	0.08	No
fin.	2	471	-398.09	-7063			1658	511	SLV 13	0.07	No
ini.	2	-881	-6894.85	6208			2010	793	SLV 4	0.13	No
fin.	2	-461	683.36	4381			1842	717	SLV 4	0.16	No
ini.	2	-881	-6894.85	6208			2010	793	SLV 3	0.13	No
fin.	2	-461	683.36	4381			1842	717	SLV 3	0.16	No
ini.	2	-874	-7390.98	6539			2008	792	SLV 1	0.12	No
fin.	2	-413	618.96	4551			1823	708	SLV 1	0.16	No
ini.	2	885	8922.22	-5432			1658	386	SLV 16	0.07	No
fin.	2	423	-333.69	-7234			1658	524	SLV 16	0.07	No
ini.	2	260	3965.06	-1745			1658	565	SLV 11	0.32	No
fin.	2	58	97.42	-3367			1658	611	SLV 11	0.18	No
ini.	2	885	8922.22	-5432			1658	386	SLV 15	0.07	No
fin.	2	423	-333.69	-7234			1658	524	SLV 15	0.07	No
ini.	2	260	3965.06	-1745			1658	565	SLV 12	0.32	No
fin.	2	58	97.42	-3367			1658	611	SLV 12	0.18	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.502	SLV 15	No
V_SLV	0.071	SLV 15	No
PF_SLU	1.644	SLU 40	Si
V_SLU	0.154	SLU 82	No

Trave di accoppiamento 84

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-17.718	6.661	5.07	5.97	0.9	-16.818	6.661	5.07	5.97	0.9	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fhmmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1966	-212.51	1150.68	SLU 82	5.41	Si
fin.	3	-1930	354.59	1150.68	SLU 82	3.25	Si
ini.	3	-1951	-233.76	1150.68	SLU 78	4.92	Si
fin.	3	-1978	372.05	1150.68	SLU 78	3.09	Si
ini.	3	-1993	-226.99	1150.68	SLU 84	5.07	Si
fin.	3	-1984	369.52	1150.68	SLU 84	3.11	Si
ini.	3	-1996	-224.68	1150.68	SLU 83	5.12	Si
fin.	3	-1982	368.24	1150.68	SLU 83	3.12	Si
ini.	3	-1927	-216.97	1150.68	SLU 74	5.3	Si
fin.	3	-1921	355.83	1150.68	SLU 74	3.23	Si
ini.	3	-1937	-229.89	1150.68	SLU 79	5.01	Si
fin.	3	-1956	367.39	1150.68	SLU 79	3.13	Si
ini.	3	-1924	-219.28	1150.68	SLU 75	5.25	Si
fin.	3	-1924	357.12	1150.68	SLU 75	3.22	Si
ini.	3	-1933	-232.2	1150.68	SLU 80	4.96	Si
fin.	3	-1959	368.67	1150.68	SLU 80	3.12	Si
ini.	3	-1904	-219.26	1150.68	SLU 76	5.25	Si
fin.	3	-1907	354.59	1150.68	SLU 76	3.25	Si
ini.	3	-1954	-231.45	1150.68	SLU 77	4.97	Si
fin.	3	-1975	370.77	1150.68	SLU 77	3.1	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1996	-224.68	-338			1769	671	SLU 83	1.99	Si
fin.	3	-1982	368.24	2820			1763	669	SLU 83	0.24	No
ini.	3	-1993	-226.99	-332			1768	671	SLU 84	2.02	Si



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	3	-1984	369.52	2829			1764	670	SLU 84	0.24	No
ini.	3	-1933	-232.2	-312			1744	664	SLU 80	2.13	Si
fin.	3	-1959	368.67	2849			1754	667	SLU 80	0.23	No
ini.	3	-1937	-229.89	-318			1745	664	SLU 79	2.09	Si
fin.	3	-1956	367.39	2840			1753	666	SLU 79	0.23	No
ini.	3	-1954	-231.45	-328			1752	666	SLU 77	2.03	Si
fin.	3	-1975	370.77	2876			1761	669	SLU 77	0.23	No
ini.	3	-1924	-219.28	-338			1740	663	SLU 75	1.96	Si
fin.	3	-1924	357.12	2782			1740	662	SLU 75	0.24	No
ini.	3	-1927	-216.97	-344			1741	663	SLU 74	1.93	Si
fin.	3	-1921	355.83	2773			1739	662	SLU 74	0.24	No
ini.	3	-1904	-219.26	-324			1732	660	SLU 76	2.04	Si
fin.	3	-1907	354.59	2752			1733	660	SLU 76	0.24	No
ini.	3	-1750	-212.13	-313			1670	641	SLU 70	2.05	Si
fin.	3	-1793	335.22	2691			1688	647	SLU 70	0.24	No
ini.	3	-1951	-233.76	-322			1751	666	SLU 78	2.07	Si
fin.	3	-1978	372.05	2885			1762	669	SLU 78	0.23	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-773	-1876.38	1726.01	SLV 1	0.92	No
fin.	2	-5709	1390.19	1726.01	SLV 1	1.24	Si
ini.	2	-2157	-531.89	1726.01	SLV 7	3.25	Si
fin.	2	-3379	806.39	1726.01	SLV 7	2.14	Si
ini.	2	-773	-1876.38	1726.01	SLV 2	0.92	No
fin.	2	-5709	1390.19	1726.01	SLV 2	1.24	Si
ini.	2	-1847	1599.05	1726.01	SLV 15	1.08	Si
fin.	2	3125	-923.21	1726.01	SLV 15	1.87	Si
ini.	2	-2157	-531.89	1726.01	SLV 8	3.25	Si
fin.	2	-3379	806.39	1726.01	SLV 8	2.14	Si
ini.	2	-1847	1599.05	1726.01	SLV 16	1.08	Si
fin.	2	3125	-923.21	1726.01	SLV 16	1.87	Si
ini.	2	-1292	1528.54	1726.01	SLV 14	1.13	Si
fin.	2	3544	-1047.55	1726.01	SLV 14	1.65	Si
ini.	2	-1292	1528.54	1726.01	SLV 13	1.13	Si
fin.	2	3544	-1047.55	1726.01	SLV 13	1.65	Si
ini.	2	-1328	-1805.87	1726.01	SLV 4	0.96	No
fin.	2	-6129	1514.54	1726.01	SLV 4	1.14	Si
ini.	2	-1328	-1805.87	1726.01	SLV 3	0.96	No
fin.	2	-6129	1514.54	1726.01	SLV 3	1.14	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-1328	-1805.87	5136			1987	785	SLV 3	0.15	No
fin.	2	-6129	1514.54	8176			3907	1327	SLV 3	0.16	No
ini.	2	-2157	-531.89	1017			2319	902	SLV 8	0.89	No
fin.	2	-3379	806.39	4638			2807	1051	SLV 8	0.23	No
ini.	2	-1292	1528.54	-5662			1972	780	SLV 13	0.14	No
fin.	2	3544	-1047.55	-4411			1456	0	SLV 13	0	No
ini.	2	-1847	1599.05	-5885			2194	860	SLV 16	0.15	No
fin.	2	3125	-923.21	-3839			1456	0	SLV 16	0	No
ini.	2	-773	-1876.38	5360			1765	696	SLV 1	0.13	No
fin.	2	-5709	1390.19	7603			3739	1288	SLV 1	0.17	No
ini.	2	-1328	-1805.87	5136			1987	785	SLV 4	0.15	No
fin.	2	-6129	1514.54	8176			3907	1327	SLV 4	0.16	No
ini.	2	-773	-1876.38	5360			1765	696	SLV 2	0.13	No
fin.	2	-5709	1390.19	7603			3739	1288	SLV 2	0.17	No
ini.	2	-1292	1528.54	-5662			1972	780	SLV 14	0.14	No
fin.	2	3544	-1047.55	-4411			1456	0	SLV 14	0	No
ini.	2	-1847	1599.05	-5885			2194	860	SLV 15	0.15	No
fin.	2	3125	-923.21	-3839			1456	0	SLV 15	0	No
ini.	2	-2157	-531.89	1017			2319	902	SLV 7	0.89	No
fin.	2	-3379	806.39	4638			2807	1051	SLV 7	0.23	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.92	SLV 1	No
V_SLV	0	SLV 13	No
PF_SLU	3.093	SLU 78	Si
V_SLU	0.232	SLU 78	No

Trave di accoppiamento 85

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-17.718	6.661	7.77	8.62	0.85	-16.818	6.661	7.77	8.62	0.85	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
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Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-430	-256.57	1026.38	SLU 83	4	Si
fin.	3	-181	-124.75	1026.38	SLU 83	8.23	Si
ini.	3	-416	-263.24	1026.38	SLU 77	3.9	Si
fin.	3	-117	-114.12	1026.38	SLU 77	8.99	Si
ini.	3	-414	-261.98	1026.38	SLU 79	3.92	Si
fin.	3	-110	-111.04	1026.38	SLU 79	9.24	Si
ini.	3	-417	-264.94	1026.38	SLU 78	3.87	Si
fin.	3	-111	-112.6	1026.38	SLU 78	9.12	Si
ini.	3	-430	-258.26	1026.38	SLU 84	3.97	Si
fin.	3	-174	-123.23	1026.38	SLU 84	8.33	Si
ini.	3	-412	-241.12	1026.38	SLU 82	4.26	Si
fin.	3	-212	-128.74	1026.38	SLU 82	7.97	Si
ini.	3	-414	-263.67	1026.38	SLU 80	3.89	Si
fin.	3	-104	-109.52	1026.38	SLU 80	9.37	Si
ini.	3	-398	-247.79	1026.38	SLU 75	4.14	Si
fin.	3	-149	-118.11	1026.38	SLU 75	8.69	Si
ini.	3	-398	-246.1	1026.38	SLU 74	4.17	Si
fin.	3	-155	-119.64	1026.38	SLU 74	8.58	Si
ini.	3	-396	-247.65	1026.38	SLU 76	4.14	Si
fin.	3	-138	-114.02	1026.38	SLU 76	9	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-412	-241.12	2148			1021	401	SLU 82	0.19	No
fin.	3	-212	-128.74	-2138			946	367	SLU 82	0.17	No
ini.	3	-398	-246.1	2152			1016	399	SLU 74	0.19	No
fin.	3	-155	-119.64	-2063			924	356	SLU 74	0.17	No
ini.	3	-430	-256.57	2236			1028	404	SLU 83	0.18	No
fin.	3	-181	-124.75	-2152			934	361	SLU 83	0.17	No
ini.	3	-414	-261.98	2230			1022	402	SLU 79	0.18	No
fin.	3	-110	-111.04	-2040			907	348	SLU 79	0.17	No
ini.	3	-416	-263.24	2247			1023	402	SLU 77	0.18	No
fin.	3	-117	-114.12	-2071			910	349	SLU 77	0.17	No
ini.	3	-398	-247.79	2159			1016	399	SLU 75	0.18	No
fin.	3	-149	-118.11	-2058			922	355	SLU 75	0.17	No
ini.	3	-430	-258.26	2243			1028	405	SLU 84	0.18	No
fin.	3	-174	-123.23	-2146			931	360	SLU 84	0.17	No
ini.	3	-411	-239.42	2140			1021	401	SLU 81	0.19	No
fin.	3	-219	-130.27	-2144			948	368	SLU 81	0.17	No
ini.	3	-417	-264.94	2255			1023	402	SLU 78	0.18	No
fin.	3	-111	-112.6	-2066			907	348	SLU 78	0.17	No
ini.	3	-414	-263.67	2238			1022	402	SLU 80	0.18	No
fin.	3	-104	-109.52	-2034			905	346	SLU 80	0.17	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-1967	-600.69	1539.56	SLV 7	2.56	Si
fin.	2	-250	91.29	1539.56	SLV 7	16.87	Si
ini.	2	1584	1151.71	1539.56	SLV 16	1.34	Si
fin.	2	-2857	-1103.87	1539.56	SLV 16	1.39	Si
ini.	2	-2709	-1491.65	1539.56	SLV 3	1.03	Si
fin.	2	2123	867.27	1539.56	SLV 3	1.78	Si
ini.	2	-2709	-1491.65	1539.56	SLV 4	1.03	Si
fin.	2	2123	867.27	1539.56	SLV 4	1.78	Si
ini.	2	-2056	-1462.33	1539.56	SLV 2	1.05	Si
fin.	2	2663	941.06	1539.56	SLV 2	1.64	Si
ini.	2	-1967	-600.69	1539.56	SLV 8	2.56	Si
fin.	2	-250	91.29	1539.56	SLV 8	16.87	Si
ini.	2	2237	1181.03	1539.56	SLV 13	1.3	Si
fin.	2	-2317	-1030.09	1539.56	SLV 13	1.49	Si
ini.	2	-2056	-1462.33	1539.56	SLV 1	1.05	Si
fin.	2	2663	941.06	1539.56	SLV 1	1.64	Si
ini.	2	1584	1151.71	1539.56	SLV 15	1.34	Si
fin.	2	-2857	-1103.87	1539.56	SLV 15	1.39	Si
ini.	2	2237	1181.03	1539.56	SLV 14	1.3	Si
fin.	2	-2317	-1030.09	1539.56	SLV 14	1.49	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	2237	1181.03	-3851			1298	0	SLV 13	0	No
fin.	2	-2317	-1030.09	-5518			2174	839	SLV 13	0.15	No
ini.	2	-2056	-1462.33	6271			2075	807	SLV 2	0.13	No
fin.	2	2663	941.06	3258			1298	0	SLV 2	0	No
ini.	2	207	-502.94	2282			1298	444	SLV 6	0.19	No
fin.	2	1550	337.24	740			1298	0	SLV 6	0	No
ini.	2	-2709	-1491.65	6654			2322	884	SLV 4	0.13	No
fin.	2	2123	867.27	2783			1298	0	SLV 4	0	No
ini.	2	1495	290.07	-755			1298	0	SLV 10	0	No
fin.	2	56	-254.1	-1893			1298	477	SLV 10	0.25	No
ini.	2	2237	1181.03	-3851			1298	0	SLV 14	0	No
fin.	2	-2317	-1030.09	-5518			2174	839	SLV 14	0.15	No
ini.	2	207	-502.94	2282			1298	444	SLV 5	0.19	No
fin.	2	1550	337.24	740			1298	0	SLV 5	0	No
ini.	2	1495	290.07	-755			1298	0	SLV 9	0	No
fin.	2	56	-254.1	-1893			1298	477	SLV 9	0.25	No
ini.	2	-2709	-1491.65	6654			2322	884	SLV 3	0.13	No
fin.	2	2123	867.27	2783			1298	0	SLV 3	0	No
ini.	2	-2056	-1462.33	6271			2075	807	SLV 1	0.13	No
fin.	2	2663	941.06	3258			1298	0	SLV 1	0	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.032	SLV 3	Si
V_SLV	0	SLV 1	No
PF_SLU	3.874	SLU 78	Si
V_SLU	0.168	SLU 84	No

Trave di accoppiamento 86

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-12.838	6.661	5.07	5.97	0.9	-11.938	6.661	5.07	5.97	0.9	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-2164	278.58	1150.68	SLU 74	4.13	Si
fin.	3	-1601	174.08	1150.68	SLU 74	6.61	Si
ini.	3	-2154	277.01	1150.68	SLU 75	4.15	Si
fin.	3	-1602	175.22	1150.68	SLU 75	6.57	Si
ini.	3	-2158	280.95	1150.68	SLU 79	4.1	Si
fin.	3	-1552	167.26	1150.68	SLU 79	6.88	Si
ini.	3	-2209	281.41	1150.68	SLU 82	4.09	Si
fin.	3	-1674	183.52	1150.68	SLU 82	6.27	Si
ini.	3	-2218	282.98	1150.68	SLU 81	4.07	Si
fin.	3	-1673	182.38	1150.68	SLU 81	6.31	Si
ini.	3	-2172	282.08	1150.68	SLU 78	4.08	Si
fin.	3	-1581	172.18	1150.68	SLU 78	6.68	Si
ini.	3	-2182	283.66	1150.68	SLU 77	4.06	Si
fin.	3	-1580	171.04	1150.68	SLU 77	6.73	Si
ini.	3	-2148	279.37	1150.68	SLU 80	4.12	Si
fin.	3	-1553	168.4	1150.68	SLU 80	6.83	Si
ini.	3	-2227	286.49	1150.68	SLU 84	4.02	Si
fin.	3	-1653	180.48	1150.68	SLU 84	6.38	Si
ini.	3	-2236	288.06	1150.68	SLU 83	3.99	Si
fin.	3	-1652	179.34	1150.68	SLU 83	6.42	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-2182	283.66	-3060			1843	693	SLU 77	0.23	No
fin.	3	-1580	171.04	2182			1602	620	SLU 77	0.28	No
ini.	3	-2218	282.98	-2963			1858	697	SLU 81	0.24	No
fin.	3	-1673	182.38	2171			1640	632	SLU 81	0.29	No
ini.	3	-2172	282.08	-3053			1839	692	SLU 78	0.23	No
fin.	3	-1581	172.18	2191			1603	620	SLU 78	0.28	No
ini.	3	-2158	280.95	-3026			1834	690	SLU 79	0.23	No
fin.	3	-1552	167.26	2141			1591	616	SLU 79	0.29	No
ini.	3	-2124	273.25	-2930			1820	686	SLU 76	0.23	No
fin.	3	-1575	172.2	2132			1600	619	SLU 76	0.29	No
ini.	3	-2227	286.49	-3039			1861	698	SLU 84	0.23	No
fin.	3	-1653	180.48	2204			1632	629	SLU 84	0.29	No
ini.	3	-2148	279.37	-3019			1830	689	SLU 80	0.23	No
fin.	3	-1553	168.4	2150			1592	616	SLU 80	0.29	No
ini.	3	-2154	277.01	-2969			1832	690	SLU 75	0.23	No
fin.	3	-1602	175.22	2167			1611	623	SLU 75	0.29	No
ini.	3	-2236	288.06	-3046			1865	699	SLU 83	0.23	No
fin.	3	-1652	179.34	2195			1631	629	SLU 83	0.29	No
ini.	3	-2164	278.58	-2977			1836	691	SLU 74	0.23	No
fin.	3	-1601	174.08	2158			1611	623	SLU 74	0.29	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-4704	966.64	1726.01	SLV 13	1.79	Si
fin.	2	2325	-650.24	1726.01	SLV 13	2.65	Si
ini.	2	2204	-671.19	1726.01	SLV 1	2.57	Si
fin.	2	-4406	1014.89	1726.01	SLV 1	1.7	Si
ini.	2	318	-193.25	1726.01	SLV 5	8.93	Si
fin.	2	-1905	579.46	1726.01	SLV 5	2.98	Si
ini.	2	1749	-589.51	1726.01	SLV 3	2.93	Si
fin.	2	-4530	888.59	1726.01	SLV 3	1.94	Si
ini.	2	-5159	1048.33	1726.01	SLV 16	1.65	Si
fin.	2	2200	-776.54	1726.01	SLV 16	2.22	Si
ini.	2	318	-193.25	1726.01	SLV 6	8.93	Si
fin.	2	-1905	579.46	1726.01	SLV 6	2.98	Si
ini.	2	-4704	966.64	1726.01	SLV 14	1.79	Si
fin.	2	2325	-650.24	1726.01	SLV 14	2.65	Si
ini.	2	1749	-589.51	1726.01	SLV 4	2.93	Si
fin.	2	-4530	888.59	1726.01	SLV 4	1.94	Si
ini.	2	2204	-671.19	1726.01	SLV 2	2.57	Si
fin.	2	-4406	1014.89	1726.01	SLV 2	1.7	Si
ini.	2	-5159	1048.33	1726.01	SLV 15	1.65	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	2	2200	-776.54	1726.01	SLV 15	2.22	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	1749	-589.51	2859			1456	0	SLV 4	0	No
fin.	2	-4530	888.59	6838			3268	1174	SLV 4	0.17	No
ini.	2	-3272	570.38	-4788			2765	1039	SLV 11	0.22	No
fin.	2	-300	-341.11	608			1576	610	SLV 11	1	Si
ini.	2	-3272	570.38	-4788			2765	1039	SLV 12	0.22	No
fin.	2	-300	-341.11	608			1576	610	SLV 12	1	Si
ini.	2	1749	-589.51	2859			1456	0	SLV 3	0	No
fin.	2	-4530	888.59	6838			3268	1174	SLV 3	0.17	No
ini.	2	-5159	1048.33	-7624			3519	1236	SLV 16	0.16	No
fin.	2	2200	-776.54	-3471			1456	0	SLV 16	0	No
ini.	2	-4704	966.64	-6910			3337	1192	SLV 14	0.17	No
fin.	2	2325	-650.24	-3875			1456	0	SLV 14	0	No
ini.	2	2204	-671.19	3573			1456	0	SLV 1	0	No
fin.	2	-4406	1014.89	6434			3218	1162	SLV 1	0.18	No
ini.	2	2204	-671.19	3573			1456	0	SLV 2	0	No
fin.	2	-4406	1014.89	6434			3218	1162	SLV 2	0.18	No
ini.	2	-4704	966.64	-6910			3337	1192	SLV 13	0.17	No
fin.	2	2325	-650.24	-3875			1456	0	SLV 13	0	No
ini.	2	-5159	1048.33	-7624			3519	1236	SLV 15	0.16	No
fin.	2	2200	-776.54	-3471			1456	0	SLV 15	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.646	SLV 15	Si
V_SLV	0	SLV 1	No
PF_SLU	3.995	SLU 83	Si
V_SLU	0.226	SLU 77	No

Trave di accoppiamento 87

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-12.838	6.661	7.77	8.62	0.85	-11.938	6.661	7.77	8.62	0.85	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-757	-142.5	1026.38	SLU 79	7.2	Si
fin.	3	-1105	-249.19	1026.38	SLU 79	4.12	Si
ini.	3	-907	-153.87	1026.38	SLU 82	6.67	Si
fin.	3	-1215	-247.37	1026.38	SLU 82	4.15	Si
ini.	3	-863	-151.69	1026.38	SLU 83	6.77	Si
fin.	3	-1202	-254.71	1026.38	SLU 83	4.03	Si
ini.	3	-760	-143.6	1026.38	SLU 80	7.15	Si
fin.	3	-1096	-247.56	1026.38	SLU 80	4.15	Si
ini.	3	-822	-147.18	1026.38	SLU 74	6.97	Si
fin.	3	-1148	-246.43	1026.38	SLU 74	4.16	Si
ini.	3	-783	-147.2	1026.38	SLU 78	6.97	Si
fin.	3	-1117	-250.5	1026.38	SLU 78	4.1	Si
ini.	3	-781	-146.1	1026.38	SLU 77	7.03	Si
fin.	3	-1126	-252.13	1026.38	SLU 77	4.07	Si
ini.	3	-905	-152.77	1026.38	SLU 81	6.72	Si
fin.	3	-1224	-249	1026.38	SLU 81	4.12	Si
ini.	3	-825	-148.28	1026.38	SLU 75	6.92	Si
fin.	3	-1139	-244.8	1026.38	SLU 75	4.19	Si
ini.	3	-866	-152.79	1026.38	SLU 84	6.72	Si
fin.	3	-1193	-253.07	1026.38	SLU 84	4.06	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-757	-142.5	2816			1152	455	SLU 79	0.16	No
fin.	3	-1105	-249.19	-3338			1283	504	SLU 79	0.15	No
ini.	3	-863	-151.69	2898			1192	471	SLU 83	0.16	No
fin.	3	-1202	-254.71	-3404			1320	517	SLU 83	0.15	No
ini.	3	-781	-146.1	2860			1161	459	SLU 77	0.16	No
fin.	3	-1126	-252.13	-3378			1291	507	SLU 77	0.15	No
ini.	3	-783	-147.2	2870			1162	459	SLU 78	0.16	No
fin.	3	-1117	-250.5	-3371			1288	506	SLU 78	0.15	No
ini.	3	-866	-152.79	2909			1193	471	SLU 84	0.16	No
fin.	3	-1193	-253.07	-3397			1316	515	SLU 84	0.15	No
ini.	3	-760	-143.6	2827			1153	456	SLU 80	0.16	No
fin.	3	-1096	-247.56	-3331			1280	503	SLU 80	0.15	No
ini.	3	-825	-148.28	2817			1177	465	SLU 75	0.17	No
fin.	3	-1139	-244.8	-3286			1296	508	SLU 75	0.15	No
ini.	3	-822	-147.18	2807			1176	465	SLU 74	0.17	No
fin.	3	-1148	-246.43	-3293			1299	510	SLU 74	0.15	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-803	-145.41	2781			1169	462	SLU 76	0.17	No
fin.	3	-1111	-240.77	-3242			1285	505	SLU 76	0.16	No
ini.	3	-907	-153.87	2856			1208	477	SLU 82	0.17	No
fin.	3	-1215	-247.37	-3312			1324	518	SLU 82	0.16	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	800	197.72	1539.56	SLV 11	7.79	Si
fin.	2	-2382	-552.58	1539.56	SLV 11	2.79	Si
ini.	2	2612	680.58	1539.56	SLV 13	2.26	Si
fin.	2	-3846	-934.59	1539.56	SLV 13	1.65	Si
ini.	2	800	197.72	1539.56	SLV 12	7.79	Si
fin.	2	-2382	-552.58	1539.56	SLV 12	2.79	Si
ini.	2	2832	714.96	1539.56	SLV 16	2.15	Si
fin.	2	-4228	-1020.99	1539.56	SLV 16	1.51	Si
ini.	2	-3927	-911.89	1539.56	SLV 2	1.69	Si
fin.	2	2698	691.71	1539.56	SLV 2	2.23	Si
ini.	2	-3927	-911.89	1539.56	SLV 1	1.69	Si
fin.	2	2698	691.71	1539.56	SLV 1	2.23	Si
ini.	2	2832	714.96	1539.56	SLV 15	2.15	Si
fin.	2	-4228	-1020.99	1539.56	SLV 15	1.51	Si
ini.	2	2612	680.58	1539.56	SLV 14	2.26	Si
fin.	2	-3846	-934.59	1539.56	SLV 14	1.65	Si
ini.	2	-3708	-877.5	1539.56	SLV 4	1.75	Si
fin.	2	2317	605.32	1539.56	SLV 4	2.54	Si
ini.	2	-3708	-877.5	1539.56	SLV 3	1.75	Si
fin.	2	2317	605.32	1539.56	SLV 3	2.54	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-3708	-877.5	6922			2699	991	SLV 4	0.14	No
fin.	2	2317	605.32	2458			1298	0	SLV 4	0	No
ini.	2	2832	714.96	-2920			1298	0	SLV 15	0	No
fin.	2	-4228	-1020.99	-7356			2896	1043	SLV 15	0.14	No
ini.	2	-3927	-911.89	6651			2782	1013	SLV 1	0.15	No
fin.	2	2698	691.71	2974			1298	0	SLV 1	0	No
ini.	2	-3708	-877.5	6922			2699	991	SLV 3	0.14	No
fin.	2	2317	605.32	2458			1298	0	SLV 3	0	No
ini.	2	2832	714.96	-2920			1298	0	SLV 16	0	No
fin.	2	-4228	-1020.99	-7356			2896	1043	SLV 16	0.14	No
ini.	2	-3927	-911.89	6651			2782	1013	SLV 2	0.15	No
fin.	2	2698	691.71	2974			1298	0	SLV 2	0	No
ini.	2	2612	680.58	-3190			1298	0	SLV 14	0	No
fin.	2	-3846	-934.59	-6839			2752	1005	SLV 14	0.15	No
ini.	2	-1162	-280.02	3793			1738	687	SLV 8	0.18	No
fin.	2	-419	-64.69	-1579			1457	568	SLV 8	0.36	No
ini.	2	2612	680.58	-3190			1298	0	SLV 13	0	No
fin.	2	-3846	-934.59	-6839			2752	1005	SLV 13	0.15	No
ini.	2	-1162	-280.02	3793			1738	687	SLV 7	0.18	No
fin.	2	-419	-64.69	-1579			1457	568	SLV 7	0.36	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.508	SLV 15	Si
V_SLV	0	SLV 1	No
PF_SLU	4.03	SLU 83	Si
V_SLU	0.15	SLU 78	No

Trave di accoppiamento 88

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-7.958	6.661	5.07	5.97	0.9	-7.058	6.661	5.07	5.97	0.9	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fkhmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1814	48.91	1150.68	SLU 81	23.53	Si
fin.	3	-1715	50.98	1150.68	SLU 81	22.57	Si
ini.	3	-1815	49.99	1150.68	SLU 84	23.02	Si
fin.	3	-1707	48.58	1150.68	SLU 84	23.69	Si
ini.	3	-1809	48.84	1150.68	SLU 82	23.56	Si
fin.	3	-1710	50.61	1150.68	SLU 82	22.74	Si
ini.	3	-1744	48.78	1150.68	SLU 79	23.59	Si
fin.	3	-1634	45.32	1150.68	SLU 79	25.39	Si
ini.	3	-1765	50.9	1150.68	SLU 74	22.61	Si
fin.	3	-1658	47.53	1150.68	SLU 74	24.21	Si
ini.	3	-1760	50.82	1150.68	SLU 75	22.64	Si
fin.	3	-1653	47.15	1150.68	SLU 75	24.4	Si
ini.	3	-1766	51.98	1150.68	SLU 78	22.14	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	3	-1651	45.13	1150.68	SLU 78	25.5	Si
ini.	3	-1771	52.05	1150.68	SLU 77	22.11	Si
fin.	3	-1656	45.5	1150.68	SLU 77	25.29	Si
ini.	3	-1725	46.35	1150.68	SLU 73	24.83	Si
fin.	3	-1631	48.75	1150.68	SLU 73	23.61	Si
ini.	3	-1820	50.06	1150.68	SLU 83	22.98	Si
fin.	3	-1712	48.96	1150.68	SLU 83	23.5	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1744	48.78	-1134			1668	641	SLU 79	0.57	No
fin.	3	-1634	45.32	1434			1624	627	SLU 79	0.44	No
ini.	3	-1814	48.91	-1113			1696	649	SLU 81	0.58	No
fin.	3	-1715	50.98	1438			1656	637	SLU 81	0.44	No
ini.	3	-1766	51.98	-1160			1677	643	SLU 78	0.55	No
fin.	3	-1651	45.13	1454			1631	629	SLU 78	0.43	No
ini.	3	-1765	50.9	-1133			1677	643	SLU 74	0.57	No
fin.	3	-1658	47.53	1439			1634	630	SLU 74	0.44	No
ini.	3	-1760	50.82	-1131			1675	643	SLU 75	0.57	No
fin.	3	-1653	47.15	1436			1632	629	SLU 75	0.44	No
ini.	3	-1809	48.84	-1112			1694	649	SLU 82	0.58	No
fin.	3	-1710	50.61	1435			1654	636	SLU 82	0.44	No
ini.	3	-1815	49.99	-1140			1696	649	SLU 84	0.57	No
fin.	3	-1707	48.58	1453			1653	636	SLU 84	0.44	No
ini.	3	-1739	48.71	-1132			1666	640	SLU 80	0.57	No
fin.	3	-1629	44.95	1432			1622	626	SLU 80	0.44	No
ini.	3	-1820	50.06	-1142			1699	650	SLU 83	0.57	No
fin.	3	-1712	48.96	1456			1655	637	SLU 83	0.44	No
ini.	3	-1771	52.05	-1161			1679	644	SLU 77	0.55	No
fin.	3	-1656	45.5	1457			1633	630	SLU 77	0.43	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-3350	524.78	1726.01	SLV 11	3.29	Si
fin.	2	-1798	-251.73	1726.01	SLV 11	6.86	Si
ini.	2	-4163	1594.9	1726.01	SLV 14	1.08	Si
fin.	2	122	-1080.91	1726.01	SLV 14	1.6	Si
ini.	2	2449	-1544.97	1726.01	SLV 2	1.12	Si
fin.	2	-1836	1126.05	1726.01	SLV 2	1.53	Si
ini.	2	-3350	524.78	1726.01	SLV 12	3.29	Si
fin.	2	-1798	-251.73	1726.01	SLV 12	6.86	Si
ini.	2	2449	-1544.97	1726.01	SLV 1	1.12	Si
fin.	2	-1836	1126.05	1726.01	SLV 1	1.53	Si
ini.	2	-4856	1608.21	1726.01	SLV 15	1.07	Si
fin.	2	-448	-1054.72	1726.01	SLV 15	1.64	Si
ini.	2	1756	-1531.66	1726.01	SLV 3	1.13	Si
fin.	2	-2406	1152.24	1726.01	SLV 3	1.5	Si
ini.	2	1756	-1531.66	1726.01	SLV 4	1.13	Si
fin.	2	-2406	1152.24	1726.01	SLV 4	1.5	Si
ini.	2	-4856	1608.21	1726.01	SLV 16	1.07	Si
fin.	2	-448	-1054.72	1726.01	SLV 16	1.64	Si
ini.	2	-4163	1594.9	1726.01	SLV 13	1.08	Si
fin.	2	122	-1080.91	1726.01	SLV 13	1.6	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-4856	1608.21	-6571			3398	1207	SLV 16	0.18	No
fin.	2	-448	-1054.72	-3343			1635	638	SLV 16	0.19	No
ini.	2	944	-461.54	1462			1456	275	SLV 6	0.19	No
fin.	2	-486	323.06	1794			1650	645	SLV 6	0.36	No
ini.	2	2449	-1544.97	5038			1456	0	SLV 1	0	No
fin.	2	-1836	1126.05	5359			2190	859	SLV 1	0.16	No
ini.	2	944	-461.54	1462			1456	275	SLV 5	0.19	No
fin.	2	-486	323.06	1794			1650	645	SLV 5	0.36	No
ini.	2	-4856	1608.21	-6571			3398	1207	SLV 15	0.18	No
fin.	2	-448	-1054.72	-3343			1635	638	SLV 15	0.19	No
ini.	2	-4163	1594.9	-6250			3121	1136	SLV 13	0.18	No
fin.	2	122	-1080.91	-3685			1456	521	SLV 13	0.14	No
ini.	2	2449	-1544.97	5038			1456	0	SLV 2	0	No
fin.	2	-1836	1126.05	5359			2190	859	SLV 2	0.16	No
ini.	2	1756	-1531.66	4717			1456	0	SLV 3	0	No
fin.	2	-2406	1152.24	5702			2418	934	SLV 3	0.16	No
ini.	2	-4163	1594.9	-6250			3121	1136	SLV 14	0.18	No
fin.	2	122	-1080.91	-3685			1456	521	SLV 14	0.14	No
ini.	2	1756	-1531.66	4717			1456	0	SLV 4	0	No
fin.	2	-2406	1152.24	5702			2418	934	SLV 4	0.16	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.073	SLV 15	Si
V_SLV	0	SLV 1	No
PF_SLU	22.106	SLU 77	Si
V_SLU	0.432	SLU 77	No

Trave di accoppiamento 89

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-7.958	6.661	7.77	8.62	0.85	-7.058	6.661	7.77	8.62	0.85	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-201	-64.66	1026.38	SLU 79	15.87	Si
fin.	3	-190	-161.73	1026.38	SLU 79	6.35	Si
ini.	3	-332	-72.21	1026.38	SLU 81	14.21	Si
fin.	3	-223	-161.8	1026.38	SLU 81	6.34	Si
ini.	3	-205	-65.79	1026.38	SLU 78	15.6	Si
fin.	3	-192	-165.12	1026.38	SLU 78	6.22	Si
ini.	3	-327	-71.59	1026.38	SLU 82	14.34	Si
fin.	3	-221	-161.81	1026.38	SLU 82	6.34	Si
ini.	3	-210	-66.41	1026.38	SLU 77	15.46	Si
fin.	3	-194	-165.12	1026.38	SLU 77	6.22	Si
ini.	3	-290	-70.19	1026.38	SLU 83	14.62	Si
fin.	3	-221	-166.05	1026.38	SLU 83	6.18	Si
ini.	3	-252	-68.42	1026.38	SLU 74	15	Si
fin.	3	-196	-160.87	1026.38	SLU 74	6.38	Si
ini.	3	-285	-69.58	1026.38	SLU 84	14.75	Si
fin.	3	-219	-166.06	1026.38	SLU 84	6.18	Si
ini.	3	-248	-67.81	1026.38	SLU 75	15.14	Si
fin.	3	-194	-160.87	1026.38	SLU 75	6.38	Si
ini.	3	-196	-64.04	1026.38	SLU 80	16.03	Si
fin.	3	-188	-161.73	1026.38	SLU 80	6.35	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-327	-71.59	3337			989	387	SLU 82	0.12	No
fin.	3	-221	-161.81	-2691			949	368	SLU 82	0.14	No
ini.	3	-252	-68.42	3214			961	374	SLU 74	0.12	No
fin.	3	-196	-160.87	-2628			940	364	SLU 74	0.14	No
ini.	3	-201	-64.66	3165			942	365	SLU 79	0.12	No
fin.	3	-190	-161.73	-2620			937	363	SLU 79	0.14	No
ini.	3	-210	-66.41	3219			945	366	SLU 77	0.11	No
fin.	3	-194	-165.12	-2665			939	363	SLU 77	0.14	No
ini.	3	-285	-69.58	3342			973	380	SLU 84	0.11	No
fin.	3	-219	-166.06	-2728			948	368	SLU 84	0.13	No
ini.	3	-290	-70.19	3347			975	381	SLU 83	0.11	No
fin.	3	-221	-166.05	-2729			949	368	SLU 83	0.13	No
ini.	3	-196	-64.04	3160			940	364	SLU 80	0.12	No
fin.	3	-188	-161.73	-2619			937	362	SLU 80	0.14	No
ini.	3	-205	-65.79	3214			943	365	SLU 78	0.11	No
fin.	3	-192	-165.12	-2663			938	363	SLU 78	0.14	No
ini.	3	-248	-67.81	3209			959	373	SLU 75	0.12	No
fin.	3	-194	-160.87	-2627			939	363	SLU 75	0.14	No
ini.	3	-332	-72.21	3342			991	388	SLU 81	0.12	No
fin.	3	-223	-161.8	-2692			950	369	SLU 81	0.14	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-2896	-773.09	1539.56	SLV 4	1.99	Si
fin.	2	2547	791.01	1539.56	SLV 4	1.95	Si
ini.	2	748	-83.83	1539.56	SLV 12	18.36	Si
fin.	2	-1405	-528.54	1539.56	SLV 12	2.91	Si
ini.	2	2590	678.24	1539.56	SLV 14	2.27	Si
fin.	2	-2754	-998.83	1539.56	SLV 14	1.54	Si
ini.	2	-2938	-633.21	1539.56	SLV 1	2.43	Si
fin.	2	2825	876.97	1539.56	SLV 1	1.76	Si
ini.	2	2633	538.37	1539.56	SLV 16	2.86	Si
fin.	2	-3033	-1084.79	1539.56	SLV 16	1.42	Si
ini.	2	2633	538.37	1539.56	SLV 15	2.86	Si
fin.	2	-3033	-1084.79	1539.56	SLV 15	1.42	Si
ini.	2	2590	678.24	1539.56	SLV 13	2.27	Si
fin.	2	-2754	-998.83	1539.56	SLV 13	1.54	Si
ini.	2	748	-83.83	1539.56	SLV 11	18.36	Si
fin.	2	-1405	-528.54	1539.56	SLV 11	2.91	Si
ini.	2	-2896	-773.09	1539.56	SLV 3	1.99	Si
fin.	2	2547	791.01	1539.56	SLV 3	1.95	Si
ini.	2	-2938	-633.21	1539.56	SLV 2	2.43	Si
fin.	2	2825	876.97	1539.56	SLV 2	1.76	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-2938	-633.21	5799			2409	910	SLV 2	0.16	No
fin.	2	2825	876.97	3508			1298	0	SLV 2	0	No
ini.	2	-1053	-11.02	2568			1696	671	SLV 5	0.26	No
fin.	2	1197	320.72	577			1298	0	SLV 5	0	No
ini.	2	2590	678.24	-1974			1298	0	SLV 14	0	No
fin.	2	-2754	-998.83	-6476			2339	890	SLV 14	0.14	No
ini.	2	-2938	-633.21	5799			2409	910	SLV 1	0.16	No
fin.	2	2825	876.97	3508			1298	0	SLV 1	0	No
ini.	2	-2896	-773.09	6236			2392	905	SLV 4	0.15	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	2	2547	791.01	3026			1298	0	SLV 4	0	No
ini.	2	2633	538.37	-1536			1298	0	SLV 16	0	No
fin.	2	-3033	-1084.79	-6958			2444	920	SLV 16	0.13	No
ini.	2	2633	538.37	-1536			1298	0	SLV 15	0	No
fin.	2	-3033	-1084.79	-6958			2444	920	SLV 15	0.13	No
ini.	2	2590	678.24	-1974			1298	0	SLV 13	0	No
fin.	2	-2754	-998.83	-6476			2339	890	SLV 13	0.14	No
ini.	2	-1053	-11.02	2568			1696	671	SLV 6	0.26	No
fin.	2	1197	320.72	577			1298	0	SLV 6	0	No
ini.	2	-2896	-773.09	6236			2392	905	SLV 3	0.15	No
fin.	2	2547	791.01	3026			1298	0	SLV 3	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF SLV	1.419	SLV 15	Si
V SLV	0	SLV 1	No
PF SLU	6.181	SLU 84	Si
V SLU	0.114	SLU 84	No

Trave di accoppiamento 90

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-19.868	1.046	7.17	8.62	1.45	-20.668	1.046	7.17	8.62	1.45	0.8	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fthk	fvk0	fthmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	556	262.1	2986.79	SLU 71	11.4	Si
fin.	3	556	-210.49	2986.79	SLU 71	14.19	Si
ini.	3	667	277.32	2986.79	SLU 77	10.77	Si
fin.	3	667	-141.93	2986.79	SLU 77	21.04	Si
ini.	3	543	253.1	2986.79	SLU 27	11.8	Si
fin.	3	543	-179.98	2986.79	SLU 27	16.59	Si
ini.	3	608	232.73	2986.79	SLU 74	12.83	Si
fin.	3	608	-89.35	2986.79	SLU 74	33.43	Si
ini.	3	508	245.04	2986.79	SLU 29	12.19	Si
fin.	3	508	-175.85	2986.79	SLU 29	16.98	Si
ini.	3	592	270.16	2986.79	SLU 69	11.06	Si
fin.	3	592	-214.62	2986.79	SLU 69	13.92	Si
ini.	3	486	223.95	2986.79	SLU 48	13.34	Si
fin.	3	486	-235.5	2986.79	SLU 48	12.68	Si
ini.	3	619	260.27	2986.79	SLU 35	11.48	Si
fin.	3	619	-107.29	2986.79	SLU 35	27.84	Si
ini.	3	583	252.2	2986.79	SLU 37	11.84	Si
fin.	3	583	-103.16	2986.79	SLU 37	28.95	Si
ini.	3	631	269.26	2986.79	SLU 79	11.09	Si
fin.	3	631	-137.8	2986.79	SLU 79	21.68	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	592	270.16	157			1564	441	SLU 69	2.8	Si
fin.	3	592	-214.62	-1417			1564	441	SLU 69	0.31	No
ini.	3	589	178.25	673			1564	442	SLU 78	0.66	No
fin.	3	589	-50.42	-1292			1564	442	SLU 78	0.34	No
ini.	3	631	269.26	450			1564	430	SLU 79	0.95	No
fin.	3	631	-137.8	-1515			1564	430	SLU 79	0.28	No
ini.	3	556	262.1	173			1564	452	SLU 71	2.61	Si
fin.	3	556	-210.49	-1401			1564	452	SLU 71	0.32	No
ini.	3	583	252.2	420			1564	444	SLU 37	1.06	Si
fin.	3	583	-103.16	-1343			1564	444	SLU 37	0.33	No
ini.	3	619	260.27	405			1564	433	SLU 35	1.07	Si
fin.	3	619	-107.29	-1358			1564	433	SLU 35	0.32	No
ini.	3	608	232.73	556			1564	437	SLU 74	0.78	No
fin.	3	608	-89.35	-1409			1564	437	SLU 74	0.31	No
ini.	3	667	277.32	435			1564	419	SLU 77	0.96	No
fin.	3	667	-141.93	-1530			1564	419	SLU 77	0.27	No
ini.	3	605	227.74	691			1564	438	SLU 83	0.63	No
fin.	3	605	-54.07	-1442			1564	438	SLU 83	0.3	No
ini.	3	561	231.12	301			1564	450	SLU 56	1.49	Si
fin.	3	561	-162.81	-1338			1564	450	SLU 56	0.34	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-723	-5872.57	4480.18	SLV 15	0.76	No
fin.	2	-454	5750.4	4480.18	SLV 15	0.78	No
ini.	2	1393	6122.38	4480.18	SLV 2	0.73	No
fin.	2	1124	-5880.09	4480.18	SLV 2	0.76	No
ini.	2	-742	-5408.9	4480.18	SLV 13	0.83	No
fin.	2	-477	5338.94	4480.18	SLV 13	0.84	No



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	623	2627.39	4480.18	SLV 5	1.71	Si
fin.	2	538	-2433.47	4480.18	SLV 5	1.84	Si
ini.	2	1413	5658.71	4480.18	SLV 3	0.79	No
fin.	2	1147	-5468.63	4480.18	SLV 3	0.82	No
ini.	2	1393	6122.38	4480.18	SLV 1	0.73	No
fin.	2	1124	-5880.09	4480.18	SLV 1	0.76	No
ini.	2	-742	-5408.9	4480.18	SLV 14	0.83	No
fin.	2	-477	5338.94	4480.18	SLV 14	0.84	No
ini.	2	1413	5658.71	4480.18	SLV 4	0.79	No
fin.	2	1147	-5468.63	4480.18	SLV 4	0.82	No
ini.	2	-723	-5872.57	4480.18	SLV 16	0.76	No
fin.	2	-454	5750.4	4480.18	SLV 16	0.78	No
ini.	2	623	2627.39	4480.18	SLV 6	1.71	Si
fin.	2	538	-2433.47	4480.18	SLV 6	1.84	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-742	-5408.9	14168			2642	1031	SLV 14	0.07	No
fin.	2	-477	5338.94	12926			2536	981	SLV 14	0.08	No
ini.	2	-723	-5872.57	15321			2635	1028	SLV 16	0.07	No
fin.	2	-454	5750.4	14065			2527	976	SLV 16	0.07	No
ini.	2	1393	6122.38	-14582			2345	494	SLV 1	0.03	No
fin.	2	1124	-5880.09	-15828			2345	590	SLV 1	0.04	No
ini.	2	623	2627.39	-5865			2345	735	SLV 6	0.13	No
fin.	2	538	-2433.47	-7092			2345	757	SLV 6	0.11	No
ini.	2	1393	6122.38	-14582			2345	494	SLV 2	0.03	No
fin.	2	1124	-5880.09	-15828			2345	590	SLV 2	0.04	No
ini.	2	-723	-5872.57	15321			2635	1028	SLV 15	0.07	No
fin.	2	-454	5750.4	14065			2527	976	SLV 15	0.07	No
ini.	2	-742	-5408.9	14168			2642	1031	SLV 13	0.07	No
fin.	2	-477	5338.94	12926			2536	981	SLV 13	0.08	No
ini.	2	623	2627.39	-5865			2345	735	SLV 5	0.13	No
fin.	2	538	-2433.47	-7092			2345	757	SLV 5	0.11	No
ini.	2	1413	5658.71	-13429			2345	487	SLV 3	0.04	No
fin.	2	1147	-5468.63	-14689			2345	582	SLV 3	0.04	No
ini.	2	1413	5658.71	-13429			2345	487	SLV 4	0.04	No
fin.	2	1147	-5468.63	-14689			2345	582	SLV 4	0.04	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.732	SLV 1	No
V_SLV	0.034	SLV 1	No
PF_SLU	10.77	SLU 77	Si
V_SLU	0.274	SLU 77	No

Trave di accoppiamento 91

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-11.163	1.046	7.57	8.62	1.05	-12.283	1.046	7.57	8.62	1.05	1.12	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fhmmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1754	-589.94	1566.2	SLU 74	2.65	Si
fin.	3	-1754	371.38	1566.2	SLU 74	4.22	Si
ini.	3	-1846	-605.65	1566.2	SLU 78	2.59	Si
fin.	3	-1846	449.79	1566.2	SLU 78	3.48	Si
ini.	3	-1849	-614.32	1566.2	SLU 83	2.55	Si
fin.	3	-1849	346.42	1566.2	SLU 83	4.52	Si
ini.	3	-1806	-590.68	1566.2	SLU 81	2.65	Si
fin.	3	-1806	288.64	1566.2	SLU 81	5.43	Si
ini.	3	-1854	-582.76	1566.2	SLU 82	2.69	Si
fin.	3	-1854	309.27	1566.2	SLU 82	5.06	Si
ini.	3	-1898	-606.4	1566.2	SLU 84	2.58	Si
fin.	3	-1898	367.04	1566.2	SLU 84	4.27	Si
ini.	3	-1803	-582.02	1566.2	SLU 75	2.69	Si
fin.	3	-1803	392.01	1566.2	SLU 75	4	Si
ini.	3	-1798	-613.58	1566.2	SLU 77	2.55	Si
fin.	3	-1798	429.16	1566.2	SLU 77	3.65	Si
ini.	3	-1833	-601.6	1566.2	SLU 80	2.6	Si
fin.	3	-1833	451.26	1566.2	SLU 80	3.47	Si
ini.	3	-1784	-609.53	1566.2	SLU 79	2.57	Si
fin.	3	-1784	430.63	1566.2	SLU 79	3.64	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1798	-613.58	1700			1736	673	SLU 77	0.4	No
fin.	3	-1798	429.16	129			1736	673	SLU 77	5.22	Si
ini.	3	-1803	-582.02	1639			1737	673	SLU 75	0.41	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	3	-1803	392.01	67			1737	673	SLU 75	9.98	Si
ini.	3	-1784	-609.53	1698			1730	671	SLU 79	0.4	No
fin.	3	-1784	430.63	126			1730	671	SLU 79	5.3	Si
ini.	3	-1849	-614.32	1689			1755	679	SLU 83	0.4	No
fin.	3	-1849	346.42	-6			1755	679	SLU 83	113.07	Si
ini.	3	-1898	-606.4	1700			1773	685	SLU 84	0.4	No
fin.	3	-1898	367.04	5			1773	685	SLU 84	128.12	Si
ini.	3	-1530	-543.19	1550			1635	639	SLU 71	0.41	No
fin.	3	-1530	492.32	266			1635	639	SLU 71	2.4	Si
ini.	3	-1821	-572.69	1644			1744	675	SLU 76	0.41	No
fin.	3	-1821	407.23	73			1744	675	SLU 76	9.29	Si
ini.	3	-1846	-605.65	1712			1754	678	SLU 78	0.4	No
fin.	3	-1846	449.79	140			1754	678	SLU 78	4.84	Si
ini.	3	-1833	-601.6	1709			1749	677	SLU 80	0.4	No
fin.	3	-1833	451.26	138			1749	677	SLU 80	4.91	Si
ini.	3	-1754	-589.94	1628			1719	667	SLU 74	0.41	No
fin.	3	-1754	371.38	56			1719	667	SLU 74	11.89	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-2462	3190.81	2349.3	SLV 3	0.74	No
fin.	2	-2613	-6354.51	2349.3	SLV 3	0.37	No
ini.	2	-17	-2935.6	2349.3	SLV 15	0.8	No
fin.	2	245	6501.13	2349.3	SLV 15	0.36	No
ini.	2	-390	-2967.55	2349.3	SLV 9	0.79	No
fin.	2	-512	2873.85	2349.3	SLV 9	0.82	No
ini.	2	206	-3939.99	2349.3	SLV 14	0.6	No
fin.	2	357	6903.68	2349.3	SLV 14	0.34	No
ini.	2	-2239	2186.41	2349.3	SLV 1	1.07	Si
fin.	2	-2501	-5951.96	2349.3	SLV 1	0.39	No
ini.	2	206	-3939.99	2349.3	SLV 13	0.6	No
fin.	2	357	6903.68	2349.3	SLV 13	0.34	No
ini.	2	-2239	2186.41	2349.3	SLV 2	1.07	Si
fin.	2	-2501	-5951.96	2349.3	SLV 2	0.39	No
ini.	2	-390	-2967.55	2349.3	SLV 10	0.79	No
fin.	2	-512	2873.85	2349.3	SLV 10	0.82	No
ini.	2	-17	-2935.6	2349.3	SLV 16	0.8	No
fin.	2	245	6501.13	2349.3	SLV 16	0.36	No
ini.	2	-2462	3190.81	2349.3	SLV 4	0.74	No
fin.	2	-2613	-6354.51	2349.3	SLV 4	0.37	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-2462	3190.81	-8067			2515	980	SLV 3	0.12	No
fin.	2	-2613	-6354.51	-9130			2572	999	SLV 3	0.11	No
ini.	2	-2239	2186.41	-6811			2432	952	SLV 2	0.14	No
fin.	2	-2501	-5951.96	-7889			2530	985	SLV 2	0.12	No
ini.	2	-2239	2186.41	-6811			2432	952	SLV 1	0.14	No
fin.	2	-2501	-5951.96	-7889			2530	985	SLV 1	0.12	No
ini.	2	-17	-2935.6	8971			1599	603	SLV 16	0.07	No
fin.	2	245	6501.13	7996			1592	547	SLV 16	0.07	No
ini.	2	-17	-2935.6	8971			1599	603	SLV 15	0.07	No
fin.	2	245	6501.13	7996			1592	547	SLV 15	0.07	No
ini.	2	-2462	3190.81	-8067			2515	980	SLV 4	0.12	No
fin.	2	-2613	-6354.51	-9130			2572	999	SLV 4	0.11	No
ini.	2	-390	-2967.55	5729			1738	674	SLV 9	0.12	No
fin.	2	-512	2873.85	4690			1784	696	SLV 9	0.15	No
ini.	2	-390	-2967.55	5729			1738	674	SLV 10	0.12	No
fin.	2	-512	2873.85	4690			1784	696	SLV 10	0.15	No
ini.	2	206	-3939.99	10227			1592	556	SLV 13	0.05	No
fin.	2	357	6903.68	9236			1592	521	SLV 13	0.06	No
ini.	2	206	-3939.99	10227			1592	556	SLV 14	0.05	No
fin.	2	357	6903.68	9236			1592	521	SLV 14	0.06	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.34	SLV 13	No
V_SLV	0.054	SLV 13	No
PF_SLU	2.549	SLU 83	Si
V_SLU	0.395	SLU 79	No

Trave di accoppiamento 92

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-9.386	1.046	7.57	8.62	1.05	-10.466	1.046	7.57	8.62	1.05	1.08	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
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Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1005	-401.54	1566.2	SLU 49	3.9	Si
fin.	3	-1005	109.04	1566.2	SLU 49	14.36	Si
ini.	3	-849	-305.03	1566.2	SLU 9	5.13	Si
fin.	3	-849	70.61	1566.2	SLU 9	22.18	Si
ini.	3	-1000	-419.47	1566.2	SLU 47	3.73	Si
fin.	3	-1000	128.48	1566.2	SLU 47	12.19	Si
ini.	3	-848	-308.72	1566.2	SLU 5	5.07	Si
fin.	3	-848	82.14	1566.2	SLU 5	19.07	Si
ini.	3	-950	-359.22	1566.2	SLU 50	4.36	Si
fin.	3	-950	82.99	1566.2	SLU 50	18.87	Si
ini.	3	-918	-310.97	1566.2	SLU 45	5.04	Si
fin.	3	-918	63.95	1566.2	SLU 45	24.49	Si
ini.	3	-970	-367.53	1566.2	SLU 46	4.26	Si
fin.	3	-969	97.92	1566.2	SLU 46	16	Si
ini.	3	-965	-385.46	1566.2	SLU 44	4.06	Si
fin.	3	-965	117.35	1566.2	SLU 44	13.35	Si
ini.	3	-1001	-415.78	1566.2	SLU 51	3.77	Si
fin.	3	-1001	116.96	1566.2	SLU 51	13.39	Si
ini.	3	-954	-344.99	1566.2	SLU 48	4.54	Si
fin.	3	-953	75.07	1566.2	SLU 48	20.86	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1164	103.22	-462			1553	613	SLU 32	1.33	Si
fin.	3	-1164	-184.53	-714			1553	613	SLU 32	0.86	No
ini.	3	-1365	71.53	-436			1631	641	SLU 81	1.47	Si
fin.	3	-1364	-175.49	-778			1631	641	SLU 81	0.82	No
ini.	3	-1264	125.73	-418			1592	627	SLU 40	1.5	Si
fin.	3	-1264	-187.87	-824			1592	627	SLU 40	0.76	No
ini.	3	-1248	148.27	-532			1586	625	SLU 41	1.17	Si
fin.	3	-1248	-210.71	-833			1586	625	SLU 41	0.75	No
ini.	3	-1299	91.71	-419			1606	632	SLU 42	1.51	Si
fin.	3	-1299	-176.74	-763			1606	632	SLU 42	0.83	No
ini.	3	-1215	46.66	-349			1573	620	SLU 33	1.78	Si
fin.	3	-1215	-150.56	-643			1573	620	SLU 33	0.96	No
ini.	3	-1199	69.21	-463			1567	618	SLU 35	1.33	Si
fin.	3	-1199	-173.4	-652			1567	618	SLU 35	0.95	No
ini.	3	-1213	182.28	-531			1572	620	SLU 39	1.17	Si
fin.	3	-1213	-221.84	-895			1572	620	SLU 39	0.69	No
ini.	3	-1416	14.98	-323			1651	648	SLU 82	2.01	Si
fin.	3	-1416	-141.52	-708			1651	648	SLU 82	0.91	No
ini.	3	-1400	37.52	-437			1645	646	SLU 83	1.48	Si
fin.	3	-1400	-164.37	-717			1645	645	SLU 83	0.9	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-851	-5944.59	2349.3	SLV 16	0.4	No
fin.	2	-407	1755.06	2349.3	SLV 16	1.34	Si
ini.	2	-832	5757.1	2349.3	SLV 1	0.41	No
fin.	2	-1275	-1841.77	2349.3	SLV 1	1.28	Si
ini.	2	-861	4854.58	2349.3	SLV 3	0.48	No
fin.	2	-1303	-683.25	2349.3	SLV 3	3.44	Si
ini.	2	-851	-5944.59	2349.3	SLV 15	0.4	No
fin.	2	-407	1755.06	2349.3	SLV 15	1.34	Si
ini.	2	-821	-5042.07	2349.3	SLV 13	0.47	No
fin.	2	-379	596.53	2349.3	SLV 13	3.94	Si
ini.	2	-888	-3217.82	2349.3	SLV 12	0.73	No
fin.	2	-754	2253.27	2349.3	SLV 12	1.04	Si
ini.	2	-861	4854.58	2349.3	SLV 4	0.48	No
fin.	2	-1303	-683.25	2349.3	SLV 4	3.44	Si
ini.	2	-821	-5042.07	2349.3	SLV 14	0.47	No
fin.	2	-379	596.53	2349.3	SLV 14	3.94	Si
ini.	2	-888	-3217.82	2349.3	SLV 11	0.73	No
fin.	2	-754	2253.27	2349.3	SLV 11	1.04	Si
ini.	2	-832	5757.1	2349.3	SLV 2	0.41	No
fin.	2	-1275	-1841.77	2349.3	SLV 2	1.28	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-821	-5042.07	8903			1971	776	SLV 14	0.09	No
fin.	2	-379	596.53	3601			1799	697	SLV 14	0.19	No
ini.	2	-832	5757.1	-7681			1975	778	SLV 1	0.1	No
fin.	2	-1275	-1841.77	-6994			2147	849	SLV 1	0.12	No
ini.	2	-832	5757.1	-7681			1975	778	SLV 2	0.1	No
fin.	2	-1275	-1841.77	-6994			2147	849	SLV 2	0.12	No
ini.	2	-861	4854.58	-9117			1986	783	SLV 3	0.09	No
fin.	2	-1303	-683.25	-4100			2158	854	SLV 3	0.21	No
ini.	2	-821	-5042.07	8903			1971	776	SLV 13	0.09	No
fin.	2	-379	596.53	3601			1799	697	SLV 13	0.19	No
ini.	2	-794	3030.32	-200			1960	771	SLV 6	3.85	Si
fin.	2	-928	-2339.98	-6663			2012	794	SLV 6	0.12	No
ini.	2	-851	-5944.59	7466			1982	781	SLV 15	0.1	No
fin.	2	-407	1755.06	6496			1810	702	SLV 15	0.11	No
ini.	2	-861	4854.58	-9117			1986	783	SLV 4	0.09	No
fin.	2	-1303	-683.25	-4100			2158	854	SLV 4	0.21	No
ini.	2	-851	-5944.59	7466			1982	781	SLV 16	0.1	No
fin.	2	-407	1755.06	6496			1810	702	SLV 16	0.11	No
ini.	2	-794	3030.32	-200			1960	771	SLV 5	3.85	Si
fin.	2	-928	-2339.98	-6663			2012	794	SLV 5	0.12	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.395	SLV 15	No
V_SLV	0.086	SLV 3	No
PF_SLU	3.734	SLU 47	Si
V_SLU	0.693	SLU 39	No

Trave di accoppiamento 93

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-6.478	1.046	7.17	8.62	1.45	-7.278	1.046	7.17	8.62	1.45	0.8	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb_	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1346	-950.37	2986.79	SLU 63	3.14	Si
fin.	3	-1346	926.2	2986.79	SLU 63	3.22	Si
ini.	3	-1422	-1020.38	2986.79	SLU 73	2.93	Si
fin.	3	-1422	977.96	2986.79	SLU 73	3.05	Si
ini.	3	-1470	-1012.28	2986.79	SLU 80	2.95	Si
fin.	3	-1470	1027.54	2986.79	SLU 80	2.91	Si
ini.	3	-1540	-1026.56	2986.79	SLU 84	2.91	Si
fin.	3	-1540	1030.77	2986.79	SLU 84	2.9	Si
ini.	3	-1514	-987.95	2986.79	SLU 82	3.02	Si
fin.	3	-1514	972.98	2986.79	SLU 82	3.07	Si
ini.	3	-1447	-1059	2986.79	SLU 76	2.82	Si
fin.	3	-1447	1035.75	2986.79	SLU 76	2.88	Si
ini.	3	-1254	-982.81	2986.79	SLU 55	3.04	Si
fin.	3	-1254	931.18	2986.79	SLU 55	3.21	Si
ini.	3	-1229	-944.19	2986.79	SLU 52	3.16	Si
fin.	3	-1229	873.38	2986.79	SLU 52	3.42	Si
ini.	3	-1430	-975.03	2986.79	SLU 75	3.06	Si
fin.	3	-1430	977.14	2986.79	SLU 75	3.06	Si
ini.	3	-1455	-1013.65	2986.79	SLU 78	2.95	Si
fin.	3	-1455	1034.94	2986.79	SLU 78	2.89	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1254	-982.81	3206			2065	817	SLU 55	0.25	No
fin.	3	-1254	931.18	1501			2065	817	SLU 55	0.54	No
ini.	3	-1455	-1013.65	3551			2145	848	SLU 78	0.24	No
fin.	3	-1455	1034.94	1497			2145	848	SLU 78	0.57	No
ini.	3	-1430	-975.03	3430			2135	844	SLU 75	0.25	No
fin.	3	-1430	977.14	1376			2135	844	SLU 75	0.61	No
ini.	3	-1359	-906.48	3280			2107	833	SLU 42	0.25	No
fin.	3	-1359	927.75	1250			2107	833	SLU 42	0.67	No
ini.	3	-1470	-1012.28	3540			2152	850	SLU 80	0.24	No
fin.	3	-1470	1027.54	1486			2152	850	SLU 80	0.57	No
ini.	3	-1540	-1026.56	3652			2179	860	SLU 84	0.24	No
fin.	3	-1540	1030.77	1418			2179	860	SLU 84	0.61	No
ini.	3	-1514	-987.95	3531			2169	857	SLU 82	0.24	No
fin.	3	-1514	972.98	1297			2169	857	SLU 82	0.66	No
ini.	3	-1422	-1020.38	3488			2132	843	SLU 73	0.24	No
fin.	3	-1422	977.96	1434			2132	843	SLU 73	0.59	No
ini.	3	-1267	-938.91	3237			2070	819	SLU 34	0.25	No
fin.	3	-1267	932.73	1387			2070	819	SLU 34	0.59	No
ini.	3	-1447	-1059	3609			2142	846	SLU 76	0.23	No
fin.	3	-1447	1035.75	1555			2142	846	SLU 76	0.54	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-1083	3460.09	4480.18	SLV 2	1.29	Si
fin.	2	-1379	-5310.77	4480.18	SLV 2	0.84	No
ini.	2	-589	-5045.16	4480.18	SLV 14	0.89	No
fin.	2	-319	6850.15	4480.18	SLV 14	0.65	No
ini.	2	-799	-4548.87	4480.18	SLV 16	0.98	No
fin.	2	-503	6377.75	4480.18	SLV 16	0.7	No
ini.	2	-517	-2647.32	4480.18	SLV 10	1.69	Si
fin.	2	-477	3144.97	4480.18	SLV 10	1.42	Si
ini.	2	-1292	3956.38	4480.18	SLV 3	1.13	Si
fin.	2	-1562	-5783.17	4480.18	SLV 3	0.77	No
ini.	2	-589	-5045.16	4480.18	SLV 13	0.89	No
fin.	2	-319	6850.15	4480.18	SLV 13	0.65	No
ini.	2	-517	-2647.32	4480.18	SLV 9	1.69	Si
fin.	2	-477	3144.97	4480.18	SLV 9	1.42	Si
ini.	2	-1083	3460.09	4480.18	SLV 1	1.29	Si
fin.	2	-1379	-5310.77	4480.18	SLV 1	0.84	No
ini.	2	-1292	3956.38	4480.18	SLV 4	1.13	Si
fin.	2	-1562	-5783.17	4480.18	SLV 4	0.77	No
ini.	2	-799	-4548.87	4480.18	SLV 15	0.98	No



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	2	-503	6377.75	4480.18	SLV 15	0.7	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-799	-4548.87	14677			2665	1042	SLV 15	0.07	No
fin.	2	-503	6377.75	13197			2546	986	SLV 15	0.07	No
ini.	2	-799	-4548.87	14677			2665	1042	SLV 16	0.07	No
fin.	2	-503	6377.75	13197			2546	986	SLV 16	0.07	No
ini.	2	-517	-2647.32	7173			2552	989	SLV 9	0.14	No
fin.	2	-477	3144.97	6468			2536	981	SLV 9	0.15	No
ini.	2	-1292	3956.38	-11506			2862	1129	SLV 4	0.1	No
fin.	2	-1562	-5783.17	-12983			2970	1174	SLV 4	0.09	No
ini.	2	-1083	3460.09	-10740			2778	1093	SLV 2	0.1	No
fin.	2	-1379	-5310.77	-11860			2897	1144	SLV 2	0.1	No
ini.	2	-589	-5045.16	15443			2581	1003	SLV 13	0.06	No
fin.	2	-319	6850.15	14320			2473	950	SLV 13	0.07	No
ini.	2	-1292	3956.38	-11506			2862	1129	SLV 3	0.1	No
fin.	2	-1562	-5783.17	-12983			2970	1174	SLV 3	0.09	No
ini.	2	-517	-2647.32	7173			2552	989	SLV 10	0.14	No
fin.	2	-477	3144.97	6468			2536	981	SLV 10	0.15	No
ini.	2	-1083	3460.09	-10740			2778	1093	SLV 1	0.1	No
fin.	2	-1379	-5310.77	-11860			2897	1144	SLV 1	0.1	No
ini.	2	-589	-5045.16	15443			2581	1003	SLV 14	0.06	No
fin.	2	-319	6850.15	14320			2473	950	SLV 14	0.07	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.654	SLV 13	No
V_SLV	0.065	SLV 13	No
PF_SLU	2.82	SLU 76	Si
V_SLU	0.235	SLU 76	No

Trave di accoppiamento 94

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-4.168	1.046	7.17	8.62	1.45	-4.968	1.046	7.17	8.62	1.45	0.8	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1364	-686.13	2986.79	SLU 74	4.35	Si
fin.	3	-1364	234.75	2986.79	SLU 74	12.72	Si
ini.	3	-1272	-704.67	2986.79	SLU 56	4.24	Si
fin.	3	-1272	277.02	2986.79	SLU 56	10.78	Si
ini.	3	-1456	-744.91	2986.79	SLU 79	4.01	Si
fin.	3	-1456	290.25	2986.79	SLU 79	10.29	Si
ini.	3	-1262	-737.54	2986.79	SLU 69	4.05	Si
fin.	3	-1262	320.37	2986.79	SLU 69	9.32	Si
ini.	3	-1469	-679.52	2986.79	SLU 83	4.4	Si
fin.	3	-1469	217.84	2986.79	SLU 83	13.71	Si
ini.	3	-1115	-680.21	2986.79	SLU 48	4.39	Si
fin.	3	-1115	300.13	2986.79	SLU 48	9.95	Si
ini.	3	-1310	-687.58	2986.79	SLU 58	4.34	Si
fin.	3	-1310	270.01	2986.79	SLU 58	11.06	Si
ini.	3	-1300	-720.45	2986.79	SLU 71	4.15	Si
fin.	3	-1300	313.36	2986.79	SLU 71	9.53	Si
ini.	3	-1418	-762	2986.79	SLU 77	3.92	Si
fin.	3	-1418	297.26	2986.79	SLU 77	10.05	Si
ini.	3	-1501	-671.36	2986.79	SLU 78	4.45	Si
fin.	3	-1501	183.39	2986.79	SLU 78	16.29	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1469	-679.52	2217			2151	850	SLU 83	0.38	No
fin.	3	-1469	217.84	99			2151	850	SLU 83	8.58	Si
ini.	3	-1364	-686.13	2162			2109	834	SLU 74	0.39	No
fin.	3	-1364	234.75	212			2109	834	SLU 74	3.93	Si
ini.	3	-1300	-720.45	2108			2083	824	SLU 71	0.39	No
fin.	3	-1300	313.36	549			2083	824	SLU 71	1.5	Si
ini.	3	-1272	-704.67	2078			2072	820	SLU 56	0.39	No
fin.	3	-1272	277.02	453			2072	820	SLU 56	1.81	Si
ini.	3	-1310	-687.58	2048			2087	825	SLU 58	0.4	No
fin.	3	-1310	270.01	422			2087	825	SLU 58	1.95	Si
ini.	3	-1456	-744.91	2305			2146	848	SLU 79	0.37	No
fin.	3	-1456	290.25	355			2146	848	SLU 79	2.39	Si
ini.	3	-1216	-659.11	2056			2050	811	SLU 35	0.39	No
fin.	3	-1216	263.8	305			2050	811	SLU 35	2.66	Si
ini.	3	-1254	-642.02	2026			2065	817	SLU 37	0.4	No
fin.	3	-1254	256.8	275			2065	817	SLU 37	2.97	Si



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1262	-737.54	2138			2068	818	SLU 69	0.38	No
fin.	3	-1262	320.37	579			2068	818	SLU 69	1.41	Si
ini.	3	-1418	-762	2335			2131	842	SLU 77	0.36	No
fin.	3	-1418	297.26	385			2131	842	SLU 77	2.19	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-1046	-6618.05	4480.18	SLV 15	0.68	No
fin.	2	-563	4575.8	4480.18	SLV 15	0.98	No
ini.	2	-690	6146.24	4480.18	SLV 4	0.73	No
fin.	2	-748	-4662.82	4480.18	SLV 4	0.96	No
ini.	2	-1184	-2999.66	4480.18	SLV 10	1.49	Si
fin.	2	-1810	2110.75	4480.18	SLV 10	2.12	Si
ini.	2	-811	5754.34	4480.18	SLV 2	0.78	No
fin.	2	-1294	-4308.15	4480.18	SLV 2	1.04	Si
ini.	2	-1167	-7009.95	4480.18	SLV 14	0.64	No
fin.	2	-1109	4930.48	4480.18	SLV 14	0.91	No
ini.	2	-1046	-6618.05	4480.18	SLV 16	0.68	No
fin.	2	-563	4575.8	4480.18	SLV 16	0.98	No
ini.	2	-690	6146.24	4480.18	SLV 3	0.73	No
fin.	2	-748	-4662.82	4480.18	SLV 3	0.96	No
ini.	2	-1184	-2999.66	4480.18	SLV 9	1.49	Si
fin.	2	-1810	2110.75	4480.18	SLV 9	2.12	Si
ini.	2	-1167	-7009.95	4480.18	SLV 13	0.64	No
fin.	2	-1109	4930.48	4480.18	SLV 13	0.91	No
ini.	2	-811	5754.34	4480.18	SLV 1	0.78	No
fin.	2	-1294	-4308.15	4480.18	SLV 1	1.04	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-1184	-2999.66	7051			2819	1111	SLV 9	0.16	No
fin.	2	-1810	2110.75	5854			3069	1214	SLV 9	0.21	No
ini.	2	-811	5754.34	-12137			2670	1044	SLV 1	0.09	No
fin.	2	-1294	-4308.15	-13323			2863	1129	SLV 1	0.08	No
ini.	2	-1167	-7009.95	15754			2812	1108	SLV 13	0.07	No
fin.	2	-1109	4930.48	14494			2789	1097	SLV 13	0.08	No
ini.	2	-1046	-6618.05	14847			2764	1086	SLV 16	0.07	No
fin.	2	-563	4575.8	13554			2571	998	SLV 16	0.07	No
ini.	2	-690	6146.24	-13044			2621	1022	SLV 4	0.08	No
fin.	2	-748	-4662.82	-14263			2645	1033	SLV 4	0.07	No
ini.	2	-1167	-7009.95	15754			2812	1108	SLV 14	0.07	No
fin.	2	-1109	4930.48	14494			2789	1097	SLV 14	0.08	No
ini.	2	-1184	-2999.66	7051			2819	1111	SLV 10	0.16	No
fin.	2	-1810	2110.75	5854			3069	1214	SLV 10	0.21	No
ini.	2	-1046	-6618.05	14847			2764	1086	SLV 15	0.07	No
fin.	2	-563	4575.8	13554			2571	998	SLV 15	0.07	No
ini.	2	-811	5754.34	-12137			2670	1044	SLV 2	0.09	No
fin.	2	-1294	-4308.15	-13323			2863	1129	SLV 2	0.08	No
ini.	2	-690	6146.24	-13044			2621	1022	SLV 3	0.08	No
fin.	2	-748	-4662.82	-14263			2645	1033	SLV 3	0.07	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.639	SLV 13	No
V_SLV	0.07	SLV 13	No
PF_SLU	3.92	SLU 77	Si
V_SLU	0.361	SLU 77	No

Trave di accoppiamento 95

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-9.728	2.206	7.17	8.62	1.45	-9.728	1.406	7.17	8.62	1.45	0.8	0.14	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	25	-1605.49	1493.39	SLU 82	0.93	No
fin.	3	25	-412.16	1493.39	SLU 82	3.62	Si
ini.	3	19	-1662.39	1493.39	SLU 79	0.9	No
fin.	3	19	-409.69	1493.39	SLU 79	3.65	Si
ini.	3	22	-1597.98	1493.39	SLU 74	0.93	No
fin.	3	22	-400.15	1493.39	SLU 74	3.73	Si
ini.	3	23	-1668.98	1493.39	SLU 84	0.89	No
fin.	3	23	-423.46	1493.39	SLU 84	3.53	Si
ini.	3	20	-1695.95	1493.39	SLU 83	0.88	No
fin.	3	20	-429.99	1493.39	SLU 83	3.47	Si
ini.	3	21	-1632.47	1493.39	SLU 81	0.91	No
fin.	3	21	-418.68	1493.39	SLU 81	3.57	Si
ini.	3	23	-1634.49	1493.39	SLU 78	0.91	No



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	3	23	-404.93	1493.39	SLU 78	3.69	Si
ini.	3	23	-1635.41	1493.39	SLU 80	0.91	No
fin.	3	23	-403.16	1493.39	SLU 80	3.7	Si
ini.	3	25	-1571	1493.39	SLU 75	0.95	No
fin.	3	25	-393.63	1493.39	SLU 75	3.79	Si
ini.	3	20	-1661.46	1493.39	SLU 77	0.9	No
fin.	3	20	-411.45	1493.39	SLU 77	3.63	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	22	-1597.98	1708			782	289	SLU 74	0.17	No
fin.	3	22	-400.15	1304			782	289	SLU 74	0.22	No
ini.	3	25	-1571	1682			782	289	SLU 75	0.17	No
fin.	3	25	-393.63	1278			782	289	SLU 75	0.23	No
ini.	3	23	-1668.98	1767			782	289	SLU 84	0.16	No
fin.	3	23	-423.46	1363			782	289	SLU 84	0.21	No
ini.	3	20	-1661.46	1773			782	290	SLU 77	0.16	No
fin.	3	20	-411.45	1369			782	290	SLU 77	0.21	No
ini.	3	21	-1632.47	1728			782	289	SLU 81	0.17	No
fin.	3	21	-418.68	1324			782	289	SLU 81	0.22	No
ini.	3	23	-1635.41	1751			782	289	SLU 80	0.17	No
fin.	3	23	-403.16	1347			782	289	SLU 80	0.21	No
ini.	3	19	-1662.39	1776			782	290	SLU 79	0.16	No
fin.	3	19	-409.69	1372			782	290	SLU 79	0.21	No
ini.	3	20	-1695.95	1793			782	290	SLU 83	0.16	No
fin.	3	20	-429.99	1389			782	290	SLU 83	0.21	No
ini.	3	25	-1605.49	1702			782	289	SLU 82	0.17	No
fin.	3	25	-412.16	1298			782	289	SLU 82	0.22	No
ini.	3	23	-1634.49	1747			782	289	SLU 78	0.17	No
fin.	3	23	-404.93	1343			782	289	SLU 78	0.22	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	959	2940.98	2240.09	SLV 6	0.76	No
fin.	2	839	214.5	2240.09	SLV 6	10.44	Si
ini.	2	-980	-6419.83	2240.09	SLV 7	0.35	No
fin.	2	-785	-1034.26	2240.09	SLV 7	2.17	Si
ini.	2	-920	-5004.85	2240.09	SLV 12	0.45	No
fin.	2	-799	-713.95	2240.09	SLV 12	3.14	Si
ini.	2	-372	-4794.36	2240.09	SLV 4	0.47	No
fin.	2	-201	-970.88	2240.09	SLV 4	2.31	Si
ini.	2	1020	4355.96	2240.09	SLV 10	0.51	No
fin.	2	825	534.8	2240.09	SLV 10	4.19	Si
ini.	2	959	2940.98	2240.09	SLV 5	0.76	No
fin.	2	839	214.5	2240.09	SLV 5	10.44	Si
ini.	2	-980	-6419.83	2240.09	SLV 8	0.35	No
fin.	2	-785	-1034.26	2240.09	SLV 8	2.17	Si
ini.	2	-372	-4794.36	2240.09	SLV 3	0.47	No
fin.	2	-201	-970.88	2240.09	SLV 3	2.31	Si
ini.	2	1020	4355.96	2240.09	SLV 9	0.51	No
fin.	2	825	534.8	2240.09	SLV 9	4.19	Si
ini.	2	-920	-5004.85	2240.09	SLV 11	0.45	No
fin.	2	-799	-713.95	2240.09	SLV 11	3.14	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-372	-4794.36	5102			1322	516	SLV 4	0.1	No
fin.	2	-201	-970.88	4770			1253	483	SLV 4	0.1	No
ini.	2	-980	-6419.83	7162			1565	619	SLV 8	0.09	No
fin.	2	-785	-1034.26	6816			1487	588	SLV 8	0.09	No
ini.	2	-920	-5004.85	5741			1541	609	SLV 11	0.11	No
fin.	2	-799	-713.95	5403			1492	590	SLV 11	0.11	No
ini.	2	1020	4355.96	-4886			1173	0	SLV 9	0	No
fin.	2	825	534.8	-5154			1173	191	SLV 9	0.04	No
ini.	2	1020	4355.96	-4886			1173	0	SLV 10	0	No
fin.	2	825	534.8	-5154			1173	191	SLV 10	0.04	No
ini.	2	-372	-4794.36	5102			1322	516	SLV 3	0.1	No
fin.	2	-201	-970.88	4770			1253	483	SLV 3	0.1	No
ini.	2	959	2940.98	-3464			1173	103	SLV 5	0.03	No
fin.	2	839	214.5	-3741			1173	184	SLV 5	0.05	No
ini.	2	-920	-5004.85	5741			1541	609	SLV 12	0.11	No
fin.	2	-799	-713.95	5403			1492	590	SLV 12	0.11	No
ini.	2	-980	-6419.83	7162			1565	619	SLV 7	0.09	No
fin.	2	-785	-1034.26	6816			1487	588	SLV 7	0.09	No
ini.	2	959	2940.98	-3464			1173	103	SLV 6	0.03	No
fin.	2	839	214.5	-3741			1173	184	SLV 6	0.05	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.349	SLV 7	No
V_SLV	0	SLV 9	No
PF_SLU	0.881	SLU 83	No
V_SLU	0.162	SLU 83	No

Trave di accoppiamento 96

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-8.28	-4.784	8.18	8.62	0.44	-10.12	-4.784	8.18	8.62	0.44	1.84	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-106	-157	294.67	SLU 79	1.88	Si
fin.	3	12	-44.21	294.67	SLU 79	6.66	Si
ini.	3	-107	-163.7	294.67	SLU 81	1.8	Si
fin.	3	5	-51.65	294.67	SLU 81	5.71	Si
ini.	3	-101	-155.43	294.67	SLU 80	1.9	Si
fin.	3	17	-42.24	294.67	SLU 80	6.98	Si
ini.	3	-104	-162.37	294.67	SLU 84	1.81	Si
fin.	3	12	-49.38	294.67	SLU 84	5.97	Si
ini.	3	-100	-158.76	294.67	SLU 78	1.86	Si
fin.	3	20	-40.73	294.67	SLU 78	7.23	Si
ini.	3	-110	-163.94	294.67	SLU 83	1.8	Si
fin.	3	6	-51.36	294.67	SLU 83	5.74	Si
ini.	3	-98	-158.53	294.67	SLU 75	1.86	Si
fin.	3	20	-41.02	294.67	SLU 75	7.18	Si
ini.	3	-102	-162.13	294.67	SLU 82	1.82	Si
fin.	3	11	-49.67	294.67	SLU 82	5.93	Si
ini.	3	-106	-160.33	294.67	SLU 77	1.84	Si
fin.	3	15	-42.71	294.67	SLU 77	6.9	Si
ini.	3	-103	-160.1	294.67	SLU 74	1.84	Si
fin.	3	14	-43	294.67	SLU 74	6.85	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-98	-158.53	469			365	141	SLU 75	0.3	No
fin.	3	20	-41.02	-242			339	125	SLU 75	0.51	No
ini.	3	-107	-163.7	510			368	142	SLU 81	0.28	No
fin.	3	5	-51.65	-261			339	127	SLU 81	0.49	No
ini.	3	-104	-162.37	503			367	142	SLU 84	0.28	No
fin.	3	12	-49.38	-261			339	126	SLU 84	0.48	No
ini.	3	-106	-160.33	472			367	142	SLU 77	0.3	No
fin.	3	15	-42.71	-243			339	125	SLU 77	0.52	No
ini.	3	-110	-163.94	508			368	143	SLU 83	0.28	No
fin.	3	6	-51.36	-262			339	127	SLU 83	0.48	No
ini.	3	-100	-158.76	466			366	141	SLU 78	0.3	No
fin.	3	20	-40.73	-243			339	125	SLU 78	0.51	No
ini.	3	-106	-157	467			367	142	SLU 79	0.3	No
fin.	3	12	-44.21	-244			339	126	SLU 79	0.52	No
ini.	3	-103	-160.1	474			366	142	SLU 74	0.3	No
fin.	3	14	-43	-242			339	125	SLU 74	0.52	No
ini.	3	-102	-162.13	505			366	142	SLU 82	0.28	No
fin.	3	11	-49.67	-261			339	126	SLU 82	0.48	No
ini.	3	-93	-153.91	464			364	140	SLU 73	0.3	No
fin.	3	20	-41.51	-243			339	125	SLU 73	0.51	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	790	-1542.29	442.01	SLV 13	0.29	No
fin.	2	1329	597.41	442.01	SLV 13	0.74	No
ini.	2	285	-1065.31	442.01	SLV 15	0.41	No
fin.	2	933	399.41	442.01	SLV 15	1.11	Si
ini.	2	955	-1262.72	442.01	SLV 9	0.35	No
fin.	2	1009	462.77	442.01	SLV 9	0.96	No
ini.	2	790	-1542.29	442.01	SLV 14	0.29	No
fin.	2	1329	597.41	442.01	SLV 14	0.74	No
ini.	2	-930	1323.35	442.01	SLV 3	0.33	No
fin.	2	-1297	-645.29	442.01	SLV 3	0.68	No
ini.	2	285	-1065.31	442.01	SLV 16	0.41	No
fin.	2	933	399.41	442.01	SLV 16	1.11	Si
ini.	2	955	-1262.72	442.01	SLV 10	0.35	No
fin.	2	1009	462.77	442.01	SLV 10	0.96	No
ini.	2	-1095	1043.79	442.01	SLV 7	0.42	No
fin.	2	-978	-510.65	442.01	SLV 7	0.87	No
ini.	2	-1095	1043.79	442.01	SLV 8	0.42	No
fin.	2	-978	-510.65	442.01	SLV 8	0.87	No
ini.	2	-930	1323.35	442.01	SLV 4	0.33	No
fin.	2	-1297	-645.29	442.01	SLV 4	0.68	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	955	-1262.72	2714			508	0	SLV 10	0	No
fin.	2	1009	462.77	255			508	0	SLV 10	0	No
ini.	2	285	-1065.31	1158			508	144	SLV 16	0.12	No
fin.	2	933	399.41	292			508	0	SLV 16	0	No
ini.	2	285	-1065.31	1158			508	144	SLV 15	0.12	No
fin.	2	933	399.41	292			508	0	SLV 15	0	No
ini.	2	-1095	1043.79	-2103			800	312	SLV 8	0.15	No
fin.	2	-978	-510.65	-576			769	301	SLV 8	0.52	No
ini.	2	955	-1262.72	2714			508	0	SLV 9	0	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	2	1009	462.77	255			508	0	SLV 9	0	No
ini.	2	-1095	1043.79	-2103			800	312	SLV 7	0.15	No
fin.	2	-978	-510.65	-576			769	301	SLV 7	0.52	No
ini.	2	790	-1542.29	2343			508	0	SLV 13	0	No
fin.	2	1329	597.41	446			508	0	SLV 13	0	No
ini.	2	591	-546.12	1847			508	62	SLV 5	0.03	No
fin.	2	340	149.36	-62			508	133	SLV 5	2.15	Si
ini.	2	790	-1542.29	2343			508	0	SLV 14	0	No
fin.	2	1329	597.41	446			508	0	SLV 14	0	No
ini.	2	591	-546.12	1847			508	62	SLV 6	0.03	No
fin.	2	340	149.36	-62			508	133	SLV 6	2.15	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF SLV	0.287	SLV 13	No
V SLV	0	SLV 9	No
PF SLU	1.797	SLU 83	Si
V SLU	0.279	SLU 81	No

Trave di accoppiamento 97

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-8.548	-3.359	7.17	8.62	1.45	-9.448	-3.359	7.17	8.62	1.45	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fthk	fvk0	fthmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-953	1144.93	2986.79	SLU 76	2.61	Si
fin.	3	-953	-1148.46	2986.79	SLU 76	2.6	Si
ini.	3	-797	978.29	2986.79	SLU 68	3.05	Si
fin.	3	-797	-1045.29	2986.79	SLU 68	2.86	Si
ini.	3	-953	1127.83	2986.79	SLU 73	2.65	Si
fin.	3	-953	-1121.46	2986.79	SLU 73	2.66	Si
ini.	3	-1009	1114.61	2986.79	SLU 84	2.68	Si
fin.	3	-1009	-1120.65	2986.79	SLU 84	2.67	Si
ini.	3	-1009	1097.51	2986.79	SLU 82	2.72	Si
fin.	3	-1009	-1093.66	2986.79	SLU 82	2.73	Si
ini.	3	-941	1057.43	2986.79	SLU 75	2.82	Si
fin.	3	-941	-1094.09	2986.79	SLU 75	2.73	Si
ini.	3	-941	1074.53	2986.79	SLU 78	2.78	Si
fin.	3	-941	-1121.09	2986.79	SLU 78	2.66	Si
ini.	3	-941	1060.29	2986.79	SLU 80	2.82	Si
fin.	3	-941	-1103.44	2986.79	SLU 80	2.71	Si
ini.	3	-844	1050.96	2986.79	SLU 31	2.84	Si
fin.	3	-844	-990.59	2986.79	SLU 31	3.02	Si
ini.	3	-844	1068.06	2986.79	SLU 34	2.8	Si
fin.	3	-844	-1017.59	2986.79	SLU 34	2.94	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1009	1114.61	-1428			1967	777	SLU 84	0.54	No
fin.	3	-1009	-1120.65	-3565			1967	777	SLU 84	0.22	No
ini.	3	-844	1068.06	-1448			1901	750	SLU 34	0.52	No
fin.	3	-844	-1017.59	-3205			1901	750	SLU 34	0.23	No
ini.	3	-1009	1097.51	-1379			1967	777	SLU 82	0.56	No
fin.	3	-1009	-1093.66	-3516			1967	777	SLU 82	0.22	No
ini.	3	-941	1074.53	-1462			1940	766	SLU 78	0.52	No
fin.	3	-941	-1121.09	-3442			1940	766	SLU 78	0.22	No
ini.	3	-941	1057.43	-1413			1940	766	SLU 75	0.54	No
fin.	3	-941	-1094.09	-3393			1940	766	SLU 75	0.23	No
ini.	3	-900	1037.74	-1305			1923	759	SLU 42	0.58	No
fin.	3	-900	-989.78	-3219			1923	759	SLU 42	0.24	No
ini.	3	-991	961.99	-1138			1960	774	SLU 83	0.68	No
fin.	3	-991	-1012.62	-3275			1960	774	SLU 83	0.24	No
ini.	3	-941	1060.29	-1427			1940	766	SLU 80	0.54	No
fin.	3	-941	-1103.44	-3406			1940	766	SLU 80	0.22	No
ini.	3	-953	1144.93	-1571			1945	768	SLU 76	0.49	No
fin.	3	-953	-1148.46	-3550			1945	768	SLU 76	0.22	No
ini.	3	-953	1127.83	-1522			1945	768	SLU 73	0.5	No
fin.	3	-953	-1121.46	-3501			1945	768	SLU 73	0.22	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-709	2530.89	4480.18	SLV 6	1.77	Si
fin.	2	-737	-2576.14	4480.18	SLV 6	1.74	Si
ini.	2	-612	-3321.51	4480.18	SLV 14	1.35	Si
fin.	2	-292	3311.61	4480.18	SLV 14	1.35	Si
ini.	2	-709	2530.89	4480.18	SLV 5	1.77	Si
fin.	2	-737	-2576.14	4480.18	SLV 5	1.74	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-597	4427.51	4480.18	SLV 4	1.01	Si
fin.	2	-918	-4604.54	4480.18	SLV 4	0.97	No
ini.	2	-612	-3321.51	4480.18	SLV 13	1.35	Si
fin.	2	-292	3311.61	4480.18	SLV 13	1.35	Si
ini.	2	-554	-3770.43	4480.18	SLV 15	1.19	Si
fin.	2	-271	3720.19	4480.18	SLV 15	1.2	Si
ini.	2	-597	4427.51	4480.18	SLV 3	1.01	Si
fin.	2	-918	-4604.54	4480.18	SLV 3	0.97	No
ini.	2	-656	4876.43	4480.18	SLV 2	0.92	No
fin.	2	-939	-5013.12	4480.18	SLV 2	0.89	No
ini.	2	-554	-3770.43	4480.18	SLV 16	1.19	Si
fin.	2	-271	3720.19	4480.18	SLV 16	1.2	Si
ini.	2	-656	4876.43	4480.18	SLV 1	0.92	No
fin.	2	-939	-5013.12	4480.18	SLV 1	0.89	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-709	2530.89	-5275			2629	1025	SLV 6	0.19	No
fin.	2	-737	-2576.14	-6523			2640	1030	SLV 6	0.16	No
ini.	2	-612	-3321.51	8078			2590	1007	SLV 13	0.12	No
fin.	2	-292	3311.61	6791			2462	944	SLV 13	0.14	No
ini.	2	-597	4427.51	-9484			2584	1004	SLV 4	0.11	No
fin.	2	-918	-4604.54	-10755			2713	1064	SLV 4	0.1	No
ini.	2	-656	4876.43	-10551			2608	1015	SLV 2	0.1	No
fin.	2	-939	-5013.12	-11806			2721	1067	SLV 2	0.09	No
ini.	2	-612	-3321.51	8078			2590	1007	SLV 14	0.12	No
fin.	2	-292	3311.61	6791			2462	944	SLV 14	0.14	No
ini.	2	-554	-3770.43	9144			2567	996	SLV 15	0.11	No
fin.	2	-271	3720.19	7842			2454	940	SLV 15	0.12	No
ini.	2	-554	-3770.43	9144			2567	996	SLV 16	0.11	No
fin.	2	-271	3720.19	7842			2454	940	SLV 16	0.12	No
ini.	2	-709	2530.89	-5275			2629	1025	SLV 5	0.19	No
fin.	2	-737	-2576.14	-6523			2640	1030	SLV 5	0.16	No
ini.	2	-597	4427.51	-9484			2584	1004	SLV 3	0.11	No
fin.	2	-918	-4604.54	-10755			2713	1064	SLV 3	0.1	No
ini.	2	-656	4876.43	-10551			2608	1015	SLV 1	0.1	No
fin.	2	-939	-5013.12	-11806			2721	1067	SLV 1	0.09	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.894	SLV 1	No
V_SLV	0.09	SLV 1	No
PF_SLU	2.601	SLU 76	Si
V_SLU	0.216	SLU 76	No

