

Progetto di riqualificazione per il cinema teatro Italia

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PROGETTO DEFINITIVO

TITOLO ELABORATO

SCALA

RELAZIONE DI CALCOLO
STATO DI PROGETTO

-

CODICE ELABORATO

SD_003

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TABULATI DI CALCOLO

(in ottemperanza al D.M. 17 genn. 2018 "Norme tecniche per le costruzioni" par. 10)

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CARATTERISTICHE MATERIALI UTILIZZATI

LEGENDA TABELLA DATI MATERIALI

Il programma consente l'uso di materiali diversi. Sono previsti i seguenti tipi di materiale:

1	materiale tipo cemento armato
2	materiale tipo acciaio
3	materiale tipo muratura
4	materiale tipo legno
5	materiale tipo generico

I materiali utilizzati nella modellazione sono individuati da una sigla identificativa ed un codice numerico (gli elementi strutturali richiamano quest'ultimo nella propria descrizione). Per ogni materiale vengono riportati in tabella i seguenti dati:

Young	modulo di elasticità normale E
Poisson	coefficiente di contrazione trasversale ν
G	modulo di elasticità tangenziale
Gamma	peso specifico
Alfa	coefficiente di dilatazione termica
Fattore di confidenza FC m	Fattore di confidenza specifico per materiale; (è riportato solo se diverso da quello globale della struttura)
Fattore di confidenza FC a	Fattore di confidenza specifico per l'armatura (è riportato solo se diverso da quello globale della struttura)
Elasto-plastico	Materiale elastico perfettamente plastico per aste non lineari
Massima compressione	Massima tensione di compressione per aste non lineari
Massima trazione	Massima tensione di trazione per aste non lineari
Fattore attrito	Coefficiente di attrito per aste non lineari
Rapporto HRDb	Rapporto di hardening a flessione
Rapporto HRDv	Rapporto di hardening a taglio

I dati soprariportati vengono utilizzati per la modellazione dello schema statico e per la determinazione dei carichi inerziali e termici. In relazione al tipo di materiale vengono riportati inoltre:

1	c.a.	Resistenza Rc	resistenza a compressione cubica
		Resistenza fctm	resistenza media a trazione semplice
		Coefficiente ksb	Coefficiente di riduzione della resistenza a compressione da utilizzare nello stress block
2	acciaio	Tensione ft	Valore della tensione di rottura
		Tensione fy	Valore della tensione di snervamento
		Resistenza fd	Resistenza di calcolo per SL CNR-UNI 10011
		Resistenza fd (>40)	Resistenza di calcolo per SL CNR-UNI 10011 per spessori >

		40mm
	Tensione ammissibile	Tensione ammissibile CNR-UNI 10011
	Tensione ammissibile(>40)	Tensione ammissibile CNR-UNI 10011 per spessori > 40mm
3	muratura	
	Muratura consolidata	Muratura per la quale si prevedono interventi di rinforzo"
	Incremento resistenza	Incremento conseguito in termini di resistenza
	Incremento rigidezza	Incremento conseguito in termini di rigidezza
	Resistenza f	Valore della resistenza a compressione
	Resistenza fv0	Valore della resistenza a taglio in assenza di tensioni normali
	Resistenza fh	Valore della resistenza a compressione orizzontale
	Resistenza fb	Valore della resistenza a compressione dei blocchi
	Resistenza fbh	Valore della resistenza a compressione dei blocchi in direzione orizzontale
	Resistenza fv0h	Valore della resistenza a taglio in assenza di tensioni normali per le travi
	Resistenza ft	Valore della resistenza a trazione per fessurazione diagonale
	Resistenza fvlim	Valore della massima resistenza a taglio
	Resistenza fbt	Valore della resistenza a trazione dei blocchi
	Coefficiente mu	Coefficiente d'attrito utilizzato per la resistenza a taglio (tipicamente 0.4)
	Coefficiente fi	Coefficiente d'ingranamento utilizzato per la resistenza a taglio
	Coefficiente ksb	Coefficiente di riduzione della resistenza a compressione da utilizzare nello stress block
4	legno	
	E0,05	Modulo di elasticità corrispondente ad un frattile del 5%
	Resistenza fc0	Valore della resistenza a compressione parallela
	Resistenza ft0	Valore della resistenza a trazione parallela
	Resistenza fm	Valore della resistenza a flessione
	Resistenza fv	Valore della resistenza a taglio
	Resist. ft0k	Resistenza caratteristica (tensione amm. per REGLES) per trazione
	Resist. fmk	Resistenza caratteristica (tensione amm. per REGLES) per flessione
	Resist. fvk	Resistenza caratteristica (tensione amm. per REGLES) per taglio
	Modulo E0,05 Lamellare	Modulo elastico parallelo caratteristico lamellare o massiccio

Nel tabulato si riportano sia i valori caratteristici che medi utilizzando gli uni e/o gli altri in relazione alle richieste di normativa ed alla tipologia di verifica. (Cap.7 NTC18 per materiali nuovi, Cap.8 NTC18 e relativa circolare 21/01/2019 per materiali esistenti, Linee Guida Reluis per incamiciatura CAM, CNR-DT 200 per interventi con FRP)

Vengono inoltre riportate le tabelle contenenti il riassunto delle informazioni assegnate nei criteri di progetto in uso.

Id	Tipo / Note	V. caratt. daN/cm2	V. medio daN/cm2	Young daN/cm2	Poisson	G daN/cm2	Gamma daN/cm3	Alfa	Altri
1	Calcestruzzo Classe C25/30 < MATERIALE NUOVO >			3.145e+05	0.20	1.310e+05	2.50e-03	1.00e-05	
	Resistenza Rc	300.0	396.4						
	Resistenza fctm		25.6						
	Rapporto Rfessurata								1.00
	Coefficiente ksb								0.85
	Rapporto HRDb								1.00e-05
	Rapporto HRDv								1.00e-05
12	Acciaio Fe430 - S275-acciaio Fe430-S275 < MATERIALE NUOVO >			2.100e+06	0.30	8.077e+05	7.85e-03	1.20e-05	
	Tensione ft	4300.0	4526.3						
	Tensione fy	2750.0	2894.7						
	Resistenza fd	2750.0							
	Resistenza fd (>40)	2500.0							
	Tensione ammissibile	1900.0							
	Tensione ammissibile (>40)	1700.0							
	Rapporto HRDb								1.00e-05
	Rapporto HRDv								1.00e-05
108	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04-muratura E = 1.500e+04 < MATERIALE ESISTENTE >			1.500e+04	0.0	5000.0	1.80e-03	1.00e-05	
	Fattore di confidenza FC m								1.35
	Resistenza f	20.8	34.5						
	Resistenza fh	10.4	20.0						
	Resistenza fv0	0.9	20.0						
	Resistenza fv0h	0.9	2.0						
	Resistenza tau0	0.3	0.9						
	Resistenza fvlm	2.4	3.4						
	Resistenza fb	41.6	52.0						
	Resistenza fbh	8.3	10.4						
	Resistenza fbt	2.2	2.8						
	Rapporto Rfessurata								1.00
	Coefficiente ksb								0.85
	Coefficiente mu tilda								0.50
	Coefficiente fi								0.50
	Rapporto HRDb								1.00e-05
	Rapporto HRDv								1.00e-05
158	Calcestruzzo Classe C25/30 < MATERIALE ESISTENTE >			3.145e+05	0.20	1.310e+05	2.50e-03	1.00e-05	
	Fattore di confidenza FC m								1.35
	Fattore di confidenza FC a								1.35
	Resistenza Rc	203.6	300.0						
	Resistenza fctm		25.6						
	Rapporto Rfessurata								1.00
	Coefficiente ksb								0.85
	Rapporto HRDb								1.00e-05
	Rapporto HRDv								1.00e-05
159	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04-muratura (consolidata) E = 2.250e+04 < MATERIALE ESISTENTE >			2.250e+04	0.0	7500.0	1.80e-03	1.00e-05	
	Fattore di confidenza FC m								1.35
	Muratura consolidata								
	Incremento resistenza (f)								1.50
	Incremento resistenza (v)								1.50
	Incremento rigidezza								1.50
	Resistenza f	20.8	26.0						
	Resistenza fh	10.4	13.0						
	Resistenza fv0	0.9	1.3						
	Resistenza fv0h	0.9	1.3						
	Resistenza tau0	0.3	0.5						
	Resistenza fvlm	2.4	3.4						
	Resistenza fb	41.6	52.0						
	Resistenza fbh	8.3	10.4						
	Resistenza fbt	2.2	2.8						
	Rapporto Rfessurata								1.00
	Coefficiente ksb								0.85
	Coefficiente mu tilda								0.50
	Coefficiente fi								0.50
	Rapporto HRDb								1.00e-05
	Rapporto HRDv								1.00e-05
160	Acciaio Fe430 - S275-acciaio Fe430-S275 <			2.100e+06	0.30	8.077e+05	7.85e-03	1.20e-05	

INGEGNERE

Id	Tipo / Note	V. caratt.	V. medio	Young	Poisson	G	Gamma	Alfa	Altri
	MATERIALE ESISTENTE >								
	Fattore di confidenza FC m								1.35
	Tensione ft	4085.0	4300.0						
	Tensione fy	2612.5	2750.0						
	Resistenza fd	2750.0							
	Resistenza fd (>40)	2500.0							
	Tensione ammissibile	1900.0							
	Tensione ammissibile (>40)	1700.0							
	Rapporto HRDb								1.00e-05
	Rapporto HRDv								1.00e-05
161	Acciaio Fe360 - S235-acciaio Fe360-S235 <			2.100e+06	0.30	8.077e+05	7.85e-03	1.20e-05	
	MATERIALE ESISTENTE >								
	Fattore di confidenza FC m								1.35
	Tensione ft	3420.0	3600.0						
	Tensione fy	2232.5	2350.0						
	Resistenza fd	2350.0							
	Resistenza fd (>40)	2100.0							
	Tensione ammissibile	1600.0							
	Tensione ammissibile (>40)	1400.0							
	Rapporto HRDb								1.00e-05
	Rapporto HRDv								1.00e-05

Aste acc.	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
Generalità						
Beta assegnato	0.80	0.80	0.80	0.80	0.80	
Verifica come controvento	NO	NO	NO	NO	NO	
Usa condizioni I e II	SI	SI	SI	SI	SI	
Coefficiente gamma M0	1.05	1.05	1.05	1.05	1.05	
Coefficiente gamma M1	1.05	1.05	1.05	1.05	1.05	
Coefficiente gamma M2	1.25	1.25	1.25	1.25	1.25	

Travi acc.	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
Lunghezze libere						
3-3 Beta * L automatico	SI	SI	SI	NO	SI	
3-3 Beta assegnato	1.00	1.00	1.00	1.00	1.00	
3-3 Beta assegnato [cm]	0.0	0.0	0.0	0.0	0.0	
2-2 Beta * L automatico	SI	SI	SI	NO	SI	
2-2 Beta assegnato	1.00	1.00	1.00	1.00	1.00	
2-2 Beta * L assegnato [cm]	0.0	0.0	0.0	0.0	0.0	
1-1 Beta * L automatico	SI	SI	SI	NO	SI	
1-1 Beta assegnato	1.00	1.00	1.00	1.00	1.00	
1-1 Beta * L assegnato [cm]	0.0	0.0	0.0	0.0	0.0	
Generalità						
Coefficiente gamma M0	1.05	1.05	1.05	1.05	1.05	
Coefficiente gamma M1	1.05	1.05	1.05	1.05	1.05	
Coefficiente gamma M2	1.25	1.25	1.25	1.25	1.25	
Luce di taglio per GR [cm]	1.00	1.00	1.00	1.00	1.00	
Usa condizioni I e II	SI	SI	SI	SI	SI	
Momenti equivalenti	SI	SI	SI	SI	SI	

Muratura	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
Lunghezze libere						
Altezza interpiano [cm]	0.0	0.0	0.0	0.0	0.0	
Rho	0.85	0.85	0.85	0.85	0.85	
Snellezza limite	20.00	20.00	20.00	20.00	20.00	
Generalità						
Gamma non sismico	3.00	3.00	3.00	3.00	3.00	
Gamma sismico	2.40	2.40	2.40	2.00	2.40	
Tolleranza azioni [daN/cm2]	0.0	0.0	0.0	0.0	0.0	
Media valori per quota	SI	SI	SI	SI	SI	
Media valori per elemento	SI	SI	SI	SI	SI	
Verifica come fascia	NO	NO	NO	NO	SI	
Usa formula [7.8.3]	SI	SI	SI	SI	SI	

Solai e pannelli	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
Generalità						
Usa tensioni ammissibili	NO	NO	NO	NO	NO	
Af inf: da traliccio	SI	SI	SI	SI	SI	

INGEGNERE

Solai e pannelli	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
Consenti armatura a taglio	NO	NO	NO	NO	NO	
Incrementa armatura longitudinale per taglio	SI	SI	SI	SI	SI	
Af inf: da q*L*L /	20.00	20.00	20.00	20.00	20.00	
Incremento fascia piena [cm]	5.00	5.00	5.00	5.00	5.00	
Armatura						
Minima tesa	0.15	0.15	0.15	0.15	0.15	
Massima tesa	3.00	3.00	3.00	3.00	3.00	
Minima compressa	0.0	0.0	0.0	0.0	0.0	
Af/h [cm]	7.000e-02	7.000e-02	7.000e-02	7.000e-02	7.000e-02	
Stati limite ultimi						
Tensione fy [daN/cm2]	4500.00	4500.00	4500.00	4500.00	4500.00	
Tipo acciaio	tipo C	tipo C	tipo C	tipo C	tipo C	
Coefficiente gamma s	1.15	1.15	1.15	1.15	1.15	
Coefficiente gamma c	1.50	1.50	1.50	1.50	1.50	
Fattore di ridistribuzione	0.0	0.0	0.0	0.0	0.0	
Tensioni ammissibili						
Tensione amm. cls [daN/cm2]	85.00	85.00	85.00	85.00	85.00	
Tensione amm. acciaio [daN/cm2]	2600.00	2600.00	2600.00	2600.00	2600.00	
Rapporto omogeneizzazione N	15.00	15.00	15.00	15.00	15.00	
Massimo rapporto area compressa/tesa	1.00	1.00	1.00	1.00	1.00	
Verifica freccia						
Infinita	250.00	250.00	250.00	250.00	250.00	
Istantanea	500.00	500.00	500.00	500.00	500.00	
Fattore viscosità	3.00	3.00	3.00	3.00	3.00	
Usa J non fessurato	NO	NO	NO	NO	NO	
Elementi non strutturali						
Tamponatura antiespulsione	NO	NO	NO	NO	NO	
Tamponatura con armatura	NO	NO	NO	NO	NO	
Fattore di struttura/comportamento	2.00	2.00	2.00	2.00	2.00	
Coefficiente gamma m	0.0	0.0	0.0	0.0	0.0	
Periodo Ta	0.0	0.0	0.0	0.0	0.0	
Altezza pannello	0.0	0.0	0.0	0.0	0.0	

MODELLAZIONE DELLE SEZIONI

LEGENDA TABELLA DATI SEZIONI

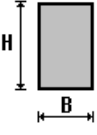
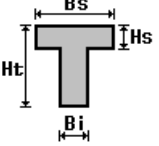
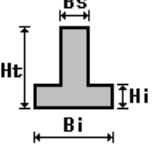
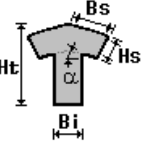
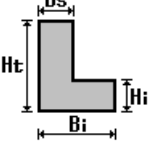
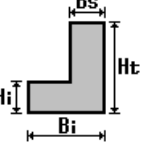
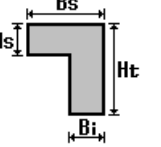
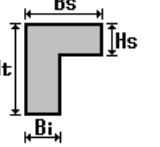
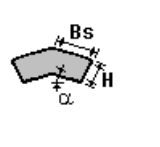
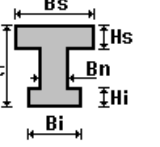
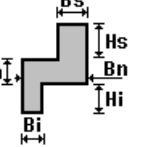
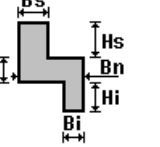
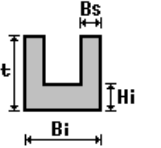
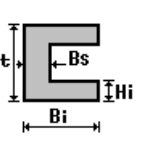
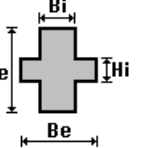
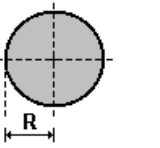
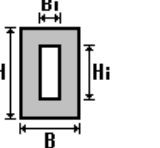
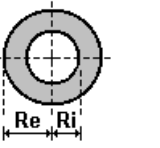
Il programma consente l'uso di sezioni diverse. Sono previsti i seguenti tipi di sezione:

1. sezione di tipo generico
2. profilati semplici
3. profilati accoppiati e speciali

Le sezioni utilizzate nella modellazione sono individuate da una sigla identificativa ed un codice numerico (gli elementi strutturali richiamano quest'ultimo nella propria descrizione). Per ogni sezione vengono riportati in tabella i seguenti dati:

Area	area della sezione
A V2	area della sezione/fattore di taglio (per il taglio in direzione 2)
A V3	area della sezione/fattore di taglio (per il taglio in direzione 3)
Jt	fattore torsionale di rigidezza
J2-2	momento d'inerzia della sezione riferito all'asse 2
J3-3	momento d'inerzia della sezione riferito all'asse 3
W2-2	modulo di resistenza della sezione riferito all'asse 2
W3-3	modulo di resistenza della sezione riferito all'asse 3
Wp2-2	modulo di resistenza plastico della sezione riferito all'asse 2
Wp3-3	modulo di resistenza plastico della sezione riferito all'asse 3

I dati sopra riportati vengono utilizzati per la determinazione dei carichi inerziali e per la definizione delle rigidezze degli elementi strutturali; qualora il valore di Area V2 (e/o Area V3) sia nullo la deformabilità per taglio V2 (e/o V3) è trascurata. La valutazione delle caratteristiche inerziali delle sezioni è condotta nel riferimento 2-3 dell'elemento.

 rettangolare	 a T	 a T rovescia	 a T di colmo	 a L	 a L specchiata
 a L specchiata rovescia	 a L rovescia	 a L di colmo	 a doppio T	 a quattro specchiata	 a quattro
 a U	 a C	 a croce	 circolare	 rettangolare cava	 circolare cava

Per quanto concerne i profilati semplici ed accoppiati l'asse 2 del riferimento coincide con l'asse x riportato nei più diffusi profilati.

Per quanto concerne le sezioni di tipo generico (tipo 1.):
 i valori dimensionali con prefisso B sono riferiti all'asse 2
 i valori dimensionali con prefisso H sono riferiti all'asse 3

Id	Tipo	Area	A V2	A V3	Jt	J 2-2	J 3-3	W 2-2	W 3-3	Wp 2-2	Wp 3-3
		cm2	cm2	cm2	cm4	cm4	cm4	cm3	cm3	cm3	cm3
1	Rettangolare: b=51 h=51	2601.00	2167.50	2167.50	9.510e+05	5.638e+05	5.638e+05	2.211e+04	2.211e+04	3.316e+04	3.316e+04
2	Rettangolare: b=38 h=38	1444.00	1203.33	1203.33	2.931e+05	1.738e+05	1.738e+05	9145.33	9145.33	1.372e+04	1.372e+04
3	IPE 140	16.40	0.0	0.0	2.40	45.00	541.00	12.30	77.30	19.20	88.30
5	Rettangolare: b=25 h=25	625.00	520.83	520.83	5.491e+04	3.255e+04	3.255e+04	2604.17	2604.17	3906.25	3906.25
6	IPE 200	28.50	0.0	0.0	7.00	142.00	1943.00	28.50	194.30	44.60	220.60
7	IPN 180	27.80	0.0	0.0	9.60	81.30	1450.00	19.80	161.00	33.20	187.00
8	HEA 240	76.80	0.0	0.0	41.60	2769.00	7763.00	230.70	675.10	351.70	744.60
9	sezione Q40x3.2 + 2RP	7.33	0.0	0.0	23.92	24.51	11.51	9.80	5.75	0.98	3.52
10	sezione IPE140 + 2RP	29.47	0.0	0.0	560.56	242.93	725.75	58.54	103.68	69.97	130.83

MODELLAZIONE STRUTTURA: NODI

LEGENDA TABELLA DATI NODI

Il programma utilizza per la modellazione nodi strutturali.

Ogni nodo è individuato dalle coordinate cartesiane nel sistema di riferimento globale (X Y Z).

Ad ogni nodo è eventualmente associato un codice di vincolamento rigido, un codice di fondazione speciale, ed un set di sei molle (tre per le traslazioni, tre per le rotazioni). Le tabelle sottoriportate riflettono le succitate possibilità. In particolare per ogni nodo viene indicato in tabella:

Nodo	numero del nodo.
X	valore della coordinata X
Y	valore della coordinata Y
Z	valore della coordinata Z

Per i nodi ai quali sia associato un codice di vincolamento rigido, un codice di fondazione speciale o un set di molle viene indicato in tabella:

Nodo	numero del nodo.
X	valore della coordinata X
Y	valore della coordinata Y
Z	valore della coordinata Z
Note	eventuale codice di vincolo (es. v=110010 sei valori relativi ai sei gradi di libertà previsti per il nodo TxTyTzRxRyRz, il valore 1 indica che lo spostamento o rotazione relativo è impedito, il valore 0 indica che lo spostamento o rotazione relativo è libero).
Note	(FS = 1, 2,...) eventuale codice del tipo di fondazione speciale (1, 2,... fanno riferimento alle tipologie: plinto, palo, plinto su pali,...) che è collegato al nodo. (ISO = "id SIGLA") indice e sigla identificativa dell' eventuale isolatore sismico assegnato al nodo
Rig. TX	valore della rigidezza dei vincoli elastici eventualmente applicati al nodo, nello specifico TX (idem per TY, TZ, RX, RY, RZ).

Per strutture sismicamente isolate viene inoltre inserita la tabella delle caratteristiche per gli isolatori utilizzati; le caratteristiche sono indicate in conformità al cap. 7.10 del D.M. 17/01/18

TABELLA DATI NODI

Nodo	X	Y	Z	Nodo	X	Y	Z	Nodo	X	Y	Z
	cm	cm	cm		cm	cm	cm		cm	cm	cm
2	6.0	1055.3	106.7	3	108.4	1055.3	106.7	5	6.0	1055.3	220.0
6	108.4	1055.3	220.0	7	6.0	1055.3	320.0	8	108.4	1055.3	320.0
9	210.8	1055.3	106.7	11	210.8	1055.3	220.0	12	210.8	1055.3	320.0
13	313.2	1055.3	106.7	15	313.2	1055.3	220.0	16	313.2	1055.3	320.0
17	415.6	1055.3	106.7	19	415.6	1055.3	220.0	20	415.6	1055.3	320.0
21	506.5	1055.3	106.7	23	506.5	1055.3	220.0	24	506.5	1055.3	320.0
25	597.3	1055.3	106.7	27	597.3	1055.3	220.0	28	597.3	1055.3	320.0
29	688.2	1055.3	106.7	31	688.2	1055.3	220.0	32	688.2	1055.3	320.0
33	779.0	1055.3	106.7	35	779.0	1055.3	220.0	36	779.0	1055.3	320.0
37	860.9	1055.3	106.7	39	860.9	1055.3	220.0	40	860.9	1055.3	320.0
41	985.1	1055.3	106.7	43	985.1	1055.3	220.0	44	985.1	1055.3	320.0
45	1064.5	1055.3	106.7	47	1064.5	1055.3	220.0	48	1064.5	1055.3	320.0
49	1143.8	1055.3	106.7	51	1143.8	1055.3	220.0	52	1143.8	1055.3	320.0
53	1228.2	1055.3	106.7	55	1228.2	1055.3	220.0	56	1228.2	1055.3	320.0
57	1312.5	1055.3	106.7	59	1312.5	1055.3	220.0	60	1312.5	1055.3	320.0

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61	1434.5	1055.3	106.7	63	1434.5	1055.3	220.0	64	1434.5	1055.3	320.0
65	1508.7	1055.3	106.7	67	1508.7	1055.3	220.0	68	1508.7	1055.3	320.0
69	1611.1	1055.3	106.7	71	1611.1	1055.3	220.0	72	1611.1	1055.3	320.0
73	1713.5	1055.3	106.7	75	1713.5	1055.3	220.0	76	1713.5	1055.3	320.0
77	1793.5	1055.3	106.7	79	1793.5	1055.3	220.0	80	1793.5	1055.3	320.0
81	1873.5	1055.3	106.7	83	1873.5	1055.3	220.0	84	1873.5	1055.3	320.0
85	1925.6	1055.3	106.7	87	1925.6	1055.3	220.0	88	1925.6	1055.3	320.0
89	2021.5	1055.3	106.7	90	1638.7	1055.3	320.0	91	2197.0	1055.3	106.7
93	2117.3	1055.3	220.0	94	2197.0	1055.3	220.0	95	2117.3	1055.3	320.0
96	2197.0	1055.3	320.0	97	2276.7	1055.3	106.7	99	2276.7	1055.3	220.0
100	2276.7	1055.3	320.0	101	2021.5	1055.3	220.0	102	2021.5	1055.3	320.0
104	6.0	-1.4	106.7	105	108.4	-1.4	106.7	107	6.0	-1.4	220.0
108	108.4	-1.4	220.0	109	6.0	-1.4	320.0	110	108.4	-1.4	320.0
111	210.8	-1.4	106.7	113	210.8	-1.4	220.0	114	210.8	-1.4	320.0
115	313.2	-1.4	106.7	117	313.2	-1.4	220.0	118	313.2	-1.4	320.0
119	415.6	-1.4	106.7	121	415.6	-1.4	220.0	122	415.6	-1.4	320.0
123	506.5	-1.4	106.7	125	506.5	-1.4	220.0	126	506.5	-1.4	320.0
127	597.3	-1.4	106.7	129	597.3	-1.4	220.0	130	597.3	-1.4	320.0
131	688.2	-1.4	106.7	133	688.2	-1.4	220.0	134	688.2	-1.4	320.0
135	779.0	-1.4	106.7	137	779.0	-1.4	220.0	138	779.0	-1.4	320.0
139	870.2	-1.4	106.7	141	870.2	-1.4	220.0	142	870.2	-1.4	320.0
143	961.4	-1.4	106.7	145	961.4	-1.4	220.0	146	961.4	-1.4	320.0
147	1052.6	-1.4	106.7	149	1052.6	-1.4	220.0	150	1052.6	-1.4	320.0
151	1143.8	-1.4	106.7	153	1143.8	-1.4	220.0	154	1143.8	-1.4	320.0
155	1235.0	-1.4	106.7	157	1235.0	-1.4	220.0	158	1235.0	-1.4	320.0
159	1326.2	-1.4	106.7	161	1326.2	-1.4	220.0	162	1326.2	-1.4	320.0
163	1417.4	-1.4	106.7	165	1417.4	-1.4	220.0	166	1417.4	-1.4	320.0
167	1508.7	-1.4	106.7	169	1508.7	-1.4	220.0	170	1508.7	-1.4	320.0
171	1611.1	-1.4	106.7	173	1611.1	-1.4	220.0	174	1611.1	-1.4	320.0
175	1713.5	-1.4	106.7	177	1713.5	-1.4	220.0	178	1713.5	-1.4	320.0
179	1793.5	-1.4	106.7	181	1793.5	-1.4	220.0	182	1793.5	-1.4	320.0
183	1873.5	-1.4	106.7	185	1873.5	-1.4	220.0	186	1873.5	-1.4	320.0
187	1974.3	-1.4	106.7	189	1974.3	-1.4	220.0	190	1974.3	-1.4	320.0
191	2075.1	-1.4	106.7	193	2075.1	-1.4	220.0	194	2075.1	-1.4	320.0
195	2175.9	-1.4	106.7	197	2175.9	-1.4	220.0	198	2175.9	-1.4	320.0
199	2276.7	-1.4	106.7	201	2276.7	-1.4	220.0	202	2276.7	-1.4	320.0
203	2276.7	115.8	106.7	205	2276.7	115.8	220.0	206	2276.7	115.8	320.0
207	2276.7	250.9	106.7	209	2276.7	250.9	220.0	210	2276.7	250.9	320.0
211	2276.7	349.4	106.7	213	2276.7	349.4	220.0	214	2276.7	349.4	320.0
215	2276.7	458.2	106.7	217	2276.7	458.2	220.0	218	2276.7	458.2	320.0
219	2276.7	593.2	106.7	221	2276.7	593.2	220.0	222	2276.7	593.2	320.0
223	2276.6	701.6	106.7	225	2276.6	701.6	220.0	226	2276.7	701.6	320.0
227	2276.7	805.6	106.7	229	2276.7	805.6	220.0	230	2276.7	805.6	320.0
231	2276.7	940.6	106.7	233	2276.7	940.6	220.0	234	2276.7	940.6	320.0
235	2276.7	1215.0	106.7	237	2276.7	1215.0	220.0	238	2276.7	1215.0	320.0
239	2276.7	1347.9	106.7	241	2276.7	1347.9	220.0	242	2276.7	1347.9	320.0
243	2276.7	1523.5	106.7	245	2276.7	1523.5	220.0	246	2276.7	1523.5	320.0
247	6.0	965.0	533.9	248	6.0	965.0	620.0	249	6.0	1120.5	106.7
251	2276.7	593.2	920.0	252	6.0	1120.5	220.0	253	1713.5	-147.0	426.7
254	6.0	1120.5	320.0	255	6.0	1185.7	106.7	257	6.0	1185.7	220.0
258	6.0	1185.7	320.0	259	6.0	1282.8	106.7	261	6.0	1282.8	220.0
262	6.0	1282.8	320.0	263	100.6	1292.9	106.7	265	100.6	1292.9	220.0
266	100.6	1292.9	320.0	267	195.2	1302.9	106.7	269	195.2	1302.9	220.0
270	195.2	1302.9	320.0	271	289.8	1312.9	106.7	273	289.8	1312.9	220.0
274	289.8	1312.9	320.0	275	384.5	1322.9	106.7	277	384.5	1322.9	220.0
278	384.5	1322.9	320.0	279	479.1	1333.0	106.7	281	479.1	1333.0	220.0
282	479.1	1333.0	320.0	283	573.7	1343.0	106.7	285	573.7	1343.0	220.0
286	573.7	1343.0	320.0	287	668.3	1353.0	106.7	289	668.3	1353.0	220.0
290	668.3	1353.0	320.0	291	762.9	1363.1	106.7	293	762.9	1363.1	220.0
294	762.9	1363.1	320.0	295	857.5	1373.1	106.7	297	857.5	1373.1	220.0
298	857.5	1373.1	320.0	299	952.1	1383.1	106.7	301	952.1	1383.1	220.0
302	952.1	1383.1	320.0	303	1046.7	1393.2	106.7	305	1046.7	1393.2	220.0
306	1046.7	1393.2	320.0	307	1141.4	1403.2	106.7	309	1141.4	1403.2	220.0
310	1141.4	1403.2	320.0	311	1236.0	1413.2	106.7	313	1236.0	1413.2	220.0
314	1236.0	1413.2	320.0	315	1330.6	1423.2	106.7	317	1330.6	1423.2	220.0
318	1330.6	1423.2	320.0	319	1425.2	1433.3	106.7	321	1425.2	1433.3	220.0
322	1425.2	1433.3	320.0	323	1519.8	1443.3	106.7	325	1519.8	1443.3	220.0
326	1519.8	1443.3	320.0	327	1614.4	1453.3	106.7	329	1614.4	1453.3	220.0
330	1614.4	1453.3	320.0	331	1709.0	1463.4	106.7	333	1709.0	1463.4	220.0
334	1709.0	1463.4	320.0	335	1803.6	1473.4	106.7	337	1803.6	1473.4	220.0
338	1803.6	1473.4	320.0	339	1898.3	1483.4	106.7	341	1898.3	1483.4	220.0
342	1898.3	1483.4	320.0	343	1992.9	1493.4	106.7	345	1992.9	1493.4	220.0
346	1992.9	1493.4	320.0	347	2087.5	1503.5	106.7	349	2087.5	1503.5	220.0
350	2087.5	1503.5	320.0	351	2182.1	1513.5	106.7	353	2182.1	1513.5	220.0
354	2182.1	1513.5	320.0	356	2276.7	1373.3	106.7	357	2276.7	1373.3	220.0
358	2276.7	1373.3	320.0	360	1799.2	1339.8	106.7	361	1894.7	1346.5	106.7
363	1799.2	1339.8	220.0	364	1894.7	1346.5	220.0	365	1799.2	1339.8	320.0
366	1894.7	1346.5	320.0	367	1990.2	1353.2	106.7	369	1990.2	1353.2	220.0
370	1990.2	1353.2	320.0	371	2085.7	1359.9	106.7	373	2085.7	1359.9	220.0

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374	2085.7	1359.9	320.0	375	2181.2	1366.6	106.7	377	2181.2	1366.6	220.0
378	2181.2	1366.6	320.0	379	1785.8	1471.5	106.7	381	1785.8	1471.5	220.0
382	1785.8	1471.5	320.0	383	6.0	75.9	106.7	385	6.0	75.9	220.0
386	6.0	75.9	320.0	387	6.0	153.3	106.7	389	6.0	153.3	220.0
390	6.0	153.3	320.0	391	6.0	280.4	106.7	393	6.0	280.4	220.0
394	6.0	280.4	320.0	395	6.0	403.7	106.7	397	6.0	403.7	220.0
398	6.0	403.7	320.0	399	6.0	526.1	106.7	401	6.0	526.1	220.0
402	6.0	526.1	320.0	403	6.0	607.8	106.7	405	6.0	607.8	220.0
406	6.0	607.8	320.0	407	5.9	701.6	106.7	409	5.9	701.6	220.0
410	6.0	701.6	320.0	411	6.0	771.3	106.7	413	6.0	771.3	220.0
414	6.0	771.3	320.0	415	6.0	874.6	106.7	417	6.0	874.6	220.0
418	6.0	874.6	320.0	419	6.0	965.0	106.7	421	6.0	965.0	220.0
422	6.0	965.0	320.0	423	-88.9	153.3	106.7	425	-88.9	153.3	220.0
426	-88.9	153.3	320.0	427	-183.9	153.3	106.7	429	-183.9	153.3	220.0
430	-183.9	153.3	320.0	431	-235.5	153.3	106.7	433	-235.5	153.3	220.0
434	-235.5	153.3	320.0	435	-327.5	153.3	106.7	437	-327.5	153.3	220.0
438	-327.5	153.3	320.0	439	-378.4	153.3	106.7	441	-378.4	153.3	220.0
442	-378.4	153.3	320.0	443	-447.2	153.3	106.7	445	-447.2	153.3	220.0
446	-447.2	153.3	320.0	447	-516.0	153.3	106.7	449	-516.0	153.3	220.0
450	-516.0	153.3	320.0	451	-584.7	153.3	106.7	453	-584.7	153.3	220.0
454	-584.7	153.3	320.0	455	-584.7	246.5	106.7	457	-584.7	246.5	220.0
458	-584.7	246.5	320.0	459	-584.7	349.4	106.7	461	-584.7	349.4	220.0
462	-584.7	349.4	320.0	463	-584.7	432.9	106.7	465	-584.7	432.9	220.0
466	-584.7	432.9	320.0	467	-584.7	526.1	106.7	469	-584.7	526.1	220.0
470	-584.7	526.1	320.0	471	-584.7	592.1	106.7	473	-584.7	592.1	220.0
474	-584.7	592.1	320.0	475	-584.7	658.2	106.7	477	-584.7	658.2	220.0
478	-584.7	658.2	320.0	479	-584.7	794.0	106.7	481	-584.7	794.0	220.0
482	-584.7	794.0	320.0	483	-584.7	874.6	106.7	485	-584.7	874.6	220.0
486	-584.7	874.6	320.0	487	-516.0	874.6	106.7	489	-516.0	874.6	220.0
490	-516.0	874.6	320.0	491	-447.2	874.6	106.7	493	-447.2	874.6	220.0
494	-447.2	874.6	320.0	495	-378.4	874.6	106.7	497	-378.4	874.6	220.0
498	-378.4	874.6	320.0	499	-313.6	874.6	106.7	501	-313.6	874.6	220.0
502	-313.6	874.6	320.0	503	-248.7	874.6	106.7	505	-248.7	874.6	220.0
506	-248.7	874.6	320.0	507	-183.9	874.6	106.7	509	-183.9	874.6	220.0
510	-183.9	874.6	320.0	511	-88.9	874.6	106.7	513	-88.9	874.6	220.0
514	-88.9	874.6	320.0	516	1903.5	701.6	320.0	518	1903.5	349.4	320.0
520	6.0	349.4	320.0	521	2276.7	701.6	726.7	522	1807.3	-147.0	620.0
523	6.0	349.4	106.7	524	6.0	349.4	220.0	525	2276.7	-147.0	106.7
527	2276.7	701.6	820.0	528	2276.7	-147.0	220.0	529	2276.7	-147.0	320.0
530	2182.8	-147.0	106.7	532	2182.8	-147.0	220.0	533	2182.8	-147.0	320.0
534	2089.0	-147.0	106.7	536	2089.0	-147.0	220.0	537	2089.0	-147.0	320.0
538	1995.1	-147.0	106.7	540	1995.1	-147.0	220.0	541	1995.1	-147.0	320.0
542	1901.2	-147.0	106.7	544	1901.2	-147.0	220.0	545	1901.2	-147.0	320.0
546	1807.3	-147.0	106.7	548	1807.3	-147.0	220.0	549	1807.3	-147.0	320.0
550	1713.5	-147.0	106.7	552	1713.5	-147.0	220.0	553	1713.5	-147.0	320.0
554	6.0	607.8	726.7	555	2276.7	701.6	920.0	556	6.0	1055.3	426.7
557	108.4	1055.3	426.7	558	2276.7	805.6	726.7	559	6.0	1055.3	533.9
560	108.4	1055.3	533.9	561	6.0	1055.3	620.0	562	108.4	1055.3	620.0
563	210.8	1055.3	426.7	564	1713.5	-147.0	533.9	565	210.8	1055.3	533.9
566	210.8	1055.3	620.0	567	313.2	1055.3	426.7	568	1713.5	-147.0	620.0
569	313.2	1055.3	533.9	570	313.2	1055.3	620.0	571	415.6	1055.3	426.7
572	2276.7	805.6	820.0	573	415.6	1055.3	533.9	574	415.6	1055.3	620.0
575	506.5	1055.3	426.7	576	-88.9	153.3	409.5	577	506.5	1055.3	533.9
578	506.5	1055.3	620.0	579	597.3	1055.3	426.7	580	-183.9	153.3	392.4
581	597.3	1055.3	533.9	582	597.3	1055.3	620.0	583	688.2	1055.3	426.7
584	2276.7	1055.3	820.0	585	688.2	1055.3	533.9	586	688.2	1055.3	620.0
587	779.0	1055.3	426.7	588	-235.5	153.3	383.1	589	779.0	1055.3	533.9
590	779.0	1055.3	620.0	591	860.9	1055.3	426.7	592	-327.5	153.3	366.4
593	860.9	1055.3	533.9	594	860.9	1055.3	620.0	595	985.1	1055.3	426.7
596	-378.4	153.3	357.3	597	985.1	1055.3	533.9	598	985.1	1055.3	620.0
599	1064.5	1055.3	426.7	600	779.0	527.0	620.0	601	1064.5	1055.3	533.9
602	1064.5	1055.3	620.0	603	1143.8	1055.3	426.7	604	-447.2	153.3	344.8
605	1143.8	1055.3	533.9	606	1143.8	1055.3	620.0	607	1228.2	1055.3	426.7
608	-516.0	153.3	332.4	609	1228.2	1055.3	533.9	610	1228.2	1055.3	620.0
611	1312.5	1055.3	426.7	612	2276.7	593.2	726.7	613	1312.5	1055.3	533.9
614	1312.5	1055.3	620.0	615	1434.5	1055.3	426.7	616	779.0	527.0	820.0
617	1434.5	1055.3	533.9	618	1434.5	1055.3	620.0	619	1508.7	1055.3	426.7
620	779.0	791.1	620.0	621	1508.7	1055.3	533.9	622	1508.7	1055.3	620.0
623	1611.1	1055.3	426.7	624	2276.7	593.2	820.0	625	1611.1	1055.3	533.9
626	1611.1	1055.3	620.0	627	1713.5	1055.3	426.7	628	2276.7	1055.3	920.0
629	1713.5	1055.3	533.9	630	1713.5	1055.3	620.0	631	1793.5	1055.3	426.7
632	779.0	262.8	620.0	633	1793.5	1055.3	533.9	634	1793.5	1055.3	620.0
635	1873.5	1055.3	426.7	636	779.0	350.8	753.3	637	1873.5	1055.3	533.9
638	1873.5	1055.3	620.0	639	1925.6	1055.3	426.7	640	6.0	1185.7	570.6
641	1925.6	1055.3	533.9	642	1925.6	1055.3	620.0	643	6.0	608.4	789.2
644	2117.3	1055.3	426.7	645	2197.0	1055.3	426.7	646	779.0	174.7	686.7
647	2117.3	1055.3	533.9	648	2197.0	1055.3	533.9	649	2117.3	1055.3	620.0
650	2197.0	1055.3	620.0	651	2276.7	1055.3	426.7	652	6.0	874.6	688.4
653	2276.7	1055.3	533.9	654	2276.7	1055.3	620.0	655	2021.5	1055.3	533.9