Trave di accoppiamento 98

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-7.723	-3.499	8.18	8.62	0.44	-7.723	-4.589	8.18	8.62	0.44	1.09	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fhmmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	101	-15.77	294.67	SLU 55	18.68	Si
fin.	3	153	-73.04	294.67	SLU 55	4.03	Si
ini.	3	96	-17.51	294.67	SLU 76	16.83	Si
fin.	3	159	-78.99	294.67	SLU 76	3.73	Si
ini.	3	116	-16.26	294.67	SLU 13	18.12	Si
fin.	3	162	-69.21	294.67	SLU 13	4.26	Si
ini.	3	102	-15.19	294.67	SLU 52	19.4	Si
fin.	3	152	-71.57	294.67	SLU 52	4.12	Si
ini.	3	111	-18.01	294.67	SLU 34	16.37	Si
fin.	3	168	-75.15	294.67	SLU 34	3.92	Si
ini.	3	101	-15.81	294.67	SLU 68	18.63	Si
fin.	3	155	-73.79	294.67	SLU 68	3.99	Si
ini.	3	112	-17.42	294.67	SLU 31	16.91	Si
fin.	3	167	-73.68	294.67	SLU 31	4	Si
ini.	3	102	-15.23	294.67	SLU 65	19.34	Si
fin.	3	154	-72.32	294.67	SLU 65	4.07	Si
ini.	3	97	-16.93	294.67	SLU 73	17.4	Si
fin.	3	158	-77.52	294.67	SLU 73	3.8	Si
ini.	3	116	-16.31	294.67	SLU 26	18.07	Si
fin.	3	164	-69.96	294.67	SLU 26	4.21	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	122	-13.98	123			339	108	SLU 2	0.88	No
fin.	3	157	-62.54	-178			339	102	SLU 2	0.58	No
ini.	3	107	-13.49	162			339	111	SLU 44	0.68	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	3	148	-66.38	-197			339	104	SLU 44	0.53	No
ini.	3	101	-15.81	157			339	112	SLU 68	0.71	No
fin.	3	155	-73.79	-189			339	103	SLU 68	0.54	No
ini.	3	96	-17.51	153			339	113	SLU 76	0.73	No
fin.	3	159	-78.99	-180			339	102	SLU 76	0.57	No
ini.	3	102	-15.23	158			339	112	SLU 65	0.71	No
fin.	3	154	-72.32	-190			339	103	SLU 65	0.54	No
ini.	3	121	-14.56	122			339	109	SLU 5	0.89	No
fin.	3	159	-64.01	-176			339	102	SLU 5	0.58	No
ini.	3	102	-15.19	159			339	112	SLU 52	0.7	No
fin.	3	152	-71.57	-188			339	103	SLU 52	0.55	No
ini.	3	101	-15.77	158			339	112	SLU 55	0.71	No
fin.	3	153	-73.04	-186			339	103	SLU 55	0.55	No
ini.	3	97	-16.93	154			339	113	SLU 73	0.73	No
fin.	3	158	-77.52	-181			339	102	SLU 73	0.56	No
ini.	3	106	-14.07	162			339	111	SLU 47	0.69	No
fin.	3	150	-67.85	-196			339	104	SLU 47	0.53	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	68	103.16	442.01	SLV 9	4.28	Si
fin.	2	2812	-762.63	442.01	SLV 9	0.58	No
ini.	2	-258	25.42	442.01	SLV 2	17.39	Si
fin.	2	1249	-434.92	442.01	SLV 2	1.02	Si
ini.	2	-185	-105.82	442.01	SLV 8	4.18	Si
fin.	2	-2853	717.11	442.01	SLV 8	0.62	No
ini.	2	-185	-105.82	442.01	SLV 7	4.18	Si
fin.	2	-2853	717.11	442.01	SLV 7	0.62	No
ini.	2	-63	100.63	442.01	SLV 5	4.39	Si
fin.	2	3043	-867.33	442.01	SLV 5	0.51	No
ini.	2	-258	25.42	442.01	SLV 1	17.39	Si
fin.	2	1249	-434.92	442.01	SLV 1	1.02	Si
ini.	2	-54	-103.29	442.01	SLV 11	4.28	Si
fin.	2	-3085	821.81	442.01	SLV 11	0.54	No
ini.	2	-63	100.63	442.01	SLV 6	4.39	Si
fin.	2	3043	-867.33	442.01	SLV 6	0.51	No
ini.	2	68	103.16	442.01	SLV 10	4.28	Si
fin.	2	2812	-762.63	442.01	SLV 10	0.58	No
ini.	2	-54	-103.29	442.01	SLV 12	4.28	Si
fin.	2	-3085	821.81	442.01	SLV 12	0.54	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-185	-105.82	719			558	216	SLV 8	0.3	No
fin.	2	-2853	717.11	4199			1269	441	SLV 8	0.11	No
ini.	2	-258	25.42	-241			577	226	SLV 2	0.94	No
fin.	2	1249	-434.92	-1045			508	0	SLV 2	0	No
ini.	2	68	103.16	-473			508	181	SLV 9	0.38	No
fin.	2	2812	-762.63	-4303			508	0	SLV 9	0	No
ini.	2	178	33.85	99			508	163	SLV 13	1.65	Si
fin.	2	479	-85.93	-1563			508	100	SLV 13	0.06	No
ini.	2	-258	25.42	-241			577	226	SLV 1	0.94	No
fin.	2	1249	-434.92	-1045			508	0	SLV 1	0	No
ini.	2	-185	-105.82	719			558	216	SLV 7	0.3	No
fin.	2	-2853	717.11	4199			1269	441	SLV 7	0.11	No
ini.	2	-63	100.63	-575			525	200	SLV 5	0.35	No
fin.	2	3043	-867.33	-4148			508	0	SLV 5	0	No
ini.	2	-63	100.63	-575			525	200	SLV 6	0.35	No
fin.	2	3043	-867.33	-4148			508	0	SLV 6	0	No
ini.	2	178	33.85	99			508	163	SLV 14	1.65	Si
fin.	2	479	-85.93	-1563			508	100	SLV 14	0.06	No
ini.	2	68	103.16	-473			508	181	SLV 10	0.38	No
fin.	2	2812	-762.63	-4303			508	0	SLV 10	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.51	SLV 5	No
V_SLV	0	SLV 1	No
PF_SLU	3.731	SLU 76	Si
V_SLU	0.527	SLU 44	No

Trave di accoppiamento 99

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-5.158	6.006	5.07	7.07	2	-5.158	6.506	5.07	7.07	2	0.5	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
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Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	1171	151.04	5682.35	SLU 81	37.62	Si
fin.	3	547	391.25	5682.35	SLU 81	14.52	Si
ini.	3	1128	156.2	5682.35	SLU 84	36.38	Si
fin.	3	524	375.35	5682.35	SLU 84	15.14	Si
ini.	3	1057	132.86	5682.35	SLU 39	42.77	Si
fin.	3	497	351.34	5682.35	SLU 39	16.17	Si
ini.	3	1056	132.04	5682.35	SLU 40	43.04	Si
fin.	3	498	351.65	5682.35	SLU 40	16.16	Si
ini.	3	1128	157.02	5682.35	SLU 83	36.19	Si
fin.	3	524	375.04	5682.35	SLU 83	15.15	Si
ini.	3	1063	147.45	5682.35	SLU 74	38.54	Si
fin.	3	492	353.83	5682.35	SLU 74	16.06	Si
ini.	3	1170	150.22	5682.35	SLU 82	37.83	Si
fin.	3	547	391.56	5682.35	SLU 82	14.51	Si
ini.	3	1062	146.63	5682.35	SLU 75	38.75	Si
fin.	3	492	354.13	5682.35	SLU 75	16.05	Si
ini.	3	1074	140.5	5682.35	SLU 73	40.44	Si
fin.	3	500	360.45	5682.35	SLU 73	15.76	Si
ini.	3	1031	146.48	5682.35	SLU 76	38.79	Si
fin.	3	477	344.24	5682.35	SLU 76	16.51	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	1020	152.61	779			2157	547	SLU 78	0.7	No
fin.	3	469	337.92	2446			2157	702	SLU 78	0.29	No
ini.	3	1128	156.2	987			2157	511	SLU 84	0.52	No
fin.	3	524	375.35	2568			2157	688	SLU 84	0.27	No
ini.	3	1031	146.48	867			2157	543	SLU 76	0.63	No
fin.	3	477	344.24	2399			2157	700	SLU 76	0.29	No
ini.	3	1170	150.22	1125			2157	496	SLU 82	0.44	No
fin.	3	547	391.56	2572			2157	682	SLU 82	0.27	No
ini.	3	1074	140.5	1004			2157	529	SLU 73	0.53	No
fin.	3	500	360.45	2404			2157	695	SLU 73	0.29	No
ini.	3	1062	146.63	917			2157	533	SLU 75	0.58	No
fin.	3	492	354.13	2451			2157	696	SLU 75	0.28	No
ini.	3	1020	153.43	775			2157	547	SLU 77	0.7	No
fin.	3	469	337.62	2449			2157	702	SLU 77	0.29	No
ini.	3	1171	151.04	1121			2157	495	SLU 81	0.44	No
fin.	3	547	391.25	2575			2157	682	SLU 81	0.27	No
ini.	3	1063	147.45	913			2157	533	SLU 74	0.58	No
fin.	3	492	353.83	2454			2157	697	SLU 74	0.28	No
ini.	3	1128	157.02	983			2157	510	SLU 83	0.52	No
fin.	3	524	375.04	2570			2157	688	SLU 83	0.27	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-2026	901.88	8523.53	SLV 2	9.45	Si
fin.	2	-918	-571.7	8523.53	SLV 2	14.91	Si
ini.	2	3390	-712.85	8523.53	SLV 16	11.96	Si
fin.	2	1544	1031.44	8523.53	SLV 16	8.26	Si
ini.	2	3921	-810.53	8523.53	SLV 13	10.52	Si
fin.	2	1886	1279.82	8523.53	SLV 13	6.66	Si
ini.	2	3390	-712.85	8523.53	SLV 15	11.96	Si
fin.	2	1544	1031.44	8523.53	SLV 15	8.26	Si
ini.	2	3921	-810.53	8523.53	SLV 14	10.52	Si
fin.	2	1886	1279.82	8523.53	SLV 14	6.66	Si
ini.	2	2460	-325.14	8523.53	SLV 10	26.21	Si
fin.	2	1304	921.56	8523.53	SLV 10	9.25	Si
ini.	2	-2557	999.55	8523.53	SLV 4	8.53	Si
fin.	2	-1261	-820.07	8523.53	SLV 4	10.39	Si
ini.	2	-2557	999.55	8523.53	SLV 3	8.53	Si
fin.	2	-1261	-820.07	8523.53	SLV 3	10.39	Si
ini.	2	-2026	901.88	8523.53	SLV 1	9.45	Si
fin.	2	-918	-571.7	8523.53	SLV 1	14.91	Si
ini.	2	2460	-325.14	8523.53	SLV 9	26.21	Si
fin.	2	1304	921.56	8523.53	SLV 9	9.25	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	3921	-810.53	9014			3235	0	SLV 13	0	No
fin.	2	1886	1279.82	6874			3235	696	SLV 13	0.1	No
ini.	2	-2026	901.88	-6512			4045	1598	SLV 2	0.25	No
fin.	2	-918	-571.7	-3076			3602	1403	SLV 2	0.46	No
ini.	2	-2026	901.88	-6512			4045	1598	SLV 1	0.25	No
fin.	2	-918	-571.7	-3076			3602	1403	SLV 1	0.46	No
ini.	2	3390	-712.85	7697			3235	0	SLV 15	0	No
fin.	2	1544	1031.44	6259			3235	815	SLV 15	0.13	No
ini.	2	2460	-325.14	5117			3235	424	SLV 10	0.08	No
fin.	2	1304	921.56	4108			3235	890	SLV 10	0.22	No
ini.	2	3921	-810.53	9014			3235	0	SLV 14	0	No
fin.	2	1886	1279.82	6874			3235	696	SLV 14	0.1	No
ini.	2	-2557	999.55	-7829			4258	1684	SLV 3	0.22	No
fin.	2	-1261	-820.07	-3690			3739	1466	SLV 3	0.4	No
ini.	2	-2557	999.55	-7829			4258	1684	SLV 4	0.22	No
fin.	2	-1261	-820.07	-3690			3739	1466	SLV 4	0.4	No
ini.	2	3390	-712.85	7697			3235	0	SLV 16	0	No
fin.	2	1544	1031.44	6259			3235	815	SLV 16	0.13	No
ini.	2	2460	-325.14	5117			3235	424	SLV 9	0.08	No
fin.	2	1304	921.56	4108			3235	890	SLV 9	0.22	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	6.66	SLV 13	Si
V_SLV	0	SLV 13	No
PF_SLU	14.512	SLU 82	Si
V_SLU	0.265	SLU 81	No

Trave di accoppiamento 100

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-5.158	6.006	7.87	8.62	0.75	-5.158	6.506	7.87	8.62	0.75	0.5	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-192	-244.11	799.08	SLU 74	3.27	Si
fin.	3	-212	63.95	799.08	SLU 74	12.49	Si
ini.	3	-125	-245.43	799.08	SLU 77	3.26	Si
fin.	3	-145	65.03	799.08	SLU 77	12.29	Si
ini.	3	-280	-249.94	799.08	SLU 82	3.2	Si
fin.	3	-302	64.61	799.08	SLU 82	12.37	Si
ini.	3	-193	-245.52	799.08	SLU 75	3.25	Si
fin.	3	-213	63.79	799.08	SLU 75	12.53	Si
ini.	3	-279	-248.53	799.08	SLU 81	3.22	Si
fin.	3	-302	64.77	799.08	SLU 81	12.34	Si
ini.	3	-212	-249.85	799.08	SLU 83	3.2	Si
fin.	3	-234	65.85	799.08	SLU 83	12.14	Si
ini.	3	-213	-251.27	799.08	SLU 84	3.18	Si
fin.	3	-235	65.68	799.08	SLU 84	12.17	Si
ini.	3	-169	-243	799.08	SLU 76	3.29	Si
fin.	3	-187	62.86	799.08	SLU 76	12.71	Si
ini.	3	-101	-243.38	799.08	SLU 80	3.28	Si
fin.	3	-119	64.05	799.08	SLU 80	12.48	Si
ini.	3	-126	-246.84	799.08	SLU 78	3.24	Si
fin.	3	-146	64.86	799.08	SLU 78	12.32	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-22	-223.94	1888			817	309	SLU 69	0.16	No
fin.	3	-32	58.71	-516			821	311	SLU 69	0.6	No
ini.	3	35	-201.28	1798			809	297	SLU 48	0.16	No
fin.	3	32	52.57	-543			809	297	SLU 48	0.55	No
ini.	3	59	-197.82	1814			809	291	SLU 50	0.16	No
fin.	3	59	51.76	-572			809	291	SLU 50	0.51	No
ini.	3	34	-202.69	1801			809	297	SLU 49	0.16	No
fin.	3	32	52.41	-540			809	297	SLU 49	0.55	No
ini.	3	-100	-241.97	1909			849	325	SLU 79	0.17	No
fin.	3	-119	64.21	-449			856	329	SLU 79	0.73	No
ini.	3	-22	-225.35	1890			818	309	SLU 70	0.16	No
fin.	3	-32	58.54	-513			822	311	SLU 70	0.61	No
ini.	3	3	-220.48	1904			809	304	SLU 71	0.16	No
fin.	3	-5	57.89	-544			811	305	SLU 71	0.56	No
ini.	3	2	-221.89	1906			809	304	SLU 72	0.16	No
fin.	3	-6	57.73	-541			811	306	SLU 72	0.56	No
ini.	3	58	-199.23	1816			809	291	SLU 51	0.16	No
fin.	3	58	51.59	-568			809	291	SLU 51	0.51	No
ini.	3	-101	-243.38	1911			849	326	SLU 80	0.17	No
fin.	3	-119	64.05	-445			856	329	SLU 80	0.74	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	1080	922.7	1198.62	SLV 2	1.3	Si
fin.	2	893	57.59	1198.62	SLV 2	20.81	Si
ini.	2	1880	832.79	1198.62	SLV 3	1.44	Si
fin.	2	1358	-100.73	1198.62	SLV 3	11.9	Si
ini.	2	736	-632.51	1198.62	SLV 11	1.9	Si
fin.	2	274	-201.07	1198.62	SLV 11	5.96	Si
ini.	2	-2117	-1170.23	1198.62	SLV 14	1.02	Si
fin.	2	-1609	187.41	1198.62	SLV 14	6.4	Si
ini.	2	-1316	-1260.14	1198.62	SLV 15	0.95	No
fin.	2	-1144	29.09	1198.62	SLV 15	41.21	Si
ini.	2	-2117	-1170.23	1198.62	SLV 13	1.02	Si
fin.	2	-1609	187.41	1198.62	SLV 13	6.4	Si
ini.	2	736	-632.51	1198.62	SLV 12	1.9	Si
fin.	2	274	-201.07	1198.62	SLV 12	5.96	Si
ini.	2	1080	922.7	1198.62	SLV 1	1.3	Si
fin.	2	893	57.59	1198.62	SLV 1	20.81	Si
ini.	2	1880	832.79	1198.62	SLV 4	1.44	Si
fin.	2	1358	-100.73	1198.62	SLV 4	11.9	Si
ini.	2	-1316	-1260.14	1198.62	SLV 16	0.95	No



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	2	-1144	29.09	1198.62	SLV 16	41.21	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	1880	832.79	-1756			1213	0	SLV 3	0	No
fin.	2	1358	-100.73	-3030			1213	0	SLV 3	0	No
ini.	2	1695	-4.63	-51			1213	0	SLV 8	0	No
fin.	2	1024	-240.01	-2151			1213	71	SLV 8	0.03	No
ini.	2	-1316	-1260.14	3969			1740	685	SLV 15	0.17	No
fin.	2	-1144	29.09	1863			1671	660	SLV 15	0.35	No
ini.	2	736	-632.51	1667			1213	250	SLV 12	0.15	No
fin.	2	274	-201.07	-682			1213	393	SLV 12	0.58	No
ini.	2	1880	832.79	-1756			1213	0	SLV 4	0	No
fin.	2	1358	-100.73	-3030			1213	0	SLV 4	0	No
ini.	2	736	-632.51	1667			1213	250	SLV 11	0.15	No
fin.	2	274	-201.07	-682			1213	393	SLV 11	0.58	No
ini.	2	1695	-4.63	-51			1213	0	SLV 7	0	No
fin.	2	1024	-240.01	-2151			1213	71	SLV 7	0.03	No
ini.	2	1080	922.7	-1500			1213	0	SLV 2	0	No
fin.	2	893	57.59	-2317			1213	177	SLV 2	0.08	No
ini.	2	1080	922.7	-1500			1213	0	SLV 1	0	No
fin.	2	893	57.59	-2317			1213	177	SLV 1	0.08	No
ini.	2	-1316	-1260.14	3969			1740	685	SLV 16	0.17	No
fin.	2	-1144	29.09	1863			1671	660	SLV 16	0.35	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.951	SLV 15	No
V_SLV	0	SLV 1	No
PF_SLU	3.18	SLU 84	Si
V_SLU	0.159	SLU 72	No

Trave di accoppiamento 101

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-6.513	-3.359	5.07	5.97	0.9	-7.413	-3.359	5.07	5.97	0.9	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	485	273.81	1150.68	SLU 65	4.2	Si
fin.	3	3	4.61	1150.68	SLU 65	249.6	Si
ini.	3	362	270.59	1150.68	SLU 47	4.25	Si
fin.	3	48	-12.87	1150.68	SLU 47	89.39	Si
ini.	3	412	245.64	1150.68	SLU 26	4.68	Si
fin.	3	63	-15.44	1150.68	SLU 26	74.52	Si
ini.	3	402	240.99	1150.68	SLU 23	4.77	Si
fin.	3	57	-14.29	1150.68	SLU 23	80.53	Si
ini.	3	683	273.4	1150.68	SLU 76	4.21	Si
fin.	3	-59	36.94	1150.68	SLU 76	31.15	Si
ini.	3	352	265.95	1150.68	SLU 44	4.33	Si
fin.	3	42	-11.72	1150.68	SLU 44	98.19	Si
ini.	3	551	265.53	1150.68	SLU 55	4.33	Si
fin.	3	-19	20.61	1150.68	SLU 55	55.84	Si
ini.	3	541	260.89	1150.68	SLU 52	4.41	Si
fin.	3	-25	21.76	1150.68	SLU 52	52.88	Si
ini.	3	673	268.76	1150.68	SLU 73	4.28	Si
fin.	3	-65	38.09	1150.68	SLU 73	30.21	Si
ini.	3	494	278.45	1150.68	SLU 68	4.13	Si
fin.	3	8	3.46	1150.68	SLU 68	332.91	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	910	151.84	-1879			970	0	SLU 81	0	No
fin.	3	-418	164.71	2273			1138	447	SLU 81	0.2	No
ini.	3	850	166.76	-2035			970	0	SLU 77	0	No
fin.	3	-371	145.63	2239			1119	439	SLU 77	0.2	No
ini.	3	838	123.66	-1550			970	20	SLU 41	0.01	No
fin.	3	-357	144.66	1974			1113	436	SLU 41	0.22	No
ini.	3	816	220.69	-2219			970	61	SLU 82	0.03	No
fin.	3	-223	97.35	2000			1060	411	SLU 82	0.21	No
ini.	3	840	162.12	-1975			970	0	SLU 74	0	No
fin.	3	-377	146.79	2203			1121	440	SLU 74	0.2	No
ini.	3	826	225.33	-2280			970	47	SLU 84	0.02	No
fin.	3	-217	96.19	2036			1057	410	SLU 84	0.2	No
ini.	3	757	235.61	-2376			970	115	SLU 78	0.05	No
fin.	3	-176	78.27	1966			1041	402	SLU 78	0.2	No
ini.	3	828	119.02	-1489			970	44	SLU 39	0.03	No
fin.	3	-363	145.81	1938			1116	437	SLU 39	0.23	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	849	163.29	-2000			970	0	SLU 79	0	No
fin.	3	-377	148.06	2229			1121	440	SLU 79	0.2	No
ini.	3	920	156.48	-1940			970	0	SLU 83	0	No
fin.	3	-412	163.56	2309			1135	446	SLU 83	0.19	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	2587	-499.96	1726.01	SLV 11	3.45	Si
fin.	2	-1878	865.84	1726.01	SLV 11	1.99	Si
ini.	2	4257	-1094.79	1726.01	SLV 16	1.58	Si
fin.	2	-2984	1829.25	1726.01	SLV 16	0.94	No
ini.	2	-2596	1165.05	1726.01	SLV 4	1.48	Si
fin.	2	1938	-1472.68	1726.01	SLV 4	1.17	Si
ini.	2	4257	-1094.79	1726.01	SLV 15	1.58	Si
fin.	2	-2984	1829.25	1726.01	SLV 15	0.94	No
ini.	2	-3222	1333.15	1726.01	SLV 2	1.29	Si
fin.	2	2467	-1637.48	1726.01	SLV 2	1.05	Si
ini.	2	3631	-926.69	1726.01	SLV 14	1.86	Si
fin.	2	-2455	1664.45	1726.01	SLV 14	1.04	Si
ini.	2	-2596	1165.05	1726.01	SLV 3	1.48	Si
fin.	2	1938	-1472.68	1726.01	SLV 3	1.17	Si
ini.	2	-3222	1333.15	1726.01	SLV 1	1.29	Si
fin.	2	2467	-1637.48	1726.01	SLV 1	1.05	Si
ini.	2	2587	-499.96	1726.01	SLV 12	3.45	Si
fin.	2	-1878	865.84	1726.01	SLV 12	1.99	Si
ini.	2	3631	-926.69	1726.01	SLV 13	1.86	Si
fin.	2	-2455	1664.45	1726.01	SLV 13	1.04	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-3222	1333.15	-7585			2744	1033	SLV 2	0.14	No
fin.	2	2467	-1637.48	-5441			1456	0	SLV 2	0	No
ini.	2	-1552	738.32	-5119			2077	818	SLV 6	0.16	No
fin.	2	1362	-674.07	-1822			1456	0	SLV 6	0	No
ini.	2	-2596	1165.05	-6368			2494	958	SLV 4	0.15	No
fin.	2	1938	-1472.68	-4631			1456	0	SLV 4	0	No
ini.	2	3631	-926.69	3519			1456	0	SLV 13	0	No
fin.	2	-2455	1664.45	7599			2438	941	SLV 13	0.12	No
ini.	2	-3222	1333.15	-7585			2744	1033	SLV 1	0.14	No
fin.	2	2467	-1637.48	-5441			1456	0	SLV 1	0	No
ini.	2	2587	-499.96	2270			1456	0	SLV 11	0	No
fin.	2	-1878	865.84	4790			2207	865	SLV 11	0.18	No
ini.	2	2587	-499.96	2270			1456	0	SLV 12	0	No
fin.	2	-1878	865.84	4790			2207	865	SLV 12	0.18	No
ini.	2	-1552	738.32	-5119			2077	818	SLV 5	0.16	No
fin.	2	1362	-674.07	-1822			1456	0	SLV 5	0	No
ini.	2	3631	-926.69	3519			1456	0	SLV 14	0	No
fin.	2	-2455	1664.45	7599			2438	941	SLV 14	0.12	No
ini.	2	-2596	1165.05	-6368			2494	958	SLV 3	0.15	No
fin.	2	1938	-1472.68	-4631			1456	0	SLV 3	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.944	SLV 15	No
V_SLV	0	SLV 1	No
PF_SLU	4.132	SLU 68	Si
V_SLU	0	SLU 74	No

Trave di accoppiamento 102

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-6.513	-3.359	7.77	8.62	0.85	-7.413	-3.359	7.77	8.62	0.85	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-436	-196.98	1026.38	SLU 77	5.21	Si
fin.	3	-83	33.7	1026.38	SLU 77	30.46	Si
ini.	3	-529	-206.86	1026.38	SLU 83	4.96	Si
fin.	3	-95	45.34	1026.38	SLU 83	22.64	Si
ini.	3	-443	-179.81	1026.38	SLU 60	5.71	Si
fin.	3	-68	31.75	1026.38	SLU 60	32.33	Si
ini.	3	-519	-179.1	1026.38	SLU 39	5.73	Si
fin.	3	-98	50.34	1026.38	SLU 39	20.39	Si
ini.	3	-542	-203.49	1026.38	SLU 81	5.04	Si
fin.	3	-100	46.13	1026.38	SLU 81	22.25	Si
ini.	3	-446	-196.11	1026.38	SLU 79	5.23	Si
fin.	3	-83	34.48	1026.38	SLU 79	29.77	Si
ini.	3	-337	-173.3	1026.38	SLU 56	5.92	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	3	-52	19.32	1026.38	SLU 56	53.13	Si
ini.	3	-429	-183.17	1026.38	SLU 62	5.6	Si
fin.	3	-63	30.96	1026.38	SLU 62	33.15	Si
ini.	3	-449	-193.62	1026.38	SLU 74	5.3	Si
fin.	3	-88	34.48	1026.38	SLU 74	29.77	Si
ini.	3	-506	-182.46	1026.38	SLU 41	5.63	Si
fin.	3	-93	49.56	1026.38	SLU 41	20.71	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-436	-196.98	3071			1030	405	SLU 77	0.13	No
fin.	3	-83	33.7	-1663			897	342	SLU 77	0.21	No
ini.	3	-542	-203.49	3121			1070	423	SLU 81	0.14	No
fin.	3	-100	46.13	-1586			903	346	SLU 81	0.22	No
ini.	3	-256	-149.34	2771			962	375	SLU 80	0.14	No
fin.	3	-201	-3.65	-1872			942	365	SLU 80	0.19	No
ini.	3	-352	-156.72	2843			999	391	SLU 82	0.14	No
fin.	3	-217	7.99	-1821			948	368	SLU 82	0.2	No
ini.	3	-245	-150.21	2793			958	373	SLU 78	0.13	No
fin.	3	-201	-4.44	-1898			942	365	SLU 78	0.19	No
ini.	3	-259	-146.84	2738			964	375	SLU 75	0.14	No
fin.	3	-206	-3.65	-1853			943	366	SLU 75	0.2	No
ini.	3	-529	-206.86	3176			1065	421	SLU 83	0.13	No
fin.	3	-95	45.34	-1632			901	345	SLU 83	0.21	No
ini.	3	-338	-160.09	2898			993	389	SLU 84	0.13	No
fin.	3	-212	7.21	-1867			946	367	SLU 84	0.2	No
ini.	3	-449	-193.62	3016			1035	408	SLU 74	0.14	No
fin.	3	-88	34.48	-1618			899	343	SLU 74	0.21	No
ini.	3	-446	-196.11	3049			1034	407	SLU 79	0.13	No
fin.	3	-83	34.48	-1638			897	342	SLU 79	0.21	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-2375	-565.71	1539.56	SLV 12	2.72	Si
fin.	2	1148	391.8	1539.56	SLV 12	3.93	Si
ini.	2	2802	560.93	1539.56	SLV 3	2.74	Si
fin.	2	-2295	-501.85	1539.56	SLV 3	3.07	Si
ini.	2	-2375	-565.71	1539.56	SLV 11	2.72	Si
fin.	2	1148	391.8	1539.56	SLV 11	3.93	Si
ini.	2	-3986	-939.69	1539.56	SLV 16	1.64	Si
fin.	2	2475	651.61	1539.56	SLV 16	2.36	Si
ini.	2	3457	690.57	1539.56	SLV 1	2.23	Si
fin.	2	-2589	-625.2	1539.56	SLV 1	2.46	Si
ini.	2	3457	690.57	1539.56	SLV 2	2.23	Si
fin.	2	-2589	-625.2	1539.56	SLV 2	2.46	Si
ini.	2	2802	560.93	1539.56	SLV 4	2.74	Si
fin.	2	-2295	-501.85	1539.56	SLV 4	3.07	Si
ini.	2	-3330	-810.06	1539.56	SLV 14	1.9	Si
fin.	2	2181	528.26	1539.56	SLV 14	2.91	Si
ini.	2	-3330	-810.06	1539.56	SLV 13	1.9	Si
fin.	2	2181	528.26	1539.56	SLV 13	2.91	Si
ini.	2	-3986	-939.69	1539.56	SLV 15	1.64	Si
fin.	2	2475	651.61	1539.56	SLV 15	2.36	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	1847	316.59	-907			1298	0	SLV 6	0	No
fin.	2	-1262	-365.4	-3586			1775	701	SLV 6	0.2	No
ini.	2	1847	316.59	-907			1298	0	SLV 5	0	No
fin.	2	-1262	-365.4	-3586			1775	701	SLV 5	0.2	No
ini.	2	3457	690.57	-3103			1298	0	SLV 2	0	No
fin.	2	-2589	-625.2	-5400			2276	871	SLV 2	0.16	No
ini.	2	2802	560.93	-2205			1298	0	SLV 4	0	No
fin.	2	-2295	-501.85	-4618			2165	836	SLV 4	0.18	No
ini.	2	-3986	-939.69	7064			2804	1019	SLV 16	0.14	No
fin.	2	2475	651.61	3169			1298	0	SLV 16	0	No
ini.	2	2802	560.93	-2205			1298	0	SLV 3	0	No
fin.	2	-2295	-501.85	-4618			2165	836	SLV 3	0.18	No
ini.	2	-3330	-810.06	6166			2556	952	SLV 14	0.15	No
fin.	2	2181	528.26	2387			1298	0	SLV 14	0	No
ini.	2	-3986	-939.69	7064			2804	1019	SLV 15	0.14	No
fin.	2	2475	651.61	3169			1298	0	SLV 15	0	No
ini.	2	3457	690.57	-3103			1298	0	SLV 1	0	No
fin.	2	-2589	-625.2	-5400			2276	871	SLV 1	0.16	No
ini.	2	-3330	-810.06	6166			2556	952	SLV 13	0.15	No
fin.	2	2181	528.26	2387			1298	0	SLV 13	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.638	SLV 15	Si
V_SLV	0	SLV 1	No
PF_SLU	4.962	SLU 83	Si
V_SLU	0.132	SLU 77	No

Trave di accoppiamento 103

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-5.508	-3.359	5.07	7.07	2	-6.008	-3.359	5.07	7.07	2	0.5	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-853	1387.53	5682.35	SLU 73	4.1	Si
fin.	3	115	1091.93	5682.35	SLU 73	5.2	Si
ini.	3	-615	1370.14	5682.35	SLU 83	4.15	Si
fin.	3	311	1197.02	5682.35	SLU 83	4.75	Si
ini.	3	-783	1378.96	5682.35	SLU 80	4.12	Si
fin.	3	169	1134.67	5682.35	SLU 80	5.01	Si
ini.	3	-743	1416.61	5682.35	SLU 82	4.01	Si
fin.	3	229	1166.29	5682.35	SLU 82	4.87	Si
ini.	3	-604	1353.33	5682.35	SLU 81	4.2	Si
fin.	3	311	1180.33	5682.35	SLU 81	4.81	Si
ini.	3	-754	1433.42	5682.35	SLU 84	3.96	Si
fin.	3	228	1182.99	5682.35	SLU 84	4.8	Si
ini.	3	-793	1388.64	5682.35	SLU 78	4.09	Si
fin.	3	166	1141.28	5682.35	SLU 78	4.98	Si
ini.	3	-654	1325.37	5682.35	SLU 77	4.29	Si
fin.	3	249	1155.31	5682.35	SLU 77	4.92	Si
ini.	3	-865	1404.34	5682.35	SLU 76	4.05	Si
fin.	3	114	1108.62	5682.35	SLU 76	5.13	Si
ini.	3	-781	1371.84	5682.35	SLU 75	4.14	Si
fin.	3	167	1124.59	5682.35	SLU 75	5.05	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-793	1388.64	-3196			2474	969	SLU 78	0.3	No
fin.	3	166	1141.28	-73			2157	775	SLU 78	10.68	Si
ini.	3	-604	1353.33	-2939			2398	934	SLU 81	0.32	No
fin.	3	311	1180.33	110			2157	741	SLU 81	6.76	Si
ini.	3	-781	1371.84	-3153			2469	967	SLU 75	0.31	No
fin.	3	167	1124.59	-100			2157	775	SLU 75	7.73	Si
ini.	3	-754	1433.42	-3253			2458	962	SLU 84	0.3	No
fin.	3	228	1182.99	-119			2157	760	SLU 84	6.41	Si
ini.	3	-743	1416.61	-3210			2454	960	SLU 82	0.3	No
fin.	3	229	1166.29	-146			2157	760	SLU 82	5.2	Si
ini.	3	-654	1325.37	-2925			2418	943	SLU 77	0.32	No
fin.	3	249	1155.31	183			2157	756	SLU 77	4.12	Si
ini.	3	-783	1378.96	-3167			2470	967	SLU 80	0.31	No
fin.	3	169	1134.67	-78			2157	774	SLU 80	9.87	Si
ini.	3	-865	1404.34	-3305			2502	982	SLU 76	0.3	No
fin.	3	114	1108.62	-277			2157	786	SLU 76	2.84	Si
ini.	3	-853	1387.53	-3262			2498	980	SLU 73	0.3	No
fin.	3	115	1091.93	-304			2157	786	SLU 73	2.58	Si
ini.	3	-615	1370.14	-2982			2403	936	SLU 83	0.31	No
fin.	3	311	1197.02	137			2157	741	SLU 83	5.4	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	2104	-1201.17	8523.53	SLV 13	7.1	Si
fin.	2	1825	2283.2	8523.53	SLV 13	3.73	Si
ini.	2	-3986	2403.36	8523.53	SLV 1	3.55	Si
fin.	2	-2761	-951.57	8523.53	SLV 1	8.96	Si
ini.	2	67	2324.03	8523.53	SLV 7	3.67	Si
fin.	2	1350	574.94	8523.53	SLV 7	14.82	Si
ini.	2	2991	-655.52	8523.53	SLV 15	13	Si
fin.	2	2982	2465.21	8523.53	SLV 15	3.46	Si
ini.	2	-3099	2949.02	8523.53	SLV 4	2.89	Si
fin.	2	-1605	-769.56	8523.53	SLV 4	11.08	Si
ini.	2	2104	-1201.17	8523.53	SLV 14	7.1	Si
fin.	2	1825	2283.2	8523.53	SLV 14	3.73	Si
ini.	2	-3986	2403.36	8523.53	SLV 2	3.55	Si
fin.	2	-2761	-951.57	8523.53	SLV 2	8.96	Si
ini.	2	67	2324.03	8523.53	SLV 8	3.67	Si
fin.	2	1350	574.94	8523.53	SLV 8	14.82	Si
ini.	2	2991	-655.52	8523.53	SLV 16	13	Si
fin.	2	2982	2465.21	8523.53	SLV 16	3.46	Si
ini.	2	-3099	2949.02	8523.53	SLV 3	2.89	Si
fin.	2	-1605	-769.56	8523.53	SLV 3	11.08	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-3099	2949.02	-10969			4475	1767	SLV 3	0.16	No
fin.	2	-1605	-769.56	-9313			3877	1527	SLV 3	0.16	No
ini.	2	67	2324.03	-5718			3235	1203	SLV 8	0.21	No
fin.	2	1350	574.94	-4842			3235	876	SLV 8	0.18	No
ini.	2	-3986	2403.36	-10270			4830	1895	SLV 2	0.18	No
fin.	2	-2761	-951.57	-7911			4339	1716	SLV 2	0.22	No
ini.	2	2991	-655.52	6365			3235	0	SLV 15	0	No
fin.	2	2982	2465.21	8134			3235	0	SLV 15	0	No
ini.	2	2991	-655.52	6365			3235	0	SLV 16	0	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	2	2982	2465.21	8134			3235	0	SLV 16	0	No
ini.	2	-3099	2949.02	-10969			4475	1767	SLV 4	0.16	No
fin.	2	-1605	-769.56	-9313			3877	1527	SLV 4	0.16	No
ini.	2	2104	-1201.17	7064			3235	607	SLV 13	0.09	No
fin.	2	1825	2283.2	9536			3235	718	SLV 13	0.08	No
ini.	2	2104	-1201.17	7064			3235	607	SLV 14	0.09	No
fin.	2	1825	2283.2	9536			3235	718	SLV 14	0.08	No
ini.	2	67	2324.03	-5718			3235	1203	SLV 7	0.21	No
fin.	2	1350	574.94	-4842			3235	876	SLV 7	0.18	No
ini.	2	-3986	2403.36	-10270			4830	1895	SLV 1	0.18	No
fin.	2	-2761	-951.57	-7911			4339	1716	SLV 1	0.22	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF SLV	2.89	SLV 3	Si
V SLV	0	SLV 15	No
PF SLU	3.964	SLU 84	Si
V SLU	0.296	SLU 84	No

Trave di accoppiamento 104

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-5.508	-3.359	7.87	8.62	0.75	-6.008	-3.359	7.87	8.62	0.75	0.5	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-16	55.2	799.08	SLU 83	14.48	Si
fin.	3	-262	-207.63	799.08	SLU 83	3.85	Si
ini.	3	111	75.62	799.08	SLU 84	10.57	Si
fin.	3	-119	-185.09	799.08	SLU 84	4.32	Si
ini.	3	-53	47.44	799.08	SLU 41	16.84	Si
fin.	3	-275	-183.09	799.08	SLU 41	4.36	Si
ini.	3	84	73.91	799.08	SLU 82	10.81	Si
fin.	3	-141	-182.13	799.08	SLU 82	4.39	Si
ini.	3	64	56.52	799.08	SLU 77	14.14	Si
fin.	3	-171	-198.23	799.08	SLU 77	4.03	Si
ini.	3	-80	45.73	799.08	SLU 39	17.48	Si
fin.	3	-297	-180.13	799.08	SLU 39	4.44	Si
ini.	3	23	49.09	799.08	SLU 62	16.28	Si
fin.	3	-189	-183.02	799.08	SLU 62	4.37	Si
ini.	3	37	54.81	799.08	SLU 74	14.58	Si
fin.	3	-193	-195.27	799.08	SLU 74	4.09	Si
ini.	3	-43	53.49	799.08	SLU 81	14.94	Si
fin.	3	-284	-204.68	799.08	SLU 81	3.9	Si
ini.	3	48	54.89	799.08	SLU 79	14.56	Si
fin.	3	-184	-196.92	799.08	SLU 79	4.06	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	318	82.47	259			809	225	SLU 68	0.87	No
fin.	3	162	-124.49	-2160			809	267	SLU 68	0.12	No
ini.	3	111	75.62	236			809	279	SLU 84	1.19	Si
fin.	3	-119	-185.09	-2650			856	329	SLU 84	0.12	No
ini.	3	206	85.49	233			809	256	SLU 73	1.1	Si
fin.	3	10	-153.43	-2412			809	302	SLU 73	0.13	No
ini.	3	191	76.94	254			809	259	SLU 78	1.02	Si
fin.	3	-28	-175.68	-2611			820	310	SLU 78	0.12	No
ini.	3	277	72.2	271			809	237	SLU 70	0.87	No
fin.	3	102	-143.78	-2295			809	281	SLU 70	0.12	No
ini.	3	232	87.2	241			809	249	SLU 76	1.03	Si
fin.	3	32	-156.39	-2475			809	297	SLU 76	0.12	No
ini.	3	164	75.22	245			809	266	SLU 75	1.09	Si
fin.	3	-50	-172.72	-2547			829	315	SLU 75	0.12	No
ini.	3	260	70.57	269			809	241	SLU 72	0.9	No
fin.	3	89	-142.48	-2263			809	284	SLU 72	0.13	No
ini.	3	230	70.83	254			809	249	SLU 57	0.98	No
fin.	3	45	-151.06	-2322			809	295	SLU 57	0.13	No
ini.	3	175	75.3	251			809	264	SLU 80	1.05	Si
fin.	3	-42	-174.38	-2578			825	313	SLU 80	0.12	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	3509	854.81	1198.62	SLV 2	1.4	Si
fin.	2	2642	26.19	1198.62	SLV 2	45.76	Si
ini.	2	-3373	-915.87	1198.62	SLV 14	1.31	Si
fin.	2	-2377	-144.14	1198.62	SLV 14	8.32	Si
ini.	2	3509	854.81	1198.62	SLV 1	1.4	Si
fin.	2	2642	26.19	1198.62	SLV 1	45.76	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	1000	523.16	1198.62	SLV 7	2.29	Si
fin.	2	-106	-324.28	1198.62	SLV 7	3.7	Si
ini.	2	3463	987.77	1198.62	SLV 4	1.21	Si
fin.	2	2184	-108.05	1198.62	SLV 4	11.09	Si
ini.	2	-3419	-782.91	1198.62	SLV 15	1.53	Si
fin.	2	-2835	-278.39	1198.62	SLV 15	4.31	Si
ini.	2	-3373	-915.87	1198.62	SLV 13	1.31	Si
fin.	2	-2377	-144.14	1198.62	SLV 13	8.32	Si
ini.	2	1000	523.16	1198.62	SLV 8	2.29	Si
fin.	2	-106	-324.28	1198.62	SLV 8	3.7	Si
ini.	2	-3419	-782.91	1198.62	SLV 16	1.53	Si
fin.	2	-2835	-278.39	1198.62	SLV 16	4.31	Si
ini.	2	3463	987.77	1198.62	SLV 3	1.21	Si
fin.	2	2184	-108.05	1198.62	SLV 3	11.09	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-910	-451.26	2298			1577	624	SLV 10	0.27	No
fin.	2	-86	72.09	139			1248	475	SLV 10	3.42	Si
ini.	2	1000	523.16	-1918			1213	99	SLV 7	0.05	No
fin.	2	-106	-324.28	-3568			1256	479	SLV 7	0.13	No
ini.	2	3509	854.81	-1743			1213	0	SLV 1	0	No
fin.	2	2642	26.19	-3604			1213	0	SLV 1	0	No
ini.	2	1155	79.95	886			1213	0	SLV 5	0	No
fin.	2	1419	123.19	-1207			1213	0	SLV 5	0	No
ini.	2	3463	987.77	-2585			1213	0	SLV 4	0	No
fin.	2	2184	-108.05	-4312			1213	0	SLV 4	0	No
ini.	2	-910	-451.26	2298			1577	624	SLV 9	0.27	No
fin.	2	-86	72.09	139			1248	475	SLV 9	3.42	Si
ini.	2	1155	79.95	886			1213	0	SLV 6	0	No
fin.	2	1419	123.19	-1207			1213	0	SLV 6	0	No
ini.	2	3509	854.81	-1743			1213	0	SLV 2	0	No
fin.	2	2642	26.19	-3604			1213	0	SLV 2	0	No
ini.	2	3463	987.77	-2585			1213	0	SLV 3	0	No
fin.	2	2184	-108.05	-4312			1213	0	SLV 3	0	No
ini.	2	1000	523.16	-1918			1213	99	SLV 8	0.05	No
fin.	2	-106	-324.28	-3568			1256	479	SLV 8	0.13	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.213	SLV 3	Si
V_SLV	0	SLV 1	No
PF_SLU	3.848	SLU 83	Si
V_SLU	0.119	SLU 78	No

Trave di accoppiamento 105

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-2.283	-3.359	5.07	5.97	0.9	-3.183	-3.359	5.07	5.97	0.9	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fmed	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-751	-505.44	1150.68	SLU 84	2.28	Si
fin.	3	-3287	785.07	1150.68	SLU 84	1.47	Si
ini.	3	-758	-494.92	1150.68	SLU 82	2.32	Si
fin.	3	-3244	770.7	1150.68	SLU 82	1.49	Si
ini.	3	-753	-494.87	1150.68	SLU 78	2.33	Si
fin.	3	-3247	775.02	1150.68	SLU 78	1.48	Si
ini.	3	-836	-500.81	1150.68	SLU 73	2.3	Si
fin.	3	-3350	772.81	1150.68	SLU 73	1.49	Si
ini.	3	-642	-460.5	1150.68	SLU 83	2.5	Si
fin.	3	-2979	736.94	1150.68	SLU 83	1.56	Si
ini.	3	-750	-491.88	1150.68	SLU 80	2.34	Si
fin.	3	-3229	769.46	1150.68	SLU 80	1.5	Si
ini.	3	-760	-484.35	1150.68	SLU 75	2.38	Si
fin.	3	-3205	760.65	1150.68	SLU 75	1.51	Si
ini.	3	-649	-449.98	1150.68	SLU 81	2.56	Si
fin.	3	-2937	722.58	1150.68	SLU 81	1.59	Si
ini.	3	-644	-449.93	1150.68	SLU 77	2.56	Si
fin.	3	-2939	726.89	1150.68	SLU 77	1.58	Si
ini.	3	-829	-511.33	1150.68	SLU 76	2.25	Si
fin.	3	-3392	787.18	1150.68	SLU 76	1.46	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-750	-491.88	1928			1270	502	SLU 80	0.26	No
fin.	3	-3229	769.46	3638			2262	804	SLU 80	0.22	No
ini.	3	-644	-449.93	1644			1228	485	SLU 77	0.3	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	3	-2939	726.89	3589			2146	775	SLU 77	0.22	No
ini.	3	-758	-494.92	1973			1274	504	SLU 82	0.26	No
fin.	3	-3244	770.7	3599			2268	805	SLU 82	0.22	No
ini.	3	-641	-446.95	1641			1227	485	SLU 79	0.3	No
fin.	3	-2921	721.34	3554			2139	773	SLU 79	0.22	No
ini.	3	-760	-484.35	1905			1274	504	SLU 75	0.26	No
fin.	3	-3205	760.65	3588			2253	801	SLU 75	0.22	No
ini.	3	-751	-505.44	2000			1271	503	SLU 84	0.25	No
fin.	3	-3287	785.07	3684			2285	809	SLU 84	0.22	No
ini.	3	-642	-460.5	1712			1227	485	SLU 83	0.28	No
fin.	3	-2979	736.94	3600			2162	779	SLU 83	0.22	No
ini.	3	-753	-494.87	1932			1272	503	SLU 78	0.26	No
fin.	3	-3247	775.02	3672			2269	806	SLU 78	0.22	No
ini.	3	-651	-439.41	1618			1231	487	SLU 74	0.3	No
fin.	3	-2897	712.53	3505			2129	770	SLU 74	0.22	No
ini.	3	-649	-449.98	1685			1230	486	SLU 81	0.29	No
fin.	3	-2937	722.58	3516			2145	774	SLU 81	0.22	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	1101	-1790.29	1726.01	SLV 13	0.96	No
fin.	2	-6538	1814.88	1726.01	SLV 13	0.95	No
ini.	2	-2121	1211.5	1726.01	SLV 3	1.42	Si
fin.	2	2497	-846.25	1726.01	SLV 3	2.04	Si
ini.	2	-3415	1210.07	1726.01	SLV 1	1.43	Si
fin.	2	1116	-657.16	1726.01	SLV 1	2.63	Si
ini.	2	2396	-1788.86	1726.01	SLV 16	0.96	No
fin.	2	-5156	1625.79	1726.01	SLV 16	1.06	Si
ini.	2	1101	-1790.29	1726.01	SLV 14	0.96	No
fin.	2	-6538	1814.88	1726.01	SLV 14	0.95	No
ini.	2	-1989	-741.83	1726.01	SLV 9	2.33	Si
fin.	2	-5470	1170.27	1726.01	SLV 9	1.47	Si
ini.	2	-2121	1211.5	1726.01	SLV 4	1.42	Si
fin.	2	2497	-846.25	1726.01	SLV 4	2.04	Si
ini.	2	-3415	1210.07	1726.01	SLV 2	1.43	Si
fin.	2	1116	-657.16	1726.01	SLV 2	2.63	Si
ini.	2	2396	-1788.86	1726.01	SLV 15	0.96	No
fin.	2	-5156	1625.79	1726.01	SLV 15	1.06	Si
ini.	2	-1989	-741.83	1726.01	SLV 10	2.33	Si
fin.	2	-5470	1170.27	1726.01	SLV 10	1.47	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	1101	-1790.29	6586			1456	194	SLV 14	0.03	No
fin.	2	-6538	1814.88	9120			4071	1363	SLV 14	0.15	No
ini.	2	2396	-1788.86	7245			1456	0	SLV 16	0	No
fin.	2	-5156	1625.79	8504			3518	1236	SLV 16	0.15	No
ini.	2	2325	-737.07	3919			1456	0	SLV 11	0	No
fin.	2	-866	539.97	3289			1802	712	SLV 11	0.22	No
ini.	2	970	163.04	410			1456	263	SLV 8	0.64	No
fin.	2	1430	-201.64	-564			1456	0	SLV 8	0	No
ini.	2	970	163.04	410			1456	263	SLV 7	0.64	No
fin.	2	1430	-201.64	-564			1456	0	SLV 7	0	No
ini.	2	2396	-1788.86	7245			1456	0	SLV 15	0	No
fin.	2	-5156	1625.79	8504			3518	1236	SLV 15	0.15	No
ini.	2	-2121	1211.5	-4452			2304	897	SLV 4	0.2	No
fin.	2	2497	-846.25	-4340			1456	0	SLV 4	0	No
ini.	2	1101	-1790.29	6586			1456	194	SLV 13	0.03	No
fin.	2	-6538	1814.88	9120			4071	1363	SLV 13	0.15	No
ini.	2	2325	-737.07	3919			1456	0	SLV 12	0	No
fin.	2	-866	539.97	3289			1802	712	SLV 12	0.22	No
ini.	2	-2121	1211.5	-4452			2304	897	SLV 3	0.2	No
fin.	2	2497	-846.25	-4340			1456	0	SLV 3	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.951	SLV 13	No
V_SLV	0	SLV 3	No
PF_SLU	1.462	SLU 76	Si
V_SLU	0.216	SLU 77	No

Trave di accoppiamento 106

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-2.283	-3.359	7.77	8.62	0.85	-3.183	-3.359	7.77	8.62	0.85	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
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Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-2019	-713.63	1026.38	SLU 81	1.44	Si
fin.	3	-211	112.3	1026.38	SLU 81	9.14	Si
ini.	3	-2239	-768.92	1026.38	SLU 73	1.33	Si
fin.	3	-266	138	1026.38	SLU 73	7.44	Si
ini.	3	-2234	-782.92	1026.38	SLU 84	1.31	Si
fin.	3	-224	136.02	1026.38	SLU 84	7.55	Si
ini.	3	-2174	-771.78	1026.38	SLU 78	1.33	Si
fin.	3	-183	133.62	1026.38	SLU 78	7.68	Si
ini.	3	-2148	-755.62	1026.38	SLU 75	1.36	Si
fin.	3	-208	129.48	1026.38	SLU 75	7.93	Si
ini.	3	-2208	-766.76	1026.38	SLU 82	1.34	Si
fin.	3	-248	131.88	1026.38	SLU 82	7.78	Si
ini.	3	-2045	-729.79	1026.38	SLU 83	1.41	Si
fin.	3	-186	116.44	1026.38	SLU 83	8.81	Si
ini.	3	-2266	-785.09	1026.38	SLU 76	1.31	Si
fin.	3	-241	142.14	1026.38	SLU 76	7.22	Si
ini.	3	-1985	-718.65	1026.38	SLU 77	1.43	Si
fin.	3	-145	114.04	1026.38	SLU 77	9	Si
ini.	3	-2166	-765.83	1026.38	SLU 80	1.34	Si
fin.	3	-191	133.23	1026.38	SLU 80	7.7	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-2045	-729.79	3788			1638	616	SLU 83	0.16	No
fin.	3	-186	116.44	-474			936	362	SLU 83	0.76	No
ini.	3	-2174	-771.78	3885			1687	630	SLU 78	0.16	No
fin.	3	-183	133.62	-300			935	361	SLU 78	1.2	Si
ini.	3	-1977	-712.7	3702			1613	609	SLU 79	0.16	No
fin.	3	-154	113.65	-456			924	356	SLU 79	0.78	No
ini.	3	-2266	-785.09	3866			1722	640	SLU 76	0.17	No
fin.	3	-241	142.14	-180			957	372	SLU 76	2.06	Si
ini.	3	-2234	-782.92	3937			1710	636	SLU 84	0.16	No
fin.	3	-224	136.02	-310			950	369	SLU 84	1.19	Si
ini.	3	-1985	-718.65	3736			1616	610	SLU 77	0.16	No
fin.	3	-145	114.04	-465			921	354	SLU 77	0.76	No
ini.	3	-2166	-765.83	3851			1684	629	SLU 80	0.16	No
fin.	3	-191	133.23	-291			938	363	SLU 80	1.25	Si
ini.	3	-2019	-713.63	3704			1628	613	SLU 81	0.17	No
fin.	3	-211	112.3	-473			945	367	SLU 81	0.77	No
ini.	3	-2208	-766.76	3853			1700	634	SLU 82	0.16	No
fin.	3	-248	131.88	-309			959	373	SLU 82	1.21	Si
ini.	3	-2148	-755.62	3801			1677	627	SLU 75	0.17	No
fin.	3	-208	129.48	-300			944	366	SLU 75	1.22	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-3001	-1338.66	1539.56	SLV 9	1.15	Si
fin.	2	-365	201.24	1539.56	SLV 9	7.65	Si
ini.	2	1423	1077.28	1539.56	SLV 3	1.43	Si
fin.	2	-2560	-909.46	1539.56	SLV 3	1.69	Si
ini.	2	1423	1077.28	1539.56	SLV 4	1.43	Si
fin.	2	-2560	-909.46	1539.56	SLV 4	1.69	Si
ini.	2	865	810.49	1539.56	SLV 1	1.9	Si
fin.	2	-3182	-1016.85	1539.56	SLV 1	1.51	Si
ini.	2	-3525	-1750.24	1539.56	SLV 15	0.88	No
fin.	2	2890	1157.27	1539.56	SLV 15	1.33	Si
ini.	2	-4083	-2017.03	1539.56	SLV 13	0.76	No
fin.	2	2268	1049.88	1539.56	SLV 13	1.47	Si
ini.	2	865	810.49	1539.56	SLV 2	1.9	Si
fin.	2	-3182	-1016.85	1539.56	SLV 2	1.51	Si
ini.	2	-4083	-2017.03	1539.56	SLV 14	0.76	No
fin.	2	2268	1049.88	1539.56	SLV 14	1.47	Si
ini.	2	-3525	-1750.24	1539.56	SLV 16	0.88	No
fin.	2	2890	1157.27	1539.56	SLV 16	1.33	Si
ini.	2	-3001	-1338.66	1539.56	SLV 10	1.15	Si
fin.	2	-365	201.24	1539.56	SLV 10	7.65	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-3525	-1750.24	7426			2630	973	SLV 15	0.13	No
fin.	2	2890	1157.27	4917			1298	0	SLV 15	0	No
ini.	2	1423	1077.28	-3157			1298	0	SLV 4	0	No
fin.	2	-2560	-909.46	-5016			2266	867	SLV 4	0.17	No
ini.	2	-4083	-2017.03	8044			2841	1029	SLV 13	0.13	No
fin.	2	2268	1049.88	4383			1298	0	SLV 13	0	No
ini.	2	-1143	-449.34	3001			1730	684	SLV 11	0.23	No
fin.	2	1708	559.2	2064			1298	0	SLV 11	0	No
ini.	2	865	810.49	-2539			1298	255	SLV 2	0.1	No
fin.	2	-3182	-1016.85	-5550			2501	937	SLV 2	0.17	No
ini.	2	-3525	-1750.24	7426			2630	973	SLV 16	0.13	No
fin.	2	2890	1157.27	4917			1298	0	SLV 16	0	No
ini.	2	-1143	-449.34	3001			1730	684	SLV 12	0.23	No
fin.	2	1708	559.2	2064			1298	0	SLV 12	0	No
ini.	2	-4083	-2017.03	8044			2841	1029	SLV 14	0.13	No
fin.	2	2268	1049.88	4383			1298	0	SLV 14	0	No
ini.	2	865	810.49	-2539			1298	255	SLV 1	0.1	No
fin.	2	-3182	-1016.85	-5550			2501	937	SLV 1	0.17	No
ini.	2	1423	1077.28	-3157			1298	0	SLV 3	0	No
fin.	2	-2560	-909.46	-5016			2266	867	SLV 3	0.17	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.763	SLV 13	No
V_SLV	0	SLV 3	No
PF_SLU	1.307	SLU 76	Si
V_SLU	0.162	SLU 84	No

Trave di accoppiamento 107

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-2.063	5.951	5.07	5.97	0.9	-2.963	5.951	5.07	5.97	0.9	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-525	-278.21	1150.68	SLU 83	4.14	Si
fin.	3	-2256	561.37	1150.68	SLU 83	2.05	Si
ini.	3	-522	-260.12	1150.68	SLU 72	4.42	Si
fin.	3	-2175	544.07	1150.68	SLU 72	2.11	Si
ini.	3	-530	-284.19	1150.68	SLU 79	4.05	Si
fin.	3	-2304	579.73	1150.68	SLU 79	1.98	Si
ini.	3	-478	-295.94	1150.68	SLU 80	3.89	Si
fin.	3	-2292	590.02	1150.68	SLU 80	1.95	Si
ini.	3	-477	-296.96	1150.68	SLU 78	3.87	Si
fin.	3	-2294	590.84	1150.68	SLU 78	1.95	Si
ini.	3	-456	-282.44	1150.68	SLU 76	4.07	Si
fin.	3	-2186	558.82	1150.68	SLU 76	2.06	Si
ini.	3	-529	-285.21	1150.68	SLU 77	4.03	Si
fin.	3	-2306	580.55	1150.68	SLU 77	1.98	Si
ini.	3	-472	-289.96	1150.68	SLU 84	3.97	Si
fin.	3	-2244	571.66	1150.68	SLU 84	2.01	Si
ini.	3	-490	-275.63	1150.68	SLU 75	4.17	Si
fin.	3	-2196	552.78	1150.68	SLU 75	2.08	Si
ini.	3	-521	-261.14	1150.68	SLU 70	4.41	Si
fin.	3	-2177	544.89	1150.68	SLU 70	2.11	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-525	-278.21	646			1180	465	SLU 83	0.72	No
fin.	3	-2256	561.37	2607			1873	701	SLU 83	0.27	No
ini.	3	-456	-282.44	702			1153	454	SLU 76	0.65	No
fin.	3	-2186	558.82	2568			1845	693	SLU 76	0.27	No
ini.	3	-521	-261.14	581			1179	465	SLU 70	0.8	No
fin.	3	-2177	544.89	2529			1841	692	SLU 70	0.27	No
ini.	3	-478	-295.94	726			1162	457	SLU 80	0.63	No
fin.	3	-2292	590.02	2711			1887	705	SLU 80	0.26	No
ini.	3	-472	-289.96	714			1159	456	SLU 84	0.64	No
fin.	3	-2244	571.66	2635			1868	700	SLU 84	0.27	No
ini.	3	-542	-263.88	578			1187	469	SLU 74	0.81	No
fin.	3	-2208	542.5	2537			1854	696	SLU 74	0.27	No
ini.	3	-477	-296.96	716			1161	457	SLU 78	0.64	No
fin.	3	-2294	590.84	2726			1888	705	SLU 78	0.26	No
ini.	3	-490	-275.63	646			1166	460	SLU 75	0.71	No
fin.	3	-2196	552.78	2565			1849	694	SLU 75	0.27	No
ini.	3	-530	-284.19	658			1183	466	SLU 79	0.71	No
fin.	3	-2304	579.73	2684			1892	707	SLU 79	0.26	No
ini.	3	-529	-285.21	648			1182	466	SLU 77	0.72	No
fin.	3	-2306	580.55	2698			1893	707	SLU 77	0.26	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-2369	1026.94	1726.01	SLV 2	1.68	Si
fin.	2	1156	-1193.96	1726.01	SLV 2	1.45	Si
ini.	2	2510	-1389.85	1726.01	SLV 13	1.24	Si
fin.	2	-3360	1730.12	1726.01	SLV 13	1	No
ini.	2	2510	-1389.85	1726.01	SLV 14	1.24	Si
fin.	2	-3360	1730.12	1726.01	SLV 14	1	No
ini.	2	-2369	1026.94	1726.01	SLV 1	1.68	Si
fin.	2	1156	-1193.96	1726.01	SLV 1	1.45	Si
ini.	2	-1474	-452.68	1726.01	SLV 11	3.81	Si
fin.	2	-3636	1075.36	1726.01	SLV 11	1.61	Si
ini.	2	1459	-1347.71	1726.01	SLV 15	1.28	Si
fin.	2	-4217	1900.27	1726.01	SLV 15	0.91	No
ini.	2	-1474	-452.68	1726.01	SLV 12	3.81	Si
fin.	2	-3636	1075.36	1726.01	SLV 12	1.61	Si
ini.	2	1459	-1347.71	1726.01	SLV 16	1.28	Si
fin.	2	-4217	1900.27	1726.01	SLV 16	0.91	No
ini.	2	-3419	1069.07	1726.01	SLV 3	1.61	Si
fin.	2	299	-1023.81	1726.01	SLV 3	1.69	Si
ini.	2	-3419	1069.07	1726.01	SLV 4	1.61	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	2	299	-1023.81	1726.01	SLV 4	1.69	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-3419	1069.07	-4987			2823	1056	SLV 3	0.21	No
fin.	2	299	-1023.81	-3473			1456	478	SLV 3	0.14	No
ini.	2	2510	-1389.85	5599			1456	0	SLV 13	0	No
fin.	2	-3360	1730.12	6810			2800	1049	SLV 13	0.15	No
ini.	2	1459	-1347.71	5196			1456	0	SLV 16	0	No
fin.	2	-4217	1900.27	7445			3142	1142	SLV 16	0.15	No
ini.	2	2029	-593.13	2505			1456	0	SLV 10	0	No
fin.	2	-780	508.18	2248			1768	697	SLV 10	0.31	No
ini.	2	-2369	1026.94	-4584			2403	930	SLV 2	0.2	No
fin.	2	1156	-1193.96	-4108			1456	158	SLV 2	0.04	No
ini.	2	-2369	1026.94	-4584			2403	930	SLV 1	0.2	No
fin.	2	1156	-1193.96	-4108			1456	158	SLV 1	0.04	No
ini.	2	2029	-593.13	2505			1456	0	SLV 9	0	No
fin.	2	-780	508.18	2248			1768	697	SLV 9	0.31	No
ini.	2	2510	-1389.85	5599			1456	0	SLV 14	0	No
fin.	2	-3360	1730.12	6810			2800	1049	SLV 14	0.15	No
ini.	2	1459	-1347.71	5196			1456	0	SLV 15	0	No
fin.	2	-4217	1900.27	7445			3142	1142	SLV 15	0.15	No
ini.	2	-3419	1069.07	-4987			2823	1056	SLV 4	0.21	No
fin.	2	299	-1023.81	-3473			1456	478	SLV 4	0.14	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.908	SLV 15	No
V_SLV	0	SLV 9	No
PF_SLU	1.948	SLU 78	Si
V_SLU	0.259	SLU 78	No

Trave di accoppiamento 108

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-2.063	5.951	7.77	8.62	0.85	-2.963	5.951	7.77	8.62	0.85	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1429	-544.63	1026.38	SLU 75	1.88	Si
fin.	3	83	278.03	1026.38	SLU 75	3.69	Si
ini.	3	-1485	-564.31	1026.38	SLU 79	1.82	Si
fin.	3	72	282.93	1026.38	SLU 79	3.63	Si
ini.	3	-1427	-536.55	1026.38	SLU 82	1.91	Si
fin.	3	54	271.14	1026.38	SLU 82	3.79	Si
ini.	3	-1417	-538.4	1026.38	SLU 74	1.91	Si
fin.	3	58	265.94	1026.38	SLU 74	3.86	Si
ini.	3	-1496	-565.54	1026.38	SLU 84	1.81	Si
fin.	3	77	290.84	1026.38	SLU 84	3.53	Si
ini.	3	-1486	-567.39	1026.38	SLU 77	1.81	Si
fin.	3	80	285.64	1026.38	SLU 77	3.59	Si
ini.	3	-1435	-545.7	1026.38	SLU 76	1.88	Si
fin.	3	92	283.38	1026.38	SLU 76	3.62	Si
ini.	3	-1484	-559.31	1026.38	SLU 83	1.84	Si
fin.	3	51	278.75	1026.38	SLU 83	3.68	Si
ini.	3	-1496	-570.54	1026.38	SLU 80	1.8	Si
fin.	3	97	295.02	1026.38	SLU 80	3.48	Si
ini.	3	-1497	-573.62	1026.38	SLU 78	1.79	Si
fin.	3	105	297.72	1026.38	SLU 78	3.45	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1496	-570.54	3821			1431	553	SLU 80	0.14	No
fin.	3	97	295.02	34			866	305	SLU 80	8.97	Si
ini.	3	-1417	-538.4	3672			1401	544	SLU 74	0.15	No
fin.	3	58	265.94	-69			866	314	SLU 74	4.57	Si
ini.	3	-1484	-559.31	3816			1426	552	SLU 83	0.14	No
fin.	3	51	278.75	-63			866	315	SLU 83	4.99	Si
ini.	3	-1429	-544.63	3694			1405	545	SLU 75	0.15	No
fin.	3	83	278.03	-19			866	308	SLU 75	16.28	Si
ini.	3	-1435	-545.7	3680			1408	546	SLU 76	0.15	No
fin.	3	92	283.38	17			866	306	SLU 76	18.33	Si
ini.	3	-1485	-564.31	3799			1426	552	SLU 79	0.15	No
fin.	3	72	282.93	-16			866	311	SLU 79	19.74	Si
ini.	3	-1497	-573.62	3850			1431	554	SLU 78	0.14	No
fin.	3	105	297.72	32			866	303	SLU 78	9.62	Si
ini.	3	-1486	-567.39	3828			1427	552	SLU 77	0.14	No
fin.	3	80	285.64	-18			866	309	SLU 77	16.95	Si



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1496	-565.54	3838			1431	553	SLU 84	0.14	No
fin.	3	77	290.84	-13			866	310	SLU 84	23.18	Si
ini.	3	-1427	-536.55	3682			1405	545	SLU 82	0.15	No
fin.	3	54	271.14	-64			866	314	SLU 82	4.93	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-2954	-1457.75	1539.56	SLV 15	1.06	Si
fin.	2	2573	1491.55	1539.56	SLV 15	1.03	Si
ini.	2	-2559	-1278.25	1539.56	SLV 13	1.2	Si
fin.	2	2271	1326.57	1539.56	SLV 13	1.16	Si
ini.	2	-2132	-954.14	1539.56	SLV 12	1.61	Si
fin.	2	1243	810.99	1539.56	SLV 12	1.9	Si
ini.	2	-2954	-1457.75	1539.56	SLV 16	1.06	Si
fin.	2	2573	1491.55	1539.56	SLV 16	1.03	Si
ini.	2	711	579.45	1539.56	SLV 3	2.66	Si
fin.	2	-2237	-1002.8	1539.56	SLV 3	1.54	Si
ini.	2	1106	758.95	1539.56	SLV 2	2.03	Si
fin.	2	-2539	-1167.78	1539.56	SLV 2	1.32	Si
ini.	2	711	579.45	1539.56	SLV 4	2.66	Si
fin.	2	-2237	-1002.8	1539.56	SLV 4	1.54	Si
ini.	2	1106	758.95	1539.56	SLV 1	2.03	Si
fin.	2	-2539	-1167.78	1539.56	SLV 1	1.32	Si
ini.	2	-2559	-1278.25	1539.56	SLV 14	1.2	Si
fin.	2	2271	1326.57	1539.56	SLV 14	1.16	Si
ini.	2	-2132	-954.14	1539.56	SLV 11	1.61	Si
fin.	2	1243	810.99	1539.56	SLV 11	1.9	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-2954	-1457.75	7332			2415	912	SLV 15	0.12	No
fin.	2	2573	1491.55	4377			1298	0	SLV 15	0	No
ini.	2	-2132	-954.14	4851			2104	816	SLV 11	0.17	No
fin.	2	1243	810.99	987			1298	0	SLV 11	0	No
ini.	2	-2559	-1278.25	6692			2265	867	SLV 14	0.13	No
fin.	2	2271	1326.57	4548			1298	0	SLV 14	0	No
ini.	2	-2559	-1278.25	6692			2265	867	SLV 13	0.13	No
fin.	2	2271	1326.57	4548			1298	0	SLV 13	0	No
ini.	2	1106	758.95	-2536			1298	130	SLV 1	0.05	No
fin.	2	-2539	-1167.78	-4572			2258	865	SLV 1	0.19	No
ini.	2	711	579.45	-1895			1298	310	SLV 3	0.16	No
fin.	2	-2237	-1002.8	-4742			2143	829	SLV 3	0.17	No
ini.	2	-2132	-954.14	4851			2104	816	SLV 12	0.17	No
fin.	2	1243	810.99	987			1298	0	SLV 12	0	No
ini.	2	-2954	-1457.75	7332			2415	912	SLV 16	0.12	No
fin.	2	2573	1491.55	4377			1298	0	SLV 16	0	No
ini.	2	711	579.45	-1895			1298	310	SLV 4	0.16	No
fin.	2	-2237	-1002.8	-4742			2143	829	SLV 4	0.17	No
ini.	2	1106	758.95	-2536			1298	130	SLV 2	0.05	No
fin.	2	-2539	-1167.78	-4572			2258	865	SLV 2	0.19	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.032	SLV 15	Si
V_SLV	0	SLV 11	No
PF_SLU	1.789	SLU 78	Si
V_SLU	0.144	SLU 78	No

Trave di accoppiamento 109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-24.678	1.266	10.72	12.17	1.45	-24.678	2.066	10.72	12.17	1.45	0.8	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-3342	576.01	2986.79	SLU 83	5.19	Si
fin.	3	-3342	-1725.13	2986.79	SLU 83	1.73	Si
ini.	3	-2809	677.13	2986.79	SLU 39	4.41	Si
fin.	3	-2809	-1574.53	2986.79	SLU 39	1.9	Si
ini.	3	-3276	514.89	2986.79	SLU 74	5.8	Si
fin.	3	-3276	-1629.08	2986.79	SLU 74	1.83	Si
ini.	3	-3238	410.13	2986.79	SLU 79	7.28	Si
fin.	3	-3238	-1600.68	2986.79	SLU 79	1.87	Si
ini.	3	-3173	457.61	2986.79	SLU 84	6.53	Si
fin.	3	-3173	-1611.35	2986.79	SLU 84	1.85	Si
ini.	3	-3305	627.99	2986.79	SLU 81	4.76	Si
fin.	3	-3305	-1704.04	2986.79	SLU 81	1.75	Si
ini.	3	-2845	625.15	2986.79	SLU 41	4.78	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	3	-2845	-1595.62	2986.79	SLU 41	1.87	Si
ini.	3	-3312	462.91	2986.79	SLU 77	6.45	Si
fin.	3	-3312	-1650.17	2986.79	SLU 77	1.81	Si
ini.	3	-3143	344.5	2986.79	SLU 78	8.67	Si
fin.	3	-3143	-1536.38	2986.79	SLU 78	1.94	Si
ini.	3	-3136	509.59	2986.79	SLU 82	5.86	Si
fin.	3	-3136	-1590.26	2986.79	SLU 82	1.88	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-3136	509.59	-2291			2818	1072	SLU 82	0.47	No
fin.	3	-3136	-1590.26	-3016			2818	1072	SLU 82	0.36	No
ini.	3	-2779	564.02	-2320			2675	1028	SLU 32	0.44	No
fin.	3	-2779	-1499.57	-2882			2675	1028	SLU 32	0.36	No
ini.	3	-3173	457.61	-2252			2833	1076	SLU 84	0.48	No
fin.	3	-3173	-1611.35	-2978			2833	1076	SLU 84	0.36	No
ini.	3	-2809	677.13	-2555			2687	1032	SLU 39	0.4	No
fin.	3	-2809	-1574.53	-3117			2687	1032	SLU 39	0.33	No
ini.	3	-2640	558.72	-2265			2619	1011	SLU 40	0.45	No
fin.	3	-2640	-1460.75	-2827			2619	1011	SLU 40	0.36	No
ini.	3	-3305	627.99	-2581			2886	1092	SLU 81	0.42	No
fin.	3	-3305	-1704.04	-3307			2886	1092	SLU 81	0.33	No
ini.	3	-3276	514.89	-2346			2874	1088	SLU 74	0.46	No
fin.	3	-3276	-1629.08	-3072			2874	1088	SLU 74	0.35	No
ini.	3	-3312	462.91	-2307			2888	1093	SLU 77	0.47	No
fin.	3	-3312	-1650.17	-3033			2888	1093	SLU 77	0.36	No
ini.	3	-2845	625.15	-2517			2702	1036	SLU 41	0.41	No
fin.	3	-2845	-1595.62	-3079			2702	1036	SLU 41	0.34	No
ini.	3	-3342	576.01	-2542			2900	1096	SLU 83	0.43	No
fin.	3	-3342	-1725.13	-3268			2900	1096	SLU 83	0.34	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-1873	-2031.23	4480.18	SLV 9	2.21	Si
fin.	2	-1769	1484.7	4480.18	SLV 9	3.02	Si
ini.	2	-1873	-2031.23	4480.18	SLV 10	2.21	Si
fin.	2	-1769	1484.7	4480.18	SLV 10	3.02	Si
ini.	2	-3368	1887.44	4480.18	SLV 4	2.37	Si
fin.	2	-3454	-3136.43	4480.18	SLV 4	1.43	Si
ini.	2	-3378	733.23	4480.18	SLV 2	6.11	Si
fin.	2	-3412	-1948.87	4480.18	SLV 2	2.3	Si
ini.	2	-1841	1816.12	4480.18	SLV 12	2.47	Si
fin.	2	-1908	-2473.82	4480.18	SLV 12	1.81	Si
ini.	2	-3368	1887.44	4480.18	SLV 3	2.37	Si
fin.	2	-3454	-3136.43	4480.18	SLV 3	1.43	Si
ini.	2	-2541	2470.53	4480.18	SLV 7	1.81	Si
fin.	2	-2644	-3419.09	4480.18	SLV 7	1.31	Si
ini.	2	-2541	2470.53	4480.18	SLV 8	1.81	Si
fin.	2	-2644	-3419.09	4480.18	SLV 8	1.31	Si
ini.	2	-3378	733.23	4480.18	SLV 1	6.11	Si
fin.	2	-3412	-1948.87	4480.18	SLV 1	2.3	Si
ini.	2	-1841	1816.12	4480.18	SLV 11	2.47	Si
fin.	2	-1908	-2473.82	4480.18	SLV 11	1.81	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-1873	-2031.23	4657			3095	1224	SLV 10	0.26	No
fin.	2	-1769	1484.7	4028			3053	1207	SLV 10	0.3	No
ini.	2	-1045	-1448.14	3567			2764	1086	SLV 13	0.3	No
fin.	2	-960	1202.04	2968			2729	1071	SLV 13	0.36	No
ini.	2	-1045	-1448.14	3567			2764	1086	SLV 14	0.3	No
fin.	2	-960	1202.04	2968			2729	1071	SLV 14	0.36	No
ini.	2	-1841	1816.12	-5115			3082	1219	SLV 12	0.24	No
fin.	2	-1908	-2473.82	-5613			3109	1229	SLV 12	0.22	No
ini.	2	-1841	1816.12	-5115			3082	1219	SLV 11	0.24	No
fin.	2	-1908	-2473.82	-5613			3109	1229	SLV 11	0.22	No
ini.	2	-2541	2470.53	-7112			3362	1324	SLV 7	0.19	No
fin.	2	-2644	-3419.09	-7597			3403	1339	SLV 7	0.18	No
ini.	2	-2541	2470.53	-7112			3362	1324	SLV 8	0.19	No
fin.	2	-2644	-3419.09	-7597			3403	1339	SLV 8	0.18	No
ini.	2	-3368	1887.44	-6022			3693	1439	SLV 4	0.24	No
fin.	2	-3454	-3136.43	-6536			3727	1451	SLV 4	0.22	No
ini.	2	-3368	1887.44	-6022			3693	1439	SLV 3	0.24	No
fin.	2	-3454	-3136.43	-6536			3727	1451	SLV 3	0.22	No
ini.	2	-1873	-2031.23	4657			3095	1224	SLV 9	0.26	No
fin.	2	-1769	1484.7	4028			3053	1207	SLV 9	0.3	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.31	SLV 7	Si
V_SLV	0.176	SLV 7	No
PF_SLU	1.731	SLU 83	Si
V_SLU	0.33	SLU 81	No

Trave di accoppiamento 110

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-21.813	5.951	8.62	9.52	0.9	-22.713	5.951	8.62	9.52	0.9	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1557	507.26	1150.68	SLU 77	2.27	Si
fin.	3	653	-763.66	1150.68	SLU 77	1.51	Si
ini.	3	-1518	484.14	1150.68	SLU 74	2.38	Si
fin.	3	579	-721.77	1150.68	SLU 74	1.59	Si
ini.	3	-1582	502.65	1150.68	SLU 84	2.29	Si
fin.	3	598	-749.79	1150.68	SLU 84	1.53	Si
ini.	3	-1545	505.79	1150.68	SLU 80	2.28	Si
fin.	3	661	-763.78	1150.68	SLU 80	1.51	Si
ini.	3	-1504	483.71	1150.68	SLU 76	2.38	Si
fin.	3	594	-723.63	1150.68	SLU 76	1.59	Si
ini.	3	-1548	504.22	1150.68	SLU 79	2.28	Si
fin.	3	650	-761.17	1150.68	SLU 79	1.51	Si
ini.	3	-1515	485.71	1150.68	SLU 75	2.37	Si
fin.	3	589	-724.37	1150.68	SLU 75	1.59	Si
ini.	3	-1585	501.08	1150.68	SLU 83	2.3	Si
fin.	3	587	-747.19	1150.68	SLU 83	1.54	Si
ini.	3	-1543	479.53	1150.68	SLU 82	2.4	Si
fin.	3	524	-707.91	1150.68	SLU 82	1.63	Si
ini.	3	-1554	508.83	1150.68	SLU 78	2.26	Si
fin.	3	664	-766.26	1150.68	SLU 78	1.5	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1381	460.63	-3746			1523	594	SLU 69	0.16	No
fin.	3	627	-698.55	-1552			970	184	SLU 69	0.12	No
ini.	3	-1557	507.26	-4010			1593	617	SLU 77	0.15	No
fin.	3	653	-763.66	-1753			970	172	SLU 77	0.1	No
ini.	3	-1504	483.71	-3788			1572	610	SLU 76	0.16	No
fin.	3	594	-723.63	-1686			970	198	SLU 76	0.12	No
ini.	3	-1378	462.2	-3739			1522	593	SLU 70	0.16	No
fin.	3	637	-701.15	-1571			970	179	SLU 70	0.11	No
ini.	3	-1545	505.79	-3960			1589	615	SLU 80	0.16	No
fin.	3	661	-763.78	-1778			970	169	SLU 80	0.09	No
ini.	3	-1554	508.83	-4004			1592	617	SLU 78	0.15	No
fin.	3	664	-766.26	-1772			970	167	SLU 78	0.09	No
ini.	3	-1585	501.08	-3912			1604	621	SLU 83	0.16	No
fin.	3	587	-747.19	-1742			970	200	SLU 83	0.12	No
ini.	3	-1582	502.65	-3906			1603	620	SLU 84	0.16	No
fin.	3	598	-749.79	-1760			970	196	SLU 84	0.11	No
ini.	3	-1548	504.22	-3966			1590	616	SLU 79	0.16	No
fin.	3	650	-761.17	-1760			970	174	SLU 79	0.1	No
ini.	3	-1369	459.16	-3695			1518	592	SLU 72	0.16	No
fin.	3	635	-698.67	-1577			970	180	SLU 72	0.11	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-2837	1061.39	1726.01	SLV 1	1.63	Si
fin.	2	2637	-1859.06	1726.01	SLV 1	0.93	No
ini.	2	-3085	1185.18	1726.01	SLV 3	1.46	Si
fin.	2	3101	-2141.94	1726.01	SLV 3	0.81	No
ini.	2	816	-423.9	1726.01	SLV 16	4.07	Si
fin.	2	-1915	912.67	1726.01	SLV 16	1.89	Si
ini.	2	1065	-547.69	1726.01	SLV 14	3.15	Si
fin.	2	-2380	1195.55	1726.01	SLV 14	1.44	Si
ini.	2	-2009	766.42	1726.01	SLV 8	2.25	Si
fin.	2	1888	-1402.86	1726.01	SLV 8	1.23	Si
ini.	2	816	-423.9	1726.01	SLV 15	4.07	Si
fin.	2	-1915	912.67	1726.01	SLV 15	1.89	Si
ini.	2	-2009	766.42	1726.01	SLV 7	2.25	Si
fin.	2	1888	-1402.86	1726.01	SLV 7	1.23	Si
ini.	2	-2837	1061.39	1726.01	SLV 2	1.63	Si
fin.	2	2637	-1859.06	1726.01	SLV 2	0.93	No
ini.	2	-3085	1185.18	1726.01	SLV 4	1.46	Si
fin.	2	3101	-2141.94	1726.01	SLV 4	0.81	No
ini.	2	1065	-547.69	1726.01	SLV 13	3.15	Si
fin.	2	-2380	1195.55	1726.01	SLV 13	1.44	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-2009	766.42	-5704			2259	882	SLV 8	0.15	No
fin.	2	1888	-1402.86	-3470			1456	0	SLV 8	0	No
ini.	2	1065	-547.69	2858			1456	216	SLV 14	0.08	No
fin.	2	-2380	1195.55	4000			2408	931	SLV 14	0.23	No
ini.	2	-2009	766.42	-5704			2259	882	SLV 7	0.15	No
fin.	2	1888	-1402.86	-3470			1456	0	SLV 7	0	No
ini.	2	-2837	1061.39	-7077			2590	988	SLV 1	0.14	No
fin.	2	2637	-1859.06	-5504			1456	0	SLV 1	0	No
ini.	2	-3085	1185.18	-8048			2690	1017	SLV 3	0.13	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	2	3101	-2141.94	-6100			1456	0	SLV 3	0	No
ini.	2	-3085	1185.18	-8048			2690	1017	SLV 4	0.13	No
fin.	2	3101	-2141.94	-6100			1456	0	SLV 4	0	No
ini.	2	1065	-547.69	2858			1456	216	SLV 13	0.08	No
fin.	2	-2380	1195.55	4000			2408	931	SLV 13	0.23	No
ini.	2	816	-423.9	1887			1456	325	SLV 16	0.17	No
fin.	2	-1915	912.67	3403			2222	870	SLV 16	0.26	No
ini.	2	-2837	1061.39	-7077			2590	988	SLV 2	0.14	No
fin.	2	2637	-1859.06	-5504			1456	0	SLV 2	0	No
ini.	2	816	-423.9	1887			1456	325	SLV 15	0.17	No
fin.	2	-1915	912.67	3403			2222	870	SLV 15	0.26	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF SLV	0.806	SLV 3	No
V SLV	0	SLV 1	No
PF SLU	1.502	SLU 78	Si
V SLU	0.094	SLU 78	No

Trave di accoppiamento 111

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-21.813	5.951	11.32	12.17	0.85	-22.713	5.951	11.32	12.17	0.85	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fthk	fvk0	fthmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	1518	384.89	1026.38	SLU 84	2.67	Si
fin.	3	-669	-708.73	1026.38	SLU 84	1.45	Si
ini.	3	1512	373.13	1026.38	SLU 75	2.75	Si
fin.	3	-605	-683.47	1026.38	SLU 75	1.5	Si
ini.	3	1626	397.3	1026.38	SLU 77	2.58	Si
fin.	3	-612	-720.05	1026.38	SLU 77	1.43	Si
ini.	3	1515	382.69	1026.38	SLU 83	2.68	Si
fin.	3	-659	-704.95	1026.38	SLU 83	1.46	Si
ini.	3	1401	358.52	1026.38	SLU 82	2.86	Si
fin.	3	-652	-668.37	1026.38	SLU 82	1.54	Si
ini.	3	1509	370.92	1026.38	SLU 74	2.77	Si
fin.	3	-595	-679.69	1026.38	SLU 74	1.51	Si
ini.	3	1613	401.09	1026.38	SLU 80	2.56	Si
fin.	3	-635	-722.24	1026.38	SLU 80	1.42	Si
ini.	3	1611	398.89	1026.38	SLU 79	2.57	Si
fin.	3	-625	-718.46	1026.38	SLU 79	1.43	Si
ini.	3	1629	399.5	1026.38	SLU 78	2.57	Si
fin.	3	-621	-723.83	1026.38	SLU 78	1.42	Si
ini.	3	1498	376.19	1026.38	SLU 76	2.73	Si
fin.	3	-624	-684.4	1026.38	SLU 76	1.5	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	1406	339.91	-535			866	0	SLU 54	0	No
fin.	3	-501	-611.7	-2925			1055	416	SLU 54	0.14	No
ini.	3	966	231.21	-368			866	0	SLU 1	0	No
fin.	3	-312	-406.1	-1967			983	384	SLU 1	0.2	No
ini.	3	1296	325.29	-456			866	0	SLU 61	0	No
fin.	3	-549	-596.6	-2870			1073	424	SLU 61	0.15	No
ini.	3	1505	365.67	-668			866	0	SLU 58	0	No
fin.	3	-522	-646.69	-3048			1063	419	SLU 58	0.14	No
ini.	3	1523	366.28	-644			866	0	SLU 57	0	No
fin.	3	-518	-652.05	-3081			1061	419	SLU 57	0.14	No
ini.	3	1403	337.7	-520			866	0	SLU 53	0	No
fin.	3	-492	-607.92	-2914			1052	415	SLU 53	0.14	No
ini.	3	1520	364.08	-629			866	0	SLU 56	0	No
fin.	3	-509	-648.28	-3071			1058	417	SLU 56	0.14	No
ini.	3	1293	323.09	-442			866	0	SLU 60	0	No
fin.	3	-539	-592.82	-2859			1069	422	SLU 60	0.15	No
ini.	3	1508	367.87	-683			866	0	SLU 59	0	No
fin.	3	-531	-650.46	-3058			1066	421	SLU 59	0.14	No
ini.	3	1393	342.97	-584			866	0	SLU 55	0	No
fin.	3	-521	-612.62	-2909			1062	419	SLU 55	0.14	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	2968	838.03	1539.56	SLV 8	1.84	Si
fin.	2	-979	-1208.1	1539.56	SLV 8	1.27	Si
ini.	2	-1306	-547.25	1539.56	SLV 16	2.81	Si
fin.	2	638	604.66	1539.56	SLV 16	2.55	Si
ini.	2	2968	838.03	1539.56	SLV 7	1.84	Si
fin.	2	-979	-1208.1	1539.56	SLV 7	1.27	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-2001	-741.08	1539.56	SLV 13	2.08	Si
fin.	2	803	851.73	1539.56	SLV 13	1.81	Si
ini.	2	3328	1042.21	1539.56	SLV 1	1.48	Si
fin.	2	-1388	-1493.68	1539.56	SLV 1	1.03	Si
ini.	2	4023	1236.05	1539.56	SLV 3	1.25	Si
fin.	2	-1553	-1740.75	1539.56	SLV 3	0.88	No
ini.	2	3328	1042.21	1539.56	SLV 2	1.48	Si
fin.	2	-1388	-1493.68	1539.56	SLV 2	1.03	Si
ini.	2	-2001	-741.08	1539.56	SLV 14	2.08	Si
fin.	2	803	851.73	1539.56	SLV 14	1.81	Si
ini.	2	4023	1236.05	1539.56	SLV 4	1.25	Si
fin.	2	-1553	-1740.75	1539.56	SLV 4	0.88	No
ini.	2	-1306	-547.25	1539.56	SLV 15	2.81	Si
fin.	2	638	604.66	1539.56	SLV 15	2.55	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	1369	303.05	-525			1298	0	SLV 12	0	No
fin.	2	-322	-504.47	-2451			1420	551	SLV 12	0.22	No
ini.	2	1369	303.05	-525			1298	0	SLV 11	0	No
fin.	2	-322	-504.47	-2451			1420	551	SLV 11	0.22	No
ini.	2	3328	1042.21	-4108			1298	0	SLV 1	0	No
fin.	2	-1388	-1493.68	-5717			1823	719	SLV 1	0.13	No
ini.	2	4023	1236.05	-4948			1298	0	SLV 4	0	No
fin.	2	-1553	-1740.75	-6628			1885	742	SLV 4	0.11	No
ini.	2	-2001	-741.08	4203			2054	800	SLV 13	0.19	No
fin.	2	803	851.73	2345			1298	279	SLV 13	0.12	No
ini.	2	2968	838.03	-3018			1298	0	SLV 8	0	No
fin.	2	-979	-1208.1	-4869			1668	660	SLV 8	0.14	No
ini.	2	4023	1236.05	-4948			1298	0	SLV 3	0	No
fin.	2	-1553	-1740.75	-6628			1885	742	SLV 3	0.11	No
ini.	2	3328	1042.21	-4108			1298	0	SLV 2	0	No
fin.	2	-1388	-1493.68	-5717			1823	719	SLV 2	0.13	No
ini.	2	2968	838.03	-3018			1298	0	SLV 7	0	No
fin.	2	-979	-1208.1	-4869			1668	660	SLV 7	0.14	No
ini.	2	-2001	-741.08	4203			2054	800	SLV 14	0.19	No
fin.	2	803	851.73	2345			1298	279	SLV 14	0.12	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.884	SLV 3	No
V_SLV	0	SLV 1	No
PF_SLU	1.418	SLU 78	Si
V_SLU	0	SLU 1	No

Trave di accoppiamento 112

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-21.593	-3.359	8.62	9.52	0.9	-22.493	-3.359	8.62	9.52	0.9	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fmed	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-2776	977.51	1150.68	SLU 82	1.18	Si
fin.	3	494	-429.36	1150.68	SLU 82	2.68	Si
ini.	3	-2585	936.63	1150.68	SLU 79	1.23	Si
fin.	3	529	-405.74	1150.68	SLU 79	2.84	Si
ini.	3	-2788	973.44	1150.68	SLU 73	1.18	Si
fin.	3	469	-431.03	1150.68	SLU 73	2.67	Si
ini.	3	-2812	1006.12	1150.68	SLU 84	1.14	Si
fin.	3	549	-445.26	1150.68	SLU 84	2.58	Si
ini.	3	-2720	971.27	1150.68	SLU 75	1.18	Si
fin.	3	521	-427.5	1150.68	SLU 75	2.69	Si
ini.	3	-2647	949.7	1150.68	SLU 83	1.21	Si
fin.	3	518	-411	1150.68	SLU 83	2.8	Si
ini.	3	-2751	993.05	1150.68	SLU 80	1.16	Si
fin.	3	560	-440	1150.68	SLU 80	2.62	Si
ini.	3	-2825	1002.05	1150.68	SLU 76	1.15	Si
fin.	3	525	-446.93	1150.68	SLU 76	2.57	Si
ini.	3	-2756	999.88	1150.68	SLU 78	1.15	Si
fin.	3	577	-443.4	1150.68	SLU 78	2.6	Si
ini.	3	-2591	943.46	1150.68	SLU 77	1.22	Si
fin.	3	546	-409.14	1150.68	SLU 77	2.81	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-2720	971.27	-3997			2058	752	SLU 75	0.19	No
fin.	3	521	-427.5	-1524			970	225	SLU 75	0.15	No
ini.	3	-2333	860.35	-3514			1904	710	SLU 38	0.2	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	3	542	-389.19	-1454			970	218	SLU 38	0.15	No
ini.	3	-2825	1002.05	-4088			2100	763	SLU 76	0.19	No
fin.	3	525	-446.93	-1661			970	224	SLU 76	0.13	No
ini.	3	-2756	999.88	-4125			2073	756	SLU 78	0.18	No
fin.	3	577	-443.4	-1567			970	204	SLU 78	0.13	No
ini.	3	-2338	867.19	-3553			1906	710	SLU 36	0.2	No
fin.	3	558	-392.59	-1448			970	212	SLU 36	0.15	No
ini.	3	-2406	869.36	-3517			1933	718	SLU 34	0.2	No
fin.	3	506	-396.13	-1543			970	230	SLU 34	0.15	No
ini.	3	-2394	873.43	-3541			1928	717	SLU 42	0.2	No
fin.	3	531	-394.46	-1526			970	222	SLU 42	0.15	No
ini.	3	-2812	1006.12	-4113			2095	762	SLU 84	0.19	No
fin.	3	549	-445.26	-1644			970	215	SLU 84	0.13	No
ini.	3	-2776	977.51	-3985			2081	758	SLU 82	0.19	No
fin.	3	494	-429.36	-1602			970	235	SLU 82	0.15	No
ini.	3	-2751	993.05	-4086			2071	755	SLU 80	0.18	No
fin.	3	560	-440	-1572			970	211	SLU 80	0.13	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-4461	2047.82	1726.01	SLV 4	0.84	No
fin.	2	2635	-1118.14	1726.01	SLV 4	1.54	Si
ini.	2	-5020	2290.35	1726.01	SLV 2	0.75	No
fin.	2	2931	-1200.85	1726.01	SLV 2	1.44	Si
ini.	2	913	-831.44	1726.01	SLV 13	2.08	Si
fin.	2	-2141	612.02	1726.01	SLV 13	2.82	Si
ini.	2	-5020	2290.35	1726.01	SLV 1	0.75	No
fin.	2	2931	-1200.85	1726.01	SLV 1	1.44	Si
ini.	2	1472	-1073.97	1726.01	SLV 16	1.61	Si
fin.	2	-2438	694.73	1726.01	SLV 16	2.48	Si
ini.	2	-4461	2047.82	1726.01	SLV 3	0.84	No
fin.	2	2635	-1118.14	1726.01	SLV 3	1.54	Si
ini.	2	-3595	1480.67	1726.01	SLV 6	1.17	Si
fin.	2	1501	-662.83	1726.01	SLV 6	2.6	Si
ini.	2	913	-831.44	1726.01	SLV 14	2.08	Si
fin.	2	-2141	612.02	1726.01	SLV 14	2.82	Si
ini.	2	-3595	1480.67	1726.01	SLV 5	1.17	Si
fin.	2	1501	-662.83	1726.01	SLV 5	2.6	Si
ini.	2	1472	-1073.97	1726.01	SLV 15	1.61	Si
fin.	2	-2438	694.73	1726.01	SLV 15	2.48	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-3595	1480.67	-5403			2894	1075	SLV 6	0.2	No
fin.	2	1501	-662.83	-2278			1456	0	SLV 6	0	No
ini.	2	-4461	2047.82	-8044			3240	1167	SLV 4	0.15	No
fin.	2	2635	-1118.14	-5749			1456	0	SLV 4	0	No
ini.	2	913	-831.44	2966			1456	287	SLV 14	0.1	No
fin.	2	-2141	612.02	4130			2312	900	SLV 14	0.22	No
ini.	2	-5020	2290.35	-8712			3464	1223	SLV 2	0.14	No
fin.	2	2931	-1200.85	-5741			1456	0	SLV 2	0	No
ini.	2	-5020	2290.35	-8712			3464	1223	SLV 1	0.14	No
fin.	2	2931	-1200.85	-5741			1456	0	SLV 1	0	No
ini.	2	1472	-1073.97	3634			1456	0	SLV 16	0	No
fin.	2	-2438	694.73	4122			2431	938	SLV 16	0.23	No
ini.	2	-3595	1480.67	-5403			2894	1075	SLV 5	0.2	No
fin.	2	1501	-662.83	-2278			1456	0	SLV 5	0	No
ini.	2	913	-831.44	2966			1456	287	SLV 13	0.1	No
fin.	2	-2141	612.02	4130			2312	900	SLV 13	0.22	No
ini.	2	1472	-1073.97	3634			1456	0	SLV 15	0	No
fin.	2	-2438	694.73	4122			2431	938	SLV 15	0.23	No
ini.	2	-4461	2047.82	-8044			3240	1167	SLV 3	0.15	No
fin.	2	2635	-1118.14	-5749			1456	0	SLV 3	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.754	SLV 1	No
V_SLV	0	SLV 1	No
PF_SLU	1.144	SLU 84	Si
V_SLU	0.13	SLU 78	No

Trave di accoppiamento 113

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-21.593	-3.359	11.32	12.17	0.85	-22.493	-3.359	11.32	12.17	0.85	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fhmmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
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Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	317	651.85	1026.38	SLU 76	1.57	Si
fin.	3	-2156	-622.86	1026.38	SLU 76	1.65	Si
ini.	3	351	618.88	1026.38	SLU 77	1.66	Si
fin.	3	-2025	-601.55	1026.38	SLU 77	1.71	Si
ini.	3	228	625.52	1026.38	SLU 82	1.64	Si
fin.	3	-2166	-609.04	1026.38	SLU 82	1.69	Si
ini.	3	337	614.11	1026.38	SLU 79	1.67	Si
fin.	3	-2024	-596.44	1026.38	SLU 79	1.72	Si
ini.	3	313	629.84	1026.38	SLU 75	1.63	Si
fin.	3	-2087	-608.45	1026.38	SLU 75	1.69	Si
ini.	3	378	659.05	1026.38	SLU 78	1.56	Si
fin.	3	-2130	-630.83	1026.38	SLU 78	1.63	Si
ini.	3	266	614.56	1026.38	SLU 83	1.67	Si
fin.	3	-2105	-602.14	1026.38	SLU 83	1.7	Si
ini.	3	293	654.73	1026.38	SLU 84	1.57	Si
fin.	3	-2210	-631.42	1026.38	SLU 84	1.63	Si
ini.	3	252	622.64	1026.38	SLU 73	1.65	Si
fin.	3	-2113	-600.47	1026.38	SLU 73	1.71	Si
ini.	3	364	654.28	1026.38	SLU 80	1.57	Si
fin.	3	-2129	-625.72	1026.38	SLU 80	1.64	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	317	651.85	-1470			866	252	SLU 76	0.17	No
fin.	3	-2156	-622.86	-4233			1680	628	SLU 76	0.15	No
ini.	3	313	629.84	-1374			866	253	SLU 75	0.18	No
fin.	3	-2087	-608.45	-4190			1654	621	SLU 75	0.15	No
ini.	3	293	654.73	-1449			866	259	SLU 84	0.18	No
fin.	3	-2210	-631.42	-4333			1700	634	SLU 84	0.15	No
ini.	3	228	625.52	-1374			866	275	SLU 82	0.2	No
fin.	3	-2166	-609.04	-4173			1684	629	SLU 82	0.15	No
ini.	3	351	618.88	-1309			866	243	SLU 77	0.19	No
fin.	3	-2025	-601.55	-4207			1631	614	SLU 77	0.15	No
ini.	3	378	659.05	-1450			866	236	SLU 78	0.16	No
fin.	3	-2130	-630.83	-4349			1670	625	SLU 78	0.14	No
ini.	3	337	614.11	-1311			866	247	SLU 79	0.19	No
fin.	3	-2024	-596.44	-4155			1630	614	SLU 79	0.15	No
ini.	3	266	614.56	-1309			866	266	SLU 83	0.2	No
fin.	3	-2105	-602.14	-4191			1661	623	SLU 83	0.15	No
ini.	3	286	589.67	-1234			866	261	SLU 74	0.21	No
fin.	3	-1982	-579.17	-4047			1614	609	SLU 74	0.15	No
ini.	3	364	654.28	-1451			866	240	SLU 80	0.17	No
fin.	3	-2129	-625.72	-4297			1670	625	SLU 80	0.15	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	1309	1611.12	1539.56	SLV 1	0.96	No
fin.	2	-4076	-1273.14	1539.56	SLV 1	1.21	Si
ini.	2	1018	1416.06	1539.56	SLV 3	1.09	Si
fin.	2	-3502	-1129.45	1539.56	SLV 3	1.36	Si
ini.	2	1309	1611.12	1539.56	SLV 2	0.96	No
fin.	2	-4076	-1273.14	1539.56	SLV 2	1.21	Si
ini.	2	-695	-659.37	1539.56	SLV 14	2.33	Si
fin.	2	914	372.97	1539.56	SLV 14	4.13	Si
ini.	2	947	1044.03	1539.56	SLV 5	1.47	Si
fin.	2	-3000	-864.64	1539.56	SLV 5	1.78	Si
ini.	2	-986	-854.44	1539.56	SLV 15	1.8	Si
fin.	2	1489	516.65	1539.56	SLV 15	2.98	Si
ini.	2	-695	-659.37	1539.56	SLV 13	2.33	Si
fin.	2	914	372.97	1539.56	SLV 13	4.13	Si
ini.	2	947	1044.03	1539.56	SLV 6	1.47	Si
fin.	2	-3000	-864.64	1539.56	SLV 6	1.78	Si
ini.	2	-986	-854.44	1539.56	SLV 16	1.8	Si
fin.	2	1489	516.65	1539.56	SLV 16	2.98	Si
ini.	2	1018	1416.06	1539.56	SLV 4	1.09	Si
fin.	2	-3502	-1129.45	1539.56	SLV 4	1.36	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	947	1044.03	-2980			1298	221	SLV 5	0.07	No
fin.	2	-3000	-864.64	-5041			2432	917	SLV 5	0.18	No
ini.	2	1309	1611.12	-4829			1298	0	SLV 2	0	No
fin.	2	-4076	-1273.14	-6988			2838	1028	SLV 2	0.15	No
ini.	2	947	1044.03	-2980			1298	221	SLV 6	0.07	No
fin.	2	-3000	-864.64	-5041			2432	917	SLV 6	0.18	No
ini.	2	-695	-659.37	2630			1561	615	SLV 13	0.23	No
fin.	2	914	372.97	1002			1298	235	SLV 13	0.24	No
ini.	2	1018	1416.06	-4176			1298	186	SLV 3	0.04	No
fin.	2	-3502	-1129.45	-6259			2621	970	SLV 3	0.16	No
ini.	2	1309	1611.12	-4829			1298	0	SLV 1	0	No
fin.	2	-4076	-1273.14	-6988			2838	1028	SLV 1	0.15	No
ini.	2	-986	-854.44	3283			1671	661	SLV 15	0.2	No
fin.	2	1489	516.65	1730			1298	0	SLV 15	0	No
ini.	2	1018	1416.06	-4176			1298	186	SLV 4	0.04	No
fin.	2	-3502	-1129.45	-6259			2621	970	SLV 4	0.16	No
ini.	2	-695	-659.37	2630			1561	615	SLV 14	0.23	No
fin.	2	914	372.97	1002			1298	235	SLV 14	0.24	No
ini.	2	-986	-854.44	3283			1671	661	SLV 16	0.2	No
fin.	2	1489	516.65	1730			1298	0	SLV 16	0	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.956	SLV 1	No
V_SLV	0	SLV 1	No
PF_SLU	1.557	SLU 78	Si
V_SLU	0.144	SLU 78	No

Trave di accoppiamento 114

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-18.868	-3.359	8.62	10.62	2	-19.368	-3.359	8.62	10.62	2	0.5	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1663	290.4	5682.35	SLU 77	19.57	Si
fin.	3	-1715	23.38	5682.35	SLU 77	243.06	Si
ini.	3	-1648	289.06	5682.35	SLU 79	19.66	Si
fin.	3	-1699	14.13	5682.35	SLU 79	402.03	Si
ini.	3	-1351	260.71	5682.35	SLU 41	21.8	Si
fin.	3	-1416	34.99	5682.35	SLU 41	162.38	Si
ini.	3	-1658	273.21	5682.35	SLU 81	20.8	Si
fin.	3	-1729	21.78	5682.35	SLU 81	260.93	Si
ini.	3	-1576	253.37	5682.35	SLU 62	22.43	Si
fin.	3	-1630	5.92	5682.35	SLU 62	960.33	Si
ini.	3	-1572	253.11	5682.35	SLU 56	22.45	Si
fin.	3	-1612	6.03	5682.35	SLU 56	942.71	Si
ini.	3	-1332	259.11	5682.35	SLU 37	21.93	Si
fin.	3	-1381	25.86	5682.35	SLU 37	219.73	Si
ini.	3	-1667	290.66	5682.35	SLU 83	19.55	Si
fin.	3	-1734	23.27	5682.35	SLU 83	244.22	Si
ini.	3	-1347	260.45	5682.35	SLU 35	21.82	Si
fin.	3	-1397	35.1	5682.35	SLU 35	161.87	Si
ini.	3	-1654	272.95	5682.35	SLU 74	20.82	Si
fin.	3	-1711	21.89	5682.35	SLU 74	259.61	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1557	251.77	-528			2779	1099	SLU 58	2.08	Si
fin.	3	-1596	-3.22	421			2795	1105	SLU 58	2.63	Si
ini.	3	-1572	253.11	-518			2785	1102	SLU 56	2.12	Si
fin.	3	-1612	6.03	462			2801	1108	SLU 56	2.4	Si
ini.	3	-1268	214.65	-475			2664	1052	SLU 29	2.22	Si
fin.	3	-1291	1.07	338			2673	1056	SLU 29	3.12	Si
ini.	3	-1667	290.66	-504			2824	1117	SLU 83	2.22	Si
fin.	3	-1734	23.27	474			2850	1127	SLU 83	2.38	Si
ini.	3	-1584	244.6	-560			2790	1103	SLU 71	1.97	Si
fin.	3	-1609	-10.65	411			2800	1107	SLU 71	2.69	Si
ini.	3	-1663	290.4	-553			2822	1116	SLU 77	2.02	Si
fin.	3	-1715	23.38	501			2843	1124	SLU 77	2.25	Si
ini.	3	-1493	207.31	-526			2754	1089	SLU 50	2.07	Si
fin.	3	-1505	-28.01	373			2759	1091	SLU 50	2.93	Si
ini.	3	-1507	208.65	-516			2760	1091	SLU 48	2.11	Si
fin.	3	-1522	-18.76	414			2765	1093	SLU 48	2.64	Si
ini.	3	-1599	245.94	-550			2796	1106	SLU 69	2.01	Si
fin.	3	-1625	-1.41	453			2807	1110	SLU 69	2.45	Si
ini.	3	-1648	289.06	-562			2816	1114	SLU 79	1.98	Si
fin.	3	-1699	14.13	459			2836	1122	SLU 79	2.44	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-1862	-1535.2	8523.53	SLV 16	5.55	Si
fin.	2	-2284	1746.57	8523.53	SLV 16	4.88	Si
ini.	2	-1862	-1535.2	8523.53	SLV 15	5.55	Si
fin.	2	-2284	1746.57	8523.53	SLV 15	4.88	Si
ini.	2	-2509	-1718.19	8523.53	SLV 13	4.96	Si
fin.	2	-2873	1456.83	8523.53	SLV 13	5.85	Si
ini.	2	170	1008.54	8523.53	SLV 8	8.45	Si
fin.	2	152	-7.01	8523.53	SLV 8	1215.85	Si
ini.	2	-545	1866.82	8523.53	SLV 2	4.57	Si
fin.	2	-184	-1761.01	8523.53	SLV 2	4.84	Si
ini.	2	-2509	-1718.19	8523.53	SLV 14	4.96	Si
fin.	2	-2873	1456.83	8523.53	SLV 14	5.85	Si
ini.	2	-545	1866.82	8523.53	SLV 1	4.57	Si
fin.	2	-184	-1761.01	8523.53	SLV 1	4.84	Si
ini.	2	103	2049.81	8523.53	SLV 4	4.16	Si
fin.	2	405	-1471.27	8523.53	SLV 4	5.79	Si
ini.	2	170	1008.54	8523.53	SLV 7	8.45	Si
fin.	2	152	-7.01	8523.53	SLV 7	1215.85	Si
ini.	2	103	2049.81	8523.53	SLV 3	4.16	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	2	405	-1471.27	8523.53	SLV 3	5.79	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-2509	-1718.19	7137			4239	1676	SLV 14	0.23	No
fin.	2	-2873	1456.83	7122			4384	1733	SLV 14	0.24	No
ini.	2	103	2049.81	-7802			3235	1195	SLV 4	0.15	No
fin.	2	405	-1471.27	-6498			3235	1126	SLV 4	0.17	No
ini.	2	-545	1866.82	-9289			3453	1331	SLV 2	0.14	No
fin.	2	-184	-1761.01	-8079			3309	1257	SLV 2	0.16	No
ini.	2	-1862	-1535.2	8624			3980	1571	SLV 16	0.18	No
fin.	2	-2284	1746.57	8703			4149	1640	SLV 16	0.19	No
ini.	2	-419	-66.97	4610			3403	1305	SLV 12	0.28	No
fin.	2	-655	958.34	5226			3497	1352	SLV 12	0.26	No
ini.	2	-1862	-1535.2	8624			3980	1571	SLV 15	0.18	No
fin.	2	-2284	1746.57	8703			4149	1640	SLV 15	0.19	No
ini.	2	-545	1866.82	-9289			3453	1331	SLV 1	0.14	No
fin.	2	-184	-1761.01	-8079			3309	1257	SLV 1	0.16	No
ini.	2	103	2049.81	-7802			3235	1195	SLV 3	0.15	No
fin.	2	405	-1471.27	-6498			3235	1126	SLV 3	0.17	No
ini.	2	-2509	-1718.19	7137			4239	1676	SLV 13	0.23	No
fin.	2	-2873	1456.83	7122			4384	1733	SLV 13	0.24	No
ini.	2	-419	-66.97	4610			3403	1305	SLV 11	0.28	No
fin.	2	-655	958.34	5226			3497	1352	SLV 11	0.26	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.158	SLV 3	Si
V_SLV	0.143	SLV 1	No
PF_SLU	19.55	SLU 83	Si
V_SLU	1.972	SLU 71	Si

Trave di accoppiamento 115

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-18.868	-3.359	11.42	12.17	0.75	-19.368	-3.359	11.42	12.17	0.75	0.5	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-552	-8.6	799.08	SLU 58	92.96	Si
fin.	3	-660	-147.92	799.08	SLU 58	5.4	Si
ini.	3	-640	-11.87	799.08	SLU 79	67.34	Si
fin.	3	-755	-161.54	799.08	SLU 79	4.95	Si
ini.	3	-641	-9.96	799.08	SLU 74	80.22	Si
fin.	3	-757	-156.49	799.08	SLU 74	5.11	Si
ini.	3	-725	-7.36	799.08	SLU 81	108.6	Si
fin.	3	-850	-158.88	799.08	SLU 81	5.03	Si
ini.	3	-624	-8.25	799.08	SLU 62	96.87	Si
fin.	3	-737	-150	799.08	SLU 62	5.33	Si
ini.	3	-640	13.6	799.08	SLU 84	58.74	Si
fin.	3	-784	-150.82	799.08	SLU 84	5.3	Si
ini.	3	-567	13.26	799.08	SLU 80	60.28	Si
fin.	3	-707	-148.74	799.08	SLU 80	5.37	Si
ini.	3	-555	11	799.08	SLU 78	72.64	Si
fin.	3	-691	-148.44	799.08	SLU 78	5.38	Si
ini.	3	-712	-11.52	799.08	SLU 83	69.37	Si
fin.	3	-832	-163.62	799.08	SLU 83	4.88	Si
ini.	3	-628	-14.12	799.08	SLU 77	56.58	Si
fin.	3	-739	-161.23	799.08	SLU 77	4.96	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-567	13.26	101			1036	410	SLU 80	4.05	Si
fin.	3	-707	-148.74	-1546			1092	431	SLU 80	0.28	No
ini.	3	-628	-14.12	178			1060	419	SLU 77	2.36	Si
fin.	3	-739	-161.23	-1560			1104	436	SLU 77	0.28	No
ini.	3	-532	34.17	37			1021	404	SLU 76	10.83	Si
fin.	3	-693	-135.47	-1497			1086	429	SLU 76	0.29	No
ini.	3	-640	-11.87	159			1065	421	SLU 79	2.66	Si
fin.	3	-755	-161.54	-1538			1111	439	SLU 79	0.29	No
ini.	3	-429	22.16	76			980	387	SLU 72	5.1	Si
fin.	3	-569	-132.83	-1435			1036	410	SLU 72	0.29	No
ini.	3	-555	11	120			1031	408	SLU 78	3.38	Si
fin.	3	-691	-148.44	-1568			1085	429	SLU 78	0.27	No
ini.	3	-568	15.16	95			1036	410	SLU 75	4.32	Si
fin.	3	-710	-143.7	-1513			1093	432	SLU 75	0.29	No
ini.	3	-640	13.6	86			1065	421	SLU 84	4.87	Si
fin.	3	-784	-150.82	-1539			1122	443	SLU 84	0.29	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-417	19.9	95			975	384	SLU 70	4.04	Si
fin.	3	-554	-132.53	-1457			1030	407	SLU 70	0.28	No
ini.	3	-490	-5.22	153			1005	397	SLU 69	2.6	Si
fin.	3	-602	-145.32	-1449			1049	415	SLU 69	0.29	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	3043	-8.23	1198.62	SLV 13	145.63	Si
fin.	2	3381	600.88	1198.62	SLV 13	1.99	Si
ini.	2	2749	-188.11	1198.62	SLV 16	6.37	Si
fin.	2	3338	643.89	1198.62	SLV 16	1.86	Si
ini.	2	3043	-8.23	1198.62	SLV 14	145.63	Si
fin.	2	3381	600.88	1198.62	SLV 14	1.99	Si
ini.	2	-931	332.24	1198.62	SLV 5	3.61	Si
fin.	2	-1613	-396.56	1198.62	SLV 5	3.02	Si
ini.	2	-3895	12.82	1198.62	SLV 3	93.47	Si
fin.	2	-4424	-813.44	1198.62	SLV 3	1.47	Si
ini.	2	-3895	12.82	1198.62	SLV 4	93.47	Si
fin.	2	-4424	-813.44	1198.62	SLV 4	1.47	Si
ini.	2	2749	-188.11	1198.62	SLV 15	6.37	Si
fin.	2	3338	643.89	1198.62	SLV 15	1.86	Si
ini.	2	-3601	192.71	1198.62	SLV 1	6.22	Si
fin.	2	-4380	-856.44	1198.62	SLV 1	1.4	Si
ini.	2	-3601	192.71	1198.62	SLV 2	6.22	Si
fin.	2	-4380	-856.44	1198.62	SLV 2	1.4	Si
ini.	2	-931	332.24	1198.62	SLV 6	3.61	Si
fin.	2	-1613	-396.56	1198.62	SLV 6	3.02	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	79	-327.65	1727			1213	439	SLV 11	0.25	No
fin.	2	571	184	904			1213	308	SLV 11	0.34	No
ini.	2	79	-327.65	1727			1213	439	SLV 12	0.25	No
fin.	2	571	184	904			1213	308	SLV 12	0.34	No
ini.	2	-931	332.24	-1594			1586	627	SLV 5	0.39	No
fin.	2	-1613	-396.56	-2936			1858	727	SLV 5	0.25	No
ini.	2	1062	271.96	-461			1213	0	SLV 9	0	No
fin.	2	715	40.64	-1516			1213	258	SLV 9	0.17	No
ini.	2	2749	-188.11	2284			1213	0	SLV 15	0	No
fin.	2	3338	643.89	1713			1213	0	SLV 15	0	No
ini.	2	3043	-8.23	1627			1213	0	SLV 14	0	No
fin.	2	3381	600.88	987			1213	0	SLV 14	0	No
ini.	2	-931	332.24	-1594			1586	627	SLV 6	0.39	No
fin.	2	-1613	-396.56	-2936			1858	727	SLV 6	0.25	No
ini.	2	2749	-188.11	2284			1213	0	SLV 16	0	No
fin.	2	3338	643.89	1713			1213	0	SLV 16	0	No
ini.	2	1062	271.96	-461			1213	0	SLV 10	0	No
fin.	2	715	40.64	-1516			1213	258	SLV 10	0.17	No
ini.	2	3043	-8.23	1627			1213	0	SLV 13	0	No
fin.	2	3381	600.88	987			1213	0	SLV 13	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.4	SLV 1	Si
V_SLV	0	SLV 9	No
PF_SLU	4.884	SLU 83	Si
V_SLU	0.274	SLU 78	No

Trave di accoppiamento 116

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-17.363	-3.359	8.62	9.52	0.9	-18.263	-3.359	8.62	9.52	0.9	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fkhmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-672	-51.8	1150.68	SLU 26	22.21	Si
fin.	3	-1082	229.33	1150.68	SLU 26	5.02	Si
ini.	3	-768	-41.9	1150.68	SLU 44	27.46	Si
fin.	3	-1252	254.07	1150.68	SLU 44	4.53	Si
ini.	3	-663	-56.56	1150.68	SLU 23	20.34	Si
fin.	3	-1093	229.82	1150.68	SLU 23	5.01	Si
ini.	3	-951	-32.72	1150.68	SLU 73	35.16	Si
fin.	3	-1266	256.21	1150.68	SLU 73	4.49	Si
ini.	3	-778	-37.14	1150.68	SLU 47	30.98	Si
fin.	3	-1242	253.58	1150.68	SLU 47	4.54	Si
ini.	3	-961	-27.96	1150.68	SLU 76	41.15	Si
fin.	3	-1256	255.72	1150.68	SLU 76	4.5	Si
ini.	3	-882	-27.01	1150.68	SLU 55	42.6	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	3	-1231	248.34	1150.68	SLU 55	4.63	Si
ini.	3	-873	-31.77	1150.68	SLU 52	36.22	Si
fin.	3	-1242	248.83	1150.68	SLU 52	4.62	Si
ini.	3	-847	-42.85	1150.68	SLU 65	26.85	Si
fin.	3	-1277	261.45	1150.68	SLU 65	4.4	Si
ini.	3	-856	-38.09	1150.68	SLU 68	30.21	Si
fin.	3	-1266	260.96	1150.68	SLU 68	4.41	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-895	-3.27	-427			1329	525	SLU 67	1.23	Si
fin.	3	-1103	222.62	1263			1412	555	SLU 67	0.44	No
ini.	3	-778	-37.14	-178			1282	507	SLU 47	2.85	Si
fin.	3	-1242	253.58	1384			1467	575	SLU 47	0.42	No
ini.	3	-913	6.75	-488			1336	528	SLU 72	1.08	Si
fin.	3	-1085	217.04	1255			1405	553	SLU 72	0.44	No
ini.	3	-817	-2.31	-402			1297	513	SLU 46	1.27	Si
fin.	3	-1078	215.24	1264			1402	552	SLU 46	0.44	No
ini.	3	-768	-41.9	-116			1278	505	SLU 44	4.34	Si
fin.	3	-1252	254.07	1352			1471	576	SLU 44	0.43	No
ini.	3	-847	-42.85	-141			1309	518	SLU 65	3.67	Si
fin.	3	-1277	261.45	1351			1481	580	SLU 65	0.43	No
ini.	3	-856	-38.09	-203			1313	519	SLU 68	2.56	Si
fin.	3	-1266	260.96	1383			1477	578	SLU 68	0.42	No
ini.	3	-905	1.49	-489			1332	526	SLU 70	1.08	Si
fin.	3	-1092	222.13	1296			1407	554	SLU 70	0.43	No
ini.	3	-826	2.45	-464			1301	514	SLU 49	1.11	Si
fin.	3	-1067	214.75	1297			1397	550	SLU 49	0.42	No
ini.	3	-834	7.71	-463			1304	516	SLU 51	1.11	Si
fin.	3	-1061	209.66	1256			1395	549	SLU 51	0.44	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	3093	-1779	1726.01	SLV 13	0.97	No
fin.	2	-3290	1420.11	1726.01	SLV 13	1.22	Si
ini.	2	2691	-1509.87	1726.01	SLV 15	1.14	Si
fin.	2	-2362	1135.15	1726.01	SLV 15	1.52	Si
ini.	2	-4603	1873.46	1726.01	SLV 4	0.92	No
fin.	2	1997	-1191.17	1726.01	SLV 4	1.45	Si
ini.	2	3093	-1779	1726.01	SLV 14	0.97	No
fin.	2	-3290	1420.11	1726.01	SLV 14	1.22	Si
ini.	2	-4201	1604.33	1726.01	SLV 2	1.08	Si
fin.	2	1068	-906.21	1726.01	SLV 2	1.9	Si
ini.	2	-2520	1003.29	1726.01	SLV 8	1.72	Si
fin.	2	1555	-709.41	1726.01	SLV 8	2.43	Si
ini.	2	-2520	1003.29	1726.01	SLV 7	1.72	Si
fin.	2	1555	-709.41	1726.01	SLV 7	2.43	Si
ini.	2	2691	-1509.87	1726.01	SLV 16	1.14	Si
fin.	2	-2362	1135.15	1726.01	SLV 16	1.52	Si
ini.	2	-4201	1604.33	1726.01	SLV 1	1.08	Si
fin.	2	1068	-906.21	1726.01	SLV 1	1.9	Si
ini.	2	-4603	1873.46	1726.01	SLV 3	0.92	No
fin.	2	1997	-1191.17	1726.01	SLV 3	1.45	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	2691	-1509.87	5571			1456	0	SLV 16	0	No
fin.	2	-2362	1135.15	5355			2400	929	SLV 16	0.17	No
ini.	2	3093	-1779	6799			1456	0	SLV 14	0	No
fin.	2	-3290	1420.11	6702			2772	1041	SLV 14	0.16	No
ini.	2	-4603	1873.46	-7895			3297	1182	SLV 4	0.15	No
fin.	2	1997	-1191.17	-5290			1456	0	SLV 4	0	No
ini.	2	-4201	1604.33	-6667			3136	1140	SLV 1	0.17	No
fin.	2	1068	-906.21	-3942			1456	214	SLV 1	0.05	No
ini.	2	3093	-1779	6799			1456	0	SLV 13	0	No
fin.	2	-3290	1420.11	6702			2772	1041	SLV 13	0.16	No
ini.	2	-4603	1873.46	-7895			3297	1182	SLV 3	0.15	No
fin.	2	1997	-1191.17	-5290			1456	0	SLV 3	0	No
ini.	2	-2520	1003.29	-4615			2464	949	SLV 7	0.21	No
fin.	2	1555	-709.41	-3136			1456	0	SLV 7	0	No
ini.	2	2691	-1509.87	5571			1456	0	SLV 15	0	No
fin.	2	-2362	1135.15	5355			2400	929	SLV 15	0.17	No
ini.	2	-4201	1604.33	-6667			3136	1140	SLV 2	0.17	No
fin.	2	1068	-906.21	-3942			1456	214	SLV 2	0.05	No
ini.	2	-2520	1003.29	-4615			2464	949	SLV 8	0.21	No
fin.	2	1555	-709.41	-3136			1456	0	SLV 8	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.921	SLV 3	No
V_SLV	0	SLV 3	No
PF_SLU	4.401	SLU 65	Si
V_SLU	0.415	SLU 47	No

Trave di accoppiamento 117

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-17.363	-3.359	11.32	12.17	0.85	-18.263	-3.359	11.32	12.17	0.85	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-57	139.48	1026.38	SLU 79	7.36	Si
fin.	3	-1018	-236.2	1026.38	SLU 79	4.35	Si
ini.	3	-9	114.26	1026.38	SLU 69	8.98	Si
fin.	3	-851	-207.52	1026.38	SLU 69	4.95	Si
ini.	3	-17	112.51	1026.38	SLU 71	9.12	Si
fin.	3	-855	-207.01	1026.38	SLU 71	4.96	Si
ini.	3	-49	141.23	1026.38	SLU 77	7.27	Si
fin.	3	-1014	-236.71	1026.38	SLU 77	4.34	Si
ini.	3	-18	118.24	1026.38	SLU 58	8.68	Si
fin.	3	-903	-214.71	1026.38	SLU 58	4.78	Si
ini.	3	-96	133.65	1026.38	SLU 74	7.68	Si
fin.	3	-999	-225.78	1026.38	SLU 74	4.55	Si
ini.	3	-82	122.22	1026.38	SLU 62	8.4	Si
fin.	3	-958	-216.29	1026.38	SLU 62	4.75	Si
ini.	3	-168	135.87	1026.38	SLU 81	7.55	Si
fin.	3	-1058	-226.85	1026.38	SLU 81	4.52	Si
ini.	3	-10	120	1026.38	SLU 56	8.55	Si
fin.	3	-899	-215.22	1026.38	SLU 56	4.77	Si
ini.	3	-121	143.45	1026.38	SLU 83	7.15	Si
fin.	3	-1073	-237.78	1026.38	SLU 83	4.32	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-18	118.24	485			872	329	SLU 58	0.68	No
fin.	3	-903	-214.71	-2082			1207	476	SLU 58	0.23	No
ini.	3	-121	143.45	516			911	350	SLU 83	0.68	No
fin.	3	-1073	-237.78	-2312			1271	500	SLU 83	0.22	No
ini.	3	-49	141.23	550			884	336	SLU 77	0.61	No
fin.	3	-1014	-236.71	-2339			1249	492	SLU 77	0.21	No
ini.	3	-10	120	511			869	328	SLU 56	0.64	No
fin.	3	-899	-215.22	-2116			1205	476	SLU 56	0.22	No
ini.	3	-168	135.87	508			929	359	SLU 81	0.71	No
fin.	3	-1058	-226.85	-2207			1265	498	SLU 81	0.23	No
ini.	3	-96	133.65	542			902	345	SLU 74	0.64	No
fin.	3	-999	-225.78	-2234			1243	490	SLU 74	0.22	No
ini.	3	-210	112.04	734			945	366	SLU 78	0.5	No
fin.	3	-912	-190.24	-2087			1210	478	SLU 78	0.23	No
ini.	3	-57	139.48	524			887	337	SLU 79	0.64	No
fin.	3	-1018	-236.2	-2305			1250	492	SLU 79	0.21	No
ini.	3	-17	112.51	527			872	329	SLU 71	0.62	No
fin.	3	-855	-207.01	-2045			1189	470	SLU 71	0.23	No
ini.	3	-9	114.26	553			869	328	SLU 69	0.59	No
fin.	3	-851	-207.52	-2079			1187	469	SLU 69	0.23	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	695	376.54	1539.56	SLV 8	4.09	Si
fin.	2	-2923	-746.9	1539.56	SLV 8	2.06	Si
ini.	2	741	568.12	1539.56	SLV 4	2.71	Si
fin.	2	-5292	-1327.4	1539.56	SLV 4	1.16	Si
ini.	2	388	468.19	1539.56	SLV 1	3.29	Si
fin.	2	-4715	-1164.91	1539.56	SLV 1	1.32	Si
ini.	2	-917	-412.27	1539.56	SLV 14	3.73	Si
fin.	2	3982	1035.31	1539.56	SLV 14	1.49	Si
ini.	2	-564	-312.34	1539.56	SLV 16	4.93	Si
fin.	2	3404	872.82	1539.56	SLV 16	1.76	Si
ini.	2	-917	-412.27	1539.56	SLV 13	3.73	Si
fin.	2	3982	1035.31	1539.56	SLV 13	1.49	Si
ini.	2	695	376.54	1539.56	SLV 7	4.09	Si
fin.	2	-2923	-746.9	1539.56	SLV 7	2.06	Si
ini.	2	388	468.19	1539.56	SLV 2	3.29	Si
fin.	2	-4715	-1164.91	1539.56	SLV 2	1.32	Si
ini.	2	741	568.12	1539.56	SLV 3	2.71	Si
fin.	2	-5292	-1327.4	1539.56	SLV 3	1.16	Si
ini.	2	-564	-312.34	1539.56	SLV 15	4.93	Si
fin.	2	3404	872.82	1539.56	SLV 15	1.76	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-564	-312.34	3512			1512	593	SLV 16	0.17	No
fin.	2	3404	872.82	2731			1298	0	SLV 16	0	No
ini.	2	388	468.19	-2741			1298	401	SLV 1	0.15	No
fin.	2	-4715	-1164.91	-5604			3080	1088	SLV 1	0.19	No
ini.	2	741	568.12	-3424			1298	300	SLV 4	0.09	No
fin.	2	-5292	-1327.4	-6394			3298	1140	SLV 4	0.18	No
ini.	2	-917	-412.27	4194			1645	650	SLV 13	0.16	No
fin.	2	3982	1035.31	3520			1298	0	SLV 13	0	No
ini.	2	-917	-412.27	4194			1645	650	SLV 14	0.16	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	2	3982	1035.31	3520			1298	0	SLV 14	0	No
ini.	2	741	568.12	-3424			1298	300	SLV 3	0.09	No
fin.	2	-5292	-1327.4	-6394			3298	1140	SLV 3	0.18	No
ini.	2	-872	-220.69	2563			1628	643	SLV 10	0.25	No
fin.	2	1612	454.81	1248			1298	0	SLV 10	0	No
ini.	2	-564	-312.34	3512			1512	593	SLV 15	0.17	No
fin.	2	3404	872.82	2731			1298	0	SLV 15	0	No
ini.	2	388	468.19	-2741			1298	401	SLV 2	0.15	No
fin.	2	-4715	-1164.91	-5604			3080	1088	SLV 2	0.19	No
ini.	2	-872	-220.69	2563			1628	643	SLV 9	0.25	No
fin.	2	1612	454.81	1248			1298	0	SLV 9	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.16	SLV 3	Si
V_SLV	0	SLV 9	No
PF_SLU	4.317	SLU 83	Si
V_SLU	0.21	SLU 77	No

Trave di accoppiamento 118

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-17.053	-4.589	11.73	12.17	0.44	-17.053	-3.499	11.73	12.17	0.44	1.09	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fthk	fvk0	fthmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	797	-234.08	294.67	SLU 13	1.26	Si
fin.	3	250	-7.94	294.67	SLU 13	37.12	Si
ini.	3	799	-233.7	294.67	SLU 26	1.26	Si
fin.	3	250	-8.32	294.67	SLU 26	35.42	Si
ini.	3	827	-241.47	294.67	SLU 68	1.22	Si
fin.	3	240	-7.46	294.67	SLU 68	39.48	Si
ini.	3	847	-249.5	294.67	SLU 31	1.18	Si
fin.	3	262	-8.75	294.67	SLU 31	33.68	Si
ini.	3	816	-239.42	294.67	SLU 52	1.23	Si
fin.	3	239	-6.4	294.67	SLU 52	46.01	Si
ini.	3	856	-251.94	294.67	SLU 34	1.17	Si
fin.	3	263	-9.43	294.67	SLU 34	31.26	Si
ini.	3	818	-239.04	294.67	SLU 65	1.23	Si
fin.	3	238	-6.79	294.67	SLU 65	43.42	Si
ini.	3	825	-241.86	294.67	SLU 55	1.22	Si
fin.	3	240	-7.08	294.67	SLU 55	41.61	Si
ini.	3	875	-257.28	294.67	SLU 73	1.15	Si
fin.	3	252	-7.89	294.67	SLU 73	37.33	Si
ini.	3	884	-259.71	294.67	SLU 76	1.13	Si
fin.	3	253	-8.57	294.67	SLU 76	34.38	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	768	-223.62	25			339	0	SLU 47	0	No
fin.	3	227	-5.97	121			339	89	SLU 47	0.73	No
ini.	3	644	-190.48	-27			339	0	SLU 40	0	No
fin.	3	166	-6.3	128			339	101	SLU 40	0.79	No
ini.	3	560	-162.15	-3			339	0	SLU 49	0	No
fin.	3	129	-4.17	52			339	107	SLU 49	2.07	Si
ini.	3	551	-159.71	4			339	0	SLU 46	0	No
fin.	3	127	-3.49	49			339	108	SLU 46	2.18	Si
ini.	3	637	-187.53	-36			339	0	SLU 38	0	No
fin.	3	163	-7.18	122			339	101	SLU 38	0.83	No
ini.	3	549	-159.22	-1			339	0	SLU 51	0	No
fin.	3	127	-3.73	48			339	108	SLU 51	2.25	Si
ini.	3	759	-221.19	32			339	0	SLU 44	0	No
fin.	3	225	-5.3	119			339	89	SLU 44	0.75	No
ini.	3	648	-190.46	-38			339	0	SLU 36	0	No
fin.	3	166	-7.62	126			339	101	SLU 36	0.8	No
ini.	3	856	-251.94	-10			339	0	SLU 34	0	No
fin.	3	263	-9.43	195			339	81	SLU 34	0.41	No
ini.	3	653	-192.91	-35			339	0	SLU 42	0	No
fin.	3	167	-6.98	130			339	100	SLU 42	0.77	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-5315	1793.36	442.01	SLV 6	0.25	No
fin.	2	-1997	94.89	442.01	SLV 6	4.66	Si
ini.	2	-4172	1559.83	442.01	SLV 9	0.28	No
fin.	2	-1834	109.81	442.01	SLV 9	4.03	Si
ini.	2	3580	-965.83	442.01	SLV 16	0.46	No
fin.	2	831	-5.31	442.01	SLV 16	83.25	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	4560	-1673.08	442.01	SLV 8	0.26	No
fin.	2	1811	-108.99	442.01	SLV 8	4.06	Si
ini.	2	5703	-1906.62	442.01	SLV 12	0.23	No
fin.	2	1974	-94.08	442.01	SLV 12	4.7	Si
ini.	2	4560	-1673.08	442.01	SLV 7	0.26	No
fin.	2	1811	-108.99	442.01	SLV 7	4.06	Si
ini.	2	5703	-1906.62	442.01	SLV 11	0.23	No
fin.	2	1974	-94.08	442.01	SLV 11	4.7	Si
ini.	2	3580	-965.83	442.01	SLV 15	0.46	No
fin.	2	831	-5.31	442.01	SLV 15	83.25	Si
ini.	2	-5315	1793.36	442.01	SLV 5	0.25	No
fin.	2	-1997	94.89	442.01	SLV 5	4.66	Si
ini.	2	-4172	1559.83	442.01	SLV 10	0.28	No
fin.	2	-1834	109.81	442.01	SLV 10	4.03	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	618	74.11	-1485			508	48	SLV 14	0.03	No
fin.	2	-311	55.86	-851			591	232	SLV 14	0.27	No
ini.	2	-230	-187.36	1438			570	222	SLV 3	0.15	No
fin.	2	289	-55.04	785			508	143	SLV 3	0.18	No
ini.	2	3580	-965.83	5			508	0	SLV 15	0	No
fin.	2	831	-5.31	452			508	0	SLV 15	0	No
ini.	2	4560	-1673.08	2675			508	0	SLV 8	0	No
fin.	2	1811	-108.99	2189			508	0	SLV 8	0	No
ini.	2	4560	-1673.08	2675			508	0	SLV 7	0	No
fin.	2	1811	-108.99	2189			508	0	SLV 7	0	No
ini.	2	618	74.11	-1485			508	48	SLV 13	0.03	No
fin.	2	-311	55.86	-851			591	232	SLV 13	0.27	No
ini.	2	3580	-965.83	5			508	0	SLV 16	0	No
fin.	2	831	-5.31	452			508	0	SLV 16	0	No
ini.	2	5703	-1906.62	2245			508	0	SLV 11	0	No
fin.	2	1974	-94.08	2089			508	0	SLV 11	0	No
ini.	2	-230	-187.36	1438			570	222	SLV 4	0.15	No
fin.	2	289	-55.04	785			508	143	SLV 4	0.18	No
ini.	2	5703	-1906.62	2245			508	0	SLV 12	0	No
fin.	2	1974	-94.08	2089			508	0	SLV 12	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.232	SLV 11	No
V_SLV	0	SLV 7	No
PF_SLU	1.135	SLU 76	Si
V_SLU	0	SLU 2	No

Trave di accoppiamento 119

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-15.433	-3.359	10.72	12.17	1.45	-16.333	-3.359	10.72	12.17	1.45	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fkhmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-974	-1168.25	2986.79	SLU 76	2.56	Si
fin.	3	-974	1213.56	2986.79	SLU 76	2.46	Si
ini.	3	-1014	-1145.13	2986.79	SLU 73	2.61	Si
fin.	3	-1014	1207.27	2986.79	SLU 73	2.47	Si
ini.	3	-859	-1124.98	2986.79	SLU 78	2.65	Si
fin.	3	-859	1146.4	2986.79	SLU 78	2.61	Si
ini.	3	-869	-1093.44	2986.79	SLU 80	2.73	Si
fin.	3	-869	1121.75	2986.79	SLU 80	2.66	Si
ini.	3	-861	-1070.87	2986.79	SLU 34	2.79	Si
fin.	3	-861	1121.19	2986.79	SLU 34	2.66	Si
ini.	3	-899	-1101.87	2986.79	SLU 75	2.71	Si
fin.	3	-899	1140.11	2986.79	SLU 75	2.62	Si
ini.	3	-901	-1047.76	2986.79	SLU 31	2.85	Si
fin.	3	-901	1114.91	2986.79	SLU 31	2.68	Si
ini.	3	-853	-1030.74	2986.79	SLU 42	2.9	Si
fin.	3	-853	1100.16	2986.79	SLU 42	2.71	Si
ini.	3	-966	-1128.11	2986.79	SLU 84	2.65	Si
fin.	3	-966	1192.52	2986.79	SLU 84	2.5	Si
ini.	3	-1006	-1104.99	2986.79	SLU 82	2.7	Si
fin.	3	-1006	1186.23	2986.79	SLU 82	2.52	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1006	-1104.99	3457			1966	777	SLU 82	0.22	No
fin.	3	-1006	1186.23	1630			1966	777	SLU 82	0.48	No
ini.	3	-859	-1124.98	3376			1907	752	SLU 78	0.22	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	3	-859	1146.4	1667			1907	752	SLU 78	0.45	No
ini.	3	-861	-1070.87	3181			1908	753	SLU 34	0.24	No
fin.	3	-861	1121.19	1689			1908	753	SLU 34	0.45	No
ini.	3	-868	-981.22	3163			1911	754	SLU 83	0.24	No
fin.	3	-868	1045.37	1336			1911	754	SLU 83	0.56	No
ini.	3	-869	-1093.44	3314			1911	754	SLU 80	0.23	No
fin.	3	-869	1121.75	1604			1911	754	SLU 80	0.47	No
ini.	3	-1014	-1145.13	3466			1969	778	SLU 73	0.22	No
fin.	3	-1014	1207.27	1757			1969	778	SLU 73	0.44	No
ini.	3	-853	-1030.74	3172			1905	751	SLU 42	0.24	No
fin.	3	-853	1100.16	1562			1905	751	SLU 42	0.48	No
ini.	3	-966	-1128.11	3490			1950	770	SLU 84	0.22	No
fin.	3	-966	1192.52	1663			1950	770	SLU 84	0.46	No
ini.	3	-974	-1168.25	3499			1953	772	SLU 76	0.22	No
fin.	3	-974	1213.56	1790			1953	772	SLU 76	0.43	No
ini.	3	-899	-1101.87	3344			1923	759	SLU 75	0.23	No
fin.	3	-899	1140.11	1634			1923	759	SLU 75	0.46	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-2196	3139.3	4480.18	SLV 2	1.43	Si
fin.	2	-2581	-2287.99	4480.18	SLV 2	1.96	Si
ini.	2	-2196	3139.3	4480.18	SLV 1	1.43	Si
fin.	2	-2581	-2287.99	4480.18	SLV 1	1.96	Si
ini.	2	-315	-3306.69	4480.18	SLV 9	1.35	Si
fin.	2	-78	3040.14	4480.18	SLV 9	1.47	Si
ini.	2	-315	-3306.69	4480.18	SLV 10	1.35	Si
fin.	2	-78	3040.14	4480.18	SLV 10	1.47	Si
ini.	2	-2067	4017.37	4480.18	SLV 4	1.12	Si
fin.	2	-2518	-3144.32	4480.18	SLV 4	1.42	Si
ini.	2	1060	-4323.52	4480.18	SLV 16	1.04	Si
fin.	2	1445	3515.81	4480.18	SLV 16	1.27	Si
ini.	2	931	-5201.59	4480.18	SLV 14	0.86	No
fin.	2	1382	4372.13	4480.18	SLV 14	1.02	Si
ini.	2	931	-5201.59	4480.18	SLV 13	0.86	No
fin.	2	1382	4372.13	4480.18	SLV 13	1.02	Si
ini.	2	1060	-4323.52	4480.18	SLV 15	1.04	Si
fin.	2	1445	3515.81	4480.18	SLV 15	1.27	Si
ini.	2	-2067	4017.37	4480.18	SLV 3	1.12	Si
fin.	2	-2518	-3144.32	4480.18	SLV 3	1.42	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-315	-3306.69	7544			2471	949	SLV 10	0.13	No
fin.	2	-78	3040.14	6721			2377	899	SLV 10	0.13	No
ini.	2	931	-5201.59	11335			2345	650	SLV 13	0.06	No
fin.	2	1382	4372.13	10360			2345	499	SLV 13	0.05	No
ini.	2	1060	-4323.52	9482			2345	610	SLV 15	0.06	No
fin.	2	1445	3515.81	8335			2345	474	SLV 15	0.06	No
ini.	2	-2196	3139.3	-5675			3224	1274	SLV 2	0.22	No
fin.	2	-2581	-2287.99	-6790			3378	1330	SLV 2	0.2	No
ini.	2	-2067	4017.37	-7528			3172	1254	SLV 3	0.17	No
fin.	2	-2518	-3144.32	-8816			3353	1321	SLV 3	0.15	No
ini.	2	1060	-4323.52	9482			2345	610	SLV 16	0.06	No
fin.	2	1445	3515.81	8335			2345	474	SLV 16	0.06	No
ini.	2	-315	-3306.69	7544			2471	949	SLV 9	0.13	No
fin.	2	-78	3040.14	6721			2377	899	SLV 9	0.13	No
ini.	2	-2196	3139.3	-5675			3224	1274	SLV 1	0.22	No
fin.	2	-2581	-2287.99	-6790			3378	1330	SLV 1	0.2	No
ini.	2	-2067	4017.37	-7528			3172	1254	SLV 4	0.17	No
fin.	2	-2518	-3144.32	-8816			3353	1321	SLV 4	0.15	No
ini.	2	931	-5201.59	11335			2345	650	SLV 14	0.06	No
fin.	2	1382	4372.13	10360			2345	499	SLV 14	0.05	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.861	SLV 13	No
V_SLV	0.048	SLV 13	No
PF_SLU	2.461	SLU 76	Si
V_SLU	0.221	SLU 76	No

Trave di accoppiamento 120

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-14.61	-4.784	11.73	12.17	0.44	-16.45	-4.784	11.73	12.17	0.44	1.84	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
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Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	412	-144.46	294.67	SLU 81	2.04	Si
fin.	3	198	-154.1	294.67	SLU 81	1.91	Si
ini.	3	389	-125.12	294.67	SLU 74	2.36	Si
fin.	3	212	-149.28	294.67	SLU 74	1.97	Si
ini.	3	394	-120.52	294.67	SLU 77	2.45	Si
fin.	3	232	-154.33	294.67	SLU 77	1.91	Si
ini.	3	366	-125.62	294.67	SLU 41	2.35	Si
fin.	3	198	-145.9	294.67	SLU 41	2.02	Si
ini.	3	442	-148.37	294.67	SLU 84	1.99	Si
fin.	3	208	-149.57	294.67	SLU 84	1.97	Si
ini.	3	419	-129.03	294.67	SLU 78	2.28	Si
fin.	3	222	-144.76	294.67	SLU 78	2.04	Si
ini.	3	417	-139.86	294.67	SLU 83	2.11	Si
fin.	3	218	-159.15	294.67	SLU 83	1.85	Si
ini.	3	397	-123.18	294.67	SLU 79	2.39	Si
fin.	3	226	-151.74	294.67	SLU 79	1.94	Si
ini.	3	428	-146.57	294.67	SLU 73	2.01	Si
fin.	3	169	-125.68	294.67	SLU 73	2.34	Si
ini.	3	437	-152.98	294.67	SLU 82	1.93	Si
fin.	3	188	-144.52	294.67	SLU 82	2.04	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	394	-120.52	-62			339	41	SLU 77	0.66	No
fin.	3	232	-154.33	-486			339	88	SLU 77	0.18	No
ini.	3	437	-152.98	14			339	11	SLU 82	0.77	No
fin.	3	188	-144.52	-501			339	97	SLU 82	0.19	No
ini.	3	421	-131.69	-57			339	26	SLU 80	0.46	No
fin.	3	215	-142.16	-472			339	91	SLU 80	0.19	No
ini.	3	389	-125.12	-39			339	43	SLU 74	1.11	Si
fin.	3	212	-149.28	-481			339	92	SLU 74	0.19	No
ini.	3	417	-139.86	-9			339	29	SLU 83	3.08	Si
fin.	3	218	-159.15	-517			339	91	SLU 83	0.18	No
ini.	3	412	-144.46	14			339	32	SLU 81	2.35	Si
fin.	3	198	-154.1	-512			339	95	SLU 81	0.18	No
ini.	3	442	-148.37	-9			339	0	SLU 84	0	No
fin.	3	208	-149.57	-506			339	93	SLU 84	0.18	No
ini.	3	414	-133.63	-39			339	31	SLU 75	0.8	No
fin.	3	202	-139.71	-470			339	94	SLU 75	0.2	No
ini.	3	419	-129.03	-62			339	28	SLU 78	0.45	No
fin.	3	222	-144.76	-475			339	90	SLU 78	0.19	No
ini.	3	397	-123.18	-57			339	40	SLU 79	0.7	No
fin.	3	226	-151.74	-483			339	89	SLU 79	0.18	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	139	-519.76	442.01	SLV 11	0.85	No
fin.	2	-1568	410.25	442.01	SLV 11	1.08	Si
ini.	2	139	-519.76	442.01	SLV 12	0.85	No
fin.	2	-1568	410.25	442.01	SLV 12	1.08	Si
ini.	2	88	195.5	442.01	SLV 10	2.26	Si
fin.	2	1049	-398.56	442.01	SLV 10	1.11	Si
ini.	2	377	352.07	442.01	SLV 6	1.26	Si
fin.	2	1811	-588.72	442.01	SLV 6	0.75	No
ini.	2	732	284.4	442.01	SLV 2	1.55	Si
fin.	2	1785	-527.49	442.01	SLV 2	0.84	No
ini.	2	-217	-452.09	442.01	SLV 15	0.98	No
fin.	2	-1542	349.02	442.01	SLV 15	1.27	Si
ini.	2	-217	-452.09	442.01	SLV 16	0.98	No
fin.	2	-1542	349.02	442.01	SLV 16	1.27	Si
ini.	2	377	352.07	442.01	SLV 5	1.26	Si
fin.	2	1811	-588.72	442.01	SLV 5	0.75	No
ini.	2	732	284.4	442.01	SLV 1	1.55	Si
fin.	2	1785	-527.49	442.01	SLV 1	0.84	No
ini.	2	88	195.5	442.01	SLV 9	2.26	Si
fin.	2	1049	-398.56	442.01	SLV 9	1.11	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	732	284.4	312			508	0	SLV 1	0	No
fin.	2	1785	-527.49	-915			508	0	SLV 1	0	No
ini.	2	748	69.82	470			508	0	SLV 3	0	No
fin.	2	1000	-284.85	-583			508	0	SLV 3	0	No
ini.	2	377	352.07	-176			508	125	SLV 6	0.71	No
fin.	2	1811	-588.72	-990			508	0	SLV 6	0	No
ini.	2	377	352.07	-176			508	125	SLV 5	0.71	No
fin.	2	1811	-588.72	-990			508	0	SLV 5	0	No
ini.	2	732	284.4	312			508	0	SLV 2	0	No
fin.	2	1785	-527.49	-915			508	0	SLV 2	0	No
ini.	2	748	69.82	470			508	0	SLV 4	0	No
fin.	2	1000	-284.85	-583			508	0	SLV 4	0	No
ini.	2	428	-363.19	349			508	113	SLV 8	0.33	No
fin.	2	-805	220.09	114			723	285	SLV 8	2.5	Si
ini.	2	88	195.5	-437			508	178	SLV 9	0.41	No
fin.	2	1049	-398.56	-724			508	0	SLV 9	0	No
ini.	2	428	-363.19	349			508	113	SLV 7	0.33	No
fin.	2	-805	220.09	114			723	285	SLV 7	2.5	Si
ini.	2	88	195.5	-437			508	178	SLV 10	0.41	No
fin.	2	1049	-398.56	-724			508	0	SLV 10	0	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.751	SLV 5	No
V_SLV	0	SLV 1	No
PF_SLU	1.852	SLU 83	Si
V_SLU	0	SLU 84	No

Trave di accoppiamento 121

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-15.058	1.406	10.72	12.17	1.45	-15.058	2.206	10.72	12.17	1.45	0.8	0.14	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb_	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-58	243.35	1493.39	SLU 80	6.14	Si
fin.	3	-58	-1497.42	1493.39	SLU 80	1	No
ini.	3	-44	234.64	1493.39	SLU 84	6.36	Si
fin.	3	-44	-1424.09	1493.39	SLU 84	1.05	Si
ini.	3	-66	246.16	1493.39	SLU 79	6.07	Si
fin.	3	-66	-1515.06	1493.39	SLU 79	0.99	No
ini.	3	-59	228.15	1493.39	SLU 58	6.55	Si
fin.	3	-59	-1389.85	1493.39	SLU 58	1.07	Si
ini.	3	-55	233.53	1493.39	SLU 74	6.39	Si
fin.	3	-55	-1389.16	1493.39	SLU 74	1.08	Si
ini.	3	-53	237.45	1493.39	SLU 83	6.29	Si
fin.	3	-53	-1441.72	1493.39	SLU 83	1.04	Si
ini.	3	-63	231.33	1493.39	SLU 71	6.46	Si
fin.	3	-63	-1394.41	1493.39	SLU 71	1.07	Si
ini.	3	-66	233.77	1493.39	SLU 69	6.39	Si
fin.	3	-66	-1393.56	1493.39	SLU 69	1.07	Si
ini.	3	-61	245.79	1493.39	SLU 78	6.08	Si
fin.	3	-61	-1496.57	1493.39	SLU 78	1	No
ini.	3	-70	248.6	1493.39	SLU 77	6.01	Si
fin.	3	-70	-1514.21	1493.39	SLU 77	0.99	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-58	243.35	-1966			805	307	SLU 80	0.16	No
fin.	3	-58	-1497.42	-2386			805	307	SLU 80	0.13	No
ini.	3	-47	230.72	-1793			800	304	SLU 75	0.17	No
fin.	3	-47	-1371.53	-2213			800	304	SLU 75	0.14	No
ini.	3	-70	248.6	-1994			810	309	SLU 77	0.15	No
fin.	3	-70	-1514.21	-2414			810	309	SLU 77	0.13	No
ini.	3	-44	234.64	-1864			800	304	SLU 84	0.16	No
fin.	3	-44	-1424.09	-2283			800	304	SLU 84	0.13	No
ini.	3	-53	237.45	-1889			803	305	SLU 83	0.16	No
fin.	3	-53	-1441.72	-2309			803	305	SLU 83	0.13	No
ini.	3	-61	245.79	-1968			806	307	SLU 78	0.16	No
fin.	3	-61	-1496.57	-2388			806	307	SLU 78	0.13	No
ini.	3	-66	246.16	-1992			808	308	SLU 79	0.15	No
fin.	3	-66	-1515.06	-2412			808	308	SLU 79	0.13	No
ini.	3	-55	233.53	-1819			804	306	SLU 74	0.17	No
fin.	3	-55	-1389.16	-2238			804	306	SLU 74	0.14	No
ini.	3	-63	231.33	-1823			807	308	SLU 71	0.17	No
fin.	3	-63	-1394.41	-2242			807	308	SLU 71	0.14	No
ini.	3	-66	233.77	-1825			808	308	SLU 69	0.17	No
fin.	3	-66	-1393.56	-2244			808	308	SLU 69	0.14	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-490	669.88	2240.09	SLV 15	3.34	Si
fin.	2	-509	-3997.66	2240.09	SLV 15	0.56	No
ini.	2	-1892	1240.63	2240.09	SLV 12	1.81	Si
fin.	2	-1976	-5492.79	2240.09	SLV 12	0.41	No
ini.	2	-1955	1115.91	2240.09	SLV 8	2.01	Si
fin.	2	-2042	-4352.93	2240.09	SLV 8	0.51	No
ini.	2	1841	-930.54	2240.09	SLV 6	2.41	Si
fin.	2	1925	3718.39	2240.09	SLV 6	0.6	No
ini.	2	1904	-805.82	2240.09	SLV 10	2.78	Si
fin.	2	1992	2578.53	2240.09	SLV 10	0.87	No
ini.	2	-490	669.88	2240.09	SLV 16	3.34	Si
fin.	2	-509	-3997.66	2240.09	SLV 16	0.56	No
ini.	2	1841	-930.54	2240.09	SLV 5	2.41	Si
fin.	2	1925	3718.39	2240.09	SLV 5	0.6	No
ini.	2	-1955	1115.91	2240.09	SLV 7	2.01	Si
fin.	2	-2042	-4352.93	2240.09	SLV 7	0.51	No
ini.	2	-1892	1240.63	2240.09	SLV 11	1.81	Si
fin.	2	-1976	-5492.79	2240.09	SLV 11	0.41	No
ini.	2	1904	-805.82	2240.09	SLV 9	2.78	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	2	1992	2578.53	2240.09	SLV 9	0.87	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	439	-359.8	3273			1173	332	SLV 2	0.1	No
fin.	2	459	2223.26	2968			1173	327	SLV 2	0.11	No
ini.	2	-490	669.88	-5561			1368	537	SLV 16	0.1	No
fin.	2	-509	-3997.66	-5891			1376	541	SLV 16	0.09	No
ini.	2	1841	-930.54	5789			1173	0	SLV 5	0	No
fin.	2	1925	3718.39	5377			1173	0	SLV 5	0	No
ini.	2	1904	-805.82	4248			1173	0	SLV 9	0	No
fin.	2	1992	2578.53	3809			1173	0	SLV 9	0	No
ini.	2	-490	669.88	-5561			1368	537	SLV 15	0.1	No
fin.	2	-509	-3997.66	-5891			1376	541	SLV 15	0.09	No
ini.	2	-1892	1240.63	-8078			1929	747	SLV 12	0.09	No
fin.	2	-1976	-5492.79	-8300			1963	758	SLV 12	0.09	No
ini.	2	439	-359.8	3273			1173	332	SLV 1	0.1	No
fin.	2	459	2223.26	2968			1173	327	SLV 1	0.11	No
ini.	2	1904	-805.82	4248			1173	0	SLV 10	0	No
fin.	2	1992	2578.53	3809			1173	0	SLV 10	0	No
ini.	2	1841	-930.54	5789			1173	0	SLV 6	0	No
fin.	2	1925	3718.39	5377			1173	0	SLV 6	0	No
ini.	2	-1892	1240.63	-8078			1929	747	SLV 11	0.09	No
fin.	2	-1976	-5492.79	-8300			1963	758	SLV 11	0.09	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.408	SLV 11	No
V_SLV	0	SLV 5	No
PF_SLU	0.986	SLU 79	No
V_SLU	0.128	SLU 79	No

Trave di accoppiamento 122

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-13.763	-0.228	10.72	12.17	1.45	-13.763	0.672	10.72	12.17	1.45	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-188	-546.07	2986.79	SLU 72	5.47	Si
fin.	3	-188	216.11	2986.79	SLU 72	13.82	Si
ini.	3	-164	-566.16	2986.79	SLU 29	5.28	Si
fin.	3	-164	194.45	2986.79	SLU 29	15.36	Si
ini.	3	-213	-543.73	2986.79	SLU 78	5.49	Si
fin.	3	-213	224.69	2986.79	SLU 78	13.29	Si
ini.	3	-207	-571	2986.79	SLU 79	5.23	Si
fin.	3	-207	224.8	2986.79	SLU 79	13.29	Si
ini.	3	-216	-595.44	2986.79	SLU 77	5.02	Si
fin.	3	-216	232.81	2986.79	SLU 77	12.83	Si
ini.	3	-173	-590.6	2986.79	SLU 27	5.06	Si
fin.	3	-173	202.46	2986.79	SLU 27	14.75	Si
ini.	3	-201	-622.22	2986.79	SLU 69	4.8	Si
fin.	3	-201	232.24	2986.79	SLU 69	12.86	Si
ini.	3	-198	-570.51	2986.79	SLU 70	5.24	Si
fin.	3	-198	224.12	2986.79	SLU 70	13.33	Si
ini.	3	-188	-563.81	2986.79	SLU 35	5.3	Si
fin.	3	-188	203.03	2986.79	SLU 35	14.71	Si
ini.	3	-192	-597.78	2986.79	SLU 71	5	Si
fin.	3	-192	224.23	2986.79	SLU 71	13.32	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-197	-510.5	1247			1643	630	SLU 74	0.5	No
fin.	3	-197	214.27	372			1643	630	SLU 74	1.69	Si
ini.	3	-216	-595.44	1362			1650	634	SLU 77	0.47	No
fin.	3	-216	232.81	487			1650	634	SLU 77	1.3	Si
ini.	3	-204	-519.29	1260			1645	631	SLU 80	0.5	No
fin.	3	-204	216.68	384			1645	631	SLU 80	1.64	Si
ini.	3	-192	-597.78	1355			1640	629	SLU 71	0.46	No
fin.	3	-192	224.23	480			1640	629	SLU 71	1.31	Si
ini.	3	-213	-543.73	1296			1649	633	SLU 78	0.49	No
fin.	3	-213	224.69	421			1649	633	SLU 78	1.51	Si
ini.	3	-207	-571	1326			1646	632	SLU 79	0.48	No
fin.	3	-207	224.8	451			1646	632	SLU 79	1.4	Si
ini.	3	-182	-537.28	1277			1636	627	SLU 66	0.49	No
fin.	3	-182	213.69	401			1636	627	SLU 66	1.56	Si
ini.	3	-201	-622.22	1392			1644	631	SLU 69	0.45	No
fin.	3	-201	232.24	516			1644	631	SLU 69	1.22	Si



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-198	-570.51	1325			1643	630	SLU 70	0.48	No
fin.	3	-198	224.12	450			1643	630	SLU 70	1.4	Si
ini.	3	-188	-546.07	1289			1639	628	SLU 72	0.49	No
fin.	3	-188	216.11	414			1639	628	SLU 72	1.52	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-1827	-6097.6	4480.18	SLV 9	0.73	No
fin.	2	-1673	1397.93	4480.18	SLV 9	3.2	Si
ini.	2	-1011	-3345.42	4480.18	SLV 2	1.34	Si
fin.	2	-1023	665.74	4480.18	SLV 2	6.73	Si
ini.	2	-1827	-6097.6	4480.18	SLV 10	0.73	No
fin.	2	-1673	1397.93	4480.18	SLV 10	3.2	Si
ini.	2	-1011	-3345.42	4480.18	SLV 1	1.34	Si
fin.	2	-1023	665.74	4480.18	SLV 1	6.73	Si
ini.	2	1797	6236.46	4480.18	SLV 12	0.72	No
fin.	2	1675	-1203.99	4480.18	SLV 12	3.72	Si
ini.	2	1797	6236.46	4480.18	SLV 11	0.72	No
fin.	2	1675	-1203.99	4480.18	SLV 11	3.72	Si
ini.	2	1588	5514.27	4480.18	SLV 7	0.81	No
fin.	2	1434	-1121.61	4480.18	SLV 7	3.99	Si
ini.	2	-2036	-6819.79	4480.18	SLV 5	0.66	No
fin.	2	-1914	1480.31	4480.18	SLV 5	3.03	Si
ini.	2	-2036	-6819.79	4480.18	SLV 6	0.66	No
fin.	2	-1914	1480.31	4480.18	SLV 6	3.03	Si
ini.	2	1588	5514.27	4480.18	SLV 8	0.81	No
fin.	2	1434	-1121.61	4480.18	SLV 8	3.99	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-2036	-6819.79	9587			3160	1249	SLV 6	0.13	No
fin.	2	-1914	1480.31	8547			3111	1230	SLV 6	0.14	No
ini.	2	-1827	-6097.6	8547			3076	1217	SLV 10	0.14	No
fin.	2	-1673	1397.93	8339			3014	1192	SLV 10	0.14	No
ini.	2	1588	5514.27	-6917			2345	412	SLV 7	0.06	No
fin.	2	1434	-1121.61	-8046			2345	478	SLV 7	0.06	No
ini.	2	772	2762.09	-3393			2345	695	SLV 15	0.2	No
fin.	2	784	-389.42	-2689			2345	691	SLV 15	0.26	No
ini.	2	1797	6236.46	-7956			2345	299	SLV 11	0.04	No
fin.	2	1675	-1203.99	-8254			2345	369	SLV 11	0.04	No
ini.	2	-2036	-6819.79	9587			3160	1249	SLV 5	0.13	No
fin.	2	-1914	1480.31	8547			3111	1230	SLV 5	0.14	No
ini.	2	1797	6236.46	-7956			2345	299	SLV 12	0.04	No
fin.	2	1675	-1203.99	-8254			2345	369	SLV 12	0.04	No
ini.	2	1588	5514.27	-6917			2345	412	SLV 8	0.06	No
fin.	2	1434	-1121.61	-8046			2345	478	SLV 8	0.06	No
ini.	2	772	2762.09	-3393			2345	695	SLV 16	0.2	No
fin.	2	784	-389.42	-2689			2345	691	SLV 16	0.26	No
ini.	2	-1827	-6097.6	8547			3076	1217	SLV 9	0.14	No
fin.	2	-1673	1397.93	8339			3014	1192	SLV 9	0.14	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.657	SLV 5	No
V_SLV	0.038	SLV 11	No
PF_SLU	4.8	SLU 69	Si
V_SLU	0.453	SLU 69	No

Trave di accoppiamento 123

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-11.448	3.311	10.12	12.17	2.05	-9.948	3.311	10.12	12.17	2.05	1.5	0.14	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-3	1619.75	2985.01	SLU 33	1.84	Si
fin.	3	-3	171.39	2985.01	SLU 33	17.42	Si
ini.	3	-13	1755.54	2985.01	SLU 83	1.7	Si
fin.	3	-13	223.46	2985.01	SLU 83	13.36	Si
ini.	3	-3	1608.02	2985.01	SLU 32	1.86	Si
fin.	3	-3	172.5	2985.01	SLU 32	17.3	Si
ini.	3	-15	1779.13	2985.01	SLU 42	1.68	Si
fin.	3	-15	195.17	2985.01	SLU 42	15.29	Si
ini.	3	-12	1835.05	2985.01	SLU 81	1.63	Si
fin.	3	-12	217.21	2985.01	SLU 81	13.74	Si
ini.	3	-15	1767.41	2985.01	SLU 41	1.69	Si
fin.	3	-15	196.28	2985.01	SLU 41	15.21	Si
ini.	3	-12	1846.78	2985.01	SLU 82	1.62	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	3	-12	216.1	2985.01	SLU 82	13.81	Si
ini.	3	-14	1846.92	2985.01	SLU 39	1.62	Si
fin.	3	-14	190.03	2985.01	SLU 39	15.71	Si
ini.	3	-14	1858.64	2985.01	SLU 40	1.61	Si
fin.	3	-14	188.92	2985.01	SLU 40	15.8	Si
ini.	3	-13	1767.27	2985.01	SLU 84	1.69	Si
fin.	3	-13	222.35	2985.01	SLU 84	13.42	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-15	1767.41	488			1111	419	SLU 41	0.86	No
fin.	3	-15	196.28	-2540			1111	419	SLU 41	0.17	No
ini.	3	-13	1755.54	664			1110	419	SLU 83	0.63	No
fin.	3	-13	223.46	-2651			1110	419	SLU 83	0.16	No
ini.	3	-1	1596.16	612			1106	416	SLU 74	0.68	No
fin.	3	-1	199.67	-2418			1106	416	SLU 74	0.17	No
ini.	3	-14	1858.64	423			1111	419	SLU 40	0.99	No
fin.	3	-14	188.92	-2606			1111	419	SLU 40	0.16	No
ini.	3	-14	1846.92	431			1111	419	SLU 39	0.97	No
fin.	3	-14	190.03	-2597			1111	419	SLU 39	0.16	No
ini.	3	-1	1607.88	604			1106	416	SLU 75	0.69	No
fin.	3	-1	198.57	-2427			1106	416	SLU 75	0.17	No
ini.	3	-13	1767.27	655			1110	419	SLU 84	0.64	No
fin.	3	-13	222.35	-2659			1110	419	SLU 84	0.16	No
ini.	3	-12	1835.05	607			1110	418	SLU 81	0.69	No
fin.	3	-12	217.21	-2708			1110	418	SLU 81	0.15	No
ini.	3	-15	1779.13	480			1111	419	SLU 42	0.87	No
fin.	3	-15	195.17	-2549			1111	419	SLU 42	0.16	No
ini.	3	-12	1846.78	598			1110	418	SLU 82	0.7	No
fin.	3	-12	216.1	-2716			1110	418	SLU 82	0.15	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	1437	6154.58	4477.52	SLV 16	0.73	No
fin.	2	587	-269.4	4477.52	SLV 16	16.62	Si
ini.	2	-1441	-4585.06	4477.52	SLV 1	0.98	No
fin.	2	-590	544.3	4477.52	SLV 1	8.23	Si
ini.	2	1519	6564.31	4477.52	SLV 14	0.68	No
fin.	2	533	-384.38	4477.52	SLV 14	11.65	Si
ini.	2	-1441	-4585.06	4477.52	SLV 2	0.98	No
fin.	2	-590	544.3	4477.52	SLV 2	8.23	Si
ini.	2	-1523	-4994.79	4477.52	SLV 3	0.9	No
fin.	2	-537	659.28	4477.52	SLV 3	6.79	Si
ini.	2	1437	6154.58	4477.52	SLV 15	0.73	No
fin.	2	587	-269.4	4477.52	SLV 15	16.62	Si
ini.	2	1519	6564.31	4477.52	SLV 13	0.68	No
fin.	2	533	-384.38	4477.52	SLV 13	11.65	Si
ini.	2	577	3140.05	4477.52	SLV 10	1.43	Si
fin.	2	77	-193.49	4477.52	SLV 10	23.14	Si
ini.	2	-1523	-4994.79	4477.52	SLV 4	0.9	No
fin.	2	-537	659.28	4477.52	SLV 4	6.79	Si
ini.	2	577	3140.05	4477.52	SLV 9	1.43	Si
fin.	2	77	-193.49	4477.52	SLV 9	23.14	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-1441	-4585.06	4730			2234	883	SLV 1	0.19	No
fin.	2	-590	544.3	2982			1894	741	SLV 1	0.25	No
ini.	2	-1441	-4585.06	4730			2234	883	SLV 2	0.19	No
fin.	2	-590	544.3	2982			1894	741	SLV 2	0.25	No
ini.	2	-1523	-4994.79	5069			2267	896	SLV 3	0.18	No
fin.	2	-537	659.28	3068			1873	731	SLV 3	0.24	No
ini.	2	577	3140.05	-1335			1658	482	SLV 10	0.36	No
fin.	2	77	-193.49	-2814			1658	607	SLV 10	0.22	No
ini.	2	-1523	-4994.79	5069			2267	896	SLV 4	0.18	No
fin.	2	-537	659.28	3068			1873	731	SLV 4	0.24	No
ini.	2	1519	6564.31	-3994			1658	0	SLV 14	0	No
fin.	2	533	-384.38	-5782			1658	495	SLV 14	0.09	No
ini.	2	1437	6154.58	-3655			1658	0	SLV 15	0	No
fin.	2	587	-269.4	-5697			1658	480	SLV 15	0.08	No
ini.	2	1437	6154.58	-3655			1658	0	SLV 16	0	No
fin.	2	587	-269.4	-5697			1658	480	SLV 16	0.08	No
ini.	2	1519	6564.31	-3994			1658	0	SLV 13	0	No
fin.	2	533	-384.38	-5782			1658	495	SLV 13	0.09	No
ini.	2	577	3140.05	-1335			1658	482	SLV 9	0.36	No
fin.	2	77	-193.49	-2814			1658	607	SLV 9	0.22	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.682	SLV 13	No
V_SLV	0	SLV 13	No
PF_SLU	1.606	SLU 40	Si
V_SLU	0.154	SLU 82	No

Trave di accoppiamento 124

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-17.718	6.661	8.62	9.52	0.9	-16.818	6.661	8.62	9.52	0.9	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	9	-19.33	1150.68	SLU 69	59.51	Si
fin.	3	-286	187.59	1150.68	SLU 69	6.13	Si
ini.	3	4	-22.23	1150.68	SLU 80	51.77	Si
fin.	3	-306	197.39	1150.68	SLU 80	5.83	Si
ini.	3	20	-24.31	1150.68	SLU 72	47.34	Si
fin.	3	-286	188.41	1150.68	SLU 72	6.11	Si
ini.	3	-35	-6.23	1150.68	SLU 84	184.68	Si
fin.	3	-290	182.84	1150.68	SLU 84	6.29	Si
ini.	3	-1	-15.94	1150.68	SLU 57	72.18	Si
fin.	3	-282	182.79	1150.68	SLU 57	6.3	Si
ini.	3	15	-22.53	1150.68	SLU 71	51.07	Si
fin.	3	-285	186.85	1150.68	SLU 71	6.16	Si
ini.	3	-6	-17.26	1150.68	SLU 77	66.69	Si
fin.	3	-306	196.58	1150.68	SLU 77	5.85	Si
ini.	3	-1	-19.03	1150.68	SLU 78	60.46	Si
fin.	3	-307	198.14	1150.68	SLU 78	5.81	Si
ini.	3	14	-21.11	1150.68	SLU 70	54.51	Si
fin.	3	-288	189.15	1150.68	SLU 70	6.08	Si
ini.	3	-1	-20.45	1150.68	SLU 79	56.27	Si
fin.	3	-304	195.83	1150.68	SLU 79	5.88	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	15	-22.53	-330			970	362	SLU 71	1.1	Si
fin.	3	-285	186.85	1470			1084	423	SLU 71	0.29	No
ini.	3	-1	-19.03	-353			971	366	SLU 78	1.04	Si
fin.	3	-307	198.14	1529			1093	427	SLU 78	0.28	No
ini.	3	-1	-15.94	-348			971	365	SLU 57	1.05	Si
fin.	3	-282	182.79	1443			1083	422	SLU 57	0.29	No
ini.	3	-6	-17.26	-359			973	367	SLU 77	1.02	Si
fin.	3	-306	196.58	1520			1093	427	SLU 77	0.28	No
ini.	3	9	-19.33	-357			970	363	SLU 69	1.02	Si
fin.	3	-286	187.59	1493			1085	423	SLU 69	0.28	No
ini.	3	-1	-20.45	-333			971	365	SLU 79	1.1	Si
fin.	3	-304	195.83	1498			1092	426	SLU 79	0.28	No
ini.	3	4	-22.23	-327			970	364	SLU 80	1.11	Si
fin.	3	-306	197.39	1507			1093	427	SLU 80	0.28	No
ini.	3	20	-24.31	-324			970	361	SLU 72	1.11	Si
fin.	3	-286	188.41	1479			1085	423	SLU 72	0.29	No
ini.	3	14	-21.11	-350			970	362	SLU 70	1.03	Si
fin.	3	-288	189.15	1501			1086	423	SLU 70	0.28	No
ini.	3	-6	-14.17	-354			973	366	SLU 56	1.04	Si
fin.	3	-280	181.23	1435			1083	422	SLU 56	0.29	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-2070	1124.4	1726.01	SLV 16	1.54	Si
fin.	2	2056	-823.63	1726.01	SLV 16	2.1	Si
ini.	2	1985	-1110.04	1726.01	SLV 1	1.55	Si
fin.	2	-2419	1052.84	1726.01	SLV 1	1.64	Si
ini.	2	1474	-1103.35	1726.01	SLV 4	1.56	Si
fin.	2	-2930	1075.78	1726.01	SLV 4	1.6	Si
ini.	2	-1559	1117.71	1726.01	SLV 14	1.54	Si
fin.	2	2566	-846.57	1726.01	SLV 14	2.04	Si
ini.	2	-1559	1117.71	1726.01	SLV 13	1.54	Si
fin.	2	2566	-846.57	1726.01	SLV 13	2.04	Si
ini.	2	1985	-1110.04	1726.01	SLV 2	1.55	Si
fin.	2	-2419	1052.84	1726.01	SLV 2	1.64	Si
ini.	2	-363	-315.83	1726.01	SLV 8	5.47	Si
fin.	2	-1781	437.74	1726.01	SLV 8	3.94	Si
ini.	2	1474	-1103.35	1726.01	SLV 3	1.56	Si
fin.	2	-2930	1075.78	1726.01	SLV 3	1.6	Si
ini.	2	-363	-315.83	1726.01	SLV 7	5.47	Si
fin.	2	-1781	437.74	1726.01	SLV 7	3.94	Si
ini.	2	-2070	1124.4	1726.01	SLV 15	1.54	Si
fin.	2	2056	-823.63	1726.01	SLV 15	2.1	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-1559	1117.71	-4281			2079	819	SLV 14	0.19	No
fin.	2	2566	-846.57	-4135			1456	0	SLV 14	0	No
ini.	2	1474	-1103.35	3707			1456	0	SLV 4	0	No
fin.	2	-2930	1075.78	5990			2628	999	SLV 4	0.17	No
ini.	2	1985	-1110.04	3951			1456	0	SLV 1	0	No
fin.	2	-2419	1052.84	5655			2423	936	SLV 1	0.17	No
ini.	2	277	330.19	-1116			1456	484	SLV 10	0.43	No
fin.	2	1417	-208.53	-1098			1456	0	SLV 10	0	No
ini.	2	1341	-338.13	1353			1456	0	SLV 5	0	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	2	-78	361.29	1839			1487	565	SLV 5	0.31	No
ini.	2	277	330.19	-1116			1456	484	SLV 9	0.43	No
fin.	2	1417	-208.53	-1098			1456	0	SLV 9	0	No
ini.	2	-1559	1117.71	-4281			2079	819	SLV 13	0.19	No
fin.	2	2566	-846.57	-4135			1456	0	SLV 13	0	No
ini.	2	1474	-1103.35	3707			1456	0	SLV 3	0	No
fin.	2	-2930	1075.78	5990			2628	999	SLV 3	0.17	No
ini.	2	1341	-338.13	1353			1456	0	SLV 6	0	No
fin.	2	-78	361.29	1839			1487	565	SLV 6	0.31	No
ini.	2	1985	-1110.04	3951			1456	0	SLV 2	0	No
fin.	2	-2419	1052.84	5655			2423	936	SLV 2	0.17	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.535	SLV 15	Si
V_SLV	0	SLV 1	No
PF_SLU	5.807	SLU 78	Si
V_SLU	0.279	SLU 78	No

Trave di accoppiamento 125

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-17.718	6.661	11.32	12.17	0.85	-16.818	6.661	11.32	12.17	0.85	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fthk	fvk0	fthmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-30	-122.38	1026.38	SLU 80	8.39	Si
fin.	3	174	16.94	1026.38	SLU 80	60.58	Si
ini.	3	-10	-122.75	1026.38	SLU 78	8.36	Si
fin.	3	171	13.66	1026.38	SLU 78	75.14	Si
ini.	3	29	-114.46	1026.38	SLU 69	8.97	Si
fin.	3	239	15.4	1026.38	SLU 69	66.66	Si
ini.	3	25	-115.28	1026.38	SLU 70	8.9	Si
fin.	3	239	16.5	1026.38	SLU 70	62.22	Si
ini.	3	-25	-121.55	1026.38	SLU 79	8.44	Si
fin.	3	174	15.84	1026.38	SLU 79	64.78	Si
ini.	3	10	-114.08	1026.38	SLU 71	9	Si
fin.	3	242	18.68	1026.38	SLU 71	54.95	Si
ini.	3	-37	-110.8	1026.38	SLU 36	9.26	Si
fin.	3	149	14.55	1026.38	SLU 36	70.56	Si
ini.	3	-6	-121.93	1026.38	SLU 77	8.42	Si
fin.	3	172	12.56	1026.38	SLU 77	81.72	Si
ini.	3	-56	-110.42	1026.38	SLU 38	9.29	Si
fin.	3	151	17.83	1026.38	SLU 38	57.57	Si
ini.	3	6	-114.9	1026.38	SLU 72	8.93	Si
fin.	3	241	19.78	1026.38	SLU 72	51.89	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-10	-122.75	1984			870	328	SLU 78	0.17	No
fin.	3	171	13.66	-1878			866	288	SLU 78	0.15	No
ini.	3	25	-115.28	1798			866	321	SLU 70	0.18	No
fin.	3	239	16.5	-1636			866	272	SLU 70	0.17	No
ini.	3	-24	-107.27	1880			875	331	SLU 83	0.18	No
fin.	3	49	4.26	-1913			866	316	SLU 83	0.16	No
ini.	3	-30	-122.38	1959			877	332	SLU 80	0.17	No
fin.	3	174	16.94	-1822			866	288	SLU 80	0.16	No
ini.	3	-28	-108.1	1886			876	331	SLU 84	0.18	No
fin.	3	48	5.36	-1911			866	316	SLU 84	0.17	No
ini.	3	29	-114.46	1792			866	320	SLU 69	0.18	No
fin.	3	239	15.4	-1638			866	272	SLU 69	0.17	No
ini.	3	-25	-121.55	1953			875	331	SLU 79	0.17	No
fin.	3	174	15.84	-1824			866	288	SLU 79	0.16	No
ini.	3	11	-104.45	1825			866	324	SLU 74	0.18	No
fin.	3	76	2.2	-1865			866	310	SLU 74	0.17	No
ini.	3	7	-105.27	1831			866	324	SLU 75	0.18	No
fin.	3	75	3.3	-1864			866	310	SLU 75	0.17	No
ini.	3	-6	-121.93	1978			868	327	SLU 77	0.17	No
fin.	3	172	12.56	-1879			866	288	SLU 77	0.15	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	1657	686.1	1539.56	SLV 16	2.24	Si
fin.	2	-3194	-635.52	1539.56	SLV 16	2.42	Si
ini.	2	-555	-413.52	1539.56	SLV 6	3.72	Si
fin.	2	1381	282.35	1539.56	SLV 6	5.45	Si
ini.	2	1592	600.75	1539.56	SLV 14	2.56	Si
fin.	2	-2935	-572.86	1539.56	SLV 14	2.69	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	1592	600.75	1539.56	SLV 13	2.56	Si
fin.	2	-2935	-572.86	1539.56	SLV 13	2.69	Si
ini.	2	-1594	-806.48	1539.56	SLV 2	1.91	Si
fin.	2	3241	630.38	1539.56	SLV 2	2.44	Si
ini.	2	1657	686.1	1539.56	SLV 15	2.24	Si
fin.	2	-3194	-635.52	1539.56	SLV 15	2.42	Si
ini.	2	-1529	-721.13	1539.56	SLV 3	2.13	Si
fin.	2	2982	567.72	1539.56	SLV 3	2.71	Si
ini.	2	-1529	-721.13	1539.56	SLV 4	2.13	Si
fin.	2	2982	567.72	1539.56	SLV 4	2.71	Si
ini.	2	-555	-413.52	1539.56	SLV 5	3.72	Si
fin.	2	1381	282.35	1539.56	SLV 5	5.45	Si
ini.	2	-1594	-806.48	1539.56	SLV 1	1.91	Si
fin.	2	3241	630.38	1539.56	SLV 1	2.44	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-1529	-721.13	4989			1876	739	SLV 4	0.15	No
fin.	2	2982	567.72	2313			1298	0	SLV 4	0	No
ini.	2	1592	600.75	-2729			1298	0	SLV 13	0	No
fin.	2	-2935	-572.86	-4744			2407	910	SLV 13	0.19	No
ini.	2	-1594	-806.48	4604			1901	747	SLV 1	0.16	No
fin.	2	3241	630.38	2728			1298	0	SLV 1	0	No
ini.	2	-555	-413.52	1588			1508	592	SLV 6	0.37	No
fin.	2	1381	282.35	597			1298	0	SLV 6	0	No
ini.	2	-555	-413.52	1588			1508	592	SLV 5	0.37	No
fin.	2	1381	282.35	597			1298	0	SLV 5	0	No
ini.	2	-1594	-806.48	4604			1901	747	SLV 2	0.16	No
fin.	2	3241	630.38	2728			1298	0	SLV 2	0	No
ini.	2	-1529	-721.13	4989			1876	739	SLV 3	0.15	No
fin.	2	2982	567.72	2313			1298	0	SLV 3	0	No
ini.	2	1657	686.1	-2344			1298	0	SLV 16	0	No
fin.	2	-3194	-635.52	-5159			2505	938	SLV 16	0.18	No
ini.	2	1592	600.75	-2729			1298	0	SLV 14	0	No
fin.	2	-2935	-572.86	-4744			2407	910	SLV 14	0.19	No
ini.	2	1657	686.1	-2344			1298	0	SLV 15	0	No
fin.	2	-3194	-635.52	-5159			2505	938	SLV 15	0.18	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.909	SLV 1	Si
V_SLV	0	SLV 1	No
PF_SLU	8.361	SLU 78	Si
V_SLU	0.153	SLU 77	No