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656	2021.5	1055.3	620.0	657	2276.7	-1.4	726.7	658	6.0	-1.4	426.7
659	108.4	-1.4	426.7	660	779.0	703.1	753.3	661	6.0	-1.4	533.9
662	108.4	-1.4	533.9	663	6.0	-1.4	620.0	664	108.4	-1.4	620.0
665	210.8	-1.4	426.7	666	779.0	879.2	686.7	667	210.8	-1.4	533.9
668	210.8	-1.4	620.0	669	313.2	-1.4	426.7	670	2276.7	-1.4	820.0
671	313.2	-1.4	533.9	672	313.2	-1.4	620.0	673	415.6	-1.4	426.7
674	2276.7	-1.4	920.0	675	415.6	-1.4	533.9	676	415.6	-1.4	620.0
677	506.5	-1.4	426.7	678	2276.7	115.8	726.7	679	506.5	-1.4	533.9
680	506.5	-1.4	620.0	681	597.3	-1.4	426.7	682	415.6	527.0	620.0
683	597.3	-1.4	533.9	684	597.3	-1.4	620.0	685	688.2	-1.4	426.7
686	415.6	527.0	820.0	687	688.2	-1.4	533.9	688	688.2	-1.4	620.0
689	779.0	-1.4	426.7	690	2276.7	115.8	820.0	691	779.0	-1.4	533.9
692	779.0	-1.4	620.0	693	870.2	-1.4	426.7	694	2276.7	115.8	920.0
695	870.2	-1.4	533.9	696	870.2	-1.4	620.0	697	961.4	-1.4	426.7
698	415.6	791.1	620.0	699	961.4	-1.4	533.9	700	961.4	-1.4	620.0
701	1052.6	-1.4	426.7	702	2276.7	250.9	726.7	703	1052.6	-1.4	533.9
704	1052.6	-1.4	620.0	705	1143.8	-1.4	426.7	706	415.6	262.8	620.0
707	1143.8	-1.4	533.9	708	1143.8	-1.4	620.0	709	1235.0	-1.4	426.7
710	2276.7	250.9	820.0	711	1235.0	-1.4	533.9	712	1235.0	-1.4	620.0
713	1326.2	-1.4	426.7	714	415.6	350.8	753.3	715	1326.2	-1.4	533.9
716	1326.2	-1.4	620.0	717	1417.4	-1.4	426.7	718	2276.7	250.9	920.0
719	1417.4	-1.4	533.9	720	1417.4	-1.4	620.0	721	1508.7	-1.4	426.7
722	2276.7	349.4	726.7	723	1508.7	-1.4	533.9	724	1508.7	-1.4	620.0
725	1611.1	-1.4	426.7	726	415.6	174.7	686.7	727	1611.1	-1.4	533.9
728	1611.1	-1.4	620.0	729	1713.5	-1.4	426.7	730	415.6	703.1	753.3
731	1713.5	-1.4	533.9	732	1713.5	-1.4	620.0	733	1793.5	-1.4	426.7
734	2276.7	349.4	820.0	735	1793.5	-1.4	533.9	736	1793.5	-1.4	620.0
737	1873.5	-1.4	426.7	738	2276.7	349.4	920.0	739	1873.5	-1.4	533.9
740	1873.5	-1.4	620.0	741	1974.3	-1.4	426.7	742	2276.7	458.2	726.7
743	1974.3	-1.4	533.9	744	1974.3	-1.4	620.0	745	2075.1	-1.4	426.7
746	415.6	879.2	686.7	747	2075.1	-1.4	533.9	748	2075.1	-1.4	620.0
749	2175.9	-1.4	426.7	750	1143.8	527.0	620.0	751	2175.9	-1.4	533.9
752	2175.9	-1.4	620.0	753	2276.7	-1.4	426.7	754	2276.7	458.2	820.0
755	2276.7	-1.4	533.9	756	2276.7	-1.4	620.0	757	2276.7	115.8	426.7
758	2276.7	458.2	920.0	759	2276.7	115.8	533.9	760	2276.7	115.8	620.0
761	2276.7	250.9	426.7	762	1143.8	527.0	820.0	763	2276.7	250.9	533.9
764	2276.7	250.9	620.0	765	2276.7	349.4	426.7	766	2276.7	805.6	920.0
767	2276.7	349.4	533.9	768	2276.7	349.4	620.0	769	2276.7	458.2	426.7
770	2276.7	940.6	726.7	771	2276.7	458.2	533.9	772	2276.7	458.2	620.0
773	2276.7	593.2	426.7	774	1143.8	791.1	620.0	775	2276.7	593.2	533.9
776	2276.7	593.2	620.0	777	2276.7	701.6	426.7	778	1903.5	-1.4	620.0
779	2276.7	701.6	533.9	780	2276.7	701.6	620.0	781	2276.7	805.6	426.7
782	1143.8	262.8	620.0	783	2276.7	805.6	533.9	784	2276.7	805.6	620.0
785	2276.7	940.6	426.7	786	2276.7	940.6	820.0	787	2276.7	940.6	533.9
788	2276.7	940.6	620.0	789	2276.7	1215.0	426.7	790	2276.7	940.6	920.0
791	2276.7	1215.0	533.9	792	2276.7	1215.0	620.0	793	2276.7	1347.9	426.7
794	6.0	349.4	726.7	795	2276.7	1347.9	533.9	796	2276.7	1347.9	620.0
797	2276.7	1523.5	426.7	798	1143.8	350.8	753.3	799	2276.7	1523.5	533.9
800	2276.7	1523.5	620.0	801	1143.8	174.7	686.7	802	2276.7	458.2	794.0
803	6.0	1120.5	426.7	804	2276.7	593.2	794.9	805	1143.8	703.1	753.3
806	6.0	1120.5	533.9	807	1143.8	879.2	686.7	808	6.0	527.0	820.0
809	6.0	1185.7	426.7	810	1508.7	527.0	620.0	811	6.0	1185.7	533.9
812	2276.7	527.0	726.7	813	6.0	1282.8	426.7	814	2276.7	805.6	714.5
815	6.0	1282.8	533.9	816	6.0	153.3	620.0	817	100.6	1292.9	426.7
818	1508.7	527.0	820.0	819	100.6	1292.9	533.9	820	2276.7	773.5	726.7
821	195.2	1302.9	426.7	822	1508.7	791.1	620.0	823	195.2	1302.9	533.9
824	1508.7	262.8	620.0	825	289.8	1312.9	426.7	826	1508.7	350.8	753.3
827	289.8	1312.9	533.9	828	6.0	280.4	726.7	829	384.5	1322.9	426.7
830	2276.7	940.6	663.4	831	384.5	1322.9	533.9	832	6.0	280.4	620.0
833	479.1	1333.0	426.7	834	2276.7	701.6	753.9	835	479.1	1333.0	533.9
836	1508.7	174.7	686.7	837	573.7	1343.0	426.7	838	1508.7	703.1	753.3
839	573.7	1343.0	533.9	840	6.0	404.1	773.5	841	668.3	1353.0	426.7
842	2021.5	1055.3	426.7	843	668.3	1353.0	533.9	844	6.0	403.7	726.7
845	762.9	1363.1	426.7	846	-516.0	874.6	332.4	847	762.9	1363.1	533.9
848	6.0	403.7	620.0	849	857.5	1373.1	426.7	850	-447.2	874.6	344.8
851	857.5	1373.1	533.9	852	6.0	349.4	752.8	853	952.1	1383.1	426.7
854	1508.7	879.2	686.7	855	952.1	1383.1	533.9	856	6.0	75.9	649.3
857	1046.7	1393.2	426.7	858	-378.4	874.6	357.3	859	1046.7	1393.2	533.9
860	2276.7	250.9	715.5	861	1141.4	1403.2	426.7	862	-313.6	874.6	369.0
863	1141.4	1403.2	533.9	864	6.0	773.5	726.7	865	1236.0	1413.2	426.7
866	-248.7	874.6	380.7	867	1236.0	1413.2	533.9	868	6.0	75.9	620.0
869	1330.6	1423.2	426.7	870	1873.5	527.0	620.0	871	1330.6	1423.2	533.9
872	6.0	701.6	726.7	873	1425.2	1433.3	426.7	874	-183.9	874.6	392.4
875	1425.2	1433.3	533.9	876	6.0	965.0	654.2	877	1519.8	1443.3	426.7
878	-88.9	874.6	409.5	879	1519.8	1443.3	533.9	880	1873.5	527.0	820.0
881	1614.4	1453.3	426.7	882	-378.4	525.3	357.3	883	1614.4	1453.3	533.9
884	1873.5	791.1	620.0	885	1709.0	1463.4	426.7	886	-183.9	525.3	392.4
887	1709.0	1463.4	533.9	888	2276.7	280.4	726.7	889	1803.6	1473.4	426.7
890	1873.5	262.8	620.0	891	1803.6	1473.4	533.9	892	2276.7	527.0	920.0

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893	1898.3	1483.4	426.7	894	1873.5	350.8	753.3	895	1898.3	1483.4	533.9
896	1873.5	174.7	686.7	897	1992.9	1493.4	426.7	898	1873.5	703.1	753.3
899	1992.9	1493.4	533.9	900	1992.9	1493.4	555.4	901	2087.5	1503.5	426.7
902	6.0	349.4	426.7	903	2087.5	1503.5	533.9	904	2087.5	1503.5	576.9
905	2182.1	1513.5	426.7	906	6.0	349.4	533.9	907	2182.1	1513.5	533.9
908	2182.1	1513.5	598.5	909	2276.7	-147.0	426.7	910	2276.7	1373.3	426.7
911	2276.7	1373.3	533.9	912	2276.7	1373.3	620.0	913	1873.5	879.2	686.7
914	6.0	526.1	726.7	915	6.0	1120.5	595.3	916	2276.7	-147.0	533.9
917	6.0	349.4	620.0	918	6.0	771.3	620.0	919	2276.7	-147.0	620.0
920	6.0	526.1	620.0	921	2276.7	527.0	620.0	922	2276.7	527.0	220.0
923	6.0	153.3	678.6	924	2182.8	-147.0	426.7	925	2276.7	527.0	820.0
926	1807.3	-147.0	533.9	927	2276.7	527.0	320.0	928	2276.7	527.0	426.7
929	2276.7	527.0	533.9	930	2182.8	-147.0	533.9	931	2276.7	349.4	752.8
932	2276.7	115.8	664.4	933	1785.8	1471.5	426.7	934	2182.8	-147.0	620.0
935	1785.8	1471.5	533.9	936	6.0	701.6	753.9	937	6.0	75.9	426.7
938	2089.0	-147.0	426.7	939	6.0	75.9	533.9	940	6.0	874.6	533.9
941	6.0	153.3	426.7	942	2089.0	-147.0	533.9	943	6.0	153.3	533.9
944	2089.0	-147.0	620.0	945	6.0	280.4	426.7	946	1995.1	-147.0	426.7
947	6.0	280.4	533.9	948	6.0	874.6	620.0	949	6.0	403.7	426.7
950	1995.1	-147.0	533.9	951	6.0	403.7	533.9	952	1995.1	-147.0	620.0
953	6.0	526.1	426.7	954	1901.2	-147.0	426.7	955	6.0	526.1	533.9
956	2276.7	1055.3	726.7	957	6.0	607.8	426.7	958	1901.2	-147.0	533.9
959	6.0	607.8	533.9	960	6.0	607.8	620.0	961	6.0	701.6	426.7
962	1901.2	-147.0	620.0	963	6.0	701.6	533.9	964	6.0	701.6	620.0
965	6.0	771.3	426.7	966	1807.3	-147.0	426.7	967	6.0	771.3	533.9
968	6.0	965.0	426.7	969	6.0	874.6	426.7	971	1638.7	-1.4	320.0
972	1638.7	-1.4	106.7	974	1638.7	-1.4	220.0	975	1638.7	-1.4	426.7
976	1638.7	-1.4	620.0	977	1638.7	-1.4	533.9	978	1638.7	1055.3	106.7
980	1638.7	1055.3	220.0	981	1638.7	1055.3	426.7	982	1638.7	1055.3	533.9
983	1638.7	1055.3	620.0	984	1903.5	1055.3	320.0	985	1903.5	-1.4	320.0
986	1903.5	1055.3	106.7	988	1903.5	1055.3	220.0	989	1903.5	1055.3	426.7
990	1903.5	1055.3	533.9	991	1903.5	1055.3	620.0	992	1903.5	-1.4	106.7
994	1903.5	-1.4	220.0	995	1903.5	-1.4	426.7	996	1903.5	-1.4	533.9
997	-584.7	701.6	320.0	998	6.0	658.2	426.7	999	-378.4	657.8	357.3
1000	-584.7	701.6	220.0	1001	-378.4	280.0	357.3	1002	-183.9	280.0	392.4
1003	2376.7	-147.0	320.0	1004	2376.2	1534.1	320.0	1005	-584.7	280.4	320.0
1006	-584.7	280.4	220.0	1007	-183.9	657.8	392.4	1008	-584.7	771.3	320.0
1009	-378.4	770.9	357.3	1010	-183.9	770.9	392.4	1011	-584.7	771.3	220.0
1012	-584.7	403.7	320.0	1013	-378.4	403.3	357.3	1014	-183.9	403.3	392.4
1016	-584.7	403.7	106.7	1017	-584.7	403.7	220.0	1019	-584.7	280.4	106.7
1021	6.0	658.2	106.7	1022	6.0	658.2	220.0	1023	6.0	658.2	320.0
1024	6.0	658.2	726.7	1025	6.0	658.2	770.3	1026	6.0	658.2	620.0
1027	6.0	658.2	533.9								

Nodo	X	Y	Z	Note	Rig. TX	Rig. TY	Rig. TZ	Rig. RX	Rig. RY	Rig. RZ
	cm	cm	cm		daN/cm	daN/cm	daN/cm	daN cm/rad	daN cm/rad	daN cm/rad
1	6.0	1055.3	0.0	v=111111						
4	108.4	1055.3	0.0	v=111111						
10	210.8	1055.3	0.0	v=111111						
14	313.2	1055.3	0.0	v=111111						
18	415.6	1055.3	0.0	v=111111						
22	506.5	1055.3	0.0	v=111111						
26	597.3	1055.3	0.0	v=111111						
30	688.2	1055.3	0.0	v=111111						
34	779.0	1055.3	0.0	v=111111						
38	860.9	1055.3	0.0	v=111111						
42	985.1	1055.3	0.0	v=111111						
46	1064.5	1055.3	0.0	v=111111						
50	1143.8	1055.3	0.0	v=111111						
54	1228.2	1055.3	0.0	v=111111						
58	1312.5	1055.3	0.0	v=111111						
62	1434.5	1055.3	0.0	v=111111						
66	1508.7	1055.3	0.0	v=111111						
70	1611.1	1055.3	0.0	v=111111						
74	1713.5	1055.3	0.0	v=111111						
78	1793.5	1055.3	0.0	v=111111						
82	1873.5	1055.3	0.0	v=111111						
86	1925.6	1055.3	0.0	v=111111						
92	2197.0	1055.3	0.0	v=111111						
98	2276.7	1055.3	0.0	v=111111						
103	6.0	-1.4	0.0	v=111111						
106	108.4	-1.4	0.0	v=111111						
112	210.8	-1.4	0.0	v=111111						
116	313.2	-1.4	0.0	v=111111						
120	415.6	-1.4	0.0	v=111111						
124	506.5	-1.4	0.0	v=111111						
128	597.3	-1.4	0.0	v=111111						
132	688.2	-1.4	0.0	v=111111						

INGEGNERE

136	779.0	-1.4	0.0	v=111111
140	870.2	-1.4	0.0	v=111111
144	961.4	-1.4	0.0	v=111111
148	1052.6	-1.4	0.0	v=111111
152	1143.8	-1.4	0.0	v=111111
156	1235.0	-1.4	0.0	v=111111
160	1326.2	-1.4	0.0	v=111111
164	1417.4	-1.4	0.0	v=111111
168	1508.7	-1.4	0.0	v=111111
172	1611.1	-1.4	0.0	v=111111
176	1713.5	-1.4	0.0	v=111111
180	1793.5	-1.4	0.0	v=111111
184	1873.5	-1.4	0.0	v=111111
188	1974.3	-1.4	0.0	v=111111
192	2075.1	-1.4	0.0	v=111111
196	2175.9	-1.4	0.0	v=111111
200	2276.7	-1.4	0.0	v=111111
204	2276.7	115.8	0.0	v=111111
208	2276.7	250.9	0.0	v=111111
212	2276.7	349.4	0.0	v=111111
216	2276.7	458.2	0.0	v=111111
220	2276.7	593.2	0.0	v=111111
224	2276.6	701.6	0.0	v=111111
228	2276.7	805.6	0.0	v=111111
232	2276.7	940.6	0.0	v=111111
236	2276.7	1215.0	0.0	v=111111
240	2276.7	1347.9	0.0	v=111111
244	2276.7	1523.5	0.0	v=111111
250	6.0	1120.5	0.0	v=111111
256	6.0	1185.7	0.0	v=111111
260	6.0	1282.8	0.0	v=111111
264	100.6	1292.9	0.0	v=111111
268	195.2	1302.9	0.0	v=111111
272	289.8	1312.9	0.0	v=111111
276	384.5	1322.9	0.0	v=111111
280	479.1	1333.0	0.0	v=111111
284	573.7	1343.0	0.0	v=111111
288	668.3	1353.0	0.0	v=111111
292	762.9	1363.1	0.0	v=111111
296	857.5	1373.1	0.0	v=111111
300	952.1	1383.1	0.0	v=111111
304	1046.7	1393.2	0.0	v=111111
308	1141.4	1403.2	0.0	v=111111
312	1236.0	1413.2	0.0	v=111111
316	1330.6	1423.2	0.0	v=111111
320	1425.2	1433.3	0.0	v=111111
324	1519.8	1443.3	0.0	v=111111
328	1614.4	1453.3	0.0	v=111111
332	1709.0	1463.4	0.0	v=111111
336	1803.6	1473.4	0.0	v=111111
340	1898.3	1483.4	0.0	v=111111
344	1992.9	1493.4	0.0	v=111111
348	2087.5	1503.5	0.0	v=111111
352	2182.1	1513.5	0.0	v=111111
355	2276.7	1373.3	0.0	v=111111
359	1799.2	1339.8	0.0	v=111111
362	1894.7	1346.5	0.0	v=111111
368	1990.2	1353.2	0.0	v=111111
372	2085.7	1359.9	0.0	v=111111
376	2181.2	1366.6	0.0	v=111111
380	1785.8	1471.5	0.0	v=111111
384	6.0	75.9	0.0	v=111111
388	6.0	153.3	0.0	v=111111
392	6.0	280.4	0.0	v=111111
396	6.0	403.7	0.0	v=111111
400	6.0	526.1	0.0	v=111111
404	6.0	607.8	0.0	v=111111
408	5.9	701.6	0.0	v=111111
412	6.0	771.3	0.0	v=111111
416	6.0	874.6	0.0	v=111111
420	6.0	965.0	0.0	v=111111
424	-88.9	153.3	0.0	v=111111
428	-183.9	153.3	0.0	v=111111
432	-235.5	153.3	0.0	v=111111
436	-327.5	153.3	0.0	v=111111
440	-378.4	153.3	0.0	v=111111
444	-447.2	153.3	0.0	v=111111
448	-516.0	153.3	0.0	v=111111
452	-584.7	153.3	0.0	v=111111

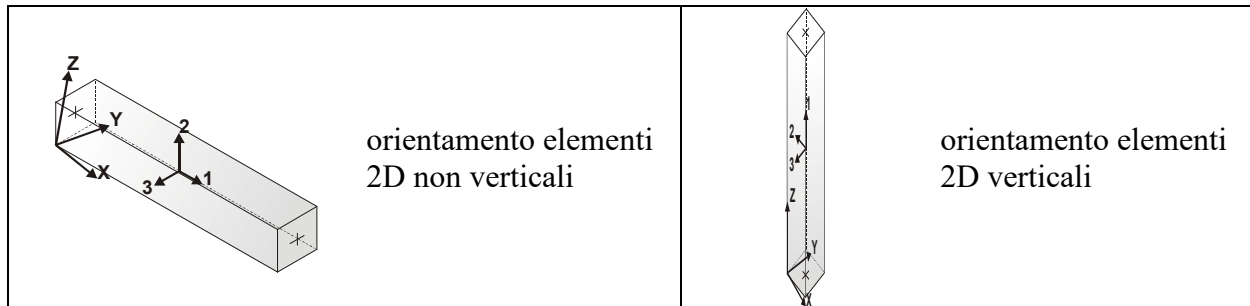
INGEGNERE

456	-584.7	246.5	0.0	v=111111
460	-584.7	349.4	0.0	v=111111
464	-584.7	432.9	0.0	v=111111
468	-584.7	526.1	0.0	v=111111
472	-584.7	592.1	0.0	v=111111
476	-584.7	658.2	0.0	v=111111
480	-584.7	794.0	0.0	v=111111
484	-584.7	874.6	0.0	v=111111
488	-516.0	874.6	0.0	v=111111
492	-447.2	874.6	0.0	v=111111
496	-378.4	874.6	0.0	v=111111
500	-313.6	874.6	0.0	v=111111
504	-248.7	874.6	0.0	v=111111
508	-183.9	874.6	0.0	v=111111
512	-88.9	874.6	0.0	v=111111
515	1903.5	701.6	0.0	v=111111
517	1903.5	349.4	0.0	v=111111
519	6.0	349.4	0.0	v=111111
526	2276.7	-147.0	0.0	v=111111
531	2182.8	-147.0	0.0	v=111111
535	2089.0	-147.0	0.0	v=111111
539	1995.1	-147.0	0.0	v=111111
543	1901.2	-147.0	0.0	v=111111
547	1807.3	-147.0	0.0	v=111111
551	1713.5	-147.0	0.0	v=111111
970	2021.5	1055.3	0.0	v=111111
973	1638.7	-1.4	0.0	v=111111
979	1638.7	1055.3	0.0	v=111111
987	1903.5	1055.3	0.0	v=111111
993	1903.5	-1.4	0.0	v=111111
1015	-584.7	403.7	0.0	v=111111
1018	-584.7	280.4	0.0	v=111111
1020	6.0	658.2	0.0	v=111111

MODELLAZIONE STRUTTURA: ELEMENTI TRAVE

TABELLA DATI TRAVI

Il programma utilizza per la modellazione elementi a due nodi denominati in generale travi. Ogni elemento trave è individuato dal nodo iniziale e dal nodo finale. Ogni elemento è caratterizzato da un insieme di proprietà riportate in tabella che ne completano la modellazione.



In particolare per ogni elemento viene indicato in tabella:

Elem.	numero dell'elemento
Note	codice di comportamento: trave, trave di fondazione, pilastro, asta, asta tesa, asta compressa,
Nodo I (J)	numero del nodo iniziale (finale)
Mat.	codice del materiale assegnato all'elemento
Sez.	codice della sezione assegnata all'elemento
Rotaz.	valore della rotazione dell'elemento, attorno al proprio asse, nel caso in cui l'orientamento di default non sia adottabile; l'orientamento di default prevede per gli elementi non verticali l'asse 2 contenuto nel piano verticale e l'asse 3 orizzontale, per gli elementi verticali l'asse 2 diretto secondo X negativo e l'asse 3 diretto secondo Y negativo
Svincolo I (J)	codici di svincolo per le azioni interne; i primi sei codici si riferiscono al nodo iniziale, i restanti sei al nodo finale (il valore 1 indica che la relativa azione interna non è attiva)
Wink V	costante di sottofondo (coefficiente di Winkler) per la modellazione della trave su suolo elastico
Wink O	costante di sottofondo (coefficiente di Winkler) per la modellazione del suolo elastico orizzontale

Elem.	Note	Nodo I	Nodo J	Mat.	Sez.	Crit.	Rotaz. gradi	Svincolo I	Svincolo J	Wink V daN/cm3	Wink O daN/cm3
1	Asta	646	632	161	9	1					
2	Asta	632	636	161	9	1					
3	Asta	636	600	161	9	1					
4	Asta	600	660	161	9	1					
5	Asta	660	620	161	9	1					
6	Asta	620	666	161	9	1					
7	Asta	600	616	161	9	1					
8	Asta	726	706	161	9	1					
9	Asta	706	714	161	9	1					
10	Asta	714	682	161	9	1					
11	Asta	682	730	161	9	1					
12	Asta	730	698	161	9	1					
13	Asta	698	746	161	9	1					
14	Asta	682	686	161	9	1					
15	Asta	801	782	161	9	1					
16	Asta	782	798	161	9	1					
17	Asta	798	750	161	9	1					
18	Asta	750	805	161	9	1					
19	Asta	805	774	161	9	1					
20	Asta	774	807	161	9	1					
21	Asta	750	762	161	9	1					
22	Asta	836	824	161	9	1					
23	Asta	824	826	161	9	1					
24	Asta	826	810	161	9	1					
25	Asta	810	838	161	9	1					
26	Asta	838	822	161	9	1					
27	Asta	822	854	161	9	1					
28	Asta	810	818	161	9	1					
29	Asta	896	890	161	9	1					
30	Asta	890	894	161	9	1					
31	Asta	894	870	161	9	1					
32	Asta	870	898	161	9	1					
33	Asta	898	884	161	9	1					
34	Asta	884	913	161	9	1					
35	Asta	870	880	161	9	1					
39	Trave	692	646	160	10	4		000001			
40	Trave	616	660	160	10	4					
41	Trave	692	632	160	10	4		000001			
49	Trave	636	616	160	10	4					
50	Trave	660	666	160	10	4					
51	Trave	600	620	160	10	4					
52	Trave	646	636	160	10	4					
53	Trave	632	600	160	10	4					
54	Trave	666	590	160	10	4				000001	
55	Trave	620	590	160	10	4				000001	
56	Trave	676	726	160	10	4		000001			
57	Trave	686	730	160	10	4					
58	Trave	676	706	160	10	4		000001			
66	Trave	714	686	160	10	4					
67	Trave	730	746	160	10	4					
68	Trave	682	698	160	10	4					
69	Trave	726	714	160	10	4					
70	Trave	706	682	160	10	4					
71	Trave	746	574	160	10	4				000001	
72	Trave	698	574	160	10	4				000001	
73	Trave	708	801	160	10	4		000001			
74	Trave	762	805	160	10	4					
75	Trave	708	782	160	10	4		000001			
81	Trave	999	1007	12	6	1					
82	Trave	1009	858	160	3	4					
83	Trave	798	762	160	10	4					
84	Trave	805	807	160	10	4					
85	Trave	750	774	160	10	4					
86	Trave	801	798	160	10	4					
87	Trave	782	750	160	10	4					
88	Trave	807	606	160	10	4				000001	
89	Trave	774	606	160	10	4				000001	
90	Trave	724	836	160	10	4		000001			
91	Trave	818	838	160	10	4					
92	Trave	724	824	160	10	4		000001			
100	Trave	826	818	160	10	4					
101	Trave	838	854	160	10	4					
102	Trave	810	822	160	10	4					
103	Trave	836	826	160	10	4					

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104	Trave	824	810	160	10	4		
105	Trave	854	622	160	10	4		000001
106	Trave	822	622	160	10	4		000001
107	Trave	740	896	160	10	4	000001	
108	Trave	880	898	160	10	4		
109	Trave	740	890	160	10	4	000001	
117	Trave	894	880	160	10	4		
118	Trave	898	913	160	10	4		
119	Trave	870	884	160	10	4		
120	Trave	896	894	160	10	4		
121	Trave	890	870	160	10	4		
122	Trave	913	638	160	10	4		000001
123	Trave	884	638	160	10	4		000001
179	Trave	1012	1013	12	6	1		
180	Trave	1013	1014	12	6	1		
181	Trave	470	882	160	6	1		
182	Trave	882	886	160	6	1		
183	Trave	886	953	160	6	1		
235	Trave	178	76	12	8	1	000001	000001
236	Trave	182	80	12	8	1	000001	000001
237	Trave	186	84	12	8	1	000001	000001
238	Trave	971	90	12	8	1	000001	000001
244	Trave	1008	1009	12	6	1		
245	Trave	1009	1010	12	6	1		
246	Trave	1010	965	12	6	1		
247	Trave	1014	949	12	6	1		
248	Trave	1005	1001	12	6	1		
249	Trave	1001	1002	12	6	1		
250	Trave	1007	998	12	6	1		
251	Trave	478	999	12	6	1		
252	Trave	1002	945	12	6	1		
253	Trave	886	1007	160	3	4		
254	Trave	882	999	160	3	4		
255	Trave	1007	1010	160	3	4		
256	Trave	999	1009	160	3	4		
257	Trave	1010	874	160	3	4		
258	Trave	580	1002	160	3	4		
259	Trave	596	1001	160	3	4		
260	Trave	1002	1014	160	3	4		
261	Trave	1001	1013	160	3	4		
262	Trave	1014	886	160	3	4		
263	Trave	1013	882	160	3	4		
264	Trave	904	796	12	3	1		

MODELLAZIONE DELLA STRUTTURA: ELEMENTI SOLAIO-PANNELLO

LEGENDA TABELLA DATI SOLAI-PANNELLI

Il programma utilizza per la modellazione elementi a tre o più nodi denominati in generale solaio o pannello.