Trave di accoppiamento 126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-12.838	6.661	8.62	9.52	0.9	-11.938	6.661	8.62	9.52	0.9	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fhmmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-596	127.03	1150.68	SLU 84	9.06	Si
fin.	3	-269	71.08	1150.68	SLU 84	16.19	Si
ini.	3	-631	127.04	1150.68	SLU 82	9.06	Si
fin.	3	-324	73.12	1150.68	SLU 82	15.74	Si
ini.	3	-589	124.83	1150.68	SLU 75	9.22	Si
fin.	3	-275	71.45	1150.68	SLU 75	16.11	Si
ini.	3	-602	128.13	1150.68	SLU 83	8.98	Si
fin.	3	-263	69.29	1150.68	SLU 83	16.61	Si
ini.	3	-537	122.92	1150.68	SLU 79	9.36	Si
fin.	3	-190	64.62	1150.68	SLU 79	17.81	Si
ini.	3	-561	125.92	1150.68	SLU 77	9.14	Si
fin.	3	-215	67.61	1150.68	SLU 77	17.02	Si
ini.	3	-554	124.82	1150.68	SLU 78	9.22	Si
fin.	3	-220	69.4	1150.68	SLU 78	16.58	Si
ini.	3	-596	125.93	1150.68	SLU 74	9.14	Si
fin.	3	-270	69.66	1150.68	SLU 74	16.52	Si
ini.	3	-638	128.14	1150.68	SLU 81	8.98	Si
fin.	3	-318	71.33	1150.68	SLU 81	16.13	Si
ini.	3	-530	121.82	1150.68	SLU 80	9.45	Si
fin.	3	-195	66.41	1150.68	SLU 80	17.33	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-467	110.77	-2062			1157	456	SLU 71	0.22	No
fin.	3	-146	58.49	1603			1029	396	SLU 71	0.25	No
ini.	3	-530	121.82	-2191			1183	466	SLU 80	0.21	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	3	-195	66.41	1710			1048	405	SLU 80	0.24	No
ini.	3	-596	127.03	-2167			1209	477	SLU 84	0.22	No
fin.	3	-269	71.08	1695			1078	420	SLU 84	0.25	No
ini.	3	-554	124.82	-2232			1192	471	SLU 78	0.21	No
fin.	3	-220	69.4	1752			1059	410	SLU 78	0.23	No
ini.	3	-537	122.92	-2198			1185	468	SLU 79	0.21	No
fin.	3	-190	64.62	1699			1046	404	SLU 79	0.24	No
ini.	3	-561	125.92	-2240			1195	472	SLU 77	0.21	No
fin.	3	-215	67.61	1741			1057	409	SLU 77	0.24	No
ini.	3	-491	113.77	-2104			1167	460	SLU 69	0.22	No
fin.	3	-172	61.49	1645			1039	401	SLU 69	0.24	No
ini.	3	-602	128.13	-2175			1211	479	SLU 83	0.22	No
fin.	3	-263	69.29	1684			1076	419	SLU 83	0.25	No
ini.	3	-460	109.67	-2055			1155	454	SLU 72	0.22	No
fin.	3	-152	60.28	1614			1031	397	SLU 72	0.25	No
ini.	3	-484	112.67	-2096			1164	459	SLU 70	0.22	No
fin.	3	-177	63.28	1656			1041	402	SLU 70	0.24	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-3701	780.03	1726.01	SLV 15	2.21	Si
fin.	2	3046	-638.44	1726.01	SLV 15	2.7	Si
ini.	2	2590	-562.55	1726.01	SLV 4	3.07	Si
fin.	2	-2971	728.61	1726.01	SLV 4	2.37	Si
ini.	2	-3433	735	1726.01	SLV 13	2.35	Si
fin.	2	2562	-631.32	1726.01	SLV 13	2.73	Si
ini.	2	2590	-562.55	1726.01	SLV 3	3.07	Si
fin.	2	-2971	728.61	1726.01	SLV 3	2.37	Si
ini.	2	-1812	362.66	1726.01	SLV 11	4.76	Si
fin.	2	1504	-168.27	1726.01	SLV 11	10.26	Si
ini.	2	-3701	780.03	1726.01	SLV 16	2.21	Si
fin.	2	3046	-638.44	1726.01	SLV 16	2.7	Si
ini.	2	2857	-607.58	1726.01	SLV 2	2.84	Si
fin.	2	-3454	735.73	1726.01	SLV 2	2.35	Si
ini.	2	-1812	362.66	1726.01	SLV 12	4.76	Si
fin.	2	1504	-168.27	1726.01	SLV 12	10.26	Si
ini.	2	-3433	735	1726.01	SLV 14	2.35	Si
fin.	2	2562	-631.32	1726.01	SLV 14	2.73	Si
ini.	2	2857	-607.58	1726.01	SLV 1	2.84	Si
fin.	2	-3454	735.73	1726.01	SLV 1	2.35	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	2857	-607.58	3318			1456	0	SLV 2	0	No
fin.	2	-3454	735.73	5647			2837	1060	SLV 2	0.19	No
ini.	2	2590	-562.55	2902			1456	0	SLV 4	0	No
fin.	2	-2971	728.61	5819			2644	1004	SLV 4	0.17	No
ini.	2	2857	-607.58	3318			1456	0	SLV 1	0	No
fin.	2	-3454	735.73	5647			2837	1060	SLV 1	0.19	No
ini.	2	-1812	362.66	-3528			2180	855	SLV 12	0.24	No
fin.	2	1504	-168.27	59			1456	0	SLV 12	0	No
ini.	2	-3701	780.03	-6244			2936	1087	SLV 16	0.17	No
fin.	2	3046	-638.44	-3352			1456	0	SLV 16	0	No
ini.	2	2590	-562.55	2902			1456	0	SLV 3	0	No
fin.	2	-2971	728.61	5819			2644	1004	SLV 3	0.17	No
ini.	2	-3701	780.03	-6244			2936	1087	SLV 15	0.17	No
fin.	2	3046	-638.44	-3352			1456	0	SLV 15	0	No
ini.	2	-3433	735	-5828			2829	1057	SLV 13	0.18	No
fin.	2	2562	-631.32	-3524			1456	0	SLV 13	0	No
ini.	2	-3433	735	-5828			2829	1057	SLV 14	0.18	No
fin.	2	2562	-631.32	-3524			1456	0	SLV 14	0	No
ini.	2	-1812	362.66	-3528			2180	855	SLV 11	0.24	No
fin.	2	1504	-168.27	59			1456	0	SLV 11	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.213	SLV 15	Si
V_SLV	0	SLV 1	No
PF_SLU	8.98	SLU 81	Si
V_SLU	0.211	SLU 77	No

Trave di accoppiamento 127

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-12.838	6.661	11.32	12.17	0.85	-11.938	6.661	11.32	12.17	0.85	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
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Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-176	-39.65	1026.38	SLU 75	25.89	Si
fin.	3	-264	-83.75	1026.38	SLU 75	12.26	Si
ini.	3	-196	-37.99	1026.38	SLU 73	27.02	Si
fin.	3	-292	-79.9	1026.38	SLU 73	12.85	Si
ini.	3	-159	-37.07	1026.38	SLU 83	27.69	Si
fin.	3	-262	-85.77	1026.38	SLU 83	11.97	Si
ini.	3	-133	-37.97	1026.38	SLU 77	27.03	Si
fin.	3	-212	-84.41	1026.38	SLU 77	12.16	Si
ini.	3	-185	-37.17	1026.38	SLU 81	27.61	Si
fin.	3	-312	-86.6	1026.38	SLU 81	11.85	Si
ini.	3	-117	-35.16	1026.38	SLU 79	29.19	Si
fin.	3	-188	-80.73	1026.38	SLU 79	12.71	Si
ini.	3	-159	-38.08	1026.38	SLU 74	26.96	Si
fin.	3	-261	-85.24	1026.38	SLU 74	12.04	Si
ini.	3	-201	-38.74	1026.38	SLU 82	26.49	Si
fin.	3	-315	-85.11	1026.38	SLU 82	12.06	Si
ini.	3	-175	-38.64	1026.38	SLU 84	26.56	Si
fin.	3	-265	-84.28	1026.38	SLU 84	12.18	Si
ini.	3	-150	-39.55	1026.38	SLU 78	25.95	Si
fin.	3	-215	-82.92	1026.38	SLU 78	12.38	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-150	-39.55	1982			922	355	SLU 78	0.18	No
fin.	3	-215	-82.92	-2129			947	367	SLU 78	0.17	No
ini.	3	-133	-36.73	1948			916	352	SLU 80	0.18	No
fin.	3	-191	-79.24	-2088			938	363	SLU 80	0.17	No
ini.	3	-96	-33.77	1798			902	345	SLU 69	0.19	No
fin.	3	-153	-74.58	-1934			924	356	SLU 69	0.18	No
ini.	3	-159	-38.08	1862			926	357	SLU 74	0.19	No
fin.	3	-261	-85.24	-2050			964	376	SLU 74	0.18	No
ini.	3	-112	-35.34	1811			908	348	SLU 70	0.19	No
fin.	3	-156	-73.09	-1929			925	356	SLU 70	0.18	No
ini.	3	-133	-37.97	1968			916	352	SLU 77	0.18	No
fin.	3	-212	-84.41	-2134			946	367	SLU 77	0.17	No
ini.	3	-117	-35.16	1935			910	349	SLU 79	0.18	No
fin.	3	-188	-80.73	-2094			937	362	SLU 79	0.17	No
ini.	3	-175	-38.64	1916			932	360	SLU 84	0.19	No
fin.	3	-265	-84.28	-2090			966	376	SLU 84	0.18	No
ini.	3	-159	-37.07	1902			926	357	SLU 83	0.19	No
fin.	3	-262	-85.77	-2095			965	376	SLU 83	0.18	No
ini.	3	-176	-39.65	1876			932	360	SLU 75	0.19	No
fin.	3	-264	-83.75	-2044			966	376	SLU 75	0.18	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-2649	-663.99	1539.56	SLV 1	2.32	Si
fin.	2	2238	615.05	1539.56	SLV 1	2.5	Si
ini.	2	2212	588.35	1539.56	SLV 14	2.62	Si
fin.	2	-2355	-676.3	1539.56	SLV 14	2.28	Si
ini.	2	-2649	-663.99	1539.56	SLV 2	2.32	Si
fin.	2	2238	615.05	1539.56	SLV 2	2.5	Si
ini.	2	-2423	-636.71	1539.56	SLV 4	2.42	Si
fin.	2	1988	563.01	1539.56	SLV 4	2.73	Si
ini.	2	1002	209.13	1539.56	SLV 11	7.36	Si
fin.	2	-1289	-337.07	1539.56	SLV 11	4.57	Si
ini.	2	2439	615.63	1539.56	SLV 16	2.5	Si
fin.	2	-2605	-728.34	1539.56	SLV 16	2.11	Si
ini.	2	-2423	-636.71	1539.56	SLV 3	2.42	Si
fin.	2	1988	563.01	1539.56	SLV 3	2.73	Si
ini.	2	2439	615.63	1539.56	SLV 15	2.5	Si
fin.	2	-2605	-728.34	1539.56	SLV 15	2.11	Si
ini.	2	2212	588.35	1539.56	SLV 13	2.62	Si
fin.	2	-2355	-676.3	1539.56	SLV 13	2.28	Si
ini.	2	1002	209.13	1539.56	SLV 12	7.36	Si
fin.	2	-1289	-337.07	1539.56	SLV 12	4.57	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-2423	-636.71	5010			2214	851	SLV 4	0.17	No
fin.	2	1988	563.01	2177			1298	0	SLV 4	0	No
ini.	2	2439	615.63	-2627			1298	0	SLV 15	0	No
fin.	2	-2605	-728.34	-5171			2282	873	SLV 15	0.17	No
ini.	2	2439	615.63	-2627			1298	0	SLV 16	0	No
fin.	2	-2605	-728.34	-5171			2282	873	SLV 16	0.17	No
ini.	2	2212	588.35	-2609			1298	0	SLV 13	0	No
fin.	2	-2355	-676.3	-4851			2188	843	SLV 13	0.17	No
ini.	2	1002	209.13	25			1298	194	SLV 11	7.9	Si
fin.	2	-1289	-337.07	-2972			1785	705	SLV 11	0.24	No
ini.	2	1002	209.13	25			1298	194	SLV 12	7.9	Si
fin.	2	-1289	-337.07	-2972			1785	705	SLV 12	0.24	No
ini.	2	2212	588.35	-2609			1298	0	SLV 14	0	No
fin.	2	-2355	-676.3	-4851			2188	843	SLV 14	0.17	No
ini.	2	-2649	-663.99	5028			2299	878	SLV 1	0.17	No
fin.	2	2238	615.05	2497			1298	0	SLV 1	0	No
ini.	2	-2423	-636.71	5010			2214	851	SLV 3	0.17	No
fin.	2	1988	563.01	2177			1298	0	SLV 3	0	No
ini.	2	-2649	-663.99	5028			2299	878	SLV 2	0.17	No
fin.	2	2238	615.05	2497			1298	0	SLV 2	0	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.114	SLV 15	Si
V_SLV	0	SLV 1	No
PF_SLU	11.852	SLU 81	Si
V_SLU	0.172	SLU 77	No

Trave di accoppiamento 128

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-7.958	6.661	8.62	9.52	0.9	-7.058	6.661	8.62	9.52	0.9	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	95	72.35	1150.68	SLU 75	15.9	Si
fin.	3	41	100.3	1150.68	SLU 75	11.47	Si
ini.	3	69	64.08	1150.68	SLU 60	17.96	Si
fin.	3	-26	104.86	1150.68	SLU 60	10.97	Si
ini.	3	90	72.45	1150.68	SLU 82	15.88	Si
fin.	3	-17	114.74	1150.68	SLU 82	10.03	Si
ini.	3	71	64.2	1150.68	SLU 61	17.92	Si
fin.	3	-21	104.09	1150.68	SLU 61	11.05	Si
ini.	3	93	72.23	1150.68	SLU 74	15.93	Si
fin.	3	36	101.07	1150.68	SLU 74	11.38	Si
ini.	3	109	74.17	1150.68	SLU 83	15.51	Si
fin.	3	40	103.41	1150.68	SLU 83	11.13	Si
ini.	3	111	74.29	1150.68	SLU 84	15.49	Si
fin.	3	45	102.64	1150.68	SLU 84	11.21	Si
ini.	3	88	72.33	1150.68	SLU 81	15.91	Si
fin.	3	-22	115.51	1150.68	SLU 81	9.96	Si
ini.	3	82	62.39	1150.68	SLU 39	18.44	Si
fin.	3	-22	99.84	1150.68	SLU 39	11.53	Si
ini.	3	84	69.05	1150.68	SLU 73	16.66	Si
fin.	3	-4	106.8	1150.68	SLU 73	10.77	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	109	64.55	-1590			970	341	SLU 72	0.21	No
fin.	3	140	65.78	1085			970	333	SLU 72	0.31	No
ini.	3	125	72.66	-1621			970	337	SLU 80	0.21	No
fin.	3	117	83.11	1159			970	339	SLU 80	0.29	No
ini.	3	95	72.35	-1601			970	344	SLU 75	0.21	No
fin.	3	41	100.3	1236			970	356	SLU 75	0.29	No
ini.	3	93	72.23	-1601			970	344	SLU 74	0.22	No
fin.	3	36	101.07	1242			970	357	SLU 74	0.29	No
ini.	3	100	66.09	-1638			970	343	SLU 70	0.21	No
fin.	3	126	70.87	1137			970	337	SLU 70	0.3	No
ini.	3	114	74.07	-1669			970	339	SLU 77	0.2	No
fin.	3	98	88.97	1216			970	343	SLU 77	0.28	No
ini.	3	98	65.97	-1638			970	343	SLU 69	0.21	No
fin.	3	121	71.64	1142			970	338	SLU 69	0.3	No
ini.	3	108	64.43	-1591			970	341	SLU 71	0.21	No
fin.	3	136	66.56	1091			970	334	SLU 71	0.31	No
ini.	3	124	72.54	-1621			970	337	SLU 79	0.21	No
fin.	3	112	83.88	1164			970	340	SLU 79	0.29	No
ini.	3	116	74.19	-1668			970	339	SLU 78	0.2	No
fin.	3	103	88.2	1210			970	342	SLU 78	0.28	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	1403	-211.54	1726.01	SLV 5	8.16	Si
fin.	2	-661	480.54	1726.01	SLV 5	3.59	Si
ini.	2	3102	-557.79	1726.01	SLV 1	3.09	Si
fin.	2	-2154	774.28	1726.01	SLV 1	2.23	Si
ini.	2	2814	-506.85	1726.01	SLV 3	3.41	Si
fin.	2	-2143	644.02	1726.01	SLV 3	2.68	Si
ini.	2	1403	-211.54	1726.01	SLV 6	8.16	Si
fin.	2	-661	480.54	1726.01	SLV 6	3.59	Si
ini.	2	-2713	601.31	1726.01	SLV 14	2.87	Si
fin.	2	2146	-499.17	1726.01	SLV 14	3.46	Si
ini.	2	-3001	652.25	1726.01	SLV 16	2.65	Si
fin.	2	2156	-629.43	1726.01	SLV 16	2.74	Si
ini.	2	-2713	601.31	1726.01	SLV 13	2.87	Si
fin.	2	2146	-499.17	1726.01	SLV 13	3.46	Si
ini.	2	2814	-506.85	1726.01	SLV 4	3.41	Si
fin.	2	-2143	644.02	1726.01	SLV 4	2.68	Si
ini.	2	-3001	652.25	1726.01	SLV 15	2.65	Si
fin.	2	2156	-629.43	1726.01	SLV 15	2.74	Si
ini.	2	3102	-557.79	1726.01	SLV 2	3.09	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	2	-2154	774.28	1726.01	SLV 2	2.23	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	1403	-211.54	875			1456	0	SLV 5	0	No
fin.	2	-661	480.54	1398			1720	676	SLV 5	0.48	No
ini.	2	2814	-506.85	3168			1456	0	SLV 3	0	No
fin.	2	-2143	644.02	4316			2313	900	SLV 3	0.21	No
ini.	2	-3001	652.25	-5779			2656	1007	SLV 15	0.17	No
fin.	2	2156	-629.43	-2266			1456	0	SLV 15	0	No
ini.	2	2814	-506.85	3168			1456	0	SLV 4	0	No
fin.	2	-2143	644.02	4316			2313	900	SLV 4	0.21	No
ini.	2	1403	-211.54	875			1456	0	SLV 6	0	No
fin.	2	-661	480.54	1398			1720	676	SLV 6	0.48	No
ini.	2	3102	-557.79	3555			1456	0	SLV 1	0	No
fin.	2	-2154	774.28	4032			2317	902	SLV 1	0.22	No
ini.	2	3102	-557.79	3555			1456	0	SLV 2	0	No
fin.	2	-2154	774.28	4032			2317	902	SLV 2	0.22	No
ini.	2	-3001	652.25	-5779			2656	1007	SLV 16	0.17	No
fin.	2	2156	-629.43	-2266			1456	0	SLV 16	0	No
ini.	2	-2713	601.31	-5392			2541	973	SLV 14	0.18	No
fin.	2	2146	-499.17	-2549			1456	0	SLV 14	0	No
ini.	2	-2713	601.31	-5392			2541	973	SLV 13	0.18	No
fin.	2	2146	-499.17	-2549			1456	0	SLV 13	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.229	SLV 1	Si
V_SLV	0	SLV 1	No
PF_SLU	9.961	SLU 81	Si
V_SLU	0.203	SLU 78	No

Trave di accoppiamento 129

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-7.958	6.661	11.32	12.17	0.85	-7.058	6.661	11.32	12.17	0.85	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	20	-58.89	1026.38	SLU 60	17.43	Si
fin.	3	176	10.45	1026.38	SLU 60	98.23	Si
ini.	3	-46	-60.88	1026.38	SLU 39	16.86	Si
fin.	3	107	11.32	1026.38	SLU 39	90.71	Si
ini.	3	-7	-67.43	1026.38	SLU 81	15.22	Si
fin.	3	165	12.01	1026.38	SLU 81	85.43	Si
ini.	3	113	-55.45	1026.38	SLU 84	18.51	Si
fin.	3	229	9.04	1026.38	SLU 84	113.6	Si
ini.	3	115	-56.14	1026.38	SLU 83	18.28	Si
fin.	3	229	8.81	1026.38	SLU 83	116.49	Si
ini.	3	137	-55.48	1026.38	SLU 74	18.5	Si
fin.	3	250	6.02	1026.38	SLU 74	170.53	Si
ini.	3	25	-60.06	1026.38	SLU 73	17.09	Si
fin.	3	184	10.7	1026.38	SLU 73	95.94	Si
ini.	3	-9	-66.74	1026.38	SLU 82	15.38	Si
fin.	3	165	12.24	1026.38	SLU 82	83.87	Si
ini.	3	18	-58.2	1026.38	SLU 61	17.64	Si
fin.	3	177	10.67	1026.38	SLU 61	96.16	Si
ini.	3	-48	-60.19	1026.38	SLU 40	17.05	Si
fin.	3	108	11.54	1026.38	SLU 40	88.94	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	273	-38.63	1639			866	264	SLU 79	0.16	No
fin.	3	311	3.92	-1968			866	254	SLU 79	0.13	No
ini.	3	256	-43.51	1701			866	268	SLU 78	0.16	No
fin.	3	315	3.04	-2027			866	253	SLU 78	0.12	No
ini.	3	115	-56.14	1777			866	301	SLU 83	0.17	No
fin.	3	229	8.81	-2011			866	275	SLU 83	0.14	No
ini.	3	271	-37.94	1640			866	264	SLU 80	0.16	No
fin.	3	311	4.14	-1968			866	254	SLU 80	0.13	No
ini.	3	343	-29.68	1446			866	246	SLU 69	0.17	No
fin.	3	355	-1.13	-1790			866	242	SLU 69	0.14	No
ini.	3	134	-54.8	1730			866	297	SLU 75	0.17	No
fin.	3	250	6.24	-1968			866	270	SLU 75	0.14	No
ini.	3	137	-55.48	1729			866	296	SLU 74	0.17	No
fin.	3	250	6.02	-1968			866	270	SLU 74	0.14	No
ini.	3	340	-28.99	1447			866	246	SLU 70	0.17	No
fin.	3	356	-0.9	-1790			866	242	SLU 70	0.14	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	113	-55.45	1778			866	302	SLU 84	0.17	No
fin.	3	229	9.04	-2011			866	275	SLU 84	0.14	No
ini.	3	259	-44.19	1700			866	267	SLU 77	0.16	No
fin.	3	314	2.82	-2027			866	253	SLU 77	0.12	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-2126	-584.51	1539.56	SLV 3	2.63	Si
fin.	2	1826	505.42	1539.56	SLV 3	3.05	Si
ini.	2	-2126	-584.51	1539.56	SLV 4	2.63	Si
fin.	2	1826	505.42	1539.56	SLV 4	3.05	Si
ini.	2	2536	543.2	1539.56	SLV 16	2.83	Si
fin.	2	-1773	-544.8	1539.56	SLV 16	2.83	Si
ini.	2	-1083	-265.78	1539.56	SLV 6	5.79	Si
fin.	2	1157	247.83	1539.56	SLV 6	6.21	Si
ini.	2	2536	543.2	1539.56	SLV 15	2.83	Si
fin.	2	-1773	-544.8	1539.56	SLV 15	2.83	Si
ini.	2	2264	508.14	1539.56	SLV 13	3.03	Si
fin.	2	-1500	-494.03	1539.56	SLV 13	3.12	Si
ini.	2	-1083	-265.78	1539.56	SLV 5	5.79	Si
fin.	2	1157	247.83	1539.56	SLV 5	6.21	Si
ini.	2	-2398	-619.57	1539.56	SLV 2	2.48	Si
fin.	2	2099	556.18	1539.56	SLV 2	2.77	Si
ini.	2	2264	508.14	1539.56	SLV 14	3.03	Si
fin.	2	-1500	-494.03	1539.56	SLV 14	3.12	Si
ini.	2	-2398	-619.57	1539.56	SLV 1	2.48	Si
fin.	2	2099	556.18	1539.56	SLV 1	2.77	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	1222	189.41	737			1298	0	SLV 11	0	No
fin.	2	-831	-236.45	-2848			1613	637	SLV 11	0.22	No
ini.	2	2264	508.14	-2130			1298	0	SLV 13	0	No
fin.	2	-1500	-494.03	-4486			1865	735	SLV 13	0.16	No
ini.	2	1222	189.41	737			1298	0	SLV 12	0	No
fin.	2	-831	-236.45	-2848			1613	637	SLV 12	0.22	No
ini.	2	-2126	-584.51	4400			2102	816	SLV 3	0.19	No
fin.	2	1826	505.42	1973			1298	0	SLV 3	0	No
ini.	2	2536	543.2	-1810			1298	0	SLV 16	0	No
fin.	2	-1773	-544.8	-4828			1968	771	SLV 16	0.16	No
ini.	2	2536	543.2	-1810			1298	0	SLV 15	0	No
fin.	2	-1773	-544.8	-4828			1968	771	SLV 15	0.16	No
ini.	2	-2398	-619.57	4080			2204	848	SLV 1	0.21	No
fin.	2	2099	556.18	2315			1298	0	SLV 1	0	No
ini.	2	-2398	-619.57	4080			2204	848	SLV 2	0.21	No
fin.	2	2099	556.18	2315			1298	0	SLV 2	0	No
ini.	2	2264	508.14	-2130			1298	0	SLV 14	0	No
fin.	2	-1500	-494.03	-4486			1865	735	SLV 14	0.16	No
ini.	2	-2126	-584.51	4400			2102	816	SLV 4	0.19	No
fin.	2	1826	505.42	1973			1298	0	SLV 4	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.485	SLV 1	Si
V_SLV	0	SLV 1	No
PF_SLU	15.222	SLU 81	Si
V_SLU	0.125	SLU 78	No

Trave di accoppiamento 130

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-19.868	1.046	10.72	12.17	1.45	-20.668	1.046	10.72	12.17	1.45	0.8	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1523	183.8	2986.79	SLU 40	16.25	Si
fin.	3	-1523	428.01	2986.79	SLU 40	6.98	Si
ini.	3	-1271	391.11	2986.79	SLU 35	7.64	Si
fin.	3	-1271	218.84	2986.79	SLU 35	13.65	Si
ini.	3	-1294	162.37	2986.79	SLU 73	18.39	Si
fin.	3	-1294	408.05	2986.79	SLU 73	7.32	Si
ini.	3	-1515	217.93	2986.79	SLU 82	13.7	Si
fin.	3	-1515	433.35	2986.79	SLU 82	6.89	Si
ini.	3	-1210	400.73	2986.79	SLU 37	7.45	Si
fin.	3	-1210	179.83	2986.79	SLU 37	16.61	Si
ini.	3	-1202	434.87	2986.79	SLU 79	6.87	Si
fin.	3	-1202	185.17	2986.79	SLU 79	16.13	Si
ini.	3	-716	421.01	2986.79	SLU 71	7.09	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	3	-716	49.61	2986.79	SLU 71	60.2	Si
ini.	3	-1301	128.24	2986.79	SLU 31	23.29	Si
fin.	3	-1301	402.71	2986.79	SLU 31	7.42	Si
ini.	3	-1263	425.24	2986.79	SLU 77	7.02	Si
fin.	3	-1263	224.18	2986.79	SLU 77	13.32	Si
ini.	3	-776	411.39	2986.79	SLU 69	7.26	Si
fin.	3	-776	88.62	2986.79	SLU 69	33.7	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-796	376.68	471			1882	741	SLU 58	1.57	Si
fin.	3	-796	107.07	-1151			1882	741	SLU 58	0.64	No
ini.	3	-716	421.01	314			1850	728	SLU 71	2.32	Si
fin.	3	-716	49.61	-1247			1850	728	SLU 71	0.58	No
ini.	3	-309	362.83	123			1687	652	SLU 50	5.29	Si
fin.	3	-309	-28.48	-1107			1687	652	SLU 50	0.59	No
ini.	3	-1515	217.93	1327			2169	857	SLU 82	0.65	No
fin.	3	-1515	433.35	-793			2169	857	SLU 82	1.08	Si
ini.	3	-723	386.88	252			1853	729	SLU 29	2.89	Si
fin.	3	-723	44.27	-1112			1853	729	SLU 29	0.66	No
ini.	3	-776	411.39	375			1874	738	SLU 69	1.97	Si
fin.	3	-776	88.62	-1187			1874	738	SLU 69	0.62	No
ini.	3	-369	353.21	184			1711	664	SLU 48	3.61	Si
fin.	3	-369	10.53	-1046			1711	664	SLU 48	0.63	No
ini.	3	-697	346.57	468			1842	724	SLU 72	1.55	Si
fin.	3	-697	98.81	-1093			1842	724	SLU 72	0.66	No
ini.	3	-1294	162.37	1281			2081	823	SLU 73	0.64	No
fin.	3	-1294	408.05	-671			2081	823	SLU 73	1.23	Si
ini.	3	-1202	434.87	662			2045	809	SLU 79	1.22	Si
fin.	3	-1202	185.17	-1291			2045	809	SLU 79	0.63	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-1686	4688.52	4480.18	SLV 2	0.96	No
fin.	2	-2211	-3957.96	4480.18	SLV 2	1.13	Si
ini.	2	-1232	4285.13	4480.18	SLV 3	1.05	Si
fin.	2	-1836	-3624.43	4480.18	SLV 3	1.24	Si
ini.	2	-1232	4285.13	4480.18	SLV 4	1.05	Si
fin.	2	-1836	-3624.43	4480.18	SLV 4	1.24	Si
ini.	2	-1686	4688.52	4480.18	SLV 1	0.96	No
fin.	2	-2211	-3957.96	4480.18	SLV 1	1.13	Si
ini.	2	-1682	2158.96	4480.18	SLV 6	2.08	Si
fin.	2	-1717	-1575.55	4480.18	SLV 6	2.84	Si
ini.	2	-157	-3883.43	4480.18	SLV 13	1.15	Si
fin.	2	448	3960.65	4480.18	SLV 13	1.13	Si
ini.	2	298	-4286.82	4480.18	SLV 15	1.05	Si
fin.	2	822	4294.17	4480.18	SLV 15	1.04	Si
ini.	2	298	-4286.82	4480.18	SLV 16	1.05	Si
fin.	2	822	4294.17	4480.18	SLV 16	1.04	Si
ini.	2	-1682	2158.96	4480.18	SLV 5	2.08	Si
fin.	2	-1717	-1575.55	4480.18	SLV 5	2.84	Si
ini.	2	-157	-3883.43	4480.18	SLV 14	1.15	Si
fin.	2	448	3960.65	4480.18	SLV 14	1.13	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	293	-1757.26	5260			2345	816	SLV 12	0.16	No
fin.	2	329	1911.77	3947			2345	808	SLV 12	0.2	No
ini.	2	293	-1757.26	5260			2345	816	SLV 11	0.16	No
fin.	2	329	1911.77	3947			2345	808	SLV 11	0.2	No
ini.	2	-1232	4285.13	-9532			2838	1119	SLV 4	0.12	No
fin.	2	-1836	-3624.43	-10785			3080	1218	SLV 4	0.11	No
ini.	2	-1686	4688.52	-10440			3020	1194	SLV 2	0.11	No
fin.	2	-2211	-3957.96	-11651			3230	1276	SLV 2	0.11	No
ini.	2	298	-4286.82	11594			2345	815	SLV 15	0.07	No
fin.	2	822	4294.17	10326			2345	681	SLV 15	0.07	No
ini.	2	-1232	4285.13	-9532			2838	1119	SLV 3	0.12	No
fin.	2	-1836	-3624.43	-10785			3080	1218	SLV 3	0.11	No
ini.	2	-1686	4688.52	-10440			3020	1194	SLV 1	0.11	No
fin.	2	-2211	-3957.96	-11651			3230	1276	SLV 1	0.11	No
ini.	2	-157	-3883.43	10686			2408	916	SLV 13	0.09	No
fin.	2	448	3960.65	9460			2345	779	SLV 13	0.08	No
ini.	2	298	-4286.82	11594			2345	815	SLV 16	0.07	No
fin.	2	822	4294.17	10326			2345	681	SLV 16	0.07	No
ini.	2	-157	-3883.43	10686			2408	916	SLV 14	0.09	No
fin.	2	448	3960.65	9460			2345	779	SLV 14	0.08	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.956	SLV 1	No
V_SLV	0.066	SLV 15	No
PF_SLU	6.868	SLU 79	Si
V_SLU	0.583	SLU 71	No

Trave di accoppiamento 131

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-11.163	1.046	11.12	12.17	1.05	-12.283	1.046	11.12	12.17	1.05	1.12	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1455	-583.12	1566.2	SLU 84	2.69	Si
fin.	3	-1455	305.43	1566.2	SLU 84	5.13	Si
ini.	3	-1393	-569.25	1566.2	SLU 75	2.75	Si
fin.	3	-1393	335.97	1566.2	SLU 75	4.66	Si
ini.	3	-1343	-564.37	1566.2	SLU 81	2.78	Si
fin.	3	-1343	232.6	1566.2	SLU 81	6.73	Si
ini.	3	-1344	-558.24	1566.2	SLU 82	2.81	Si
fin.	3	-1344	247.84	1566.2	SLU 82	6.32	Si
ini.	3	-1503	-594.13	1566.2	SLU 78	2.64	Si
fin.	3	-1503	393.56	1566.2	SLU 78	3.98	Si
ini.	3	-1454	-589.25	1566.2	SLU 83	2.66	Si
fin.	3	-1454	290.19	1566.2	SLU 83	5.4	Si
ini.	3	-1392	-575.38	1566.2	SLU 74	2.72	Si
fin.	3	-1392	320.72	1566.2	SLU 74	4.88	Si
ini.	3	-1451	-584.35	1566.2	SLU 80	2.68	Si
fin.	3	-1451	396.15	1566.2	SLU 80	3.95	Si
ini.	3	-1503	-600.26	1566.2	SLU 77	2.61	Si
fin.	3	-1503	378.32	1566.2	SLU 77	4.14	Si
ini.	3	-1450	-590.48	1566.2	SLU 79	2.65	Si
fin.	3	-1450	380.91	1566.2	SLU 79	4.11	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1236	-538.97	1527			1525	601	SLU 70	0.39	No
fin.	3	-1236	470.87	243			1525	601	SLU 70	2.47	Si
ini.	3	-1503	-594.13	1651			1625	636	SLU 78	0.39	No
fin.	3	-1503	393.56	80			1625	636	SLU 78	7.99	Si
ini.	3	-1450	-590.48	1636			1605	629	SLU 79	0.38	No
fin.	3	-1450	380.91	65			1605	629	SLU 79	9.68	Si
ini.	3	-1454	-589.25	1616			1607	630	SLU 83	0.39	No
fin.	3	-1454	290.19	-79			1607	630	SLU 83	8	Si
ini.	3	-1503	-600.26	1643			1625	636	SLU 77	0.39	No
fin.	3	-1503	378.32	71			1625	636	SLU 77	8.9	Si
ini.	3	-1455	-583.12	1624			1607	630	SLU 84	0.39	No
fin.	3	-1455	305.43	-71			1607	630	SLU 84	8.93	Si
ini.	3	-1183	-535.33	1513			1505	593	SLU 71	0.39	No
fin.	3	-1183	458.22	228			1505	593	SLU 71	2.6	Si
ini.	3	-1341	-555.39	1576			1564	615	SLU 76	0.39	No
fin.	3	-1341	348.73	5			1564	615	SLU 76	124.54	Si
ini.	3	-1183	-529.2	1521			1505	593	SLU 72	0.39	No
fin.	3	-1183	473.46	237			1505	593	SLU 72	2.51	Si
ini.	3	-1451	-584.35	1645			1606	629	SLU 80	0.38	No
fin.	3	-1451	396.15	73			1606	629	SLU 80	8.6	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	2563	-2375.97	2349.3	SLV 15	0.99	No
fin.	2	2995	5393.37	2349.3	SLV 15	0.44	No
ini.	2	-4078	1645.04	2349.3	SLV 1	1.43	Si
fin.	2	-4509	-4899.47	2349.3	SLV 1	0.48	No
ini.	2	3040	-3250.12	2349.3	SLV 14	0.72	No
fin.	2	3434	5716.21	2349.3	SLV 14	0.41	No
ini.	2	1106	-2556.65	2349.3	SLV 9	0.92	No
fin.	2	1166	2377.36	2349.3	SLV 9	0.99	No
ini.	2	3040	-3250.12	2349.3	SLV 13	0.72	No
fin.	2	3434	5716.21	2349.3	SLV 13	0.41	No
ini.	2	1106	-2556.65	2349.3	SLV 10	0.92	No
fin.	2	1166	2377.36	2349.3	SLV 10	0.99	No
ini.	2	2563	-2375.97	2349.3	SLV 16	0.99	No
fin.	2	2995	5393.37	2349.3	SLV 16	0.44	No
ini.	2	-4555	2519.19	2349.3	SLV 4	0.93	No
fin.	2	-4948	-5222.3	2349.3	SLV 4	0.45	No
ini.	2	-4078	1645.04	2349.3	SLV 2	1.43	Si
fin.	2	-4509	-4899.47	2349.3	SLV 2	0.48	No
ini.	2	-4555	2519.19	2349.3	SLV 3	0.93	No
fin.	2	-4948	-5222.3	2349.3	SLV 3	0.45	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-4555	2519.19	-6482			3300	1213	SLV 3	0.19	No
fin.	2	-4948	-5222.3	-7508			3448	1252	SLV 3	0.17	No
ini.	2	2563	-2375.97	7528			1592	0	SLV 16	0	No
fin.	2	2995	5393.37	6499			1592	0	SLV 16	0	No
ini.	2	-4078	1645.04	-5434			3121	1164	SLV 2	0.21	No
fin.	2	-4509	-4899.47	-6458			3283	1208	SLV 2	0.19	No
ini.	2	-4555	2519.19	-6482			3300	1213	SLV 4	0.19	No
fin.	2	-4948	-5222.3	-7508			3448	1252	SLV 4	0.17	No
ini.	2	3040	-3250.12	8576			1592	0	SLV 13	0	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	2	3434	5716.21	7549			1592	0	SLV 13	0	No
ini.	2	-4078	1645.04	-5434			3121	1164	SLV 1	0.21	No
fin.	2	-4509	-4899.47	-6458			3283	1208	SLV 1	0.19	No
ini.	2	2563	-2375.97	7528			1592	0	SLV 15	0	No
fin.	2	2995	5393.37	6499			1592	0	SLV 15	0	No
ini.	2	1106	-2556.65	4896			1592	298	SLV 9	0.06	No
fin.	2	1166	2377.36	3871			1592	273	SLV 9	0.07	No
ini.	2	3040	-3250.12	8576			1592	0	SLV 14	0	No
fin.	2	3434	5716.21	7549			1592	0	SLV 14	0	No
ini.	2	1106	-2556.65	4896			1592	298	SLV 10	0.06	No
fin.	2	1166	2377.36	3871			1592	273	SLV 10	0.07	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF SLV	0.411	SLV 13	No
V SLV	0	SLV 13	No
PF SLU	2.609	SLU 77	Si
V SLU	0.383	SLU 80	No

Trave di accoppiamento 132

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-9.386	1.046	11.12	12.17	1.05	-10.466	1.046	11.12	12.17	1.05	1.08	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fthk	fvk0	fthmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1198	324.92	1566.2	SLU 81	4.82	Si
fin.	3	-1198	-401.73	1566.2	SLU 81	3.9	Si
ini.	3	-1154	382.7	1566.2	SLU 39	4.09	Si
fin.	3	-1154	-402.69	1566.2	SLU 39	3.89	Si
ini.	3	-1200	296.43	1566.2	SLU 74	5.28	Si
fin.	3	-1200	-394.97	1566.2	SLU 74	3.97	Si
ini.	3	-1240	349.53	1566.2	SLU 35	4.48	Si
fin.	3	-1240	-401.43	1566.2	SLU 35	3.9	Si
ini.	3	-1156	354.2	1566.2	SLU 32	4.42	Si
fin.	3	-1156	-395.94	1566.2	SLU 32	3.96	Si
ini.	3	-1283	320.25	1566.2	SLU 83	4.89	Si
fin.	3	-1282	-407.22	1566.2	SLU 83	3.85	Si
ini.	3	-1198	315.25	1566.2	SLU 37	4.97	Si
fin.	3	-1198	-378.77	1566.2	SLU 37	4.13	Si
ini.	3	-1285	291.76	1566.2	SLU 77	5.37	Si
fin.	3	-1285	-400.46	1566.2	SLU 77	3.91	Si
ini.	3	-1238	378.02	1566.2	SLU 41	4.14	Si
fin.	3	-1238	-408.19	1566.2	SLU 41	3.84	Si
ini.	3	-1234	327.73	1566.2	SLU 42	4.78	Si
fin.	3	-1234	-378.94	1566.2	SLU 42	4.13	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1194	274.63	-457			1565	617	SLU 82	1.35	Si
fin.	3	-1194	-372.48	-1310			1565	617	SLU 82	0.47	No
ini.	3	-1238	378.02	-667			1582	623	SLU 41	0.93	No
fin.	3	-1238	-408.19	-1349			1582	623	SLU 41	0.46	No
ini.	3	-1283	320.25	-626			1600	629	SLU 83	1.01	Si
fin.	3	-1282	-407.22	-1341			1600	629	SLU 83	0.47	No
ini.	3	-1200	296.43	-610			1568	618	SLU 74	1.01	Si
fin.	3	-1200	-394.97	-1244			1568	618	SLU 74	0.5	No
ini.	3	-1278	269.96	-530			1598	629	SLU 84	1.19	Si
fin.	3	-1278	-377.98	-1278			1598	629	SLU 84	0.49	No
ini.	3	-1149	332.41	-498			1548	611	SLU 40	1.23	Si
fin.	3	-1149	-373.45	-1319			1548	611	SLU 40	0.46	No
ini.	3	-1156	354.2	-651			1550	612	SLU 32	0.94	No
fin.	3	-1156	-395.94	-1252			1550	612	SLU 32	0.49	No
ini.	3	-1198	324.92	-553			1567	618	SLU 81	1.12	Si
fin.	3	-1198	-401.73	-1374			1567	618	SLU 81	0.45	No
ini.	3	-1154	382.7	-594			1549	611	SLU 39	1.03	Si
fin.	3	-1154	-402.69	-1382			1549	611	SLU 39	0.44	No
ini.	3	-1234	327.73	-571			1581	623	SLU 42	1.09	Si
fin.	3	-1234	-378.94	-1286			1581	623	SLU 42	0.48	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	1171	-4807.95	2349.3	SLV 15	0.49	No
fin.	2	1976	1477.91	2349.3	SLV 15	1.59	Si
ini.	2	-2582	4164.72	2349.3	SLV 3	0.56	No
fin.	2	-3434	-882.69	2349.3	SLV 3	2.66	Si
ini.	2	-2582	4164.72	2349.3	SLV 4	0.56	No
fin.	2	-3434	-882.69	2349.3	SLV 4	2.66	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-921	2853.77	2349.3	SLV 6	0.82	No
fin.	2	-1090	-2269.48	2349.3	SLV 6	1.04	Si
ini.	2	1332	-3963.58	2349.3	SLV 13	0.59	No
fin.	2	2184	456.53	2349.3	SLV 13	5.15	Si
ini.	2	1332	-3963.58	2349.3	SLV 14	0.59	No
fin.	2	2184	456.53	2349.3	SLV 14	5.15	Si
ini.	2	-2422	5009.1	2349.3	SLV 2	0.47	No
fin.	2	-3226	-1904.07	2349.3	SLV 2	1.23	Si
ini.	2	-921	2853.77	2349.3	SLV 5	0.82	No
fin.	2	-1090	-2269.48	2349.3	SLV 5	1.04	Si
ini.	2	-2422	5009.1	2349.3	SLV 1	0.47	No
fin.	2	-3226	-1904.07	2349.3	SLV 1	1.23	Si
ini.	2	1171	-4807.95	2349.3	SLV 16	0.49	No
fin.	2	1976	1477.91	2349.3	SLV 16	1.59	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	1332	-3963.58	7396			1651	191	SLV 13	0.03	No
fin.	2	2184	456.53	2728			1651	0	SLV 13	0	No
ini.	2	1332	-3963.58	7396			1651	191	SLV 14	0.03	No
fin.	2	2184	456.53	2728			1651	0	SLV 14	0	No
ini.	2	-2582	4164.72	-7893			2655	1032	SLV 4	0.13	No
fin.	2	-3434	-882.69	-4082			2987	1135	SLV 4	0.28	No
ini.	2	1171	-4807.95	6102			1651	280	SLV 16	0.05	No
fin.	2	1976	1477.91	5303			1651	0	SLV 16	0	No
ini.	2	-921	2853.77	-193			2009	793	SLV 6	4.11	Si
fin.	2	-1090	-2269.48	-6376			2075	820	SLV 6	0.13	No
ini.	2	-329	-2652.62	-304			1779	687	SLV 12	2.26	Si
fin.	2	-160	1843.32	5022			1713	654	SLV 12	0.13	No
ini.	2	-2582	4164.72	-7893			2655	1032	SLV 3	0.13	No
fin.	2	-3434	-882.69	-4082			2987	1135	SLV 3	0.28	No
ini.	2	1171	-4807.95	6102			1651	280	SLV 15	0.05	No
fin.	2	1976	1477.91	5303			1651	0	SLV 15	0	No
ini.	2	-921	2853.77	-193			2009	793	SLV 5	4.11	Si
fin.	2	-1090	-2269.48	-6376			2075	820	SLV 5	0.13	No
ini.	2	-329	-2652.62	-304			1779	687	SLV 11	2.26	Si
fin.	2	-160	1843.32	5022			1713	654	SLV 11	0.13	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.469	SLV 1	No
V_SLV	0	SLV 13	No
PF_SLU	3.837	SLU 41	Si
V_SLU	0.442	SLU 39	No

Trave di accoppiamento 133

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-6.478	1.046	10.72	12.17	1.45	-7.278	1.046	10.72	12.17	1.45	0.8	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fhmmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1228	-765.9	2986.79	SLU 79	3.9	Si
fin.	3	-1228	1140.96	2986.79	SLU 79	2.62	Si
ini.	3	-1246	-762.92	2986.79	SLU 77	3.91	Si
fin.	3	-1246	1147.5	2986.79	SLU 77	2.6	Si
ini.	3	-1149	-816.29	2986.79	SLU 75	3.66	Si
fin.	3	-1149	1126.28	2986.79	SLU 75	2.65	Si
ini.	3	-1179	-856.69	2986.79	SLU 80	3.49	Si
fin.	3	-1179	1197.58	2986.79	SLU 80	2.49	Si
ini.	3	-1222	-818.05	2986.79	SLU 82	3.65	Si
fin.	3	-1222	1103.74	2986.79	SLU 82	2.71	Si
ini.	3	-908	-814.02	2986.79	SLU 57	3.67	Si
fin.	3	-908	1093.37	2986.79	SLU 57	2.73	Si
ini.	3	-1271	-855.47	2986.79	SLU 84	3.49	Si
fin.	3	-1271	1181.58	2986.79	SLU 84	2.53	Si
ini.	3	-1320	-764.69	2986.79	SLU 83	3.91	Si
fin.	3	-1320	1124.96	2986.79	SLU 83	2.66	Si
ini.	3	-1197	-853.71	2986.79	SLU 78	3.5	Si
fin.	3	-1197	1204.12	2986.79	SLU 78	2.48	Si
ini.	3	-1098	-879.8	2986.79	SLU 76	3.39	Si
fin.	3	-1098	1157.49	2986.79	SLU 76	2.58	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1149	-816.29	3418			2023	800	SLU 75	0.23	No
fin.	3	-1149	1126.28	1364			2023	800	SLU 75	0.59	No
ini.	3	-1098	-879.8	3537			2003	792	SLU 76	0.22	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	3	-1098	1157.49	1483			2003	792	SLU 76	0.53	No
ini.	3	-1271	-855.47	3627			2072	819	SLU 84	0.23	No
fin.	3	-1271	1181.58	1392			2072	819	SLU 84	0.59	No
ini.	3	-1197	-853.71	3562			2042	808	SLU 78	0.23	No
fin.	3	-1197	1204.12	1508			2042	808	SLU 78	0.54	No
ini.	3	-1049	-842.38	3393			1983	784	SLU 73	0.23	No
fin.	3	-1049	1079.65	1339			1983	784	SLU 73	0.59	No
ini.	3	-981	-815.78	3262			1956	773	SLU 63	0.24	No
fin.	3	-981	1070.83	1377			1956	773	SLU 63	0.56	No
ini.	3	-889	-817	3194			1919	757	SLU 59	0.24	No
fin.	3	-889	1086.83	1489			1919	757	SLU 59	0.51	No
ini.	3	-808	-840.1	3172			1887	744	SLU 55	0.23	No
fin.	3	-808	1046.74	1467			1887	744	SLU 55	0.51	No
ini.	3	-1222	-818.05	3483			2052	812	SLU 82	0.23	No
fin.	3	-1222	1103.74	1248			2052	812	SLU 82	0.65	No
ini.	3	-1179	-856.69	3558			2035	805	SLU 80	0.23	No
fin.	3	-1179	1197.58	1504			2035	805	SLU 80	0.54	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-740	2986.01	4480.18	SLV 3	1.5	Si
fin.	2	-1332	-3855.75	4480.18	SLV 3	1.16	Si
ini.	2	-554	-3950.06	4480.18	SLV 13	1.13	Si
fin.	2	38	5183.35	4480.18	SLV 13	0.86	No
ini.	2	-1679	-3928.92	4480.18	SLV 16	1.14	Si
fin.	2	-1152	5179.68	4480.18	SLV 16	0.86	No
ini.	2	-554	-3950.06	4480.18	SLV 14	1.13	Si
fin.	2	38	5183.35	4480.18	SLV 14	0.86	No
ini.	2	385	2964.87	4480.18	SLV 1	1.51	Si
fin.	2	-142	-3852.08	4480.18	SLV 1	1.16	Si
ini.	2	1087	-1554.49	4480.18	SLV 10	2.88	Si
fin.	2	1363	2025.23	4480.18	SLV 10	2.21	Si
ini.	2	1087	-1554.49	4480.18	SLV 9	2.88	Si
fin.	2	1363	2025.23	4480.18	SLV 9	2.21	Si
ini.	2	-1679	-3928.92	4480.18	SLV 15	1.14	Si
fin.	2	-1152	5179.68	4480.18	SLV 15	0.86	No
ini.	2	385	2964.87	4480.18	SLV 2	1.51	Si
fin.	2	-142	-3852.08	4480.18	SLV 2	1.16	Si
ini.	2	-740	2986.01	4480.18	SLV 4	1.5	Si
fin.	2	-1332	-3855.75	4480.18	SLV 4	1.16	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-740	2986.01	-8472			2641	1031	SLV 3	0.12	No
fin.	2	-1332	-3855.75	-10048			2878	1136	SLV 3	0.11	No
ini.	2	-740	2986.01	-8472			2641	1031	SLV 4	0.12	No
fin.	2	-1332	-3855.75	-10048			2878	1136	SLV 4	0.11	No
ini.	2	-1679	-3928.92	12085			3017	1193	SLV 15	0.1	No
fin.	2	-1152	5179.68	10503			2806	1105	SLV 15	0.11	No
ini.	2	1087	-1554.49	5959			2345	601	SLV 10	0.1	No
fin.	2	1363	2025.23	5590			2345	506	SLV 10	0.09	No
ini.	2	-554	-3950.06	12578			2567	996	SLV 13	0.08	No
fin.	2	38	5183.35	11555			2345	874	SLV 13	0.08	No
ini.	2	385	2964.87	-7979			2345	794	SLV 1	0.1	No
fin.	2	-142	-3852.08	-8996			2402	913	SLV 1	0.1	No
ini.	2	385	2964.87	-7979			2345	794	SLV 2	0.1	No
fin.	2	-142	-3852.08	-8996			2402	913	SLV 2	0.1	No
ini.	2	-554	-3950.06	12578			2567	996	SLV 14	0.08	No
fin.	2	38	5183.35	11555			2345	874	SLV 14	0.08	No
ini.	2	-1679	-3928.92	12085			3017	1193	SLV 16	0.1	No
fin.	2	-1152	5179.68	10503			2806	1105	SLV 16	0.11	No
ini.	2	1087	-1554.49	5959			2345	601	SLV 9	0.1	No
fin.	2	1363	2025.23	5590			2345	506	SLV 9	0.09	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.864	SLV 13	No
V_SLV	0.076	SLV 13	No
PF_SLU	2.48	SLU 78	Si
V_SLU	0.224	SLU 76	No

Trave di accoppiamento 134

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-4.168	1.046	10.72	12.17	1.45	-4.968	1.046	10.72	12.17	1.45	0.8	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
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Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1267	-546.64	2986.79	SLU 79	5.46	Si
fin.	3	-1267	334	2986.79	SLU 79	8.94	Si
ini.	3	-739	-525.77	2986.79	SLU 49	5.68	Si
fin.	3	-739	228.88	2986.79	SLU 49	13.05	Si
ini.	3	-1011	-545.14	2986.79	SLU 72	5.48	Si
fin.	3	-1011	260.59	2986.79	SLU 72	11.46	Si
ini.	3	-964	-572.47	2986.79	SLU 69	5.22	Si
fin.	3	-964	341.34	2986.79	SLU 69	8.75	Si
ini.	3	-980	-599.51	2986.79	SLU 71	4.98	Si
fin.	3	-980	348.15	2986.79	SLU 71	8.58	Si
ini.	3	-709	-580.14	2986.79	SLU 48	5.15	Si
fin.	3	-709	316.44	2986.79	SLU 48	9.44	Si
ini.	3	-1011	-554.31	2986.79	SLU 58	5.39	Si
fin.	3	-1011	309.1	2986.79	SLU 58	9.66	Si
ini.	3	-725	-607.18	2986.79	SLU 50	4.92	Si
fin.	3	-725	323.25	2986.79	SLU 50	9.24	Si
ini.	3	-995	-527.27	2986.79	SLU 56	5.66	Si
fin.	3	-995	302.29	2986.79	SLU 56	9.88	Si
ini.	3	-756	-552.81	2986.79	SLU 51	5.4	Si
fin.	3	-756	235.69	2986.79	SLU 51	12.67	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1267	-546.64	2112			2070	819	SLU 79	0.39	No
fin.	3	-1267	334	162			2070	819	SLU 79	5.05	Si
ini.	3	-1322	-429.46	1967			2092	827	SLU 83	0.42	No
fin.	3	-1322	267.62	-151			2092	827	SLU 83	5.47	Si
ini.	3	-964	-572.47	1958			1949	770	SLU 69	0.39	No
fin.	3	-964	341.34	399			1949	770	SLU 69	1.93	Si
ini.	3	-995	-527.27	1888			1962	775	SLU 56	0.41	No
fin.	3	-995	302.29	262			1962	775	SLU 56	2.95	Si
ini.	3	-1297	-492.26	1935			2082	823	SLU 80	0.43	No
fin.	3	-1297	246.44	-15			2082	823	SLU 80	53.32	Si
ini.	3	-1250	-519.6	2070			2064	816	SLU 77	0.39	No
fin.	3	-1250	327.19	120			2064	816	SLU 77	6.82	Si
ini.	3	-1011	-554.31	1930			1968	778	SLU 58	0.4	No
fin.	3	-1011	309.1	305			1968	778	SLU 58	2.55	Si
ini.	3	-709	-580.14	1776			1847	726	SLU 48	0.41	No
fin.	3	-709	316.44	542			1847	726	SLU 48	1.34	Si
ini.	3	-725	-607.18	1818			1854	729	SLU 50	0.4	No
fin.	3	-725	323.25	584			1854	729	SLU 50	1.25	Si
ini.	3	-980	-599.51	2000			1956	773	SLU 71	0.39	No
fin.	3	-980	348.15	441			1956	773	SLU 71	1.75	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	251	4496.84	4480.18	SLV 2	1	No
fin.	2	-237	-2928.43	4480.18	SLV 2	1.53	Si
ini.	2	-1779	-5395.21	4480.18	SLV 13	0.83	No
fin.	2	-1208	3558.03	4480.18	SLV 13	1.26	Si
ini.	2	427	4790.53	4480.18	SLV 4	0.94	No
fin.	2	-144	-3227.04	4480.18	SLV 4	1.39	Si
ini.	2	-1779	-5395.21	4480.18	SLV 14	0.83	No
fin.	2	-1208	3558.03	4480.18	SLV 14	1.26	Si
ini.	2	-1603	-5101.52	4480.18	SLV 16	0.88	No
fin.	2	-1115	3259.42	4480.18	SLV 16	1.37	Si
ini.	2	-1603	-5101.52	4480.18	SLV 15	0.88	No
fin.	2	-1115	3259.42	4480.18	SLV 15	1.37	Si
ini.	2	427	4790.53	4480.18	SLV 3	0.94	No
fin.	2	-144	-3227.04	4480.18	SLV 3	1.39	Si
ini.	2	251	4496.84	4480.18	SLV 1	1	No
fin.	2	-237	-2928.43	4480.18	SLV 1	1.53	Si
ini.	2	-1274	-2275.63	4480.18	SLV 9	1.97	Si
fin.	2	-976	1636.15	4480.18	SLV 9	2.74	Si
ini.	2	-1274	-2275.63	4480.18	SLV 10	1.97	Si
fin.	2	-976	1636.15	4480.18	SLV 10	2.74	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-1274	-2275.63	5574			2855	1126	SLV 9	0.2	No
fin.	2	-976	1636.15	4415			2736	1074	SLV 9	0.24	No
ini.	2	-1603	-5101.52	11404			2986	1181	SLV 16	0.1	No
fin.	2	-1115	3259.42	10142			2791	1099	SLV 16	0.11	No
ini.	2	427	4790.53	-9648			2345	784	SLV 4	0.08	No
fin.	2	-144	-3227.04	-10913			2403	913	SLV 4	0.08	No
ini.	2	427	4790.53	-9648			2345	784	SLV 3	0.08	No
fin.	2	-144	-3227.04	-10913			2403	913	SLV 3	0.08	No
ini.	2	-1274	-2275.63	5574			2855	1126	SLV 10	0.2	No
fin.	2	-976	1636.15	4415			2736	1074	SLV 10	0.24	No
ini.	2	251	4496.84	-8938			2345	826	SLV 2	0.09	No
fin.	2	-237	-2928.43	-10155			2440	933	SLV 2	0.09	No
ini.	2	-1779	-5395.21	12113			3057	1209	SLV 14	0.1	No
fin.	2	-1208	3558.03	10900			2829	1115	SLV 14	0.1	No
ini.	2	251	4496.84	-8938			2345	826	SLV 1	0.09	No
fin.	2	-237	-2928.43	-10155			2440	933	SLV 1	0.09	No
ini.	2	-1779	-5395.21	12113			3057	1209	SLV 13	0.1	No
fin.	2	-1208	3558.03	10900			2829	1115	SLV 13	0.1	No
ini.	2	-1603	-5101.52	11404			2986	1181	SLV 15	0.1	No
fin.	2	-1115	3259.42	10142			2791	1099	SLV 15	0.11	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.83	SLV 13	No
V_SLV	0.081	SLV 3	No
PF_SLU	4.919	SLU 50	Si
V_SLU	0.386	SLU 71	No

Trave di accoppiamento 135

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-9.728	1.406	10.72	12.17	1.45	-9.728	2.206	10.72	12.17	1.45	0.8	0.14	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb_	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-16	-295.97	1493.39	SLU 77	5.05	Si
fin.	3	-16	-1555.06	1493.39	SLU 77	0.96	No
ini.	3	-7	-296.02	1493.39	SLU 84	5.04	Si
fin.	3	-7	-1486.27	1493.39	SLU 84	1	Si
ini.	3	-12	-291.57	1493.39	SLU 80	5.12	Si
fin.	3	-12	-1538.36	1493.39	SLU 80	0.97	No
ini.	3	-10	-300.51	1493.39	SLU 83	4.97	Si
fin.	3	-10	-1509.12	1493.39	SLU 83	0.99	No
ini.	3	-15	-296.06	1493.39	SLU 79	5.04	Si
fin.	3	-15	-1561.2	1493.39	SLU 79	0.96	No
ini.	3	-12	-256.21	1493.39	SLU 58	5.83	Si
fin.	3	-12	-1417.92	1493.39	SLU 58	1.05	Si
ini.	3	-13	-256.12	1493.39	SLU 56	5.83	Si
fin.	3	-13	-1411.78	1493.39	SLU 56	1.06	Si
ini.	3	-13	-291.49	1493.39	SLU 78	5.12	Si
fin.	3	-13	-1532.22	1493.39	SLU 78	0.97	No
ini.	3	-10	-278.49	1493.39	SLU 74	5.36	Si
fin.	3	-10	-1434.28	1493.39	SLU 74	1.04	Si
ini.	3	-7	-274	1493.39	SLU 75	5.45	Si
fin.	3	-7	-1411.43	1493.39	SLU 75	1.06	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-12	-291.57	-1387			786	297	SLU 80	0.21	No
fin.	3	-12	-1538.36	-1755			786	297	SLU 80	0.17	No
ini.	3	-13	-291.49	-1380			787	297	SLU 78	0.22	No
fin.	3	-13	-1532.22	-1747			787	297	SLU 78	0.17	No
ini.	3	-12	-256.21	-1290			787	297	SLU 58	0.23	No
fin.	3	-12	-1417.92	-1638			787	297	SLU 58	0.18	No
ini.	3	-16	-295.97	-1403			788	298	SLU 77	0.21	No
fin.	3	-16	-1555.06	-1770			788	298	SLU 77	0.17	No
ini.	3	-15	-244.81	-1266			788	297	SLU 69	0.23	No
fin.	3	-15	-1394.75	-1634			788	297	SLU 69	0.18	No
ini.	3	-14	-244.9	-1274			787	297	SLU 71	0.23	No
fin.	3	-14	-1400.89	-1641			787	297	SLU 71	0.18	No
ini.	3	-10	-278.49	-1273			786	296	SLU 74	0.23	No
fin.	3	-10	-1434.28	-1641			786	296	SLU 74	0.18	No
ini.	3	-7	-296.02	-1317			784	296	SLU 84	0.22	No
fin.	3	-7	-1486.27	-1684			784	296	SLU 84	0.18	No
ini.	3	-10	-300.51	-1340			786	296	SLU 83	0.22	No
fin.	3	-10	-1509.12	-1707			786	296	SLU 83	0.17	No
ini.	3	-15	-296.06	-1410			788	297	SLU 79	0.21	No
fin.	3	-15	-1561.2	-1778			788	297	SLU 79	0.17	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	1480	52.67	2240.09	SLV 9	42.53	Si
fin.	2	1080	3859.52	2240.09	SLV 9	0.58	No
ini.	2	-368	-568.76	2240.09	SLV 4	3.94	Si
fin.	2	-376	-4168.62	2240.09	SLV 4	0.54	No
ini.	2	1532	-168.48	2240.09	SLV 5	13.3	Si
fin.	2	1048	2651.05	2240.09	SLV 5	0.84	No
ini.	2	1532	-168.48	2240.09	SLV 6	13.3	Si
fin.	2	1048	2651.05	2240.09	SLV 6	0.84	No
ini.	2	-1484	-387.36	2240.09	SLV 8	5.78	Si
fin.	2	-1085	-5671.7	2240.09	SLV 8	0.39	No
ini.	2	-1536	-166.21	2240.09	SLV 12	13.48	Si
fin.	2	-1052	-4463.23	2240.09	SLV 12	0.5	No
ini.	2	-1484	-387.36	2240.09	SLV 7	5.78	Si
fin.	2	-1085	-5671.7	2240.09	SLV 7	0.39	No
ini.	2	-368	-568.76	2240.09	SLV 3	3.94	Si
fin.	2	-376	-4168.62	2240.09	SLV 3	0.54	No
ini.	2	1480	52.67	2240.09	SLV 10	42.53	Si
fin.	2	1080	3859.52	2240.09	SLV 10	0.58	No
ini.	2	-1536	-166.21	2240.09	SLV 11	13.48	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	2	-1052	-4463.23	2240.09	SLV 11	0.5	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-1484	-387.36	-6156			1766	692	SLV 7	0.11	No
fin.	2	-1085	-5671.7	-6454			1607	635	SLV 7	0.1	No
ini.	2	-1536	-166.21	-4906			1787	700	SLV 12	0.14	No
fin.	2	-1052	-4463.23	-5219			1594	630	SLV 12	0.12	No
ini.	2	1480	52.67	4569			1173	0	SLV 10	0	No
fin.	2	1080	3859.52	4309			1173	0	SLV 10	0	No
ini.	2	-368	-568.76	-4298			1320	515	SLV 4	0.12	No
fin.	2	-376	-4168.62	-4559			1323	517	SLV 4	0.11	No
ini.	2	1532	-168.48	3319			1173	0	SLV 5	0	No
fin.	2	1048	2651.05	3075			1173	0	SLV 5	0	No
ini.	2	-368	-568.76	-4298			1320	515	SLV 3	0.12	No
fin.	2	-376	-4168.62	-4559			1323	517	SLV 3	0.11	No
ini.	2	1480	52.67	4569			1173	0	SLV 9	0	No
fin.	2	1080	3859.52	4309			1173	0	SLV 9	0	No
ini.	2	1532	-168.48	3319			1173	0	SLV 6	0	No
fin.	2	1048	2651.05	3075			1173	0	SLV 6	0	No
ini.	2	-1484	-387.36	-6156			1766	692	SLV 8	0.11	No
fin.	2	-1085	-5671.7	-6454			1607	635	SLV 8	0.1	No
ini.	2	-1536	-166.21	-4906			1787	700	SLV 11	0.14	No
fin.	2	-1052	-4463.23	-5219			1594	630	SLV 11	0.12	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.395	SLV 7	No
V_SLV	0	SLV 5	No
PF_SLU	0.957	SLU 79	No
V_SLU	0.167	SLU 79	No

Trave di accoppiamento 136

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-8.28	-4.784	11.73	12.17	0.44	-10.12	-4.784	11.73	12.17	0.44	1.84	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	4	-26.69	294.67	SLU 73	11.04	Si
fin.	3	131	-322.69	294.67	SLU 73	0.91	No
ini.	3	6	-46.48	294.67	SLU 78	6.34	Si
fin.	3	126	-308.84	294.67	SLU 78	0.95	No
ini.	3	-15	-74.66	294.67	SLU 81	3.95	Si
fin.	3	104	-318.79	294.67	SLU 81	0.92	No
ini.	3	-5	-49.3	294.67	SLU 82	5.98	Si
fin.	3	125	-336.27	294.67	SLU 82	0.88	No
ini.	3	2	-46.25	294.67	SLU 75	6.37	Si
fin.	3	121	-308.27	294.67	SLU 75	0.96	No
ini.	3	-1	-49.53	294.67	SLU 84	5.95	Si
fin.	3	130	-336.85	294.67	SLU 84	0.87	No
ini.	3	8	-26.92	294.67	SLU 76	10.95	Si
fin.	3	136	-323.27	294.67	SLU 76	0.91	No
ini.	3	1	-41.82	294.67	SLU 42	7.05	Si
fin.	3	120	-305.91	294.67	SLU 42	0.96	No
ini.	3	5	-44.06	294.67	SLU 80	6.69	Si
fin.	3	127	-312.19	294.67	SLU 80	0.94	No
ini.	3	-11	-74.89	294.67	SLU 83	3.93	Si
fin.	3	109	-319.37	294.67	SLU 83	0.92	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	1	-41.82	374			339	127	SLU 42	0.34	No
fin.	3	120	-305.91	-733			339	109	SLU 42	0.15	No
ini.	3	-11	-74.89	446			342	129	SLU 83	0.29	No
fin.	3	109	-319.37	-793			339	111	SLU 83	0.14	No
ini.	3	2	-46.25	396			339	127	SLU 75	0.32	No
fin.	3	121	-308.27	-758			339	109	SLU 75	0.14	No
ini.	3	4	-26.69	379			339	127	SLU 73	0.34	No
fin.	3	131	-322.69	-779			339	107	SLU 73	0.14	No
ini.	3	8	-26.92	378			339	126	SLU 76	0.33	No
fin.	3	136	-323.27	-778			339	106	SLU 76	0.14	No
ini.	3	-5	-49.3	424			340	128	SLU 82	0.3	No
fin.	3	125	-336.27	-820			339	108	SLU 82	0.13	No
ini.	3	-15	-74.66	446			343	130	SLU 81	0.29	No
fin.	3	104	-318.79	-794			339	111	SLU 81	0.14	No
ini.	3	-1	-49.53	424			339	128	SLU 84	0.3	No
fin.	3	130	-336.85	-819			339	107	SLU 84	0.13	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	5	-44.06	393			339	127	SLU 80	0.32	No
fin.	3	127	-312.19	-760			339	108	SLU 80	0.14	No
ini.	3	6	-46.48	396			339	127	SLU 78	0.32	No
fin.	3	126	-308.84	-757			339	108	SLU 78	0.14	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	192	-699.62	442.01	SLV 6	0.63	No
fin.	2	-189	437.04	442.01	SLV 6	1.01	Si
ini.	2	192	-699.62	442.01	SLV 5	0.63	No
fin.	2	-189	437.04	442.01	SLV 5	1.01	Si
ini.	2	-541	455.14	442.01	SLV 4	0.97	No
fin.	2	-501	-784.85	442.01	SLV 4	0.56	No
ini.	2	-208	610.96	442.01	SLV 11	0.72	No
fin.	2	312	-811.08	442.01	SLV 11	0.54	No
ini.	2	-208	610.96	442.01	SLV 12	0.72	No
fin.	2	312	-811.08	442.01	SLV 12	0.54	No
ini.	2	-468	777.68	442.01	SLV 8	0.57	No
fin.	2	-39	-1037.11	442.01	SLV 8	0.43	No
ini.	2	452	-866.34	442.01	SLV 9	0.51	No
fin.	2	162	663.06	442.01	SLV 9	0.67	No
ini.	2	-468	777.68	442.01	SLV 7	0.57	No
fin.	2	-39	-1037.11	442.01	SLV 7	0.43	No
ini.	2	452	-866.34	442.01	SLV 10	0.51	No
fin.	2	162	663.06	442.01	SLV 10	0.67	No
ini.	2	-541	455.14	442.01	SLV 3	0.97	No
fin.	2	-501	-784.85	442.01	SLV 3	0.56	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	192	-699.62	1070			508	161	SLV 6	0.15	No
fin.	2	-189	437.04	171			559	217	SLV 6	1.27	Si
ini.	2	-208	610.96	-527			564	219	SLV 12	0.42	No
fin.	2	312	-811.08	-1126			508	139	SLV 12	0.12	No
ini.	2	452	-866.34	1285			508	107	SLV 10	0.08	No
fin.	2	162	663.06	337			508	166	SLV 10	0.49	No
ini.	2	525	-543.8	901			508	87	SLV 13	0.1	No
fin.	2	623	410.81	19			508	45	SLV 13	2.34	Si
ini.	2	327	-100.61	358			508	136	SLV 16	0.38	No
fin.	2	668	-31.43	-420			508	0	SLV 16	0	No
ini.	2	192	-699.62	1070			508	161	SLV 5	0.15	No
fin.	2	-189	437.04	171			559	217	SLV 5	1.27	Si
ini.	2	327	-100.61	358			508	136	SLV 15	0.38	No
fin.	2	668	-31.43	-420			508	0	SLV 15	0	No
ini.	2	-208	610.96	-527			564	219	SLV 11	0.42	No
fin.	2	312	-811.08	-1126			508	139	SLV 11	0.12	No
ini.	2	525	-543.8	901			508	87	SLV 14	0.1	No
fin.	2	623	410.81	19			508	45	SLV 14	2.34	Si
ini.	2	452	-866.34	1285			508	107	SLV 9	0.08	No
fin.	2	162	663.06	337			508	166	SLV 9	0.49	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.426	SLV 7	No
V_SLV	0	SLV 15	No
PF_SLU	0.875	SLU 84	No
V_SLU	0.131	SLU 84	No

Trave di accoppiamento 137

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-8.548	-3.359	10.72	12.17	1.45	-9.448	-3.359	10.72	12.17	1.45	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-347	982.09	2986.79	SLU 76	3.04	Si
fin.	3	-347	-1547.94	2986.79	SLU 76	1.93	Si
ini.	3	-315	898.94	2986.79	SLU 34	3.32	Si
fin.	3	-315	-1417.18	2986.79	SLU 34	2.11	Si
ini.	3	-280	930.96	2986.79	SLU 80	3.21	Si
fin.	3	-280	-1523.81	2986.79	SLU 80	1.96	Si
ini.	3	-261	949.48	2986.79	SLU 78	3.15	Si
fin.	3	-261	-1563.74	2986.79	SLU 78	1.91	Si
ini.	3	-303	924.62	2986.79	SLU 75	3.23	Si
fin.	3	-303	-1495.49	2986.79	SLU 75	2	Si
ini.	3	-389	957.22	2986.79	SLU 73	3.12	Si
fin.	3	-389	-1479.69	2986.79	SLU 73	2.02	Si
ini.	3	-399	933.25	2986.79	SLU 82	3.2	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	3	-399	-1470.14	2986.79	SLU 82	2.03	Si
ini.	3	-357	958.12	2986.79	SLU 84	3.12	Si
fin.	3	-357	-1538.39	2986.79	SLU 84	1.94	Si
ini.	3	-225	835.5	2986.79	SLU 77	3.57	Si
fin.	3	-225	-1425.15	2986.79	SLU 77	2.1	Si
ini.	3	-229	866.33	2986.79	SLU 36	3.45	Si
fin.	3	-229	-1432.98	2986.79	SLU 36	2.08	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-320	844.14	-1420			1692	654	SLU 83	0.46	No
fin.	3	-320	-1399.81	-3581			1692	654	SLU 83	0.18	No
ini.	3	-389	957.22	-1713			1719	668	SLU 73	0.39	No
fin.	3	-389	-1479.69	-3717			1719	668	SLU 73	0.18	No
ini.	3	-303	924.62	-1695			1685	651	SLU 75	0.38	No
fin.	3	-303	-1495.49	-3698			1685	651	SLU 75	0.18	No
ini.	3	-399	933.25	-1597			1723	670	SLU 82	0.42	No
fin.	3	-399	-1470.14	-3758			1723	670	SLU 82	0.18	No
ini.	3	-357	958.12	-1701			1706	661	SLU 84	0.39	No
fin.	3	-357	-1538.39	-3862			1706	661	SLU 84	0.17	No
ini.	3	-261	949.48	-1798			1668	643	SLU 78	0.36	No
fin.	3	-261	-1563.74	-3801			1668	643	SLU 78	0.17	No
ini.	3	-280	930.96	-1733			1676	646	SLU 80	0.37	No
fin.	3	-280	-1523.81	-3736			1676	646	SLU 80	0.17	No
ini.	3	-225	835.5	-1518			1653	635	SLU 77	0.42	No
fin.	3	-225	-1425.15	-3521			1653	635	SLU 77	0.18	No
ini.	3	-229	866.33	-1673			1655	636	SLU 36	0.38	No
fin.	3	-229	-1432.98	-3448			1655	636	SLU 36	0.18	No
ini.	3	-347	982.09	-1817			1702	660	SLU 76	0.36	No
fin.	3	-347	-1547.94	-3820			1702	660	SLU 76	0.17	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	902	3314.31	4480.18	SLV 1	1.35	Si
fin.	2	369	-5067.29	4480.18	SLV 1	0.88	No
ini.	2	902	3314.31	4480.18	SLV 2	1.35	Si
fin.	2	369	-5067.29	4480.18	SLV 2	0.88	No
ini.	2	97	2087.12	4480.18	SLV 5	2.15	Si
fin.	2	-35	-2978.48	4480.18	SLV 5	1.5	Si
ini.	2	-1306	-2309.86	4480.18	SLV 15	1.94	Si
fin.	2	-774	3433.39	4480.18	SLV 15	1.3	Si
ini.	2	97	2087.12	4480.18	SLV 6	2.15	Si
fin.	2	-35	-2978.48	4480.18	SLV 6	1.5	Si
ini.	2	-1328	-1821.11	4480.18	SLV 14	2.46	Si
fin.	2	-777	2848.94	4480.18	SLV 14	1.57	Si
ini.	2	923	2825.56	4480.18	SLV 4	1.59	Si
fin.	2	373	-4482.84	4480.18	SLV 4	1	No
ini.	2	-1306	-2309.86	4480.18	SLV 16	1.94	Si
fin.	2	-774	3433.39	4480.18	SLV 16	1.3	Si
ini.	2	923	2825.56	4480.18	SLV 3	1.59	Si
fin.	2	373	-4482.84	4480.18	SLV 3	1	No
ini.	2	-1328	-1821.11	4480.18	SLV 13	2.46	Si
fin.	2	-777	2848.94	4480.18	SLV 13	1.57	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-1306	-2309.86	7277			2868	1131	SLV 15	0.16	No
fin.	2	-774	3433.39	5940			2655	1037	SLV 15	0.17	No
ini.	2	-1306	-2309.86	7277			2868	1131	SLV 16	0.16	No
fin.	2	-774	3433.39	5940			2655	1037	SLV 16	0.17	No
ini.	2	902	3314.31	-8923			2345	658	SLV 2	0.07	No
fin.	2	369	-5067.29	-10180			2345	798	SLV 2	0.08	No
ini.	2	97	2087.12	-5191			2345	861	SLV 6	0.17	No
fin.	2	-35	-2978.48	-6355			2360	890	SLV 6	0.14	No
ini.	2	97	2087.12	-5191			2345	861	SLV 5	0.17	No
fin.	2	-35	-2978.48	-6355			2360	890	SLV 5	0.14	No
ini.	2	902	3314.31	-8923			2345	658	SLV 1	0.07	No
fin.	2	369	-5067.29	-10180			2345	798	SLV 1	0.08	No
ini.	2	923	2825.56	-7646			2345	652	SLV 4	0.09	No
fin.	2	373	-4482.84	-8982			2345	798	SLV 4	0.09	No
ini.	2	-1328	-1821.11	6000			2876	1135	SLV 13	0.19	No
fin.	2	-777	2848.94	4742			2656	1038	SLV 13	0.22	No
ini.	2	923	2825.56	-7646			2345	652	SLV 3	0.09	No
fin.	2	373	-4482.84	-8982			2345	798	SLV 3	0.09	No
ini.	2	-1328	-1821.11	6000			2876	1135	SLV 14	0.19	No
fin.	2	-777	2848.94	4742			2656	1038	SLV 14	0.22	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.884	SLV 1	No
V_SLV	0.074	SLV 1	No
PF_SLU	1.91	SLU 78	Si
V_SLU	0.169	SLU 78	No

Trave di accoppiamento 138

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-7.723	-3.499	11.73	12.17	0.44	-7.723	-4.589	11.73	12.17	0.44	1.09	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	85	10.83	294.67	SLU 52	27.22	Si
fin.	3	255	-115.42	294.67	SLU 52	2.55	Si
ini.	3	85	10.52	294.67	SLU 65	28.02	Si
fin.	3	257	-116.57	294.67	SLU 65	2.53	Si
ini.	3	94	8.43	294.67	SLU 31	34.95	Si
fin.	3	268	-118.07	294.67	SLU 31	2.5	Si
ini.	3	95	8.44	294.67	SLU 13	34.91	Si
fin.	3	262	-115.46	294.67	SLU 13	2.55	Si
ini.	3	95	8.13	294.67	SLU 26	36.24	Si
fin.	3	264	-116.61	294.67	SLU 26	2.53	Si
ini.	3	83	9.72	294.67	SLU 68	30.33	Si
fin.	3	258	-118.24	294.67	SLU 68	2.49	Si
ini.	3	82	10.02	294.67	SLU 73	29.42	Si
fin.	3	262	-119.7	294.67	SLU 73	2.46	Si
ini.	3	81	9.21	294.67	SLU 76	31.98	Si
fin.	3	263	-121.37	294.67	SLU 76	2.43	Si
ini.	3	93	7.63	294.67	SLU 34	38.62	Si
fin.	3	269	-119.74	294.67	SLU 34	2.46	Si
ini.	3	83	10.03	294.67	SLU 55	29.39	Si
fin.	3	256	-117.09	294.67	SLU 55	2.52	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	85	10.83	42			339	115	SLU 52	2.76	Si
fin.	3	255	-115.42	-204			339	83	SLU 52	0.41	No
ini.	3	86	10.53	45			339	114	SLU 47	2.56	Si
fin.	3	251	-113.96	-209			339	84	SLU 47	0.4	No
ini.	3	85	10.52	41			339	115	SLU 65	2.83	Si
fin.	3	257	-116.57	-205			339	82	SLU 65	0.4	No
ini.	3	83	9.72	40			339	115	SLU 68	2.9	Si
fin.	3	258	-118.24	-203			339	82	SLU 68	0.4	No
ini.	3	81	9.21	36			339	115	SLU 76	3.23	Si
fin.	3	263	-121.37	-196			339	81	SLU 76	0.41	No
ini.	3	83	10.03	41			339	115	SLU 55	2.82	Si
fin.	3	256	-117.09	-202			339	82	SLU 55	0.41	No
ini.	3	87	11.33	46			339	114	SLU 44	2.51	Si
fin.	3	250	-112.29	-211			339	84	SLU 44	0.4	No
ini.	3	98	8.94	6			339	112	SLU 5	18.86	Si
fin.	3	257	-112.33	-182			339	82	SLU 5	0.45	No
ini.	3	99	9.74	7			339	112	SLU 2	16.33	Si
fin.	3	256	-110.66	-184			339	83	SLU 2	0.45	No
ini.	3	82	10.02	37			339	115	SLU 73	3.14	Si
fin.	3	262	-119.7	-198			339	81	SLU 73	0.41	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	448	-0.62	442.01	SLV 15	709.89	Si
fin.	2	2671	-1009.38	442.01	SLV 15	0.44	No
ini.	2	976	-102.11	442.01	SLV 12	4.33	Si
fin.	2	5408	-2027.28	442.01	SLV 12	0.22	No
ini.	2	-942	128.03	442.01	SLV 9	3.45	Si
fin.	2	-4731	1743.62	442.01	SLV 9	0.25	No
ini.	2	976	-102.11	442.01	SLV 11	4.33	Si
fin.	2	5408	-2027.28	442.01	SLV 11	0.22	No
ini.	2	448	-0.62	442.01	SLV 16	709.89	Si
fin.	2	2671	-1009.38	442.01	SLV 16	0.44	No
ini.	2	-942	128.03	442.01	SLV 10	3.45	Si
fin.	2	-4731	1743.62	442.01	SLV 10	0.25	No
ini.	2	852	-120.06	442.01	SLV 7	3.68	Si
fin.	2	4713	-1768.5	442.01	SLV 7	0.25	No
ini.	2	-1065	110.07	442.01	SLV 6	4.02	Si
fin.	2	-5426	2002.4	442.01	SLV 6	0.22	No
ini.	2	852	-120.06	442.01	SLV 8	3.68	Si
fin.	2	4713	-1768.5	442.01	SLV 8	0.25	No
ini.	2	-1065	110.07	442.01	SLV 5	4.02	Si
fin.	2	-5426	2002.4	442.01	SLV 5	0.22	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	976	-102.11	-2045			508	0	SLV 11	0	No
fin.	2	5408	-2027.28	-191			508	0	SLV 11	0	No
ini.	2	-942	128.03	2161			760	298	SLV 10	0.14	No
fin.	2	-4731	1743.62	-294			1770	547	SLV 10	1.86	Si
ini.	2	448	-0.62	-720			508	108	SLV 16	0.15	No
fin.	2	2671	-1009.38	-610			508	0	SLV 16	0	No
ini.	2	852	-120.06	-1919			508	0	SLV 8	0	No
fin.	2	4713	-1768.5	137			508	0	SLV 8	0	No
ini.	2	-1065	110.07	2287			792	309	SLV 6	0.14	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	2	-5426	2002.4	34			1955	581	SLV 6	17.12	Si
ini.	2	-1065	110.07	2287			792	309	SLV 5	0.14	No
fin.	2	-5426	2002.4	34			1955	581	SLV 5	17.12	Si
ini.	2	852	-120.06	-1919			508	0	SLV 7	0	No
fin.	2	4713	-1768.5	137			508	0	SLV 7	0	No
ini.	2	-942	128.03	2161			760	298	SLV 9	0.14	No
fin.	2	-4731	1743.62	-294			1770	547	SLV 9	1.86	Si
ini.	2	448	-0.62	-720			508	108	SLV 15	0.15	No
fin.	2	2671	-1009.38	-610			508	0	SLV 15	0	No
ini.	2	976	-102.11	-2045			508	0	SLV 12	0	No
fin.	2	5408	-2027.28	-191			508	0	SLV 12	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF SLV	0.218	SLV 11	No
V SLV	0	SLV 7	No
PF SLU	2.428	SLU 76	Si
V SLU	0.398	SLU 44	No

Trave di accoppiamento 139

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-5.158	6.006	8.62	10.62	2	-5.158	6.506	8.62	10.62	2	0.5	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb_	fthk	fvk0	fthmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	143	568.58	5682.35	SLU 77	9.99	Si
fin.	3	163	162.73	5682.35	SLU 77	34.92	Si
ini.	3	119	571.32	5682.35	SLU 80	9.95	Si
fin.	3	137	137.26	5682.35	SLU 80	41.4	Si
ini.	3	233	535.12	5682.35	SLU 84	10.62	Si
fin.	3	256	250.89	5682.35	SLU 84	22.65	Si
ini.	3	118	571.36	5682.35	SLU 79	9.95	Si
fin.	3	136	136.69	5682.35	SLU 79	41.57	Si
ini.	3	36	552.21	5682.35	SLU 69	10.29	Si
fin.	3	46	50	5682.35	SLU 69	113.64	Si
ini.	3	11	554.98	5682.35	SLU 71	10.24	Si
fin.	3	19	23.96	5682.35	SLU 71	237.13	Si
ini.	3	144	568.54	5682.35	SLU 78	9.99	Si
fin.	3	164	163.3	5682.35	SLU 78	34.8	Si
ini.	3	12	554.94	5682.35	SLU 72	10.24	Si
fin.	3	19	24.53	5682.35	SLU 72	231.62	Si
ini.	3	232	535.16	5682.35	SLU 83	10.62	Si
fin.	3	255	250.32	5682.35	SLU 83	22.7	Si
ini.	3	37	552.17	5682.35	SLU 70	10.29	Si
fin.	3	46	50.57	5682.35	SLU 70	112.36	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	118	571.36	-1719			2157	786	SLU 79	0.46	No
fin.	3	136	136.69	-289			2157	781	SLU 79	2.71	Si
ini.	3	-23	514.85	-1868			2166	817	SLU 48	0.44	No
fin.	3	-21	-14.38	-437			2165	816	SLU 48	1.87	Si
ini.	3	11	554.98	-1933			2157	809	SLU 71	0.42	No
fin.	3	19	23.96	-413			2157	808	SLU 71	1.96	Si
ini.	3	36	552.21	-1857			2157	804	SLU 69	0.43	No
fin.	3	46	50	-381			2157	802	SLU 69	2.1	Si
ini.	3	119	571.32	-1716			2157	785	SLU 80	0.46	No
fin.	3	137	137.26	-288			2157	781	SLU 80	2.72	Si
ini.	3	-48	517.58	-1942			2176	822	SLU 51	0.42	No
fin.	3	-48	-39.85	-468			2176	822	SLU 51	1.76	Si
ini.	3	37	552.17	-1855			2157	804	SLU 70	0.43	No
fin.	3	46	50.57	-380			2157	801	SLU 70	2.11	Si
ini.	3	12	554.94	-1931			2157	809	SLU 72	0.42	No
fin.	3	19	24.53	-412			2157	807	SLU 72	1.96	Si
ini.	3	-23	514.81	-1865			2166	816	SLU 49	0.44	No
fin.	3	-20	-13.81	-436			2165	816	SLU 49	1.87	Si
ini.	3	-49	517.62	-1944			2176	822	SLU 50	0.42	No
fin.	3	-48	-40.42	-469			2176	822	SLU 50	1.75	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	1770	1511.58	8523.53	SLV 16	5.64	Si
fin.	2	1387	1345.11	8523.53	SLV 16	6.34	Si
ini.	2	1770	1511.58	8523.53	SLV 15	5.64	Si
fin.	2	1387	1345.11	8523.53	SLV 15	6.34	Si
ini.	2	1060	240.52	8523.53	SLV 9	35.44	Si
fin.	2	1189	1113.8	8523.53	SLV 9	7.65	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-1748	-543.05	8523.53	SLV 3	15.7	Si
fin.	2	-1482	-1409.35	8523.53	SLV 3	6.05	Si
ini.	2	1060	240.52	8523.53	SLV 10	35.44	Si
fin.	2	1189	1113.8	8523.53	SLV 10	7.65	Si
ini.	2	2011	1256.84	8523.53	SLV 14	6.78	Si
fin.	2	1759	1683.3	8523.53	SLV 14	5.06	Si
ini.	2	2011	1256.84	8523.53	SLV 13	6.78	Si
fin.	2	1759	1683.3	8523.53	SLV 13	5.06	Si
ini.	2	258	1089.66	8523.53	SLV 12	7.82	Si
fin.	2	-51	-13.51	8523.53	SLV 12	631.13	Si
ini.	2	-1748	-543.05	8523.53	SLV 4	15.7	Si
fin.	2	-1482	-1409.35	8523.53	SLV 4	6.05	Si
ini.	2	258	1089.66	8523.53	SLV 11	7.82	Si
fin.	2	-51	-13.51	8523.53	SLV 11	631.13	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	258	1089.66	-3399			3235	1160	SLV 11	0.34	No
fin.	2	-51	-13.51	-613			3256	1228	SLV 11	2	Si
ini.	2	-1748	-543.05	-2814			3934	1552	SLV 4	0.55	No
fin.	2	-1482	-1409.35	-1919			3828	1505	SLV 4	0.78	No
ini.	2	-798	473.27	-4043			3554	1380	SLV 8	0.34	No
fin.	2	-912	-839.85	-1514			3600	1402	SLV 8	0.93	No
ini.	2	-1748	-543.05	-2814			3934	1552	SLV 3	0.55	No
fin.	2	-1482	-1409.35	-1919			3828	1505	SLV 3	0.78	No
ini.	2	1060	240.52	2262			3235	960	SLV 9	0.42	No
fin.	2	1189	1113.8	1235			3235	923	SLV 9	0.75	No
ini.	2	2011	1256.84	1032			3235	646	SLV 14	0.63	No
fin.	2	1759	1683.3	1640			3235	742	SLV 14	0.45	No
ini.	2	-798	473.27	-4043			3554	1380	SLV 7	0.34	No
fin.	2	-912	-839.85	-1514			3600	1402	SLV 7	0.93	No
ini.	2	258	1089.66	-3399			3235	1160	SLV 12	0.34	No
fin.	2	-51	-13.51	-613			3256	1228	SLV 12	2	Si
ini.	2	1060	240.52	2262			3235	960	SLV 10	0.42	No
fin.	2	1189	1113.8	1235			3235	923	SLV 10	0.75	No
ini.	2	2011	1256.84	1032			3235	646	SLV 13	0.63	No
fin.	2	1759	1683.3	1640			3235	742	SLV 13	0.45	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.064	SLV 13	Si
V_SLV	0.341	SLV 11	No
PF_SLU	9.945	SLU 79	Si
V_SLU	0.419	SLU 71	No

Trave di accoppiamento 140

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-5.158	6.006	11.42	12.17	0.75	-5.158	6.506	11.42	12.17	0.75	0.5	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fhhmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-469	-206.9	799.08	SLU 79	3.86	Si
fin.	3	-84	28.75	799.08	SLU 79	27.8	Si
ini.	3	-444	-200.4	799.08	SLU 72	3.99	Si
fin.	3	-81	28.03	799.08	SLU 72	28.5	Si
ini.	3	-445	-201.07	799.08	SLU 71	3.97	Si
fin.	3	-81	28.1	799.08	SLU 71	28.44	Si
ini.	3	-433	-192.9	799.08	SLU 58	4.14	Si
fin.	3	-78	26.94	799.08	SLU 58	29.66	Si
ini.	3	-468	-204.17	799.08	SLU 77	3.91	Si
fin.	3	-83	28.41	799.08	SLU 77	28.13	Si
ini.	3	-432	-192.23	799.08	SLU 59	4.16	Si
fin.	3	-78	26.88	799.08	SLU 59	29.73	Si
ini.	3	-468	-206.23	799.08	SLU 80	3.87	Si
fin.	3	-84	28.68	799.08	SLU 80	27.86	Si
ini.	3	-444	-197.68	799.08	SLU 70	4.04	Si
fin.	3	-80	27.7	799.08	SLU 70	28.85	Si
ini.	3	-467	-203.51	799.08	SLU 78	3.93	Si
fin.	3	-83	28.35	799.08	SLU 78	28.19	Si
ini.	3	-444	-198.34	799.08	SLU 69	4.03	Si
fin.	3	-81	27.76	799.08	SLU 69	28.78	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-433	-192.9	2368			982	387	SLU 58	0.16	No
fin.	3	-78	26.94	-60			840	321	SLU 58	5.35	Si
ini.	3	-432	-192.23	2361			982	387	SLU 59	0.16	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	3	-78	26.88	-60			840	321	SLU 59	5.37	Si
ini.	3	-467	-203.51	2503			996	393	SLU 78	0.16	No
fin.	3	-83	28.35	-50			842	322	SLU 78	6.38	Si
ini.	3	-444	-197.68	2434			986	389	SLU 70	0.16	No
fin.	3	-80	27.7	-63			841	321	SLU 70	5.13	Si
ini.	3	-445	-201.07	2468			987	389	SLU 71	0.16	No
fin.	3	-81	28.1	-66			841	322	SLU 71	4.88	Si
ini.	3	-468	-204.17	2510			996	393	SLU 77	0.16	No
fin.	3	-83	28.41	-51			842	322	SLU 77	6.36	Si
ini.	3	-469	-206.9	2537			996	393	SLU 79	0.16	No
fin.	3	-84	28.75	-54			842	322	SLU 79	6	Si
ini.	3	-468	-206.23	2530			996	393	SLU 80	0.16	No
fin.	3	-84	28.68	-53			842	322	SLU 80	6.03	Si
ini.	3	-444	-198.34	2441			986	389	SLU 69	0.16	No
fin.	3	-81	27.76	-63			841	321	SLU 69	5.11	Si
ini.	3	-444	-200.4	2461			986	389	SLU 72	0.16	No
fin.	3	-81	28.03	-66			841	322	SLU 72	4.9	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-141	-118.85	1198.62	SLV 11	10.09	Si
fin.	2	-38	25.81	1198.62	SLV 11	46.44	Si
ini.	2	-393	-109.56	1198.62	SLV 5	10.94	Si
fin.	2	-56	6.33	1198.62	SLV 5	189.33	Si
ini.	2	-372	-134.26	1198.62	SLV 13	8.93	Si
fin.	2	-61	14.71	1198.62	SLV 13	81.46	Si
ini.	2	-430	-121.37	1198.62	SLV 10	9.88	Si
fin.	2	-63	7.19	1198.62	SLV 10	166.63	Si
ini.	2	-141	-118.85	1198.62	SLV 12	10.09	Si
fin.	2	-38	25.81	1198.62	SLV 12	46.44	Si
ini.	2	-430	-121.37	1198.62	SLV 9	9.88	Si
fin.	2	-63	7.19	1198.62	SLV 9	166.63	Si
ini.	2	-393	-109.56	1198.62	SLV 6	10.94	Si
fin.	2	-56	6.33	1198.62	SLV 6	189.33	Si
ini.	2	-372	-134.26	1198.62	SLV 14	8.93	Si
fin.	2	-61	14.71	1198.62	SLV 14	81.46	Si
ini.	2	-285	-133.51	1198.62	SLV 16	8.98	Si
fin.	2	-54	20.3	1198.62	SLV 16	59.05	Si
ini.	2	-285	-133.51	1198.62	SLV 15	8.98	Si
fin.	2	-54	20.3	1198.62	SLV 15	59.05	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-141	-118.85	1701			1269	486	SLV 12	0.29	No
fin.	2	-38	25.81	-155			1228	465	SLV 12	3	Si
ini.	2	-161	-94.14	1206			1278	490	SLV 3	0.41	No
fin.	2	-32	17.42	-80			1226	464	SLV 3	5.79	Si
ini.	2	-161	-94.14	1206			1278	490	SLV 4	0.41	No
fin.	2	-32	17.42	-80			1226	464	SLV 4	5.79	Si
ini.	2	-141	-118.85	1701			1269	486	SLV 11	0.29	No
fin.	2	-38	25.81	-155			1228	465	SLV 11	3	Si
ini.	2	-103	-107.04	1539			1254	478	SLV 8	0.31	No
fin.	2	-31	24.95	-157			1226	463	SLV 8	2.95	Si
ini.	2	-285	-133.51	1746			1327	515	SLV 15	0.29	No
fin.	2	-54	20.3	-73			1235	468	SLV 15	6.45	Si
ini.	2	-285	-133.51	1746			1327	515	SLV 16	0.29	No
fin.	2	-54	20.3	-73			1235	468	SLV 16	6.45	Si
ini.	2	-372	-134.26	1622			1362	531	SLV 14	0.33	No
fin.	2	-61	14.71	-4			1238	470	SLV 14	112.45	Si
ini.	2	-103	-107.04	1539			1254	478	SLV 7	0.31	No
fin.	2	-31	24.95	-157			1226	463	SLV 7	2.95	Si
ini.	2	-372	-134.26	1622			1362	531	SLV 13	0.33	No
fin.	2	-61	14.71	-4			1238	470	SLV 13	112.45	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	8.927	SLV 13	Si
V_SLV	0.286	SLV 11	No
PF_SLU	3.862	SLU 79	Si
V_SLU	0.155	SLU 79	No

Trave di accoppiamento 141

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-6.513	-3.359	8.62	9.52	0.9	-7.413	-3.359	8.62	9.52	0.9	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
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Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-538	190.82	1150.68	SLU 70	6.03	Si
fin.	3	-437	-30.57	1150.68	SLU 70	37.64	Si
ini.	3	-676	206.98	1150.68	SLU 44	5.56	Si
fin.	3	-330	-53.63	1150.68	SLU 44	21.46	Si
ini.	3	-681	215.11	1150.68	SLU 65	5.35	Si
fin.	3	-402	-55.7	1150.68	SLU 65	20.66	Si
ini.	3	-676	211.27	1150.68	SLU 47	5.45	Si
fin.	3	-321	-58.09	1150.68	SLU 47	19.81	Si
ini.	3	-637	202.63	1150.68	SLU 52	5.68	Si
fin.	3	-437	-39.64	1150.68	SLU 52	29.03	Si
ini.	3	-642	210.76	1150.68	SLU 73	5.46	Si
fin.	3	-508	-41.71	1150.68	SLU 73	27.59	Si
ini.	3	-641	215.05	1150.68	SLU 76	5.35	Si
fin.	3	-500	-46.17	1150.68	SLU 76	24.92	Si
ini.	3	-680	219.4	1150.68	SLU 68	5.24	Si
fin.	3	-393	-60.16	1150.68	SLU 68	19.13	Si
ini.	3	-637	206.92	1150.68	SLU 55	5.56	Si
fin.	3	-428	-44.1	1150.68	SLU 55	26.09	Si
ini.	3	-609	194.52	1150.68	SLU 26	5.92	Si
fin.	3	-301	-70.29	1150.68	SLU 26	16.37	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-499	186.47	-1523			1170	461	SLU 78	0.3	No
fin.	3	-543	-16.58	711			1188	469	SLU 78	0.66	No
ini.	3	-535	187.75	-1548			1184	467	SLU 72	0.3	No
fin.	3	-444	-26.56	604			1148	452	SLU 72	0.75	No
ini.	3	-538	186.53	-1517			1186	468	SLU 67	0.31	No
fin.	3	-445	-26.11	582			1149	452	SLU 67	0.78	No
ini.	3	-494	178.34	-1489			1168	460	SLU 57	0.31	No
fin.	3	-471	-14.51	659			1159	456	SLU 57	0.69	No
ini.	3	-676	211.27	-1604			1241	491	SLU 47	0.31	No
fin.	3	-321	-58.09	334			1099	429	SLU 47	1.29	Si
ini.	3	-530	179.62	-1514			1183	466	SLU 51	0.31	No
fin.	3	-372	-24.49	552			1119	439	SLU 51	0.79	No
ini.	3	-641	215.05	-1573			1227	485	SLU 76	0.31	No
fin.	3	-500	-46.17	485			1170	461	SLU 76	0.95	No
ini.	3	-680	219.4	-1637			1243	491	SLU 68	0.3	No
fin.	3	-393	-60.16	386			1128	442	SLU 68	1.15	Si
ini.	3	-533	182.69	-1554			1184	467	SLU 49	0.3	No
fin.	3	-365	-28.5	560			1116	437	SLU 49	0.78	No
ini.	3	-538	190.82	-1587			1186	468	SLU 70	0.29	No
fin.	3	-437	-30.57	612			1145	450	SLU 70	0.74	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	2376	-771.79	1726.01	SLV 14	2.24	Si
fin.	2	-2709	1425.88	1726.01	SLV 14	1.21	Si
ini.	2	-3477	1126.78	1726.01	SLV 1	1.53	Si
fin.	2	2149	-1510.51	1726.01	SLV 1	1.14	Si
ini.	2	2376	-771.79	1726.01	SLV 13	2.24	Si
fin.	2	-2709	1425.88	1726.01	SLV 13	1.21	Si
ini.	2	1710	-472.06	1726.01	SLV 12	3.66	Si
fin.	2	-1697	732.31	1726.01	SLV 12	2.36	Si
ini.	2	-2839	958.42	1726.01	SLV 4	1.8	Si
fin.	2	1831	-1356.28	1726.01	SLV 4	1.27	Si
ini.	2	-3477	1126.78	1726.01	SLV 2	1.53	Si
fin.	2	2149	-1510.51	1726.01	SLV 2	1.14	Si
ini.	2	-2839	958.42	1726.01	SLV 3	1.8	Si
fin.	2	1831	-1356.28	1726.01	SLV 3	1.27	Si
ini.	2	3014	-940.14	1726.01	SLV 16	1.84	Si
fin.	2	-3027	1580.12	1726.01	SLV 16	1.09	Si
ini.	2	3014	-940.14	1726.01	SLV 15	1.84	Si
fin.	2	-3027	1580.12	1726.01	SLV 15	1.09	Si
ini.	2	1710	-472.06	1726.01	SLV 11	3.66	Si
fin.	2	-1697	732.31	1726.01	SLV 11	2.36	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	3014	-940.14	4589			1456	0	SLV 16	0	No
fin.	2	-3027	1580.12	6745			2666	1010	SLV 16	0.15	No
ini.	2	1710	-472.06	2150			1456	0	SLV 12	0	No
fin.	2	-1697	732.31	3603			2135	839	SLV 12	0.23	No
ini.	2	-2839	958.42	-5423			2591	988	SLV 3	0.18	No
fin.	2	1831	-1356.28	-4700			1456	0	SLV 3	0	No
ini.	2	-3477	1126.78	-6336			2847	1062	SLV 1	0.17	No
fin.	2	2149	-1510.51	-5440			1456	0	SLV 1	0	No
ini.	2	2376	-771.79	3676			1456	0	SLV 13	0	No
fin.	2	-2709	1425.88	6005			2539	972	SLV 13	0.16	No
ini.	2	1710	-472.06	2150			1456	0	SLV 11	0	No
fin.	2	-1697	732.31	3603			2135	839	SLV 11	0.23	No
ini.	2	3014	-940.14	4589			1456	0	SLV 15	0	No
fin.	2	-3027	1580.12	6745			2666	1010	SLV 15	0.15	No
ini.	2	-3477	1126.78	-6336			2847	1062	SLV 2	0.17	No
fin.	2	2149	-1510.51	-5440			1456	0	SLV 2	0	No
ini.	2	2376	-771.79	3676			1456	0	SLV 14	0	No
fin.	2	-2709	1425.88	6005			2539	972	SLV 14	0.16	No
ini.	2	-2839	958.42	-5423			2591	988	SLV 4	0.18	No
fin.	2	1831	-1356.28	-4700			1456	0	SLV 4	0	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.092	SLV 15	Si
V_SLV	0	SLV 1	No
PF_SLU	5.245	SLU 68	Si
V_SLU	0.295	SLU 70	No

Trave di accoppiamento 142

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-6.513	-3.359	11.32	12.17	0.85	-7.413	-3.359	11.32	12.17	0.85	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb_	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-557	-147.85	1026.38	SLU 79	6.94	Si
fin.	3	157	107.17	1026.38	SLU 79	9.58	Si
ini.	3	-552	-149.16	1026.38	SLU 77	6.88	Si
fin.	3	171	109.43	1026.38	SLU 77	9.38	Si
ini.	3	-629	-148.82	1026.38	SLU 81	6.9	Si
fin.	3	85	107.41	1026.38	SLU 81	9.56	Si
ini.	3	-559	-144.8	1026.38	SLU 74	7.09	Si
fin.	3	137	104.71	1026.38	SLU 74	9.8	Si
ini.	3	-477	-132.99	1026.38	SLU 58	7.72	Si
fin.	3	171	91.53	1026.38	SLU 58	11.21	Si
ini.	3	-543	-138.31	1026.38	SLU 62	7.42	Si
fin.	3	132	96.49	1026.38	SLU 62	10.64	Si
ini.	3	-549	-133.95	1026.38	SLU 60	7.66	Si
fin.	3	99	91.77	1026.38	SLU 60	11.18	Si
ini.	3	-473	-134.3	1026.38	SLU 56	7.64	Si
fin.	3	185	93.78	1026.38	SLU 56	10.94	Si
ini.	3	-562	-133.63	1026.38	SLU 41	7.68	Si
fin.	3	88	102.53	1026.38	SLU 41	10.01	Si
ini.	3	-622	-153.17	1026.38	SLU 83	6.7	Si
fin.	3	118	112.13	1026.38	SLU 83	9.15	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-437	-113.49	2129			1031	406	SLU 78	0.19	No
fin.	3	58	78.96	-1013			866	314	SLU 78	0.31	No
ini.	3	-622	-153.17	2338			1101	435	SLU 83	0.19	No
fin.	3	118	112.13	-796			866	301	SLU 83	0.38	No
ini.	3	-507	-117.5	2122			1057	417	SLU 84	0.2	No
fin.	3	5	81.66	-967			866	325	SLU 84	0.34	No
ini.	3	-629	-148.82	2251			1103	436	SLU 81	0.19	No
fin.	3	85	107.41	-761			866	308	SLU 81	0.4	No
ini.	3	-441	-112.18	2087			1032	406	SLU 80	0.19	No
fin.	3	44	76.7	-992			866	317	SLU 80	0.32	No
ini.	3	-559	-144.8	2258			1077	425	SLU 74	0.19	No
fin.	3	137	104.71	-807			866	296	SLU 74	0.37	No
ini.	3	-557	-147.85	2303			1076	425	SLU 79	0.18	No
fin.	3	157	107.17	-821			866	292	SLU 79	0.36	No
ini.	3	-415	-126.57	2059			1022	402	SLU 69	0.2	No
fin.	3	183	86.84	-817			866	286	SLU 69	0.35	No
ini.	3	-552	-149.16	2345			1074	424	SLU 77	0.18	No
fin.	3	171	109.43	-842			866	289	SLU 77	0.34	No
ini.	3	-473	-134.3	2105			1044	412	SLU 56	0.2	No
fin.	3	185	93.78	-769			866	285	SLU 56	0.37	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	3173	691.75	1539.56	SLV 2	2.23	Si
fin.	2	-1054	-479.75	1539.56	SLV 2	3.21	Si
ini.	2	3173	691.75	1539.56	SLV 1	2.23	Si
fin.	2	-1054	-479.75	1539.56	SLV 1	3.21	Si
ini.	2	-3462	-796.84	1539.56	SLV 13	1.93	Si
fin.	2	1076	514.97	1539.56	SLV 13	2.99	Si
ini.	2	-2050	-450.43	1539.56	SLV 12	3.42	Si
fin.	2	619	354.07	1539.56	SLV 12	4.35	Si
ini.	2	-2050	-450.43	1539.56	SLV 11	3.42	Si
fin.	2	619	354.07	1539.56	SLV 11	4.35	Si
ini.	2	2753	611.17	1539.56	SLV 4	2.52	Si
fin.	2	-920	-393.33	1539.56	SLV 4	3.91	Si
ini.	2	-3462	-796.84	1539.56	SLV 14	1.93	Si
fin.	2	1076	514.97	1539.56	SLV 14	2.99	Si
ini.	2	2753	611.17	1539.56	SLV 3	2.52	Si
fin.	2	-920	-393.33	1539.56	SLV 3	3.91	Si
ini.	2	-3882	-877.43	1539.56	SLV 16	1.75	Si
fin.	2	1209	601.39	1539.56	SLV 16	2.56	Si
ini.	2	-3882	-877.43	1539.56	SLV 15	1.75	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	2	1209	601.39	1539.56	SLV 15	2.56	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	2753	611.17	-1920			1298	0	SLV 4	0	No
fin.	2	-920	-393.33	-3536			1646	651	SLV 4	0.18	No
ini.	2	2753	611.17	-1920			1298	0	SLV 3	0	No
fin.	2	-920	-393.33	-3536			1646	651	SLV 3	0.18	No
ini.	2	-3882	-877.43	5406			2765	1009	SLV 16	0.19	No
fin.	2	1209	601.39	2893			1298	0	SLV 16	0	No
ini.	2	1341	264.76	-641			1298	0	SLV 5	0	No
fin.	2	-463	-232.43	-2272			1474	576	SLV 5	0.25	No
ini.	2	1341	264.76	-641			1298	0	SLV 6	0	No
fin.	2	-463	-232.43	-2272			1474	576	SLV 6	0.25	No
ini.	2	-3882	-877.43	5406			2765	1009	SLV 15	0.19	No
fin.	2	1209	601.39	2893			1298	0	SLV 15	0	No
ini.	2	3173	691.75	-2513			1298	0	SLV 1	0	No
fin.	2	-1054	-479.75	-3991			1696	671	SLV 1	0.17	No
ini.	2	-3462	-796.84	4813			2606	966	SLV 13	0.2	No
fin.	2	1076	514.97	2438			1298	151	SLV 13	0.06	No
ini.	2	-3462	-796.84	4813			2606	966	SLV 14	0.2	No
fin.	2	1076	514.97	2438			1298	151	SLV 14	0.06	No
ini.	2	3173	691.75	-2513			1298	0	SLV 2	0	No
fin.	2	-1054	-479.75	-3991			1696	671	SLV 2	0.17	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.755	SLV 15	Si
V_SLV	0	SLV 1	No
PF_SLU	6.701	SLU 83	Si
V_SLU	0.181	SLU 77	No

Trave di accoppiamento 143

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-5.508	-3.359	8.62	10.62	2	-6.008	-3.359	8.62	10.62	2	0.5	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-815	405.71	5682.35	SLU 58	14.01	Si
fin.	3	-617	491.5	5682.35	SLU 58	11.56	Si
ini.	3	-859	468.1	5682.35	SLU 81	12.14	Si
fin.	3	-619	538.7	5682.35	SLU 81	10.55	Si
ini.	3	-813	421.44	5682.35	SLU 62	13.48	Si
fin.	3	-601	504.04	5682.35	SLU 62	11.27	Si
ini.	3	-875	484.62	5682.35	SLU 83	11.73	Si
fin.	3	-629	554.28	5682.35	SLU 83	10.25	Si
ini.	3	-889	480.07	5682.35	SLU 77	11.84	Si
fin.	3	-654	548.77	5682.35	SLU 77	10.35	Si
ini.	3	-797	404.92	5682.35	SLU 60	14.03	Si
fin.	3	-590	488.46	5682.35	SLU 60	11.63	Si
ini.	3	-857	404.8	5682.35	SLU 69	14.04	Si
fin.	3	-667	483.13	5682.35	SLU 69	11.76	Si
ini.	3	-873	463.55	5682.35	SLU 74	12.26	Si
fin.	3	-643	533.18	5682.35	SLU 74	10.66	Si
ini.	3	-826	416.89	5682.35	SLU 56	13.63	Si
fin.	3	-625	498.53	5682.35	SLU 56	11.4	Si
ini.	3	-877	468.89	5682.35	SLU 79	12.12	Si
fin.	3	-646	541.74	5682.35	SLU 79	10.49	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-842	388.28	-437			2493	978	SLU 66	2.24	Si
fin.	3	-656	467.54	931			2419	943	SLU 66	1.01	Si
ini.	3	-784	330.44	-314			2470	967	SLU 50	3.08	Si
fin.	3	-631	425.85	972			2409	939	SLU 50	0.97	No
ini.	3	-779	325.1	-306			2468	966	SLU 45	3.16	Si
fin.	3	-628	417.3	942			2408	938	SLU 45	1	No
ini.	3	-826	416.89	-477			2487	975	SLU 56	2.04	Si
fin.	3	-625	498.53	940			2407	938	SLU 56	1	No
ini.	3	-846	393.62	-444			2495	978	SLU 71	2.2	Si
fin.	3	-659	476.1	961			2420	944	SLU 71	0.98	No
ini.	3	-795	341.62	-340			2475	969	SLU 48	2.85	Si
fin.	3	-638	432.89	981			2412	940	SLU 48	0.96	No
ini.	3	-857	404.8	-470			2500	980	SLU 69	2.09	Si
fin.	3	-667	483.13	970			2423	945	SLU 69	0.97	No
ini.	3	-815	405.71	-451			2483	973	SLU 58	2.16	Si
fin.	3	-617	491.5	931			2404	936	SLU 58	1.01	Si



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-889	480.07	-607			2512	986	SLU 77	1.62	Si
fin.	3	-654	548.77	929			2418	943	SLU 77	1.01	Si
ini.	3	-877	468.89	-582			2508	984	SLU 79	1.69	Si
fin.	3	-646	541.74	920			2415	942	SLU 79	1.02	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	2172	-1053.79	8523.53	SLV 16	8.09	Si
fin.	2	1662	1803.31	8523.53	SLV 16	4.73	Si
ini.	2	-3416	1623.76	8523.53	SLV 1	5.25	Si
fin.	2	-2622	-1103.39	8523.53	SLV 1	7.72	Si
ini.	2	2172	-1053.79	8523.53	SLV 15	8.09	Si
fin.	2	1662	1803.31	8523.53	SLV 15	4.73	Si
ini.	2	1161	225.27	8523.53	SLV 12	37.84	Si
fin.	2	1261	1196.4	8523.53	SLV 12	7.12	Si
ini.	2	-3416	1623.76	8523.53	SLV 2	5.25	Si
fin.	2	-2622	-1103.39	8523.53	SLV 2	7.72	Si
ini.	2	1161	225.27	8523.53	SLV 11	37.84	Si
fin.	2	1261	1196.4	8523.53	SLV 11	7.12	Si
ini.	2	-2793	1849.2	8523.53	SLV 4	4.61	Si
fin.	2	-1898	-832.77	8523.53	SLV 4	10.24	Si
ini.	2	-2793	1849.2	8523.53	SLV 3	4.61	Si
fin.	2	-1898	-832.77	8523.53	SLV 3	10.24	Si
ini.	2	1550	-1279.23	8523.53	SLV 13	6.66	Si
fin.	2	937	1532.69	8523.53	SLV 13	5.56	Si
ini.	2	1550	-1279.23	8523.53	SLV 14	6.66	Si
fin.	2	937	1532.69	8523.53	SLV 14	5.56	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-329	1096.17	-4977			3366	1287	SLV 8	0.26	No
fin.	2	193	405.57	-4156			3235	1175	SLV 8	0.28	No
ini.	2	-2793	1849.2	-8254			4352	1721	SLV 3	0.21	No
fin.	2	-1898	-832.77	-7513			3994	1577	SLV 3	0.21	No
ini.	2	-915	-526.2	4375			3601	1402	SLV 10	0.32	No
fin.	2	-1154	294.35	5496			3696	1447	SLV 10	0.26	No
ini.	2	-2793	1849.2	-8254			4352	1721	SLV 4	0.21	No
fin.	2	-1898	-832.77	-7513			3994	1577	SLV 4	0.21	No
ini.	2	-915	-526.2	4375			3601	1402	SLV 9	0.32	No
fin.	2	-1154	294.35	5496			3696	1447	SLV 9	0.26	No
ini.	2	1550	-1279.23	7652			3235	814	SLV 13	0.11	No
fin.	2	937	1532.69	8854			3235	993	SLV 13	0.11	No
ini.	2	2172	-1053.79	6141			3235	576	SLV 15	0.09	No
fin.	2	1662	1803.31	7290			3235	776	SLV 15	0.11	No
ini.	2	1550	-1279.23	7652			3235	814	SLV 14	0.11	No
fin.	2	937	1532.69	8854			3235	993	SLV 14	0.11	No
ini.	2	-329	1096.17	-4977			3366	1287	SLV 7	0.26	No
fin.	2	193	405.57	-4156			3235	1175	SLV 7	0.28	No
ini.	2	2172	-1053.79	6141			3235	576	SLV 16	0.09	No
fin.	2	1662	1803.31	7290			3235	776	SLV 16	0.11	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.609	SLV 3	Si
V_SLV	0.094	SLV 15	No
PF_SLU	10.252	SLU 83	Si
V_SLU	0.958	SLU 48	No

Trave di accoppiamento 144

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-5.508	-3.359	11.42	12.17	0.75	-6.008	-3.359	11.42	12.17	0.75	0.5	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-323	-15.65	799.08	SLU 41	51.05	Si
fin.	3	-383	-83.3	799.08	SLU 41	9.59	Si
ini.	3	-354	-20.12	799.08	SLU 39	39.72	Si
fin.	3	-400	-79.56	799.08	SLU 39	10.04	Si
ini.	3	-353	-22.62	799.08	SLU 83	35.33	Si
fin.	3	-409	-91.02	799.08	SLU 83	8.78	Si
ini.	3	-384	-27.09	799.08	SLU 81	29.5	Si
fin.	3	-426	-87.27	799.08	SLU 81	9.16	Si
ini.	3	-295	-19.7	799.08	SLU 74	40.56	Si
fin.	3	-350	-85.15	799.08	SLU 74	9.38	Si
ini.	3	-234	-8.27	799.08	SLU 35	96.62	Si
fin.	3	-306	-81.18	799.08	SLU 35	9.84	Si
ini.	3	-303	-24.69	799.08	SLU 62	32.37	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	3	-345	-78.07	799.08	SLU 62	10.24	Si
ini.	3	-279	-17.76	799.08	SLU 79	45	Si
fin.	3	-341	-86.93	799.08	SLU 79	9.19	Si
ini.	3	-264	-15.24	799.08	SLU 77	52.44	Si
fin.	3	-333	-88.89	799.08	SLU 77	8.99	Si
ini.	3	-249	-10.79	799.08	SLU 37	74.05	Si
fin.	3	-314	-79.22	799.08	SLU 37	10.09	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-279	-17.76	385			920	360	SLU 79	0.94	No
fin.	3	-341	-86.93	-1317			945	371	SLU 79	0.28	No
ini.	3	-221	-10.72	409			897	349	SLU 75	0.85	No
fin.	3	-261	-65.15	-1213			913	357	SLU 75	0.29	No
ini.	3	-353	-22.62	386			950	373	SLU 83	0.97	No
fin.	3	-409	-91.02	-1305			973	383	SLU 83	0.29	No
ini.	3	-205	-8.77	407			891	346	SLU 80	0.85	No
fin.	3	-252	-66.93	-1252			910	355	SLU 80	0.28	No
ini.	3	-162	-14.31	388			874	338	SLU 69	0.87	No
fin.	3	-212	-70.62	-1201			894	347	SLU 69	0.29	No
ini.	3	-190	-6.25	405			885	343	SLU 78	0.85	No
fin.	3	-244	-68.9	-1292			906	353	SLU 78	0.27	No
ini.	3	-264	-15.24	382			914	357	SLU 77	0.93	No
fin.	3	-333	-88.89	-1358			942	370	SLU 77	0.27	No
ini.	3	-279	-13.64	408			920	360	SLU 84	0.88	No
fin.	3	-321	-71.02	-1240			937	367	SLU 84	0.3	No
ini.	3	-295	-19.7	386			927	363	SLU 74	0.94	No
fin.	3	-350	-85.15	-1278			949	373	SLU 74	0.29	No
ini.	3	-88	-5.33	411			844	323	SLU 70	0.79	No
fin.	3	-123	-50.63	-1135			858	330	SLU 70	0.29	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-3089	-720.44	1198.62	SLV 13	1.66	Si
fin.	2	-2509	-74.25	1198.62	SLV 13	16.14	Si
ini.	2	-1815	-269.06	1198.62	SLV 11	4.45	Si
fin.	2	-1550	-246.96	1198.62	SLV 11	4.85	Si
ini.	2	2687	679.37	1198.62	SLV 4	1.76	Si
fin.	2	2078	-24.61	1198.62	SLV 4	48.7	Si
ini.	2	-3501	-741.67	1198.62	SLV 15	1.62	Si
fin.	2	-2865	-178.88	1198.62	SLV 15	6.7	Si
ini.	2	-3089	-720.44	1198.62	SLV 14	1.66	Si
fin.	2	-2509	-74.25	1198.62	SLV 14	16.14	Si
ini.	2	3099	700.6	1198.62	SLV 1	1.71	Si
fin.	2	2434	80.03	1198.62	SLV 1	14.98	Si
ini.	2	3099	700.6	1198.62	SLV 2	1.71	Si
fin.	2	2434	80.03	1198.62	SLV 2	14.98	Si
ini.	2	2687	679.37	1198.62	SLV 3	1.76	Si
fin.	2	2078	-24.61	1198.62	SLV 3	48.7	Si
ini.	2	-3501	-741.67	1198.62	SLV 16	1.62	Si
fin.	2	-2865	-178.88	1198.62	SLV 16	6.7	Si
ini.	2	-1815	-269.06	1198.62	SLV 12	4.45	Si
fin.	2	-1550	-246.96	1198.62	SLV 12	4.85	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	1413	227.99	924			1213	0	SLV 5	0	No
fin.	2	1119	148.11	-206			1213	0	SLV 5	0	No
ini.	2	3099	700.6	-1064			1213	0	SLV 1	0	No
fin.	2	2434	80.03	-1852			1213	0	SLV 1	0	No
ini.	2	-443	-198.32	1948			1390	544	SLV 10	0.28	No
fin.	2	-364	101.83	615			1359	530	SLV 10	0.86	No
ini.	2	2687	679.37	-1744			1213	0	SLV 3	0	No
fin.	2	2078	-24.61	-2443			1213	0	SLV 3	0	No
ini.	2	1413	227.99	924			1213	0	SLV 6	0	No
fin.	2	1119	148.11	-206			1213	0	SLV 6	0	No
ini.	2	-443	-198.32	1948			1390	544	SLV 9	0.28	No
fin.	2	-364	101.83	615			1359	530	SLV 9	0.86	No
ini.	2	41	157.25	-1343			1213	447	SLV 8	0.33	No
fin.	2	-67	-200.68	-2175			1240	471	SLV 8	0.22	No
ini.	2	3099	700.6	-1064			1213	0	SLV 2	0	No
fin.	2	2434	80.03	-1852			1213	0	SLV 2	0	No
ini.	2	2687	679.37	-1744			1213	0	SLV 4	0	No
fin.	2	2078	-24.61	-2443			1213	0	SLV 4	0	No
ini.	2	41	157.25	-1343			1213	447	SLV 7	0.33	No
fin.	2	-67	-200.68	-2175			1240	471	SLV 7	0.22	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.616	SLV 15	Si
V_SLV	0	SLV 1	No
PF_SLU	8.78	SLU 83	Si
V_SLU	0.272	SLU 77	No

Trave di accoppiamento 145

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-2.283	-3.359	8.62	9.52	0.9	-3.183	-3.359	8.62	9.52	0.9	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	134	-429.88	1150.68	SLU 80	2.68	Si
fin.	3	-1841	517.72	1150.68	SLU 80	2.22	Si
ini.	3	118	-400.38	1150.68	SLU 83	2.87	Si
fin.	3	-1741	498.96	1150.68	SLU 83	2.31	Si
ini.	3	148	-434.16	1150.68	SLU 78	2.65	Si
fin.	3	-1844	522.47	1150.68	SLU 78	2.2	Si
ini.	3	78	-427.64	1150.68	SLU 73	2.69	Si
fin.	3	-1895	505.74	1150.68	SLU 73	2.28	Si
ini.	3	119	-420.73	1150.68	SLU 75	2.73	Si
fin.	3	-1821	508.2	1150.68	SLU 75	2.26	Si
ini.	3	122	-437.3	1150.68	SLU 84	2.63	Si
fin.	3	-1889	523.82	1150.68	SLU 84	2.2	Si
ini.	3	144	-397.24	1150.68	SLU 77	2.9	Si
fin.	3	-1696	497.61	1150.68	SLU 77	2.31	Si
ini.	3	107	-441.07	1150.68	SLU 76	2.61	Si
fin.	3	-1917	520.02	1150.68	SLU 76	2.21	Si
ini.	3	130	-392.96	1150.68	SLU 79	2.93	Si
fin.	3	-1693	492.86	1150.68	SLU 79	2.33	Si
ini.	3	93	-423.88	1150.68	SLU 82	2.71	Si
fin.	3	-1866	509.54	1150.68	SLU 82	2.26	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	115	-383.81	1087			970	339	SLU 74	0.31	No
fin.	3	-1673	483.33	2937			1640	632	SLU 74	0.22	No
ini.	3	134	-429.88	1254			970	335	SLU 80	0.27	No
fin.	3	-1841	517.72	3130			1707	652	SLU 80	0.21	No
ini.	3	107	-441.07	1334			970	341	SLU 76	0.26	No
fin.	3	-1917	520.02	3114			1737	662	SLU 76	0.21	No
ini.	3	148	-434.16	1254			970	332	SLU 78	0.26	No
fin.	3	-1844	522.47	3173			1708	653	SLU 78	0.21	No
ini.	3	108	-385.51	1066			970	341	SLU 70	0.32	No
fin.	3	-1680	474.93	2945			1643	633	SLU 70	0.21	No
ini.	3	119	-420.73	1234			970	338	SLU 75	0.27	No
fin.	3	-1821	508.2	3069			1699	650	SLU 75	0.21	No
ini.	3	118	-400.38	1168			970	339	SLU 83	0.29	No
fin.	3	-1741	498.96	2992			1667	640	SLU 83	0.21	No
ini.	3	144	-397.24	1106			970	332	SLU 77	0.3	No
fin.	3	-1696	497.61	3041			1649	635	SLU 77	0.21	No
ini.	3	130	-392.96	1107			970	336	SLU 79	0.3	No
fin.	3	-1693	492.86	2998			1648	634	SLU 79	0.21	No
ini.	3	122	-437.3	1316			970	338	SLU 84	0.26	No
fin.	3	-1889	523.82	3124			1726	658	SLU 84	0.21	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	1893	-1378.62	1726.01	SLV 16	1.25	Si
fin.	2	-3651	1111.25	1726.01	SLV 16	1.55	Si
ini.	2	1100	-933.29	1726.01	SLV 9	1.85	Si
fin.	2	-3083	809.76	1726.01	SLV 9	2.13	Si
ini.	2	2174	-1569.04	1726.01	SLV 13	1.1	Si
fin.	2	-4300	1248.67	1726.01	SLV 13	1.38	Si
ini.	2	-2117	1072.54	1726.01	SLV 3	1.61	Si
fin.	2	1990	-600.8	1726.01	SLV 3	2.87	Si
ini.	2	1893	-1378.62	1726.01	SLV 15	1.25	Si
fin.	2	-3651	1111.25	1726.01	SLV 15	1.55	Si
ini.	2	-2117	1072.54	1726.01	SLV 4	1.61	Si
fin.	2	1990	-600.8	1726.01	SLV 4	2.87	Si
ini.	2	-1835	882.12	1726.01	SLV 2	1.96	Si
fin.	2	1341	-463.39	1726.01	SLV 2	3.72	Si
ini.	2	1100	-933.29	1726.01	SLV 10	1.85	Si
fin.	2	-3083	809.76	1726.01	SLV 10	2.13	Si
ini.	2	-1835	882.12	1726.01	SLV 1	1.96	Si
fin.	2	1341	-463.39	1726.01	SLV 1	3.72	Si
ini.	2	2174	-1569.04	1726.01	SLV 14	1.1	Si
fin.	2	-4300	1248.67	1726.01	SLV 14	1.38	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-2117	1072.54	-3767			2302	897	SLV 3	0.24	No
fin.	2	1990	-600.8	-3254			1456	0	SLV 3	0	No
ini.	2	1893	-1378.62	5349			1456	0	SLV 15	0	No
fin.	2	-3651	1111.25	6500			2916	1082	SLV 15	0.17	No
ini.	2	-1835	882.12	-3954			2190	859	SLV 1	0.22	No
fin.	2	1341	-463.39	-2536			1456	0	SLV 1	0	No
ini.	2	2174	-1569.04	5162			1456	0	SLV 14	0	No
fin.	2	-4300	1248.67	7218			3176	1151	SLV 14	0.16	No
ini.	2	2174	-1569.04	5162			1456	0	SLV 13	0	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	2	-4300	1248.67	7218			3176	1151	SLV 13	0.16	No
ini.	2	1893	-1378.62	5349			1456	0	SLV 16	0	No
fin.	2	-3651	1111.25	6500			2916	1082	SLV 16	0.17	No
ini.	2	1100	-933.29	1753			1456	195	SLV 9	0.11	No
fin.	2	-3083	809.76	4642			2689	1017	SLV 9	0.22	No
ini.	2	-2117	1072.54	-3767			2302	897	SLV 4	0.24	No
fin.	2	1990	-600.8	-3254			1456	0	SLV 4	0	No
ini.	2	1100	-933.29	1753			1456	195	SLV 10	0.11	No
fin.	2	-3083	809.76	4642			2689	1017	SLV 10	0.22	No
ini.	2	-1835	882.12	-3954			2190	859	SLV 2	0.22	No
fin.	2	1341	-463.39	-2536			1456	0	SLV 2	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.1	SLV 13	Si
V_SLV	0	SLV 1	No
PF_SLU	2.197	SLU 84	Si
V_SLU	0.206	SLU 78	No

Trave di accoppiamento 146

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-2.283	-3.359	11.32	12.17	0.85	-3.183	-3.359	11.32	12.17	0.85	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb_	fthk	fvk0	fthmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1341	-539.4	1026.38	SLU 84	1.9	Si
fin.	3	305	194.98	1026.38	SLU 84	5.26	Si
ini.	3	-1279	-514.08	1026.38	SLU 83	2	Si
fin.	3	272	175.76	1026.38	SLU 83	5.84	Si
ini.	3	-1258	-520.1	1026.38	SLU 75	1.97	Si
fin.	3	327	187.67	1026.38	SLU 75	5.47	Si
ini.	3	-1208	-513.84	1026.38	SLU 77	2	Si
fin.	3	355	175.7	1026.38	SLU 77	5.84	Si
ini.	3	-1275	-534.26	1026.38	SLU 80	1.92	Si
fin.	3	371	193.85	1026.38	SLU 80	5.29	Si
ini.	3	-1270	-539.17	1026.38	SLU 78	1.9	Si
fin.	3	388	194.91	1026.38	SLU 78	5.27	Si
ini.	3	-1293	-513.01	1026.38	SLU 73	2	Si
fin.	3	271	192.18	1026.38	SLU 73	5.34	Si
ini.	3	-1330	-520.34	1026.38	SLU 82	1.97	Si
fin.	3	244	187.73	1026.38	SLU 82	5.47	Si
ini.	3	-1213	-508.93	1026.38	SLU 79	2.02	Si
fin.	3	338	174.63	1026.38	SLU 79	5.88	Si
ini.	3	-1305	-532.07	1026.38	SLU 76	1.93	Si
fin.	3	332	199.42	1026.38	SLU 76	5.15	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1258	-520.1	2838			1341	524	SLU 75	0.18	No
fin.	3	327	187.67	75			866	250	SLU 75	3.33	Si
ini.	3	-1279	-514.08	2828			1349	527	SLU 83	0.19	No
fin.	3	272	175.76	0			866	264	SLU 83	1091.27	Si
ini.	3	-1275	-534.26	2907			1347	526	SLU 80	0.18	No
fin.	3	371	193.85	99			866	238	SLU 80	2.4	Si
ini.	3	-1208	-513.84	2847			1322	517	SLU 77	0.18	No
fin.	3	355	175.7	-15			866	242	SLU 77	15.74	Si
ini.	3	-1213	-508.93	2810			1324	518	SLU 79	0.18	No
fin.	3	338	174.63	3			866	247	SLU 79	85.54	Si
ini.	3	-1330	-520.34	2819			1368	533	SLU 82	0.19	No
fin.	3	244	187.73	91			866	271	SLU 82	2.99	Si
ini.	3	-1197	-494.78	2741			1318	516	SLU 74	0.19	No
fin.	3	295	168.45	-21			866	258	SLU 74	12.3	Si
ini.	3	-1270	-539.17	2944			1345	525	SLU 78	0.18	No
fin.	3	388	194.91	81			866	233	SLU 78	2.89	Si
ini.	3	-1341	-539.4	2925			1372	534	SLU 84	0.18	No
fin.	3	305	194.98	96			866	256	SLU 84	2.66	Si
ini.	3	-1305	-532.07	2866			1359	530	SLU 76	0.18	No
fin.	3	332	199.42	157			866	248	SLU 76	1.58	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-2407	-1286.81	1539.56	SLV 13	1.2	Si
fin.	2	2182	885.58	1539.56	SLV 13	1.74	Si
ini.	2	-1832	-868.14	1539.56	SLV 10	1.77	Si
fin.	2	1338	393.63	1539.56	SLV 10	3.91	Si
ini.	2	819	641.19	1539.56	SLV 3	2.4	Si
fin.	2	-1841	-665.94	1539.56	SLV 3	2.31	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	819	641.19	1539.56	SLV 4	2.4	Si
fin.	2	-1841	-665.94	1539.56	SLV 4	2.31	Si
ini.	2	-1832	-868.14	1539.56	SLV 9	1.77	Si
fin.	2	1338	393.63	1539.56	SLV 9	3.91	Si
ini.	2	-2407	-1286.81	1539.56	SLV 14	1.2	Si
fin.	2	2182	885.58	1539.56	SLV 14	1.74	Si
ini.	2	-2041	-1117.94	1539.56	SLV 16	1.38	Si
fin.	2	1810	851.91	1539.56	SLV 16	1.81	Si
ini.	2	-2041	-1117.94	1539.56	SLV 15	1.38	Si
fin.	2	1810	851.91	1539.56	SLV 15	1.81	Si
ini.	2	453	472.32	1539.56	SLV 2	3.26	Si
fin.	2	-1469	-632.26	1539.56	SLV 2	2.44	Si
ini.	2	453	472.32	1539.56	SLV 1	3.26	Si
fin.	2	-1469	-632.26	1539.56	SLV 1	2.44	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-2407	-1286.81	5423			2208	850	SLV 13	0.16	No
fin.	2	2182	885.58	3216			1298	0	SLV 13	0	No
ini.	2	453	472.32	-1313			1298	385	SLV 2	0.29	No
fin.	2	-1469	-632.26	-3614			1853	730	SLV 2	0.2	No
ini.	2	-1832	-868.14	3671			1991	779	SLV 9	0.21	No
fin.	2	1338	393.63	382			1298	0	SLV 9	0	No
ini.	2	819	641.19	-1832			1298	273	SLV 4	0.15	No
fin.	2	-1841	-665.94	-3235			1994	780	SLV 4	0.24	No
ini.	2	819	641.19	-1832			1298	273	SLV 3	0.15	No
fin.	2	-1841	-665.94	-3235			1994	780	SLV 3	0.24	No
ini.	2	453	472.32	-1313			1298	385	SLV 1	0.29	No
fin.	2	-1469	-632.26	-3614			1853	730	SLV 1	0.2	No
ini.	2	-2041	-1117.94	4904			2069	805	SLV 15	0.16	No
fin.	2	1810	851.91	3595			1298	0	SLV 15	0	No
ini.	2	-1832	-868.14	3671			1991	779	SLV 10	0.21	No
fin.	2	1338	393.63	382			1298	0	SLV 10	0	No
ini.	2	-2041	-1117.94	4904			2069	805	SLV 16	0.16	No
fin.	2	1810	851.91	3595			1298	0	SLV 16	0	No
ini.	2	-2407	-1286.81	5423			2208	850	SLV 14	0.16	No
fin.	2	2182	885.58	3216			1298	0	SLV 14	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.196	SLV 13	Si
V_SLV	0	SLV 9	No
PF_SLU	1.903	SLU 84	Si
V_SLU	0.178	SLU 78	No

Trave di accoppiamento 147

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-2.063	5.951	8.62	9.52	0.9	-2.963	5.951	8.62	9.52	0.9	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fmed	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	844	-330.12	1150.68	SLU 80	3.49	Si
fin.	3	-749	509.78	1150.68	SLU 80	2.26	Si
ini.	3	826	-319.52	1150.68	SLU 77	3.6	Si
fin.	3	-741	500.59	1150.68	SLU 77	2.3	Si
ini.	3	787	-313.79	1150.68	SLU 76	3.67	Si
fin.	3	-740	488.98	1150.68	SLU 76	2.35	Si
ini.	3	751	-295.71	1150.68	SLU 74	3.89	Si
fin.	3	-724	471.79	1150.68	SLU 74	2.44	Si
ini.	3	851	-330.74	1150.68	SLU 78	3.48	Si
fin.	3	-752	512.59	1150.68	SLU 78	2.24	Si
ini.	3	819	-318.9	1150.68	SLU 79	3.61	Si
fin.	3	-738	497.79	1150.68	SLU 79	2.31	Si
ini.	3	793	-319.14	1150.68	SLU 84	3.61	Si
fin.	3	-779	502.94	1150.68	SLU 84	2.29	Si
ini.	3	777	-306.93	1150.68	SLU 75	3.75	Si
fin.	3	-735	483.79	1150.68	SLU 75	2.38	Si
ini.	3	719	-295.33	1150.68	SLU 82	3.9	Si
fin.	3	-763	474.14	1150.68	SLU 82	2.43	Si
ini.	3	768	-307.92	1150.68	SLU 83	3.74	Si
fin.	3	-768	490.94	1150.68	SLU 83	2.34	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	790	-300.18	700			970	89	SLU 72	0.13	No
fin.	3	-641	458.55	2176			1227	485	SLU 72	0.22	No
ini.	3	787	-313.79	862			970	92	SLU 76	0.11	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	3	-740	488.98	2218			1267	501	SLU 76	0.23	No
ini.	3	797	-300.81	691			970	83	SLU 70	0.12	No
fin.	3	-643	461.36	2198			1228	485	SLU 70	0.22	No
ini.	3	826	-319.52	797			970	48	SLU 77	0.06	No
fin.	3	-741	500.59	2337			1267	501	SLU 77	0.21	No
ini.	3	819	-318.9	806			970	58	SLU 79	0.07	No
fin.	3	-738	497.79	2314			1266	501	SLU 79	0.22	No
ini.	3	793	-319.14	893			970	86	SLU 84	0.1	No
fin.	3	-779	502.94	2269			1282	507	SLU 84	0.22	No
ini.	3	844	-330.12	866			970	0	SLU 80	0	No
fin.	3	-749	509.78	2347			1270	502	SLU 80	0.21	No
ini.	3	777	-306.93	813			970	100	SLU 75	0.12	No
fin.	3	-735	483.79	2218			1265	500	SLU 75	0.23	No
ini.	3	851	-330.74	857			970	0	SLU 78	0	No
fin.	3	-752	512.59	2369			1271	503	SLU 78	0.21	No
ini.	3	768	-307.92	833			970	107	SLU 83	0.13	No
fin.	3	-768	490.94	2237			1278	505	SLU 83	0.23	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-2241	800.43	1726.01	SLV 3	2.16	Si
fin.	2	358	-843.45	1726.01	SLV 3	2.05	Si
ini.	2	-2958	885.01	1726.01	SLV 1	1.95	Si
fin.	2	331	-1018.29	1726.01	SLV 1	1.7	Si
ini.	2	-2241	800.43	1726.01	SLV 4	2.16	Si
fin.	2	358	-843.45	1726.01	SLV 4	2.05	Si
ini.	2	-2958	885.01	1726.01	SLV 2	1.95	Si
fin.	2	331	-1018.29	1726.01	SLV 2	1.7	Si
ini.	2	2586	-636.24	1726.01	SLV 11	2.71	Si
fin.	2	-670	963.14	1726.01	SLV 11	1.79	Si
ini.	2	3183	-1173.45	1726.01	SLV 13	1.47	Si
fin.	2	-1299	1447.26	1726.01	SLV 13	1.19	Si
ini.	2	3899	-1258.03	1726.01	SLV 16	1.37	Si
fin.	2	-1272	1622.1	1726.01	SLV 16	1.06	Si
ini.	2	3183	-1173.45	1726.01	SLV 14	1.47	Si
fin.	2	-1299	1447.26	1726.01	SLV 14	1.19	Si
ini.	2	2586	-636.24	1726.01	SLV 12	2.71	Si
fin.	2	-670	963.14	1726.01	SLV 12	1.79	Si
ini.	2	3899	-1258.03	1726.01	SLV 15	1.37	Si
fin.	2	-1272	1622.1	1726.01	SLV 15	1.06	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-2958	885.01	-4046			2639	1002	SLV 1	0.25	No
fin.	2	331	-1018.29	-3296			1456	470	SLV 1	0.14	No
ini.	2	2586	-636.24	1948			1456	0	SLV 12	0	No
fin.	2	-670	963.14	3531			1724	678	SLV 12	0.19	No
ini.	2	3899	-1258.03	4924			1456	0	SLV 16	0	No
fin.	2	-1272	1622.1	6135			1965	777	SLV 16	0.13	No
ini.	2	-2241	800.43	-3938			2352	913	SLV 3	0.23	No
fin.	2	358	-843.45	-2837			1456	463	SLV 3	0.16	No
ini.	2	3899	-1258.03	4924			1456	0	SLV 15	0	No
fin.	2	-1272	1622.1	6135			1965	777	SLV 15	0.13	No
ini.	2	3183	-1173.45	4816			1456	0	SLV 14	0	No
fin.	2	-1299	1447.26	5676			1975	781	SLV 14	0.14	No
ini.	2	3183	-1173.45	4816			1456	0	SLV 13	0	No
fin.	2	-1299	1447.26	5676			1975	781	SLV 13	0.14	No
ini.	2	-2958	885.01	-4046			2639	1002	SLV 2	0.25	No
fin.	2	331	-1018.29	-3296			1456	470	SLV 2	0.14	No
ini.	2	-2241	800.43	-3938			2352	913	SLV 4	0.23	No
fin.	2	358	-843.45	-2837			1456	463	SLV 4	0.16	No
ini.	2	2586	-636.24	1948			1456	0	SLV 11	0	No
fin.	2	-670	963.14	3531			1724	678	SLV 11	0.19	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.064	SLV 15	Si
V_SLV	0	SLV 11	No
PF_SLU	2.245	SLU 78	Si
V_SLU	0	SLU 78	No

Trave di accoppiamento 148

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-2.063	5.951	11.32	12.17	0.85	-2.963	5.951	11.32	12.17	0.85	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
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Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1145	-484.87	1026.38	SLU 79	2.12	Si
fin.	3	571	434.03	1026.38	SLU 79	2.36	Si
ini.	3	-1189	-484.55	1026.38	SLU 84	2.12	Si
fin.	3	528	426.33	1026.38	SLU 84	2.41	Si
ini.	3	-1139	-471.77	1026.38	SLU 76	2.18	Si
fin.	3	545	423.08	1026.38	SLU 76	2.43	Si
ini.	3	-1173	-494.73	1026.38	SLU 80	2.07	Si
fin.	3	588	446.88	1026.38	SLU 80	2.3	Si
ini.	3	-1132	-487.72	1026.38	SLU 77	2.1	Si
fin.	3	586	433.71	1026.38	SLU 77	2.37	Si
ini.	3	-1160	-497.58	1026.38	SLU 78	2.06	Si
fin.	3	603	446.55	1026.38	SLU 78	2.3	Si
ini.	3	-1136	-455.02	1026.38	SLU 82	2.26	Si
fin.	3	475	393.96	1026.38	SLU 82	2.61	Si
ini.	3	-1161	-474.69	1026.38	SLU 83	2.16	Si
fin.	3	511	413.48	1026.38	SLU 83	2.48	Si
ini.	3	-1107	-468.05	1026.38	SLU 75	2.19	Si
fin.	3	550	414.19	1026.38	SLU 75	2.48	Si
ini.	3	-1079	-458.19	1026.38	SLU 74	2.24	Si
fin.	3	533	401.34	1026.38	SLU 74	2.56	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1139	-471.77	3179			1296	508	SLU 76	0.16	No
fin.	3	545	423.08	651			866	182	SLU 76	0.28	No
ini.	3	-1000	-452.42	3057			1243	490	SLU 70	0.16	No
fin.	3	617	418.99	646			866	154	SLU 70	0.24	No
ini.	3	-1145	-484.87	3287			1298	509	SLU 79	0.15	No
fin.	3	571	434.03	641			866	173	SLU 79	0.27	No
ini.	3	-1161	-474.69	3237			1304	511	SLU 83	0.16	No
fin.	3	511	413.48	582			866	194	SLU 83	0.33	No
ini.	3	-1160	-497.58	3356			1304	511	SLU 78	0.15	No
fin.	3	603	446.55	676			866	159	SLU 78	0.24	No
ini.	3	-1173	-494.73	3329			1309	513	SLU 80	0.15	No
fin.	3	588	446.88	690			866	166	SLU 80	0.24	No
ini.	3	-1079	-458.19	3136			1273	501	SLU 74	0.16	No
fin.	3	533	401.34	555			866	187	SLU 74	0.34	No
ini.	3	-1189	-484.55	3279			1315	515	SLU 84	0.16	No
fin.	3	528	426.33	631			866	188	SLU 84	0.3	No
ini.	3	-1107	-468.05	3178			1284	504	SLU 75	0.16	No
fin.	3	550	414.19	604			866	180	SLU 75	0.3	No
ini.	3	-1132	-487.72	3314			1293	507	SLU 77	0.15	No
fin.	3	586	433.71	627			866	166	SLU 77	0.27	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-1473	-749.36	1539.56	SLV 12	2.05	Si
fin.	2	1414	878.99	1539.56	SLV 12	1.75	Si
ini.	2	-2043	-1007.35	1539.56	SLV 13	1.53	Si
fin.	2	1647	1167.83	1539.56	SLV 13	1.32	Si
ini.	2	-1473	-749.36	1539.56	SLV 11	2.05	Si
fin.	2	1414	878.99	1539.56	SLV 11	1.75	Si
ini.	2	873	551	1539.56	SLV 2	2.79	Si
fin.	2	-1297	-833.1	1539.56	SLV 2	1.85	Si
ini.	2	-2251	-1140.01	1539.56	SLV 15	1.35	Si
fin.	2	2015	1357.75	1539.56	SLV 15	1.13	Si
ini.	2	873	551	1539.56	SLV 1	2.79	Si
fin.	2	-1297	-833.1	1539.56	SLV 1	1.85	Si
ini.	2	665	418.34	1539.56	SLV 3	3.68	Si
fin.	2	-929	-643.18	1539.56	SLV 3	2.39	Si
ini.	2	665	418.34	1539.56	SLV 4	3.68	Si
fin.	2	-929	-643.18	1539.56	SLV 4	2.39	Si
ini.	2	-2251	-1140.01	1539.56	SLV 16	1.35	Si
fin.	2	2015	1357.75	1539.56	SLV 16	1.13	Si
ini.	2	-2043	-1007.35	1539.56	SLV 14	1.53	Si
fin.	2	1647	1167.83	1539.56	SLV 14	1.32	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-2043	-1007.35	5089			2070	805	SLV 14	0.16	No
fin.	2	1647	1167.83	3401			1298	0	SLV 14	0	No
ini.	2	-2043	-1007.35	5089			2070	805	SLV 13	0.16	No
fin.	2	1647	1167.83	3401			1298	0	SLV 13	0	No
ini.	2	-1473	-749.36	4088			1855	731	SLV 12	0.18	No
fin.	2	1414	878.99	2295			1298	0	SLV 12	0	No
ini.	2	873	551	-1640			1298	252	SLV 1	0.15	No
fin.	2	-1297	-833.1	-3259			1788	706	SLV 1	0.22	No
ini.	2	-2251	-1140.01	5714			2149	831	SLV 16	0.15	No
fin.	2	2015	1357.75	3966			1298	0	SLV 16	0	No
ini.	2	-2251	-1140.01	5714			2149	831	SLV 15	0.15	No
fin.	2	2015	1357.75	3966			1298	0	SLV 15	0	No
ini.	2	-1473	-749.36	4088			1855	731	SLV 11	0.18	No
fin.	2	1414	878.99	2295			1298	0	SLV 11	0	No
ini.	2	665	418.34	-1015			1298	324	SLV 4	0.32	No
fin.	2	-929	-643.18	-2694			1649	652	SLV 4	0.24	No
ini.	2	665	418.34	-1015			1298	324	SLV 3	0.32	No
fin.	2	-929	-643.18	-2694			1649	652	SLV 3	0.24	No
ini.	2	873	551	-1640			1298	252	SLV 2	0.15	No
fin.	2	-1297	-833.1	-3259			1788	706	SLV 2	0.22	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.134	SLV 15	Si
V_SLV	0	SLV 11	No
PF_SLU	2.063	SLU 78	Si
V_SLU	0.152	SLU 78	No

Trave di accoppiamento 149

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-24.678	1.266	14.27	15.32	1.05	-24.678	2.066	14.27	15.32	1.05	0.8	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	2250	121.44	1566.2	SLU 32	12.9	Si
fin.	3	1884	-169.76	1566.2	SLU 32	9.23	Si
ini.	3	2674	135.98	1566.2	SLU 83	11.52	Si
fin.	3	2265	-187.74	1566.2	SLU 83	8.34	Si
ini.	3	2579	124.18	1566.2	SLU 74	12.61	Si
fin.	3	2195	-178.53	1566.2	SLU 74	8.77	Si
ini.	3	2921	125.31	1566.2	SLU 77	12.5	Si
fin.	3	2545	-168.22	1566.2	SLU 77	9.31	Si
ini.	3	2345	133.24	1566.2	SLU 41	11.75	Si
fin.	3	1954	-178.97	1566.2	SLU 41	8.75	Si
ini.	3	2592	122.57	1566.2	SLU 35	12.78	Si
fin.	3	2234	-159.45	1566.2	SLU 35	9.82	Si
ini.	3	2333	134.85	1566.2	SLU 81	11.61	Si
fin.	3	1915	-198.05	1566.2	SLU 81	7.91	Si
ini.	3	2090	116.54	1566.2	SLU 40	13.44	Si
fin.	3	1745	-157.7	1566.2	SLU 40	9.93	Si
ini.	3	2004	132.11	1566.2	SLU 39	11.86	Si
fin.	3	1604	-189.28	1566.2	SLU 39	8.27	Si
ini.	3	2419	119.29	1566.2	SLU 82	13.13	Si
fin.	3	2056	-166.47	1566.2	SLU 82	9.41	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	2727	73.01	-27			1132	0	SLU 59	0	No
fin.	3	2513	-83	-595			1132	0	SLU 59	0	No
ini.	3	2631	92.7	-152			1132	0	SLU 56	0	No
fin.	3	2344	-126.68	-722			1132	0	SLU 56	0	No
ini.	3	2717	77.13	-59			1132	0	SLU 57	0	No
fin.	3	2485	-95.1	-628			1132	0	SLU 57	0	No
ini.	3	1428	46.42	-21			1132	0	SLU 1	0	No
fin.	3	1265	-76.71	-464			1132	0	SLU 1	0	No
ini.	3	2640	88.57	-120			1132	0	SLU 58	0	No
fin.	3	2372	-114.58	-689			1132	0	SLU 58	0	No
ini.	3	2129	86.67	-133			1132	0	SLU 61	0	No
fin.	3	1855	-124.92	-706			1132	0	SLU 61	0	No
ini.	3	2376	76	-75			1132	0	SLU 54	0	No
fin.	3	2135	-105.4	-645			1132	0	SLU 54	0	No
ini.	3	2443	61.5	19			1132	0	SLU 55	0	No
fin.	3	2257	-72.26	-550			1132	0	SLU 55	0	No
ini.	3	2289	91.57	-168			1132	0	SLU 53	0	No
fin.	3	1994	-136.98	-740			1132	0	SLU 53	0	No
ini.	3	2043	102.24	-226			1132	0	SLU 60	0	No
fin.	3	1714	-156.5	-800			1132	0	SLU 60	0	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	2786	447.43	2349.3	SLV 4	5.25	Si
fin.	2	1562	-401.5	2349.3	SLV 4	5.85	Si
ini.	2	2762	711.12	2349.3	SLV 7	3.3	Si
fin.	2	987	-650.09	2349.3	SLV 7	3.61	Si
ini.	2	2195	587.39	2349.3	SLV 12	4	Si
fin.	2	775	-561.4	2349.3	SLV 12	4.18	Si
ini.	2	940	-454.69	2349.3	SLV 6	5.17	Si
fin.	2	1925	355.83	2349.3	SLV 6	6.6	Si
ini.	2	374	-578.42	2349.3	SLV 10	4.06	Si
fin.	2	1713	444.52	2349.3	SLV 10	5.29	Si
ini.	2	940	-454.69	2349.3	SLV 5	5.17	Si
fin.	2	1925	355.83	2349.3	SLV 5	6.6	Si
ini.	2	374	-578.42	2349.3	SLV 9	4.06	Si
fin.	2	1713	444.52	2349.3	SLV 9	5.29	Si
ini.	2	2762	711.12	2349.3	SLV 8	3.3	Si
fin.	2	987	-650.09	2349.3	SLV 8	3.61	Si
ini.	2	2786	447.43	2349.3	SLV 3	5.25	Si
fin.	2	1562	-401.5	2349.3	SLV 3	5.85	Si
ini.	2	2195	587.39	2349.3	SLV 11	4	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	2	775	-561.4	2349.3	SLV 11	4.18	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	2786	447.43	-1610			1698	0	SLV 3	0	No
fin.	2	1562	-401.5	-2056			1698	0	SLV 3	0	No
ini.	2	2762	711.12	-2514			1698	0	SLV 8	0	No
fin.	2	987	-650.09	-2967			1698	366	SLV 8	0.12	No
ini.	2	2786	447.43	-1610			1698	0	SLV 4	0	No
fin.	2	1562	-401.5	-2056			1698	0	SLV 4	0	No
ini.	2	374	-578.42	2288			1698	552	SLV 10	0.24	No
fin.	2	1713	444.52	1853			1698	0	SLV 10	0	No
ini.	2	940	-454.69	1776			1698	384	SLV 6	0.22	No
fin.	2	1925	355.83	1341			1698	0	SLV 6	0	No
ini.	2	2239	97.69	-323			1698	0	SLV 2	0	No
fin.	2	1843	-99.72	-763			1698	0	SLV 2	0	No
ini.	2	2239	97.69	-323			1698	0	SLV 1	0	No
fin.	2	1843	-99.72	-763			1698	0	SLV 1	0	No
ini.	2	940	-454.69	1776			1698	384	SLV 5	0.22	No
fin.	2	1925	355.83	1341			1698	0	SLV 5	0	No
ini.	2	374	-578.42	2288			1698	552	SLV 9	0.24	No
fin.	2	1713	444.52	1853			1698	0	SLV 9	0	No
ini.	2	2762	711.12	-2514			1698	0	SLV 7	0	No
fin.	2	987	-650.09	-2967			1698	366	SLV 7	0.12	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.304	SLV 7	Si
V_SLV	0	SLV 1	No
PF_SLU	7.908	SLU 81	Si
V_SLU	0	SLU 1	No

Trave di accoppiamento 150

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-21.813	5.951	12.17	13.07	0.9	-22.713	5.951	12.17	13.07	0.9	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1547	559.55	1150.68	SLU 80	2.06	Si
fin.	3	701	-719.53	1150.68	SLU 80	1.6	Si
ini.	3	-1550	553.12	1150.68	SLU 83	2.08	Si
fin.	3	625	-696.02	1150.68	SLU 83	1.65	Si
ini.	3	-1490	538.67	1150.68	SLU 75	2.14	Si
fin.	3	626	-674.71	1150.68	SLU 75	1.71	Si
ini.	3	-1513	557.38	1150.68	SLU 77	2.06	Si
fin.	3	725	-716.82	1150.68	SLU 77	1.61	Si
ini.	3	-1566	556.93	1150.68	SLU 84	2.07	Si
fin.	3	621	-699.76	1150.68	SLU 84	1.64	Si
ini.	3	-1475	534.86	1150.68	SLU 74	2.15	Si
fin.	3	630	-670.98	1150.68	SLU 74	1.71	Si
ini.	3	-1396	514.76	1150.68	SLU 70	2.24	Si
fin.	3	685	-659.72	1150.68	SLU 70	1.74	Si
ini.	3	-1532	555.74	1150.68	SLU 79	2.07	Si
fin.	3	704	-715.79	1150.68	SLU 79	1.61	Si
ini.	3	-1529	561.18	1150.68	SLU 78	2.05	Si
fin.	3	721	-720.55	1150.68	SLU 78	1.6	Si
ini.	3	-1519	539.57	1150.68	SLU 76	2.13	Si
fin.	3	603	-676.17	1150.68	SLU 76	1.7	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1529	561.18	-2918			1582	613	SLU 78	0.21	No
fin.	3	721	-720.55	-2470			970	137	SLU 78	0.06	No
ini.	3	-1532	555.74	-2863			1583	614	SLU 79	0.21	No
fin.	3	704	-715.79	-2471			970	147	SLU 79	0.06	No
ini.	3	-1380	510.95	-2775			1523	594	SLU 69	0.21	No
fin.	3	688	-655.98	-2204			970	155	SLU 69	0.07	No
ini.	3	-1550	553.12	-2749			1591	616	SLU 83	0.22	No
fin.	3	625	-696.02	-2454			970	185	SLU 83	0.08	No
ini.	3	-1513	557.38	-2907			1576	611	SLU 77	0.21	No
fin.	3	725	-716.82	-2453			970	135	SLU 77	0.06	No
ini.	3	-1399	509.31	-2731			1530	596	SLU 71	0.22	No
fin.	3	667	-654.96	-2222			970	166	SLU 71	0.07	No
ini.	3	-1396	514.76	-2787			1529	596	SLU 70	0.21	No
fin.	3	685	-659.72	-2221			970	157	SLU 70	0.07	No
ini.	3	-1547	559.55	-2875			1589	616	SLU 80	0.21	No
fin.	3	701	-719.53	-2487			970	149	SLU 80	0.06	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1414	513.12	-2743			1536	598	SLU 72	0.22	No
fin.	3	664	-658.69	-2238			970	167	SLU 72	0.07	No
ini.	3	-1566	556.93	-2761			1597	618	SLU 84	0.22	No
fin.	3	621	-699.76	-2470			970	186	SLU 84	0.08	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-1349	483.74	1726.01	SLV 11	3.57	Si
fin.	2	437	-552.83	1726.01	SLV 11	3.12	Si
ini.	2	-1349	483.74	1726.01	SLV 12	3.57	Si
fin.	2	437	-552.83	1726.01	SLV 12	3.12	Si
ini.	2	1718	-311.66	1726.01	SLV 13	5.54	Si
fin.	2	-457	551.79	1726.01	SLV 13	3.13	Si
ini.	2	1718	-311.66	1726.01	SLV 14	5.54	Si
fin.	2	-457	551.79	1726.01	SLV 14	3.13	Si
ini.	2	-2804	832.26	1726.01	SLV 8	2.07	Si
fin.	2	877	-1076.45	1726.01	SLV 8	1.6	Si
ini.	2	-2804	832.26	1726.01	SLV 7	2.07	Si
fin.	2	877	-1076.45	1726.01	SLV 7	1.6	Si
ini.	2	-3132	850.05	1726.01	SLV 1	2.03	Si
fin.	2	1007	-1193.59	1726.01	SLV 1	1.45	Si
ini.	2	-3764	1029.5	1726.01	SLV 4	1.68	Si
fin.	2	1183	-1421.47	1726.01	SLV 4	1.21	Si
ini.	2	-3132	850.05	1726.01	SLV 2	2.03	Si
fin.	2	1007	-1193.59	1726.01	SLV 2	1.45	Si
ini.	2	-3764	1029.5	1726.01	SLV 3	1.68	Si
fin.	2	1183	-1421.47	1726.01	SLV 3	1.21	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-2804	832.26	-4307			2577	984	SLV 8	0.23	No
fin.	2	877	-1076.45	-3879			1456	302	SLV 8	0.08	No
ini.	2	-3764	1029.5	-5447			2961	1094	SLV 3	0.2	No
fin.	2	1183	-1421.47	-5195			1456	135	SLV 3	0.03	No
ini.	2	-3764	1029.5	-5447			2961	1094	SLV 4	0.2	No
fin.	2	1183	-1421.47	-5195			1456	135	SLV 4	0.03	No
ini.	2	-1349	483.74	-2412			1995	788	SLV 11	0.33	No
fin.	2	437	-552.83	-1929			1456	443	SLV 11	0.23	No
ini.	2	-2804	832.26	-4307			2577	984	SLV 7	0.23	No
fin.	2	877	-1076.45	-3879			1456	302	SLV 7	0.08	No
ini.	2	-1349	483.74	-2412			1995	788	SLV 12	0.33	No
fin.	2	437	-552.83	-1929			1456	443	SLV 12	0.23	No
ini.	2	-3132	850.05	-4529			2708	1023	SLV 1	0.23	No
fin.	2	1007	-1193.59	-4371			1456	245	SLV 1	0.06	No
ini.	2	-3132	850.05	-4529			2708	1023	SLV 2	0.23	No
fin.	2	1007	-1193.59	-4371			1456	245	SLV 2	0.06	No
ini.	2	1718	-311.66	1786			1456	0	SLV 13	0	No
fin.	2	-457	551.79	2131			1639	640	SLV 13	0.3	No
ini.	2	1718	-311.66	1786			1456	0	SLV 14	0	No
fin.	2	-457	551.79	2131			1639	640	SLV 14	0.3	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.214	SLV 3	Si
V_SLV	0	SLV 13	No
PF_SLU	1.597	SLU 78	Si
V_SLU	0.055	SLU 77	No

Trave di accoppiamento 151

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-21.813	5.951	14.87	15.32	0.45	-22.713	5.951	14.87	15.32	0.45	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	734	229.43	287.67	SLU 76	1.25	Si
fin.	3	-602	-321.73	287.67	SLU 76	0.89	No
ini.	3	841	234.79	287.67	SLU 80	1.23	Si
fin.	3	-536	-333.4	287.67	SLU 80	0.86	No
ini.	3	779	239.37	287.67	SLU 83	1.2	Si
fin.	3	-605	-331.97	287.67	SLU 83	0.87	No
ini.	3	732	224.84	287.67	SLU 75	1.28	Si
fin.	3	-608	-327.98	287.67	SLU 75	0.88	No
ini.	3	830	231.42	287.67	SLU 78	1.24	Si
fin.	3	-558	-341.28	287.67	SLU 78	0.84	No
ini.	3	747	223.01	287.67	SLU 74	1.29	Si
fin.	3	-583	-325.55	287.67	SLU 74	0.88	No
ini.	3	765	241.21	287.67	SLU 84	1.19	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	3	-631	-334.41	287.67	SLU 84	0.86	No
ini.	3	845	229.59	287.67	SLU 77	1.25	Si
fin.	3	-533	-338.84	287.67	SLU 77	0.85	No
ini.	3	856	232.95	287.67	SLU 79	1.23	Si
fin.	3	-511	-330.97	287.67	SLU 79	0.87	No
ini.	3	667	234.63	287.67	SLU 82	1.23	Si
fin.	3	-680	-321.11	287.67	SLU 82	0.9	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	761	206.09	-533			323	0	SLU 59	0	No
fin.	3	-460	-297.38	-1150			446	176	SLU 59	0.15	No
ini.	3	601	204.09	-561			323	0	SLU 60	0	No
fin.	3	-579	-282.65	-1066			478	188	SLU 60	0.18	No
ini.	3	586	205.93	-568			323	0	SLU 61	0	No
fin.	3	-604	-285.09	-1073			485	190	SLU 61	0.18	No
ini.	3	775	204.25	-526			323	0	SLU 58	0	No
fin.	3	-435	-294.94	-1143			439	174	SLU 58	0.15	No
ini.	3	749	202.73	-506			323	0	SLU 57	0	No
fin.	3	-482	-305.25	-1192			452	178	SLU 57	0.15	No
ini.	3	666	194.31	-494			323	0	SLU 53	0	No
fin.	3	-507	-289.53	-1123			459	181	SLU 53	0.16	No
ini.	3	430	131.22	-340			323	0	SLU 1	0	No
fin.	3	-349	-190.27	-735			417	165	SLU 1	0.22	No
ini.	3	653	200.74	-532			323	0	SLU 55	0	No
fin.	3	-526	-285.71	-1094			464	183	SLU 55	0.17	No
ini.	3	652	196.15	-501			323	0	SLU 54	0	No
fin.	3	-532	-291.96	-1131			465	183	SLU 54	0.16	No
ini.	3	764	200.89	-499			323	0	SLU 56	0	No
fin.	3	-457	-302.82	-1185			445	176	SLU 56	0.15	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	398	59.28	431.5	SLV 5	7.28	Si
fin.	2	-343	-139.67	431.5	SLV 5	3.09	Si
ini.	2	1163	350.16	431.5	SLV 8	1.23	Si
fin.	2	-611	-430.19	431.5	SLV 8	1	Si
ini.	2	536	236.9	431.5	SLV 11	1.82	Si
fin.	2	-460	-280.52	431.5	SLV 11	1.54	Si
ini.	2	536	236.9	431.5	SLV 12	1.82	Si
fin.	2	-460	-280.52	431.5	SLV 12	1.54	Si
ini.	2	1397	293.23	431.5	SLV 1	1.47	Si
fin.	2	-613	-415.97	431.5	SLV 1	1.04	Si
ini.	2	1163	350.16	431.5	SLV 7	1.23	Si
fin.	2	-611	-430.19	431.5	SLV 7	1	Si
ini.	2	1627	380.49	431.5	SLV 4	1.13	Si
fin.	2	-694	-503.12	431.5	SLV 4	0.86	No
ini.	2	1627	380.49	431.5	SLV 3	1.13	Si
fin.	2	-694	-503.12	431.5	SLV 3	0.86	No
ini.	2	398	59.28	431.5	SLV 6	7.28	Si
fin.	2	-343	-139.67	431.5	SLV 6	3.09	Si
ini.	2	1397	293.23	431.5	SLV 2	1.47	Si
fin.	2	-613	-415.97	431.5	SLV 2	1.04	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	536	236.9	-586			485	70	SLV 11	0.12	No
fin.	2	-460	-280.52	-993			608	240	SLV 11	0.24	No
ini.	2	1627	380.49	-1281			485	0	SLV 3	0	No
fin.	2	-694	-503.12	-1691			670	265	SLV 3	0.16	No
ini.	2	1163	350.16	-1042			485	0	SLV 7	0	No
fin.	2	-611	-430.19	-1451			648	256	SLV 7	0.18	No
ini.	2	1397	293.23	-1030			485	0	SLV 2	0	No
fin.	2	-613	-415.97	-1439			649	257	SLV 2	0.18	No
ini.	2	1397	293.23	-1030			485	0	SLV 1	0	No
fin.	2	-613	-415.97	-1439			649	257	SLV 1	0.18	No
ini.	2	398	59.28	-205			485	111	SLV 5	0.54	No
fin.	2	-343	-139.67	-610			577	227	SLV 5	0.37	No
ini.	2	1627	380.49	-1281			485	0	SLV 4	0	No
fin.	2	-694	-503.12	-1691			670	265	SLV 4	0.16	No
ini.	2	1163	350.16	-1042			485	0	SLV 8	0	No
fin.	2	-611	-430.19	-1451			648	256	SLV 8	0.18	No
ini.	2	536	236.9	-586			485	70	SLV 12	0.12	No
fin.	2	-460	-280.52	-993			608	240	SLV 12	0.24	No
ini.	2	398	59.28	-205			485	111	SLV 6	0.54	No
fin.	2	-343	-139.67	-610			577	227	SLV 6	0.37	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.858	SLV 3	No
V_SLV	0	SLV 1	No
PF_SLU	0.843	SLU 78	No
V_SLU	0	SLU 1	No

Trave di accoppiamento 152

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-21.593	-3.359	12.17	13.07	0.9	-22.493	-3.359	12.17	13.07	0.9	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1289	733.84	1150.68	SLU 73	1.57	Si
fin.	3	1075	-360.47	1150.68	SLU 73	3.19	Si
ini.	3	-1125	739.78	1150.68	SLU 77	1.56	Si
fin.	3	1251	-381.39	1150.68	SLU 77	3.02	Si
ini.	3	-1294	776.48	1150.68	SLU 84	1.48	Si
fin.	3	1209	-394.07	1150.68	SLU 84	2.92	Si
ini.	3	-1209	781.1	1150.68	SLU 78	1.47	Si
fin.	3	1300	-400.04	1150.68	SLU 78	2.88	Si
ini.	3	-1274	767.96	1150.68	SLU 76	1.5	Si
fin.	3	1199	-387.18	1150.68	SLU 76	2.97	Si
ini.	3	-1309	742.36	1150.68	SLU 82	1.55	Si
fin.	3	1085	-367.36	1150.68	SLU 82	3.13	Si
ini.	3	-1224	746.98	1150.68	SLU 75	1.54	Si
fin.	3	1176	-373.33	1150.68	SLU 75	3.08	Si
ini.	3	-1204	774.54	1150.68	SLU 80	1.49	Si
fin.	3	1290	-401.45	1150.68	SLU 80	2.87	Si
ini.	3	-1120	733.23	1150.68	SLU 79	1.57	Si
fin.	3	1241	-382.8	1150.68	SLU 79	3.01	Si
ini.	3	-1211	735.17	1150.68	SLU 83	1.57	Si
fin.	3	1160	-375.42	1150.68	SLU 83	3.07	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1062	695.32	-2477			1395	549	SLU 57	0.22	No
fin.	3	1169	-352.07	-1710			970	0	SLU 57	0	No
ini.	3	-973	647.44	-2312			1360	537	SLU 58	0.23	No
fin.	3	1110	-334.83	-1600			970	0	SLU 58	0	No
ini.	3	-1057	688.76	-2444			1393	549	SLU 59	0.22	No
fin.	3	1159	-353.48	-1730			970	0	SLU 59	0	No
ini.	3	-1162	656.58	-2238			1435	564	SLU 61	0.25	No
fin.	3	954	-319.39	-1735			970	0	SLU 61	0	No
ini.	3	-1077	661.19	-2322			1401	552	SLU 54	0.24	No
fin.	3	1045	-325.36	-1639			970	0	SLU 54	0	No
ini.	3	-1079	615.26	-2106			1402	552	SLU 60	0.26	No
fin.	3	905	-300.74	-1605			970	0	SLU 60	0	No
ini.	3	-1127	682.18	-2377			1421	559	SLU 55	0.24	No
fin.	3	1068	-339.21	-1747			970	0	SLU 55	0	No
ini.	3	-978	654	-2345			1362	537	SLU 56	0.23	No
fin.	3	1120	-333.42	-1580			970	0	SLU 56	0	No
ini.	3	-1142	684.86	-2335			1427	561	SLU 42	0.24	No
fin.	3	1067	-352.19	-1934			970	0	SLU 42	0	No
ini.	3	-993	619.88	-2190			1368	540	SLU 53	0.25	No
fin.	3	996	-306.71	-1509			970	0	SLU 53	0	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-1640	1108.23	1726.01	SLV 4	1.56	Si
fin.	2	2403	-637.46	1726.01	SLV 4	2.71	Si
ini.	2	-1102	578.41	1726.01	SLV 9	2.98	Si
fin.	2	705	-278.25	1726.01	SLV 9	6.2	Si
ini.	2	-1102	578.41	1726.01	SLV 10	2.98	Si
fin.	2	705	-278.25	1726.01	SLV 10	6.2	Si
ini.	2	-1742	1036.11	1726.01	SLV 5	1.67	Si
fin.	2	1840	-564.15	1726.01	SLV 5	3.06	Si
ini.	2	-2032	1321.4	1726.01	SLV 2	1.31	Si
fin.	2	2754	-757.58	1726.01	SLV 2	2.28	Si
ini.	2	-1640	1108.23	1726.01	SLV 3	1.56	Si
fin.	2	2403	-637.46	1726.01	SLV 3	2.71	Si
ini.	2	496	-417.43	1726.01	SLV 16	4.13	Si
fin.	2	-1380	315.55	1726.01	SLV 16	5.47	Si
ini.	2	496	-417.43	1726.01	SLV 15	4.13	Si
fin.	2	-1380	315.55	1726.01	SLV 15	5.47	Si
ini.	2	-1742	1036.11	1726.01	SLV 6	1.67	Si
fin.	2	1840	-564.15	1726.01	SLV 6	3.06	Si
ini.	2	-2032	1321.4	1726.01	SLV 1	1.31	Si
fin.	2	2754	-757.58	1726.01	SLV 1	2.28	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-1742	1036.11	-3659			2153	846	SLV 6	0.23	No
fin.	2	1840	-564.15	-2969			1456	0	SLV 6	0	No
ini.	2	-2032	1321.4	-4894			2269	886	SLV 2	0.18	No
fin.	2	2754	-757.58	-4121			1456	0	SLV 2	0	No
ini.	2	496	-417.43	1749			1456	427	SLV 16	0.24	No
fin.	2	-1380	315.55	1869			2008	793	SLV 16	0.42	No
ini.	2	-1742	1036.11	-3659			2153	846	SLV 5	0.23	No
fin.	2	1840	-564.15	-2969			1456	0	SLV 5	0	No
ini.	2	-2032	1321.4	-4894			2269	886	SLV 1	0.18	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	2	2754	-757.58	-4121			1456	0	SLV 1	0	No
ini.	2	496	-417.43	1749			1456	427	SLV 15	0.24	No
fin.	2	-1380	315.55	1869			2008	793	SLV 15	0.42	No
ini.	2	-1640	1108.23	-4175			2112	831	SLV 4	0.2	No
fin.	2	2403	-637.46	-3499			1456	0	SLV 4	0	No
ini.	2	-1640	1108.23	-4175			2112	831	SLV 3	0.2	No
fin.	2	2403	-637.46	-3499			1456	0	SLV 3	0	No
ini.	2	-1102	578.41	-1882			1896	750	SLV 9	0.4	No
fin.	2	705	-278.25	-1359			1456	364	SLV 9	0.27	No
ini.	2	-1102	578.41	-1882			1896	750	SLV 10	0.4	No
fin.	2	705	-278.25	-1359			1456	364	SLV 10	0.27	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF SLV	1.306	SLV 1	Si
V SLV	0	SLV 1	No
PF SLU	1.473	SLU 78	Si
V SLU	0	SLU 6	No

Trave di accoppiamento 153

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-21.593	-3.359	14.87	15.32	0.45	-22.493	-3.359	14.87	15.32	0.45	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fthk	fvk0	fthmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	1313	200.7	287.67	SLU 77	1.43	Si
fin.	3	-1101	-255.22	287.67	SLU 77	1.13	Si
ini.	3	1184	195.03	287.67	SLU 82	1.47	Si
fin.	3	-1170	-240.05	287.67	SLU 82	1.2	Si
ini.	3	1363	209.81	287.67	SLU 80	1.37	Si
fin.	3	-1145	-261.48	287.67	SLU 80	1.1	Si
ini.	3	1199	188.31	287.67	SLU 74	1.53	Si
fin.	3	-1077	-238.53	287.67	SLU 74	1.21	Si
ini.	3	1206	195.14	287.67	SLU 75	1.47	Si
fin.	3	-1160	-248.18	287.67	SLU 75	1.16	Si
ini.	3	1321	207.53	287.67	SLU 78	1.39	Si
fin.	3	-1184	-264.87	287.67	SLU 78	1.09	Si
ini.	3	1299	207.42	287.67	SLU 84	1.39	Si
fin.	3	-1195	-256.74	287.67	SLU 84	1.12	Si
ini.	3	1291	200.59	287.67	SLU 83	1.43	Si
fin.	3	-1112	-247.09	287.67	SLU 83	1.16	Si
ini.	3	1356	202.98	287.67	SLU 79	1.42	Si
fin.	3	-1063	-251.83	287.67	SLU 79	1.14	Si
ini.	3	1253	201.98	287.67	SLU 76	1.42	Si
fin.	3	-1176	-251.22	287.67	SLU 76	1.15	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	1056	164.13	-240			323	0	SLU 53	0	No
fin.	3	-924	-208.36	-1654			570	218	SLU 53	0.13	No
ini.	3	1170	176.52	-160			323	0	SLU 56	0	No
fin.	3	-948	-225.05	-1847			576	220	SLU 56	0.12	No
ini.	3	1178	183.35	-205			323	0	SLU 57	0	No
fin.	3	-1031	-234.7	-1893			598	226	SLU 57	0.12	No
ini.	3	1063	170.96	-285			323	0	SLU 54	0	No
fin.	3	-1007	-218.01	-1700			592	224	SLU 54	0.13	No
ini.	3	1220	185.64	-277			323	0	SLU 59	0	No
fin.	3	-992	-231.31	-1823			588	223	SLU 59	0.12	No
ini.	3	1110	177.8	-387			323	0	SLU 55	0	No
fin.	3	-1023	-221.05	-1661			596	226	SLU 55	0.14	No
ini.	3	1041	170.86	-499			323	0	SLU 61	0	No
fin.	3	-1018	-209.88	-1500			595	225	SLU 61	0.15	No
ini.	3	1033	164.03	-454			323	0	SLU 60	0	No
fin.	3	-935	-200.23	-1453			573	219	SLU 60	0.15	No
ini.	3	704	106.93	-214			323	0	SLU 1	0	No
fin.	3	-571	-131.34	-1014			476	187	SLU 1	0.18	No
ini.	3	1213	178.81	-232			323	0	SLU 58	0	No
fin.	3	-910	-221.66	-1777			566	217	SLU 58	0.12	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	2851	344.53	431.5	SLV 1	1.25	Si
fin.	2	-828	-344.61	431.5	SLV 1	1.25	Si
ini.	2	-26	93.76	431.5	SLV 8	4.6	Si
fin.	2	-2023	-234.59	431.5	SLV 8	1.84	Si
ini.	2	-26	93.76	431.5	SLV 7	4.6	Si
fin.	2	-2023	-234.59	431.5	SLV 7	1.84	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	2591	266.14	431.5	SLV 6	1.62	Si
fin.	2	381	-183.83	431.5	SLV 6	2.35	Si
ini.	2	2851	344.53	431.5	SLV 2	1.25	Si
fin.	2	-828	-344.61	431.5	SLV 2	1.25	Si
ini.	2	2591	266.14	431.5	SLV 5	1.62	Si
fin.	2	381	-183.83	431.5	SLV 5	2.35	Si
ini.	2	2066	292.81	431.5	SLV 3	1.47	Si
fin.	2	-1549	-359.83	431.5	SLV 3	1.2	Si
ini.	2	1583	147.23	431.5	SLV 9	2.93	Si
fin.	2	696	-61.25	431.5	SLV 9	7.04	Si
ini.	2	2066	292.81	431.5	SLV 4	1.47	Si
fin.	2	-1549	-359.83	431.5	SLV 4	1.2	Si
ini.	2	1583	147.23	431.5	SLV 10	2.93	Si
fin.	2	696	-61.25	431.5	SLV 10	7.04	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	2066	292.81	-1207			485	0	SLV 3	0	No
fin.	2	-1549	-359.83	-2005			898	340	SLV 3	0.17	No
ini.	2	2851	344.53	-1515			485	0	SLV 1	0	No
fin.	2	-828	-344.61	-2306			706	278	SLV 1	0.12	No
ini.	2	2591	266.14	-1116			485	0	SLV 6	0	No
fin.	2	381	-183.83	-1927			485	115	SLV 6	0.06	No
ini.	2	1583	147.23	-466			485	0	SLV 9	0	No
fin.	2	696	-61.25	-1302			485	0	SLV 9	0	No
ini.	2	-1294	-103.53	958			830	319	SLV 15	0.33	No
fin.	2	-499	48.76	80			618	244	SLV 15	3.05	Si
ini.	2	2066	292.81	-1207			485	0	SLV 4	0	No
fin.	2	-1549	-359.83	-2005			898	340	SLV 4	0.17	No
ini.	2	2591	266.14	-1116			485	0	SLV 5	0	No
fin.	2	381	-183.83	-1927			485	115	SLV 5	0.06	No
ini.	2	1583	147.23	-466			485	0	SLV 10	0	No
fin.	2	696	-61.25	-1302			485	0	SLV 10	0	No
ini.	2	2851	344.53	-1515			485	0	SLV 2	0	No
fin.	2	-828	-344.61	-2306			706	278	SLV 2	0.12	No
ini.	2	-1294	-103.53	958			830	319	SLV 16	0.33	No
fin.	2	-499	48.76	80			618	244	SLV 16	3.05	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.199	SLV 3	Si
V_SLV	0	SLV 1	No
PF_SLU	1.086	SLU 78	Si
V_SLU	0	SLU 1	No

Trave di accoppiamento 154

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-18.868	-3.359	12.17	14.17	2	-19.368	-3.359	12.17	14.17	2	0.5	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fhmmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-599	489.9	5682.35	SLU 83	11.6	Si
fin.	3	-479	37.96	5682.35	SLU 83	149.71	Si
ini.	3	-624	487.78	5682.35	SLU 74	11.65	Si
fin.	3	-507	62.76	5682.35	SLU 74	90.54	Si
ini.	3	-597	480.67	5682.35	SLU 69	11.82	Si
fin.	3	-485	92.24	5682.35	SLU 69	61.61	Si
ini.	3	-562	464.85	5682.35	SLU 71	12.22	Si
fin.	3	-447	68.81	5682.35	SLU 71	82.59	Si
ini.	3	-816	462.83	5682.35	SLU 78	12.28	Si
fin.	3	-679	81.13	5682.35	SLU 78	70.04	Si
ini.	3	-533	464.02	5682.35	SLU 58	12.25	Si
fin.	3	-425	61.03	5682.35	SLU 58	93.1	Si
ini.	3	-568	479.84	5682.35	SLU 56	11.84	Si
fin.	3	-463	84.47	5682.35	SLU 56	67.27	Si
ini.	3	-618	522.55	5682.35	SLU 77	10.87	Si
fin.	3	-506	89.03	5682.35	SLU 77	63.83	Si
ini.	3	-605	455.13	5682.35	SLU 81	12.49	Si
fin.	3	-480	11.69	5682.35	SLU 81	485.9	Si
ini.	3	-583	506.72	5682.35	SLU 79	11.21	Si
fin.	3	-469	65.6	5682.35	SLU 79	86.63	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-533	464.02	-877			2370	920	SLU 58	1.05	Si
fin.	3	-425	61.03	-678			2327	899	SLU 58	1.33	Si
ini.	3	-803	395.42	-869			2478	971	SLU 82	1.12	Si