Ogni elemento solaio-pannello è individuato da una poligonale di nodi 1,2, ..., N.

L'elemento solaio è utilizzato in primo luogo per la modellazione dei carichi agenti sugli elementi strutturali. In secondo luogo può essere utilizzato per la corretta ripartizione delle forze orizzontali agenti nel proprio piano. L'elemento balcone è derivato dall'elemento solaio.

I carichi agenti sugli elementi solaio, raccolti in un archivio, sono direttamente assegnati agli elementi utilizzando le informazioni raccolte nell'archivio (es. i coefficienti combinatori). La tabella seguente riporta i dati utilizzati per la definizione dei carichi e delle masse.

L'elemento pannello è utilizzato solo per l'applicazione dei carichi, quali pesi delle tamponature o spinte dovute al vento o terre. In questo caso i carichi sono applicati in analogia agli altri elementi strutturali (si veda il cap. SCHEMATIZZAZIONE DEI CASI DI CARICO).

Id.Arch.	Identificativo dell' archivio
Tipo	Tipo di carico <i>Variab.</i> Carico variabile generico <i>Var. rid.</i> Carico variabile generico con riduzione in funzione dell' area (c.5.5. ...) <i>Neve</i> Carico di neve
G1k	carico permanente (comprensivo del peso proprio)
G2k	carico permanente non strutturale e non compiutamente definito
Qk	carico variabile
Fatt. A	fattore di riduzione del carico variabile (0.5 o 0.75) per tipo "Var.rid."
S sis.	fattore di riduzione del carico variabile per la definizione delle masse sismiche per D.M. 96 (vedi NOTA sul capitolo "normativa di riferimento")
Psi 0	Coefficiente combinatorio dei valori caratteristici delle azioni variabili: <i>per valore raro</i>
Psi 1	Coefficiente combinatorio dei valori caratteristici delle azioni variabili: <i>per valore frequente</i>
Psi 2	Coefficiente combinatorio dei valori caratteristici delle azioni variabili: <i>per valore quasi permanente</i>
Psi S 2	Coefficiente di combinazione che fornisce il valore quasi-permanente dell'azione variabile: <i>per la definizione delle masse sismiche</i>
Fatt. Fi	Coefficiente di correlazione dei carichi per edifici

Ogni elemento è caratterizzato da un insieme di proprietà riportate in tabella che ne completano la modellazione. In particolare per ogni elemento viene indicato in tabella:

Elem	numero dell'elemento
Tipo	codice di comportamento <i>S</i> elemento utilizzato solo per scarico <i>C</i> elemento utilizzato per scarico e per modellazione piano rigido <i>P</i> elemento utilizzato come pannello <i>M</i> scarico monodirezionale

B scarico bidirezionale	
Id.Arch.	Identificativo dell' archivio
Mat	codice del materiale assegnato all'elemento
Spessore	spessore dell'elemento (costante)
Orditura	angolo (rispetto all'asse X) della direzione dei travetti principali
Gk	carico permanente solaio (comprensivo del peso proprio)
Qk	carico variabile solaio
Nodi	numero dei nodi che definiscono l'elemento (5 per riga)

Nel caso in cui si sia proceduto alla progettazione dei solai con le tensioni ammissibili vengono riportate le massime tensioni nell'elemento (massima compressione nel calcestruzzo, massima tensione nell'acciaio, massima tensione tangenziale); nel caso in cui si sia proceduto alla progettazione con il metodo degli stati limite vengono riportati il rapporto x/d e le verifiche per sollecitazioni proporzionali nonché le verifiche in esercizio.

In particolare i simboli utilizzati in tabella assumono il seguente significato:

Elem.	numero identificativo dell'elemento
Stato	Codici di verifica relativi alle tensioni normali e alle tensioni tangenziali
Note	Viene riportato il codice relativo alla sezione(s) e relativo al materiale(m);
Pos.	Ascissa del punto di verifica
F ist, F infi	Frecce istantanee e a tempo infinito
Momento	Momento flettente
Taglio	Sollecitazione di taglio
Af inf.	Area di armatura longitudinale posta all'intradosso della trave
Af sup.	Area di armatura longitudinale posta all'estradosso della trave
AfV	Area dell'armatura atta ad assorbire le azioni di taglio
Beff	Base della sezione di cls per l'assorbimento del taglio
simboli utilizzati con il metodo delle tensioni ammissibili:	
sc max	Massima tensione di compressione del calcestruzzo
sf max	Massima tensione nell'acciaio
tau max	Massima tensione tangenziale nel cls
simboli utilizzati con il metodo degli stati limite:	
x/d	rapporto tra posizione dell'asse neutro e altezza utile alla rottura della sezione (per sola flessione)
verif.	rapporto S_d/S_u con sollecitazioni ultime proporzionali: valore minore o uguale a 1 per verifica positiva
Verif.V	rapporto S_d/S_u con sollecitazioni taglianti proporzionali valore minore o uguale a 1 per verifica positiva
rRfck	rapporto tra la massima compressione nel calcestruzzo e la tensione f_{ck} in combinazioni rare [normalizzato a 1]
rFfck	rapporto tra la massima compressione nel calcestruzzo e la tensione f_{ck} in combinazioni frequenti [normalizzato a 1]
rPfck	rapporto tra la massima compressione nel calcestruzzo e la tensione f_{ck} in combinazioni quasi permanenti [normalizzato a 1]
rRfyk	rapporto tra la massima tensione nell'acciaio e la tensione f_{yk} in combinazioni frequenti [normalizzato a 1]
rFyk	rapporto tra la massima tensione nell'acciaio e la tensione f_{yk} in combinazioni rare [normalizzato a 1]
rPfyk	rapporto tra la massima tensione nell'acciaio e la tensione f_{yk} in combinazioni quasi permanenti [normalizzato a 1]
wR	apertura caratteristica delle fessure in combinazioni rare [mm]

wF	apertura caratteristica delle fessure in combinazioni frequenti [mm]
wP	apertura caratteristica delle fessure in combinazioni quasi permanenti [mm]

Nel caso in cui si sia proceduto alla verifica delle tamponature secondo il D.M. 17.01.2018 - §7.2.3 viene riportata una tabella riassuntiva delle verifiche degli elementi pannello. La verifica confronta i momenti sollecitanti indotti dal sisma con i momenti resistenti, secondo tre ipotesi, due basate sulla resistenza a pressoflessione della tamponatura ed una basata sul cinematismo a seguito della formazione di tre cerniere plastiche sulla tamponatura (rif. Ufficio di Vigilanza sulle Costruzioni, Provincia di Terni).

Qualora la tamponatura sia di tipo antiespulsione (nelle due possibili varianti ordinaria o armata) viene condotta una verifica con meccanismo ad arco con degrado di resistenza. La verifica confronta le pressioni sollecitanti indotte dal sisma con le pressioni resistenti che la tamponatura sviluppa attraverso il meccanismo ad arco. La verifica considera anche il degrado di resistenza dovuto al danneggiamento nel piano della tamponatura.

Per quest'ultima tamponatura sono disponibili, in funzione del materiale impiegato (materiale [52] o materiale [53]):

- **Tamponatura Antiespulsione ordinaria Poroton® Cis Edil** sp.30 cm; con metodo di verifica per meccanismo ad arco con degrado di resistenza, sviluppato attraverso i risultati di un progetto di ricerca sperimentale condotto dall'Università degli Studi di Padova. Utilizzabile per il materiale [52].
- **Tamponatura Antiespulsione armata Poroton® Cis Edil** sp.30 cm; con metodo di verifica per meccanismo ad arco con degrado di resistenza, sviluppato attraverso i risultati di un progetto di ricerca sperimentale condotto dall'Università degli Studi di Padova. Utilizzabile per il materiale [53].

La verifica è stata calibrata sulla base di prove sperimentali sul sistema di Tamponatura Antiespulsione anche in presenza di aperture.

(rif. Rapporti di Prova redatti dal Dipartimento ICEA - Università degli Studi di Padova di test sperimentali condotti sul sistema Tamponatura Antiespulsione di Cis Edil)

In particolare i simboli utilizzati in tabella assumono il seguente significato:

Elem.	Numero identificativo dell'elemento
Stato	Codice di verifica
Ver. c.c.	Verifica nell'ipotesi di trave appoggiata con carico concentrato in mezzeria
Ver. c.d.	Verifica nell'ipotesi di trave appoggiata con carico distribuito
Ver. c.cin.	Verifica nell'ipotesi di cinematismo con formazione di cerniere plastiche in appoggio e mezzeria
Ver. CIS	Rapporto p_a/p_r (valore minore o uguale a 1 per verifica positiva)
Z	Quota del baricentro dell'elemento
T1	Periodo proprio dell'edificio nella direzione di interesse (ortogonale al pannello)
Ta	Periodo proprio della parete
Sa	Accelerazione massima, adimensionalizzata allo SLV
p_a	Pressione sulla parete causata dall'azione sismica
p_r	Pressione resistente del meccanismo ad arco
Drift	Spostamento relativo interpiano allo SLV valutato secondo il D.M. 14.01.2018 - § 7.3.3.3
Beta a	Coef. riduttivo per tener conto del danneggiamento del piano dipendente dallo spostamento, ottenuto sperimentalmente

ID Arch.	Tipo	G1k kN/ m2	G2k kN/ m2	Qk kN/ m2	Fatt. A	s sis.	Psi 0	Psi 1	Psi 2	Psi S 2	Fatt. Fi
1	Variab.	3.00	2.00	2.00		1.00	0.70	0.50	0.30	0.30	1.00
2	Variab.	2.10	0.75	1.00		1.00	0.50	0.20	0.0	0.0	1.00

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3	Variab.	3.00	0.75	1.00		1.00	0.50	0.20	0.0	0.0	1.00
4	Variab.	3.00	0.10	1.00		1.00	0.50	0.20	0.0	0.0	1.00

Elem.	Tipo	ID Arch.	Mat.	Spessore	Orditura	G1k kN/ m2	G2k kN/ m2	Qk kN/ m2	Nodo 1/6..	Nodo 2/7..	Nodo 3/8..	Nodo..	Nodo..
1	CM	1	m=1	5.0	0.0	3.00	2.00	2.00	186	84	80	182	
2	CM	1	m=158	5.0	90.0	3.00	2.00	2.00	518	214	218	927	222
									226	516			
3	CM	1	m=1	5.0	0.0	3.00	2.00	2.00	178	182	80	76	
4	SM	2	m=12	5.0	90.0	2.10	0.75	1.00	561	819	815		
5	SM	2	m=12	5.0	90.0	2.10	0.75	1.00	562	566	570	574	578
									582	586	590	847	843
									839	835	831	827	823
									819	561			
6	CM	1	m=158	5.0	90.0	3.00	2.00	2.00	238	242	358	378	374
									370	366	365	382	334
									330	326	322	318	314
									310	306	302	298	294
									290	286	282	278	274
									270	266	262	258	254
									7	8	12	16	20
									24	28	32	36	40
									44	48	52	56	60
									64	68	72	76	80
									84	88	102	95	96
									100				
7	SM	2	m=12	5.0	0.0	2.10	0.75	1.00	686	730	746	574	570
									566	562	561	876	652
									864	936	643	808	
8	SM	2	m=12	5.0	90.0	2.10	0.75	1.00	752	748	744	740	736
									732	568	522	962	952
									944	934	919	756	
9	SM	2	m=12	5.0	0.0	2.10	0.75	1.00	746	730	686	616	660
									666	590	586	582	578
									574				
10	SM	2	m=12	5.0	0.0	2.10	0.75	1.00	686	714	726	676	680
									684	688	692	646	636
									616				
11	SM	2	m=12	5.0	0.0	2.10	0.75	1.00	636	646	692	696	700
									704	708	801	798	762
									616				
12	SM	2	m=12	5.0	0.0	2.10	0.75	1.00	762	805	807	606	602
									598	594	590	666	660
									616				
13	SM	2	m=12	5.0	0.0	2.10	0.75	1.00	807	805	762	818	838
									854	622	618	614	610
									606				
14	SM	2	m=12	5.0	0.0	2.10	0.75	1.00	762	798	801	708	712
									716	720	724	836	826
									818				
15	SM	2	m=12	5.0	0.0	2.10	0.75	1.00	854	838	818	880	898
									913	638	634	630	626
									622				
16	SM	2	m=12	5.0	0.0	2.10	0.75	1.00	818	826	836	724	728
									732	736	740	896	894
									880				
17	SM	2	m=12	5.0	0.0	2.10	0.75	1.00	913	898	880	925	804
									834	820	814	830	654
									650	649	656	642	638
18	SM	2	m=12	5.0	0.0	2.10	0.75	1.00	880	894	896	740	744
									748	752	756	932	860
									888	931	802	925	
19	SM	2	m=12	5.0	90.0	2.10	0.75	1.00	594	598	602	606	610
									614	618	622	626	630
									634	638	642	656	649
									650	654	895	891	935
									887	883	879	875	871
									867	863	859	855	851
									847	590			
20	SM	4	m=158	1.0	0.0	3.00	0.10	1.00	529	1003	1004	246	358
									238	100	234	230	226
									222	927	218	214	210
									206	202			
21	SM	2	m=12	5.0	0.0	2.10	0.75	1.00	840	852	828	923	856
									663	664	668	672	676
									726	714	686	808	
22	CM	3	m=158	5.0	0.0	3.00	0.75	1.00	953	957	961	965	969
									878	874	886		

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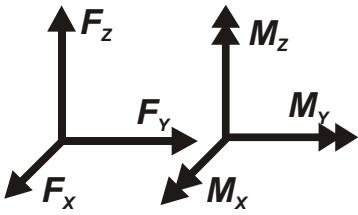
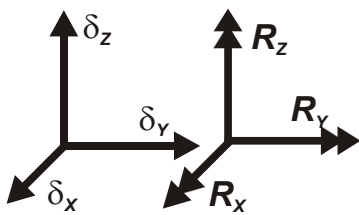
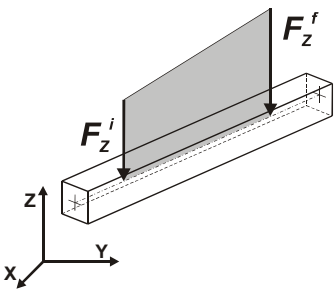
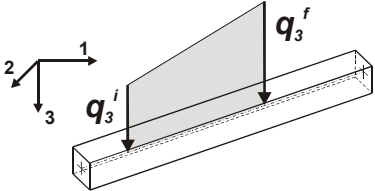
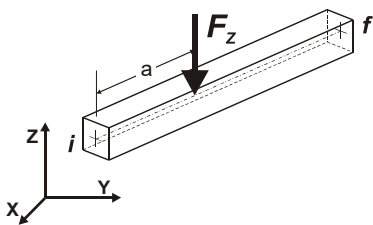
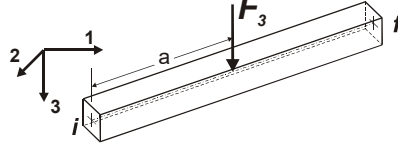
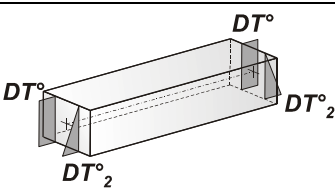
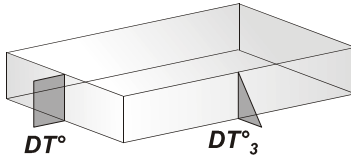
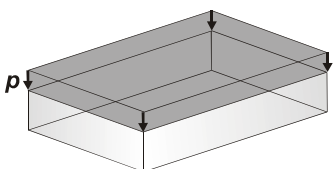
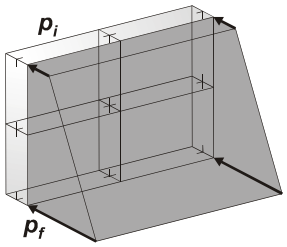
23	CM	3 m=158	5.0	0.0	3.00	0.75	1.00	874 886	866	862	858	882
24	CM	3 m=158	5.0	0.0	3.00	0.75	1.00	850 474	846	486	482	478
25	CM	3 m=158	5.0	0.0	3.00	0.75	1.00	886 902	580	576	941	945
26	CM	3 m=158	5.0	0.0	3.00	0.75	1.00	882 886	596	592	588	580
27	CM	3 m=158	5.0	0.0	3.00	0.75	1.00	882 454	470	466	462	458
28	CM	1 m=158	5.0	0.0	3.00	2.00	2.00	971	178	76	90	
29	CM	1 m=158	5.0	90.0	3.00	2.00	2.00	226	230	234	100	96
								95	102	88	984	516
30	CM	1 m=158	5.0	90.0	3.00	2.00	2.00	190	194	198	202	206
								210	214	518	985	
31	SM	2 m=12	5.0	0.0	2.10	0.75	1.00	796	912	800	908	904
32	SM	2 m=12	5.0	0.0	2.10	0.75	1.00	904 796	900	895	654	792

MODELLAZIONE DELLE AZIONI

LEGENDA TABELLA DATI AZIONI

Il programma consente l'uso di diverse tipologie di carico (azioni). Le azioni utilizzate nella modellazione sono individuate da una sigla identificativa ed un codice numerico (gli elementi strutturali richiamano quest'ultimo nella propria descrizione). Per ogni azione applicata alla struttura viene di riportato il codice, il tipo e la sigla identificativa. Le tabelle successive dettagliano i valori caratteristici di ogni azione in relazione al tipo. Le tabelle riportano infatti i seguenti dati in relazione al tipo:

1	carico concentrato nodale 6 dati (forza F_x , F_y , F_z , momento M_x , M_y , M_z)
2	spostamento nodale impresso 6 dati (spostamento T_x , T_y , T_z , rotazione R_x , R_y , R_z)
3	carico distribuito globale su elemento tipo trave 7 dati (f_x , f_y , f_z , m_x , m_y , m_z , ascissa di inizio carico) 7 dati (f_x , f_y , f_z , m_x , m_y , m_z , ascissa di fine carico)
4	carico distribuito locale su elemento tipo trave 7 dati (f_1 , f_2 , f_3 , m_1 , m_2 , m_3 , ascissa di inizio carico) 7 dati (f_1 , f_2 , f_3 , m_1 , m_2 , m_3 , ascissa di fine carico)
5	carico concentrato globale su elemento tipo trave 7 dati (F_x , F_y , F_z , M_x , M_y , M_z , ascissa di carico)
6	carico concentrato locale su elemento tipo trave 7 dati (F_1 , F_2 , F_3 , M_1 , M_2 , M_3 , ascissa di carico)
7	variazione termica applicata ad elemento tipo trave 7 dati (variazioni termiche: uniforme, media e differenza in altezza e larghezza al nodo iniziale e finale)
8	carico di pressione uniforme su elemento tipo piastra 1 dato (pressione)
9	carico di pressione variabile su elemento tipo piastra 4 dati (pressione, quota, pressione, quota)
10	variazione termica applicata ad elemento tipo piastra 2 dati (variazioni termiche: media e differenza nello spessore)
11	carico variabile generale su elementi tipo trave e piastra 1 dato descrizione della tipologia 4 dati per segmento (posizione, valore, posizione, valore) la tipologia precisa l'ascissa di definizione, la direzione del carico, la modalità di carico e la larghezza d'influenza per gli elementi tipo trave
12	gruppo di carichi con impronta su piastra 9 dati (numero di ripetizioni in direzione X e Y, valore di ciascun carico, posizione centrale del primo, dimensioni dell'impronta, interasse tra i carichi)

 Carico concentrato nodale	 Spostamento impresso
 Carico distribuito globale	 Carico distribuito locale
 Carico concentrato globale	 Carico concentrato locale
 Carico termico 2D	 Carico termico 3D
 Carico pressione uniforme	 Carico pressione variabile

SCHEMATIZZAZIONE DEI CASI DI CARICO

LEGENDA TABELLA CASI DI CARICO

Il programma consente l'applicazione di diverse tipologie di casi di carico.

Sono previsti i seguenti 11 tipi di casi di carico:

	Sigla	Tipo	Descrizione
1	Ggk	A	caso di carico comprensivo del peso proprio struttura
2	Gk	NA	caso di carico con azioni permanenti
3	Qk	NA	caso di carico con azioni variabili
4	Gsk	A	caso di carico comprensivo dei carichi permanenti sui solai e sulle coperture
5	Qsk	A	caso di carico comprensivo dei carichi variabili sui solai
6	Qnk	A	caso di carico comprensivo dei carichi di neve sulle coperture
7	Qtk	SA	caso di carico comprensivo di una variazione termica agente sulla struttura
8	Qvk	NA	caso di carico comprensivo di azioni da vento sulla struttura
9	Esk	SA	caso di carico sismico con analisi statica equivalente
10	Edk	SA	caso di carico sismico con analisi dinamica
11	Etk	NA	caso di carico comprensivo di azioni derivanti dall' incremento di spinta delle terre in condizione sismica
12	Pk	NA	caso di carico comprensivo di azioni derivanti da coazioni, cedimenti e precompressioni

Sono di tipo automatico A (ossia non prevedono introduzione dati da parte dell'utente) i seguenti casi di carico: 1-Ggk; 4-Gsk; 5-Qsk; 6-Qnk.

Sono di tipo semi-automatico SA (ossia prevedono una minima introduzione dati da parte dell'utente) i seguenti casi di carico:

7-Qtk, in quanto richiede solo il valore della variazione termica;

9-Esk e 10-Edk, in quanto richiedono il valore dell'angolo di ingresso del sisma e l'individuazione dei casi di carico partecipanti alla definizione delle masse.

Sono di tipo non automatico NA ossia prevedono la diretta applicazione di carichi generici agli elementi strutturali (si veda il precedente punto Modellazione delle Azioni) i restanti casi di carico.

Nella tabella successiva vengono riportati i casi di carico agenti sulla struttura, con l'indicazione dei dati relativi al caso di carico stesso:

Numero Tipo e Sigla identificativa, Valore di riferimento del caso di carico (se previsto).

In successione, per i casi di carico non automatici, viene riportato l'elenco di nodi ed elementi direttamente caricati con la sigla identificativa del carico.

Per i casi di carico di tipo sismico (9-Esk e 10-Edk), viene riportata la tabella di definizione delle masse: per ogni caso di carico partecipante alla definizione delle masse viene indicata la relativa aliquota (partecipazione) considerata. Si precisa che per i caso di carico 5-Qsk e 6-Qnk la partecipazione è prevista localmente per ogni elemento solaio o copertura presente nel modello (si confronti il valore Sksol nel capitolo relativo agli elementi solaio) e pertanto la loro partecipazione è di norma pari a uno.

CDC	Tipo	Sigla Id	Note
1	Ggk	CDC=Ggk (peso proprio della struttura)	
2	Gsk	CDC=G1sk (permanente solai-coperture)	

CDC	Tipo	Sigla Id	Note
3	Gsk	CDC=G2sk (permanente solai-coperture n.c.d.)	
4	Qsk	CDC=Qsk (variabile solai)	
5	Qsk	CDC=Qsk (variabile solai)	
6	Edk	CDC=Ed (dinamico SLU) alfa=0.0 (ecc. +)	partecipazione:1.00 per 1 CDC=Ggk (peso proprio della struttura)
			partecipazione:1.00 per 2 CDC=G1sk (permanente solai-coperture)
			partecipazione:1.00 per 3 CDC=G2sk (permanente solai-coperture n.c.d.)
			partecipazione:1.00 per 4 CDC=Qsk (variabile solai)
			partecipazione:1.00 per 5 CDC=Qsk (variabile solai)
7	Edk	CDC=Ed (dinamico SLU) alfa=0.0 (ecc. -)	come precedente CDC sismico
8	Edk	CDC=Ed (dinamico SLU) alfa=90.00 (ecc. +)	come precedente CDC sismico
9	Edk	CDC=Ed (dinamico SLU) alfa=90.00 (ecc. -)	come precedente CDC sismico
10	Edk	CDC=Ed (dinamico SLD) alfa=0.0 (ecc. +)	come precedente CDC sismico
11	Edk	CDC=Ed (dinamico SLD) alfa=0.0 (ecc. -)	come precedente CDC sismico
12	Edk	CDC=Ed (dinamico SLD) alfa=90.00 (ecc. +)	come precedente CDC sismico
13	Edk	CDC=Ed (dinamico SLD) alfa=90.00 (ecc. -)	come precedente CDC sismico

DEFINIZIONE DELLE COMBINAZIONI

LEGENDA TABELLA COMBINAZIONI DI CARICO

Il programma combina i diversi tipi di casi di carico (CDC) secondo le regole previste dalla normativa vigente.

Le combinazioni previste sono destinate al controllo di sicurezza della struttura ed alla verifica degli spostamenti e delle sollecitazioni.

La prima tabella delle combinazioni riportata di seguito comprende le seguenti informazioni:

Numero, Tipo, Sigla identificativa. Una seconda tabella riporta il peso nella combinazione assunto per ogni caso di carico.

Ai fini delle verifiche degli stati limite si definiscono le seguenti combinazioni delle azioni:

Combinazione fondamentale SLU

$$\gamma G1 \cdot G1 + \gamma G2 \cdot G2 + \gamma P \cdot P + \gamma Q1 \cdot Qk1 + \gamma Q2 \cdot \psi 02 \cdot Qk2 + \gamma Q3 \cdot \psi 03 \cdot Qk3 + \dots$$

Combinazione caratteristica (rara) SLE

$$G1 + G2 + P + Qk1 + \psi 02 \cdot Qk2 + \psi 03 \cdot Qk3 + \dots$$

Combinazione frequente SLE

$$G1 + G2 + P + \psi 11 \cdot Qk1 + \psi 22 \cdot Qk2 + \psi 23 \cdot Qk3 + \dots$$

Combinazione quasi permanente SLE

$$G1 + G2 + P + \psi 21 \cdot Qk1 + \psi 22 \cdot Qk2 + \psi 23 \cdot Qk3 + \dots$$

Combinazione sismica, impiegata per gli stati limite ultimi e di esercizio connessi all'azione sismica E

$$E + G1 + G2 + P + \psi 21 \cdot Qk1 + \psi 22 \cdot Qk2 + \dots$$

Combinazione eccezionale, impiegata per gli stati limite connessi alle azioni eccezionali

$$G1 + G2 + Ad + P + \psi 21 \cdot Qk1 + \psi 22 \cdot Qk2 + \dots$$

Dove:

NTC 2018 Tabella 2.5.1

Destinazione d'uso/azione	$\psi 0$	$\psi 1$	$\psi 2$
Categoria A residenziali	0,70	0,50	0,30
Categoria B uffici	0,70	0,50	0,30
Categoria C ambienti suscettibili di affollamento	0,70	0,70	0,60
Categoria D ambienti ad uso commerciale	0,70	0,70	0,60
Categoria E biblioteche, archivi, magazzini,...	1,00	0,90	0,80
Categoria F Rimesse e parcheggi (autoveicoli $\leq 30kN$)	0,70	0,70	0,60
Categoria G Rimesse e parcheggi (autoveicoli $> 30kN$)	0,70	0,50	0,30
Categoria H Coperture	0,00	0,00	0,00
Vento	0,60	0,20	0,00
Neve a quota ≤ 1000 m	0,50	0,20	0,00
Neve a quota > 1000 m	0,70	0,50	0,20
Variazioni Termiche	0,60	0,50	0,00

Nelle verifiche possono essere adottati in alternativa due diversi approcci progettuali:

- per l'approccio 1 si considerano due diverse combinazioni di gruppi di coefficienti di sicurezza parziali per le azioni, per i materiali e per la resistenza globale (combinazione 1 con coefficienti $A1$ e combinazione 2 con coefficienti $A2$),

- per l'approccio 2 si definisce un'unica combinazione per le azioni, per la resistenza dei materiali e per la resistenza globale (con coefficienti A1).

NTC 2018 Tabella 2.6.I

		Coefficiente γ_f	EQU	A1	A2
<i>Carichi permanenti</i>	<i>Favorevoli</i>	γ_{G1}	0,9	1,0	1,0
	<i>Sfavorevoli</i>		1,1	1,3	1,0
<i>Carichi permanenti non strutturali</i> (Non compiutamente definiti)	<i>Favorevoli</i>	γ_{G2}	0,8	0,8	0,8
	<i>Sfavorevoli</i>		1,5	1,5	1,3
<i>Carichi variabili</i>	<i>Favorevoli</i>	γ_{Qi}	0,0	0,0	0,0
	<i>Sfavorevoli</i>		1,5	1,5	1,3

Cmb	Tipo	Sigla Id	effetto P-delta
1	SLU	Comb. SLU A1 1	
2	SLU	Comb. SLU A1 2	
3	SLU	Comb. SLU A1 3	
4	SLU	Comb. SLU A1 4	
5	SLU	Comb. SLU A1 5	
6	SLU	Comb. SLU A1 6	
7	SLU	Comb. SLU A1 7	
8	SLU	Comb. SLU A1 8	
9	SLU	Comb. SLU A1 9	
10	SLU	Comb. SLU A1 10	
11	SLU	Comb. SLU A1 11	
12	SLU	Comb. SLU A1 12	
13	SLU	Comb. SLU A1 13	
14	SLU	Comb. SLU A1 14	
15	SLU	Comb. SLU A1 (SLV sism.) 15	
16	SLU	Comb. SLU A1 (SLV sism.) 16	
17	SLU	Comb. SLU A1 (SLV sism.) 17	
18	SLU	Comb. SLU A1 (SLV sism.) 18	
19	SLU	Comb. SLU A1 (SLV sism.) 19	
20	SLU	Comb. SLU A1 (SLV sism.) 20	
21	SLU	Comb. SLU A1 (SLV sism.) 21	
22	SLU	Comb. SLU A1 (SLV sism.) 22	
23	SLU	Comb. SLU A1 (SLV sism.) 23	
24	SLU	Comb. SLU A1 (SLV sism.) 24	
25	SLU	Comb. SLU A1 (SLV sism.) 25	
26	SLU	Comb. SLU A1 (SLV sism.) 26	
27	SLU	Comb. SLU A1 (SLV sism.) 27	
28	SLU	Comb. SLU A1 (SLV sism.) 28	
29	SLU	Comb. SLU A1 (SLV sism.) 29	
30	SLU	Comb. SLU A1 (SLV sism.) 30	
31	SLU	Comb. SLU A1 (SLV sism.) 31	
32	SLU	Comb. SLU A1 (SLV sism.) 32	
33	SLU	Comb. SLU A1 (SLV sism.) 33	
34	SLU	Comb. SLU A1 (SLV sism.) 34	
35	SLU	Comb. SLU A1 (SLV sism.) 35	
36	SLU	Comb. SLU A1 (SLV sism.) 36	
37	SLU	Comb. SLU A1 (SLV sism.) 37	
38	SLU	Comb. SLU A1 (SLV sism.) 38	
39	SLU	Comb. SLU A1 (SLV sism.) 39	
40	SLU	Comb. SLU A1 (SLV sism.) 40	
41	SLU	Comb. SLU A1 (SLV sism.) 41	
42	SLU	Comb. SLU A1 (SLV sism.) 42	
43	SLU	Comb. SLU A1 (SLV sism.) 43	
44	SLU	Comb. SLU A1 (SLV sism.) 44	
45	SLU	Comb. SLU A1 (SLV sism.) 45	
46	SLU	Comb. SLU A1 (SLV sism.) 46	
47	SLD(sis)	Comb. SLE (SLD Danno sism.) 47	
48	SLD(sis)	Comb. SLE (SLD Danno sism.) 48	
49	SLD(sis)	Comb. SLE (SLD Danno sism.) 49	
50	SLD(sis)	Comb. SLE (SLD Danno sism.) 50	

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Cmb	Tipo	Sigla Id	effetto P-delta
51	SLD(sis)	Comb. SLE (SLD Danno sism.) 51	
52	SLD(sis)	Comb. SLE (SLD Danno sism.) 52	
53	SLD(sis)	Comb. SLE (SLD Danno sism.) 53	
54	SLD(sis)	Comb. SLE (SLD Danno sism.) 54	
55	SLD(sis)	Comb. SLE (SLD Danno sism.) 55	
56	SLD(sis)	Comb. SLE (SLD Danno sism.) 56	
57	SLD(sis)	Comb. SLE (SLD Danno sism.) 57	
58	SLD(sis)	Comb. SLE (SLD Danno sism.) 58	
59	SLD(sis)	Comb. SLE (SLD Danno sism.) 59	
60	SLD(sis)	Comb. SLE (SLD Danno sism.) 60	
61	SLD(sis)	Comb. SLE (SLD Danno sism.) 61	
62	SLD(sis)	Comb. SLE (SLD Danno sism.) 62	
63	SLD(sis)	Comb. SLE (SLD Danno sism.) 63	
64	SLD(sis)	Comb. SLE (SLD Danno sism.) 64	
65	SLD(sis)	Comb. SLE (SLD Danno sism.) 65	
66	SLD(sis)	Comb. SLE (SLD Danno sism.) 66	
67	SLD(sis)	Comb. SLE (SLD Danno sism.) 67	
68	SLD(sis)	Comb. SLE (SLD Danno sism.) 68	
69	SLD(sis)	Comb. SLE (SLD Danno sism.) 69	
70	SLD(sis)	Comb. SLE (SLD Danno sism.) 70	
71	SLD(sis)	Comb. SLE (SLD Danno sism.) 71	
72	SLD(sis)	Comb. SLE (SLD Danno sism.) 72	
73	SLD(sis)	Comb. SLE (SLD Danno sism.) 73	
74	SLD(sis)	Comb. SLE (SLD Danno sism.) 74	
75	SLD(sis)	Comb. SLE (SLD Danno sism.) 75	
76	SLD(sis)	Comb. SLE (SLD Danno sism.) 76	
77	SLD(sis)	Comb. SLE (SLD Danno sism.) 77	
78	SLD(sis)	Comb. SLE (SLD Danno sism.) 78	

Cmb	CDC 1/15...	CDC 2/16...	CDC 3/17...	CDC 4/18...	CDC 5/19...	CDC 6/20...	CDC 7/21...	CDC 8/22...	CDC 9/23...	CDC 10/24...	CDC 11/25...	CDC 12/26...	CDC 13/27...	CDC 14/28...
1	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2	1.30	1.30	1.50	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
3	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
4	1.30	1.30	1.50	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
6	1.00	1.00	0.80	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
7	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8	1.00	1.00	0.80	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
9	1.30	1.30	1.50	0.0	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10	1.30	1.30	1.50	1.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11	1.30	1.30	1.50	1.05	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
12	1.00	1.00	0.80	0.0	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
13	1.00	1.00	0.80	1.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
14	1.00	1.00	0.80	1.05	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
15	1.00	1.00	1.00	0.30	0.0	-1.00	0.0	-0.30	0.0	0.0	0.0	0.0	0.0	
16	1.00	1.00	1.00	0.30	0.0	-1.00	0.0	0.30	0.0	0.0	0.0	0.0	0.0	
17	1.00	1.00	1.00	0.30	0.0	1.00	0.0	-0.30	0.0	0.0	0.0	0.0	0.0	
18	1.00	1.00	1.00	0.30	0.0	1.00	0.0	0.30	0.0	0.0	0.0	0.0	0.0	
19	1.00	1.00	1.00	0.30	0.0	-1.00	0.0	0.0	-0.30	0.0	0.0	0.0	0.0	
20	1.00	1.00	1.00	0.30	0.0	-1.00	0.0	0.0	0.30	0.0	0.0	0.0	0.0	
21	1.00	1.00	1.00	0.30	0.0	1.00	0.0	0.0	-0.30	0.0	0.0	0.0	0.0	
22	1.00	1.00	1.00	0.30	0.0	1.00	0.0	0.0	0.30	0.0	0.0	0.0	0.0	
23	1.00	1.00	1.00	0.30	0.0	0.0	-1.00	-0.30	0.0	0.0	0.0	0.0	0.0	
24	1.00	1.00	1.00	0.30	0.0	0.0	-1.00	0.30	0.0	0.0	0.0	0.0	0.0	
25	1.00	1.00	1.00	0.30	0.0	0.0	1.00	-0.30	0.0	0.0	0.0	0.0	0.0	
26	1.00	1.00	1.00	0.30	0.0	0.0	1.00	0.30	0.0	0.0	0.0	0.0	0.0	
27	1.00	1.00	1.00	0.30	0.0	0.0	-1.00	0.0	-0.30	0.0	0.0	0.0	0.0	
28	1.00	1.00	1.00	0.30	0.0	0.0	-1.00	0.0	0.30	0.0	0.0	0.0	0.0	
29	1.00	1.00	1.00	0.30	0.0	0.0	1.00	0.0	-0.30	0.0	0.0	0.0	0.0	
30	1.00	1.00	1.00	0.30	0.0	0.0	1.00	0.0	0.30	0.0	0.0	0.0	0.0	
31	1.00	1.00	1.00	0.30	0.0	-0.30	0.0	-1.00	0.0	0.0	0.0	0.0	0.0	
32	1.00	1.00	1.00	0.30	0.0	-0.30	0.0	1.00	0.0	0.0	0.0	0.0	0.0	
33	1.00	1.00	1.00	0.30	0.0	0.30	0.0	-1.00	0.0	0.0	0.0	0.0	0.0	
34	1.00	1.00	1.00	0.30	0.0	0.30	0.0	1.00	0.0	0.0	0.0	0.0	0.0	
35	1.00	1.00	1.00	0.30	0.0	0.0	-0.30	-1.00	0.0	0.0	0.0	0.0	0.0	
36	1.00	1.00	1.00	0.30	0.0	0.0	-0.30	1.00	0.0	0.0	0.0	0.0	0.0	
37	1.00	1.00	1.00	0.30	0.0	0.0	0.30	-1.00	0.0	0.0	0.0	0.0	0.0	
38	1.00	1.00	1.00	0.30	0.0	0.0	0.30	1.00	0.0	0.0	0.0	0.0	0.0	
39	1.00	1.00	1.00	0.30	0.0	-0.30	0.0	0.0	-1.00	0.0	0.0	0.0	0.0	
40	1.00	1.00	1.00	0.30	0.0	-0.30	0.0	0.0	1.00	0.0	0.0	0.0	0.0	
41	1.00	1.00	1.00	0.30	0.0	0.30	0.0	0.0	-1.00	0.0	0.0	0.0	0.0	
42	1.00	1.00	1.00	0.30	0.0	0.30	0.0	0.0	1.00	0.0	0.0	0.0	0.0	
43	1.00	1.00	1.00	0.30	0.0	0.0	-0.30	0.0	-1.00	0.0	0.0	0.0	0.0	

INGEGNERE

Cmb	CDC 1/15...	CDC 2/16...	CDC 3/17...	CDC 4/18...	CDC 5/19...	CDC 6/20...	CDC 7/21...	CDC 8/22...	CDC 9/23...	CDC 10/24...	CDC 11/25...	CDC 12/26...	CDC 13/27...	CDC 14/28...
44	1.00	1.00	1.00	0.30	0.0	0.0	-0.30	0.0	1.00	0.0	0.0	0.0	0.0	
45	1.00	1.00	1.00	0.30	0.0	0.0	0.30	0.0	-1.00	0.0	0.0	0.0	0.0	
46	1.00	1.00	1.00	0.30	0.0	0.0	0.30	0.0	1.00	0.0	0.0	0.0	0.0	
47	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	-0.30	0.0	
48	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	0.30	0.0	
49	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	1.00	0.0	-0.30	0.0	
50	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.30	0.0	
51	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	0.0	-0.30	
52	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	0.0	0.30	
53	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.0	-0.30	
54	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.0	0.30	
55	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.0	-1.00	-0.30	0.0	
56	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.0	-1.00	0.30	0.0	
57	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.0	1.00	-0.30	0.0	
58	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.30	0.0	
59	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	-0.30	
60	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	0.30	
61	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.0	-0.30	
62	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.30	
63	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	-1.00	0.0	
64	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	1.00	0.0	
65	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.30	0.0	-1.00	0.0	
66	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.30	0.0	1.00	0.0	
67	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.0	-0.30	-1.00	0.0	
68	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.0	-0.30	1.00	0.0	
69	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.0	0.30	-1.00	0.0	
70	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.0	0.30	1.00	0.0	
71	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0	-1.00	
72	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0	1.00	
73	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0	-1.00	
74	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0	1.00	
75	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	-1.00	
76	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	1.00	
77	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.0	-1.00	
78	1.00	1.00	1.00	0.30	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.0	1.00	

AZIONE SISMICA

VALUTAZIONE DELL' AZIONE SISMICA

L'azione sismica sulle costruzioni è valutata a partire dalla "pericolosità sismica di base", in condizioni ideali di sito di riferimento rigido con superficie topografica orizzontale.

Allo stato attuale, la pericolosità sismica su reticolo di riferimento nell'intervallo di riferimento è fornita dai dati pubblicati sul sito <http://esse1.mi.ingv.it/>. Per punti non coincidenti con il reticolo di riferimento e periodi di ritorno non contemplati direttamente si opera come indicato nell'allegato alle NTC (rispettivamente media pesata e interpolazione).

L'azione sismica viene definita in relazione ad un periodo di riferimento V_r che si ricava, per ciascun tipo di costruzione, moltiplicandone la vita nominale per il coefficiente d'uso (vedi tabella Parametri della struttura). Fissato il periodo di riferimento V_r e la probabilità di superamento P_{ver} associata a ciascuno degli stati limite considerati, si ottiene il periodo di ritorno T_r e i relativi parametri di pericolosità sismica (vedi tabella successiva):

ag: accelerazione orizzontale massima del terreno;

Fo: valore massimo del fattore di amplificazione dello spettro in accelerazione orizzontale;

T*c: periodo di inizio del tratto a velocità costante dello spettro in accelerazione orizzontale;

Parametri della struttura

Classe d'uso	Vita V_n [anni]	Coeff. Uso	Periodo V_r [anni]	Tipo di suolo	Categoria topografica
III	50.0	1.5	75.0	C	T1

Individuati su reticolo di riferimento i parametri di pericolosità sismica si valutano i parametri spettrali riportati in tabella:

S è il coefficiente che tiene conto della categoria di sottosuolo e delle condizioni topografiche mediante la relazione seguente $S = S_s \cdot S_t$ (3.2.3)

Fo è il fattore che quantifica l'amplificazione spettrale massima, su sito di riferimento rigido orizzontale

Fv è il fattore che quantifica l'amplificazione spettrale massima verticale, in termini di accelerazione orizzontale massima del terreno ag su sito di riferimento rigido orizzontale

Tb è il periodo corrispondente all'inizio del tratto dello spettro ad accelerazione costante.

Tc è il periodo corrispondente all'inizio del tratto dello spettro a velocità costante.