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	3	-653	3.8	-914			2418	943	SLU 82	1.03	Si
ini.	3	-605	455.13	-937			2399	934	SLU 81	1	No
fin.	3	-480	11.69	-933			2349	910	SLU 81	0.98	No
ini.	3	-597	480.67	-880			2395	932	SLU 69	1.06	Si
fin.	3	-485	92.24	-595			2350	911	SLU 69	1.53	Si
ini.	3	-583	506.72	-964			2390	930	SLU 79	0.96	No
fin.	3	-469	65.6	-775			2344	908	SLU 79	1.17	Si
ini.	3	-562	464.85	-890			2381	926	SLU 71	1.04	Si
fin.	3	-447	68.81	-646			2335	904	SLU 71	1.4	Si
ini.	3	-624	487.78	-925			2406	938	SLU 74	1.01	Si
fin.	3	-507	62.76	-775			2360	915	SLU 74	1.18	Si
ini.	3	-599	489.9	-966			2396	933	SLU 83	0.97	No
fin.	3	-479	37.96	-882			2348	910	SLU 83	1.03	Si
ini.	3	-549	447.2	-880			2376	923	SLU 62	1.05	Si
fin.	3	-436	33.4	-785			2331	901	SLU 62	1.15	Si
ini.	3	-618	522.55	-954			2404	936	SLU 77	0.98	No
fin.	3	-506	89.03	-724			2359	915	SLU 77	1.26	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	961	1003.49	8523.53	SLV 3	8.49	Si
fin.	2	926	-800.29	8523.53	SLV 3	10.65	Si
ini.	2	-1243	-724.23	8523.53	SLV 15	11.77	Si
fin.	2	-1418	911.97	8523.53	SLV 15	9.35	Si
ini.	2	368	1337.55	8523.53	SLV 1	6.37	Si
fin.	2	734	-890.76	8523.53	SLV 1	9.57	Si
ini.	2	-1835	-390.17	8523.53	SLV 13	21.85	Si
fin.	2	-1610	821.5	8523.53	SLV 13	10.38	Si
ini.	2	-1093	1122.59	8523.53	SLV 6	7.59	Si
fin.	2	-310	-397.01	8523.53	SLV 6	21.47	Si
ini.	2	-1093	1122.59	8523.53	SLV 5	7.59	Si
fin.	2	-310	-397.01	8523.53	SLV 5	21.47	Si
ini.	2	961	1003.49	8523.53	SLV 4	8.49	Si
fin.	2	926	-800.29	8523.53	SLV 4	10.65	Si
ini.	2	-1835	-390.17	8523.53	SLV 14	21.85	Si
fin.	2	-1610	821.5	8523.53	SLV 14	10.38	Si
ini.	2	-1243	-724.23	8523.53	SLV 16	11.77	Si
fin.	2	-1418	911.97	8523.53	SLV 16	9.35	Si
ini.	2	368	1337.55	8523.53	SLV 2	6.37	Si
fin.	2	734	-890.76	8523.53	SLV 2	9.57	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-1093	1122.59	-4243			3672	1436	SLV 5	0.34	No
fin.	2	-310	-397.01	-4032			3359	1283	SLV 5	0.32	No
ini.	2	-1243	-724.23	4293			3732	1463	SLV 16	0.34	No
fin.	2	-1418	911.97	3887			3802	1494	SLV 16	0.38	No
ini.	2	368	1337.55	-5576			3235	1134	SLV 2	0.2	No
fin.	2	734	-890.76	-5069			3235	1046	SLV 2	0.21	No
ini.	2	219	-509.26	2960			3235	1169	SLV 11	0.39	No
fin.	2	-374	418.22	2849			3385	1296	SLV 11	0.45	No
ini.	2	-1243	-724.23	4293			3732	1463	SLV 15	0.34	No
fin.	2	-1418	911.97	3887			3802	1494	SLV 15	0.38	No
ini.	2	-1093	1122.59	-4243			3672	1436	SLV 6	0.34	No
fin.	2	-310	-397.01	-4032			3359	1283	SLV 6	0.32	No
ini.	2	368	1337.55	-5576			3235	1134	SLV 1	0.2	No
fin.	2	734	-890.76	-5069			3235	1046	SLV 1	0.21	No
ini.	2	961	1003.49	-4178			3235	987	SLV 3	0.24	No
fin.	2	926	-800.29	-3687			3235	996	SLV 3	0.27	No
ini.	2	961	1003.49	-4178			3235	987	SLV 4	0.24	No
fin.	2	926	-800.29	-3687			3235	996	SLV 4	0.27	No
ini.	2	219	-509.26	2960			3235	1169	SLV 12	0.39	No
fin.	2	-374	418.22	2849			3385	1296	SLV 12	0.45	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV		SLV 1	Si
V_SLV	0.203	SLV 1	No
PF_SLU	10.874	SLU 77	Si
V_SLU	0.965	SLU 79	No

Trave di accoppiamento 155

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-18.868	-3.359	14.97	15.32	0.35	-19.368	-3.359	14.97	15.32	0.35	0.5	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
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Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-607	42.87	174.02	SLU 61	4.06	Si
fin.	3	-607	-68.04	174.02	SLU 61	2.56	Si
ini.	3	-647	37.65	174.02	SLU 83	4.62	Si
fin.	3	-647	-71.73	174.02	SLU 83	2.43	Si
ini.	3	-632	46.55	174.02	SLU 76	3.74	Si
fin.	3	-632	-72.62	174.02	SLU 76	2.4	Si
ini.	3	-602	38.77	174.02	SLU 80	4.49	Si
fin.	3	-602	-69.67	174.02	SLU 80	2.5	Si
ini.	3	-665	44.22	174.02	SLU 84	3.94	Si
fin.	3	-665	-74.36	174.02	SLU 84	2.34	Si
ini.	3	-665	41.05	174.02	SLU 81	4.24	Si
fin.	3	-665	-72.93	174.02	SLU 81	2.39	Si
ini.	3	-650	49.95	174.02	SLU 73	3.48	Si
fin.	3	-650	-73.81	174.02	SLU 73	2.36	Si
ini.	3	-628	37.3	174.02	SLU 78	4.66	Si
fin.	3	-628	-69.26	174.02	SLU 78	2.51	Si
ini.	3	-646	40.71	174.02	SLU 75	4.28	Si
fin.	3	-646	-70.45	174.02	SLU 75	2.47	Si
ini.	3	-683	47.62	174.02	SLU 82	3.65	Si
fin.	3	-683	-75.56	174.02	SLU 82	2.3	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-526	41.78	-155			411	161	SLU 68	1.04	Si
fin.	3	-526	-64.46	-270			411	161	SLU 68	0.6	No
ini.	3	-650	49.95	-190			446	172	SLU 73	0.9	No
fin.	3	-650	-73.81	-305			446	172	SLU 73	0.56	No
ini.	3	-573	45.2	-166			425	165	SLU 52	1	No
fin.	3	-573	-66.3	-280			425	165	SLU 52	0.59	No
ini.	3	-665	41.05	-171			450	173	SLU 81	1.02	Si
fin.	3	-665	-72.93	-285			450	173	SLU 81	0.61	No
ini.	3	-665	44.22	-180			450	173	SLU 84	0.96	No
fin.	3	-665	-74.36	-294			450	173	SLU 84	0.59	No
ini.	3	-683	47.62	-189			456	175	SLU 82	0.92	No
fin.	3	-683	-75.56	-304			456	175	SLU 82	0.58	No
ini.	3	-607	42.87	-164			434	168	SLU 61	1.02	Si
fin.	3	-607	-68.04	-279			434	168	SLU 61	0.6	No
ini.	3	-632	46.55	-181			441	170	SLU 76	0.94	No
fin.	3	-632	-72.62	-296			441	170	SLU 76	0.58	No
ini.	3	-544	45.18	-164			416	162	SLU 65	0.99	No
fin.	3	-544	-65.66	-279			416	162	SLU 65	0.58	No
ini.	3	-555	41.8	-156			420	163	SLU 55	1.04	Si
fin.	3	-555	-65.1	-271			420	163	SLU 55	0.6	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-355	-195.12	261.03	SLV 12	1.34	Si
fin.	2	45	235.55	261.03	SLV 12	1.11	Si
ini.	2	-284	29.13	261.03	SLV 1	8.96	Si
fin.	2	-1056	-272.88	261.03	SLV 1	0.96	No
ini.	2	-284	29.13	261.03	SLV 2	8.96	Si
fin.	2	-1056	-272.88	261.03	SLV 2	0.96	No
ini.	2	-462	248.44	261.03	SLV 5	1.05	Si
fin.	2	-862	-331.19	261.03	SLV 5	0.79	No
ini.	2	-262	-237.36	261.03	SLV 8	1.1	Si
fin.	2	-292	143.21	261.03	SLV 8	1.82	Si
ini.	2	-355	-195.12	261.03	SLV 11	1.34	Si
fin.	2	45	235.55	261.03	SLV 11	1.11	Si
ini.	2	-462	248.44	261.03	SLV 6	1.05	Si
fin.	2	-862	-331.19	261.03	SLV 6	0.79	No
ini.	2	-555	290.67	261.03	SLV 10	0.9	No
fin.	2	-525	-238.84	261.03	SLV 10	1.09	Si
ini.	2	-262	-237.36	261.03	SLV 7	1.1	Si
fin.	2	-292	143.21	261.03	SLV 7	1.82	Si
ini.	2	-555	290.67	261.03	SLV 9	0.9	No
fin.	2	-525	-238.84	261.03	SLV 9	1.09	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-284	29.13	-676			476	187	SLV 2	0.28	No
fin.	2	-1056	-272.88	-793			692	265	SLV 2	0.33	No
ini.	2	-534	24.18	466			546	216	SLV 15	0.46	No
fin.	2	239	177.25	407			396	107	SLV 15	0.26	No
ini.	2	-355	-195.12	609			496	196	SLV 12	0.32	No
fin.	2	45	235.55	516			396	142	SLV 12	0.28	No
ini.	2	-284	29.13	-676			476	187	SLV 1	0.28	No
fin.	2	-1056	-272.88	-793			692	265	SLV 1	0.33	No
ini.	2	-555	290.67	-583			552	218	SLV 9	0.37	No
fin.	2	-525	-238.84	-647			543	215	SLV 9	0.33	No
ini.	2	-355	-195.12	609			496	196	SLV 11	0.32	No
fin.	2	45	235.55	516			396	142	SLV 11	0.28	No
ini.	2	-462	248.44	-818			526	208	SLV 5	0.25	No
fin.	2	-862	-331.19	-902			638	248	SLV 5	0.27	No
ini.	2	-534	24.18	466			546	216	SLV 16	0.46	No
fin.	2	239	177.25	407			396	107	SLV 16	0.26	No
ini.	2	-555	290.67	-583			552	218	SLV 10	0.37	No
fin.	2	-525	-238.84	-647			543	215	SLV 10	0.33	No
ini.	2	-462	248.44	-818			526	208	SLV 6	0.25	No
fin.	2	-862	-331.19	-902			638	248	SLV 6	0.27	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.788	SLV 5	No
V_SLV	0.254	SLV 5	No
PF_SLU	2.303	SLU 82	Si
V_SLU	0.564	SLU 73	No

Trave di accoppiamento 156

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-17.363	-3.359	12.17	13.07	0.9	-18.263	-3.359	12.17	13.07	0.9	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb_	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-987	202.9	1150.68	SLU 71	5.67	Si
fin.	3	-150	-60.49	1150.68	SLU 71	19.02	Si
ini.	3	-1097	204.62	1150.68	SLU 74	5.62	Si
fin.	3	-194	-61.38	1150.68	SLU 74	18.75	Si
ini.	3	-1002	204.76	1150.68	SLU 69	5.62	Si
fin.	3	-161	-57.24	1150.68	SLU 69	20.1	Si
ini.	3	-1026	213.93	1150.68	SLU 56	5.38	Si
fin.	3	-137	-67.19	1150.68	SLU 56	17.13	Si
ini.	3	-1116	217.2	1150.68	SLU 77	5.3	Si
fin.	3	-151	-71.44	1150.68	SLU 77	16.11	Si
ini.	3	-1011	212.08	1150.68	SLU 58	5.43	Si
fin.	3	-126	-70.44	1150.68	SLU 58	16.33	Si
ini.	3	-912	201.49	1150.68	SLU 48	5.71	Si
fin.	3	-147	-52.99	1150.68	SLU 48	21.72	Si
ini.	3	-1101	215.34	1150.68	SLU 79	5.34	Si
fin.	3	-140	-74.7	1150.68	SLU 79	15.4	Si
ini.	3	-1041	204.83	1150.68	SLU 62	5.62	Si
fin.	3	-165	-66.47	1150.68	SLU 62	17.31	Si
ini.	3	-1131	208.1	1150.68	SLU 83	5.53	Si
fin.	3	-178	-70.72	1150.68	SLU 83	16.27	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1002	204.76	-1034			1371	541	SLU 69	0.52	No
fin.	3	-161	-57.24	-303			1035	399	SLU 69	1.31	Si
ini.	3	-894	188.91	-936			1328	525	SLU 45	0.56	No
fin.	3	-191	-42.92	-202			1047	405	SLU 45	2	Si
ini.	3	-912	201.49	-1049			1335	527	SLU 48	0.5	No
fin.	3	-147	-52.99	-203			1029	396	SLU 48	1.95	Si
ini.	3	-738	162.09	-862			1266	501	SLU 6	0.58	No
fin.	3	-100	-45.77	-176			1010	386	SLU 6	2.19	Si
ini.	3	-987	202.9	-1004			1365	539	SLU 71	0.54	No
fin.	3	-150	-60.49	-333			1030	396	SLU 71	1.19	Si
ini.	3	-897	199.63	-1019			1329	525	SLU 50	0.52	No
fin.	3	-136	-56.24	-232			1025	394	SLU 50	1.69	Si
ini.	3	-1026	213.93	-1035			1381	544	SLU 56	0.53	No
fin.	3	-137	-67.19	-391			1025	394	SLU 56	1.01	Si
ini.	3	-1011	212.08	-1005			1375	542	SLU 58	0.54	No
fin.	3	-126	-70.44	-421			1021	392	SLU 58	0.93	No
ini.	3	-1101	215.34	-990			1411	555	SLU 79	0.56	No
fin.	3	-140	-74.7	-521			1026	394	SLU 79	0.76	No
ini.	3	-1116	217.2	-1020			1417	557	SLU 77	0.55	No
fin.	3	-151	-71.44	-492			1031	397	SLU 77	0.81	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-3047	1203.01	1726.01	SLV 1	1.43	Si
fin.	2	1378	-835.43	1726.01	SLV 1	2.07	Si
ini.	2	1560	-923.89	1726.01	SLV 16	1.87	Si
fin.	2	-1730	767.09	1726.01	SLV 16	2.25	Si
ini.	2	-3231	1345.63	1726.01	SLV 4	1.28	Si
fin.	2	1997	-1019.63	1726.01	SLV 4	1.69	Si
ini.	2	-3047	1203.01	1726.01	SLV 2	1.43	Si
fin.	2	1378	-835.43	1726.01	SLV 2	2.07	Si
ini.	2	-1768	717.68	1726.01	SLV 7	2.4	Si
fin.	2	1416	-609.19	1726.01	SLV 7	2.83	Si
ini.	2	-1768	717.68	1726.01	SLV 8	2.4	Si
fin.	2	1416	-609.19	1726.01	SLV 8	2.83	Si
ini.	2	-3231	1345.63	1726.01	SLV 3	1.28	Si
fin.	2	1997	-1019.63	1726.01	SLV 3	1.69	Si
ini.	2	1744	-1066.5	1726.01	SLV 13	1.62	Si
fin.	2	-2349	951.29	1726.01	SLV 13	1.81	Si
ini.	2	1560	-923.89	1726.01	SLV 15	1.87	Si
fin.	2	-1730	767.09	1726.01	SLV 15	2.25	Si
ini.	2	1744	-1066.5	1726.01	SLV 14	1.62	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	2	-2349	951.29	1726.01	SLV 14	1.81	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-3231	1345.63	-5942			2748	1034	SLV 3	0.17	No
fin.	2	1997	-1019.63	-4551			1456	0	SLV 3	0	No
ini.	2	-3047	1203.01	-5121			2674	1013	SLV 2	0.2	No
fin.	2	1378	-835.43	-3734			1456	0	SLV 2	0	No
ini.	2	1560	-923.89	3926			1456	0	SLV 15	0	No
fin.	2	-1730	767.09	3162			2148	844	SLV 15	0.27	No
ini.	2	-3231	1345.63	-5942			2748	1034	SLV 4	0.17	No
fin.	2	1997	-1019.63	-4551			1456	0	SLV 4	0	No
ini.	2	-3047	1203.01	-5121			2674	1013	SLV 1	0.2	No
fin.	2	1378	-835.43	-3734			1456	0	SLV 1	0	No
ini.	2	-1768	717.68	-3446			2163	849	SLV 8	0.25	No
fin.	2	1416	-609.19	-2804			1456	0	SLV 8	0	No
ini.	2	1560	-923.89	3926			1456	0	SLV 16	0	No
fin.	2	-1730	767.09	3162			2148	844	SLV 16	0.27	No
ini.	2	-1768	717.68	-3446			2163	849	SLV 7	0.25	No
fin.	2	1416	-609.19	-2804			1456	0	SLV 7	0	No
ini.	2	1744	-1066.5	4747			1456	0	SLV 13	0	No
fin.	2	-2349	951.29	3979			2395	927	SLV 13	0.23	No
ini.	2	1744	-1066.5	4747			1456	0	SLV 14	0	No
fin.	2	-2349	951.29	3979			2395	927	SLV 14	0.23	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.283	SLV 3	Si
V_SLV	0	SLV 1	No
PF_SLU	5.298	SLU 77	Si
V_SLU	0.503	SLU 48	No

Trave di accoppiamento 157

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-17.363	-3.359	14.87	15.32	0.45	-18.263	-3.359	14.87	15.32	0.45	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	93	75.15	287.67	SLU 69	3.83	Si
fin.	3	-1077	-150.63	287.67	SLU 69	1.91	Si
ini.	3	85	79.98	287.67	SLU 58	3.6	Si
fin.	3	-1074	-144.82	287.67	SLU 58	1.99	Si
ini.	3	117	68.46	287.67	SLU 48	4.2	Si
fin.	3	-962	-140.08	287.67	SLU 48	2.05	Si
ini.	3	46	84.93	287.67	SLU 77	3.39	Si
fin.	3	-1227	-160.83	287.67	SLU 77	1.79	Si
ini.	3	-23	80.68	287.67	SLU 74	3.57	Si
fin.	3	-1207	-147.64	287.67	SLU 74	1.95	Si
ini.	3	70	78.23	287.67	SLU 56	3.68	Si
fin.	3	-1112	-150.28	287.67	SLU 56	1.91	Si
ini.	3	108	76.89	287.67	SLU 71	3.74	Si
fin.	3	-1038	-145.16	287.67	SLU 71	1.98	Si
ini.	3	-57	70.93	287.67	SLU 78	4.06	Si
fin.	3	-1174	-143.75	287.67	SLU 78	2	Si
ini.	3	-29	86.61	287.67	SLU 83	3.32	Si
fin.	3	-1234	-146.55	287.67	SLU 83	1.96	Si
ini.	3	61	86.67	287.67	SLU 79	3.32	Si
fin.	3	-1189	-155.36	287.67	SLU 79	1.85	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	117	68.46	28			323	103	SLU 48	3.75	Si
fin.	3	-962	-140.08	-1130			580	221	SLU 48	0.2	No
ini.	3	93	75.15	14			323	107	SLU 69	7.67	Si
fin.	3	-1077	-150.63	-1215			611	230	SLU 69	0.19	No
ini.	3	-10	61.16	41			326	123	SLU 70	2.97	Si
fin.	3	-1024	-133.55	-1121			596	226	SLU 70	0.2	No
ini.	3	132	70.2	-16			323	101	SLU 50	6.4	Si
fin.	3	-923	-134.62	-1061			570	218	SLU 50	0.21	No
ini.	3	-57	70.93	-21			339	130	SLU 78	6.1	Si
fin.	3	-1174	-143.75	-1170			637	237	SLU 78	0.2	No
ini.	3	108	76.89	-29			323	105	SLU 71	3.58	Si
fin.	3	-1038	-145.16	-1146			600	227	SLU 71	0.2	No
ini.	3	46	84.93	-49			323	115	SLU 77	2.36	Si
fin.	3	-1227	-160.83	-1264			651	241	SLU 77	0.19	No
ini.	3	61	86.67	-92			323	113	SLU 79	1.22	Si
fin.	3	-1189	-155.36	-1195			641	238	SLU 79	0.2	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	70	78.23	-35			323	111	SLU 56	3.16	Si
fin.	3	-1112	-150.28	-1179			620	233	SLU 56	0.2	No
ini.	3	88	62.68	34			323	108	SLU 27	3.21	Si
fin.	3	-903	-128.43	-1054			564	216	SLU 27	0.21	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	742	268.27	431.5	SLV 4	1.61	Si
fin.	2	-2683	-409.26	431.5	SLV 4	1.05	Si
ini.	2	786	247.71	431.5	SLV 1	1.74	Si
fin.	2	-1806	-394.38	431.5	SLV 1	1.09	Si
ini.	2	742	268.27	431.5	SLV 3	1.61	Si
fin.	2	-2683	-409.26	431.5	SLV 3	1.05	Si
ini.	2	-806	-160.39	431.5	SLV 14	2.69	Si
fin.	2	1111	225.31	431.5	SLV 14	1.92	Si
ini.	2	-850	-139.83	431.5	SLV 16	3.09	Si
fin.	2	234	210.43	431.5	SLV 16	2.05	Si
ini.	2	-850	-139.83	431.5	SLV 15	3.09	Si
fin.	2	234	210.43	431.5	SLV 15	2.05	Si
ini.	2	133	149.42	431.5	SLV 7	2.89	Si
fin.	2	-2685	-209.72	431.5	SLV 7	2.06	Si
ini.	2	-806	-160.39	431.5	SLV 13	2.69	Si
fin.	2	1111	225.31	431.5	SLV 13	1.92	Si
ini.	2	786	247.71	431.5	SLV 2	1.74	Si
fin.	2	-1806	-394.38	431.5	SLV 2	1.09	Si
ini.	2	133	149.42	431.5	SLV 8	2.89	Si
fin.	2	-2685	-209.72	431.5	SLV 8	2.06	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-198	-41.54	1137			538	209	SLV 9	0.18	No
fin.	2	1113	25.78	-245			485	0	SLV 9	0	No
ini.	2	133	149.42	-1343			485	162	SLV 8	0.12	No
fin.	2	-2685	-209.72	-1100			1201	419	SLV 8	0.38	No
ini.	2	742	268.27	-1746			485	0	SLV 4	0	No
fin.	2	-2683	-409.26	-2094			1201	419	SLV 4	0.2	No
ini.	2	-198	-41.54	1137			538	209	SLV 10	0.18	No
fin.	2	1113	25.78	-245			485	0	SLV 10	0	No
ini.	2	-806	-160.39	1540			700	276	SLV 13	0.18	No
fin.	2	1111	225.31	749			485	0	SLV 13	0	No
ini.	2	133	149.42	-1343			485	162	SLV 7	0.12	No
fin.	2	-2685	-209.72	-1100			1201	419	SLV 7	0.38	No
ini.	2	786	247.71	-1253			485	0	SLV 1	0	No
fin.	2	-1806	-394.38	-2094			967	359	SLV 1	0.17	No
ini.	2	742	268.27	-1746			485	0	SLV 3	0	No
fin.	2	-2683	-409.26	-2094			1201	419	SLV 3	0.2	No
ini.	2	-806	-160.39	1540			700	276	SLV 14	0.18	No
fin.	2	1111	225.31	749			485	0	SLV 14	0	No
ini.	2	786	247.71	-1253			485	0	SLV 2	0	No
fin.	2	-1806	-394.38	-2094			967	359	SLV 2	0.17	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.054	SLV 3	Si
V_SLV	0	SLV 1	No
PF_SLU	1.789	SLU 77	Si
V_SLU	0.189	SLU 69	No

Trave di accoppiamento 158

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-15.433	-3.359	14.27	15.32	1.05	-16.333	-3.359	14.27	15.32	1.05	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fkhmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1484	-270.51	1566.2	SLU 82	5.79	Si
fin.	3	-719	337.9	1566.2	SLU 82	4.64	Si
ini.	3	-1387	-275.54	1566.2	SLU 80	5.68	Si
fin.	3	-589	327.43	1566.2	SLU 80	4.78	Si
ini.	3	-1234	-267.21	1566.2	SLU 31	5.86	Si
fin.	3	-508	333.18	1566.2	SLU 31	4.7	Si
ini.	3	-1235	-278.11	1566.2	SLU 34	5.63	Si
fin.	3	-469	339.09	1566.2	SLU 34	4.62	Si
ini.	3	-1484	-281.41	1566.2	SLU 84	5.57	Si
fin.	3	-681	343.81	1566.2	SLU 84	4.56	Si
ini.	3	-1400	-281.97	1566.2	SLU 73	5.55	Si
fin.	3	-617	351.88	1566.2	SLU 73	4.45	Si
ini.	3	-1439	-273.91	1566.2	SLU 75	5.72	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	3	-653	332.6	1566.2	SLU 75	4.71	Si
ini.	3	-1319	-266.65	1566.2	SLU 42	5.87	Si
fin.	3	-571	325.12	1566.2	SLU 42	4.82	Si
ini.	3	-1439	-284.81	1566.2	SLU 78	5.5	Si
fin.	3	-615	338.51	1566.2	SLU 78	4.63	Si
ini.	3	-1400	-292.87	1566.2	SLU 76	5.35	Si
fin.	3	-578	357.79	1566.2	SLU 76	4.38	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1400	-292.87	2187			1692	664	SLU 76	0.3	No
fin.	3	-578	357.79	576			1364	537	SLU 76	0.93	No
ini.	3	-1274	-270.05	2179			1642	646	SLU 36	0.3	No
fin.	3	-505	319.81	485			1334	525	SLU 36	1.08	Si
ini.	3	-1387	-275.54	2287			1687	662	SLU 80	0.29	No
fin.	3	-589	327.43	440			1368	539	SLU 80	1.23	Si
ini.	3	-1244	-234.26	2132			1630	642	SLU 57	0.3	No
fin.	3	-548	278.7	283			1351	532	SLU 57	1.88	Si
ini.	3	-1045	-230.92	2017			1550	613	SLU 28	0.3	No
fin.	3	-382	267.79	326			1285	502	SLU 28	1.54	Si
ini.	3	-1158	-236.41	2125			1596	629	SLU 72	0.3	No
fin.	3	-466	275.4	281			1319	518	SLU 72	1.84	Si
ini.	3	-1418	-242.47	2242			1700	667	SLU 77	0.3	No
fin.	3	-689	284.1	284			1408	556	SLU 77	1.96	Si
ini.	3	-1439	-273.91	2196			1708	669	SLU 75	0.3	No
fin.	3	-653	332.6	474			1393	550	SLU 75	1.16	Si
ini.	3	-1439	-284.81	2403			1708	669	SLU 78	0.28	No
fin.	3	-615	338.51	445			1378	544	SLU 78	1.22	Si
ini.	3	-1211	-245.68	2241			1617	637	SLU 70	0.28	No
fin.	3	-491	286.48	287			1329	522	SLU 70	1.82	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-959	-700.47	2349.3	SLV 15	3.35	Si
fin.	2	1650	1321.1	2349.3	SLV 15	1.78	Si
ini.	2	-835	435.29	2349.3	SLV 1	5.4	Si
fin.	2	-2640	-995.86	2349.3	SLV 1	2.36	Si
ini.	2	-1562	-1168.07	2349.3	SLV 14	2.01	Si
fin.	2	1230	1718.79	2349.3	SLV 14	1.37	Si
ini.	2	-1562	-1168.07	2349.3	SLV 13	2.01	Si
fin.	2	1230	1718.79	2349.3	SLV 13	1.37	Si
ini.	2	-2012	-1152.44	2349.3	SLV 9	2.04	Si
fin.	2	-614	1232.64	2349.3	SLV 9	1.91	Si
ini.	2	-2012	-1152.44	2349.3	SLV 10	2.04	Si
fin.	2	-614	1232.64	2349.3	SLV 10	1.91	Si
ini.	2	-231	902.89	2349.3	SLV 4	2.6	Si
fin.	2	-2220	-1393.55	2349.3	SLV 4	1.69	Si
ini.	2	-959	-700.47	2349.3	SLV 16	3.35	Si
fin.	2	1650	1321.1	2349.3	SLV 16	1.78	Si
ini.	2	-835	435.29	2349.3	SLV 2	5.4	Si
fin.	2	-2640	-995.86	2349.3	SLV 2	2.36	Si
ini.	2	-231	902.89	2349.3	SLV 3	2.6	Si
fin.	2	-2220	-1393.55	2349.3	SLV 3	1.69	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-2012	-1152.44	4064			2503	984	SLV 10	0.24	No
fin.	2	-614	1232.64	3037			1944	761	SLV 10	0.25	No
ini.	2	-959	-700.47	4214			2082	821	SLV 16	0.19	No
fin.	2	1650	1321.1	3149			1698	0	SLV 16	0	No
ini.	2	219	887.25	-1707			1698	590	SLV 7	0.35	No
fin.	2	-376	-907.39	-2745			1849	716	SLV 7	0.26	No
ini.	2	-2012	-1152.44	4064			2503	984	SLV 9	0.24	No
fin.	2	-614	1232.64	3037			1944	761	SLV 9	0.25	No
ini.	2	-231	902.89	-2943			1791	688	SLV 4	0.23	No
fin.	2	-2220	-1393.55	-3953			2586	1013	SLV 4	0.26	No
ini.	2	-1562	-1168.07	5301			2323	918	SLV 13	0.17	No
fin.	2	1230	1718.79	4244			1698	258	SLV 13	0.06	No
ini.	2	-1562	-1168.07	5301			2323	918	SLV 14	0.17	No
fin.	2	1230	1718.79	4244			1698	258	SLV 14	0.06	No
ini.	2	-231	902.89	-2943			1791	688	SLV 3	0.23	No
fin.	2	-2220	-1393.55	-3953			2586	1013	SLV 3	0.26	No
ini.	2	219	887.25	-1707			1698	590	SLV 8	0.35	No
fin.	2	-376	-907.39	-2745			1849	716	SLV 8	0.26	No
ini.	2	-959	-700.47	4214			2082	821	SLV 15	0.19	No
fin.	2	1650	1321.1	3149			1698	0	SLV 15	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.367	SLV 13	Si
V_SLV	0	SLV 15	No
PF_SLU	4.377	SLU 76	Si
V_SLU	0.279	SLU 78	No

Trave di accoppiamento 159

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-15.058	1.406	14.27	15.32	1.05	-15.058	2.206	14.27	15.32	1.05	0.8	0.14	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	355	23.55	783.1	SLU 71	33.25	Si
fin.	3	355	-770.44	783.1	SLU 71	1.02	Si
ini.	3	360	23.05	783.1	SLU 72	33.97	Si
fin.	3	360	-763.99	783.1	SLU 72	1.03	Si
ini.	3	383	32.47	783.1	SLU 78	24.12	Si
fin.	3	383	-812.99	783.1	SLU 78	0.96	No
ini.	3	361	17.99	783.1	SLU 70	43.53	Si
fin.	3	361	-775.01	783.1	SLU 70	1.01	Si
ini.	3	358	23.08	783.1	SLU 57	33.93	Si
fin.	3	358	-758.78	783.1	SLU 57	1.03	Si
ini.	3	356	18.49	783.1	SLU 69	42.36	Si
fin.	3	356	-781.46	783.1	SLU 69	1	Si
ini.	3	353	23.58	783.1	SLU 56	33.21	Si
fin.	3	353	-765.23	783.1	SLU 56	1.02	Si
ini.	3	382	37.53	783.1	SLU 80	20.86	Si
fin.	3	382	-801.98	783.1	SLU 80	0.98	No
ini.	3	377	38.03	783.1	SLU 79	20.59	Si
fin.	3	377	-808.43	783.1	SLU 79	0.97	No
ini.	3	378	32.97	783.1	SLU 77	23.75	Si
fin.	3	378	-819.44	783.1	SLU 77	0.96	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	356	18.49	-848			566	112	SLU 69	0.13	No
fin.	3	356	-781.46	-1151			566	112	SLU 69	0.1	No
ini.	3	355	23.55	-840			566	112	SLU 71	0.13	No
fin.	3	355	-770.44	-1143			566	112	SLU 71	0.1	No
ini.	3	382	37.53	-897			566	100	SLU 80	0.11	No
fin.	3	382	-801.98	-1200			566	100	SLU 80	0.08	No
ini.	3	361	17.99	-839			566	109	SLU 70	0.13	No
fin.	3	361	-775.01	-1142			566	109	SLU 70	0.1	No
ini.	3	383	32.47	-905			566	100	SLU 78	0.11	No
fin.	3	383	-812.99	-1207			566	100	SLU 78	0.08	No
ini.	3	360	23.05	-832			566	110	SLU 72	0.13	No
fin.	3	360	-763.99	-1134			566	110	SLU 72	0.1	No
ini.	3	378	32.97	-913			566	102	SLU 77	0.11	No
fin.	3	378	-819.44	-1216			566	102	SLU 77	0.08	No
ini.	3	361	46.94	-828			566	109	SLU 84	0.13	No
fin.	3	361	-737.51	-1131			566	109	SLU 84	0.1	No
ini.	3	356	47.44	-837			566	112	SLU 83	0.13	No
fin.	3	356	-743.96	-1140			566	112	SLU 83	0.1	No
ini.	3	377	38.03	-906			566	102	SLU 79	0.11	No
fin.	3	377	-808.43	-1209			566	102	SLU 79	0.08	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	789	-29.98	1174.65	SLV 14	39.18	Si
fin.	2	761	-772.15	1174.65	SLV 14	1.52	Si
ini.	2	-775	422.35	1174.65	SLV 8	2.78	Si
fin.	2	-648	-1484.31	1174.65	SLV 8	0.79	No
ini.	2	-775	422.35	1174.65	SLV 7	2.78	Si
fin.	2	-648	-1484.31	1174.65	SLV 7	0.79	No
ini.	2	240	221.04	1174.65	SLV 15	5.31	Si
fin.	2	289	-1502.95	1174.65	SLV 15	0.78	No
ini.	2	1055	-414.38	1174.65	SLV 6	2.83	Si
fin.	2	922	951.7	1174.65	SLV 6	1.23	Si
ini.	2	240	221.04	1174.65	SLV 16	5.31	Si
fin.	2	289	-1502.95	1174.65	SLV 16	0.78	No
ini.	2	-602	464.61	1174.65	SLV 12	2.53	Si
fin.	2	-469	-1886.42	1174.65	SLV 12	0.62	No
ini.	2	789	-29.98	1174.65	SLV 13	39.18	Si
fin.	2	761	-772.15	1174.65	SLV 13	1.52	Si
ini.	2	-602	464.61	1174.65	SLV 11	2.53	Si
fin.	2	-469	-1886.42	1174.65	SLV 11	0.62	No
ini.	2	1055	-414.38	1174.65	SLV 5	2.83	Si
fin.	2	922	951.7	1174.65	SLV 5	1.23	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	1228	-372.13	1089			849	0	SLV 10	0	No
fin.	2	1101	549.58	684			849	0	SLV 10	0	No
ini.	2	1055	-414.38	1659			849	0	SLV 6	0	No
fin.	2	922	951.7	1235			849	0	SLV 6	0	No
ini.	2	789	-29.98	-888			849	0	SLV 13	0	No
fin.	2	761	-772.15	-1141			849	0	SLV 13	0	No
ini.	2	-602	464.61	-2660			1090	431	SLV 12	0.16	No
fin.	2	-469	-1886.42	-2694			1037	409	SLV 12	0.15	No
ini.	2	1055	-414.38	1659			849	0	SLV 5	0	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	2	922	951.7	1235			849	0	SLV 5	0	No
ini.	2	-602	464.61	-2660			1090	431	SLV 11	0.16	No
fin.	2	-469	-1886.42	-2694			1037	409	SLV 11	0.15	No
ini.	2	789	-29.98	-888			849	0	SLV 14	0	No
fin.	2	761	-772.15	-1141			849	0	SLV 14	0	No
ini.	2	1228	-372.13	1089			849	0	SLV 9	0	No
fin.	2	1101	549.58	684			849	0	SLV 9	0	No
ini.	2	240	221.04	-2012			849	262	SLV 16	0.13	No
fin.	2	289	-1502.95	-2154			849	249	SLV 16	0.12	No
ini.	2	240	221.04	-2012			849	262	SLV 15	0.13	No
fin.	2	289	-1502.95	-2154			849	249	SLV 15	0.12	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF SLV	0.623	SLV 11	No
V SLV	0	SLV 5	No
PF SLU	0.956	SLU 77	No
V SLU	0.083	SLU 78	No

Trave di accoppiamento 160

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-13.763	-0.228	14.27	15.32	1.05	-13.763	0.672	14.27	15.32	1.05	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fthk	fvk0	fthmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	234	-725.35	1566.2	SLU 71	2.16	Si
fin.	3	234	-28.69	1566.2	SLU 71	54.6	Si
ini.	3	245	-760.72	1566.2	SLU 69	2.06	Si
fin.	3	245	-36.46	1566.2	SLU 69	42.95	Si
ini.	3	220	-686.9	1566.2	SLU 56	2.28	Si
fin.	3	220	-37.13	1566.2	SLU 56	42.18	Si
ini.	3	245	-738.67	1566.2	SLU 79	2.12	Si
fin.	3	245	-22.53	1566.2	SLU 79	69.5	Si
ini.	3	255	-774.04	1566.2	SLU 77	2.02	Si
fin.	3	255	-30.31	1566.2	SLU 77	51.67	Si
ini.	3	241	-720.23	1566.2	SLU 80	2.17	Si
fin.	3	241	-26.19	1566.2	SLU 80	59.79	Si
ini.	3	251	-755.6	1566.2	SLU 78	2.07	Si
fin.	3	251	-33.97	1566.2	SLU 78	46.11	Si
ini.	3	230	-706.9	1566.2	SLU 72	2.22	Si
fin.	3	230	-32.35	1566.2	SLU 72	48.42	Si
ini.	3	241	-742.28	1566.2	SLU 70	2.11	Si
fin.	3	241	-40.12	1566.2	SLU 70	39.04	Si
ini.	3	230	-690.03	1566.2	SLU 35	2.27	Si
fin.	3	230	-24.9	1566.2	SLU 35	62.9	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	251	-755.6	1083			1132	367	SLU 78	0.34	No
fin.	3	251	-33.97	483			1132	367	SLU 78	0.76	No
ini.	3	227	-657.12	1000			1132	374	SLU 83	0.37	No
fin.	3	227	-9.97	400			1132	374	SLU 83	0.93	No
ini.	3	255	-774.04	1107			1132	366	SLU 77	0.33	No
fin.	3	255	-30.31	507			1132	366	SLU 77	0.72	No
ini.	3	245	-738.67	1077			1132	369	SLU 79	0.34	No
fin.	3	245	-22.53	477			1132	369	SLU 79	0.77	No
ini.	3	241	-742.28	1061			1132	370	SLU 70	0.35	No
fin.	3	241	-40.12	461			1132	370	SLU 70	0.8	No
ini.	3	232	-686.78	1021			1132	372	SLU 74	0.36	No
fin.	3	232	-20.38	421			1132	372	SLU 74	0.88	No
ini.	3	245	-760.72	1086			1132	369	SLU 69	0.34	No
fin.	3	245	-36.46	486			1132	369	SLU 69	0.76	No
ini.	3	234	-725.35	1055			1132	372	SLU 71	0.35	No
fin.	3	234	-28.69	455			1132	372	SLU 71	0.82	No
ini.	3	241	-720.23	1052			1132	370	SLU 80	0.35	No
fin.	3	241	-26.19	452			1132	370	SLU 80	0.82	No
ini.	3	230	-706.9	1031			1132	373	SLU 72	0.36	No
fin.	3	230	-32.35	430			1132	373	SLU 72	0.87	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	1096	1802.04	2349.3	SLV 12	1.3	Si
fin.	2	1497	-578.35	2349.3	SLV 12	4.06	Si
ini.	2	1096	1802.04	2349.3	SLV 11	1.3	Si
fin.	2	1497	-578.35	2349.3	SLV 11	4.06	Si
ini.	2	1138	1462.47	2349.3	SLV 7	1.61	Si
fin.	2	1594	-584.34	2349.3	SLV 7	4.02	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-859	-2279.18	2349.3	SLV 9	1.03	Si
fin.	2	-1314	571.28	2349.3	SLV 9	4.11	Si
ini.	2	-859	-2279.18	2349.3	SLV 10	1.03	Si
fin.	2	-1314	571.28	2349.3	SLV 10	4.11	Si
ini.	2	-817	-2618.76	2349.3	SLV 6	0.9	No
fin.	2	-1217	565.29	2349.3	SLV 6	4.16	Si
ini.	2	-83	-1586.5	2349.3	SLV 1	1.48	Si
fin.	2	-119	155.93	2349.3	SLV 1	15.07	Si
ini.	2	1138	1462.47	2349.3	SLV 8	1.61	Si
fin.	2	1594	-584.34	2349.3	SLV 8	4.02	Si
ini.	2	-83	-1586.5	2349.3	SLV 2	1.48	Si
fin.	2	-119	155.93	2349.3	SLV 2	15.07	Si
ini.	2	-817	-2618.76	2349.3	SLV 5	0.9	No
fin.	2	-1217	565.29	2349.3	SLV 5	4.16	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	1096	1802.04	-2027			1698	322	SLV 12	0.16	No
fin.	2	1497	-578.35	-3146			1698	0	SLV 12	0	No
ini.	2	-83	-1586.5	2013			1732	657	SLV 1	0.33	No
fin.	2	-119	155.93	1852			1746	665	SLV 1	0.36	No
ini.	2	-817	-2618.76	3349			2025	797	SLV 5	0.24	No
fin.	2	-1217	565.29	3553			2185	864	SLV 5	0.24	No
ini.	2	-83	-1586.5	2013			1732	657	SLV 2	0.33	No
fin.	2	-119	155.93	1852			1746	665	SLV 2	0.36	No
ini.	2	1138	1462.47	-1667			1698	304	SLV 7	0.18	No
fin.	2	1594	-584.34	-2722			1698	0	SLV 7	0	No
ini.	2	1096	1802.04	-2027			1698	322	SLV 11	0.16	No
fin.	2	1497	-578.35	-3146			1698	0	SLV 11	0	No
ini.	2	-817	-2618.76	3349			2025	797	SLV 6	0.24	No
fin.	2	-1217	565.29	3553			2185	864	SLV 6	0.24	No
ini.	2	-859	-2279.18	2988			2042	804	SLV 10	0.27	No
fin.	2	-1314	571.28	3128			2224	880	SLV 10	0.28	No
ini.	2	-859	-2279.18	2988			2042	804	SLV 9	0.27	No
fin.	2	-1314	571.28	3128			2224	880	SLV 9	0.28	No
ini.	2	1138	1462.47	-1667			1698	304	SLV 8	0.18	No
fin.	2	1594	-584.34	-2722			1698	0	SLV 8	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.897	SLV 5	No
V_SLV	0	SLV 7	No
PF_SLU	2.023	SLU 77	Si
V_SLU	0.331	SLU 77	No

Trave di accoppiamento 161

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-11.448	3.311	13.67	15.32	1.65	-9.948	3.311	13.67	15.32	1.65	1.5	0.14	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fkhmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-107	904.65	1933.78	SLU 74	2.14	Si
fin.	3	-107	107.18	1933.78	SLU 74	18.04	Si
ini.	3	-119	904.48	1933.78	SLU 40	2.14	Si
fin.	3	-119	42.4	1933.78	SLU 40	45.61	Si
ini.	3	-112	880.76	1933.78	SLU 83	2.2	Si
fin.	3	-112	71.3	1933.78	SLU 83	27.12	Si
ini.	3	-107	880.75	1933.78	SLU 32	2.2	Si
fin.	3	-107	81.17	1933.78	SLU 32	23.82	Si
ini.	3	-118	898.48	1933.78	SLU 39	2.15	Si
fin.	3	-118	42.71	1933.78	SLU 39	45.28	Si
ini.	3	-119	928.38	1933.78	SLU 82	2.08	Si
fin.	3	-119	68.42	1933.78	SLU 82	28.27	Si
ini.	3	-112	886.75	1933.78	SLU 84	2.18	Si
fin.	3	-112	71	1933.78	SLU 84	27.24	Si
ini.	3	-118	922.38	1933.78	SLU 81	2.1	Si
fin.	3	-118	68.72	1933.78	SLU 81	28.14	Si
ini.	3	-108	910.64	1933.78	SLU 75	2.12	Si
fin.	3	-108	106.88	1933.78	SLU 75	18.09	Si
ini.	3	-108	886.74	1933.78	SLU 33	2.18	Si
fin.	3	-108	80.87	1933.78	SLU 33	23.91	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-108	910.64	322			933	357	SLU 75	1.11	Si
fin.	3	-108	106.88	-1300			933	357	SLU 75	0.27	No
ini.	3	-79	714.18	433			921	352	SLU 54	0.81	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	3	-79	115.26	-1136			921	352	SLU 54	0.31	No
ini.	3	-107	904.65	326			932	357	SLU 74	1.09	Si
fin.	3	-107	107.18	-1296			932	357	SLU 74	0.28	No
ini.	3	-118	922.38	133			937	360	SLU 81	2.71	Si
fin.	3	-118	68.72	-1169			937	360	SLU 81	0.31	No
ini.	3	-102	845.12	201			930	356	SLU 36	1.77	Si
fin.	3	-102	83.45	-1147			930	356	SLU 36	0.31	No
ini.	3	-119	928.38	128			937	360	SLU 82	2.8	Si
fin.	3	-119	68.42	-1173			937	360	SLU 82	0.31	No
ini.	3	-107	880.75	176			933	357	SLU 32	2.03	Si
fin.	3	-107	81.17	-1172			933	357	SLU 32	0.3	No
ini.	3	-101	863.02	356			930	356	SLU 77	1	Si
fin.	3	-101	109.76	-1266			930	356	SLU 77	0.28	No
ini.	3	-101	869.02	352			930	356	SLU 78	1.01	Si
fin.	3	-101	109.46	-1270			930	356	SLU 78	0.28	No
ini.	3	-108	886.74	172			933	358	SLU 33	2.08	Si
fin.	3	-108	80.87	-1177			933	358	SLU 33	0.3	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	692	2402.42	2900.66	SLV 13	1.21	Si
fin.	2	340	295.7	2900.66	SLV 13	9.81	Si
ini.	2	673	2177.72	2900.66	SLV 16	1.33	Si
fin.	2	402	313.77	2900.66	SLV 16	9.24	Si
ini.	2	-776	-1297.94	2900.66	SLV 1	2.23	Si
fin.	2	-504	-174.72	2900.66	SLV 1	16.6	Si
ini.	2	673	2177.72	2900.66	SLV 15	1.33	Si
fin.	2	402	313.77	2900.66	SLV 15	9.24	Si
ini.	2	-794	-1522.63	2900.66	SLV 4	1.91	Si
fin.	2	-443	-156.64	2900.66	SLV 4	18.52	Si
ini.	2	-794	-1522.63	2900.66	SLV 3	1.91	Si
fin.	2	-443	-156.64	2900.66	SLV 3	18.52	Si
ini.	2	200	1369.44	2900.66	SLV 10	2.12	Si
fin.	2	-27	109.97	2900.66	SLV 10	26.38	Si
ini.	2	-776	-1297.94	2900.66	SLV 2	2.23	Si
fin.	2	-504	-174.72	2900.66	SLV 2	16.6	Si
ini.	2	200	1369.44	2900.66	SLV 9	2.12	Si
fin.	2	-27	109.97	2900.66	SLV 9	26.38	Si
ini.	2	692	2402.42	2900.66	SLV 14	1.21	Si
fin.	2	340	295.7	2900.66	SLV 14	9.81	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-776	-1297.94	1536			1645	649	SLV 2	0.42	No
fin.	2	-504	-174.72	571			1536	602	SLV 2	1.05	Si
ini.	2	-776	-1297.94	1536			1645	649	SLV 1	0.42	No
fin.	2	-504	-174.72	571			1536	602	SLV 1	1.05	Si
ini.	2	200	1369.44	-372			1334	457	SLV 10	1.23	Si
fin.	2	-27	109.97	-1346			1345	508	SLV 10	0.38	No
ini.	2	673	2177.72	-962			1334	324	SLV 16	0.34	No
fin.	2	402	313.77	-1976			1334	405	SLV 16	0.21	No
ini.	2	-794	-1522.63	1692			1652	652	SLV 3	0.39	No
fin.	2	-443	-156.64	715			1511	591	SLV 3	0.83	No
ini.	2	673	2177.72	-962			1334	324	SLV 15	0.34	No
fin.	2	402	313.77	-1976			1334	405	SLV 15	0.21	No
ini.	2	-794	-1522.63	1692			1652	652	SLV 4	0.39	No
fin.	2	-443	-156.64	715			1511	591	SLV 4	0.83	No
ini.	2	200	1369.44	-372			1334	457	SLV 9	1.23	Si
fin.	2	-27	109.97	-1346			1345	508	SLV 9	0.38	No
ini.	2	692	2402.42	-1118			1334	318	SLV 13	0.28	No
fin.	2	340	295.7	-2120			1334	422	SLV 13	0.2	No
ini.	2	692	2402.42	-1118			1334	318	SLV 14	0.28	No
fin.	2	340	295.7	-2120			1334	422	SLV 14	0.2	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.207	SLV 13	Si
V_SLV	0.199	SLV 13	No
PF_SLU	2.083	SLU 82	Si
V_SLU	0.275	SLU 75	No

Trave di accoppiamento 162

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-17.718	6.661	12.17	13.07	0.9	-16.818	6.661	12.17	13.07	0.9	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
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Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	229	64.63	1150.68	SLU 60	17.8	Si
fin.	3	281	25.73	1150.68	SLU 60	44.71	Si
ini.	3	450	22.6	1150.68	SLU 71	50.92	Si
fin.	3	219	61.59	1150.68	SLU 71	18.68	Si
ini.	3	485	28.12	1150.68	SLU 79	40.93	Si
fin.	3	285	61.49	1150.68	SLU 79	18.71	Si
ini.	3	258	65.79	1150.68	SLU 73	17.49	Si
fin.	3	279	33.72	1150.68	SLU 73	34.12	Si
ini.	3	199	65.17	1150.68	SLU 52	17.66	Si
fin.	3	231	28.16	1150.68	SLU 52	40.86	Si
ini.	3	476	29.86	1150.68	SLU 80	38.54	Si
fin.	3	273	62.91	1150.68	SLU 80	18.29	Si
ini.	3	220	66.37	1150.68	SLU 61	17.34	Si
fin.	3	268	27.16	1150.68	SLU 61	42.36	Si
ini.	3	288	65.26	1150.68	SLU 81	17.63	Si
fin.	3	329	31.3	1150.68	SLU 81	36.77	Si
ini.	3	279	67	1150.68	SLU 82	17.17	Si
fin.	3	316	32.73	1150.68	SLU 82	35.16	Si
ini.	3	441	24.34	1150.68	SLU 72	47.27	Si
fin.	3	206	63.02	1150.68	SLU 72	18.26	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	454	29.17	-316			970	247	SLU 70	0.78	No
fin.	3	241	58.4	767			970	309	SLU 70	0.4	No
ini.	3	391	21.98	-318			970	267	SLU 50	0.84	No
fin.	3	171	56.02	788			970	326	SLU 50	0.41	No
ini.	3	382	23.72	-319			970	270	SLU 51	0.84	No
fin.	3	158	57.45	792			970	329	SLU 51	0.42	No
ini.	3	439	32.32	-289			970	252	SLU 56	0.87	No
fin.	3	272	51.31	653			970	300	SLU 56	0.46	No
ini.	3	404	26.8	-377			970	263	SLU 48	0.7	No
fin.	3	205	51.41	810			970	318	SLU 48	0.39	No
ini.	3	441	24.34	-257			970	252	SLU 72	0.98	No
fin.	3	206	63.02	746			970	317	SLU 72	0.43	No
ini.	3	463	27.43	-315			970	245	SLU 69	0.78	No
fin.	3	253	56.97	764			970	305	SLU 69	0.4	No
ini.	3	450	22.6	-256			970	249	SLU 71	0.97	No
fin.	3	219	61.59	743			970	314	SLU 71	0.42	No
ini.	3	379	13.87	-276			970	271	SLU 6	0.98	No
fin.	3	175	46.91	704			970	325	SLU 6	0.46	No
ini.	3	395	28.55	-378			970	266	SLU 49	0.7	No
fin.	3	193	52.84	813			970	321	SLU 49	0.39	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	3281	-568.87	1726.01	SLV 1	3.03	Si
fin.	2	-563	307.32	1726.01	SLV 1	5.62	Si
ini.	2	-1324	278.57	1726.01	SLV 11	6.2	Si
fin.	2	-184	-15.39	1726.01	SLV 11	112.13	Si
ini.	2	2903	-536.78	1726.01	SLV 4	3.22	Si
fin.	2	-956	338.3	1726.01	SLV 4	5.1	Si
ini.	2	-1324	278.57	1726.01	SLV 12	6.2	Si
fin.	2	-184	-15.39	1726.01	SLV 12	112.13	Si
ini.	2	2903	-536.78	1726.01	SLV 3	3.22	Si
fin.	2	-956	338.3	1726.01	SLV 3	5.1	Si
ini.	2	-2921	660.02	1726.01	SLV 16	2.62	Si
fin.	2	939	-261.45	1726.01	SLV 16	6.6	Si
ini.	2	3281	-568.87	1726.01	SLV 2	3.03	Si
fin.	2	-563	307.32	1726.01	SLV 2	5.62	Si
ini.	2	-2543	627.93	1726.01	SLV 14	2.75	Si
fin.	2	1332	-292.43	1726.01	SLV 14	5.9	Si
ini.	2	-2921	660.02	1726.01	SLV 15	2.62	Si
fin.	2	939	-261.45	1726.01	SLV 15	6.6	Si
ini.	2	-2543	627.93	1726.01	SLV 13	2.75	Si
fin.	2	1332	-292.43	1726.01	SLV 13	5.9	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	2903	-536.78	2559			1456	0	SLV 4	0	No
fin.	2	-956	338.3	3248			1838	727	SLV 4	0.22	No
ini.	2	-2921	660.02	-3297			2624	998	SLV 15	0.3	No
fin.	2	939	-261.45	-2454			1456	277	SLV 15	0.11	No
ini.	2	3281	-568.87	2849			1456	0	SLV 2	0	No
fin.	2	-563	307.32	2938			1681	659	SLV 2	0.22	No
ini.	2	2903	-536.78	2559			1456	0	SLV 3	0	No
fin.	2	-956	338.3	3248			1838	727	SLV 3	0.22	No
ini.	2	3281	-568.87	2849			1456	0	SLV 1	0	No
fin.	2	-563	307.32	2938			1681	659	SLV 1	0.22	No
ini.	2	-2543	627.93	-3006			2473	952	SLV 13	0.32	No
fin.	2	1332	-292.43	-2764			1456	0	SLV 13	0	No
ini.	2	1683	-187.43	1139			1456	0	SLV 6	0	No
fin.	2	559	61.26	582			1456	408	SLV 6	0.7	No
ini.	2	-2543	627.93	-3006			2473	952	SLV 14	0.32	No
fin.	2	1332	-292.43	-2764			1456	0	SLV 14	0	No
ini.	2	-2921	660.02	-3297			2624	998	SLV 16	0.3	No
fin.	2	939	-261.45	-2454			1456	277	SLV 16	0.11	No
ini.	2	1683	-187.43	1139			1456	0	SLV 5	0	No
fin.	2	559	61.26	582			1456	408	SLV 5	0.7	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.615	SLV 15	Si
V_SLV	0	SLV 1	No
PF_SLU	17.175	SLU 82	Si
V_SLU	0.392	SLU 48	No

Trave di accoppiamento 163

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-17.718	6.661	14.87	15.32	0.45	-16.818	6.661	14.87	15.32	0.45	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-726	3.61	287.67	SLU 83	79.68	Si
fin.	3	-1062	-128.56	287.67	SLU 83	2.24	Si
ini.	3	-666	-30.15	287.67	SLU 70	9.54	Si
fin.	3	-916	-126.13	287.67	SLU 70	2.28	Si
ini.	3	-685	24.18	287.67	SLU 81	11.9	Si
fin.	3	-1067	-127.36	287.67	SLU 81	2.26	Si
ini.	3	-753	-21.01	287.67	SLU 80	13.69	Si
fin.	3	-1025	-126.09	287.67	SLU 80	2.28	Si
ini.	3	-705	24.24	287.67	SLU 82	11.87	Si
fin.	3	-1089	-128.26	287.67	SLU 82	2.24	Si
ini.	3	-747	-20.55	287.67	SLU 78	14	Si
fin.	3	-1046	-136.82	287.67	SLU 78	2.1	Si
ini.	3	-746	3.67	287.67	SLU 84	78.34	Si
fin.	3	-1085	-129.46	287.67	SLU 84	2.22	Si
ini.	3	-686	-0.05	287.67	SLU 74	6159.27	Si
fin.	3	-1028	-134.71	287.67	SLU 74	2.14	Si
ini.	3	-727	-20.61	287.67	SLU 77	13.96	Si
fin.	3	-1024	-135.91	287.67	SLU 77	2.12	Si
ini.	3	-706	0.02	287.67	SLU 75	18753.9	Si
fin.	3	-1050	-135.61	287.67	SLU 75	2.12	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-643	-20.72	319			495	194	SLU 56	0.61	No
fin.	3	-912	-125.18	-683			567	217	SLU 56	0.32	No
ini.	3	-686	-0.05	231			506	198	SLU 74	0.86	No
fin.	3	-1028	-134.71	-695			598	226	SLU 74	0.33	No
ini.	3	-727	-20.61	332			517	201	SLU 77	0.61	No
fin.	3	-1024	-135.91	-733			596	226	SLU 77	0.31	No
ini.	3	-646	-30.21	365			496	194	SLU 69	0.53	No
fin.	3	-893	-125.23	-698			562	215	SLU 69	0.31	No
ini.	3	-747	-20.55	331			523	203	SLU 78	0.61	No
fin.	3	-1046	-136.82	-735			602	227	SLU 78	0.31	No
ini.	3	-663	-20.66	318			500	195	SLU 57	0.61	No
fin.	3	-935	-126.08	-685			573	219	SLU 57	0.32	No
ini.	3	-582	-30.26	351			479	188	SLU 49	0.54	No
fin.	3	-804	-115.4	-650			538	208	SLU 49	0.32	No
ini.	3	-666	-30.15	363			501	196	SLU 70	0.54	No
fin.	3	-916	-126.13	-699			568	217	SLU 70	0.31	No
ini.	3	-562	-30.32	352			473	186	SLU 48	0.53	No
fin.	3	-782	-114.5	-648			532	206	SLU 48	0.32	No
ini.	3	-706	0.02	229			512	199	SLU 75	0.87	No
fin.	3	-1050	-135.61	-697			604	228	SLU 75	0.33	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-403	222.49	431.5	SLV 13	1.94	Si
fin.	2	-2032	-323.21	431.5	SLV 13	1.34	Si
ini.	2	-885	-199.1	431.5	SLV 2	2.17	Si
fin.	2	168	118.99	431.5	SLV 2	3.63	Si
ini.	2	-482	-200.95	431.5	SLV 3	2.15	Si
fin.	2	652	149.37	431.5	SLV 3	2.89	Si
ini.	2	-403	222.49	431.5	SLV 14	1.94	Si
fin.	2	-2032	-323.21	431.5	SLV 14	1.34	Si
ini.	2	-885	-199.1	431.5	SLV 1	2.17	Si
fin.	2	168	118.99	431.5	SLV 1	3.63	Si
ini.	2	0	220.63	431.5	SLV 15	1.96	Si
fin.	2	-1548	-292.83	431.5	SLV 15	1.47	Si
ini.	2	-1042	77.1	431.5	SLV 9	5.6	Si
fin.	2	-1826	-203.88	431.5	SLV 9	2.12	Si
ini.	2	-1042	77.1	431.5	SLV 10	5.6	Si
fin.	2	-1826	-203.88	431.5	SLV 10	2.12	Si
ini.	2	0	220.63	431.5	SLV 16	1.96	Si
fin.	2	-1548	-292.83	431.5	SLV 16	1.47	Si
ini.	2	-482	-200.95	431.5	SLV 4	2.15	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	2	652	149.37	431.5	SLV 4	2.89	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-403	222.49	-737			593	234	SLV 13	0.32	No
fin.	2	-2032	-323.21	-1294			1027	375	SLV 13	0.29	No
ini.	2	-403	222.49	-737			593	234	SLV 14	0.32	No
fin.	2	-2032	-323.21	-1294			1027	375	SLV 14	0.29	No
ini.	2	-885	-199.1	795			721	283	SLV 1	0.36	No
fin.	2	168	118.99	270			485	156	SLV 1	0.58	No
ini.	2	0	220.63	-592			485	183	SLV 16	0.31	No
fin.	2	-1548	-292.83	-1146			898	340	SLV 16	0.3	No
ini.	2	-482	-200.95	939			614	243	SLV 3	0.26	No
fin.	2	652	149.37	418			485	0	SLV 3	0	No
ini.	2	0	220.63	-592			485	183	SLV 15	0.31	No
fin.	2	-1548	-292.83	-1146			898	340	SLV 15	0.3	No
ini.	2	157	-55.56	573			485	158	SLV 7	0.28	No
fin.	2	446	30.05	43			485	99	SLV 7	2.3	Si
ini.	2	-885	-199.1	795			721	283	SLV 2	0.36	No
fin.	2	168	118.99	270			485	156	SLV 2	0.58	No
ini.	2	157	-55.56	573			485	158	SLV 8	0.28	No
fin.	2	446	30.05	43			485	99	SLV 8	2.3	Si
ini.	2	-482	-200.95	939			614	243	SLV 4	0.26	No
fin.	2	652	149.37	418			485	0	SLV 4	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.335	SLV 13	Si
V_SLV	0	SLV 3	No
PF_SLU	2.103	SLU 78	Si
V_SLU	0.308	SLU 77	No

Trave di accoppiamento 164

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-12.838	6.661	12.17	13.07	0.9	-11.938	6.661	12.17	13.07	0.9	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-317	118.4	1150.68	SLU 78	9.72	Si
fin.	3	-252	128.89	1150.68	SLU 78	8.93	Si
ini.	3	-282	114.5	1150.68	SLU 79	10.05	Si
fin.	3	-212	124.65	1150.68	SLU 79	9.23	Si
ini.	3	-296	107.98	1150.68	SLU 71	10.66	Si
fin.	3	-247	123.48	1150.68	SLU 71	9.32	Si
ini.	3	-317	111.02	1150.68	SLU 69	10.36	Si
fin.	3	-259	123.59	1150.68	SLU 69	9.31	Si
ini.	3	-299	107.47	1150.68	SLU 59	10.71	Si
fin.	3	-251	121.54	1150.68	SLU 59	9.47	Si
ini.	3	-297	115.36	1150.68	SLU 80	9.97	Si
fin.	3	-239	128.78	1150.68	SLU 80	8.94	Si
ini.	3	-311	108.84	1150.68	SLU 72	10.57	Si
fin.	3	-274	127.61	1150.68	SLU 72	9.02	Si
ini.	3	-331	111.88	1150.68	SLU 70	10.29	Si
fin.	3	-287	127.72	1150.68	SLU 70	9.01	Si
ini.	3	-303	117.53	1150.68	SLU 77	9.79	Si
fin.	3	-224	124.76	1150.68	SLU 77	9.22	Si
ini.	3	-319	110.5	1150.68	SLU 57	10.41	Si
fin.	3	-264	121.65	1150.68	SLU 57	9.46	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-303	117.53	-920			1092	426	SLU 77	0.46	No
fin.	3	-224	124.76	867			1060	411	SLU 77	0.47	No
ini.	3	-317	118.4	-914			1097	429	SLU 78	0.47	No
fin.	3	-252	128.89	882			1071	416	SLU 78	0.47	No
ini.	3	-313	100.95	-858			1096	428	SLU 51	0.5	No
fin.	3	-286	120.37	882			1085	423	SLU 51	0.48	No
ini.	3	-305	109.64	-893			1092	426	SLU 56	0.48	No
fin.	3	-236	117.52	849			1065	413	SLU 56	0.49	No
ini.	3	-331	111.88	-931			1103	431	SLU 70	0.46	No
fin.	3	-287	127.72	930			1085	423	SLU 70	0.46	No
ini.	3	-333	103.98	-903			1104	432	SLU 49	0.48	No
fin.	3	-299	120.48	911			1090	425	SLU 49	0.47	No
ini.	3	-317	111.02	-937			1097	429	SLU 69	0.46	No
fin.	3	-259	123.59	915			1074	418	SLU 69	0.46	No
ini.	3	-319	103.12	-909			1098	429	SLU 48	0.47	No
fin.	3	-271	116.35	897			1079	420	SLU 48	0.47	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-296	107.98	-891			1089	425	SLU 71	0.48	No
fin.	3	-247	123.48	886			1069	415	SLU 71	0.47	No
ini.	3	-311	108.84	-885			1095	428	SLU 72	0.48	No
fin.	3	-274	127.61	901			1080	421	SLU 72	0.47	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	1508	-266.35	1726.01	SLV 1	6.48	Si
fin.	2	-2649	559.25	1726.01	SLV 1	3.09	Si
ini.	2	1508	-266.35	1726.01	SLV 2	6.48	Si
fin.	2	-2649	559.25	1726.01	SLV 2	3.09	Si
ini.	2	-924	314.43	1726.01	SLV 10	5.49	Si
fin.	2	-334	29.91	1726.01	SLV 10	57.7	Si
ini.	2	-2067	495.23	1726.01	SLV 14	3.49	Si
fin.	2	1829	-360.1	1726.01	SLV 14	4.79	Si
ini.	2	-924	314.43	1726.01	SLV 9	5.49	Si
fin.	2	-334	29.91	1726.01	SLV 9	57.7	Si
ini.	2	1601	-339.86	1726.01	SLV 4	5.08	Si
fin.	2	-2138	500.76	1726.01	SLV 4	3.45	Si
ini.	2	-1974	421.73	1726.01	SLV 16	4.09	Si
fin.	2	2340	-418.59	1726.01	SLV 16	4.12	Si
ini.	2	1601	-339.86	1726.01	SLV 3	5.08	Si
fin.	2	-2138	500.76	1726.01	SLV 3	3.45	Si
ini.	2	-2067	495.23	1726.01	SLV 13	3.49	Si
fin.	2	1829	-360.1	1726.01	SLV 13	4.79	Si
ini.	2	-1974	421.73	1726.01	SLV 15	4.09	Si
fin.	2	2340	-418.59	1726.01	SLV 15	4.12	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-1974	421.73	-3531			2245	878	SLV 16	0.25	No
fin.	2	2340	-418.59	-2521			1456	0	SLV 16	0	No
ini.	2	-1974	421.73	-3531			2245	878	SLV 15	0.25	No
fin.	2	2340	-418.59	-2521			1456	0	SLV 15	0	No
ini.	2	-2067	495.23	-3266			2283	890	SLV 14	0.27	No
fin.	2	1829	-360.1	-2416			1456	0	SLV 14	0	No
ini.	2	-614	69.41	-1860			1701	668	SLV 12	0.36	No
fin.	2	1368	-165.06	-582			1456	0	SLV 12	0	No
ini.	2	1508	-266.35	2394			1456	0	SLV 2	0	No
fin.	2	-2649	559.25	3476			2515	965	SLV 2	0.28	No
ini.	2	1508	-266.35	2394			1456	0	SLV 1	0	No
fin.	2	-2649	559.25	3476			2515	965	SLV 1	0.28	No
ini.	2	1601	-339.86	2129			1456	0	SLV 3	0	No
fin.	2	-2138	500.76	3371			2311	900	SLV 3	0.27	No
ini.	2	-614	69.41	-1860			1701	668	SLV 11	0.36	No
fin.	2	1368	-165.06	-582			1456	0	SLV 11	0	No
ini.	2	1601	-339.86	2129			1456	0	SLV 4	0	No
fin.	2	-2138	500.76	3371			2311	900	SLV 4	0.27	No
ini.	2	-2067	495.23	-3266			2283	890	SLV 13	0.27	No
fin.	2	1829	-360.1	-2416			1456	0	SLV 13	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.086	SLV 1	Si
V_SLV	0	SLV 1	No
PF_SLU	8.927	SLU 78	Si
V_SLU	0.455	SLU 70	No

Trave di accoppiamento 165

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-12.838	6.661	14.87	15.32	0.45	-11.938	6.661	14.87	15.32	0.45	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-643	-82.18	287.67	SLU 57	3.5	Si
fin.	3	-596	-62.77	287.67	SLU 57	4.58	Si
ini.	3	-718	-85.96	287.67	SLU 80	3.35	Si
fin.	3	-662	-63.12	287.67	SLU 80	4.56	Si
ini.	3	-699	-87.67	287.67	SLU 78	3.28	Si
fin.	3	-650	-67.48	287.67	SLU 78	4.26	Si
ini.	3	-660	-88.75	287.67	SLU 70	3.24	Si
fin.	3	-603	-65.2	287.67	SLU 70	4.41	Si
ini.	3	-672	-85.94	287.67	SLU 77	3.35	Si
fin.	3	-628	-67.98	287.67	SLU 77	4.23	Si
ini.	3	-633	-87.02	287.67	SLU 69	3.31	Si
fin.	3	-581	-65.7	287.67	SLU 69	4.38	Si
ini.	3	-604	-83.26	287.67	SLU 49	3.46	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	3	-549	-60.5	287.67	SLU 49	4.75	Si
ini.	3	-679	-87.04	287.67	SLU 72	3.3	Si
fin.	3	-615	-60.84	287.67	SLU 72	4.73	Si
ini.	3	-652	-85.32	287.67	SLU 71	3.37	Si
fin.	3	-593	-61.34	287.67	SLU 71	4.69	Si
ini.	3	-690	-84.24	287.67	SLU 79	3.41	Si
fin.	3	-640	-63.61	287.67	SLU 79	4.52	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-652	-85.32	470			497	194	SLU 71	0.41	No
fin.	3	-593	-61.34	-390			482	189	SLU 71	0.49	No
ini.	3	-643	-82.18	456			495	194	SLU 57	0.42	No
fin.	3	-596	-62.77	-391			482	189	SLU 57	0.48	No
ini.	3	-679	-87.04	474			505	197	SLU 72	0.42	No
fin.	3	-615	-60.84	-386			488	191	SLU 72	0.49	No
ini.	3	-604	-83.26	461			485	190	SLU 49	0.41	No
fin.	3	-549	-60.5	-385			470	185	SLU 49	0.48	No
ini.	3	-616	-80.45	452			488	191	SLU 56	0.42	No
fin.	3	-574	-63.27	-394			477	187	SLU 56	0.48	No
ini.	3	-699	-87.67	482			510	199	SLU 78	0.41	No
fin.	3	-650	-67.48	-414			497	194	SLU 78	0.47	No
ini.	3	-672	-85.94	478			503	196	SLU 77	0.41	No
fin.	3	-628	-67.98	-418			491	192	SLU 77	0.46	No
ini.	3	-577	-81.53	457			477	188	SLU 48	0.41	No
fin.	3	-527	-61	-388			464	183	SLU 48	0.47	No
ini.	3	-660	-88.75	487			500	195	SLU 70	0.4	No
fin.	3	-603	-65.2	-408			484	190	SLU 70	0.47	No
ini.	3	-633	-87.02	483			492	193	SLU 69	0.4	No
fin.	3	-581	-65.7	-411			478	188	SLU 69	0.46	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	359	231.01	431.5	SLV 14	1.87	Si
fin.	2	-965	-300.8	431.5	SLV 14	1.43	Si
ini.	2	-1145	-307.09	431.5	SLV 3	1.41	Si
fin.	2	180	224.86	431.5	SLV 3	1.92	Si
ini.	2	359	231.01	431.5	SLV 13	1.87	Si
fin.	2	-965	-300.8	431.5	SLV 13	1.43	Si
ini.	2	-1590	-162.79	431.5	SLV 6	2.65	Si
fin.	2	-1106	37.51	431.5	SLV 6	11.5	Si
ini.	2	-1680	-331.33	431.5	SLV 1	1.3	Si
fin.	2	-308	223.01	431.5	SLV 1	1.93	Si
ini.	2	-1680	-331.33	431.5	SLV 2	1.3	Si
fin.	2	-308	223.01	431.5	SLV 2	1.93	Si
ini.	2	-1590	-162.79	431.5	SLV 5	2.65	Si
fin.	2	-1106	37.51	431.5	SLV 5	11.5	Si
ini.	2	-1145	-307.09	431.5	SLV 4	1.41	Si
fin.	2	180	224.86	431.5	SLV 4	1.92	Si
ini.	2	894	255.25	431.5	SLV 16	1.69	Si
fin.	2	-478	-298.95	431.5	SLV 16	1.44	Si
ini.	2	894	255.25	431.5	SLV 15	1.69	Si
fin.	2	-478	-298.95	431.5	SLV 15	1.44	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-1680	-331.33	1182			933	350	SLV 1	0.3	No
fin.	2	-308	223.01	706			567	223	SLV 1	0.32	No
ini.	2	-1680	-331.33	1182			933	350	SLV 2	0.3	No
fin.	2	-308	223.01	706			567	223	SLV 2	0.32	No
ini.	2	359	231.01	-627			485	120	SLV 14	0.19	No
fin.	2	-965	-300.8	-1085			743	291	SLV 14	0.27	No
ini.	2	359	231.01	-627			485	120	SLV 13	0.19	No
fin.	2	-965	-300.8	-1085			743	291	SLV 13	0.27	No
ini.	2	-1145	-307.09	1091			791	307	SLV 4	0.28	No
fin.	2	180	224.86	621			485	154	SLV 4	0.25	No
ini.	2	894	255.25	-718			485	0	SLV 16	0	No
fin.	2	-478	-298.95	-1170			613	242	SLV 16	0.21	No
ini.	2	-1145	-307.09	1091			791	307	SLV 3	0.28	No
fin.	2	180	224.86	621			485	154	SLV 3	0.25	No
ini.	2	894	255.25	-718			485	0	SLV 15	0	No
fin.	2	-478	-298.95	-1170			613	242	SLV 15	0.21	No
ini.	2	804	86.71	-191			485	0	SLV 12	0	No
fin.	2	321	-113.45	-642			485	128	SLV 12	0.2	No
ini.	2	804	86.71	-191			485	0	SLV 11	0	No
fin.	2	321	-113.45	-642			485	128	SLV 11	0.2	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.302	SLV 1	Si
V_SLV	0	SLV 11	No
PF_SLU	3.241	SLU 70	Si
V_SLU	0.399	SLU 69	No

Trave di accoppiamento 166

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-7.958	6.661	12.17	13.07	0.9	-7.058	6.661	12.17	13.07	0.9	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	641	-28.67	1150.68	SLU 76	40.13	Si
fin.	3	540	91.8	1150.68	SLU 76	12.54	Si
ini.	3	525	-21.4	1150.68	SLU 73	53.78	Si
fin.	3	366	101.27	1150.68	SLU 73	11.36	Si
ini.	3	560	-24.2	1150.68	SLU 81	47.55	Si
fin.	3	389	102.91	1150.68	SLU 81	11.18	Si
ini.	3	552	-23.92	1150.68	SLU 82	48.11	Si
fin.	3	378	106.16	1150.68	SLU 82	10.84	Si
ini.	3	477	-22.87	1150.68	SLU 40	50.32	Si
fin.	3	321	93.34	1150.68	SLU 40	12.33	Si
ini.	3	668	-31.19	1150.68	SLU 84	36.89	Si
fin.	3	551	96.69	1150.68	SLU 84	11.9	Si
ini.	3	476	-18.38	1150.68	SLU 61	62.61	Si
fin.	3	317	95.04	1150.68	SLU 61	12.11	Si
ini.	3	655	-28.4	1150.68	SLU 75	40.51	Si
fin.	3	540	92.12	1150.68	SLU 75	12.49	Si
ini.	3	484	-18.66	1150.68	SLU 60	61.66	Si
fin.	3	328	91.79	1150.68	SLU 60	12.54	Si
ini.	3	676	-31.47	1150.68	SLU 83	36.56	Si
fin.	3	563	93.43	1150.68	SLU 83	12.32	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	780	-35.96	-30			970	98	SLU 77	3.28	Si
fin.	3	724	79.39	549			970	135	SLU 77	0.25	No
ini.	3	720	-30.23	-167			970	138	SLU 70	0.82	No
fin.	3	704	66.18	623			970	147	SLU 70	0.24	No
ini.	3	703	-30.42	-114			970	147	SLU 56	1.29	Si
fin.	3	663	68.27	587			970	167	SLU 56	0.29	No
ini.	3	772	-35.68	-25			970	104	SLU 78	4.15	Si
fin.	3	713	82.65	554			970	142	SLU 78	0.26	No
ini.	3	644	-24.69	-252			970	176	SLU 49	0.7	No
fin.	3	643	55.05	661			970	177	SLU 49	0.27	No
ini.	3	719	-30.97	-135			970	139	SLU 71	1.03	Si
fin.	3	724	60.43	534			970	136	SLU 71	0.25	No
ini.	3	770	-36.42	7			970	105	SLU 79	14.2	Si
fin.	3	732	76.9	465			970	131	SLU 79	0.28	No
ini.	3	711	-30.69	-130			970	143	SLU 72	1.1	Si
fin.	3	712	63.68	540			970	142	SLU 72	0.26	No
ini.	3	728	-30.52	-172			970	133	SLU 69	0.77	No
fin.	3	716	62.92	617			970	141	SLU 69	0.23	No
ini.	3	652	-24.98	-256			970	173	SLU 48	0.67	No
fin.	3	655	51.8	655			970	172	SLU 48	0.26	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-410	313.02	1726.01	SLV 16	5.51	Si
fin.	2	3010	-374.34	1726.01	SLV 16	4.61	Si
ini.	2	919	-294.05	1726.01	SLV 4	5.87	Si
fin.	2	-2210	475.97	1726.01	SLV 4	3.63	Si
ini.	2	1155	-338.97	1726.01	SLV 2	5.09	Si
fin.	2	-2453	500.99	1726.01	SLV 2	3.45	Si
ini.	2	966	-178.9	1726.01	SLV 5	9.65	Si
fin.	2	-909	232.58	1726.01	SLV 5	7.42	Si
ini.	2	919	-294.05	1726.01	SLV 3	5.87	Si
fin.	2	-2210	475.97	1726.01	SLV 3	3.63	Si
ini.	2	-410	313.02	1726.01	SLV 15	5.51	Si
fin.	2	3010	-374.34	1726.01	SLV 15	4.61	Si
ini.	2	-174	268.1	1726.01	SLV 13	6.44	Si
fin.	2	2767	-349.32	1726.01	SLV 13	4.94	Si
ini.	2	1155	-338.97	1726.01	SLV 1	5.09	Si
fin.	2	-2453	500.99	1726.01	SLV 1	3.45	Si
ini.	2	966	-178.9	1726.01	SLV 6	9.65	Si
fin.	2	-909	232.58	1726.01	SLV 6	7.42	Si
ini.	2	-174	268.1	1726.01	SLV 14	6.44	Si
fin.	2	2767	-349.32	1726.01	SLV 14	4.94	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-174	268.1	-2424			1525	584	SLV 13	0.24	No
fin.	2	2767	-349.32	-1806			1456	0	SLV 13	0	No
ini.	2	-410	313.02	-2669			1620	631	SLV 16	0.24	No
fin.	2	3010	-374.34	-1839			1456	0	SLV 16	0	No
ini.	2	-221	152.95	-1180			1544	594	SLV 11	0.5	No
fin.	2	1466	-105.93	-305			1456	0	SLV 11	0	No
ini.	2	-221	152.95	-1180			1544	594	SLV 12	0.5	No
fin.	2	1466	-105.93	-305			1456	0	SLV 12	0	No
ini.	2	-174	268.1	-2424			1525	584	SLV 14	0.24	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	2	2767	-349.32	-1806			1456	0	SLV 14	0	No
ini.	2	919	-294.05	2402			1456	285	SLV 4	0.12	No
fin.	2	-2210	475.97	2654			2340	909	SLV 4	0.34	No
ini.	2	919	-294.05	2402			1456	285	SLV 3	0.12	No
fin.	2	-2210	475.97	2654			2340	909	SLV 3	0.34	No
ini.	2	1155	-338.97	2647			1456	158	SLV 1	0.06	No
fin.	2	-2453	500.99	2686			2437	940	SLV 1	0.35	No
ini.	2	-410	313.02	-2669			1620	631	SLV 15	0.24	No
fin.	2	3010	-374.34	-1839			1456	0	SLV 15	0	No
ini.	2	1155	-338.97	2647			1456	158	SLV 2	0.06	No
fin.	2	-2453	500.99	2686			2437	940	SLV 2	0.35	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF SLV	3.445	SLV 1	Si
V SLV	0	SLV 11	No
PF SLU	10.839	SLU 82	Si
V SLU	0.228	SLU 69	No

Trave di accoppiamento 167

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-7.958	6.661	14.87	15.32	0.45	-7.058	6.661	14.87	15.32	0.45	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1223	-188.28	287.67	SLU 57	1.53	Si
fin.	3	-509	106.51	287.67	SLU 57	2.7	Si
ini.	3	-1241	-186.58	287.67	SLU 72	1.54	Si
fin.	3	-512	114.47	287.67	SLU 72	2.51	Si
ini.	3	-1319	-194.59	287.67	SLU 79	1.48	Si
fin.	3	-554	121.68	287.67	SLU 79	2.36	Si
ini.	3	-1319	-202.11	287.67	SLU 77	1.42	Si
fin.	3	-550	115.66	287.67	SLU 77	2.49	Si
ini.	3	-1256	-185.63	287.67	SLU 75	1.55	Si
fin.	3	-559	102.48	287.67	SLU 75	2.81	Si
ini.	3	-1241	-194.1	287.67	SLU 70	1.48	Si
fin.	3	-508	108.46	287.67	SLU 70	2.65	Si
ini.	3	-1202	-191.4	287.67	SLU 69	1.5	Si
fin.	3	-480	106.71	287.67	SLU 69	2.7	Si
ini.	3	-1359	-197.29	287.67	SLU 80	1.46	Si
fin.	3	-582	123.42	287.67	SLU 80	2.33	Si
ini.	3	-1184	-185.58	287.67	SLU 56	1.55	Si
fin.	3	-481	104.77	287.67	SLU 56	2.75	Si
ini.	3	-1359	-204.81	287.67	SLU 78	1.4	Si
fin.	3	-578	117.41	287.67	SLU 78	2.45	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1241	-194.1	875			654	242	SLU 70	0.28	No
fin.	3	-508	108.46	133			459	181	SLU 70	1.36	Si
ini.	3	-1184	-185.58	838			639	238	SLU 56	0.28	No
fin.	3	-481	104.77	130			452	178	SLU 56	1.37	Si
ini.	3	-1202	-191.4	868			644	239	SLU 69	0.28	No
fin.	3	-480	106.71	126			451	178	SLU 69	1.41	Si
ini.	3	-1359	-204.81	910			686	251	SLU 78	0.28	No
fin.	3	-578	117.41	165			478	188	SLU 78	1.14	Si
ini.	3	-1066	-174.87	804			608	229	SLU 48	0.28	No
fin.	3	-411	95.82	98			433	171	SLU 48	1.74	Si
ini.	3	-1223	-188.28	846			650	241	SLU 57	0.28	No
fin.	3	-509	106.51	137			459	181	SLU 57	1.32	Si
ini.	3	-1105	-177.57	812			618	232	SLU 49	0.29	No
fin.	3	-439	97.56	105			441	174	SLU 49	1.65	Si
ini.	3	-1319	-202.11	902			675	248	SLU 77	0.27	No
fin.	3	-550	115.66	158			470	185	SLU 77	1.17	Si
ini.	3	-1359	-197.29	867			686	251	SLU 80	0.29	No
fin.	3	-582	123.42	202			479	188	SLU 80	0.93	No
ini.	3	-1319	-194.59	859			675	248	SLU 79	0.29	No
fin.	3	-554	121.68	195			471	185	SLU 79	0.95	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	1235	176.98	431.5	SLV 16	2.44	Si
fin.	2	332	-170.56	431.5	SLV 16	2.53	Si
ini.	2	1235	176.98	431.5	SLV 15	2.44	Si
fin.	2	332	-170.56	431.5	SLV 15	2.53	Si
ini.	2	-2776	-399.72	431.5	SLV 2	1.08	Si
fin.	2	-1025	298.38	431.5	SLV 2	1.45	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-2293	-262.17	431.5	SLV 5	1.65	Si
fin.	2	-1237	173.41	431.5	SLV 5	2.49	Si
ini.	2	628	134.59	431.5	SLV 13	3.21	Si
fin.	2	-121	-144.74	431.5	SLV 13	2.98	Si
ini.	2	-2169	-357.33	431.5	SLV 4	1.21	Si
fin.	2	-572	272.56	431.5	SLV 4	1.58	Si
ini.	2	-2293	-262.17	431.5	SLV 6	1.65	Si
fin.	2	-1237	173.41	431.5	SLV 6	2.49	Si
ini.	2	-2169	-357.33	431.5	SLV 3	1.21	Si
fin.	2	-572	272.56	431.5	SLV 3	1.58	Si
ini.	2	628	134.59	431.5	SLV 14	3.21	Si
fin.	2	-121	-144.74	431.5	SLV 14	2.98	Si
ini.	2	-2776	-399.72	431.5	SLV 1	1.08	Si
fin.	2	-1025	298.38	431.5	SLV 1	1.45	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-2169	-357.33	1248			1064	385	SLV 4	0.31	No
fin.	2	-572	272.56	808			638	252	SLV 4	0.31	No
ini.	2	628	134.59	-246			485	11	SLV 13	0.05	No
fin.	2	-121	-144.74	-642			518	199	SLV 13	0.31	No
ini.	2	751	39.42	-17			485	0	SLV 11	0	No
fin.	2	543	-45.6	-416			485	68	SLV 11	0.16	No
ini.	2	751	39.42	-17			485	0	SLV 12	0	No
fin.	2	543	-45.6	-416			485	68	SLV 12	0.16	No
ini.	2	-2169	-357.33	1248			1064	385	SLV 3	0.31	No
fin.	2	-572	272.56	808			638	252	SLV 3	0.31	No
ini.	2	1235	176.98	-407			485	0	SLV 15	0	No
fin.	2	332	-170.56	-797			485	126	SLV 15	0.16	No
ini.	2	628	134.59	-246			485	11	SLV 14	0.05	No
fin.	2	-121	-144.74	-642			518	199	SLV 14	0.31	No
ini.	2	-2776	-399.72	1410			1226	425	SLV 2	0.3	No
fin.	2	-1025	298.38	963			758	296	SLV 2	0.31	No
ini.	2	-2776	-399.72	1410			1226	425	SLV 1	0.3	No
fin.	2	-1025	298.38	963			758	296	SLV 1	0.31	No
ini.	2	1235	176.98	-407			485	0	SLV 16	0	No
fin.	2	332	-170.56	-797			485	126	SLV 16	0.16	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.08	SLV 1	Si
V_SLV	0	SLV 11	No
PF_SLU	1.405	SLU 78	Si
V_SLU	0.275	SLU 77	No

Trave di accoppiamento 168

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-19.868	1.046	14.27	15.32	1.05	-20.668	1.046	14.27	15.32	1.05	0.8	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fhmmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1552	284.51	1566.2	SLU 72	5.5	Si
fin.	3	-2459	-268.26	1566.2	SLU 72	5.84	Si
ini.	3	-1564	266.74	1566.2	SLU 29	5.87	Si
fin.	3	-2460	-261.15	1566.2	SLU 29	6	Si
ini.	3	-1246	273.98	1566.2	SLU 48	5.72	Si
fin.	3	-1990	-237.22	1566.2	SLU 48	6.6	Si
ini.	3	-1654	298.02	1566.2	SLU 71	5.26	Si
fin.	3	-2619	-284.46	1566.2	SLU 71	5.51	Si
ini.	3	-1017	275.71	1566.2	SLU 8	5.68	Si
fin.	3	-1736	-232.62	1566.2	SLU 8	6.73	Si
ini.	3	-2373	218.86	1566.2	SLU 77	7.16	Si
fin.	3	-3442	-271.34	1566.2	SLU 77	5.77	Si
ini.	3	-2234	251.87	1566.2	SLU 79	6.22	Si
fin.	3	-3346	-290.04	1566.2	SLU 79	5.4	Si
ini.	3	-1006	293.48	1566.2	SLU 51	5.34	Si
fin.	3	-1734	-239.73	1566.2	SLU 51	6.53	Si
ini.	3	-2133	238.36	1566.2	SLU 80	6.57	Si
fin.	3	-3186	-273.84	1566.2	SLU 80	5.72	Si
ini.	3	-1107	306.99	1566.2	SLU 50	5.1	Si
fin.	3	-1894	-255.92	1566.2	SLU 50	6.12	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1792	265.01	2000			1849	717	SLU 69	0.36	No
fin.	3	-2715	-265.76	-2499			2218	827	SLU 69	0.33	No
ini.	3	-1691	251.51	2035			1809	703	SLU 70	0.35	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	3	-2555	-249.57	-2408			2154	809	SLU 70	0.34	No
ini.	3	-1552	284.51	1899			1753	685	SLU 72	0.36	No
fin.	3	-2459	-268.26	-2374			2116	798	SLU 72	0.34	No
ini.	3	-1006	293.48	1812			1534	607	SLU 51	0.33	No
fin.	3	-1734	-239.73	-2144			1826	709	SLU 51	0.33	No
ini.	3	-2234	251.87	1817			2026	772	SLU 79	0.42	No
fin.	3	-3346	-290.04	-2523			2471	895	SLU 79	0.35	No
ini.	3	-2373	218.86	1953			2081	788	SLU 77	0.4	No
fin.	3	-3442	-271.34	-2558			2509	905	SLU 77	0.35	No
ini.	3	-1246	273.98	1913			1631	642	SLU 48	0.34	No
fin.	3	-1990	-237.22	-2269			1928	742	SLU 48	0.33	No
ini.	3	-1654	298.02	1864			1794	699	SLU 71	0.37	No
fin.	3	-2619	-284.46	-2465			2180	817	SLU 71	0.33	No
ini.	3	-1107	306.99	1777			1575	622	SLU 50	0.35	No
fin.	3	-1894	-255.92	-2235			1890	730	SLU 50	0.33	No
ini.	3	-1144	260.48	1948			1590	627	SLU 49	0.32	No
fin.	3	-1830	-221.03	-2179			1864	722	SLU 49	0.33	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-2373	1006.4	2349.3	SLV 1	2.33	Si
fin.	2	-5307	-1182.32	2349.3	SLV 1	1.99	Si
ini.	2	-751	-836.63	2349.3	SLV 13	2.81	Si
fin.	2	957	841	2349.3	SLV 13	2.79	Si
ini.	2	-751	-836.63	2349.3	SLV 14	2.81	Si
fin.	2	957	841	2349.3	SLV 14	2.79	Si
ini.	2	-1741	993.17	2349.3	SLV 4	2.37	Si
fin.	2	-4499	-1081.07	2349.3	SLV 4	2.17	Si
ini.	2	-2543	376.78	2349.3	SLV 6	6.24	Si
fin.	2	-4058	-592.28	2349.3	SLV 6	3.97	Si
ini.	2	-119	-849.86	2349.3	SLV 16	2.76	Si
fin.	2	1765	942.24	2349.3	SLV 16	2.49	Si
ini.	2	-119	-849.86	2349.3	SLV 15	2.76	Si
fin.	2	1765	942.24	2349.3	SLV 15	2.49	Si
ini.	2	-2543	376.78	2349.3	SLV 5	6.24	Si
fin.	2	-4058	-592.28	2349.3	SLV 5	3.97	Si
ini.	2	-2373	1006.4	2349.3	SLV 2	2.33	Si
fin.	2	-5307	-1182.32	2349.3	SLV 2	1.99	Si
ini.	2	-1741	993.17	2349.3	SLV 3	2.37	Si
fin.	2	-4499	-1081.07	2349.3	SLV 3	2.17	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	51	-220.24	2673			1698	628	SLV 12	0.23	No
fin.	2	515	352.21	884			1698	515	SLV 12	0.58	No
ini.	2	-1741	993.17	-1298			2395	945	SLV 3	0.73	No
fin.	2	-4499	-1081.07	-5226			3498	1288	SLV 3	0.25	No
ini.	2	-2373	1006.4	-1911			2648	1033	SLV 1	0.54	No
fin.	2	-5307	-1182.32	-5724			3821	1372	SLV 1	0.24	No
ini.	2	51	-220.24	2673			1698	628	SLV 11	0.23	No
fin.	2	515	352.21	884			1698	515	SLV 11	0.58	No
ini.	2	-119	-849.86	3710			1746	664	SLV 16	0.18	No
fin.	2	1765	942.24	3280			1698	0	SLV 16	0	No
ini.	2	-2373	1006.4	-1911			2648	1033	SLV 2	0.54	No
fin.	2	-5307	-1182.32	-5724			3821	1372	SLV 2	0.24	No
ini.	2	-751	-836.63	3097			1999	786	SLV 14	0.25	No
fin.	2	957	841	2782			1698	378	SLV 14	0.14	No
ini.	2	-751	-836.63	3097			1999	786	SLV 13	0.25	No
fin.	2	957	841	2782			1698	378	SLV 13	0.14	No
ini.	2	-1741	993.17	-1298			2395	945	SLV 4	0.73	No
fin.	2	-4499	-1081.07	-5226			3498	1288	SLV 4	0.25	No
ini.	2	-119	-849.86	3710			1746	664	SLV 15	0.18	No
fin.	2	1765	942.24	3280			1698	0	SLV 15	0	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.987	SLV 1	Si
V_SLV	0	SLV 15	No
PF_SLU	5.102	SLU 50	Si
V_SLU	0.322	SLU 49	No

Trave di accoppiamento 169

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-11.163	1.046	14.67	15.32	0.65	-12.283	1.046	14.67	15.32	0.65	1.12	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
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Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1360	-395.34	600.2	SLU 69	1.52	Si
fin.	3	-795	-133.1	600.2	SLU 69	4.51	Si
ini.	3	-1281	-380.11	600.2	SLU 71	1.58	Si
fin.	3	-725	-121.36	600.2	SLU 71	4.95	Si
ini.	3	-1092	-371.11	600.2	SLU 49	1.62	Si
fin.	3	-515	-99.26	600.2	SLU 49	6.05	Si
ini.	3	-1456	-375.21	600.2	SLU 79	1.6	Si
fin.	3	-960	-147.15	600.2	SLU 79	4.08	Si
ini.	3	-1126	-371.15	600.2	SLU 48	1.62	Si
fin.	3	-559	-105.32	600.2	SLU 48	5.7	Si
ini.	3	-1423	-375.17	600.2	SLU 80	1.6	Si
fin.	3	-916	-141.08	600.2	SLU 80	4.25	Si
ini.	3	-1502	-390.4	600.2	SLU 78	1.54	Si
fin.	3	-986	-152.83	600.2	SLU 78	3.93	Si
ini.	3	-1327	-395.3	600.2	SLU 70	1.52	Si
fin.	3	-751	-127.04	600.2	SLU 70	4.72	Si
ini.	3	-1535	-390.44	600.2	SLU 77	1.54	Si
fin.	3	-1030	-158.89	600.2	SLU 77	3.78	Si
ini.	3	-1248	-380.07	600.2	SLU 72	1.58	Si
fin.	3	-681	-115.29	600.2	SLU 72	5.21	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1126	-371.15	2268			767	297	SLU 48	0.13	No
fin.	3	-559	-105.32	-860			616	244	SLU 48	0.28	No
ini.	3	-1360	-395.34	2402			830	317	SLU 69	0.13	No
fin.	3	-795	-133.1	-960			679	267	SLU 69	0.28	No
ini.	3	-1281	-380.11	2320			809	310	SLU 71	0.13	No
fin.	3	-725	-121.36	-912			661	261	SLU 71	0.29	No
ini.	3	-1092	-371.11	2269			758	294	SLU 49	0.13	No
fin.	3	-515	-99.26	-845			605	239	SLU 49	0.28	No
ini.	3	-1327	-395.3	2403			821	314	SLU 70	0.13	No
fin.	3	-751	-127.04	-945			667	263	SLU 70	0.28	No
ini.	3	-1047	-355.92	2186			746	290	SLU 50	0.13	No
fin.	3	-489	-93.58	-813			598	236	SLU 50	0.29	No
ini.	3	-1248	-380.07	2321			800	307	SLU 72	0.13	No
fin.	3	-681	-115.29	-897			649	256	SLU 72	0.29	No
ini.	3	-1502	-390.4	2379			868	328	SLU 78	0.14	No
fin.	3	-986	-152.83	-1013			730	285	SLU 78	0.28	No
ini.	3	-1267	-366.21	2245			805	309	SLU 57	0.14	No
fin.	3	-750	-125.05	-913			667	263	SLU 57	0.29	No
ini.	3	-1013	-355.88	2187			737	287	SLU 51	0.13	No
fin.	3	-445	-87.52	-798			586	232	SLU 51	0.29	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-2353	390.29	900.3	SLV 3	2.31	Si
fin.	2	-6464	-1421.71	900.3	SLV 3	0.63	No
ini.	2	-2691	256.45	900.3	SLV 2	3.51	Si
fin.	2	-6451	-1496.35	900.3	SLV 2	0.6	No
ini.	2	748	-848.52	900.3	SLV 14	1.06	Si
fin.	2	5562	1282.29	900.3	SLV 14	0.7	No
ini.	2	-2353	390.29	900.3	SLV 4	2.31	Si
fin.	2	-6464	-1421.71	900.3	SLV 4	0.63	No
ini.	2	-849	-617.93	900.3	SLV 10	1.46	Si
fin.	2	1373	222.68	900.3	SLV 10	4.04	Si
ini.	2	748	-848.52	900.3	SLV 13	1.06	Si
fin.	2	5562	1282.29	900.3	SLV 13	0.7	No
ini.	2	-2691	256.45	900.3	SLV 1	3.51	Si
fin.	2	-6451	-1496.35	900.3	SLV 1	0.6	No
ini.	2	1086	-714.68	900.3	SLV 16	1.26	Si
fin.	2	5549	1356.93	900.3	SLV 16	0.66	No
ini.	2	-849	-617.93	900.3	SLV 9	1.46	Si
fin.	2	1373	222.68	900.3	SLV 9	4.04	Si
ini.	2	1086	-714.68	900.3	SLV 15	1.26	Si
fin.	2	5549	1356.93	900.3	SLV 15	0.66	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-2691	256.45	-1005			1418	525	SLV 2	0.52	No
fin.	2	-6451	-1496.35	-4277			2421	750	SLV 2	0.18	No
ini.	2	-2691	256.45	-1005			1418	525	SLV 1	0.52	No
fin.	2	-6451	-1496.35	-4277			2421	750	SLV 1	0.18	No
ini.	2	-849	-617.93	3212			927	367	SLV 10	0.11	No
fin.	2	1373	222.68	334			701	0	SLV 10	0	No
ini.	2	1086	-714.68	3840			701	0	SLV 16	0	No
fin.	2	5549	1356.93	3166			701	0	SLV 16	0	No
ini.	2	277	-171.8	1253			701	220	SLV 12	0.18	No
fin.	2	1329	471.5	751			701	0	SLV 12	0	No
ini.	2	-849	-617.93	3212			927	367	SLV 9	0.11	No
fin.	2	1373	222.68	334			701	0	SLV 9	0	No
ini.	2	1086	-714.68	3840			701	0	SLV 15	0	No
fin.	2	5549	1356.93	3166			701	0	SLV 15	0	No
ini.	2	748	-848.52	4428			701	111	SLV 13	0.03	No
fin.	2	5562	1282.29	3041			701	0	SLV 13	0	No
ini.	2	277	-171.8	1253			701	220	SLV 11	0.18	No
fin.	2	1329	471.5	751			701	0	SLV 11	0	No
ini.	2	748	-848.52	4428			701	111	SLV 14	0.03	No
fin.	2	5562	1282.29	3041			701	0	SLV 14	0	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.602	SLV 1	No
V_SLV	0	SLV 9	No
PF_SLU	1.518	SLU 69	Si
V_SLU	0.13	SLU 49	No

Trave di accoppiamento 170

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-9.386	1.046	14.67	15.32	0.65	-10.466	1.046	14.67	15.32	0.65	1.08	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1088	-47.05	600.2	SLU 35	12.76	Si
fin.	3	-1257	-190.98	600.2	SLU 35	3.14	Si
ini.	3	-948	-29.17	600.2	SLU 32	20.57	Si
fin.	3	-1156	-182.14	600.2	SLU 32	3.3	Si
ini.	3	-1083	-55.75	600.2	SLU 74	10.77	Si
fin.	3	-1248	-195.16	600.2	SLU 74	3.08	Si
ini.	3	-1078	-64.23	600.2	SLU 75	9.34	Si
fin.	3	-1214	-187.44	600.2	SLU 75	3.2	Si
ini.	3	-1201	-79.46	600.2	SLU 79	7.55	Si
fin.	3	-1287	-188.27	600.2	SLU 79	3.19	Si
ini.	3	-1217	-82.11	600.2	SLU 78	7.31	Si
fin.	3	-1316	-196.28	600.2	SLU 78	3.06	Si
ini.	3	-1222	-73.63	600.2	SLU 77	8.15	Si
fin.	3	-1350	-204	600.2	SLU 77	2.94	Si
ini.	3	-1083	-55.53	600.2	SLU 36	10.81	Si
fin.	3	-1223	-183.26	600.2	SLU 36	3.28	Si
ini.	3	-1105	-52.3	600.2	SLU 83	11.48	Si
fin.	3	-1264	-189.03	600.2	SLU 83	3.18	Si
ini.	3	-1122	-95.28	600.2	SLU 69	6.3	Si
fin.	3	-1166	-181.62	600.2	SLU 69	3.3	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1122	-95.28	454			766	297	SLU 69	0.65	No
fin.	3	-1166	-181.62	-1153			778	301	SLU 69	0.26	No
ini.	3	-1083	-55.75	312			756	293	SLU 74	0.94	No
fin.	3	-1248	-195.16	-1143			800	307	SLU 74	0.27	No
ini.	3	-1201	-79.46	383			788	304	SLU 79	0.79	No
fin.	3	-1287	-188.27	-1146			810	311	SLU 79	0.27	No
ini.	3	-1078	-64.23	343			755	293	SLU 75	0.85	No
fin.	3	-1214	-187.44	-1121			791	305	SLU 75	0.27	No
ini.	3	-1217	-82.11	403			792	305	SLU 78	0.76	No
fin.	3	-1316	-196.28	-1193			818	313	SLU 78	0.26	No
ini.	3	-978	-85.88	426			728	284	SLU 67	0.67	No
fin.	3	-1031	-165.06	-1059			742	289	SLU 67	0.27	No
ini.	3	-1117	-103.76	485			765	296	SLU 70	0.61	No
fin.	3	-1132	-173.9	-1131			769	298	SLU 70	0.26	No
ini.	3	-1101	-101.11	466			761	295	SLU 71	0.63	No
fin.	3	-1103	-165.89	-1084			761	295	SLU 71	0.27	No
ini.	3	-983	-77.4	394			729	285	SLU 66	0.72	No
fin.	3	-1065	-172.78	-1081			751	292	SLU 66	0.27	No
ini.	3	-1222	-73.63	371			793	305	SLU 77	0.82	No
fin.	3	-1350	-204	-1215			827	316	SLU 77	0.26	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	1627	812.32	900.3	SLV 4	1.11	Si
fin.	2	-1142	-523.8	900.3	SLV 4	1.72	Si
ini.	2	-2900	-910.7	900.3	SLV 13	0.99	No
fin.	2	-245	301.82	900.3	SLV 13	2.98	Si
ini.	2	-3336	-1069.33	900.3	SLV 16	0.84	No
fin.	2	-76	569.81	900.3	SLV 16	1.58	Si
ini.	2	2063	970.94	900.3	SLV 2	0.93	No
fin.	2	-1311	-791.78	900.3	SLV 2	1.14	Si
ini.	2	834	497.43	900.3	SLV 6	1.81	Si
fin.	2	-1135	-721.67	900.3	SLV 6	1.25	Si
ini.	2	2063	970.94	900.3	SLV 1	0.93	No
fin.	2	-1311	-791.78	900.3	SLV 1	1.14	Si
ini.	2	834	497.43	900.3	SLV 5	1.81	Si
fin.	2	-1135	-721.67	900.3	SLV 5	1.25	Si
ini.	2	-2900	-910.7	900.3	SLV 14	0.99	No
fin.	2	-245	301.82	900.3	SLV 14	2.98	Si
ini.	2	-3336	-1069.33	900.3	SLV 15	0.84	No
fin.	2	-76	569.81	900.3	SLV 15	1.58	Si
ini.	2	1627	812.32	900.3	SLV 3	1.11	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	2	-1142	-523.8	900.3	SLV 3	1.72	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-2900	-910.7	3043			1474	540	SLV 14	0.18	No
fin.	2	-245	301.82	572			766	297	SLV 14	0.52	No
ini.	2	-2900	-910.7	3043			1474	540	SLV 13	0.18	No
fin.	2	-245	301.82	572			766	297	SLV 13	0.52	No
ini.	2	834	497.43	-1064			701	76	SLV 6	0.07	No
fin.	2	-1135	-721.67	-2933			1004	395	SLV 6	0.13	No
ini.	2	834	497.43	-1064			701	76	SLV 5	0.07	No
fin.	2	-1135	-721.67	-2933			1004	395	SLV 5	0.13	No
ini.	2	2063	970.94	-2792			701	0	SLV 2	0	No
fin.	2	-1311	-791.78	-2999			1050	412	SLV 2	0.14	No
ini.	2	2063	970.94	-2792			701	0	SLV 1	0	No
fin.	2	-1311	-791.78	-2999			1050	412	SLV 1	0.14	No
ini.	2	-3336	-1069.33	3313			1591	570	SLV 16	0.17	No
fin.	2	-76	569.81	1587			721	275	SLV 16	0.17	No
ini.	2	-3336	-1069.33	3313			1591	570	SLV 15	0.17	No
fin.	2	-76	569.81	1587			721	275	SLV 15	0.17	No
ini.	2	1627	812.32	-2522			701	0	SLV 4	0	No
fin.	2	-1142	-523.8	-1985			1005	396	SLV 4	0.2	No
ini.	2	1627	812.32	-2522			701	0	SLV 3	0	No
fin.	2	-1142	-523.8	-1985			1005	396	SLV 3	0.2	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.842	SLV 15	No
V_SLV	0	SLV 1	No
PF_SLU	2.942	SLU 77	Si
V_SLU	0.26	SLU 77	No

Trave di accoppiamento 171

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-6.478	1.046	14.27	15.32	1.05	-7.278	1.046	14.27	15.32	1.05	0.8	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-2134	-341.59	1566.2	SLU 77	4.59	Si
fin.	3	-1440	201.49	1566.2	SLU 77	7.77	Si
ini.	3	-1984	-326.28	1566.2	SLU 74	4.8	Si
fin.	3	-1278	193.07	1566.2	SLU 74	8.11	Si
ini.	3	-1897	-336.85	1566.2	SLU 75	4.65	Si
fin.	3	-1180	211.6	1566.2	SLU 75	7.4	Si
ini.	3	-1673	-324.02	1566.2	SLU 57	4.83	Si
fin.	3	-1070	215.79	1566.2	SLU 57	7.26	Si
ini.	3	-2051	-327.02	1566.2	SLU 83	4.79	Si
fin.	3	-1316	206.29	1566.2	SLU 83	7.59	Si
ini.	3	-2047	-352.16	1566.2	SLU 78	4.45	Si
fin.	3	-1342	220.02	1566.2	SLU 78	7.12	Si
ini.	3	-1964	-337.59	1566.2	SLU 84	4.64	Si
fin.	3	-1219	224.83	1566.2	SLU 84	6.97	Si
ini.	3	-1943	-336.29	1566.2	SLU 80	4.66	Si
fin.	3	-1276	224.95	1566.2	SLU 80	6.96	Si
ini.	3	-1735	-328.02	1566.2	SLU 76	4.77	Si
fin.	3	-1050	228.88	1566.2	SLU 76	6.84	Si
ini.	3	-2030	-325.72	1566.2	SLU 79	4.81	Si
fin.	3	-1374	206.41	1566.2	SLU 79	7.59	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1125	-269.95	2430			1582	624	SLU 46	0.26	No
fin.	3	-665	188	-558			1398	552	SLU 46	0.99	No
ini.	3	-1171	-269.39	2473			1601	631	SLU 51	0.26	No
fin.	3	-762	201.34	-616			1437	568	SLU 51	0.92	No
ini.	3	-2047	-352.16	2957			1951	749	SLU 78	0.25	No
fin.	3	-1342	220.02	-416			1669	656	SLU 78	1.57	Si
ini.	3	-1649	-313.4	2802			1792	698	SLU 70	0.25	No
fin.	3	-1099	200.65	-618			1572	621	SLU 70	1	Si
ini.	3	-1275	-285.26	2622			1642	646	SLU 49	0.25	No
fin.	3	-827	196.42	-672			1463	579	SLU 49	0.86	No
ini.	3	-1736	-302.83	2749			1826	709	SLU 69	0.26	No
fin.	3	-1197	182.12	-656			1611	635	SLU 69	0.97	No
ini.	3	-1545	-297.53	2653			1750	684	SLU 72	0.26	No
fin.	3	-1034	205.57	-562			1546	611	SLU 72	1.09	Si
ini.	3	-1362	-274.69	2569			1677	659	SLU 48	0.26	No
fin.	3	-925	177.89	-710			1502	594	SLU 48	0.84	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1673	-324.02	2777			1801	701	SLU 57	0.25	No
fin.	3	-1070	215.79	-471			1560	616	SLU 57	1.31	Si
ini.	3	-963	-261.12	2317			1517	600	SLU 47	0.26	No
fin.	3	-535	205.28	-477			1346	530	SLU 47	1.11	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	35	589.85	2349.3	SLV 4	3.98	Si
fin.	2	-1411	-835.64	2349.3	SLV 4	2.81	Si
ini.	2	-2147	-993.99	2349.3	SLV 14	2.36	Si
fin.	2	150	1106.69	2349.3	SLV 14	2.12	Si
ini.	2	-2826	-1244.98	2349.3	SLV 15	1.89	Si
fin.	2	-737	1096.44	2349.3	SLV 15	2.14	Si
ini.	2	-2616	-895.61	2349.3	SLV 11	2.62	Si
fin.	2	-2007	408.27	2349.3	SLV 11	5.75	Si
ini.	2	-2826	-1244.98	2349.3	SLV 16	1.89	Si
fin.	2	-737	1096.44	2349.3	SLV 16	2.14	Si
ini.	2	713	840.83	2349.3	SLV 1	2.79	Si
fin.	2	-525	-825.39	2349.3	SLV 1	2.85	Si
ini.	2	713	840.83	2349.3	SLV 2	2.79	Si
fin.	2	-525	-825.39	2349.3	SLV 2	2.85	Si
ini.	2	35	589.85	2349.3	SLV 3	3.98	Si
fin.	2	-1411	-835.64	2349.3	SLV 3	2.81	Si
ini.	2	-2147	-993.99	2349.3	SLV 13	2.36	Si
fin.	2	150	1106.69	2349.3	SLV 13	2.12	Si
ini.	2	-2616	-895.61	2349.3	SLV 12	2.62	Si
fin.	2	-2007	408.27	2349.3	SLV 12	5.75	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	35	589.85	-1753			1698	632	SLV 4	0.36	No
fin.	2	-1411	-835.64	-3601			2263	895	SLV 4	0.25	No
ini.	2	-2826	-1244.98	5483			2829	1093	SLV 16	0.2	No
fin.	2	-737	1096.44	3169			1993	783	SLV 16	0.25	No
ini.	2	-355	-58.99	2278			1840	712	SLV 10	0.31	No
fin.	2	947	442.41	688			1698	381	SLV 10	0.55	No
ini.	2	35	589.85	-1753			1698	632	SLV 3	0.36	No
fin.	2	-1411	-835.64	-3601			2263	895	SLV 3	0.25	No
ini.	2	713	840.83	-2063			1698	459	SLV 1	0.22	No
fin.	2	-525	-825.39	-3653			1908	745	SLV 1	0.2	No
ini.	2	713	840.83	-2063			1698	459	SLV 2	0.22	No
fin.	2	-525	-825.39	-3653			1908	745	SLV 2	0.2	No
ini.	2	-2147	-993.99	5172			2557	1003	SLV 14	0.19	No
fin.	2	150	1106.69	3118			1698	606	SLV 14	0.19	No
ini.	2	-355	-58.99	2278			1840	712	SLV 9	0.31	No
fin.	2	947	442.41	688			1698	381	SLV 9	0.55	No
ini.	2	-2826	-1244.98	5483			2829	1093	SLV 15	0.2	No
fin.	2	-737	1096.44	3169			1993	783	SLV 15	0.25	No
ini.	2	-2147	-993.99	5172			2557	1003	SLV 13	0.19	No
fin.	2	150	1106.69	3118			1698	606	SLV 13	0.19	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.887	SLV 15	Si
V_SLV	0.194	SLV 13	No
PF_SLU	4.447	SLU 78	Si
V_SLU	0.247	SLU 49	No

Trave di accoppiamento 172

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-4.168	1.046	14.27	15.32	1.05	-4.968	1.046	14.27	15.32	1.05	0.8	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fkhmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1026	-409.53	1566.2	SLU 50	3.82	Si
fin.	3	-434	299.12	1566.2	SLU 50	5.24	Si
ini.	3	-2440	-407.31	1566.2	SLU 80	3.85	Si
fin.	3	-1524	293.06	1566.2	SLU 80	5.34	Si
ini.	3	-1782	-424.87	1566.2	SLU 71	3.69	Si
fin.	3	-987	322.25	1566.2	SLU 71	4.86	Si
ini.	3	-822	-398.31	1566.2	SLU 51	3.93	Si
fin.	3	-309	269.29	1566.2	SLU 51	5.82	Si
ini.	3	-1578	-413.65	1566.2	SLU 72	3.79	Si
fin.	3	-862	292.42	1566.2	SLU 72	5.36	Si
ini.	3	-2645	-418.53	1566.2	SLU 79	3.74	Si
fin.	3	-1649	322.89	1566.2	SLU 79	4.85	Si
ini.	3	-2828	-393.66	1566.2	SLU 77	3.98	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1841	299.45	1566.2	SLU 77	5.23	Si
fin.	3	-1965	-400	1566.2	SLU 69	3.92	Si
ini.	3	-1180	298.8	1566.2	SLU 69	5.24	Si
fin.	3	-1684	-391.97	1566.2	SLU 59	4	Si
ini.	3	-971	269.93	1566.2	SLU 59	5.8	Si
fin.	3	-1889	-403.19	1566.2	SLU 58	3.88	Si
ini.	3	-1096	299.76	1566.2	SLU 58	5.22	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1760	-388.78	2307			1836	713	SLU 70	0.31	No
fin.	3	-1055	268.97	-1187			1554	614	SLU 70	0.52	No
ini.	3	-822	-398.31	1998			1461	578	SLU 51	0.29	No
fin.	3	-309	269.29	-944			1256	489	SLU 51	0.52	No
ini.	3	-1578	-413.65	2252			1763	688	SLU 72	0.31	No
fin.	3	-862	292.42	-999			1477	584	SLU 72	0.58	No
ini.	3	-1004	-373.44	2053			1534	606	SLU 49	0.3	No
fin.	3	-501	245.84	-1132			1333	524	SLU 49	0.46	No
ini.	3	-1026	-409.53	2119			1543	610	SLU 50	0.29	No
fin.	3	-434	299.12	-908			1306	512	SLU 50	0.56	No
ini.	3	-2072	-378.32	2331			1961	752	SLU 56	0.32	No
fin.	3	-1288	276.31	-1083			1647	648	SLU 56	0.6	No
ini.	3	-1965	-400	2429			1918	739	SLU 69	0.3	No
fin.	3	-1180	298.8	-1152			1604	633	SLU 69	0.55	No
ini.	3	-1889	-403.19	2276			1888	729	SLU 58	0.32	No
fin.	3	-1096	299.76	-895			1570	620	SLU 58	0.69	No
ini.	3	-1209	-384.66	2174			1616	637	SLU 48	0.29	No
fin.	3	-626	275.67	-1096			1383	546	SLU 48	0.5	No
ini.	3	-1782	-424.87	2373			1845	715	SLU 71	0.3	No
fin.	3	-987	322.25	-964			1527	604	SLU 71	0.63	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-1595	1068.35	2349.3	SLV 4	2.2	Si
fin.	2	-2066	-766.6	2349.3	SLV 4	3.06	Si
ini.	2	-2329	1004.45	2349.3	SLV 1	2.34	Si
fin.	2	-2599	-718.52	2349.3	SLV 1	3.27	Si
ini.	2	-2329	1004.45	2349.3	SLV 2	2.34	Si
fin.	2	-2599	-718.52	2349.3	SLV 2	3.27	Si
ini.	2	-1185	-1502.84	2349.3	SLV 13	1.56	Si
fin.	2	274	1077.61	2349.3	SLV 13	2.18	Si
ini.	2	-1185	-1502.84	2349.3	SLV 14	1.56	Si
fin.	2	274	1077.61	2349.3	SLV 14	2.18	Si
ini.	2	-451	-1438.94	2349.3	SLV 16	1.63	Si
fin.	2	807	1029.52	2349.3	SLV 16	2.28	Si
ini.	2	-1595	1068.35	2349.3	SLV 3	2.2	Si
fin.	2	-2066	-766.6	2349.3	SLV 3	3.06	Si
ini.	2	-451	-1438.94	2349.3	SLV 15	1.63	Si
fin.	2	807	1029.52	2349.3	SLV 15	2.28	Si
ini.	2	-2441	-699.84	2349.3	SLV 9	3.36	Si
fin.	2	-1353	505.06	2349.3	SLV 9	4.65	Si
ini.	2	-2441	-699.84	2349.3	SLV 10	3.36	Si
fin.	2	-1353	505.06	2349.3	SLV 10	4.65	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-2329	1004.45	-1609			2630	1027	SLV 2	0.64	No
fin.	2	-2599	-718.52	-3070			2738	1063	SLV 2	0.35	No
ini.	2	-1595	1068.35	-2027			2336	923	SLV 4	0.46	No
fin.	2	-2066	-766.6	-3379			2525	991	SLV 4	0.29	No
ini.	2	-1595	1068.35	-2027			2336	923	SLV 3	0.46	No
fin.	2	-2066	-766.6	-3379			2525	991	SLV 3	0.29	No
ini.	2	-451	-1438.94	4431			1879	731	SLV 16	0.16	No
fin.	2	807	1029.52	1898			1698	429	SLV 16	0.23	No
ini.	2	-1185	-1502.84	4849			2172	859	SLV 14	0.18	No
fin.	2	274	1077.61	2207			1698	576	SLV 14	0.26	No
ini.	2	-2329	1004.45	-1609			2630	1027	SLV 1	0.64	No
fin.	2	-2599	-718.52	-3070			2738	1063	SLV 1	0.35	No
ini.	2	-451	-1438.94	4431			1879	731	SLV 15	0.16	No
fin.	2	807	1029.52	1898			1698	429	SLV 15	0.23	No
ini.	2	-2441	-699.84	3077			2675	1042	SLV 9	0.34	No
fin.	2	-1353	505.06	721			2240	886	SLV 9	1.23	Si
ini.	2	-1185	-1502.84	4849			2172	859	SLV 13	0.18	No
fin.	2	274	1077.61	2207			1698	576	SLV 13	0.26	No
ini.	2	-2441	-699.84	3077			2675	1042	SLV 10	0.34	No
fin.	2	-1353	505.06	721			2240	886	SLV 10	1.23	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.563	SLV 13	Si
V_SLV	0.165	SLV 15	No
PF_SLU	3.686	SLU 71	Si
V_SLU	0.288	SLU 50	No

Trave di accoppiamento 173

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-9.728	1.406	14.27	15.32	1.05	-9.728	2.206	14.27	15.32	1.05	0.8	0.14	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	172	-303.46	783.1	SLU 69	2.58	Si
fin.	3	172	-868.54	783.1	SLU 69	0.9	No
ini.	3	171	-288.64	783.1	SLU 56	2.71	Si
fin.	3	171	-846.96	783.1	SLU 56	0.92	No
ini.	3	176	-290.68	783.1	SLU 57	2.69	Si
fin.	3	176	-841.49	783.1	SLU 57	0.93	No
ini.	3	175	-294.81	783.1	SLU 71	2.66	Si
fin.	3	175	-857.41	783.1	SLU 71	0.91	No
ini.	3	188	-287.9	783.1	SLU 80	2.72	Si
fin.	3	188	-874.69	783.1	SLU 80	0.9	No
ini.	3	184	-285.85	783.1	SLU 79	2.74	Si
fin.	3	184	-880.17	783.1	SLU 79	0.89	No
ini.	3	185	-296.55	783.1	SLU 78	2.64	Si
fin.	3	185	-885.82	783.1	SLU 78	0.88	No
ini.	3	181	-294.5	783.1	SLU 77	2.66	Si
fin.	3	181	-891.3	783.1	SLU 77	0.88	No
ini.	3	179	-296.86	783.1	SLU 72	2.64	Si
fin.	3	179	-851.93	783.1	SLU 72	0.92	No
ini.	3	176	-305.51	783.1	SLU 70	2.56	Si
fin.	3	176	-863.06	783.1	SLU 70	0.91	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	171	-288.64	-534			566	172	SLU 56	0.32	No
fin.	3	171	-846.96	-830			566	172	SLU 56	0.21	No
ini.	3	188	-287.9	-562			566	167	SLU 80	0.3	No
fin.	3	188	-874.69	-875			566	167	SLU 80	0.19	No
ini.	3	175	-294.81	-532			566	171	SLU 71	0.32	No
fin.	3	175	-857.41	-844			566	171	SLU 71	0.2	No
ini.	3	179	-296.86	-522			566	170	SLU 72	0.32	No
fin.	3	179	-851.93	-835			566	170	SLU 72	0.2	No
ini.	3	185	-296.55	-565			566	168	SLU 78	0.3	No
fin.	3	185	-885.82	-878			566	168	SLU 78	0.19	No
ini.	3	184	-285.85	-571			566	168	SLU 79	0.29	No
fin.	3	184	-880.17	-884			566	168	SLU 79	0.19	No
ini.	3	181	-294.5	-574			566	169	SLU 77	0.29	No
fin.	3	181	-891.3	-887			566	169	SLU 77	0.19	No
ini.	3	172	-303.46	-535			566	172	SLU 69	0.32	No
fin.	3	172	-868.54	-848			566	172	SLU 69	0.2	No
ini.	3	176	-305.51	-525			566	170	SLU 70	0.32	No
fin.	3	176	-863.06	-838			566	170	SLU 70	0.2	No
ini.	3	175	-279.98	-531			566	171	SLU 58	0.32	No
fin.	3	175	-835.83	-827			566	171	SLU 58	0.21	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	327	-52.79	1174.65	SLV 4	22.25	Si
fin.	2	56	-1330.97	1174.65	SLV 4	0.88	No
ini.	2	-1252	84.08	1174.65	SLV 11	13.97	Si
fin.	2	-444	-1742.25	1174.65	SLV 11	0.67	No
ini.	2	-906	104.35	1174.65	SLV 8	11.26	Si
fin.	2	-381	-1991.24	1174.65	SLV 8	0.59	No
ini.	2	327	-52.79	1174.65	SLV 3	22.25	Si
fin.	2	56	-1330.97	1174.65	SLV 3	0.88	No
ini.	2	1120	-432.47	1174.65	SLV 10	2.72	Si
fin.	2	594	974.2	1174.65	SLV 10	1.21	Si
ini.	2	1466	-412.2	1174.65	SLV 5	2.85	Si
fin.	2	657	725.22	1174.65	SLV 5	1.62	Si
ini.	2	1466	-412.2	1174.65	SLV 6	2.85	Si
fin.	2	657	725.22	1174.65	SLV 6	1.62	Si
ini.	2	-906	104.35	1174.65	SLV 7	11.26	Si
fin.	2	-381	-1991.24	1174.65	SLV 7	0.59	No
ini.	2	-1252	84.08	1174.65	SLV 12	13.97	Si
fin.	2	-444	-1742.25	1174.65	SLV 12	0.67	No
ini.	2	1120	-432.47	1174.65	SLV 9	2.72	Si
fin.	2	594	974.2	1174.65	SLV 9	1.21	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	327	-52.79	-1442			849	238	SLV 3	0.17	No
fin.	2	56	-1330.97	-1638			849	307	SLV 3	0.19	No
ini.	2	1466	-412.2	1370			849	0	SLV 6	0	No
fin.	2	657	725.22	905			849	104	SLV 6	0.12	No
ini.	2	1466	-412.2	1370			849	0	SLV 5	0	No
fin.	2	657	725.22	905			849	104	SLV 5	0.12	No
ini.	2	327	-52.79	-1442			849	238	SLV 4	0.17	No
fin.	2	56	-1330.97	-1638			849	307	SLV 4	0.19	No
ini.	2	1039	-207.75	-334			849	0	SLV 1	0	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	2	368	-516.03	-662			849	226	SLV 1	0.34	No
ini.	2	-906	104.35	-2324			1212	478	SLV 8	0.21	No
fin.	2	-381	-1991.24	-2347			1001	394	SLV 8	0.17	No
ini.	2	1120	-432.47	1723			849	0	SLV 9	0	No
fin.	2	594	974.2	1272			849	140	SLV 9	0.11	No
ini.	2	1039	-207.75	-334			849	0	SLV 2	0	No
fin.	2	368	-516.03	-662			849	226	SLV 2	0.34	No
ini.	2	1120	-432.47	1723			849	0	SLV 10	0	No
fin.	2	594	974.2	1272			849	140	SLV 10	0.11	No
ini.	2	-906	104.35	-2324			1212	478	SLV 7	0.21	No
fin.	2	-381	-1991.24	-2347			1001	394	SLV 7	0.17	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF SLV	0.59	SLV 7	No
V SLV	0	SLV 1	No
PF SLU	0.879	SLU 77	No
V SLU	0.19	SLU 79	No

Trave di accoppiamento 174

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-8.548	-3.359	14.27	15.32	1.05	-9.448	-3.359	14.27	15.32	1.05	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fthk	fvk0	fthmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	367	474.22	1566.2	SLU 76	3.3	Si
fin.	3	-5	-25.73	1566.2	SLU 76	60.88	Si
ini.	3	305	455.45	1566.2	SLU 73	3.44	Si
fin.	3	-50	-17.69	1566.2	SLU 73	88.54	Si
ini.	3	345	473.66	1566.2	SLU 78	3.31	Si
fin.	3	-11	-16.99	1566.2	SLU 78	92.19	Si
ini.	3	343	462.15	1566.2	SLU 80	3.39	Si
fin.	3	-6	-15.28	1566.2	SLU 80	102.5	Si
ini.	3	236	451.7	1566.2	SLU 82	3.47	Si
fin.	3	-87	8.24	1566.2	SLU 82	190.01	Si
ini.	3	339	434.04	1566.2	SLU 42	3.61	Si
fin.	3	25	-1.03	1566.2	SLU 42	1516.94	Si
ini.	3	385	437.24	1566.2	SLU 36	3.58	Si
fin.	3	57	-18.23	1566.2	SLU 36	85.94	Si
ini.	3	283	454.9	1566.2	SLU 75	3.44	Si
fin.	3	-55	-8.95	1566.2	SLU 75	175	Si
ini.	3	299	470.46	1566.2	SLU 84	3.33	Si
fin.	3	-43	0.2	1566.2	SLU 84	7653.78	Si
ini.	3	407	437.8	1566.2	SLU 34	3.58	Si
fin.	3	63	-26.97	1566.2	SLU 34	58.08	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	385	437.24	148			1132	332	SLU 36	2.24	Si
fin.	3	57	-18.23	-1533			1132	413	SLU 36	0.27	No
ini.	3	383	425.72	117			1132	333	SLU 38	2.85	Si
fin.	3	62	-16.52	-1461			1132	412	SLU 38	0.28	No
ini.	3	345	473.66	234			1132	343	SLU 78	1.46	Si
fin.	3	-11	-16.99	-1721			1137	428	SLU 78	0.25	No
ini.	3	216	427.4	354			1132	376	SLU 77	1.06	Si
fin.	3	-78	10.74	-1604			1163	443	SLU 77	0.28	No
ini.	3	303	410.47	300			1132	354	SLU 70	1.18	Si
fin.	3	-27	-34.36	-1654			1143	432	SLU 70	0.26	No
ini.	3	301	398.96	268			1132	355	SLU 72	1.32	Si
fin.	3	-22	-32.66	-1581			1141	431	SLU 72	0.27	No
ini.	3	283	454.9	166			1132	359	SLU 75	2.16	Si
fin.	3	-55	-8.95	-1564			1154	438	SLU 75	0.28	No
ini.	3	244	400.25	291			1132	369	SLU 57	1.27	Si
fin.	3	-65	-19.69	-1562			1158	440	SLU 57	0.28	No
ini.	3	367	474.22	55			1132	337	SLU 76	6.12	Si
fin.	3	-5	-25.73	-1570			1134	427	SLU 76	0.27	No
ini.	3	343	462.15	203			1132	343	SLU 80	1.69	Si
fin.	3	-6	-15.28	-1648			1135	427	SLU 80	0.26	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	2262	1251.39	2349.3	SLV 3	1.88	Si
fin.	2	998	-158.63	2349.3	SLV 3	14.81	Si
ini.	2	2543	1497.13	2349.3	SLV 1	1.57	Si
fin.	2	1228	-399.53	2349.3	SLV 1	5.88	Si
ini.	2	-2212	-762.69	2349.3	SLV 13	3.08	Si
fin.	2	-1286	184.53	2349.3	SLV 13	12.73	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	2543	1497.13	2349.3	SLV 2	1.57	Si
fin.	2	1228	-399.53	2349.3	SLV 2	5.88	Si
ini.	2	1207	992.89	2349.3	SLV 5	2.37	Si
fin.	2	617	-476.17	2349.3	SLV 5	4.93	Si
ini.	2	-2212	-762.69	2349.3	SLV 14	3.08	Si
fin.	2	-1286	184.53	2349.3	SLV 14	12.73	Si
ini.	2	1207	992.89	2349.3	SLV 6	2.37	Si
fin.	2	617	-476.17	2349.3	SLV 6	4.93	Si
ini.	2	2262	1251.39	2349.3	SLV 4	1.88	Si
fin.	2	998	-158.63	2349.3	SLV 4	14.81	Si
ini.	2	-2493	-1008.43	2349.3	SLV 15	2.33	Si
fin.	2	-1516	425.43	2349.3	SLV 15	5.52	Si
ini.	2	-2493	-1008.43	2349.3	SLV 16	2.33	Si
fin.	2	-1516	425.43	2349.3	SLV 16	5.52	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	2262	1251.39	-1635			1698	0	SLV 4	0	No
fin.	2	998	-158.63	-2670			1698	362	SLV 4	0.14	No
ini.	2	2262	1251.39	-1635			1698	0	SLV 3	0	No
fin.	2	998	-158.63	-2670			1698	362	SLV 3	0.14	No
ini.	2	-1156	-504.19	1731			2161	854	SLV 11	0.49	No
fin.	2	-905	502.06	681			2060	812	SLV 11	1.19	Si
ini.	2	1207	992.89	-1357			1698	270	SLV 6	0.2	No
fin.	2	617	-476.17	-2421			1698	487	SLV 6	0.2	No
ini.	2	1207	992.89	-1357			1698	270	SLV 5	0.2	No
fin.	2	617	-476.17	-2421			1698	487	SLV 5	0.2	No
ini.	2	-1156	-504.19	1731			2161	854	SLV 12	0.49	No
fin.	2	-905	502.06	681			2060	812	SLV 12	1.19	Si
ini.	2	-2493	-1008.43	2558			2695	1049	SLV 16	0.41	No
fin.	2	-1516	425.43	1486			2305	911	SLV 16	0.61	No
ini.	2	2543	1497.13	-2184			1698	0	SLV 1	0	No
fin.	2	1228	-399.53	-3227			1698	259	SLV 1	0.08	No
ini.	2	-2493	-1008.43	2558			2695	1049	SLV 15	0.41	No
fin.	2	-1516	425.43	1486			2305	911	SLV 15	0.61	No
ini.	2	2543	1497.13	-2184			1698	0	SLV 2	0	No
fin.	2	1228	-399.53	-3227			1698	259	SLV 2	0.08	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.569	SLV 1	Si
V_SLV	0	SLV 1	No
PF_SLU	3.303	SLU 76	Si
V_SLU	0.249	SLU 78	No

Trave di accoppiamento 175

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-5.158	6.006	12.17	14.17	2	-5.158	6.506	12.17	14.17	2	0.5	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fhmmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	444	755.58	5682.35	SLU 72	7.52	Si
fin.	3	81	86.27	5682.35	SLU 72	65.87	Si
ini.	3	409	713.24	5682.35	SLU 50	7.97	Si
fin.	3	76	80.87	5682.35	SLU 50	70.27	Si
ini.	3	468	753.2	5682.35	SLU 80	7.54	Si
fin.	3	84	88.33	5682.35	SLU 80	64.33	Si
ini.	3	468	731.55	5682.35	SLU 77	7.77	Si
fin.	3	83	87.44	5682.35	SLU 77	64.98	Si
ini.	3	444	733.92	5682.35	SLU 69	7.74	Si
fin.	3	81	85.37	5682.35	SLU 69	66.56	Si
ini.	3	445	757.38	5682.35	SLU 71	7.5	Si
fin.	3	81	86.49	5682.35	SLU 71	65.7	Si
ini.	3	467	729.75	5682.35	SLU 78	7.79	Si
fin.	3	83	87.22	5682.35	SLU 78	65.15	Si
ini.	3	409	711.45	5682.35	SLU 51	7.99	Si
fin.	3	76	80.65	5682.35	SLU 51	70.46	Si
ini.	3	444	732.13	5682.35	SLU 70	7.76	Si
fin.	3	80	85.16	5682.35	SLU 70	66.73	Si
ini.	3	469	755	5682.35	SLU 79	7.53	Si
fin.	3	84	88.55	5682.35	SLU 79	64.17	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	444	755.58	-1943			2157	708	SLU 72	0.36	No
fin.	3	81	86.27	-306			2157	794	SLU 72	2.59	Si
ini.	3	445	757.38	-1950			2157	708	SLU 71	0.36	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	3	81	86.49	-306			2157	794	SLU 71	2.59	Si
ini.	3	468	753.2	-1931			2157	702	SLU 80	0.36	No
fin.	3	84	88.33	-238			2157	793	SLU 80	3.34	Si
ini.	3	444	733.92	-1884			2157	708	SLU 69	0.38	No
fin.	3	81	85.37	-270			2157	794	SLU 69	2.94	Si
ini.	3	433	710.87	-1819			2157	711	SLU 58	0.39	No
fin.	3	78	82.94	-262			2157	794	SLU 58	3.03	Si
ini.	3	467	729.75	-1865			2157	703	SLU 78	0.38	No
fin.	3	83	87.22	-202			2157	793	SLU 78	3.93	Si
ini.	3	469	755	-1938			2157	702	SLU 79	0.36	No
fin.	3	84	88.55	-237			2157	793	SLU 79	3.34	Si
ini.	3	409	713.24	-1831			2157	717	SLU 50	0.39	No
fin.	3	76	80.87	-330			2157	795	SLU 50	2.41	Si
ini.	3	444	732.13	-1877			2157	709	SLU 70	0.38	No
fin.	3	80	85.16	-270			2157	794	SLU 70	2.94	Si
ini.	3	468	731.55	-1872			2157	702	SLU 77	0.38	No
fin.	3	83	87.44	-202			2157	793	SLU 77	3.93	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	390	388.55	8523.53	SLV 12	21.94	Si
fin.	2	95	53.23	8523.53	SLV 12	160.13	Si
ini.	2	202	582.15	8523.53	SLV 3	14.64	Si
fin.	2	40	55.91	8523.53	SLV 3	152.44	Si
ini.	2	334	508.5	8523.53	SLV 8	16.76	Si
fin.	2	83	56.26	8523.53	SLV 8	151.51	Si
ini.	2	390	388.55	8523.53	SLV 11	21.94	Si
fin.	2	95	53.23	8523.53	SLV 11	160.13	Si
ini.	2	334	508.5	8523.53	SLV 7	16.76	Si
fin.	2	83	56.26	8523.53	SLV 7	151.51	Si
ini.	2	144	319.09	8523.53	SLV 6	26.71	Si
fin.	2	-1	45.16	8523.53	SLV 6	188.73	Si
ini.	2	145	525.33	8523.53	SLV 2	16.23	Si
fin.	2	14	52.58	8523.53	SLV 2	162.09	Si
ini.	2	144	319.09	8523.53	SLV 5	26.71	Si
fin.	2	-1	45.16	8523.53	SLV 5	188.73	Si
ini.	2	145	525.33	8523.53	SLV 1	16.23	Si
fin.	2	14	52.58	8523.53	SLV 1	162.09	Si
ini.	2	202	582.15	8523.53	SLV 4	14.64	Si
fin.	2	40	55.91	8523.53	SLV 4	152.44	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	202	582.15	-1239			3235	1173	SLV 3	0.95	No
fin.	2	40	55.91	-791			3235	1209	SLV 3	1.53	Si
ini.	2	388	182.31	-945			3235	1130	SLV 15	1.2	Si
fin.	2	79	45.81	470			3235	1200	SLV 15	2.55	Si
ini.	2	145	525.33	-760			3235	1185	SLV 2	1.56	Si
fin.	2	14	52.58	-623			3235	1214	SLV 2	1.95	Si
ini.	2	202	582.15	-1239			3235	1173	SLV 4	0.95	No
fin.	2	40	55.91	-791			3235	1209	SLV 4	1.53	Si
ini.	2	334	508.5	-1696			3235	1143	SLV 7	0.67	No
fin.	2	83	56.26	-545			3235	1199	SLV 7	2.2	Si
ini.	2	390	388.55	-1608			3235	1130	SLV 11	0.7	No
fin.	2	95	53.23	-167			3235	1197	SLV 11	7.16	Si
ini.	2	390	388.55	-1608			3235	1130	SLV 12	0.7	No
fin.	2	95	53.23	-167			3235	1197	SLV 12	7.16	Si
ini.	2	388	182.31	-945			3235	1130	SLV 16	1.2	Si
fin.	2	79	45.81	470			3235	1200	SLV 16	2.55	Si
ini.	2	145	525.33	-760			3235	1185	SLV 1	1.56	Si
fin.	2	14	52.58	-623			3235	1214	SLV 1	1.95	Si
ini.	2	334	508.5	-1696			3235	1143	SLV 8	0.67	No
fin.	2	83	56.26	-545			3235	1199	SLV 8	2.2	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	14.641	SLV 3	Si
V_SLV	0.674	SLV 7	No
PF_SLU	7.503	SLU 71	Si
V_SLU	0.362	SLU 79	No

Trave di accoppiamento 176

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-5.158	6.006	14.97	15.32	0.35	-5.158	6.506	14.97	15.32	0.35	0.5	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
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Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	2383	254.64	174.02	SLU 72	0.68	No
fin.	3	1004	262	174.02	SLU 72	0.66	No
ini.	3	2226	233.62	174.02	SLU 70	0.74	No
fin.	3	942	256.28	174.02	SLU 70	0.68	No
ini.	3	2346	257.9	174.02	SLU 51	0.67	No
fin.	3	975	241.41	174.02	SLU 51	0.72	No
ini.	3	2388	254.4	174.02	SLU 71	0.68	No
fin.	3	1014	260	174.02	SLU 71	0.67	No
ini.	3	2351	257.65	174.02	SLU 50	0.68	No
fin.	3	985	239.41	174.02	SLU 50	0.73	No
ini.	3	2014	199.28	174.02	SLU 78	0.87	No
fin.	3	868	264.88	174.02	SLU 78	0.66	No
ini.	3	2176	220.06	174.02	SLU 79	0.79	No
fin.	3	940	268.61	174.02	SLU 79	0.65	No
ini.	3	2231	233.37	174.02	SLU 69	0.75	No
fin.	3	952	254.28	174.02	SLU 69	0.68	No
ini.	3	2019	199.03	174.02	SLU 77	0.87	No
fin.	3	878	262.88	174.02	SLU 77	0.66	No
ini.	3	2171	220.3	174.02	SLU 80	0.79	No
fin.	3	930	270.61	174.02	SLU 80	0.64	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	1330	128.45	224			264	0	SLU 54	0	No
fin.	3	551	201.65	-590			264	0	SLU 54	0	No
ini.	3	2135	223.56	62			264	0	SLU 59	0	No
fin.	3	901	250.02	-969			264	0	SLU 59	0	No
ini.	3	821	83.36	88			264	0	SLU 1	0	No
fin.	3	321	123.98	-341			264	13	SLU 1	0.04	No
ini.	3	1335	128.2	225			264	0	SLU 53	0	No
fin.	3	561	199.65	-593			264	0	SLU 53	0	No
ini.	3	1983	202.29	128			264	0	SLU 56	0	No
fin.	3	849	242.29	-906			264	0	SLU 56	0	No
ini.	3	753	60.43	331			264	0	SLU 60	0	No
fin.	3	303	166.41	-310			264	27	SLU 60	0.09	No
ini.	3	2140	223.32	63			264	0	SLU 58	0	No
fin.	3	911	248.02	-972			264	0	SLU 58	0	No
ini.	3	747	60.67	331			264	0	SLU 61	0	No
fin.	3	293	168.41	-307			264	32	SLU 61	0.1	No
ini.	3	1978	202.54	128			264	0	SLU 57	0	No
fin.	3	839	244.29	-902			264	0	SLU 57	0	No
ini.	3	1483	149.64	158			264	0	SLU 55	0	No
fin.	3	606	208.71	-654			264	0	SLU 55	0	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-2773	-428.1	261.03	SLV 9	0.61	No
fin.	2	-994	260.58	261.03	SLV 9	1	Si
ini.	2	4315	573.33	261.03	SLV 7	0.46	No
fin.	2	1612	4.06	261.03	SLV 7	64.22	Si
ini.	2	3860	559.81	261.03	SLV 4	0.47	No
fin.	2	1155	76.83	261.03	SLV 4	3.4	Si
ini.	2	2980	351.14	261.03	SLV 12	0.74	No
fin.	2	1311	15.28	261.03	SLV 12	17.08	Si
ini.	2	4315	573.33	261.03	SLV 8	0.46	No
fin.	2	1612	4.06	261.03	SLV 8	64.22	Si
ini.	2	2980	351.14	261.03	SLV 11	0.74	No
fin.	2	1311	15.28	261.03	SLV 11	17.08	Si
ini.	2	-2318	-414.58	261.03	SLV 13	0.63	No
fin.	2	-538	187.82	261.03	SLV 13	1.39	Si
ini.	2	-2773	-428.1	261.03	SLV 10	0.61	No
fin.	2	-994	260.58	261.03	SLV 10	1	Si
ini.	2	-2318	-414.58	261.03	SLV 14	0.63	No
fin.	2	-538	187.82	261.03	SLV 14	1.39	Si
ini.	2	3860	559.81	261.03	SLV 3	0.47	No
fin.	2	1155	76.83	261.03	SLV 3	3.4	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-2773	-428.1	2669			1173	385	SLV 9	0.14	No
fin.	2	-994	260.58	1320			675	260	SLV 9	0.2	No
ini.	2	-2773	-428.1	2669			1173	385	SLV 10	0.14	No
fin.	2	-994	260.58	1320			675	260	SLV 10	0.2	No
ini.	2	2134	326.04	-604			396	0	SLV 1	0	No
fin.	2	464	150.42	-1304			396	34	SLV 1	0.03	No
ini.	2	2134	326.04	-604			396	0	SLV 2	0	No
fin.	2	464	150.42	-1304			396	34	SLV 2	0.03	No
ini.	2	4315	573.33	-2333			396	0	SLV 7	0	No
fin.	2	1612	4.06	-1967			396	0	SLV 7	0	No
ini.	2	2980	351.14	-1495			396	0	SLV 12	0	No
fin.	2	1311	15.28	-1156			396	0	SLV 12	0	No
ini.	2	3860	559.81	-1854			396	0	SLV 4	0	No
fin.	2	1155	76.83	-2046			396	0	SLV 4	0	No
ini.	2	3860	559.81	-1854			396	0	SLV 3	0	No
fin.	2	1155	76.83	-2046			396	0	SLV 3	0	No
ini.	2	2980	351.14	-1495			396	0	SLV 11	0	No
fin.	2	1311	15.28	-1156			396	0	SLV 11	0	No
ini.	2	4315	573.33	-2333			396	0	SLV 8	0	No
fin.	2	1612	4.06	-1967			396	0	SLV 8	0	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.455	SLV 7	No
V_SLV	0	SLV 1	No
PF_SLU	0.643	SLU 80	No
V_SLU	0	SLU 1	No

Trave di accoppiamento 177

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-6.513	-3.359	12.17	13.07	0.9	-7.413	-3.359	12.17	13.07	0.9	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	21	-26.09	1150.68	SLU 79	44.1	Si
fin.	3	-692	159.96	1150.68	SLU 79	7.19	Si
ini.	3	-21	-20.41	1150.68	SLU 53	56.37	Si
fin.	3	-652	156.74	1150.68	SLU 53	7.34	Si
ini.	3	-9	-24.44	1150.68	SLU 60	47.08	Si
fin.	3	-657	152.02	1150.68	SLU 60	7.57	Si
ini.	3	-5	-23.36	1150.68	SLU 58	49.27	Si
fin.	3	-654	160.16	1150.68	SLU 58	7.18	Si
ini.	3	6	-23.15	1150.68	SLU 74	49.71	Si
fin.	3	-690	156.55	1150.68	SLU 74	7.35	Si
ini.	3	-6	-22.64	1150.68	SLU 56	50.82	Si
fin.	3	-663	163.19	1150.68	SLU 56	7.05	Si
ini.	3	33	-29.41	1150.68	SLU 83	39.13	Si
fin.	3	-707	158.27	1150.68	SLU 83	7.27	Si
ini.	3	6	-26.67	1150.68	SLU 62	43.14	Si
fin.	3	-669	158.47	1150.68	SLU 62	7.26	Si
ini.	3	-68	-9.71	1150.68	SLU 48	118.54	Si
fin.	3	-601	152.1	1150.68	SLU 48	7.57	Si
ini.	3	21	-25.38	1150.68	SLU 77	45.34	Si
fin.	3	-702	162.99	1150.68	SLU 77	7.06	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	21	-26.09	152			970	361	SLU 79	2.37	Si
fin.	3	-692	159.96	823			1247	493	SLU 79	0.6	No
ini.	3	-21	-20.41	91			979	370	SLU 53	4.06	Si
fin.	3	-652	156.74	786			1231	487	SLU 53	0.62	No
ini.	3	-5	-23.36	76			973	366	SLU 58	4.83	Si
fin.	3	-654	160.16	830			1232	487	SLU 58	0.59	No
ini.	3	-6	-22.64	50			973	366	SLU 56	7.36	Si
fin.	3	-663	163.19	867			1236	489	SLU 56	0.56	No
ini.	3	-68	-9.71	-127			998	380	SLU 48	2.99	Si
fin.	3	-601	152.1	861			1211	478	SLU 48	0.56	No
ini.	3	-83	-7.48	-86			1004	383	SLU 45	4.47	Si
fin.	3	-589	145.65	780			1206	476	SLU 45	0.61	No
ini.	3	-68	-10.42	-101			998	380	SLU 50	3.76	Si
fin.	3	-591	149.06	824			1207	477	SLU 50	0.58	No
ini.	3	-42	-12.44	-51			987	374	SLU 69	7.38	Si
fin.	3	-639	151.9	855			1226	485	SLU 69	0.57	No
ini.	3	21	-25.38	126			970	361	SLU 77	2.86	Si
fin.	3	-702	162.99	861			1251	495	SLU 77	0.58	No
ini.	3	-41	-13.16	-25			987	374	SLU 71	15.17	Si
fin.	3	-629	148.87	818			1222	483	SLU 71	0.59	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-1776	681.32	1726.01	SLV 2	2.53	Si
fin.	2	1799	-902.15	1726.01	SLV 2	1.91	Si
ini.	2	-1394	579.25	1726.01	SLV 3	2.98	Si
fin.	2	1386	-748.04	1726.01	SLV 3	2.31	Si
ini.	2	-1394	579.25	1726.01	SLV 4	2.98	Si
fin.	2	1386	-748.04	1726.01	SLV 4	2.31	Si
ini.	2	1308	-598.82	1726.01	SLV 13	2.88	Si
fin.	2	-2337	963.66	1726.01	SLV 13	1.79	Si
ini.	2	1056	-371.92	1726.01	SLV 11	4.64	Si
fin.	2	-1784	644.53	1726.01	SLV 11	2.68	Si
ini.	2	1056	-371.92	1726.01	SLV 12	4.64	Si
fin.	2	-1784	644.53	1726.01	SLV 12	2.68	Si
ini.	2	1690	-700.89	1726.01	SLV 15	2.46	Si
fin.	2	-2750	1117.77	1726.01	SLV 15	1.54	Si
ini.	2	1308	-598.82	1726.01	SLV 14	2.88	Si
fin.	2	-2337	963.66	1726.01	SLV 14	1.79	Si
ini.	2	1690	-700.89	1726.01	SLV 16	2.46	Si
fin.	2	-2750	1117.77	1726.01	SLV 16	1.54	Si
ini.	2	-1776	681.32	1726.01	SLV 1	2.53	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	2	1799	-902.15	1726.01	SLV 1	1.91	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	1690	-700.89	3777			1456	0	SLV 15	0	No
fin.	2	-2750	1117.77	4685			2556	977	SLV 15	0.21	No
ini.	2	-1776	681.32	-3620			2166	850	SLV 2	0.23	No
fin.	2	1799	-902.15	-3671			1456	0	SLV 2	0	No
ini.	2	1690	-700.89	3777			1456	0	SLV 16	0	No
fin.	2	-2750	1117.77	4685			2556	977	SLV 16	0.21	No
ini.	2	1308	-598.82	3156			1456	0	SLV 13	0	No
fin.	2	-2337	963.66	4024			2391	926	SLV 13	0.23	No
ini.	2	-1394	579.25	-2999			2013	795	SLV 3	0.27	No
fin.	2	1386	-748.04	-3009			1456	0	SLV 3	0	No
ini.	2	-1394	579.25	-2999			2013	795	SLV 4	0.27	No
fin.	2	1386	-748.04	-3009			1456	0	SLV 4	0	No
ini.	2	-1776	681.32	-3620			2166	850	SLV 1	0.23	No
fin.	2	1799	-902.15	-3671			1456	0	SLV 1	0	No
ini.	2	1056	-371.92	2130			1456	220	SLV 11	0.1	No
fin.	2	-1784	644.53	2763			2169	851	SLV 11	0.31	No
ini.	2	1308	-598.82	3156			1456	0	SLV 14	0	No
fin.	2	-2337	963.66	4024			2391	926	SLV 14	0.23	No
ini.	2	1056	-371.92	2130			1456	220	SLV 12	0.1	No
fin.	2	-1784	644.53	2763			2169	851	SLV 12	0.31	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.544	SLV 15	Si
V_SLV	0	SLV 1	No
PF_SLU	7.051	SLU 56	Si
V_SLU	0.556	SLU 48	No

Trave di accoppiamento 178

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-6.513	-3.359	14.87	15.32	0.45	-7.413	-3.359	14.87	15.32	0.45	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-989	-115.42	287.67	SLU 79	2.49	Si
fin.	3	152	76.82	287.67	SLU 79	3.74	Si
ini.	3	-918	-111.9	287.67	SLU 69	2.57	Si
fin.	3	146	63.04	287.67	SLU 69	4.56	Si
ini.	3	-1001	-109.61	287.67	SLU 83	2.62	Si
fin.	3	108	80.78	287.67	SLU 83	3.56	Si
ini.	3	-967	-107.38	287.67	SLU 78	2.68	Si
fin.	3	90	65.89	287.67	SLU 78	4.37	Si
ini.	3	-944	-112.56	287.67	SLU 56	2.56	Si
fin.	3	133	67.31	287.67	SLU 56	4.27	Si
ini.	3	-1025	-120.13	287.67	SLU 77	2.39	Si
fin.	3	149	75.64	287.67	SLU 77	3.8	Si
ini.	3	-991	-110.79	287.67	SLU 74	2.6	Si
fin.	3	104	74.2	287.67	SLU 74	3.88	Si
ini.	3	-837	-104.33	287.67	SLU 48	2.76	Si
fin.	3	130	54.71	287.67	SLU 48	5.26	Si
ini.	3	-882	-107.2	287.67	SLU 71	2.68	Si
fin.	3	149	64.21	287.67	SLU 71	4.48	Si
ini.	3	-908	-107.85	287.67	SLU 58	2.67	Si
fin.	3	136	68.49	287.67	SLU 58	4.2	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-967	-107.38	1220			581	221	SLU 78	0.18	No
fin.	3	90	65.89	-85			323	108	SLU 78	1.27	Si
ini.	3	-882	-107.2	1164			559	214	SLU 71	0.18	No
fin.	3	149	64.21	-90			323	98	SLU 71	1.09	Si
ini.	3	-770	-95.22	1083			529	205	SLU 27	0.19	No
fin.	3	140	53	-125			323	99	SLU 27	0.79	No
ini.	3	-918	-111.9	1244			568	217	SLU 69	0.17	No
fin.	3	146	63.04	-130			323	98	SLU 69	0.76	No
ini.	3	-989	-115.42	1213			587	223	SLU 79	0.18	No
fin.	3	152	76.82	-25			323	97	SLU 79	3.91	Si
ini.	3	-1025	-120.13	1293			597	226	SLU 77	0.17	No
fin.	3	149	75.64	-65			323	98	SLU 77	1.5	Si
ini.	3	-944	-112.56	1204			575	219	SLU 56	0.18	No
fin.	3	133	67.31	-80			323	101	SLU 56	1.25	Si
ini.	3	-877	-103.45	1132			557	214	SLU 35	0.19	No
fin.	3	144	65.61	-60			323	99	SLU 35	1.65	Si



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-837	-104.33	1155			547	211	SLU 48	0.18	No
fin.	3	130	54.71	-145			323	101	SLU 48	0.7	No
ini.	3	-860	-99.15	1171			553	213	SLU 70	0.18	No
fin.	3	87	53.29	-150			323	108	SLU 70	0.72	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	1362	180.47	431.5	SLV 1	2.39	Si
fin.	2	-123	-141.48	431.5	SLV 1	3.05	Si
ini.	2	673	153.15	431.5	SLV 3	2.82	Si
fin.	2	-656	-127.13	431.5	SLV 3	3.39	Si
ini.	2	-1951	-290.69	431.5	SLV 14	1.48	Si
fin.	2	740	225.03	431.5	SLV 14	1.92	Si
ini.	2	-2285	-184.97	431.5	SLV 11	2.33	Si
fin.	2	-717	127.84	431.5	SLV 11	3.38	Si
ini.	2	-2640	-318.01	431.5	SLV 16	1.36	Si
fin.	2	207	239.38	431.5	SLV 16	1.8	Si
ini.	2	-1951	-290.69	431.5	SLV 13	1.48	Si
fin.	2	740	225.03	431.5	SLV 13	1.92	Si
ini.	2	-2285	-184.97	431.5	SLV 12	2.33	Si
fin.	2	-717	127.84	431.5	SLV 12	3.38	Si
ini.	2	-2640	-318.01	431.5	SLV 15	1.36	Si
fin.	2	207	239.38	431.5	SLV 15	1.8	Si
ini.	2	1362	180.47	431.5	SLV 2	2.39	Si
fin.	2	-123	-141.48	431.5	SLV 2	3.05	Si
ini.	2	673	153.15	431.5	SLV 4	2.82	Si
fin.	2	-656	-127.13	431.5	SLV 4	3.39	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	673	153.15	-504			485	0	SLV 3	0	No
fin.	2	-656	-127.13	-915			660	261	SLV 3	0.29	No
ini.	2	12	-93.92	1448			485	181	SLV 9	0.12	No
fin.	2	1060	80.01	-353			485	0	SLV 9	0	No
ini.	2	-1951	-290.69	1858			1006	370	SLV 13	0.2	No
fin.	2	740	225.03	961			485	0	SLV 13	0	No
ini.	2	1006	47.43	822			485	0	SLV 5	0	No
fin.	2	802	-29.94	-1046			485	0	SLV 5	0	No
ini.	2	1362	180.47	-230			485	0	SLV 1	0	No
fin.	2	-123	-141.48	-1349			518	200	SLV 1	0.15	No
ini.	2	-1951	-290.69	1858			1006	370	SLV 14	0.2	No
fin.	2	740	225.03	961			485	0	SLV 14	0	No
ini.	2	12	-93.92	1448			485	181	SLV 10	0.12	No
fin.	2	1060	80.01	-353			485	0	SLV 10	0	No
ini.	2	1006	47.43	822			485	0	SLV 6	0	No
fin.	2	802	-29.94	-1046			485	0	SLV 6	0	No
ini.	2	1362	180.47	-230			485	0	SLV 2	0	No
fin.	2	-123	-141.48	-1349			518	200	SLV 2	0.15	No
ini.	2	673	153.15	-504			485	0	SLV 4	0	No
fin.	2	-656	-127.13	-915			660	261	SLV 4	0.29	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.357	SLV 15	Si
V_SLV	0	SLV 1	No
PF_SLU	2.395	SLU 77	Si
V_SLU	0.175	SLU 77	No

Trave di accoppiamento 179

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-5.508	-3.359	12.17	14.17	2	-6.008	-3.359	12.17	14.17	2	0.5	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-383	344.72	5682.35	SLU 79	16.48	Si
fin.	3	-302	534.64	5682.35	SLU 79	10.63	Si
ini.	3	-440	338.96	5682.35	SLU 69	16.76	Si
fin.	3	-376	510.85	5682.35	SLU 69	11.12	Si
ini.	3	-341	310.13	5682.35	SLU 83	18.32	Si
fin.	3	-264	514.36	5682.35	SLU 83	11.05	Si
ini.	3	-414	312.6	5682.35	SLU 71	18.18	Si
fin.	3	-357	487.97	5682.35	SLU 71	11.64	Si
ini.	3	-408	371.07	5682.35	SLU 77	15.31	Si
fin.	3	-321	557.51	5682.35	SLU 77	10.19	Si
ini.	3	-374	304.64	5682.35	SLU 58	18.65	Si
fin.	3	-311	488.19	5682.35	SLU 58	11.64	Si
ini.	3	-399	330.99	5682.35	SLU 56	17.17	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	3	-330	511.07	5682.35	SLU 56	11.12	Si
ini.	3	-551	354.15	5682.35	SLU 78	16.04	Si
fin.	3	-482	498.22	5682.35	SLU 78	11.41	Si
ini.	3	-330	341.07	5682.35	SLU 35	16.66	Si
fin.	3	-241	486.46	5682.35	SLU 35	11.68	Si
ini.	3	-380	322.72	5682.35	SLU 74	17.61	Si
fin.	3	-306	517.24	5682.35	SLU 74	10.99	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-374	304.64	316			2306	889	SLU 58	2.81	Si
fin.	3	-311	488.19	693			2281	877	SLU 58	1.26	Si
ini.	3	-399	330.99	284			2316	894	SLU 56	3.15	Si
fin.	3	-330	511.07	702			2289	880	SLU 56	1.26	Si
ini.	3	-406	272.52	320			2319	895	SLU 50	2.8	Si
fin.	3	-366	441.53	739			2303	888	SLU 50	1.2	Si
ini.	3	-358	215.9	431			2300	886	SLU 64	2.05	Si
fin.	3	-327	407.42	693			2288	880	SLU 64	1.27	Si
ini.	3	-414	312.6	296			2322	897	SLU 71	3.03	Si
fin.	3	-357	487.97	719			2299	886	SLU 71	1.23	Si
ini.	3	-349	175.82	455			2296	884	SLU 43	1.94	Si
fin.	3	-336	360.97	713			2291	882	SLU 43	1.24	Si
ini.	3	-412	290.6	331			2321	897	SLU 66	2.7	Si
fin.	3	-361	470.57	714			2301	887	SLU 66	1.24	Si
ini.	3	-431	298.87	288			2329	900	SLU 48	3.13	Si
fin.	3	-385	464.4	747			2311	891	SLU 48	1.19	Si
ini.	3	-403	250.52	355			2318	895	SLU 45	2.52	Si
fin.	3	-370	424.13	734			2305	888	SLU 45	1.21	Si
ini.	3	-440	338.96	264			2333	902	SLU 69	3.42	Si
fin.	3	-376	510.85	727			2307	890	SLU 69	1.22	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	918	-313.93	8523.53	SLV 15	27.15	Si
fin.	2	1047	847.05	8523.53	SLV 15	10.06	Si
ini.	2	-550	877.03	8523.53	SLV 7	9.72	Si
fin.	2	346	-112.96	8523.53	SLV 7	75.46	Si
ini.	2	21	-544.14	8523.53	SLV 9	15.66	Si
fin.	2	-822	746	8523.53	SLV 9	11.43	Si
ini.	2	-1408	958.64	8523.53	SLV 4	8.89	Si
fin.	2	-990	-362.8	8523.53	SLV 4	23.49	Si
ini.	2	880	-625.75	8523.53	SLV 13	13.62	Si
fin.	2	513	995.85	8523.53	SLV 13	8.56	Si
ini.	2	880	-625.75	8523.53	SLV 14	13.62	Si
fin.	2	513	995.85	8523.53	SLV 14	8.56	Si
ini.	2	918	-313.93	8523.53	SLV 16	27.15	Si
fin.	2	1047	847.05	8523.53	SLV 16	10.06	Si
ini.	2	-1408	958.64	8523.53	SLV 3	8.89	Si
fin.	2	-990	-362.8	8523.53	SLV 3	23.49	Si
ini.	2	-550	877.03	8523.53	SLV 8	9.72	Si
fin.	2	346	-112.96	8523.53	SLV 8	75.46	Si
ini.	2	21	-544.14	8523.53	SLV 10	15.66	Si
fin.	2	-822	746	8523.53	SLV 10	11.43	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-1408	958.64	-3354			3798	1492	SLV 3	0.44	No
fin.	2	-990	-362.8	-3533			3631	1416	SLV 3	0.4	No
ini.	2	880	-625.75	4025			3235	1008	SLV 13	0.25	No
fin.	2	513	995.85	4583			3235	1100	SLV 13	0.24	No
ini.	2	918	-313.93	2743			3235	998	SLV 16	0.36	No
fin.	2	1047	847.05	3362			3235	963	SLV 16	0.29	No
ini.	2	918	-313.93	2743			3235	998	SLV 15	0.36	No
fin.	2	1047	847.05	3362			3235	963	SLV 15	0.29	No
ini.	2	880	-625.75	4025			3235	1008	SLV 14	0.25	No
fin.	2	513	995.85	4583			3235	1100	SLV 14	0.24	No
ini.	2	21	-544.14	3388			3235	1213	SLV 10	0.36	No
fin.	2	-822	746	3593			3564	1385	SLV 10	0.39	No
ini.	2	-550	877.03	-2717			3455	1332	SLV 7	0.49	No
fin.	2	346	-112.96	-2544			3235	1140	SLV 7	0.45	No
ini.	2	-1408	958.64	-3354			3798	1492	SLV 4	0.44	No
fin.	2	-990	-362.8	-3533			3631	1416	SLV 4	0.4	No
ini.	2	21	-544.14	3388			3235	1213	SLV 9	0.36	No
fin.	2	-822	746	3593			3564	1385	SLV 9	0.39	No
ini.	2	-550	877.03	-2717			3455	1332	SLV 8	0.49	No
fin.	2	346	-112.96	-2544			3235	1140	SLV 8	0.45	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	8.559	SLV 13	Si
V_SLV	0.24	SLV 13	No
PF_SLU	10.192	SLU 77	Si
V_SLU	1.193	SLU 48	Si

Trave di accoppiamento 180

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-5.508	-3.359	14.97	15.32	0.35	-6.008	-3.359	14.97	15.32	0.35	0.5	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-599	-28.32	174.02	SLU 82	6.14	Si
fin.	3	-599	-3.2	174.02	SLU 82	54.47	Si
ini.	3	-484	-27.15	174.02	SLU 65	6.41	Si
fin.	3	-484	3.54	174.02	SLU 65	49.11	Si
ini.	3	-604	-26.72	174.02	SLU 81	6.51	Si
fin.	3	-604	-8.76	174.02	SLU 81	19.87	Si
ini.	3	-428	-26.09	174.02	SLU 44	6.67	Si
fin.	3	-428	5.45	174.02	SLU 44	31.93	Si
ini.	3	-547	-25.66	174.02	SLU 60	6.78	Si
fin.	3	-547	-6.85	174.02	SLU 60	25.4	Si
ini.	3	-543	-27.26	174.02	SLU 61	6.38	Si
fin.	3	-543	-1.29	174.02	SLU 61	135.04	Si
ini.	3	-507	-27.66	174.02	SLU 52	6.29	Si
fin.	3	-507	3.33	174.02	SLU 52	52.29	Si
ini.	3	-565	-26.27	174.02	SLU 76	6.62	Si
fin.	3	-565	-3.53	174.02	SLU 76	49.33	Si
ini.	3	-601	-25.87	174.02	SLU 84	6.73	Si
fin.	3	-601	-8.14	174.02	SLU 84	21.37	Si
ini.	3	-563	-28.72	174.02	SLU 73	6.06	Si
fin.	3	-563	1.42	174.02	SLU 73	122.38	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-484	-27.15	119			400	157	SLU 65	1.32	Si
fin.	3	-484	3.54	4			400	157	SLU 65	38.64	Si
ini.	3	-563	-28.72	118			422	164	SLU 73	1.39	Si
fin.	3	-563	1.42	3			422	164	SLU 73	55.71	Si
ini.	3	-507	-27.66	119			406	159	SLU 52	1.33	Si
fin.	3	-507	3.33	5			406	159	SLU 52	34.17	Si
ini.	3	-399	-22.02	96			376	148	SLU 23	1.54	Si
fin.	3	-399	3.92	8			376	148	SLU 23	19.03	Si
ini.	3	-343	-20.97	98			360	142	SLU 2	1.46	Si
fin.	3	-343	5.83	9			360	142	SLU 2	15	Si
ini.	3	-509	-25.21	105			407	159	SLU 55	1.52	Si
fin.	3	-509	-1.62	-10			407	159	SLU 55	15.67	Si
ini.	3	-487	-24.7	104			400	157	SLU 68	1.51	Si
fin.	3	-487	-1.41	-11			400	157	SLU 68	14.61	Si
ini.	3	-431	-23.65	106			385	151	SLU 47	1.43	Si
fin.	3	-431	0.5	-9			385	151	SLU 47	16.75	Si
ini.	3	-543	-27.26	109			416	162	SLU 61	1.48	Si
fin.	3	-543	-1.29	-5			416	162	SLU 61	30.16	Si
ini.	3	-428	-26.09	120			384	151	SLU 44	1.26	Si
fin.	3	-428	5.45	6			384	151	SLU 44	26.26	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-96	199.08	261.03	SLV 8	1.31	Si
fin.	2	-249	-202.3	261.03	SLV 8	1.29	Si
ini.	2	-610	141.1	261.03	SLV 12	1.85	Si
fin.	2	-766	-191.92	261.03	SLV 12	1.36	Si
ini.	2	-1256	-172.43	261.03	SLV 13	1.51	Si
fin.	2	-1216	70.46	261.03	SLV 13	3.7	Si
ini.	2	-681	-237.18	261.03	SLV 10	1.1	Si
fin.	2	-528	193.11	261.03	SLV 10	1.35	Si
ini.	2	-610	141.1	261.03	SLV 11	1.85	Si
fin.	2	-766	-191.92	261.03	SLV 11	1.36	Si
ini.	2	-681	-237.18	261.03	SLV 9	1.1	Si
fin.	2	-528	193.11	261.03	SLV 9	1.35	Si
ini.	2	-1256	-172.43	261.03	SLV 14	1.51	Si
fin.	2	-1216	70.46	261.03	SLV 14	3.7	Si
ini.	2	-96	199.08	261.03	SLV 7	1.31	Si
fin.	2	-249	-202.3	261.03	SLV 7	1.29	Si
ini.	2	-167	-179.19	261.03	SLV 5	1.46	Si
fin.	2	-10	182.74	261.03	SLV 5	1.43	Si
ini.	2	-167	-179.19	261.03	SLV 6	1.46	Si
fin.	2	-10	182.74	261.03	SLV 6	1.43	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-167	-179.19	508			443	173	SLV 6	0.34	No
fin.	2	-10	182.74	443			399	151	SLV 6	0.34	No
ini.	2	479	134.34	-323			396	22	SLV 3	0.07	No
fin.	2	439	-79.64	-366			396	48	SLV 3	0.13	No
ini.	2	-681	-237.18	654			587	231	SLV 9	0.35	No
fin.	2	-528	193.11	560			544	215	SLV 9	0.38	No
ini.	2	-96	199.08	-508			423	163	SLV 8	0.32	No
fin.	2	-249	-202.3	-591			466	183	SLV 8	0.31	No
ini.	2	-167	-179.19	508			443	173	SLV 5	0.34	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	2	-10	182.74	443			399	151	SLV 5	0.34	No
ini.	2	458	20.85	-18			396	38	SLV 1	2.1	Si
fin.	2	511	35.87	-56			396	0	SLV 1	0	No
ini.	2	458	20.85	-18			396	38	SLV 2	2.1	Si
fin.	2	511	35.87	-56			396	0	SLV 2	0	No
ini.	2	479	134.34	-323			396	22	SLV 4	0.07	No
fin.	2	439	-79.64	-366			396	48	SLV 4	0.13	No
ini.	2	-96	199.08	-508			423	163	SLV 7	0.32	No
fin.	2	-249	-202.3	-591			466	183	SLV 7	0.31	No
ini.	2	-681	-237.18	654			587	231	SLV 10	0.35	No
fin.	2	-528	193.11	560			544	215	SLV 10	0.38	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF SLV	1.101	SLV 9	Si
V SLV	0	SLV 1	No
PF SLU	6.06	SLU 73	Si
V SLU	1.255	SLU 44	Si

Trave di accoppiamento 181

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-2.283	-3.359	12.17	13.07	0.9	-3.183	-3.359	12.17	13.07	0.9	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fthk	fvk0	fthmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	256	-399.38	1150.68	SLU 82	2.88	Si
fin.	3	-1318	438.6	1150.68	SLU 82	2.62	Si
ini.	3	399	-427.88	1150.68	SLU 78	2.69	Si
fin.	3	-1259	466.91	1150.68	SLU 78	2.46	Si
ini.	3	396	-407.93	1150.68	SLU 77	2.82	Si
fin.	3	-1167	443.74	1150.68	SLU 77	2.59	Si
ini.	3	326	-423.26	1150.68	SLU 84	2.72	Si
fin.	3	-1320	459.23	1150.68	SLU 84	2.51	Si
ini.	3	329	-404.01	1150.68	SLU 75	2.85	Si
fin.	3	-1257	446.28	1150.68	SLU 75	2.58	Si
ini.	3	323	-403.3	1150.68	SLU 83	2.85	Si
fin.	3	-1228	436.06	1150.68	SLU 83	2.64	Si
ini.	3	319	-416.51	1150.68	SLU 76	2.76	Si
fin.	3	-1318	456.49	1150.68	SLU 76	2.52	Si
ini.	3	385	-407.13	1150.68	SLU 79	2.83	Si
fin.	3	-1167	438.5	1150.68	SLU 79	2.62	Si
ini.	3	249	-392.63	1150.68	SLU 73	2.93	Si
fin.	3	-1316	435.85	1150.68	SLU 73	2.64	Si
ini.	3	387	-427.09	1150.68	SLU 80	2.69	Si
fin.	3	-1259	461.67	1150.68	SLU 80	2.49	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	319	-416.51	1644			970	288	SLU 76	0.17	No
fin.	3	-1318	456.49	2107			1498	585	SLU 76	0.28	No
ini.	3	326	-423.26	1683			970	286	SLU 84	0.17	No
fin.	3	-1320	459.23	2095			1498	586	SLU 84	0.28	No
ini.	3	323	-403.3	1591			970	286	SLU 83	0.18	No
fin.	3	-1228	436.06	2001			1462	573	SLU 83	0.29	No
ini.	3	256	-399.38	1640			970	305	SLU 82	0.19	No
fin.	3	-1318	438.6	1951			1498	585	SLU 82	0.3	No
ini.	3	399	-427.88	1613			970	265	SLU 78	0.16	No
fin.	3	-1259	466.91	2231			1474	577	SLU 78	0.26	No
ini.	3	385	-407.13	1533			970	269	SLU 79	0.18	No
fin.	3	-1167	438.5	2095			1437	564	SLU 79	0.27	No
ini.	3	387	-427.09	1625			970	268	SLU 80	0.17	No
fin.	3	-1259	461.67	2188			1474	577	SLU 80	0.26	No
ini.	3	329	-404.01	1571			970	285	SLU 75	0.18	No
fin.	3	-1257	446.28	2088			1473	577	SLU 75	0.28	No
ini.	3	367	-378.96	1433			970	274	SLU 36	0.19	No
fin.	3	-1086	406.47	1919			1405	553	SLU 36	0.29	No
ini.	3	396	-407.93	1521			970	265	SLU 77	0.17	No
fin.	3	-1167	443.74	2138			1437	565	SLU 77	0.26	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	1964	-899.55	1726.01	SLV 13	1.92	Si
fin.	2	-1868	711	1726.01	SLV 13	2.43	Si
ini.	2	1964	-899.55	1726.01	SLV 14	1.92	Si
fin.	2	-1868	711	1726.01	SLV 14	2.43	Si
ini.	2	-388	-371.9	1726.01	SLV 11	4.64	Si
fin.	2	-2406	432.93	1726.01	SLV 11	3.99	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	1361	-861.89	1726.01	SLV 15	2	Si
fin.	2	-2578	725.73	1726.01	SLV 15	2.38	Si
ini.	2	-1626	412.54	1726.01	SLV 4	4.18	Si
fin.	2	277	-159.96	1726.01	SLV 4	10.79	Si
ini.	2	1623	-497.45	1726.01	SLV 9	3.47	Si
fin.	2	-41	383.82	1726.01	SLV 9	4.5	Si
ini.	2	-388	-371.9	1726.01	SLV 12	4.64	Si
fin.	2	-2406	432.93	1726.01	SLV 12	3.99	Si
ini.	2	1361	-861.89	1726.01	SLV 16	2	Si
fin.	2	-2578	725.73	1726.01	SLV 16	2.38	Si
ini.	2	1623	-497.45	1726.01	SLV 10	3.47	Si
fin.	2	-41	383.82	1726.01	SLV 10	4.5	Si
ini.	2	-1626	412.54	1726.01	SLV 3	4.18	Si
fin.	2	277	-159.96	1726.01	SLV 3	10.79	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-1023	374.87	-1421			1865	737	SLV 2	0.52	No
fin.	2	987	-174.69	-909			1456	255	SLV 2	0.28	No
ini.	2	1361	-861.89	3332			1456	0	SLV 15	0	No
fin.	2	-2578	725.73	3510			2487	956	SLV 15	0.27	No
ini.	2	1623	-497.45	2144			1456	0	SLV 10	0	No
fin.	2	-41	383.82	2916			1472	557	SLV 10	0.19	No
ini.	2	1361	-861.89	3332			1456	0	SLV 16	0	No
fin.	2	-2578	725.73	3510			2487	956	SLV 16	0.27	No
ini.	2	1964	-899.55	3594			1456	0	SLV 13	0	No
fin.	2	-1868	711	4035			2203	863	SLV 13	0.21	No
ini.	2	727	-115.12	639			1456	356	SLV 6	0.56	No
fin.	2	816	118.11	1433			1456	325	SLV 6	0.23	No
ini.	2	1623	-497.45	2144			1456	0	SLV 9	0	No
fin.	2	-41	383.82	2916			1472	557	SLV 9	0.19	No
ini.	2	-1023	374.87	-1421			1865	737	SLV 1	0.52	No
fin.	2	987	-174.69	-909			1456	255	SLV 1	0.28	No
ini.	2	727	-115.12	639			1456	356	SLV 5	0.56	No
fin.	2	816	118.11	1433			1456	325	SLV 5	0.23	No
ini.	2	1964	-899.55	3594			1456	0	SLV 14	0	No
fin.	2	-1868	711	4035			2203	863	SLV 14	0.21	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.919	SLV 13	Si
V_SLV	0	SLV 9	No
PF_SLU	2.464	SLU 78	Si
V_SLU	0.164	SLU 78	No

Trave di accoppiamento 182

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-2.283	-3.359	14.87	15.32	0.45	-3.183	-3.359	14.87	15.32	0.45	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-636	-262.51	287.67	SLU 79	1.1	Si
fin.	3	653	108.04	287.67	SLU 79	2.66	Si
ini.	3	-620	-250.95	287.67	SLU 57	1.15	Si
fin.	3	581	96.12	287.67	SLU 57	2.99	Si
ini.	3	-688	-258.86	287.67	SLU 75	1.11	Si
fin.	3	597	109.63	287.67	SLU 75	2.62	Si
ini.	3	-680	-273.65	287.67	SLU 80	1.05	Si
fin.	3	677	115.42	287.67	SLU 80	2.49	Si
ini.	3	-698	-261.27	287.67	SLU 76	1.1	Si
fin.	3	641	120.03	287.67	SLU 76	2.4	Si
ini.	3	-700	-278.67	287.67	SLU 78	1.03	Si
fin.	3	649	109.94	287.67	SLU 78	2.62	Si
ini.	3	-666	-253.15	287.67	SLU 83	1.14	Si
fin.	3	625	115.3	287.67	SLU 83	2.5	Si
ini.	3	-601	-254.3	287.67	SLU 70	1.13	Si
fin.	3	592	92.28	287.67	SLU 70	3.12	Si
ini.	3	-710	-264.28	287.67	SLU 84	1.09	Si
fin.	3	649	122.68	287.67	SLU 84	2.34	Si
ini.	3	-656	-267.53	287.67	SLU 77	1.08	Si
fin.	3	625	102.56	287.67	SLU 77	2.8	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-599	-245.93	1219			483	190	SLU 59	0.16	No
fin.	3	609	101.59	67			323	0	SLU 59	0	No
ini.	3	-608	-231.14	1143			486	190	SLU 54	0.17	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	3	529	95.81	84			323	0	SLU 54	0	No
ini.	3	-575	-239.81	1219			477	187	SLU 56	0.15	No
fin.	3	557	88.73	-35			323	0	SLU 56	0	No
ini.	3	-632	-232.18	1094			492	193	SLU 42	0.18	No
fin.	3	569	108.8	211			323	0	SLU 42	0	No
ini.	3	-618	-216.76	1027			488	191	SLU 61	0.19	No
fin.	3	530	108.54	265			323	0	SLU 61	0	No
ini.	3	-555	-234.79	1180			471	185	SLU 58	0.16	No
fin.	3	585	94.21	27			323	0	SLU 58	0	No
ini.	3	-563	-220	1104			474	186	SLU 53	0.17	No
fin.	3	505	88.42	44			323	0	SLU 53	0	No
ini.	3	-573	-205.62	988			476	187	SLU 60	0.19	No
fin.	3	506	101.16	224			323	0	SLU 60	0	No
ini.	3	-617	-233.55	1130			488	191	SLU 55	0.17	No
fin.	3	573	106.2	173			323	0	SLU 55	0	No
ini.	3	-620	-250.95	1258			489	192	SLU 57	0.15	No
fin.	3	581	96.12	5			323	0	SLU 57	0	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	547	-179.88	431.5	SLV 10	2.4	Si
fin.	2	1725	210.06	431.5	SLV 10	2.05	Si
ini.	2	-767	-334.72	431.5	SLV 14	1.29	Si
fin.	2	1443	263.1	431.5	SLV 14	1.64	Si
ini.	2	-1357	-127.3	431.5	SLV 8	3.39	Si
fin.	2	-964	-67.97	431.5	SLV 8	6.35	Si
ini.	2	-1784	-241.52	431.5	SLV 12	1.79	Si
fin.	2	-530	31.16	431.5	SLV 12	13.85	Si
ini.	2	-1467	-353.22	431.5	SLV 16	1.22	Si
fin.	2	766	209.43	431.5	SLV 16	2.06	Si
ini.	2	547	-179.88	431.5	SLV 9	2.4	Si
fin.	2	1725	210.06	431.5	SLV 9	2.05	Si
ini.	2	-767	-334.72	431.5	SLV 13	1.29	Si
fin.	2	1443	263.1	431.5	SLV 13	1.64	Si
ini.	2	-1784	-241.52	431.5	SLV 11	1.79	Si
fin.	2	-530	31.16	431.5	SLV 11	13.85	Si
ini.	2	-1357	-127.3	431.5	SLV 7	3.39	Si
fin.	2	-964	-67.97	431.5	SLV 7	6.35	Si
ini.	2	-1467	-353.22	431.5	SLV 15	1.22	Si
fin.	2	766	209.43	431.5	SLV 15	2.06	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	657	46.04	141			485	0	SLV 2	0	No
fin.	2	-5	-67.33	-545			487	183	SLV 2	0.34	No
ini.	2	-767	-334.72	1618			690	272	SLV 14	0.17	No
fin.	2	1443	263.1	1038			485	0	SLV 14	0	No
ini.	2	975	-65.65	951			485	0	SLV 6	0	No
fin.	2	1291	110.94	308			485	0	SLV 6	0	No
ini.	2	-767	-334.72	1618			690	272	SLV 13	0.17	No
fin.	2	1443	263.1	1038			485	0	SLV 13	0	No
ini.	2	-1467	-353.22	1367			876	333	SLV 16	0.24	No
fin.	2	766	209.43	781			485	0	SLV 16	0	No
ini.	2	975	-65.65	951			485	0	SLV 5	0	No
fin.	2	1291	110.94	308			485	0	SLV 5	0	No
ini.	2	-1467	-353.22	1367			876	333	SLV 15	0.24	No
fin.	2	766	209.43	781			485	0	SLV 15	0	No
ini.	2	547	-179.88	1394			485	66	SLV 10	0.05	No
fin.	2	1725	210.06	783			485	0	SLV 10	0	No
ini.	2	547	-179.88	1394			485	66	SLV 9	0.05	No
fin.	2	1725	210.06	783			485	0	SLV 9	0	No
ini.	2	657	46.04	141			485	0	SLV 1	0	No
fin.	2	-5	-67.33	-545			487	183	SLV 1	0.34	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.222	SLV 15	Si
V_SLV	0	SLV 1	No
PF_SLU	1.032	SLU 78	Si
V_SLU	0	SLU 5	No