Td è il periodo corrispondente all'inizio del tratto dello spettro a spostamento costante.

Lo spettro di risposta elastico in accelerazione della componente orizzontale del moto sismico, S_e , è definito dalle seguenti espressioni:

$$\begin{aligned} 0 \leq T < T_B & \quad S_e(T) = a_g \cdot S \cdot \eta \cdot F_o \cdot \left[\frac{T}{T_B} + \frac{1}{\eta \cdot F_o} \left(1 - \frac{T}{T_B} \right) \right] \\ T_B \leq T < T_C & \quad S_e(T) = a_g \cdot S \cdot \eta \cdot F_o \\ T_C \leq T < T_D & \quad S_e(T) = a_g \cdot S \cdot \eta \cdot F_o \cdot \left(\frac{T_C}{T} \right) \\ T_D \leq T & \quad S_e(T) = a_g \cdot S \cdot \eta \cdot F_o \cdot \left(\frac{T_C \cdot T_D}{T^2} \right) \end{aligned}$$

Dove per sottosuolo di categoria **A** i coefficienti S_s e C_c valgono 1; mentre per le categorie di sottosuolo **B, C, D, E** i coefficienti S_s e C_c vengono calcolati mediante le espressioni riportate nella seguente Tabella

Categoria sottosuolo	S_s	C_c
A	1,00	1,00
B	$1,00 \leq 1,40 - 0,40 \cdot F_o \cdot \frac{a_g}{g} \leq 1,20$	$1,10 \cdot (T_c^*)^{-0,20}$
C	$1,00 \leq 1,70 - 0,60 \cdot F_o \cdot \frac{a_g}{g} \leq 1,50$	$1,05 \cdot (T_c^*)^{-0,33}$
D	$0,90 \leq 2,40 - 1,50 \cdot F_o \cdot \frac{a_g}{g} \leq 1,80$	$1,25 \cdot (T_c^*)^{-0,50}$
E	$1,00 \leq 2,00 - 1,10 \cdot F_o \cdot \frac{a_g}{g} \leq 1,60$	$1,15 \cdot (T_c^*)^{-0,40}$

Per tenere conto delle condizioni topografiche e in assenza di specifiche analisi di risposta sismica locale, si utilizzano i valori del coefficiente topografico S_T riportati nella seguente Tabella

Categoria topografica	Ubicazione dell'opera o dell'intervento	S_T
T1	-	1,0
T2	In corrispondenza della sommità del pendio	1,2
T3	In corrispondenza della cresta di un rilievo con pendenza media minore o uguale a 30°	1,2
T4	In corrispondenza della cresta di un rilievo con pendenza media maggiore di 30°	1,4

Lo spettro di risposta elastico in accelerazione della componente verticale del moto sismico, S_{ve} , è definito dalle espressioni:

$$0 \leq T < T_B \quad S_{ve}(T) = a_g \cdot S \cdot \eta \cdot F_v \cdot \left[\frac{T}{T_B} + \frac{1}{\eta \cdot F_o} \left(1 - \frac{T}{T_B} \right) \right]$$

$$T_B \leq T < T_C \quad S_{ve}(T) = a_g \cdot S \cdot \eta \cdot F_v$$

$$T_C \leq T < T_D \quad S_{ve}(T) = a_g \cdot S \cdot \eta \cdot F_v \cdot \left(\frac{T_C}{T} \right)$$

$$T_D \leq T \quad S_{ve}(T) = a_g \cdot S \cdot \eta \cdot F_v \cdot \left(\frac{T_C \cdot T_D}{T^2} \right)$$

I valori di S_s , T_B , T_C e T_D , sono riportati nella seguente Tabella

Categoria di sottosuolo	S_s	T_B	T_C	T_D
A, B, C, D, E	1,0	0,05 s	0,15 s	1,0 s

Id nodo	Longitudine	Latitudine	Distanza
			Km
Loc.	10.641	44.954	
14722	10.596	44.950	3.557
14723	10.666	44.952	1.973
14501	10.664	45.002	5.617
14500	10.593	45.000	6.337

SL	Pver	Tr	ag	Fo	T*c
		Anni	g		sec
SLO	91.8	30.0	0.035	2.573	0.220
SLD	91.8	30.0	0.035	2.573	0.220
SLV	56.9	89.1	0.050	2.605	0.276

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SL	P _{ver}	Tr	ag	Fo	T*c
SLC	31.6	197.1	0.063	2.660	0.302

SL	ag	S	Fo	Fv	Tb	Tc	Td
	g				sec	sec	sec
SLO	0.035	1.500	2.573	0.645	0.127	0.381	1.738
SLD	0.035	1.500	2.573	0.645	0.127	0.381	1.738
SLV	0.050	1.500	2.605	0.784	0.148	0.443	1.799
SLC	0.063	1.500	2.660	0.899	0.157	0.471	1.851

RISULTATI ANALISI SISMICHE

LEGENDA TABELLA ANALISI SISMICHE

Il programma consente l'analisi di diverse configurazioni sismiche.

Sono previsti, infatti, i seguenti casi di carico:

9. Esk caso di carico sismico con analisi statica equivalente

10. Edk caso di carico sismico con analisi dinamica

Ciascun caso di carico è caratterizzato da un angolo di ingresso e da una configurazione di masse determinante la forza sismica complessiva (si rimanda al capitolo relativo ai casi di carico per chiarimenti inerenti questo aspetto).

Nella colonna Note, in funzione della norma in uso sono riportati i parametri fondamentali che caratterizzano l'azione sismica: in particolare possono essere presenti i seguenti valori:

Angolo di ingresso	Angolo di ingresso dell'azione sismica orizzontale
Fattore di importanza	Fattore di importanza dell'edificio, in base alla categoria di appartenenza
Zona sismica	Zona sismica
Accelerazione ag	Accelerazione orizzontale massima sul suolo
Categoria suolo	Categoria di profilo stratigrafico del suolo di fondazione
Fattore q	Fattore di struttura/di comportamento. Dipendente dalla tipologia strutturale
Amplificazione ND	Coefficiente di amplificazione q/q_{ND} delle azioni sismiche (solo per elementi progettati in campo non dissipativo)
Fattore di sito S	Fattore dipendente dalla stratigrafia e dal profilo topografico
Classe di duttilità CD	Classe di duttilità della struttura – “A” duttilità alta, “B” duttilità bassa
Fattore riduz. SLD	Fattore di riduzione dello spettro elastico per lo stato limite di danno
Periodo proprio T1	Periodo proprio di vibrazione della struttura
Coefficiente Lambda	Coefficiente dipendente dal periodo proprio T1 e dal numero di piani della struttura
Ordinata spettro Sd(T1)	Valore delle ordinate dello spettro di progetto per lo stato limite ultimo, componente orizzontale (verticale Svd)
Ordinata spettro Se(T1)	Valore delle ordinate dello spettro elastico ridotta del fattore SLD per lo stato limite di danno, componente orizzontale (verticale Sve)
Ordinata spettro S (Tb-Tc)	Valore dell'ordinata dello spettro in uso nel tratto costante
numero di modi considerati	Numero di modi di vibrare della struttura considerati nell'analisi dinamica

Nel caso di elementi progettati in campo non dissipativo vengono adottate le sollecitazioni calcolate con un fattore q_{ND} ricavato come da 7.3.2 in funzione del fattore di comportamento q utilizzato per la struttura: $1 < q_{ND} = 2/3 * q < 1.5$

Il coefficiente di amplificazione delle azioni sismiche rispetto alle azioni calcolate con il fattore di comportamento globale viene indicato nelle relative tabelle.

Per ciascun caso di carico sismico viene riportato l'insieme di dati sotto riportati (le masse sono espresse in unità di forza):

- a) analisi sismica statica equivalente:
 - quota, posizione del centro di applicazione e azione orizzontale risultante, posizione del baricentro delle rigidezze, rapporto r/L_s (per strutture a nucleo), indici di regolarità e/r secondo EC8 4.2.3.2
 - azione sismica complessiva
- b) analisi sismica dinamica con spettro di risposta:
 - quota, posizione del centro di massa e massa risultante, posizione del baricentro delle rigidezze, rapporto r/L_s (per strutture a nucleo), indici di regolarità e/r secondo EC8 4.2.3.2
 - frequenza, periodo, accelerazione spettrale, massa eccitata nelle tre direzioni globali per tutti i modi
 - massa complessiva ed aliquota di massa complessiva eccitata.

Per ciascuna combinazione sismica definita SLD o SLO viene riportato il livello di deformazione η_T (dr) degli elementi strutturali verticali. Per semplicità di consultazione il livello è espresso anche in unità $1000 \cdot \eta_T/h$ da confrontare direttamente con i valori forniti nella norma (es. 5 per edifici con tamponamenti collegati rigidamente alla struttura, 10.0 per edifici con tamponamenti collegati elasticamente, 3 per edifici in muratura ordinaria, 4 per edifici in muratura armata).

Qualora si applichi il D.M. 96 (vedi NOTA sul capitolo "normativa di riferimento") l'analisi sismica dinamica può essere comprensiva di sollecitazione verticale contemporanea a quella orizzontale, nel qual caso è effettuata una sovrapposizione degli effetti in ragione della radice dei quadrati degli effetti stessi. Per ciascuna combinazione sismica - analisi effettuate con il D.M. 96 (vedi NOTA sul capitolo "normativa di riferimento") - viene riportato il livello di deformazione η_T , η_P e η_D degli elementi strutturali verticali. Per semplicità di consultazione il livello è espresso in unità $1000 \cdot \eta_T/h$ da confrontare direttamente con il valore 2 o 4 per la verifica.

Per gli edifici sismicamente isolati si riportano di seguito le verifiche condotte sui dispositivi di isolamento. Le verifiche sono effettuate secondo la circolare n.7/2019 del C.S.LL.PP nelle combinazioni in SLC come previsto dal DM 17-01-2018. Per ogni combinazione è riportato il codice di verifica ed i valori utilizzati per la verifica: spostamento d_E , area ridotta e dimensione A_2 , azione verticale, deformazioni di taglio dell'elastomero e tensioni nell'acciaio.

Qualora si applichi l'Ordinanza 3274 e s.m.i. le verifiche sono eseguite in accordo con l'allegato 10.A.

In particolare la tabella, per ogni combinazione di calcolo, riporta:

Nodo	Nodo di appoggio dell' isolatore
Cmb	Combinazione oggetto della verifica
Verif.	Codice di verifica ok – verifica positiva , NV – verifica negativa, ND – verifica non completata
d_E	Spostamento relativo tra le due facce (amplificato del 20% per Ordinanza 3274 e smi) combinato con la regola del 30%
Ang f_i	Angolo utilizzato per il calcolo dell' area ridotta A_r (per dispositivi circolari)
V	Azione verticale agente
A_r	Area ridotta efficace
Dim A_2	Dimensione utile per il calcolo della deformazione per rotazione
Sig s	Tensione nell' inserto in acciaio

$\gamma_{c(a,s,t)}$	Deformazioni di taglio dell' elastomero
V_{cr}	Carico critico per instabilità

Affinché la verifica sia positiva deve essere:

- 1) $V > 0$
- 2) $\sigma_s < f_{yk}$
- 3) $\gamma_t < 5$
- 4) $\gamma_s < \gamma^*$ (caratteristica dell' elastomero)
- 5) $\gamma_s < 2$
- 6) $V < 0.5 V_{cr}$

Calcolo dei fattori di comportamento secondo il D.M. 17/01/2018

La costruzione, esistente, è caratterizzata da non regolarità sia in pianta sia in altezza ed è progettata in classe di duttilità media (CD"B").

Parametri fattore in direzione x e y

Sistema costruttivo: muratura

Tipo di muratura: muratura in pietra e/o mattoni

Definizione rapporto α_u/α_1 : media tra 1 e il valore da normativa

Riferimento normativo α_u/α_1 : in assenza di precise valutazioni, non superiore a 1,5

Valore rapporto $\alpha_u/\alpha_1 = 1.250$

Fattore dissipativo $q_D = 1.500 \alpha_u/\alpha_1 = 1.875$

Fattori di comportamento utilizzati

Dissipativi

q SLU x 1.875

q SLU y 1.875

q SLU z 1.500

CDC	Tipo	Sigla Id	Note
6	Edk	CDC=Ed (dinamico SLU) alfa=0.0 (ecc. +)	
			verifica esistenti: fattore FC 1.350
			categoria suolo: C
			fattore di sito S = 1.500
			ordinata spettro (tratto Tb-Tc) = 0.104 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.079 sec.
			fattore q: 1.875
			fattore q (fragili): 1.500
			fattore per spost. mu d: 5.375
			classe di duttilità CD: B
			numero di modi considerati:150
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	kN	m	m	m	m	m	m			
9.20	22.68	22.77	5.27	0.0	-0.53	22.77	5.26	0.003	5.8650e-06	9.6147e-04
8.20	156.44	14.10	5.27	0.0	-0.53	22.77	5.26	5.2206e-04	52.444	0.001
7.95	7.09	22.77	5.93	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.94	7.20	22.77	4.58	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.89	5.18	0.06	6.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.73	6.73	0.06	4.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.70	3.43	0.06	6.58	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.54	13.73	15.21	7.02	0.0	0.0	11.41	7.02	3.000	0.334	0.0
7.53	205.56	11.43	5.27	0.0	-0.18	0.0	0.0	0.0	0.0	0.0
7.53	13.89	14.86	3.49	0.0	0.0	11.41	3.49	3.000	0.303	0.0
7.27	91.98	12.96	5.25	0.0	-0.53	19.41	5.26	1.242	0.801	1.0260e-04
7.15	7.28	22.77	2.51	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.15	7.39	22.77	8.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.88	7.66	0.06	8.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.87	204.79	11.43	5.27	0.0	-0.35	0.0	0.0	0.0	0.0	0.0
6.79	8.01	0.06	1.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.64	10.12	22.77	1.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.63	10.01	22.77	9.41	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.54	6.39	0.06	9.65	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.49	5.37	0.06	0.76	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.20	525.53	12.59	6.27	0.0	-0.84	14.71	7.06	0.415	0.061	0.150
5.98	1.52	21.82	15.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.95	0.90	0.06	11.21	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.77	4.92	20.87	15.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.71	0.58	0.06	11.86	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.55	0.60	19.93	14.93	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.34	594.17	11.63	7.68	0.0	-0.84	13.65	9.85	0.426	0.052	0.409
4.27	619.49	11.04	6.80	0.0	-0.84	13.73	9.79	0.464	0.070	0.540
4.10	3.67	-0.89	3.64	0.0	-0.36	0.0	0.0	0.0	0.0	0.0
3.92	58.76	-1.84	5.11	0.0	-0.36	0.0	0.0	0.0	0.0	0.0
3.83	1.35	-2.35	1.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.81	1.20	-2.49	8.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.69	0.97	-3.14	8.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.66	1.06	-3.27	1.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.57	59.72	-3.78	5.15	0.0	-0.36	0.0	0.0	0.0	0.0	0.0
3.45	1.05	-4.47	5.14	0.0	-0.36	0.0	0.0	0.0	0.0	0.0
3.32	0.50	-5.16	5.14	0.0	-0.36	0.0	0.0	0.0	0.0	0.0
3.20	1550.32	13.19	7.77	0.0	-0.84	2.52	9.74	0.343	0.290	0.352

INGEGNERE

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
2.20	708.68	9.51	6.81	0.0	-0.84	1.83	9.74	0.339	0.205	0.526
1.07	691.36	9.35	6.82	0.0	-0.84	1.82	9.70	0.355	0.200	0.506
0.0	3.04	-5.85	3.36	0.0	-0.06	0.0	0.0	0.0	0.0	0.0
Risulta	5630.32									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	kN		kN		kN			
1	0.517	1.934	0.022	76.62	1.4	4.35e-03	7.72e-05	1.68e-05	0.0	0.0	0.0
2	0.519	1.928	0.022	75.87	1.3	0.05	9.63e-04	0.0	0.0	0.0	0.0
3	0.530	1.885	0.023	7.27	0.1	9.97e-03	1.77e-04	0.0	0.0	0.0	0.0
4	0.532	1.878	0.023	1.37	2.43e-02	0.03	5.41e-04	1.10e-06	0.0	0.0	0.0
5	0.534	1.874	0.024	252.28	4.5	0.01	2.02e-04	0.0	0.0	0.0	0.0
6	1.410	0.709	0.065	0.69	1.23e-02	1129.43	20.1	3.41e-03	6.06e-05	0.0	0.0
7	1.577	0.634	0.072	224.69	4.0	0.09	1.56e-03	5.88e-04	1.04e-05	0.0	0.0
8	1.592	0.628	0.073	1.40	2.48e-02	26.26	0.5	0.0	0.0	0.0	0.0
9	1.596	0.627	0.073	0.09	1.54e-03	3.90	6.92e-02	1.66e-04	2.94e-06	0.0	0.0
10	1.622	0.617	0.074	0.09	1.63e-03	2.78	4.94e-02	1.69e-04	3.01e-06	0.0	0.0
11	1.628	0.614	0.075	0.10	1.72e-03	8.75	0.2	5.68e-05	1.01e-06	0.0	0.0
12	1.647	0.607	0.076	0.11	1.88e-03	54.42	1.0	7.26e-05	1.29e-06	0.0	0.0
13	2.027	0.493	0.093	0.05	8.47e-04	19.22	0.3	0.02	2.72e-04	0.0	0.0
14	2.544	0.393	0.104	10.93	0.2	37.65	0.7	0.02	3.04e-04	0.0	0.0
15	2.545	0.393	0.104	12.58	0.2	0.78	1.38e-02	4.57e-03	8.12e-05	0.0	0.0
16	2.600	0.385	0.104	98.91	1.8	6.66	0.1	0.42	7.37e-03	0.0	0.0
17	2.605	0.384	0.104	48.00	0.9	23.76	0.4	0.02	3.76e-04	0.0	0.0
18	2.620	0.382	0.104	6.41	0.1	10.23	0.2	1.39e-04	2.47e-06	0.0	0.0
19	2.629	0.380	0.104	47.74	0.8	2.83	5.03e-02	1.36e-03	2.42e-05	0.0	0.0
20	2.696	0.371	0.104	0.03	5.80e-04	426.16	7.6	0.10	1.75e-03	0.0	0.0
21	2.932	0.341	0.104	0.10	1.81e-03	49.18	0.9	0.04	6.93e-04	0.0	0.0
22	3.093	0.323	0.104	2.73	4.85e-02	122.72	2.2	8.08e-04	1.44e-05	0.0	0.0
23	3.289	0.304	0.104	0.29	5.12e-03	16.80	0.3	0.01	2.18e-04	0.0	0.0
24	3.400	0.294	0.104	0.62	1.10e-02	6.69	0.1	2.37e-04	4.21e-06	0.0	0.0
25	3.601	0.278	0.104	0.02	4.20e-04	16.06	0.3	0.02	4.12e-04	0.0	0.0
26	3.839	0.261	0.104	0.07	1.22e-03	0.86	1.52e-02	2.90e-03	5.15e-05	0.0	0.0
27	4.003	0.250	0.104	0.09	1.58e-03	0.14	2.48e-03	4.90e-03	8.71e-05	0.0	0.0
28	4.019	0.249	0.104	0.07	1.19e-03	0.57	1.00e-02	1.58e-03	2.80e-05	0.0	0.0
29	4.029	0.248	0.104	1.86	3.30e-02	0.97	1.72e-02	8.06e-03	1.43e-04	0.0	0.0
30	4.036	0.248	0.104	2.21e-03	3.93e-05	3.89e-06	0.0	1.86e-03	3.30e-05	0.0	0.0
31	4.044	0.247	0.104	8.93	0.2	0.07	1.23e-03	7.85e-04	1.39e-05	0.0	0.0
32	4.597	0.218	0.104	23.82	0.4	0.10	1.81e-03	3.64e-04	6.47e-06	0.0	0.0
33	4.642	0.215	0.104	0.44	7.74e-03	0.29	5.18e-03	1.97e-03	3.49e-05	0.0	0.0
34	4.663	0.214	0.104	0.01	2.52e-04	0.09	1.57e-03	0.01	2.13e-04	0.0	0.0
35	4.770	0.210	0.104	0.17	3.04e-03	0.18	3.11e-03	8.13e-03	1.44e-04	0.0	0.0
36	4.788	0.209	0.104	0.30	5.27e-03	0.06	1.05e-03	5.01e-03	8.89e-05	0.0	0.0
37	4.790	0.209	0.104	1.54	2.73e-02	0.02	3.67e-04	3.84e-05	0.0	0.0	0.0
38	4.865	0.206	0.104	0.06	1.15e-03	38.51	0.7	4.58e-03	8.14e-05	0.0	0.0
39	4.878	0.205	0.104	0.02	3.06e-04	1.85	3.28e-02	7.56e-06	0.0	0.0	0.0
40	5.368	0.186	0.104	4.98	8.85e-02	9.88e-03	1.76e-04	0.03	4.87e-04	0.0	0.0
41	5.383	0.186	0.104	5.26	9.35e-02	0.34	6.02e-03	5.41e-05	0.0	0.0	0.0
42	5.431	0.184	0.104	0.21	3.81e-03	65.61	1.2	4.06e-05	0.0	0.0	0.0
43	5.512	0.181	0.104	0.56	9.97e-03	0.06	1.10e-03	1.11e-03	1.98e-05	0.0	0.0
44	5.526	0.181	0.104	1.28	2.27e-02	0.12	2.14e-03	0.03	4.68e-04	0.0	0.0
45	5.533	0.181	0.104	14.54	0.3	7.70e-03	1.37e-04	0.02	3.00e-04	0.0	0.0
46	5.982	0.167	0.104	0.26	4.62e-03	21.25	0.4	86.83	1.5	0.0	0.0
47	6.166	0.162	0.104	5.37	9.54e-02	67.83	1.2	0.82	1.46e-02	0.0	0.0
48	6.241	0.160	0.104	0.11	2.03e-03	2.07	3.67e-02	7.68	0.1	0.0	0.0
49	6.295	0.159	0.104	0.05	8.88e-04	11.09	0.2	139.82	2.5	0.0	0.0
50	6.412	0.156	0.104	0.04	7.18e-04	0.47	8.41e-03	105.22	1.9	0.0	0.0
51	6.458	0.155	0.104	24.79	0.4	624.29	11.1	3.55	6.30e-02	0.0	0.0
52	6.495	0.154	0.104	1.31	2.33e-02	11.59	0.2	9.10	0.2	0.0	0.0
53	6.542	0.153	0.104	0.20	3.62e-03	8.89	0.2	206.43	3.7	0.0	0.0
54	6.890	0.145	0.103	9.29e-03	1.65e-04	5.34	9.49e-02	3.34	5.94e-02	0.0	0.0
55	7.176	0.139	0.102	41.44	0.7	839.73	14.9	0.89	1.59e-02	0.0	0.0
56	7.223	0.138	0.102	14.89	0.3	0.17	2.97e-03	82.93	1.5	0.0	0.0
57	7.251	0.138	0.102	9.07	0.2	254.75	4.5	0.04	6.44e-04	0.0	0.0
58	7.519	0.133	0.101	102.41	1.8	197.72	3.5	0.03	6.12e-04	0.0	0.0
59	8.026	0.125	0.099	0.42	7.49e-03	19.48	0.3	0.83	1.47e-02	0.0	0.0
60	8.100	0.123	0.099	6.39	0.1	51.36	0.9	0.27	4.74e-03	0.0	0.0
61	8.288	0.121	0.098	0.03	5.17e-04	6.80	0.1	0.33	5.84e-03	0.0	0.0
62	8.570	0.117	0.097	13.91	0.2	6.65	0.1	0.03	5.47e-04	0.0	0.0
63	8.691	0.115	0.097	58.48	1.0	0.84	1.50e-02	0.23	4.11e-03	0.0	0.0
64	9.087	0.110	0.096	0.13	2.32e-03	38.97	0.7	0.45	8.07e-03	0.0	0.0
65	9.330	0.107	0.096	14.80	0.3	15.35	0.3	0.04	7.98e-04	0.0	0.0
66	9.545	0.105	0.095	1.33	2.36e-02	30.18	0.5	0.09	1.54e-03	0.0	0.0

INGEGNERE

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
67	9.576	0.104	0.095	3.34	5.92e-02	70.29	1.2	0.14	2.48e-03	0.0	0.0
68	9.763	0.102	0.095	14.81	0.3	28.73	0.5	0.30	5.35e-03	0.0	0.0
69	9.857	0.101	0.094	19.49	0.3	0.85	1.51e-02	4.41e-05	0.0	0.0	0.0
70	10.146	0.099	0.094	23.58	0.4	2.23	3.96e-02	0.14	2.55e-03	0.0	0.0
71	10.429	0.096	0.093	0.15	2.75e-03	2.85	5.06e-02	1.64e-03	2.92e-05	0.0	0.0
72	10.534	0.095	0.093	4.72	8.39e-02	0.72	1.28e-02	0.18	3.22e-03	0.0	0.0
73	10.834	0.092	0.093	11.65	0.2	2.46	4.37e-02	0.16	2.87e-03	0.0	0.0
74	11.043	0.091	0.092	13.28	0.2	7.55	0.1	0.03	4.93e-04	0.0	0.0
75	11.072	0.090	0.092	0.49	8.75e-03	11.57	0.2	0.17	3.04e-03	0.0	0.0
76	11.234	0.089	0.092	8.07	0.1	2.02	3.58e-02	0.04	7.47e-04	0.0	0.0
77	11.329	0.088	0.092	1.71	3.05e-02	7.34	0.1	0.02	2.86e-04	0.0	0.0
78	11.411	0.088	0.092	0.21	3.69e-03	12.84	0.2	0.20	3.55e-03	0.0	0.0
79	11.516	0.087	0.092	6.41	0.1	7.58	0.1	7.05e-03	1.25e-04	0.0	0.0
80	11.719	0.085	0.091	10.96	0.2	26.72	0.5	0.25	4.40e-03	0.0	0.0
81	11.863	0.084	0.091	394.27	7.0	242.93	4.3	2.01	3.57e-02	0.0	0.0
82	11.996	0.083	0.091	3.61	6.42e-02	16.95	0.3	0.21	3.74e-03	0.0	0.0
83	12.046	0.083	0.091	17.90	0.3	7.26e-03	1.29e-04	0.01	1.79e-04	0.0	0.0
84	12.103	0.083	0.091	1.19	2.11e-02	9.82	0.2	0.64	1.14e-02	0.0	0.0
85	12.355	0.081	0.090	165.00	2.9	8.27	0.1	0.07	1.20e-03	0.0	0.0
86	12.568	0.080	0.090	18.03	0.3	46.14	0.8	2.04e-04	3.62e-06	0.0	0.0
87	12.702	0.079	0.090	786.71	14.0	3.00	5.32e-02	8.72e-03	1.55e-04	0.0	0.0
88	12.893	0.078	0.090	1.43	2.53e-02	0.08	1.36e-03	0.02	3.89e-04	0.0	0.0
89	13.053	0.077	0.090	6.29	0.1	0.03	5.36e-04	0.02	2.76e-04	0.0	0.0
90	13.104	0.076	0.090	8.11	0.1	4.46	7.93e-02	0.19	3.44e-03	0.0	0.0
91	13.262	0.075	0.089	26.83	0.5	95.23	1.7	0.76	1.35e-02	0.0	0.0
92	13.357	0.075	0.089	6.87	0.1	1.07	1.90e-02	0.04	6.30e-04	0.0	0.0
93	13.430	0.074	0.089	1.83	3.25e-02	0.14	2.56e-03	0.11	1.98e-03	0.0	0.0
94	13.456	0.074	0.089	0.22	3.89e-03	0.19	3.39e-03	4.34e-03	7.72e-05	0.0	0.0
95	13.607	0.073	0.089	111.72	2.0	10.85	0.2	4.46	7.92e-02	0.0	0.0
96	13.795	0.072	0.089	81.44	1.4	27.41	0.5	0.08	1.44e-03	0.0	0.0
97	13.912	0.072	0.089	35.85	0.6	0.24	4.30e-03	2.88	5.11e-02	0.0	0.0
98	14.065	0.071	0.088	701.91	12.5	2.99	5.31e-02	6.76	0.1	0.0	0.0
99	14.130	0.071	0.088	72.23	1.3	0.63	1.12e-02	11.23	0.2	0.0	0.0
100	14.419	0.069	0.088	42.19	0.7	6.69	0.1	0.03	4.91e-04	0.0	0.0
101	14.575	0.069	0.088	415.80	7.4	1.59	2.83e-02	1.52	2.70e-02	0.0	0.0
102	14.973	0.067	0.088	2.75	4.89e-02	7.01	0.1	5.08e-05	0.0	0.0	0.0
103	15.113	0.066	0.088	102.17	1.8	0.20	3.51e-03	2.25e-04	3.99e-06	0.0	0.0
104	15.338	0.065	0.087	1.57	2.78e-02	0.23	4.05e-03	0.13	2.23e-03	0.0	0.0
105	15.671	0.064	0.087	0.49	8.71e-03	5.65	0.1	0.11	1.90e-03	0.0	0.0
106	15.803	0.063	0.087	4.93	8.76e-02	1.19	2.12e-02	0.14	2.50e-03	0.0	0.0
107	15.908	0.063	0.087	21.41	0.4	10.50	0.2	0.22	3.99e-03	0.0	0.0
108	16.165	0.062	0.087	20.87	0.4	18.84	0.3	6.35e-04	1.13e-05	0.0	0.0
109	16.579	0.060	0.086	87.47	1.6	6.35e-03	1.13e-04	0.05	9.48e-04	0.0	0.0
110	16.695	0.060	0.086	116.24	2.1	3.32	5.90e-02	1.58	2.81e-02	0.0	0.0
111	16.922	0.059	0.086	96.31	1.7	2.89	5.12e-02	0.40	7.11e-03	0.0	0.0
112	17.059	0.059	0.086	2.89	5.13e-02	2.17	3.85e-02	0.35	6.24e-03	0.0	0.0
113	17.179	0.058	0.086	22.32	0.4	0.02	3.55e-04	0.36	6.44e-03	0.0	0.0
114	17.508	0.057	0.086	0.81	1.43e-02	39.28	0.7	1.00	1.78e-02	0.0	0.0
115	17.677	0.057	0.086	54.62	1.0	0.27	4.82e-03	0.02	2.69e-04	0.0	0.0
116	17.794	0.056	0.086	0.37	6.51e-03	4.97	8.83e-02	1.48e-04	2.62e-06	0.0	0.0
117	18.132	0.055	0.085	38.45	0.7	0.69	1.22e-02	0.02	2.73e-04	0.0	0.0
118	18.257	0.055	0.085	0.04	7.69e-04	1.02	1.82e-02	0.13	2.24e-03	0.0	0.0
119	18.299	0.055	0.085	0.07	1.31e-03	0.07	1.18e-03	0.04	7.08e-04	0.0	0.0
120	18.320	0.055	0.085	0.14	2.48e-03	1.40	2.48e-02	0.04	7.69e-04	0.0	0.0
121	18.374	0.054	0.085	3.14	5.58e-02	0.67	1.20e-02	0.01	1.89e-04	0.0	0.0
122	18.429	0.054	0.085	10.22	0.2	0.59	1.05e-02	1.57e-05	0.0	0.0	0.0
123	18.437	0.054	0.085	30.28	0.5	4.86	8.63e-02	0.20	3.63e-03	0.0	0.0
124	18.787	0.053	0.085	17.76	0.3	0.17	3.03e-03	2.45	4.34e-02	0.0	0.0
125	18.883	0.053	0.085	3.72	6.60e-02	0.07	1.18e-03	4.86	8.62e-02	0.0	0.0
126	19.216	0.052	0.085	21.60	0.4	0.11	1.94e-03	0.90	1.60e-02	0.0	0.0
127	19.272	0.052	0.085	12.90	0.2	0.05	9.36e-04	2.89	5.13e-02	0.0	0.0
128	19.403	0.052	0.085	0.12	2.08e-03	2.31	4.10e-02	12.85	0.2	0.0	0.0
129	19.543	0.051	0.085	3.88	6.90e-02	12.01	0.2	0.28	4.98e-03	0.0	0.0
130	19.617	0.051	0.085	0.18	3.15e-03	0.82	1.45e-02	3.91	6.95e-02	0.0	0.0
131	19.640	0.051	0.085	1.61	2.86e-02	30.75	0.5	2.26	4.02e-02	0.0	0.0
132	19.767	0.051	0.084	4.43	7.87e-02	0.75	1.34e-02	1.98	3.52e-02	0.0	0.0
133	19.870	0.050	0.084	0.48	8.46e-03	11.82	0.2	0.12	2.09e-03	0.0	0.0
134	20.011	0.050	0.084	0.97	1.73e-02	5.46	9.70e-02	2.55	4.53e-02	0.0	0.0
135	20.101	0.050	0.084	7.38e-03	1.31e-04	0.11	1.95e-03	86.49	1.5	0.0	0.0
136	20.230	0.049	0.084	2.20e-03	3.92e-05	16.65	0.3	0.39	6.93e-03	0.0	0.0
137	20.306	0.049	0.084	0.02	4.08e-04	1.09	1.94e-02	3.85	6.84e-02	0.0	0.0
138	20.422	0.049	0.084	0.13	2.30e-03	0.11	1.98e-03	0.02	3.61e-04	0.0	0.0
139	20.572	0.049	0.084	0.31	5.42e-03	0.57	1.01e-02	6.74	0.1	0.0	0.0
140	20.943	0.048	0.084	0.16	2.78e-03	9.28	0.2	31.08	0.6	0.0	0.0
141	20.986	0.048	0.084	2.06e-03	3.66e-05	7.74	0.1	0.96	1.70e-02	0.0	0.0

INGEGNERE

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
142	21.022	0.048	0.084	0.69	1.22e-02	0.75	1.33e-02	0.36	6.44e-03	0.0	0.0
143	21.094	0.047	0.084	12.17	0.2	0.88	1.57e-02	145.07	2.6	0.0	0.0
144	21.306	0.047	0.084	1.08	1.93e-02	1.23	2.18e-02	0.14	2.53e-03	0.0	0.0
145	21.415	0.047	0.084	1.99	3.54e-02	1.48	2.62e-02	67.84	1.2	0.0	0.0
146	21.489	0.047	0.084	19.83	0.4	10.12	0.2	19.56	0.3	0.0	0.0
147	21.548	0.046	0.084	53.17	0.9	1.13	2.01e-02	6.52	0.1	0.0	0.0
148	21.678	0.046	0.084	16.34	0.3	3.87	6.88e-02	292.59	5.2	0.0	0.0
149	21.944	0.046	0.083	0.75	1.34e-02	1.10	1.96e-02	124.83	2.2	0.0	0.0
150	21.974	0.046	0.083	1.11	1.97e-02	1.05	1.87e-02	38.73	0.7	0.0	0.0
Risulta				5039.94		5178.96		1547.43			
In percentuale				89.51		91.98		27.48			

CDC	Tipo	Sigla Id	Note
7	Edk	CDC=Ed (dinamico SLU) alfa=0.0 (ecc. -)	
			verifica esistenti: fattore FC 1.350
			categoria suolo: C
			fattore di sito S = 1.500
			ordinata spettro (tratto Tb-Tc) = 0.104 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.078 sec.
			fattore q: 1.875
			fattore q (fragili): 1.500
			fattore per spost. mu d: 5.375
			classe di duttilità CD: B
			numero di modi considerati:150
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	kN	m	m	m	m	m	m			
9.20	22.68	22.77	5.27	0.0	0.53	22.77	5.26	0.003	5.8650e-06	9.6147e-04
8.20	156.44	14.10	5.27	0.0	0.53	22.77	5.26	5.2206e-04	52.444	0.001
7.95	7.09	22.77	5.93	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.94	7.20	22.77	4.58	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.89	5.18	0.06	6.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.73	6.73	0.06	4.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.70	3.43	0.06	6.58	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.54	13.73	15.21	7.02	0.0	0.0	11.41	7.02	3.000	0.334	0.0
7.53	205.56	11.43	5.27	0.0	0.18	0.0	0.0	0.0	0.0	0.0
7.53	13.89	14.86	3.49	0.0	0.0	11.41	3.49	3.000	0.303	0.0
7.27	91.98	12.96	5.25	0.0	0.53	19.41	5.26	1.242	0.801	1.0260e-04
7.15	7.28	22.77	2.51	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.15	7.39	22.77	8.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.88	7.66	0.06	8.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.87	204.79	11.43	5.27	0.0	0.35	0.0	0.0	0.0	0.0	0.0
6.79	8.01	0.06	1.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.64	10.12	22.77	1.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.63	10.01	22.77	9.41	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.54	6.39	0.06	9.65	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.49	5.37	0.06	0.76	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.20	525.53	12.59	6.27	0.0	0.84	14.71	7.06	0.415	0.061	0.150
5.98	1.52	21.82	15.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.95	0.90	0.06	11.21	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.77	4.92	20.87	15.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.71	0.58	0.06	11.86	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.55	0.60	19.93	14.93	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.34	594.17	11.63	7.68	0.0	0.84	13.65	9.85	0.426	0.052	0.409
4.27	619.49	11.04	6.80	0.0	0.84	13.73	9.79	0.464	0.070	0.540
4.10	3.67	-0.89	3.64	0.0	0.36	0.0	0.0	0.0	0.0	0.0
3.92	58.76	-1.84	5.11	0.0	0.36	0.0	0.0	0.0	0.0	0.0
3.83	1.35	-2.35	1.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.81	1.20	-2.49	8.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.69	0.97	-3.14	8.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.66	1.06	-3.27	1.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.57	59.72	-3.78	5.15	0.0	0.36	0.0	0.0	0.0	0.0	0.0
3.45	1.05	-4.47	5.14	0.0	0.36	0.0	0.0	0.0	0.0	0.0
3.32	0.50	-5.16	5.14	0.0	0.36	0.0	0.0	0.0	0.0	0.0
3.20	1550.32	13.19	7.77	0.0	0.84	2.52	9.74	0.343	0.290	0.352
2.20	708.68	9.51	6.81	0.0	0.84	1.83	9.74	0.339	0.205	0.526
1.07	691.36	9.35	6.82	0.0	0.84	1.82	9.70	0.355	0.200	0.506

INGEGNERE

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
0.0	3.04	-5.85	3.36	0.0	0.06	0.0	0.0	0.0	0.0	0.0
Risulta	5630.32									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	kN		kN		kN			
1	0.517	1.935	0.022	76.70	1.4	1.51e-03	2.69e-05	1.61e-05	0.0	0.0	0.0
2	0.519	1.928	0.022	75.41	1.3	0.05	9.67e-04	0.0	0.0	0.0	0.0
3	0.530	1.885	0.023	7.66	0.1	9.76e-03	1.73e-04	0.0	0.0	0.0	0.0
4	0.532	1.878	0.023	2.08	3.69e-02	0.02	3.84e-04	0.0	0.0	0.0	0.0
5	0.534	1.874	0.023	251.47	4.5	7.36e-03	1.31e-04	0.0	0.0	0.0	0.0
6	1.410	0.709	0.065	0.65	1.15e-02	1131.02	20.1	3.41e-03	6.05e-05	0.0	0.0
7	1.580	0.633	0.072	215.56	3.8	8.09e-03	1.44e-04	6.76e-04	1.20e-05	0.0	0.0
8	1.592	0.628	0.073	4.21e-03	7.47e-05	24.62	0.4	0.0	0.0	0.0	0.0
9	1.596	0.627	0.073	1.79	3.18e-02	5.43	9.64e-02	2.55e-04	4.54e-06	0.0	0.0
10	1.622	0.616	0.074	0.11	1.94e-03	2.68	4.76e-02	1.79e-04	3.18e-06	0.0	0.0
11	1.628	0.614	0.075	0.05	9.60e-04	8.35	0.1	6.10e-05	1.08e-06	0.0	0.0
12	1.647	0.607	0.076	0.54	9.67e-03	53.56	1.0	7.13e-05	1.27e-06	0.0	0.0
13	2.026	0.494	0.093	0.01	2.08e-04	19.10	0.3	0.02	2.78e-04	0.0	0.0
14	2.544	0.393	0.104	4.23	7.52e-02	36.60	0.7	0.02	2.69e-04	0.0	0.0
15	2.545	0.393	0.104	20.25	0.4	4.05	7.19e-02	4.87e-04	8.64e-06	0.0	0.0
16	2.602	0.384	0.104	6.83	0.1	32.23	0.6	0.01	1.87e-04	0.0	0.0
17	2.622	0.381	0.104	0.69	1.23e-02	4.90	8.71e-02	5.46e-03	9.69e-05	0.0	0.0
18	2.629	0.380	0.104	62.42	1.1	2.22	3.95e-02	2.23e-04	3.96e-06	0.0	0.0
19	2.635	0.380	0.104	123.67	2.2	0.23	4.12e-03	0.43	7.72e-03	0.0	0.0
20	2.697	0.371	0.104	0.02	2.69e-04	429.33	7.6	0.10	1.83e-03	0.0	0.0
21	2.932	0.341	0.104	0.07	1.20e-03	50.44	0.9	0.04	6.68e-04	0.0	0.0
22	3.089	0.324	0.104	3.45	6.12e-02	118.80	2.1	1.04e-03	1.84e-05	0.0	0.0
23	3.311	0.302	0.104	0.24	4.26e-03	20.85	0.4	0.01	1.92e-04	0.0	0.0
24	3.420	0.292	0.104	1.11e-03	1.98e-05	2.96	5.26e-02	3.47e-06	0.0	0.0	0.0
25	3.601	0.278	0.104	0.01	2.34e-04	15.90	0.3	0.02	4.11e-04	0.0	0.0
26	3.831	0.261	0.104	0.17	3.04e-03	0.95	1.68e-02	2.86e-03	5.08e-05	0.0	0.0
27	4.140	0.242	0.104	0.11	1.90e-03	0.16	2.89e-03	5.55e-03	9.86e-05	0.0	0.0
28	4.157	0.241	0.104	0.02	3.70e-04	0.71	1.26e-02	1.54e-03	2.73e-05	0.0	0.0
29	4.167	0.240	0.104	1.84	3.27e-02	0.78	1.39e-02	7.21e-03	1.28e-04	0.0	0.0
30	4.176	0.239	0.104	2.11e-03	3.74e-05	2.84e-04	5.04e-06	2.43e-03	4.32e-05	0.0	0.0
31	4.185	0.239	0.104	8.81	0.2	0.07	1.30e-03	8.06e-04	1.43e-05	0.0	0.0
32	4.643	0.215	0.104	0.93	1.65e-02	0.27	4.77e-03	1.17e-04	2.08e-06	0.0	0.0
33	4.658	0.215	0.104	0.73	1.30e-02	8.05e-05	1.43e-06	7.92e-03	1.41e-04	0.0	0.0
34	4.769	0.210	0.104	0.25	4.49e-03	0.06	1.06e-03	5.33e-03	9.47e-05	0.0	0.0
35	4.787	0.209	0.104	0.42	7.51e-03	0.01	2.49e-04	5.13e-04	9.11e-06	0.0	0.0
36	4.791	0.209	0.104	2.02	3.59e-02	1.35e-03	2.40e-05	3.26e-06	0.0	0.0	0.0
37	4.849	0.206	0.104	0.22	3.87e-03	36.55	0.6	7.14e-03	1.27e-04	0.0	0.0
38	4.982	0.201	0.104	0.10	1.72e-03	0.26	4.70e-03	0.02	3.78e-04	0.0	0.0
39	5.021	0.199	0.104	32.94	0.6	1.06	1.89e-02	0.06	1.02e-03	0.0	0.0
40	5.368	0.186	0.104	4.51	8.00e-02	0.03	5.42e-04	0.04	6.33e-04	0.0	0.0
41	5.391	0.186	0.104	5.71	0.1	0.10	1.84e-03	0.02	2.91e-04	0.0	0.0
42	5.430	0.184	0.104	0.24	4.18e-03	69.84	1.2	7.84e-05	1.39e-06	0.0	0.0
43	5.515	0.181	0.104	0.12	2.22e-03	0.17	3.09e-03	0.01	2.60e-04	0.0	0.0
44	5.528	0.181	0.104	0.23	4.00e-03	0.19	3.32e-03	0.06	1.10e-03	0.0	0.0
45	5.533	0.181	0.104	14.80	0.3	0.07	1.28e-03	0.05	9.30e-04	0.0	0.0
46	5.831	0.172	0.104	25.98	0.5	127.39	2.3	0.33	5.95e-03	0.0	0.0
47	5.985	0.167	0.104	0.13	2.31e-03	44.92	0.8	87.53	1.6	0.0	0.0
48	6.241	0.160	0.104	0.13	2.23e-03	1.78	3.16e-02	8.05	0.1	0.0	0.0
49	6.290	0.159	0.104	1.18	2.09e-02	66.12	1.2	78.85	1.4	0.0	0.0
50	6.306	0.159	0.104	3.74	6.64e-02	44.45	0.8	59.82	1.1	0.0	0.0
51	6.413	0.156	0.104	1.52e-03	2.69e-05	0.17	3.07e-03	107.53	1.9	0.0	0.0
52	6.493	0.154	0.104	1.02e-04	1.81e-06	6.36	0.1	5.39	9.57e-02	0.0	0.0
53	6.541	0.153	0.104	0.03	4.54e-04	40.86	0.7	211.38	3.8	0.0	0.0
54	6.804	0.147	0.103	16.52	0.3	116.86	2.1	0.80	1.42e-02	0.0	0.0
55	6.890	0.145	0.103	0.55	9.81e-03	17.99	0.3	3.53	6.26e-02	0.0	0.0
56	7.109	0.141	0.102	2.95	5.24e-02	1507.43	26.8	0.76	1.34e-02	0.0	0.0
57	7.233	0.138	0.102	11.53	0.2	0.02	4.27e-04	82.78	1.5	0.0	0.0
58	7.600	0.132	0.100	115.72	2.1	95.45	1.7	0.17	3.03e-03	0.0	0.0
59	8.020	0.125	0.099	0.62	1.10e-02	38.78	0.7	0.51	9.07e-03	0.0	0.0
60	8.064	0.124	0.099	7.15	0.1	15.57	0.3	0.61	1.09e-02	0.0	0.0
61	8.373	0.119	0.098	8.74	0.2	1.43	2.55e-02	0.23	4.06e-03	0.0	0.0
62	8.600	0.116	0.097	25.37	0.5	0.04	7.37e-04	0.04	6.24e-04	0.0	0.0
63	8.725	0.115	0.097	50.58	0.9	1.30	2.32e-02	0.21	3.81e-03	0.0	0.0
64	8.997	0.111	0.096	9.70	0.2	33.05	0.6	0.47	8.35e-03	0.0	0.0
65	9.388	0.107	0.095	1.49	2.65e-02	37.23	0.7	0.11	2.01e-03	0.0	0.0
66	9.546	0.105	0.095	8.96	0.2	36.39	0.6	0.05	8.14e-04	0.0	0.0
67	9.584	0.104	0.095	11.93	0.2	71.70	1.3	0.26	4.70e-03	0.0	0.0
68	9.815	0.102	0.095	1.73	3.07e-02	13.36	0.2	0.24	4.23e-03	0.0	0.0