Trave di accoppiamento 183

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-2.063	5.951	12.17	13.07	0.9	-2.963	5.951	12.17	13.07	0.9	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fhmmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
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Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	460	-354.58	1150.68	SLU 84	3.25	Si
fin.	3	-1258	611.06	1150.68	SLU 84	1.88	Si
ini.	3	449	-345.17	1150.68	SLU 76	3.33	Si
fin.	3	-1236	600.34	1150.68	SLU 76	1.92	Si
ini.	3	507	-358	1150.68	SLU 78	3.21	Si
fin.	3	-1256	626.22	1150.68	SLU 78	1.84	Si
ini.	3	426	-317.32	1150.68	SLU 72	3.63	Si
fin.	3	-1189	577.64	1150.68	SLU 72	1.99	Si
ini.	3	460	-345.3	1150.68	SLU 79	3.33	Si
fin.	3	-1256	611.37	1150.68	SLU 79	1.88	Si
ini.	3	471	-339.79	1150.68	SLU 75	3.39	Si
fin.	3	-1186	589.02	1150.68	SLU 75	1.95	Si
ini.	3	458	-319.18	1150.68	SLU 70	3.61	Si
fin.	3	-1158	576.78	1150.68	SLU 70	1.99	Si
ini.	3	492	-347.16	1150.68	SLU 77	3.31	Si
fin.	3	-1226	610.52	1150.68	SLU 77	1.88	Si
ini.	3	475	-356.15	1150.68	SLU 80	3.23	Si
fin.	3	-1286	627.07	1150.68	SLU 80	1.84	Si
ini.	3	444	-343.73	1150.68	SLU 83	3.35	Si
fin.	3	-1228	595.36	1150.68	SLU 83	1.93	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	507	-358	1764			970	230	SLU 78	0.13	No
fin.	3	-1256	626.22	2106			1473	577	SLU 78	0.27	No
ini.	3	475	-356.15	1785			970	241	SLU 80	0.13	No
fin.	3	-1286	627.07	2086			1485	581	SLU 80	0.28	No
ini.	3	449	-345.17	1766			970	249	SLU 76	0.14	No
fin.	3	-1236	600.34	1957			1465	574	SLU 76	0.29	No
ini.	3	471	-339.79	1708			970	242	SLU 75	0.14	No
fin.	3	-1186	589.02	1945			1445	567	SLU 75	0.29	No
ini.	3	456	-328.95	1652			970	247	SLU 74	0.15	No
fin.	3	-1156	573.32	1896			1433	563	SLU 74	0.3	No
ini.	3	492	-347.16	1707			970	235	SLU 77	0.14	No
fin.	3	-1226	610.52	2057			1461	573	SLU 77	0.28	No
ini.	3	460	-345.3	1728			970	246	SLU 79	0.14	No
fin.	3	-1256	611.37	2037			1473	577	SLU 79	0.28	No
ini.	3	423	-336.37	1777			970	257	SLU 82	0.14	No
fin.	3	-1188	573.86	1814			1446	567	SLU 82	0.31	No
ini.	3	460	-354.58	1832			970	246	SLU 84	0.13	No
fin.	3	-1258	611.06	1975			1474	577	SLU 84	0.29	No
ini.	3	444	-343.73	1776			970	251	SLU 83	0.14	No
fin.	3	-1228	595.36	1926			1462	573	SLU 83	0.3	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	791	-478.9	1726.01	SLV 12	3.6	Si
fin.	2	-1788	858.4	1726.01	SLV 12	2.01	Si
ini.	2	136	-225.81	1726.01	SLV 7	7.64	Si
fin.	2	-1044	484.71	1726.01	SLV 7	3.56	Si
ini.	2	1293	-588.89	1726.01	SLV 13	2.93	Si
fin.	2	-1838	910.35	1726.01	SLV 13	1.9	Si
ini.	2	791	-478.9	1726.01	SLV 11	3.6	Si
fin.	2	-1788	858.4	1726.01	SLV 11	2.01	Si
ini.	2	136	-225.81	1726.01	SLV 8	7.64	Si
fin.	2	-1044	484.71	1726.01	SLV 8	3.56	Si
ini.	2	1414	-674.41	1726.01	SLV 16	2.56	Si
fin.	2	-2216	1087.59	1726.01	SLV 16	1.59	Si
ini.	2	-892	254.75	1726.01	SLV 2	6.78	Si
fin.	2	642	-335.28	1726.01	SLV 2	5.15	Si
ini.	2	-892	254.75	1726.01	SLV 1	6.78	Si
fin.	2	642	-335.28	1726.01	SLV 1	5.15	Si
ini.	2	1293	-588.89	1726.01	SLV 14	2.93	Si
fin.	2	-1838	910.35	1726.01	SLV 14	1.9	Si
ini.	2	1414	-674.41	1726.01	SLV 15	2.56	Si
fin.	2	-2216	1087.59	1726.01	SLV 15	1.59	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	1293	-588.89	3162			1456	0	SLV 13	0	No
fin.	2	-1838	910.35	3245			2191	859	SLV 13	0.26	No
ini.	2	136	-225.81	1231			1456	517	SLV 7	0.42	No
fin.	2	-1044	484.71	1522			1873	741	SLV 7	0.49	No
ini.	2	791	-478.9	2635			1456	334	SLV 11	0.13	No
fin.	2	-1788	858.4	2914			2171	852	SLV 11	0.29	No
ini.	2	1293	-588.89	3162			1456	0	SLV 14	0	No
fin.	2	-1838	910.35	3245			2191	859	SLV 14	0.26	No
ini.	2	-892	254.75	-1518			1813	716	SLV 1	0.47	No
fin.	2	642	-335.28	-1395			1456	384	SLV 1	0.28	No
ini.	2	1414	-674.41	3675			1456	0	SLV 15	0	No
fin.	2	-2216	1087.59	3841			2342	910	SLV 15	0.24	No
ini.	2	1414	-674.41	3675			1456	0	SLV 16	0	No
fin.	2	-2216	1087.59	3841			2342	910	SLV 16	0.24	No
ini.	2	791	-478.9	2635			1456	334	SLV 12	0.13	No
fin.	2	-1788	858.4	2914			2171	852	SLV 12	0.29	No
ini.	2	-892	254.75	-1518			1813	716	SLV 2	0.47	No
fin.	2	642	-335.28	-1395			1456	384	SLV 2	0.28	No
ini.	2	136	-225.81	1231			1456	517	SLV 8	0.42	No
fin.	2	-1044	484.71	1522			1873	741	SLV 8	0.49	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.587	SLV 15	Si
V_SLV	0	SLV 13	No
PF_SLU	1.835	SLU 80	Si
V_SLU	0.13	SLU 78	No

Trave di accoppiamento 184

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-2.063	5.951	14.87	15.32	0.45	-2.963	5.951	14.87	15.32	0.45	0.9	0.28	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb_	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-654	-301.56	287.67	SLU 77	0.95	No
fin.	3	425	145.11	287.67	SLU 77	1.98	Si
ini.	3	-760	-280.88	287.67	SLU 82	1.02	Si
fin.	3	335	171.43	287.67	SLU 82	1.68	Si
ini.	3	-636	-294.67	287.67	SLU 79	0.98	No
fin.	3	432	147.21	287.67	SLU 79	1.95	Si
ini.	3	-675	-301.68	287.67	SLU 80	0.95	No
fin.	3	424	153.31	287.67	SLU 80	1.88	Si
ini.	3	-742	-297.64	287.67	SLU 84	0.97	No
fin.	3	384	168.15	287.67	SLU 84	1.71	Si
ini.	3	-672	-284.8	287.67	SLU 74	1.01	Si
fin.	3	376	148.39	287.67	SLU 74	1.94	Si
ini.	3	-694	-308.56	287.67	SLU 78	0.93	No
fin.	3	417	151.22	287.67	SLU 78	1.9	Si
ini.	3	-703	-290.64	287.67	SLU 83	0.99	No
fin.	3	392	162.05	287.67	SLU 83	1.78	Si
ini.	3	-711	-291.8	287.67	SLU 75	0.99	No
fin.	3	368	154.5	287.67	SLU 75	1.86	Si
ini.	3	-720	-289.58	287.67	SLU 76	0.99	No
fin.	3	369	160.66	287.67	SLU 76	1.79	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-560	-272	1094			473	186	SLU 72	0.17	No
fin.	3	402	126.34	235			323	25	SLU 72	0.11	No
ini.	3	-694	-308.56	1227			508	198	SLU 78	0.16	No
fin.	3	417	151.22	307			323	10	SLU 78	0.03	No
ini.	3	-654	-301.56	1205			498	195	SLU 77	0.16	No
fin.	3	425	145.11	286			323	0	SLU 77	0	No
ini.	3	-520	-264.99	1071			462	182	SLU 71	0.17	No
fin.	3	410	120.23	214			323	19	SLU 71	0.09	No
ini.	3	-675	-301.68	1189			504	197	SLU 80	0.17	No
fin.	3	424	153.31	329			323	0	SLU 80	0	No
ini.	3	-672	-284.8	1127			503	196	SLU 74	0.17	No
fin.	3	376	148.39	320			323	39	SLU 74	0.12	No
ini.	3	-703	-290.64	1130			511	199	SLU 83	0.18	No
fin.	3	392	162.05	381			323	31	SLU 83	0.08	No
ini.	3	-720	-289.58	1126			515	201	SLU 76	0.18	No
fin.	3	369	160.66	377			323	42	SLU 76	0.11	No
ini.	3	-742	-297.64	1152			521	203	SLU 84	0.18	No
fin.	3	384	168.15	403			323	36	SLU 84	0.09	No
ini.	3	-636	-294.67	1167			493	193	SLU 79	0.17	No
fin.	3	432	147.21	308			323	0	SLU 79	0	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-13	-192.56	431.5	SLV 12	2.24	Si
fin.	2	824	157.09	431.5	SLV 12	2.75	Si
ini.	2	-655	-304.38	431.5	SLV 13	1.42	Si
fin.	2	683	178.43	431.5	SLV 13	2.42	Si
ini.	2	-13	-192.56	431.5	SLV 11	2.24	Si
fin.	2	824	157.09	431.5	SLV 11	2.75	Si
ini.	2	-866	-166.01	431.5	SLV 6	2.6	Si
fin.	2	-349	43.79	431.5	SLV 6	9.85	Si
ini.	2	-655	-304.38	431.5	SLV 14	1.42	Si
fin.	2	683	178.43	431.5	SLV 14	2.42	Si
ini.	2	-384	-291.03	431.5	SLV 16	1.48	Si
fin.	2	932	196.74	431.5	SLV 16	2.19	Si
ini.	2	-914	-237.07	431.5	SLV 9	1.82	Si
fin.	2	-7	96.08	431.5	SLV 9	4.49	Si
ini.	2	-384	-291.03	431.5	SLV 15	1.48	Si
fin.	2	932	196.74	431.5	SLV 15	2.19	Si
ini.	2	-914	-237.07	431.5	SLV 10	1.82	Si
fin.	2	-7	96.08	431.5	SLV 10	4.49	Si
ini.	2	-866	-166.01	431.5	SLV 5	2.6	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	2	-349	43.79	431.5	SLV 5	9.85	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-384	-291.03	1136			588	232	SLV 16	0.2	No
fin.	2	932	196.74	655			485	0	SLV 16	0	No
ini.	2	-655	-304.38	982			660	261	SLV 13	0.27	No
fin.	2	683	178.43	504			485	0	SLV 13	0	No
ini.	2	-13	-192.56	1068			489	185	SLV 11	0.17	No
fin.	2	824	157.09	586			485	0	SLV 11	0	No
ini.	2	-13	-192.56	1068			489	185	SLV 12	0.17	No
fin.	2	824	157.09	586			485	0	SLV 12	0	No
ini.	2	34	-121.51	856			485	178	SLV 8	0.21	No
fin.	2	482	104.81	375			485	89	SLV 8	0.24	No
ini.	2	-655	-304.38	982			660	261	SLV 14	0.27	No
fin.	2	683	178.43	504			485	0	SLV 14	0	No
ini.	2	-225	-54.19	429			545	213	SLV 3	0.5	No
fin.	2	-208	22.45	-46			541	211	SLV 3	4.53	Si
ini.	2	-384	-291.03	1136			588	232	SLV 15	0.2	No
fin.	2	932	196.74	655			485	0	SLV 15	0	No
ini.	2	-225	-54.19	429			545	213	SLV 4	0.5	No
fin.	2	-208	22.45	-46			541	211	SLV 4	4.53	Si
ini.	2	34	-121.51	856			485	178	SLV 7	0.21	No
fin.	2	482	104.81	375			485	89	SLV 7	0.24	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.418	SLV 13	Si
V_SLV	0	SLV 11	No
PF_SLU	0.932	SLU 78	No
V_SLU	0	SLU 77	No

Trave di accoppiamento 185

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-17.053	-4.589	14.14	14.912	0.772	-17.053	-3.499	14.14	15.296	1.156	1.09	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	220	-11.35	907.26	SLU 57	79.91	Si
fin.	3	-75	60.85	2033.85	SLU 57	33.42	Si
ini.	3	219	-11.36	907.26	SLU 72	79.9	Si
fin.	3	-75	60.47	2033.85	SLU 72	33.63	Si
ini.	3	273	-15.67	907.26	SLU 73	57.91	Si
fin.	3	-54	61.9	2033.85	SLU 73	32.86	Si
ini.	3	266	-15.09	907.26	SLU 55	60.14	Si
fin.	3	-60	63.02	2033.85	SLU 55	32.27	Si
ini.	3	226	-11.62	907.26	SLU 78	78.08	Si
fin.	3	-81	64.05	2033.85	SLU 78	31.75	Si
ini.	3	272	-15.35	907.26	SLU 76	59.09	Si
fin.	3	-66	66.22	2033.85	SLU 76	30.71	Si
ini.	3	224	-11.71	907.26	SLU 80	77.47	Si
fin.	3	-75	62.16	2033.85	SLU 80	32.72	Si
ini.	3	260	-14.73	907.26	SLU 47	61.59	Si
fin.	3	-59	61.33	2033.85	SLU 47	33.16	Si
ini.	3	220	-11.26	907.26	SLU 70	80.54	Si
fin.	3	-81	62.37	2033.85	SLU 70	32.61	Si
ini.	3	266	-15	907.26	SLU 68	60.49	Si
fin.	3	-65	64.54	2033.85	SLU 68	31.52	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	145	-6.32	140			632	214	SLU 45	1.54	Si
fin.	3	-60	42.27	-391			1359	515	SLU 45	1.32	Si
ini.	3	150	-6.27	133			632	213	SLU 69	1.61	Si
fin.	3	-77	49.79	-372			1366	519	SLU 69	1.4	Si
ini.	3	151	-6.67	136			632	213	SLU 53	1.57	Si
fin.	3	-60	43.96	-371			1360	515	SLU 53	1.39	Si
ini.	3	143	-6.09	136			632	215	SLU 50	1.57	Si
fin.	3	-65	44.69	-393			1362	517	SLU 50	1.31	Si
ini.	3	148	-6.36	132			632	214	SLU 71	1.62	Si
fin.	3	-71	47.89	-374			1364	518	SLU 71	1.38	Si
ini.	3	144	-6.72	141			632	214	SLU 43	1.52	Si
fin.	3	-42	36.05	-394			1352	512	SLU 43	1.3	Si
ini.	3	150	-6.99	137			632	213	SLU 64	1.56	Si
fin.	3	-48	39.25	-375			1355	513	SLU 64	1.37	Si
ini.	3	151	-6.58	135			632	213	SLU 66	1.58	Si
fin.	3	-65	45.47	-372			1362	517	SLU 66	1.39	Si



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	144	-6	137			632	214	SLU 48	1.56	Si
fin.	3	-71	46.59	-391			1364	518	SLU 48	1.33	Si
ini.	3	148	-6.45	133			632	214	SLU 58	1.61	Si
fin.	3	-66	46.38	-373			1362	517	SLU 58	1.39	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	1360	-138.18	1360.88	SLV 8	9.85	Si
fin.	2	-38	225.76	3050.78	SLV 8	13.51	Si
ini.	2	440	-67.7	1360.88	SLV 4	20.1	Si
fin.	2	-12	52.35	3050.78	SLV 4	58.27	Si
ini.	2	1392	-123.38	1360.88	SLV 12	11.03	Si
fin.	2	-54	249.73	3050.78	SLV 12	12.22	Si
ini.	2	-1161	112.55	1360.88	SLV 5	12.09	Si
fin.	2	-18	-189.78	3050.78	SLV 5	16.08	Si
ini.	2	440	-67.7	1360.88	SLV 3	20.1	Si
fin.	2	-12	52.35	3050.78	SLV 3	58.27	Si
ini.	2	1392	-123.38	1360.88	SLV 11	11.03	Si
fin.	2	-54	249.73	3050.78	SLV 11	12.22	Si
ini.	2	-1129	127.35	1360.88	SLV 9	10.69	Si
fin.	2	-33	-165.81	3050.78	SLV 9	18.4	Si
ini.	2	-1161	112.55	1360.88	SLV 6	12.09	Si
fin.	2	-18	-189.78	3050.78	SLV 6	16.08	Si
ini.	2	1360	-138.18	1360.88	SLV 7	9.85	Si
fin.	2	-38	225.76	3050.78	SLV 7	13.51	Si
ini.	2	-1129	127.35	1360.88	SLV 10	10.69	Si
fin.	2	-33	-165.81	3050.78	SLV 10	18.4	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	1360	-138.18	-596			948	0	SLV 7	0	No
fin.	2	-38	225.76	2415			2018	762	SLV 7	0.32	No
ini.	2	-1129	127.35	806			1268	501	SLV 9	0.62	No
fin.	2	-33	-165.81	-2989			2017	761	SLV 9	0.25	No
ini.	2	-1161	112.55	942			1277	505	SLV 6	0.54	No
fin.	2	-18	-189.78	-3043			2010	758	SLV 6	0.25	No
ini.	2	1392	-123.38	-732			948	0	SLV 12	0	No
fin.	2	-54	249.73	2469			2025	765	SLV 12	0.31	No
ini.	2	-316	7.52	561			1037	402	SLV 2	0.72	No
fin.	2	-6	-72.31	-1197			2006	755	SLV 2	0.63	No
ini.	2	1360	-138.18	-596			948	0	SLV 8	0	No
fin.	2	-38	225.76	2415			2018	762	SLV 8	0.32	No
ini.	2	1392	-123.38	-732			948	0	SLV 11	0	No
fin.	2	-54	249.73	2469			2025	765	SLV 11	0.31	No
ini.	2	-1129	127.35	806			1268	501	SLV 10	0.62	No
fin.	2	-33	-165.81	-2989			2017	761	SLV 10	0.25	No
ini.	2	-316	7.52	561			1037	402	SLV 1	0.72	No
fin.	2	-6	-72.31	-1197			2006	755	SLV 1	0.63	No
ini.	2	-1161	112.55	942			1277	505	SLV 5	0.54	No
fin.	2	-18	-189.78	-3043			2010	758	SLV 5	0.25	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	9.848	SLV 7	Si
V_SLV	0	SLV 7	No
PF_SLU	30.713	SLU 76	Si
V_SLU	1.298	SLU 43	Si

Trave di accoppiamento 186

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-14.61	-4.784	14.14	14.842	0.702	-16.45	-4.784	14.14	14.843	0.703	1.84	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	60	-62.11	750.57	SLU 49	12.09	Si
fin.	3	173	55.47	752.81	SLU 49	13.57	Si
ini.	3	40	-61.15	750.57	SLU 59	12.27	Si
fin.	3	159	55.54	752.81	SLU 59	13.55	Si
ini.	3	1	-66.24	750.57	SLU 44	11.33	Si
fin.	3	138	54.8	752.81	SLU 44	13.74	Si
ini.	3	-3	-61.98	750.57	SLU 65	12.11	Si
fin.	3	131	54.71	752.81	SLU 65	13.76	Si
ini.	3	-17	-61.84	750.57	SLU 52	12.14	Si
fin.	3	121	54.26	752.81	SLU 52	13.87	Si
ini.	3	22	-68.19	750.57	SLU 47	11.01	Si
fin.	3	159	57.08	752.81	SLU 47	13.19	Si
ini.	3	59	-65.56	750.57	SLU 51	11.45	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	3	177	56.08	752.81	SLU 51	13.42	Si
ini.	3	3	-63.79	750.57	SLU 55	11.77	Si
fin.	3	141	56.54	752.81	SLU 55	13.31	Si
ini.	3	55	-61.29	750.57	SLU 72	12.25	Si
fin.	3	170	56	752.81	SLU 72	13.44	Si
ini.	3	18	-63.93	750.57	SLU 68	11.74	Si
fin.	3	152	57	752.81	SLU 68	13.21	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	36	-56.89	432			541	198	SLU 80	0.46	No
fin.	3	152	55.46	-169			542	180	SLU 80	1.06	Si
ini.	3	84	-55.23	418			541	191	SLU 48	0.46	No
fin.	3	170	50.54	-184			542	177	SLU 48	0.97	No
ini.	3	83	-58.68	426			541	191	SLU 50	0.45	No
fin.	3	174	51.15	-188			542	177	SLU 50	0.94	No
ini.	3	60	-62.11	430			541	195	SLU 49	0.45	No
fin.	3	173	55.47	-173			542	177	SLU 49	1.02	Si
ini.	3	55	-61.29	438			541	195	SLU 72	0.45	No
fin.	3	170	56	-177			542	178	SLU 72	1	Si
ini.	3	80	-50.96	418			541	192	SLU 69	0.46	No
fin.	3	163	50.46	-184			542	179	SLU 69	0.97	No
ini.	3	40	-61.15	433			541	198	SLU 59	0.46	No
fin.	3	159	55.54	-170			542	179	SLU 59	1.06	Si
ini.	3	79	-54.41	426			541	192	SLU 71	0.45	No
fin.	3	167	51.07	-188			542	178	SLU 71	0.95	No
ini.	3	59	-65.56	438			541	195	SLU 51	0.44	No
fin.	3	177	56.08	-177			542	176	SLU 51	1	No
ini.	3	56	-57.84	429			541	195	SLU 70	0.45	No
fin.	3	166	55.39	-173			542	178	SLU 70	1.03	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-711	-136.95	1125.85	SLV 16	8.22	Si
fin.	2	-185	117.72	1129.21	SLV 16	9.59	Si
ini.	2	-561	-340.45	1125.85	SLV 8	3.31	Si
fin.	2	14	104.98	1129.21	SLV 8	10.76	Si
ini.	2	917	267.69	1125.85	SLV 6	4.21	Si
fin.	2	313	-67.44	1129.21	SLV 6	16.74	Si
ini.	2	609	263.38	1125.85	SLV 10	4.27	Si
fin.	2	173	-33.71	1129.21	SLV 10	33.5	Si
ini.	2	-561	-340.45	1125.85	SLV 7	3.31	Si
fin.	2	14	104.98	1129.21	SLV 7	10.76	Si
ini.	2	917	267.69	1125.85	SLV 5	4.21	Si
fin.	2	313	-67.44	1129.21	SLV 5	16.74	Si
ini.	2	609	263.38	1125.85	SLV 9	4.27	Si
fin.	2	173	-33.71	1129.21	SLV 9	33.5	Si
ini.	2	-711	-136.95	1125.85	SLV 15	8.22	Si
fin.	2	-185	117.72	1129.21	SLV 15	9.59	Si
ini.	2	-869	-344.76	1125.85	SLV 12	3.27	Si
fin.	2	-126	138.71	1129.21	SLV 12	8.14	Si
ini.	2	-869	-344.76	1125.85	SLV 11	3.27	Si
fin.	2	-126	138.71	1129.21	SLV 11	8.14	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	917	267.69	141			811	110	SLV 5	0.78	No
fin.	2	313	-67.44	-146			813	256	SLV 5	1.75	Si
ini.	2	-561	-340.45	669			961	378	SLV 8	0.56	No
fin.	2	14	104.98	1			813	304	SLV 8	311.04	Si
ini.	2	917	267.69	141			811	110	SLV 6	0.78	No
fin.	2	313	-67.44	-146			813	256	SLV 6	1.75	Si
ini.	2	-561	-340.45	669			961	378	SLV 7	0.56	No
fin.	2	14	104.98	1			813	304	SLV 7	311.04	Si
ini.	2	316	-122.56	746			811	255	SLV 4	0.34	No
fin.	2	283	5.28	51			813	262	SLV 4	5.15	Si
ini.	2	759	59.88	588			811	161	SLV 1	0.27	No
fin.	2	372	-46.45	7			813	246	SLV 1	37.36	Si
ini.	2	759	59.88	588			811	161	SLV 2	0.27	No
fin.	2	372	-46.45	7			813	246	SLV 2	37.36	Si
ini.	2	-869	-344.76	445			1043	412	SLV 11	0.93	No
fin.	2	-126	138.71	-86			846	323	SLV 11	3.77	Si
ini.	2	316	-122.56	746			811	255	SLV 3	0.34	No
fin.	2	283	5.28	51			813	262	SLV 3	5.15	Si
ini.	2	-869	-344.76	445			1043	412	SLV 12	0.93	No
fin.	2	-126	138.71	-86			846	323	SLV 12	3.77	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.266	SLV 11	Si
V_SLV	0.274	SLV 1	No
PF_SLU	11.007	SLU 47	Si
V_SLU	0.445	SLU 51	No

Trave di accoppiamento 187

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-8.28	-4.784	14.14	14.839	0.699	-10.12	-4.784	14.14	14.84	0.7	1.84	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	63	37.98	742.88	SLU 80	19.56	Si
fin.	3	-445	-162.86	745.11	SLU 80	4.58	Si
ini.	3	20	25.41	742.88	SLU 77	29.24	Si
fin.	3	-419	-152.1	745.11	SLU 77	4.9	Si
ini.	3	7	25.17	742.88	SLU 83	29.51	Si
fin.	3	-432	-152.29	745.11	SLU 83	4.89	Si
ini.	3	22	25.96	742.88	SLU 79	28.62	Si
fin.	3	-426	-155.94	745.11	SLU 79	4.78	Si
ini.	3	81	44.63	742.88	SLU 76	16.64	Si
fin.	3	-444	-160.05	745.11	SLU 76	4.66	Si
ini.	3	61	37.43	742.88	SLU 78	19.85	Si
fin.	3	-438	-159.02	745.11	SLU 78	4.69	Si
ini.	3	49	37.2	742.88	SLU 84	19.97	Si
fin.	3	-451	-159.2	745.11	SLU 84	4.68	Si
ini.	3	72	43.27	742.88	SLU 73	17.17	Si
fin.	3	-431	-152.63	745.11	SLU 73	4.88	Si
ini.	3	75	36.63	742.88	SLU 72	20.28	Si
fin.	3	-400	-154.07	745.11	SLU 72	4.84	Si
ini.	3	69	36.44	742.88	SLU 59	20.38	Si
fin.	3	-406	-153.79	745.11	SLU 59	4.85	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	61	37.43	463			538	193	SLU 78	0.42	No
fin.	3	-438	-159.02	-990			656	259	SLU 78	0.26	No
ini.	3	22	25.96	499			538	199	SLU 79	0.4	No
fin.	3	-426	-155.94	-972			653	257	SLU 79	0.26	No
ini.	3	75	36.63	479			538	191	SLU 72	0.4	No
fin.	3	-400	-154.07	-991			646	254	SLU 72	0.26	No
ini.	3	81	35.09	477			538	190	SLU 51	0.4	No
fin.	3	-361	-145	-960			635	250	SLU 51	0.26	No
ini.	3	33	24.61	512			538	198	SLU 71	0.39	No
fin.	3	-381	-147.16	-958			640	252	SLU 71	0.26	No
ini.	3	79	34.54	474			538	191	SLU 49	0.4	No
fin.	3	-353	-141.16	-945			633	249	SLU 49	0.26	No
ini.	3	69	36.44	464			538	192	SLU 59	0.41	No
fin.	3	-406	-153.79	-975			647	255	SLU 59	0.26	No
ini.	3	73	36.08	476			538	192	SLU 70	0.4	No
fin.	3	-393	-150.23	-976			644	253	SLU 70	0.26	No
ini.	3	67	35.9	461			538	193	SLU 57	0.42	No
fin.	3	-399	-149.95	-960			645	254	SLU 57	0.26	No
ini.	3	63	37.98	466			538	193	SLU 80	0.41	No
fin.	3	-445	-162.86	-1005			658	259	SLU 80	0.26	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	542	18.78	1114.32	SLV 16	59.33	Si
fin.	2	-868	-358.15	1117.67	SLV 16	3.12	Si
ini.	2	-141	-270.88	1114.32	SLV 10	4.11	Si
fin.	2	794	286.97	1117.67	SLV 10	3.89	Si
ini.	2	428	258.16	1114.32	SLV 11	4.32	Si
fin.	2	-1496	-568.11	1117.67	SLV 11	1.97	Si
ini.	2	160	304.63	1114.32	SLV 7	3.66	Si
fin.	2	-1347	-491.56	1117.67	SLV 7	2.27	Si
ini.	2	-141	-270.88	1114.32	SLV 9	4.11	Si
fin.	2	794	286.97	1117.67	SLV 9	3.89	Si
ini.	2	-409	-224.41	1114.32	SLV 6	4.97	Si
fin.	2	943	363.52	1117.67	SLV 6	3.07	Si
ini.	2	160	304.63	1114.32	SLV 8	3.66	Si
fin.	2	-1347	-491.56	1117.67	SLV 8	2.27	Si
ini.	2	542	18.78	1114.32	SLV 15	59.33	Si
fin.	2	-868	-358.15	1117.67	SLV 15	3.12	Si
ini.	2	428	258.16	1114.32	SLV 12	4.32	Si
fin.	2	-1496	-568.11	1117.67	SLV 12	1.97	Si
ini.	2	-409	-224.41	1114.32	SLV 5	4.97	Si
fin.	2	943	363.52	1117.67	SLV 5	3.07	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-523	14.97	1214			947	372	SLV 1	0.31	No
fin.	2	316	153.55	-166			808	254	SLV 1	1.53	Si
ini.	2	-409	-224.41	1375			916	358	SLV 6	0.26	No
fin.	2	943	363.52	222			808	97	SLV 6	0.44	No
ini.	2	-409	-224.41	1375			916	358	SLV 5	0.26	No
fin.	2	943	363.52	222			808	97	SLV 5	0.44	No
ini.	2	160	304.63	-341			807	280	SLV 8	0.82	No
fin.	2	-1347	-491.56	-1354			1168	460	SLV 8	0.34	No
ini.	2	-141	-270.88	998			845	324	SLV 10	0.32	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	2	794	286.97	82			808	150	SLV 10	1.84	Si
ini.	2	-141	-270.88	998			845	324	SLV 9	0.32	No
fin.	2	794	286.97	82			808	150	SLV 9	1.84	Si
ini.	2	428	258.16	-718			807	234	SLV 12	0.33	No
fin.	2	-1496	-568.11	-1495			1207	474	SLV 12	0.32	No
ini.	2	428	258.16	-718			807	234	SLV 11	0.33	No
fin.	2	-1496	-568.11	-1495			1207	474	SLV 11	0.32	No
ini.	2	-523	14.97	1214			947	372	SLV 2	0.31	No
fin.	2	316	153.55	-166			808	254	SLV 2	1.53	Si
ini.	2	160	304.63	-341			807	280	SLV 7	0.82	No
fin.	2	-1347	-491.56	-1354			1168	460	SLV 7	0.34	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.967	SLV 11	Si
V_SLV	0.261	SLV 5	No
PF_SLU	4.575	SLU 80	Si
V_SLU	0.257	SLU 72	No

Trave di accoppiamento 188

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-7.723	-3.499	14.14	15.291	1.151	-7.723	-4.589	14.14	14.907	0.767	1.09	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fthk	fvk0	fthmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-65	55.45	2016.05	SLU 34	36.36	Si
fin.	3	-14	-71.05	895.38	SLU 34	12.6	Si
ini.	3	-56	50.88	2016.05	SLU 13	39.63	Si
fin.	3	-7	-67.55	895.38	SLU 13	13.26	Si
ini.	3	-43	46.79	2016.05	SLU 10	43.09	Si
fin.	3	0	-67.64	895.38	SLU 10	13.24	Si
ini.	3	-51	51.81	2016.05	SLU 52	38.91	Si
fin.	3	16	-69.12	895.38	SLU 52	12.95	Si
ini.	3	-52	51.36	2016.05	SLU 31	39.25	Si
fin.	3	-8	-71.14	895.38	SLU 31	12.59	Si
ini.	3	-70	56.91	2016.05	SLU 68	35.42	Si
fin.	3	8	-68.89	895.38	SLU 68	13	Si
ini.	3	-73	60.46	2016.05	SLU 76	33.34	Si
fin.	3	2	-72.53	895.38	SLU 76	12.34	Si
ini.	3	-60	56.38	2016.05	SLU 73	35.76	Si
fin.	3	9	-72.62	895.38	SLU 73	12.33	Si
ini.	3	-64	55.89	2016.05	SLU 55	36.07	Si
fin.	3	10	-69.03	895.38	SLU 55	12.97	Si
ini.	3	-57	52.83	2016.05	SLU 65	38.16	Si
fin.	3	14	-68.98	895.38	SLU 65	12.98	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-64	55.89	347			1355	514	SLU 55	1.48	Si
fin.	3	10	-69.03	-557			624	233	SLU 55	0.42	No
ini.	3	-57	52.83	348			1352	513	SLU 65	1.47	Si
fin.	3	14	-68.98	-552			624	232	SLU 65	0.42	No
ini.	3	-60	56.38	337			1354	513	SLU 73	1.52	Si
fin.	3	9	-72.62	-560			624	233	SLU 73	0.42	No
ini.	3	-73	60.46	338			1359	516	SLU 76	1.53	Si
fin.	3	2	-72.53	-567			624	234	SLU 76	0.41	No
ini.	3	-85	56.03	376			1364	519	SLU 80	1.38	Si
fin.	3	13	-50.43	-527			624	233	SLU 80	0.44	No
ini.	3	-51	51.81	346			1350	511	SLU 52	1.48	Si
fin.	3	16	-69.12	-549			624	232	SLU 52	0.42	No
ini.	3	-70	56.91	349			1358	515	SLU 68	1.48	Si
fin.	3	8	-68.89	-559			624	233	SLU 68	0.42	No
ini.	3	-61	52.34	358			1354	514	SLU 47	1.44	Si
fin.	3	16	-65.38	-549			624	232	SLU 47	0.42	No
ini.	3	-48	48.26	357			1349	511	SLU 44	1.43	Si
fin.	3	22	-65.48	-541			624	231	SLU 44	0.43	No
ini.	3	-92	57.55	377			1366	520	SLU 78	1.38	Si
fin.	3	12	-51.22	-530			624	233	SLU 78	0.44	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	133	125.46	3024.08	SLV 16	24.1	Si
fin.	2	-164	-486.48	1343.07	SLV 16	2.76	Si
ini.	2	133	125.46	3024.08	SLV 15	24.1	Si
fin.	2	-164	-486.48	1343.07	SLV 15	2.76	Si
ini.	2	0	-200.79	3024.08	SLV 10	15.06	Si
fin.	2	1006	622.28	1343.07	SLV 10	2.16	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-79	249.32	3024.08	SLV 8	12.13	Si
fin.	2	-921	-644.27	1343.07	SLV 8	2.08	Si
ini.	2	-79	249.32	3024.08	SLV 7	12.13	Si
fin.	2	-921	-644.27	1343.07	SLV 7	2.08	Si
ini.	2	22	267.86	3024.08	SLV 12	11.29	Si
fin.	2	-876	-801.43	1343.07	SLV 12	1.68	Si
ini.	2	22	267.86	3024.08	SLV 11	11.29	Si
fin.	2	-876	-801.43	1343.07	SLV 11	1.68	Si
ini.	2	-102	-219.33	3024.08	SLV 5	13.79	Si
fin.	2	961	779.44	1343.07	SLV 5	1.72	Si
ini.	2	-102	-219.33	3024.08	SLV 6	13.79	Si
fin.	2	961	779.44	1343.07	SLV 6	1.72	Si
ini.	2	0	-200.79	3024.08	SLV 9	15.06	Si
fin.	2	1006	622.28	1343.07	SLV 9	2.16	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-79	249.32	-1287			2026	768	SLV 8	0.6	No
fin.	2	-921	-644.27	-1876			1195	472	SLV 8	0.25	No
ini.	2	133	125.46	3			1995	721	SLV 15	281.34	Si
fin.	2	-164	-486.48	-1288			981	376	SLV 15	0.29	No
ini.	2	133	125.46	3			1995	721	SLV 16	281.34	Si
fin.	2	-164	-486.48	-1288			981	376	SLV 16	0.29	No
ini.	2	22	267.86	-1204			1995	746	SLV 12	0.62	No
fin.	2	-876	-801.43	-2146			1182	467	SLV 12	0.22	No
ini.	2	0	-200.79	1965			1995	751	SLV 10	0.38	No
fin.	2	1006	622.28	1209			935	125	SLV 10	0.1	No
ini.	2	-102	-219.33	1882			2035	772	SLV 6	0.41	No
fin.	2	961	779.44	1480			935	143	SLV 6	0.1	No
ini.	2	-102	-219.33	1882			2035	772	SLV 5	0.41	No
fin.	2	961	779.44	1480			935	143	SLV 5	0.1	No
ini.	2	0	-200.79	1965			1995	751	SLV 9	0.38	No
fin.	2	1006	622.28	1209			935	125	SLV 9	0.1	No
ini.	2	-79	249.32	-1287			2026	768	SLV 7	0.6	No
fin.	2	-921	-644.27	-1876			1195	472	SLV 7	0.25	No
ini.	2	22	267.86	-1204			1995	746	SLV 11	0.62	No
fin.	2	-876	-801.43	-2146			1182	467	SLV 11	0.22	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV		SLV 11	Si
V_SLV	0.097	SLV 5	No
PF_SLU	12.329	SLU 73	Si
V_SLU	0.413	SLU 76	No

Trave di accoppiamento 189

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-12.933	-4.784	3.15	3.7	0.55	-11.933	-4.784	3.15	3.7	0.55	1	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fhmmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-1575	120.73	460.42	SLU 61	3.81	Si
fin.	3	-1575	28.61	460.42	SLU 61	16.09	Si
ini.	3	-1547	120.58	460.42	SLU 55	3.82	Si
fin.	3	-1547	27.45	460.42	SLU 55	16.77	Si
ini.	3	-1656	122.98	460.42	SLU 75	3.74	Si
fin.	3	-1656	34.31	460.42	SLU 75	13.42	Si
ini.	3	-1518	119.93	460.42	SLU 68	3.84	Si
fin.	3	-1518	27.13	460.42	SLU 68	16.97	Si
ini.	3	-1704	128.71	460.42	SLU 82	3.58	Si
fin.	3	-1704	30.83	460.42	SLU 82	14.93	Si
ini.	3	-1676	128.56	460.42	SLU 76	3.58	Si
fin.	3	-1676	29.67	460.42	SLU 76	15.52	Si
ini.	3	-1531	124.35	460.42	SLU 52	3.7	Si
fin.	3	-1531	21.55	460.42	SLU 52	21.37	Si
ini.	3	-1720	124.94	460.42	SLU 84	3.69	Si
fin.	3	-1720	36.73	460.42	SLU 84	12.53	Si
ini.	3	-1502	123.7	460.42	SLU 65	3.72	Si
fin.	3	-1502	21.23	460.42	SLU 65	21.69	Si
ini.	3	-1661	132.33	460.42	SLU 73	3.48	Si
fin.	3	-1661	23.76	460.42	SLU 73	19.38	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1502	123.7	136			824	308	SLU 65	2.27	Si
fin.	3	-1502	21.23	-337			824	308	SLU 65	0.91	No
ini.	3	-1373	115.72	139			790	298	SLU 44	2.14	Si



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	3	-1373	19.01	-330			790	298	SLU 44	0.9	No
ini.	3	-1369	106.36	159			789	298	SLU 46	1.87	Si
fin.	3	-1369	29.55	-310			789	298	SLU 46	0.96	No
ini.	3	-1575	120.73	144			844	313	SLU 61	2.18	Si
fin.	3	-1575	28.61	-325			844	313	SLU 61	0.96	No
ini.	3	-1531	124.35	133			832	310	SLU 52	2.33	Si
fin.	3	-1531	21.55	-336			832	310	SLU 52	0.92	No
ini.	3	-1518	119.93	145			828	309	SLU 68	2.13	Si
fin.	3	-1518	27.13	-328			828	309	SLU 68	0.94	No
ini.	3	-1676	128.56	139			871	321	SLU 76	2.31	Si
fin.	3	-1676	29.67	-334			871	321	SLU 76	0.96	No
ini.	3	-1661	132.33	129			866	320	SLU 73	2.47	Si
fin.	3	-1661	23.76	-343			866	320	SLU 73	0.93	No
ini.	3	-1547	120.58	143			836	311	SLU 55	2.18	Si
fin.	3	-1547	27.45	-326			836	311	SLU 55	0.95	No
ini.	3	-1389	111.95	149			794	299	SLU 47	2.01	Si
fin.	3	-1389	24.91	-320			794	299	SLU 47	0.94	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-1785	3267.37	690.63	SLV 14	0.21	No
fin.	2	-1525	-3236.62	690.63	SLV 14	0.21	No
ini.	2	448	-1029.23	690.63	SLV 7	0.67	No
fin.	2	-397	1283.01	690.63	SLV 7	0.54	No
ini.	2	-878	3164.96	690.63	SLV 16	0.22	No
fin.	2	-1123	-3054.94	690.63	SLV 16	0.23	No
ini.	2	-466	-3103.82	690.63	SLV 3	0.22	No
fin.	2	-726	3292.75	690.63	SLV 3	0.21	No
ini.	2	-1373	-3001.4	690.63	SLV 2	0.23	No
fin.	2	-1128	3111.07	690.63	SLV 2	0.22	No
ini.	2	-878	3164.96	690.63	SLV 15	0.22	No
fin.	2	-1123	-3054.94	690.63	SLV 15	0.23	No
ini.	2	-1373	-3001.4	690.63	SLV 1	0.23	No
fin.	2	-1128	3111.07	690.63	SLV 1	0.22	No
ini.	2	-466	-3103.82	690.63	SLV 4	0.22	No
fin.	2	-726	3292.75	690.63	SLV 4	0.21	No
ini.	2	448	-1029.23	690.63	SLV 8	0.67	No
fin.	2	-397	1283.01	690.63	SLV 8	0.54	No
ini.	2	-1785	3267.37	690.63	SLV 13	0.21	No
fin.	2	-1525	-3236.62	690.63	SLV 13	0.21	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-466	-3103.82	6486			760	299	SLV 3	0.05	No
fin.	2	-726	3292.75	6088			829	328	SLV 3	0.05	No
ini.	2	-1785	3267.37	-6228			1112	425	SLV 14	0.07	No
fin.	2	-1525	-3236.62	-6556			1042	404	SLV 14	0.06	No
ini.	2	-878	3164.96	-6020			870	344	SLV 16	0.06	No
fin.	2	-1123	-3054.94	-6484			935	367	SLV 16	0.06	No
ini.	2	448	-1029.23	2353			635	162	SLV 8	0.07	No
fin.	2	-397	1283.01	1772			741	291	SLV 8	0.16	No
ini.	2	-1373	-3001.4	6277			1002	390	SLV 1	0.06	No
fin.	2	-1128	3111.07	6016			936	368	SLV 1	0.06	No
ini.	2	-1785	3267.37	-6228			1112	425	SLV 13	0.07	No
fin.	2	-1525	-3236.62	-6556			1042	404	SLV 13	0.06	No
ini.	2	-466	-3103.82	6486			760	299	SLV 4	0.05	No
fin.	2	-726	3292.75	6088			829	328	SLV 4	0.05	No
ini.	2	-1373	-3001.4	6277			1002	390	SLV 2	0.06	No
fin.	2	-1128	3111.07	6016			936	368	SLV 2	0.06	No
ini.	2	-878	3164.96	-6020			870	344	SLV 15	0.06	No
fin.	2	-1123	-3054.94	-6484			935	367	SLV 15	0.06	No
ini.	2	448	-1029.23	2353			635	162	SLV 7	0.07	No
fin.	2	-397	1283.01	1772			741	291	SLV 7	0.16	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.21	SLV 3	No
V_SLV	0.046	SLV 3	No
PF_SLU	3.479	SLU 73	Si
V_SLU	0.904	SLU 44	No

Trave di accoppiamento 190

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-12.933	-4.784	6.33	7.13	0.801	-11.933	-4.784	6.33	7.13	0.801	1	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

f _b	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
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Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-566	161.89	975.34	SLU 83	6.02	Si
fin.	3	-242	104.29	975.34	SLU 83	9.35	Si
ini.	3	-618	175.12	975.34	SLU 82	5.57	Si
fin.	3	-241	94.79	975.34	SLU 82	10.29	Si
ini.	3	-584	161.65	975.34	SLU 52	6.03	Si
fin.	3	-223	84.34	975.34	SLU 52	11.56	Si
ini.	3	-625	173.32	975.34	SLU 76	5.63	Si
fin.	3	-254	95.5	975.34	SLU 76	10.21	Si
ini.	3	-589	163.65	975.34	SLU 80	5.96	Si
fin.	3	-258	103.72	975.34	SLU 80	9.4	Si
ini.	3	-569	164.43	975.34	SLU 81	5.93	Si
fin.	3	-229	98.65	975.34	SLU 81	9.89	Si
ini.	3	-629	175.87	975.34	SLU 73	5.55	Si
fin.	3	-241	89.86	975.34	SLU 73	10.85	Si
ini.	3	-592	165.31	975.34	SLU 78	5.9	Si
fin.	3	-255	102.86	975.34	SLU 78	9.48	Si
ini.	3	-614	172.58	975.34	SLU 84	5.65	Si
fin.	3	-254	100.43	975.34	SLU 84	9.71	Si
ini.	3	-596	167.85	975.34	SLU 75	5.81	Si
fin.	3	-242	97.22	975.34	SLU 75	10.03	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-490	138.05	-981			897	354	SLU 71	0.36	No
fin.	3	-226	102.07	950			813	316	SLU 71	0.33	No
ini.	3	-618	175.12	-1117			938	371	SLU 82	0.33	No
fin.	3	-241	94.79	924			818	318	SLU 82	0.34	No
ini.	3	-592	165.31	-1106			930	368	SLU 78	0.33	No
fin.	3	-255	102.86	983			822	320	SLU 78	0.33	No
ini.	3	-566	161.89	-1075			921	364	SLU 83	0.34	No
fin.	3	-242	104.29	966			818	318	SLU 83	0.33	No
ini.	3	-541	152.96	-1050			913	361	SLU 79	0.34	No
fin.	3	-246	107.57	988			819	319	SLU 79	0.32	No
ini.	3	-625	173.32	-1123			941	372	SLU 76	0.33	No
fin.	3	-254	95.5	942			822	320	SLU 76	0.34	No
ini.	3	-614	172.58	-1122			937	370	SLU 84	0.33	No
fin.	3	-254	100.43	962			822	320	SLU 84	0.33	No
ini.	3	-544	154.61	-1059			914	361	SLU 77	0.34	No
fin.	3	-243	106.72	988			818	318	SLU 77	0.32	No
ini.	3	-493	139.71	-990			898	354	SLU 69	0.36	No
fin.	3	-223	101.22	950			812	315	SLU 69	0.33	No
ini.	3	-589	163.65	-1097			929	367	SLU 80	0.33	No
fin.	3	-258	103.72	983			823	320	SLU 80	0.33	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-4996	2503.59	1463	SLV 15	0.58	No
fin.	2	5591	-1919.22	1463	SLV 15	0.76	No
ini.	2	-4996	2503.59	1463	SLV 16	0.58	No
fin.	2	5591	-1919.22	1463	SLV 16	0.76	No
ini.	2	4516	-2476.73	1463	SLV 4	0.59	No
fin.	2	-6502	2205.36	1463	SLV 4	0.66	No
ini.	2	-2306	1184.3	1463	SLV 10	1.24	Si
fin.	2	2656	-791.42	1463	SLV 10	1.85	Si
ini.	2	4516	-2476.73	1463	SLV 3	0.59	No
fin.	2	-6502	2205.36	1463	SLV 3	0.66	No
ini.	2	-2306	1184.3	1463	SLV 9	1.24	Si
fin.	2	2656	-791.42	1463	SLV 9	1.85	Si
ini.	2	-5291	2699.2	1463	SLV 14	0.54	No
fin.	2	6190	-2064.97	1463	SLV 14	0.71	No
ini.	2	4221	-2281.12	1463	SLV 1	0.64	No
fin.	2	-5903	2059.61	1463	SLV 1	0.71	No
ini.	2	4221	-2281.12	1463	SLV 2	0.64	No
fin.	2	-5903	2059.61	1463	SLV 2	0.71	No
ini.	2	-5291	2699.2	1463	SLV 13	0.54	No
fin.	2	6190	-2064.97	1463	SLV 13	0.71	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-2306	1184.3	-4534			1849	714	SLV 9	0.16	No
fin.	2	2656	-791.42	-1316			1111	0	SLV 9	0	No
ini.	2	-5291	2699.2	-9904			2804	972	SLV 14	0.1	No
fin.	2	6190	-2064.97	-7481			1111	0	SLV 14	0	No
ini.	2	4516	-2476.73	8404			1111	0	SLV 3	0	No
fin.	2	-6502	2205.36	8824			3192	1058	SLV 3	0.12	No
ini.	2	4516	-2476.73	8404			1111	0	SLV 4	0	No
fin.	2	-6502	2205.36	8824			3192	1058	SLV 4	0.12	No
ini.	2	4221	-2281.12	7720			1111	0	SLV 1	0	No
fin.	2	-5903	2059.61	9127			3001	1017	SLV 1	0.11	No
ini.	2	4221	-2281.12	7720			1111	0	SLV 2	0	No
fin.	2	-5903	2059.61	9127			3001	1017	SLV 2	0.11	No
ini.	2	-5291	2699.2	-9904			2804	972	SLV 13	0.1	No
fin.	2	6190	-2064.97	-7481			1111	0	SLV 13	0	No
ini.	2	1531	-961.82	3034			1111	0	SLV 7	0	No
fin.	2	-2968	931.81	2659			2061	779	SLV 7	0.29	No
ini.	2	-2306	1184.3	-4534			1849	714	SLV 10	0.16	No
fin.	2	2656	-791.42	-1316			1111	0	SLV 10	0	No
ini.	2	1531	-961.82	3034			1111	0	SLV 8	0	No
fin.	2	-2968	931.81	2659			2061	779	SLV 8	0.29	No



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.542	SLV 13	No
V_SLV	0	SLV 1	No
PF_SLU	5.546	SLU 73	Si
V_SLU	0.322	SLU 77	No

Trave di accoppiamento 191

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-12.933	-4.784	9.85	10.61	0.761	-11.933	-4.784	9.85	10.61	0.761	1	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-491	192.57	880.3	SLU 73	4.57	Si
fin.	3	-101	18.11	880.3	SLU 73	48.6	Si
ini.	3	-485	193.02	880.3	SLU 82	4.56	Si
fin.	3	-97	20.13	880.3	SLU 82	43.73	Si
ini.	3	-476	192.35	880.3	SLU 84	4.58	Si
fin.	3	-101	24.09	880.3	SLU 84	36.54	Si
ini.	3	-483	191.91	880.3	SLU 76	4.59	Si
fin.	3	-105	22.08	880.3	SLU 76	39.88	Si
ini.	3	-450	186.48	880.3	SLU 75	4.72	Si
fin.	3	-86	22.31	880.3	SLU 75	39.46	Si
ini.	3	-428	182	880.3	SLU 83	4.84	Si
fin.	3	-83	26.99	880.3	SLU 83	32.61	Si
ini.	3	-447	177.35	880.3	SLU 61	4.96	Si
fin.	3	-93	20.31	880.3	SLU 61	43.35	Si
ini.	3	-442	184.35	880.3	SLU 80	4.78	Si
fin.	3	-97	27.97	880.3	SLU 80	31.47	Si
ini.	3	-437	182.66	880.3	SLU 81	4.82	Si
fin.	3	-79	23.03	880.3	SLU 81	38.22	Si
ini.	3	-442	185.82	880.3	SLU 78	4.74	Si
fin.	3	-90	26.27	880.3	SLU 78	33.51	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-483	191.91	-678			815	321	SLU 76	0.47	No
fin.	3	-105	22.08	293			700	268	SLU 76	0.92	No
ini.	3	-491	192.57	-668			818	323	SLU 73	0.48	No
fin.	3	-101	18.11	259			699	268	SLU 73	1.03	Si
ini.	3	-394	175.46	-633			788	310	SLU 77	0.49	No
fin.	3	-72	29.17	335			690	263	SLU 77	0.79	No
ini.	3	-442	185.82	-671			803	316	SLU 78	0.47	No
fin.	3	-90	26.27	328			696	266	SLU 78	0.81	No
ini.	3	-476	192.35	-672			813	321	SLU 84	0.48	No
fin.	3	-101	24.09	291			699	268	SLU 84	0.92	No
ini.	3	-383	168.68	-625			785	308	SLU 70	0.49	No
fin.	3	-71	26.08	342			690	263	SLU 70	0.77	No
ini.	3	-428	182	-635			799	314	SLU 83	0.5	No
fin.	3	-83	26.99	298			694	265	SLU 83	0.89	No
ini.	3	-442	184.35	-663			803	316	SLU 80	0.48	No
fin.	3	-97	27.97	331			698	267	SLU 80	0.81	No
ini.	3	-485	193.02	-663			816	322	SLU 82	0.49	No
fin.	3	-97	20.13	258			698	267	SLU 82	1.04	Si
ini.	3	-450	186.48	-661			805	317	SLU 75	0.48	No
fin.	3	-86	22.31	294			694	265	SLU 75	0.9	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-3423	1377.73	1320.45	SLV 16	0.96	No
fin.	2	2537	-986.29	1320.45	SLV 16	1.34	Si
ini.	2	-2757	1294.92	1320.45	SLV 14	1.02	Si
fin.	2	3369	-1093.35	1320.45	SLV 14	1.21	Si
ini.	2	2862	-1131.46	1320.45	SLV 1	1.17	Si
fin.	2	-2625	1021.5	1320.45	SLV 1	1.29	Si
ini.	2	-2757	1294.92	1320.45	SLV 13	1.02	Si
fin.	2	3369	-1093.35	1320.45	SLV 13	1.21	Si
ini.	2	-2232	625.11	1320.45	SLV 12	2.11	Si
fin.	2	-532	-121.19	1320.45	SLV 12	10.9	Si
ini.	2	-2232	625.11	1320.45	SLV 11	2.11	Si
fin.	2	-532	-121.19	1320.45	SLV 11	10.9	Si
ini.	2	2862	-1131.46	1320.45	SLV 2	1.17	Si
fin.	2	-2625	1021.5	1320.45	SLV 2	1.29	Si
ini.	2	2197	-1048.65	1320.45	SLV 4	1.26	Si
fin.	2	-3458	1128.56	1320.45	SLV 4	1.17	Si
ini.	2	-3423	1377.73	1320.45	SLV 15	0.96	No
fin.	2	2537	-986.29	1320.45	SLV 15	1.34	Si
ini.	2	2197	-1048.65	1320.45	SLV 3	1.26	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	2	-3458	1128.56	1320.45	SLV 3	1.17	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-2757	1294.92	-5226			1841	697	SLV 14	0.13	No
fin.	2	3369	-1093.35	-4420			1002	0	SLV 14	0	No
ini.	2	2862	-1131.46	3702			1002	0	SLV 1	0	No
fin.	2	-2625	1021.5	4196			1801	685	SLV 1	0.16	No
ini.	2	-14	349.07	-2874			1007	379	SLV 10	0.13	No
fin.	2	2242	-478.05	-2164			1002	0	SLV 10	0	No
ini.	2	2197	-1048.65	4365			1002	0	SLV 3	0	No
fin.	2	-3458	1128.56	4846			2054	757	SLV 3	0.16	No
ini.	2	1672	-378.85	-196			1002	0	SLV 5	0	No
fin.	2	443	156.41	421			1002	295	SLV 5	0.7	No
ini.	2	-2757	1294.92	-5226			1841	697	SLV 13	0.13	No
fin.	2	3369	-1093.35	-4420			1002	0	SLV 13	0	No
ini.	2	-14	349.07	-2874			1007	379	SLV 9	0.13	No
fin.	2	2242	-478.05	-2164			1002	0	SLV 9	0	No
ini.	2	1672	-378.85	-196			1002	0	SLV 6	0	No
fin.	2	443	156.41	421			1002	295	SLV 6	0.7	No
ini.	2	2197	-1048.65	4365			1002	0	SLV 4	0	No
fin.	2	-3458	1128.56	4846			2054	757	SLV 4	0.16	No
ini.	2	2862	-1131.46	3702			1002	0	SLV 2	0	No
fin.	2	-2625	1021.5	4196			1801	685	SLV 2	0.16	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.958	SLV 15	No
V_SLV	0	SLV 1	No
PF_SLU	4.561	SLU 82	Si
V_SLU	0.471	SLU 78	No

Trave di accoppiamento 192

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-12.933	-4.784	12.61	14.841	2.231	-11.933	-4.784	12.61	14.841	2.231	1	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-416	383.24	7577.7	SLU 75	19.77	Si
fin.	3	-659	-205.36	7573.83	SLU 75	36.88	Si
ini.	3	-226	366.4	7577.7	SLU 39	20.68	Si
fin.	3	-442	-135.47	7573.83	SLU 39	55.91	Si
ini.	3	-360	399.11	7577.7	SLU 83	18.99	Si
fin.	3	-612	-187.22	7573.83	SLU 83	40.45	Si
ini.	3	-321	405.88	7577.7	SLU 81	18.67	Si
fin.	3	-571	-181.12	7573.83	SLU 81	41.82	Si
ini.	3	-401	380.07	7577.7	SLU 77	19.94	Si
fin.	3	-647	-189.48	7573.83	SLU 77	39.97	Si
ini.	3	-415	395.5	7577.7	SLU 84	19.16	Si
fin.	3	-666	-209.19	7573.83	SLU 84	36.21	Si
ini.	3	-424	371.53	7577.7	SLU 73	20.4	Si
fin.	3	-660	-219.27	7573.83	SLU 73	34.54	Si
ini.	3	-376	402.28	7577.7	SLU 82	18.84	Si
fin.	3	-625	-203.09	7573.83	SLU 82	37.29	Si
ini.	3	-362	386.84	7577.7	SLU 74	19.59	Si
fin.	3	-605	-183.39	7573.83	SLU 74	41.3	Si
ini.	3	-455	376.46	7577.7	SLU 78	20.13	Si
fin.	3	-701	-211.46	7573.83	SLU 78	35.82	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-465	360.38	331			2764	1066	SLU 80	3.22	Si
fin.	3	-707	-216.82	-1986			2860	1113	SLU 80	0.56	No
ini.	3	-415	395.5	264			2744	1056	SLU 84	4	Si
fin.	3	-666	-209.19	-1990			2844	1105	SLU 84	0.56	No
ini.	3	-455	376.46	312			2760	1064	SLU 78	3.41	Si
fin.	3	-701	-211.46	-1995			2858	1112	SLU 78	0.56	No
ini.	3	-401	380.07	330			2738	1054	SLU 77	3.19	Si
fin.	3	-647	-189.48	-1977			2836	1102	SLU 77	0.56	No
ini.	3	-362	386.84	303			2723	1046	SLU 74	3.46	Si
fin.	3	-605	-183.39	-1940			2819	1094	SLU 74	0.56	No
ini.	3	-376	402.28	237			2728	1049	SLU 82	4.43	Si
fin.	3	-625	-203.09	-1953			2827	1097	SLU 82	0.56	No
ini.	3	-416	383.24	285			2744	1057	SLU 75	3.71	Si
fin.	3	-659	-205.36	-1958			2841	1104	SLU 75	0.56	No
ini.	3	-360	399.11	282			2722	1046	SLU 83	3.71	Si
fin.	3	-612	-187.22	-1972			2822	1095	SLU 83	0.56	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-321	405.88	255			2707	1038	SLU 81	4.07	Si
fin.	3	-571	-181.12	-1935			2806	1087	SLU 81	0.56	No
ini.	3	-411	363.99	349			2742	1056	SLU 79	3.02	Si
fin.	3	-653	-194.84	-1968			2838	1103	SLU 79	0.56	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	890	2885.75	11366.55	SLV 9	3.94	Si
fin.	2	957	1109.4	11360.74	SLV 9	10.24	Si
ini.	2	294	1965.41	11366.55	SLV 13	5.78	Si
fin.	2	-623	-834.08	11360.74	SLV 13	13.62	Si
ini.	2	-1295	-1785.24	11366.55	SLV 11	6.37	Si
fin.	2	-2229	-2099.41	11360.74	SLV 11	5.41	Si
ini.	2	-1440	-2397.67	11366.55	SLV 7	4.74	Si
fin.	2	-1831	-1396.21	11360.74	SLV 7	8.14	Si
ini.	2	890	2885.75	11366.55	SLV 10	3.94	Si
fin.	2	957	1109.4	11360.74	SLV 10	10.24	Si
ini.	2	294	1965.41	11366.55	SLV 14	5.78	Si
fin.	2	-623	-834.08	11360.74	SLV 14	13.62	Si
ini.	2	745	2273.31	11366.55	SLV 6	5	Si
fin.	2	1355	1812.6	11360.74	SLV 6	6.27	Si
ini.	2	-1440	-2397.67	11366.55	SLV 8	4.74	Si
fin.	2	-1831	-1396.21	11360.74	SLV 8	8.14	Si
ini.	2	-1295	-1785.24	11366.55	SLV 12	6.37	Si
fin.	2	-2229	-2099.41	11360.74	SLV 12	5.41	Si
ini.	2	745	2273.31	11366.55	SLV 5	5	Si
fin.	2	1355	1812.6	11360.74	SLV 5	6.27	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	294	1965.41	-2129			3867	1390	SLV 13	0.65	No
fin.	2	-623	-834.08	-4127			4115	1584	SLV 13	0.38	No
ini.	2	-188	-76.04	3047			3942	1496	SLV 2	0.49	No
fin.	2	705	1509.92	1325			3866	1292	SLV 2	0.98	No
ini.	2	890	2885.75	81			3867	1247	SLV 9	15.33	Si
fin.	2	957	1109.4	-2252			3866	1229	SLV 9	0.55	No
ini.	2	-188	-76.04	3047			3942	1496	SLV 1	0.49	No
fin.	2	705	1509.92	1325			3866	1292	SLV 1	0.98	No
ini.	2	-844	-1477.34	2705			4204	1628	SLV 4	0.6	No
fin.	2	-251	547.27	1353			3966	1508	SLV 4	1.11	Si
ini.	2	-844	-1477.34	2705			4204	1628	SLV 3	0.6	No
fin.	2	-251	547.27	1353			3966	1508	SLV 3	1.11	Si
ini.	2	890	2885.75	81			3867	1247	SLV 10	15.33	Si
fin.	2	957	1109.4	-2252			3866	1229	SLV 10	0.55	No
ini.	2	294	1965.41	-2129			3867	1390	SLV 14	0.65	No
fin.	2	-623	-834.08	-4127			4115	1584	SLV 14	0.38	No
ini.	2	-362	564.11	-2471			4012	1532	SLV 16	0.62	No
fin.	2	-1579	-1796.73	-4099			4497	1765	SLV 16	0.43	No
ini.	2	-362	564.11	-2471			4012	1532	SLV 15	0.62	No
fin.	2	-1579	-1796.73	-4099			4497	1765	SLV 15	0.43	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.939	SLV 9	Si
V_SLV	0.384	SLV 13	No
PF_SLU	18.67	SLU 81	Si
V_SLU	0.555	SLU 83	No

Trave di accoppiamento 193

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-13.143	-4.784	3.15	6.33	3.18	-12.933	-4.784	3.15	6.33	3.18	0.21	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	t ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-2013	-2476.72	15386.83	SLU 80	6.21	Si
fin.	3	-1878	-1974.23	15386.83	SLU 80	7.79	Si
ini.	3	-2015	-2484.45	15386.83	SLU 78	6.19	Si
fin.	3	-1881	-1979.29	15386.83	SLU 78	7.77	Si
ini.	3	-2006	-2551.23	15386.83	SLU 82	6.03	Si
fin.	3	-1883	-2041.73	15386.83	SLU 82	7.54	Si
ini.	3	-2000	-2541.29	15386.83	SLU 83	6.05	Si
fin.	3	-1861	-2040.33	15386.83	SLU 83	7.54	Si
ini.	3	-1968	-2461.22	15386.83	SLU 73	6.25	Si
fin.	3	-1853	-1958.05	15386.83	SLU 73	7.86	Si
ini.	3	-1978	-2467.86	15386.83	SLU 75	6.23	Si
fin.	3	-1851	-1966.45	15386.83	SLU 75	7.82	Si
ini.	3	-1963	-2524.7	15386.83	SLU 81	6.09	Si



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
fin.	3	-1831	-2027.5	15386.83	SLU 81	7.59	Si
ini.	3	-1972	-2457.92	15386.83	SLU 77	6.26	Si
fin.	3	-1829	-1965.05	15386.83	SLU 77	7.83	Si
ini.	3	-2043	-2567.82	15386.83	SLU 84	5.99	Si
fin.	3	-1913	-2054.57	15386.83	SLU 84	7.49	Si
ini.	3	-2005	-2477.81	15386.83	SLU 76	6.21	Si
fin.	3	-1883	-1970.88	15386.83	SLU 76	7.81	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-1970	-2450.2	4510			4461	1759	SLU 79	0.39	No
fin.	3	-1826	-1959.99	1516			4404	1735	SLU 79	1.14	Si
ini.	3	-2006	-2551.23	4452			4476	1765	SLU 82	0.4	No
fin.	3	-1883	-2041.73	1438			4427	1744	SLU 82	1.21	Si
ini.	3	-2043	-2567.82	4531			4491	1772	SLU 84	0.39	No
fin.	3	-1913	-2054.57	1478			4438	1749	SLU 84	1.18	Si
ini.	3	-1978	-2467.86	4433			4465	1761	SLU 75	0.4	No
fin.	3	-1851	-1966.45	1444			4414	1739	SLU 75	1.2	Si
ini.	3	-1963	-2524.7	4455			4459	1758	SLU 81	0.39	No
fin.	3	-1831	-2027.5	1466			4406	1735	SLU 81	1.18	Si
ini.	3	-2013	-2476.72	4508			4479	1767	SLU 80	0.39	No
fin.	3	-1878	-1974.23	1487			4425	1743	SLU 80	1.17	Si
ini.	3	-1972	-2457.92	4514			4462	1760	SLU 77	0.39	No
fin.	3	-1829	-1965.05	1512			4405	1735	SLU 77	1.15	Si
ini.	3	-2015	-2484.45	4512			4479	1767	SLU 78	0.39	No
fin.	3	-1881	-1979.29	1484			4426	1744	SLU 78	1.18	Si
ini.	3	-1935	-2441.33	4435			4447	1753	SLU 74	0.4	No
fin.	3	-1800	-1952.22	1472			4393	1730	SLU 74	1.18	Si
ini.	3	-2000	-2541.29	4534			4473	1764	SLU 83	0.39	No
fin.	3	-1861	-2040.33	1506			4418	1741	SLU 83	1.16	Si

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	7050	-4026.73	23080.24	SLV 15	5.73	Si
fin.	2	3967	-2064.78	23080.24	SLV 15	11.18	Si
ini.	2	-4827	-3602.73	23080.24	SLV 5	6.41	Si
fin.	2	-3655	-3308.84	23080.24	SLV 5	6.98	Si
ini.	2	28	-5519.69	23080.24	SLV 9	4.18	Si
fin.	2	-684	-4171.28	23080.24	SLV 9	5.53	Si
ini.	2	-9134	2363.12	23080.24	SLV 3	9.77	Si
fin.	2	-5936	810	23080.24	SLV 3	28.49	Si
ini.	2	-4827	-3602.73	23080.24	SLV 6	6.41	Si
fin.	2	-3655	-3308.84	23080.24	SLV 6	6.98	Si
ini.	2	28	-5519.69	23080.24	SLV 10	4.18	Si
fin.	2	-684	-4171.28	23080.24	SLV 10	5.53	Si
ini.	2	6423	-5748	23080.24	SLV 13	4.02	Si
fin.	2	3420	-3501.4	23080.24	SLV 13	6.59	Si
ini.	2	6423	-5748	23080.24	SLV 14	4.02	Si
fin.	2	3420	-3501.4	23080.24	SLV 14	6.59	Si
ini.	2	7050	-4026.73	23080.24	SLV 16	5.73	Si
fin.	2	3967	-2064.78	23080.24	SLV 16	11.18	Si
ini.	2	-9134	2363.12	23080.24	SLV 4	9.77	Si
fin.	2	-5936	810	23080.24	SLV 4	28.49	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-9134	2363.12	18445			9164	3540	SLV 3	0.19	No
fin.	2	-5936	810	15066			7885	3107	SLV 3	0.21	No
ini.	2	7050	-4026.73	-12743			5510	0	SLV 16	0	No
fin.	2	3967	-2064.78	-13023			5510	851	SLV 16	0.07	No
ini.	2	-4827	-3602.73	8993			7441	2941	SLV 6	0.33	No
fin.	2	-3655	-3308.84	5389			6972	2756	SLV 6	0.51	No
ini.	2	-9760	641.86	19121			9414	3619	SLV 1	0.19	No
fin.	2	-6483	-626.61	15137			8103	3185	SLV 1	0.21	No
ini.	2	6423	-5748	-12067			5510	0	SLV 14	0	No
fin.	2	3420	-3501.4	-12952			5510	1103	SLV 14	0.09	No
ini.	2	-9134	2363.12	18445			9164	3540	SLV 4	0.19	No
fin.	2	-5936	810	15066			7885	3107	SLV 4	0.21	No
ini.	2	-9760	641.86	19121			9414	3619	SLV 2	0.19	No
fin.	2	-6483	-626.61	15137			8103	3185	SLV 2	0.21	No
ini.	2	-4827	-3602.73	8993			7441	2941	SLV 5	0.33	No
fin.	2	-3655	-3308.84	5389			6972	2756	SLV 5	0.51	No
ini.	2	6423	-5748	-12067			5510	0	SLV 13	0	No
fin.	2	3420	-3501.4	-12952			5510	1103	SLV 13	0.09	No
ini.	2	7050	-4026.73	-12743			5510	0	SLV 15	0	No
fin.	2	3967	-2064.78	-13023			5510	851	SLV 15	0.07	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.015	SLV 13	Si
V_SLV	0	SLV 13	No
PF_SLU	5.992	SLU 84	Si
V_SLU	0.389	SLU 83	No

Trave di accoppiamento 194

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-12.933	-4.784	5.7	6.33	0.63	-11.933	-4.784	5.7	6.33	0.63	1	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-193	-164.53	603.15	SLU 84	3.67	Si
fin.	3	-553	-297.76	603.15	SLU 84	2.03	Si
ini.	3	-209	-166.88	603.15	SLU 78	3.61	Si
fin.	3	-546	-292	603.15	SLU 78	2.07	Si
ini.	3	-210	-167.48	603.15	SLU 80	3.6	Si
fin.	3	-541	-290.19	603.15	SLU 80	2.08	Si
ini.	3	-206	-158.74	603.15	SLU 76	3.8	Si
fin.	3	-578	-296.9	603.15	SLU 76	2.03	Si
ini.	3	-193	-158.12	603.15	SLU 63	3.81	Si
fin.	3	-527	-281.44	603.15	SLU 63	2.14	Si
ini.	3	-179	-158.14	603.15	SLU 82	3.81	Si
fin.	3	-556	-297.27	603.15	SLU 82	2.03	Si
ini.	3	-192	-152.35	603.15	SLU 73	3.96	Si
fin.	3	-580	-296.41	603.15	SLU 73	2.03	Si
ini.	3	-164	-161.68	603.15	SLU 81	3.73	Si
fin.	3	-504	-286.48	603.15	SLU 81	2.11	Si
ini.	3	-178	-168.07	603.15	SLU 83	3.59	Si
fin.	3	-502	-286.97	603.15	SLU 83	2.1	Si
ini.	3	-195	-160.5	603.15	SLU 75	3.76	Si
fin.	3	-549	-291.51	603.15	SLU 75	2.07	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-210	-167.48	1313			541	211	SLU 80	0.16	No
fin.	3	-541	-290.19	-2101			629	249	SLU 80	0.12	No
ini.	3	-164	-161.68	1293			529	205	SLU 81	0.16	No
fin.	3	-504	-286.48	-2086			619	245	SLU 81	0.12	No
ini.	3	-178	-168.07	1324			532	207	SLU 83	0.16	No
fin.	3	-502	-286.97	-2098			619	245	SLU 83	0.12	No
ini.	3	-206	-158.74	1277			540	210	SLU 76	0.16	No
fin.	3	-578	-296.9	-2122			639	253	SLU 76	0.12	No
ini.	3	-209	-166.88	1313			541	211	SLU 78	0.16	No
fin.	3	-546	-292	-2110			631	249	SLU 78	0.12	No
ini.	3	-193	-164.53	1316			536	209	SLU 84	0.16	No
fin.	3	-553	-297.76	-2148			632	250	SLU 84	0.12	No
ini.	3	-195	-160.5	1282			537	209	SLU 75	0.16	No
fin.	3	-549	-291.51	-2098			631	250	SLU 75	0.12	No
ini.	3	-195	-171.02	1321			537	209	SLU 79	0.16	No
fin.	3	-490	-279.4	-2051			616	243	SLU 79	0.12	No
ini.	3	-194	-170.42	1321			537	209	SLU 77	0.16	No
fin.	3	-495	-281.21	-2060			617	244	SLU 77	0.12	No
ini.	3	-179	-158.14	1285			533	207	SLU 82	0.16	No
fin.	3	-556	-297.27	-2136			633	250	SLU 82	0.12	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-5026	-2305.88	904.72	SLV 1	0.39	No
fin.	2	5312	1717.2	904.72	SLV 1	0.53	No
ini.	2	4761	2072.97	904.72	SLV 16	0.44	No
fin.	2	-6039	-2120.18	904.72	SLV 16	0.43	No
ini.	2	2060	765.01	904.72	SLV 9	1.18	Si
fin.	2	-2873	-1108.23	904.72	SLV 9	0.82	No
ini.	2	5160	2196.62	904.72	SLV 13	0.41	No
fin.	2	-6483	-2302.46	904.72	SLV 13	0.39	No
ini.	2	5160	2196.62	904.72	SLV 14	0.41	No
fin.	2	-6483	-2302.46	904.72	SLV 14	0.39	No
ini.	2	2060	765.01	904.72	SLV 10	1.18	Si
fin.	2	-2873	-1108.23	904.72	SLV 10	0.82	No
ini.	2	-5424	-2429.54	904.72	SLV 3	0.37	No
fin.	2	5756	1899.47	904.72	SLV 3	0.48	No
ini.	2	-5424	-2429.54	904.72	SLV 4	0.37	No
fin.	2	5756	1899.47	904.72	SLV 4	0.48	No
ini.	2	-5026	-2305.88	904.72	SLV 2	0.39	No
fin.	2	5312	1717.2	904.72	SLV 2	0.53	No
ini.	2	4761	2072.97	904.72	SLV 15	0.44	No
fin.	2	-6039	-2120.18	904.72	SLV 15	0.43	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-5424	-2429.54	8592			2174	711	SLV 4	0.08	No
fin.	2	5756	1899.47	7252			727	0	SLV 4	0	No
ini.	2	-5026	-2305.88	8846			2068	688	SLV 1	0.08	No
fin.	2	5312	1717.2	6460			727	0	SLV 1	0	No
ini.	2	-5026	-2305.88	8846			2068	688	SLV 2	0.08	No
fin.	2	5312	1717.2	6460			727	0	SLV 2	0	No
ini.	2	5160	2196.62	-6753			727	0	SLV 13	0	No
fin.	2	-6483	-2302.46	-10185			2456	768	SLV 13	0.08	No
ini.	2	-5424	-2429.54	8592			2174	711	SLV 3	0.08	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	2	5756	1899.47	7252			727	0	SLV 3	0	No
ini.	2	2060	765.01	-998			727	0	SLV 9	0	No
fin.	2	-2873	-1108.23	-5283			1493	550	SLV 9	0.1	No
ini.	2	-2324	-997.92	2837			1347	509	SLV 8	0.18	No
fin.	2	2145	705.25	2350			727	0	SLV 8	0	No
ini.	2	2060	765.01	-998			727	0	SLV 10	0	No
fin.	2	-2873	-1108.23	-5283			1493	550	SLV 10	0.1	No
ini.	2	-2324	-997.92	2837			1347	509	SLV 7	0.18	No
fin.	2	2145	705.25	2350			727	0	SLV 7	0	No
ini.	2	5160	2196.62	-6753			727	0	SLV 14	0	No
fin.	2	-6483	-2302.46	-10185			2456	768	SLV 14	0.08	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF SLV	0.372	SLV 3	No
V SLV	0	SLV 1	No
PF SLU	2.026	SLU 84	Si
V SLU	0.116	SLU 84	No

Trave di accoppiamento 195

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-12.933	-4.784	9.13	9.85	0.72	-11.933	-4.784	9.13	9.85	0.72	1	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fthk	fvk0	fthmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	278	-7.52	787.94	SLU 55	104.84	Si
fin.	3	-66	-174.36	787.94	SLU 55	4.52	Si
ini.	3	316	1.48	787.94	SLU 73	532	Si
fin.	3	-74	-185.63	787.94	SLU 73	4.24	Si
ini.	3	322	-5.14	787.94	SLU 75	153.34	Si
fin.	3	-42	-181.81	787.94	SLU 75	4.33	Si
ini.	3	339	0.01	787.94	SLU 82	67886.6	Si
fin.	3	-48	-185.35	787.94	SLU 82	4.25	Si
ini.	3	312	-3.19	787.94	SLU 76	246.94	Si
fin.	3	-66	-185.87	787.94	SLU 76	4.24	Si
ini.	3	351	-4.7	787.94	SLU 81	167.79	Si
fin.	3	-7	-176.61	787.94	SLU 81	4.46	Si
ini.	3	335	-4.66	787.94	SLU 84	169.08	Si
fin.	3	-40	-185.59	787.94	SLU 84	4.25	Si
ini.	3	318	-9.81	787.94	SLU 78	80.32	Si
fin.	3	-34	-182.06	787.94	SLU 78	4.33	Si
ini.	3	315	-11	787.94	SLU 80	71.62	Si
fin.	3	-30	-180.29	787.94	SLU 80	4.37	Si
ini.	3	346	-9.37	787.94	SLU 83	84.11	Si
fin.	3	1	-176.85	787.94	SLU 83	4.46	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	329	-14.52	804			598	166	SLU 77	0.21	No
fin.	3	7	-173.32	-1574			598	224	SLU 77	0.14	No
ini.	3	334	-9.85	775			598	165	SLU 74	0.21	No
fin.	3	-1	-173.07	-1559			598	225	SLU 74	0.14	No
ini.	3	346	-9.37	792			598	162	SLU 83	0.2	No
fin.	3	1	-176.85	-1597			598	225	SLU 83	0.14	No
ini.	3	318	-9.81	793			598	168	SLU 78	0.21	No
fin.	3	-34	-182.06	-1615			608	230	SLU 78	0.14	No
ini.	3	326	-15.71	807			598	166	SLU 79	0.21	No
fin.	3	11	-171.56	-1566			598	223	SLU 79	0.14	No
ini.	3	339	0.01	753			598	164	SLU 82	0.22	No
fin.	3	-48	-185.35	-1624			612	232	SLU 82	0.14	No
ini.	3	351	-4.7	764			598	161	SLU 81	0.21	No
fin.	3	-7	-176.61	-1582			600	226	SLU 81	0.14	No
ini.	3	335	-4.66	781			598	165	SLU 84	0.21	No
fin.	3	-40	-185.59	-1639			610	231	SLU 84	0.14	No
ini.	3	322	-5.14	765			598	167	SLU 75	0.22	No
fin.	3	-42	-181.81	-1600			610	232	SLU 75	0.14	No
ini.	3	315	-11	796			598	169	SLU 80	0.21	No
fin.	3	-30	-180.29	-1607			607	230	SLU 80	0.14	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	-2515	-1587.11	1181.91	SLV 3	0.74	No
fin.	2	3794	1361.92	1181.91	SLV 3	0.87	No
ini.	2	2621	1436.36	1181.91	SLV 15	0.82	No
fin.	2	-3410	-1438.31	1181.91	SLV 15	0.82	No
ini.	2	2621	1436.36	1181.91	SLV 16	0.82	No
fin.	2	-3410	-1438.31	1181.91	SLV 16	0.82	No



Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	1601	671.28	1181.91	SLV 9	1.76	Si
fin.	2	-1736	-824.87	1181.91	SLV 9	1.43	Si
ini.	2	-2515	-1587.11	1181.91	SLV 4	0.74	No
fin.	2	3794	1361.92	1181.91	SLV 4	0.87	No
ini.	2	1601	671.28	1181.91	SLV 10	1.76	Si
fin.	2	-1736	-824.87	1181.91	SLV 10	1.43	Si
ini.	2	2980	1571.65	1181.91	SLV 14	0.75	No
fin.	2	-3801	-1607.52	1181.91	SLV 14	0.74	No
ini.	2	-2156	-1451.82	1181.91	SLV 1	0.81	No
fin.	2	3403	1192.7	1181.91	SLV 1	0.99	No
ini.	2	2980	1571.65	1181.91	SLV 13	0.75	No
fin.	2	-3801	-1607.52	1181.91	SLV 13	0.74	No
ini.	2	-2156	-1451.82	1181.91	SLV 2	0.81	No
fin.	2	3403	1192.7	1181.91	SLV 2	0.99	No

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-1136	-686.74	3111			1224	484	SLV 8	0.16	No
fin.	2	1729	579.26	1540			897	0	SLV 8	0	No
ini.	2	1601	671.28	-1997			897	0	SLV 10	0	No
fin.	2	-1736	-824.87	-3760			1397	545	SLV 10	0.14	No
ini.	2	1601	671.28	-1997			897	0	SLV 9	0	No
fin.	2	-1736	-824.87	-3760			1397	545	SLV 9	0.14	No
ini.	2	-2515	-1587.11	6024			1621	616	SLV 3	0.1	No
fin.	2	3794	1361.92	4544			897	0	SLV 3	0	No
ini.	2	-2156	-1451.82	5421			1518	585	SLV 1	0.11	No
fin.	2	3403	1192.7	3914			897	0	SLV 1	0	No
ini.	2	-2515	-1587.11	6024			1621	616	SLV 4	0.1	No
fin.	2	3794	1361.92	4544			897	0	SLV 4	0	No
ini.	2	2980	1571.65	-4910			897	0	SLV 14	0	No
fin.	2	-3801	-1607.52	-6764			1991	718	SLV 14	0.11	No
ini.	2	-1136	-686.74	3111			1224	484	SLV 7	0.16	No
fin.	2	1729	579.26	1540			897	0	SLV 7	0	No
ini.	2	-2156	-1451.82	5421			1518	585	SLV 2	0.11	No
fin.	2	3403	1192.7	3914			897	0	SLV 2	0	No
ini.	2	2980	1571.65	-4910			897	0	SLV 13	0	No
fin.	2	-3801	-1607.52	-6764			1991	718	SLV 13	0.11	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.735	SLV 13	No
V_SLV	0	SLV 1	No
PF_SLU	4.239	SLU 76	Si
V_SLU	0.141	SLU 83	No

Trave di accoppiamento 196

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-11.933	-4.784	3.15	6.33	3.18	-11.743	-4.784	3.15	6.33	3.18	0.19	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2_Corti

fb	fhk	fvk0	fhmmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			172500	9000	20000	0.577	0.767	6500	320000000	128000000	1.2

Verifiche a pressoflessione delle travi in muratura in combinazioni non sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	3	-2254	-1734.19	15386.83	SLU 76	8.87	Si
fin.	3	-2498	-1963.96	15386.83	SLU 76	7.83	Si
ini.	3	-2130	-1751.08	15386.83	SLU 77	8.79	Si
fin.	3	-2358	-1986.47	15386.83	SLU 77	7.75	Si
ini.	3	-2209	-1750.64	15386.83	SLU 80	8.79	Si
fin.	3	-2444	-1986.21	15386.83	SLU 80	7.75	Si
ini.	3	-2172	-1796.39	15386.83	SLU 81	8.57	Si
fin.	3	-2408	-2024.64	15386.83	SLU 81	7.6	Si
ini.	3	-2218	-1753.25	15386.83	SLU 78	8.78	Si
fin.	3	-2455	-1989.22	15386.83	SLU 78	7.74	Si
ini.	3	-2121	-1748.46	15386.83	SLU 79	8.8	Si
fin.	3	-2347	-1983.46	15386.83	SLU 79	7.76	Si
ini.	3	-2205	-1735.36	15386.83	SLU 75	8.87	Si
fin.	3	-2444	-1965.14	15386.83	SLU 75	7.83	Si
ini.	3	-2260	-1798.57	15386.83	SLU 82	8.56	Si
fin.	3	-2506	-2027.4	15386.83	SLU 82	7.59	Si
ini.	3	-2273	-1816.46	15386.83	SLU 84	8.47	Si
fin.	3	-2517	-2051.48	15386.83	SLU 84	7.5	Si
ini.	3	-2185	-1814.29	15386.83	SLU 83	8.48	Si
fin.	3	-2419	-2048.73	15386.83	SLU 83	7.51	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni non sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	3	-2260	-1798.57	-2482			4577	1808	SLU 82	0.73	No
fin.	3	-2506	-2027.4	-5183			4676	1849	SLU 82	0.36	No
ini.	3	-2205	-1735.36	-2435			4555	1799	SLU 75	0.74	No



Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
fin.	3	-2444	-1965.14	-5107			4651	1838	SLU 75	0.36	No
ini.	3	-2209	-1750.64	-2425			4557	1800	SLU 80	0.74	No
fin.	3	-2444	-1986.21	-5128			4651	1838	SLU 80	0.36	No
ini.	3	-2218	-1753.25	-2437			4561	1801	SLU 78	0.74	No
fin.	3	-2455	-1989.22	-5148			4655	1840	SLU 78	0.36	No
ini.	3	-2273	-1816.46	-2485			4583	1810	SLU 84	0.73	No
fin.	3	-2517	-2051.48	-5224			4680	1850	SLU 84	0.35	No
ini.	3	-2241	-1716.3	-2467			4570	1805	SLU 73	0.73	No
fin.	3	-2487	-1939.88	-5120			4668	1845	SLU 73	0.36	No
ini.	3	-2185	-1814.29	-2414			4547	1796	SLU 83	0.74	No
fin.	3	-2419	-2048.73	-5114			4641	1834	SLU 83	0.36	No
ini.	3	-2130	-1751.08	-2367			4526	1786	SLU 77	0.75	No
fin.	3	-2358	-1986.47	-5038			4616	1824	SLU 77	0.36	No
ini.	3	-2254	-1734.19	-2469			4575	1807	SLU 76	0.73	No
fin.	3	-2498	-1963.96	-5160			4673	1847	SLU 76	0.36	No
ini.	3	-2172	-1796.39	-2412			4542	1793	SLU 81	0.74	No
fin.	3	-2408	-2024.64	-5073			4637	1833	SLU 81	0.36	No

Verifiche a pressoflessione delle travi in muratura in combinazioni sismiche

Sezione	yM	N	M	Mu	Comb.	c.s.	Verifica
ini.	2	4240	-3468.4	23080.24	SLV 1	6.65	Si
fin.	2	6533	-4681.29	23080.24	SLV 1	4.93	Si
ini.	2	-7218	1088.76	23080.24	SLV 15	21.2	Si
fin.	2	-9848	1980.53	23080.24	SLV 15	11.65	Si
ini.	2	1791	-1348.07	23080.24	SLV 8	17.12	Si
fin.	2	2536	-2073.04	23080.24	SLV 8	11.13	Si
ini.	2	-1073	-2311.97	23080.24	SLV 5	9.98	Si
fin.	2	-650	-2580.58	23080.24	SLV 5	8.94	Si
ini.	2	-1073	-2311.97	23080.24	SLV 6	9.98	Si
fin.	2	-650	-2580.58	23080.24	SLV 6	8.94	Si
ini.	2	-7218	1088.76	23080.24	SLV 16	21.2	Si
fin.	2	-9848	1980.53	23080.24	SLV 16	11.65	Si
ini.	2	5099	-3179.23	23080.24	SLV 3	7.26	Si
fin.	2	7489	-4529.03	23080.24	SLV 3	5.1	Si
ini.	2	1791	-1348.07	23080.24	SLV 7	17.12	Si
fin.	2	2536	-2073.04	23080.24	SLV 7	11.13	Si
ini.	2	4240	-3468.4	23080.24	SLV 2	6.65	Si
fin.	2	6533	-4681.29	23080.24	SLV 2	4.93	Si
ini.	2	5099	-3179.23	23080.24	SLV 4	7.26	Si
fin.	2	7489	-4529.03	23080.24	SLV 4	5.1	Si

Verifiche a taglio delle travi in muratura secondo §C8.7.1.3.1 in combinazioni sismiche

Sezione	yM	N	M	V	Vt	Vp	Vt fess. diag.	Vt,lim	Comb.	c.s.	Verifica
ini.	2	-4769	-1031.58	-7687			7418	2932	SLV 9	0.38	No
fin.	2	-5851	-627.72	-11453			7850	3094	SLV 9	0.27	No
ini.	2	-7218	1088.76	-15828			8397	3287	SLV 16	0.21	No
fin.	2	-9848	1980.53	-18892			9449	3630	SLV 16	0.19	No
ini.	2	-8077	799.59	-16787			8741	3403	SLV 13	0.2	No
fin.	2	-10804	1828.27	-20695			9831	3747	SLV 13	0.18	No
ini.	2	5099	-3179.23	13368			5510	0	SLV 4	0	No
fin.	2	7489	-4529.03	13526			5510	0	SLV 4	0	No
ini.	2	-7218	1088.76	-15828			8397	3287	SLV 15	0.21	No
fin.	2	-9848	1980.53	-18892			9449	3630	SLV 15	0.19	No
ini.	2	5099	-3179.23	13368			5510	0	SLV 3	0	No
fin.	2	7489	-4529.03	13526			5510	0	SLV 3	0	No
ini.	2	4240	-3468.4	12409			5510	691	SLV 2	0.06	No
fin.	2	6533	-4681.29	11723			5510	0	SLV 2	0	No
ini.	2	4240	-3468.4	12409			5510	691	SLV 1	0.06	No
fin.	2	6533	-4681.29	11723			5510	0	SLV 1	0	No
ini.	2	-8077	799.59	-16787			8741	3403	SLV 14	0.2	No
fin.	2	-10804	1828.27	-20695			9831	3747	SLV 14	0.18	No
ini.	2	-4769	-1031.58	-7687			7418	2932	SLV 10	0.38	No
fin.	2	-5851	-627.72	-11453			7850	3094	SLV 10	0.27	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.93	SLV 1	Si
V_SLV	0	SLV 1	No
PF_SLU	7.5	SLU 84	Si
V_SLU	0.354	SLU 84	No