INGEGNERE

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
69	9.871	0.101	0.094	11.59	0.2	0.98	1.74e-02	2.54e-04	4.50e-06	0.0	0.0
70	10.097	0.099	0.094	31.70	0.6	1.68	2.99e-02	0.14	2.44e-03	0.0	0.0
71	10.429	0.096	0.093	0.08	1.38e-03	3.02	5.37e-02	1.73e-03	3.07e-05	0.0	0.0
72	10.572	0.095	0.093	0.75	1.34e-02	3.04	5.41e-02	0.06	1.14e-03	0.0	0.0
73	10.712	0.093	0.093	0.07	1.27e-03	0.49	8.67e-03	0.25	4.40e-03	0.0	0.0
74	11.180	0.089	0.092	8.26	0.1	0.95	1.68e-02	0.57	1.01e-02	0.0	0.0
75	11.286	0.089	0.092	3.15	5.59e-02	38.44	0.7	0.08	1.44e-03	0.0	0.0
76	11.616	0.086	0.091	4.00	7.10e-02	1.65	2.93e-02	0.02	2.95e-04	0.0	0.0
77	11.684	0.086	0.091	0.38	6.67e-03	2.14	3.80e-02	0.06	1.04e-03	0.0	0.0
78	11.750	0.085	0.091	8.14	0.1	28.52	0.5	0.07	1.20e-03	0.0	0.0
79	11.850	0.084	0.091	2.77	4.92e-02	10.68	0.2	0.09	1.68e-03	0.0	0.0
80	11.932	0.084	0.091	0.05	8.28e-04	51.74	0.9	0.01	1.95e-04	0.0	0.0
81	12.019	0.083	0.091	20.50	0.4	37.33	0.7	0.14	2.48e-03	0.0	0.0
82	12.065	0.083	0.091	25.90	0.5	59.57	1.1	0.24	4.25e-03	0.0	0.0
83	12.148	0.082	0.091	107.08	1.9	41.38	0.7	1.66	2.94e-02	0.0	0.0
84	12.279	0.081	0.091	60.26	1.1	0.12	2.19e-03	0.01	1.83e-04	0.0	0.0
85	12.400	0.081	0.090	86.49	1.5	145.07	2.6	0.30	5.37e-03	0.0	0.0
86	12.660	0.079	0.090	88.13	1.6	12.04	0.2	0.08	1.45e-03	0.0	0.0
87	12.768	0.078	0.090	1628.95	28.9	7.10	0.1	0.21	3.69e-03	0.0	0.0
88	12.978	0.077	0.090	97.46	1.7	0.97	1.73e-02	0.04	6.39e-04	0.0	0.0
89	13.050	0.077	0.090	2.93	5.21e-02	0.15	2.75e-03	0.02	2.76e-04	0.0	0.0
90	13.138	0.076	0.089	119.81	2.1	5.23	9.29e-02	0.28	4.99e-03	0.0	0.0
91	13.349	0.075	0.089	26.22	0.5	23.56	0.4	1.00e-03	1.78e-05	0.0	0.0
92	13.361	0.075	0.089	29.94	0.5	53.26	0.9	0.05	8.14e-04	0.0	0.0
93	13.428	0.074	0.089	1.31	2.33e-02	0.33	5.85e-03	0.06	1.10e-03	0.0	0.0
94	13.456	0.074	0.089	0.45	8.06e-03	0.62	1.11e-02	2.67e-04	4.74e-06	0.0	0.0
95	13.523	0.074	0.089	3.63	6.44e-02	11.98	0.2	0.05	8.11e-04	0.0	0.0
96	13.857	0.072	0.089	33.60	0.6	0.01	1.89e-04	12.82	0.2	0.0	0.0
97	13.956	0.072	0.089	3.68	6.54e-02	9.62	0.2	0.71	1.25e-02	0.0	0.0
98	14.193	0.070	0.088	21.11	0.4	1.26	2.23e-02	13.51	0.2	0.0	0.0
99	14.352	0.070	0.088	91.02	1.6	7.58	0.1	0.24	4.21e-03	0.0	0.0
100	14.538	0.069	0.088	0.56	9.90e-03	0.24	4.29e-03	0.10	1.86e-03	0.0	0.0
101	14.641	0.068	0.088	268.65	4.8	0.14	2.42e-03	0.06	9.97e-04	0.0	0.0
102	15.119	0.066	0.088	14.06	0.2	17.53	0.3	0.42	7.38e-03	0.0	0.0
103	15.184	0.066	0.087	413.75	7.3	0.51	9.00e-03	0.02	2.94e-04	0.0	0.0
104	15.369	0.065	0.087	0.69	1.23e-02	4.22e-04	7.49e-06	0.07	1.19e-03	0.0	0.0
105	15.600	0.064	0.087	0.17	2.97e-03	5.18	9.20e-02	0.14	2.57e-03	0.0	0.0
106	15.808	0.063	0.087	4.36	7.75e-02	6.48	0.1	0.18	3.12e-03	0.0	0.0
107	15.962	0.063	0.087	5.13	9.10e-02	1.21	2.15e-02	0.44	7.79e-03	0.0	0.0
108	16.071	0.062	0.087	11.30	0.2	0.14	2.42e-03	3.11e-04	5.53e-06	0.0	0.0
109	16.616	0.060	0.086	35.74	0.6	13.31	0.2	0.13	2.26e-03	0.0	0.0
110	16.748	0.060	0.086	59.14	1.1	4.81	8.55e-02	0.08	1.43e-03	0.0	0.0
111	16.881	0.059	0.086	63.06	1.1	1.86	3.31e-02	0.30	5.29e-03	0.0	0.0
112	17.186	0.058	0.086	112.87	2.0	0.98	1.74e-02	1.97	3.51e-02	0.0	0.0
113	17.260	0.058	0.086	1.98	3.51e-02	2.23e-03	3.96e-05	0.09	1.53e-03	0.0	0.0
114	17.505	0.057	0.086	0.53	9.38e-03	36.23	0.6	1.24	2.21e-02	0.0	0.0
115	17.785	0.056	0.086	1.36	2.41e-02	0.70	1.25e-02	0.52	9.15e-03	0.0	0.0
116	17.960	0.056	0.085	41.74	0.7	7.03	0.1	0.01	1.87e-04	0.0	0.0
117	18.243	0.055	0.085	2.22	3.94e-02	0.16	2.91e-03	0.13	2.35e-03	0.0	0.0
118	18.411	0.054	0.085	1.29	2.30e-02	0.78	1.39e-02	0.60	1.07e-02	0.0	0.0
119	18.795	0.053	0.085	11.92	0.2	3.87	6.87e-02	2.58e-06	0.0	0.0	0.0
120	18.887	0.053	0.085	0.21	3.77e-03	1.72	3.05e-02	0.27	4.82e-03	0.0	0.0
121	18.920	0.053	0.085	0.10	1.81e-03	0.22	3.92e-03	1.95	3.47e-02	0.0	0.0
122	18.943	0.053	0.085	3.48e-03	6.18e-05	0.08	1.36e-03	0.30	5.42e-03	0.0	0.0
123	18.981	0.053	0.085	2.94	5.22e-02	0.33	5.94e-03	8.66	0.2	0.0	0.0
124	19.008	0.053	0.085	1.02	1.82e-02	0.16	2.80e-03	1.81	3.21e-02	0.0	0.0
125	19.058	0.052	0.085	0.21	3.66e-03	0.05	8.48e-04	0.99	1.75e-02	0.0	0.0
126	19.078	0.052	0.085	0.11	1.97e-03	0.06	1.06e-03	0.08	1.38e-03	0.0	0.0
127	19.193	0.052	0.085	2.24	3.98e-02	1.64e-03	2.92e-05	4.41e-04	7.83e-06	0.0	0.0
128	19.467	0.051	0.085	6.55	0.1	13.28	0.2	4.14	7.35e-02	0.0	0.0
129	19.541	0.051	0.085	2.20	3.90e-02	0.26	4.55e-03	0.56	1.00e-02	0.0	0.0
130	19.654	0.051	0.085	0.11	1.92e-03	36.88	0.7	0.60	1.06e-02	0.0	0.0
131	19.850	0.050	0.084	1.16	2.05e-02	7.10	0.1	0.03	4.90e-04	0.0	0.0
132	19.992	0.050	0.084	15.67	0.3	4.94	8.78e-02	15.73	0.3	0.0	0.0
133	20.106	0.050	0.084	8.50e-03	1.51e-04	3.66	6.50e-02	59.77	1.1	0.0	0.0
134	20.121	0.050	0.084	9.26	0.2	9.53	0.2	7.49	0.1	0.0	0.0
135	20.272	0.049	0.084	2.18	3.86e-02	3.10	5.51e-02	10.16	0.2	0.0	0.0
136	20.359	0.049	0.084	3.02	5.36e-02	3.22	5.71e-02	8.12	0.1	0.0	0.0
137	20.451	0.049	0.084	5.10	9.05e-02	0.86	1.52e-02	2.78	4.93e-02	0.0	0.0
138	20.594	0.049	0.084	0.61	1.09e-02	4.98	8.84e-02	0.30	5.26e-03	0.0	0.0
139	20.775	0.048	0.084	10.95	0.2	5.62	9.99e-02	1.10	1.95e-02	0.0	0.0
140	20.942	0.048	0.084	0.26	4.54e-03	7.76	0.1	69.68	1.2	0.0	0.0
141	20.984	0.048	0.084	0.04	6.28e-04	2.14	3.80e-02	1.67	2.97e-02	0.0	0.0
142	21.023	0.048	0.084	0.35	6.28e-03	0.07	1.27e-03	8.28	0.1	0.0	0.0
143	21.056	0.047	0.084	5.55	9.86e-02	4.90	8.70e-02	84.55	1.5	0.0	0.0

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	kN	m	m	m	m	m	m			
9.20	22.68	22.77	5.27	0.0	0.0	22.77	5.26	0.003	5.8650e-06	9.6147e-04
8.20	156.44	14.10	5.27	1.14	0.0	22.77	5.26	5.2206e-04	52.444	0.001
7.95	7.09	22.77	5.93	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.94	7.20	22.77	4.58	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.89	5.18	0.06	6.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.73	6.73	0.06	4.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.70	3.43	0.06	6.58	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.54	13.73	15.21	7.02	1.14	0.0	11.41	7.02	3.000	0.334	0.0
7.53	205.56	11.43	5.27	0.73	0.0	0.0	0.0	0.0	0.0	0.0
7.53	13.89	14.86	3.49	1.14	0.0	11.41	3.49	3.000	0.303	0.0
7.27	91.98	12.96	5.25	1.14	0.0	19.41	5.26	1.242	0.801	1.0260e-04
7.15	7.28	22.77	2.51	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.15	7.39	22.77	8.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.88	7.66	0.06	8.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.87	204.79	11.43	5.27	0.73	0.0	0.0	0.0	0.0	0.0	0.0
6.79	8.01	0.06	1.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.64	10.12	22.77	1.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.63	10.01	22.77	9.41	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.54	6.39	0.06	9.65	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.49	5.37	0.06	0.76	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.20	525.53	12.59	6.27	1.14	0.0	14.71	7.06	0.415	0.061	0.150
5.98	1.52	21.82	15.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.95	0.90	0.06	11.21	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.77	4.92	20.87	15.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.71	0.58	0.06	11.86	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.55	0.60	19.93	14.93	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.34	594.17	11.63	7.68	1.14	0.0	13.65	9.85	0.426	0.052	0.409
4.27	619.49	11.04	6.80	1.14	0.0	13.73	9.79	0.464	0.070	0.540
4.10	3.67	-0.89	3.64	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.92	58.76	-1.84	5.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.83	1.35	-2.35	1.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.81	1.20	-2.49	8.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.69	0.97	-3.14	8.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.66	1.06	-3.27	1.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.57	59.72	-3.78	5.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.45	1.05	-4.47	5.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.32	0.50	-5.16	5.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.20	1550.32	13.19	7.77	1.43	0.0	2.52	9.74	0.343	0.290	0.352
2.20	708.68	9.51	6.81	1.43	0.0	1.83	9.74	0.339	0.205	0.526
1.07	691.36	9.35	6.82	1.43	0.0	1.82	9.70	0.355	0.200	0.506
0.0	3.04	-5.85	3.36	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Risulta	5630.32									

INGEGNERE

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	kN		kN		kN			
1	0.517	1.934	0.022	76.64	1.4	2.12e-03	3.76e-05	1.64e-05	0.0	0.0	0.0
2	0.519	1.927	0.022	75.59	1.3	0.06	1.10e-03	0.0	0.0	0.0	0.0
3	0.531	1.885	0.023	7.48	0.1	0.01	2.10e-04	0.0	0.0	0.0	0.0
4	0.533	1.878	0.023	1.73	3.07e-02	0.03	5.30e-04	0.0	0.0	0.0	0.0
5	0.534	1.874	0.024	251.75	4.5	9.10e-03	1.62e-04	0.0	0.0	0.0	0.0
6	1.453	0.688	0.067	0.94	1.67e-02	1058.84	18.8	2.58e-03	4.58e-05	0.0	0.0
7	1.582	0.632	0.073	218.53	3.9	2.35e-03	4.18e-05	6.36e-04	1.13e-05	0.0	0.0
8	1.590	0.629	0.073	1.36	2.41e-02	28.98	0.5	0.0	0.0	0.0	0.0
9	1.594	0.627	0.073	0.74	1.31e-02	8.60	0.2	2.05e-04	3.65e-06	0.0	0.0
10	1.622	0.616	0.074	3.62e-04	6.43e-06	1.48	2.62e-02	1.53e-04	2.72e-06	0.0	0.0
11	1.629	0.614	0.075	5.83e-03	1.04e-04	13.97	0.2	1.89e-04	3.36e-06	0.0	0.0
12	1.648	0.607	0.076	0.08	1.40e-03	98.94	1.8	4.59e-05	0.0	0.0	0.0
13	2.094	0.478	0.096	0.04	6.41e-04	24.08	0.4	0.03	5.05e-04	0.0	0.0
14	2.524	0.396	0.104	10.03	0.2	128.12	2.3	0.03	5.59e-04	0.0	0.0
15	2.535	0.394	0.104	10.12	0.2	0.25	4.35e-03	5.01e-03	8.89e-05	0.0	0.0
16	2.586	0.387	0.104	14.66	0.3	127.24	2.3	0.04	7.08e-04	0.0	0.0
17	2.608	0.383	0.104	1.36	2.41e-02	31.22	0.6	0.02	3.29e-04	0.0	0.0
18	2.618	0.382	0.104	80.05	1.4	9.49	0.2	0.01	2.34e-04	0.0	0.0
19	2.619	0.382	0.104	101.29	1.8	1.02	1.81e-02	0.41	7.36e-03	0.0	0.0
20	2.637	0.379	0.104	4.49	7.98e-02	247.90	4.4	0.04	7.75e-04	0.0	0.0
21	2.914	0.343	0.104	0.02	4.26e-04	16.82	0.3	3.82e-05	0.0	0.0	0.0
22	3.102	0.322	0.104	2.90	5.15e-02	151.37	2.7	2.35e-06	0.0	0.0	0.0
23	3.220	0.311	0.104	0.15	2.72e-03	17.84	0.3	1.77e-04	3.15e-06	0.0	0.0
24	3.334	0.300	0.104	0.13	2.36e-03	0.05	8.39e-04	3.23e-03	5.73e-05	0.0	0.0
25	3.603	0.278	0.104	2.87e-04	5.09e-06	6.16	0.1	0.03	5.27e-04	0.0	0.0
26	3.887	0.257	0.104	0.37	6.58e-03	2.20	3.91e-02	3.31e-03	5.88e-05	0.0	0.0
27	4.071	0.246	0.104	0.09	1.59e-03	0.22	3.90e-03	5.14e-03	9.12e-05	0.0	0.0
28	4.087	0.245	0.104	0.02	2.72e-04	0.73	1.30e-02	1.75e-03	3.10e-05	0.0	0.0
29	4.097	0.244	0.104	1.78	3.17e-02	0.77	1.38e-02	6.29e-03	1.12e-04	0.0	0.0
30	4.106	0.244	0.104	2.73e-03	4.85e-05	1.98e-03	3.51e-05	2.33e-03	4.13e-05	0.0	0.0
31	4.113	0.243	0.104	8.83	0.2	0.07	1.25e-03	4.40e-04	7.82e-06	0.0	0.0
32	4.705	0.213	0.104	2.56e-03	4.54e-05	0.21	3.64e-03	1.09e-03	1.94e-05	0.0	0.0
33	4.720	0.212	0.104	1.24e-03	2.20e-05	1.04e-03	1.85e-05	0.01	1.96e-04	0.0	0.0
34	4.832	0.207	0.104	3.26e-04	5.78e-06	0.20	3.51e-03	8.91e-03	1.58e-04	0.0	0.0
35	4.852	0.206	0.104	5.88e-04	1.04e-05	0.02	3.49e-04	2.96e-03	5.26e-05	0.0	0.0
36	4.856	0.206	0.104	3.59e-03	6.37e-05	0.04	7.79e-04	2.90e-05	0.0	0.0	0.0
37	4.923	0.203	0.104	0.17	2.95e-03	37.90	0.7	0.01	2.17e-04	0.0	0.0
38	4.928	0.203	0.104	0.02	3.92e-04	7.94	0.1	2.14e-03	3.80e-05	0.0	0.0
39	5.078	0.197	0.104	0.16	2.92e-03	63.66	1.1	4.72e-04	8.38e-06	0.0	0.0
40	5.271	0.190	0.104	6.21	0.1	3.96e-04	7.03e-06	0.02	3.36e-04	0.0	0.0
41	5.288	0.189	0.104	10.19	0.2	0.08	1.47e-03	9.84e-04	1.75e-05	0.0	0.0
42	5.302	0.189	0.104	25.63	0.5	1.07	1.89e-02	0.07	1.19e-03	0.0	0.0
43	5.414	0.185	0.104	0.16	2.87e-03	0.16	2.88e-03	7.65e-03	1.36e-04	0.0	0.0
44	5.425	0.184	0.104	1.05	1.87e-02	0.35	6.22e-03	0.03	4.66e-04	0.0	0.0
45	5.430	0.184	0.104	15.60	0.3	0.09	1.53e-03	4.88e-03	8.67e-05	0.0	0.0
46	5.863	0.171	0.104	29.73	0.5	214.33	3.8	0.64	1.14e-02	0.0	0.0
47	6.032	0.166	0.104	0.49	8.73e-03	112.17	2.0	0.35	6.27e-03	0.0	0.0
48	6.110	0.164	0.104	0.07	1.32e-03	42.74	0.8	144.87	2.6	0.0	0.0
49	6.265	0.160	0.104	0.04	7.76e-04	3.20	5.68e-02	15.28	0.3	0.0	0.0
50	6.284	0.159	0.104	2.51e-03	4.46e-05	17.89	0.3	139.20	2.5	0.0	0.0
51	6.361	0.157	0.104	2.30	4.09e-02	315.49	5.6	0.68	1.20e-02	0.0	0.0
52	6.426	0.156	0.104	0.04	7.99e-04	1.64	2.91e-02	51.19	0.9	0.0	0.0
53	6.495	0.154	0.104	0.02	4.03e-04	0.76	1.34e-02	15.17	0.3	0.0	0.0
54	6.602	0.151	0.104	6.15e-04	1.09e-05	49.26	0.9	195.43	3.5	0.0	0.0
55	6.932	0.144	0.103	2.15	3.82e-02	1192.70	21.2	0.79	1.40e-02	0.0	0.0
56	7.121	0.140	0.102	1.20	2.13e-02	142.10	2.5	0.20	3.56e-03	0.0	0.0
57	7.229	0.138	0.102	12.01	0.2	0.05	8.10e-04	82.74	1.5	0.0	0.0
58	7.504	0.133	0.101	124.24	2.2	82.54	1.5	0.44	7.89e-03	0.0	0.0
59	7.875	0.127	0.099	1.69	3.01e-02	1.01	1.79e-02	0.20	3.51e-03	0.0	0.0
60	8.136	0.123	0.099	6.40	0.1	22.53	0.4	0.04	7.36e-04	0.0	0.0
61	8.311	0.120	0.098	21.50	0.4	4.66	8.28e-02	0.82	1.46e-02	0.0	0.0
62	8.330	0.120	0.098	23.07	0.4	2.83	5.03e-02	0.19	3.45e-03	0.0	0.0
63	8.751	0.114	0.097	56.16	1.0	0.98	1.73e-02	0.30	5.37e-03	0.0	0.0
64	8.802	0.114	0.097	0.24	4.24e-03	21.87	0.4	0.40	7.11e-03	0.0	0.0
65	9.281	0.108	0.096	0.35	6.27e-03	0.71	1.26e-02	8.38e-03	1.49e-04	0.0	0.0
66	9.559	0.105	0.095	0.20	3.47e-03	0.69	1.22e-02	2.19e-05	0.0	0.0	0.0
67	9.711	0.103	0.095	0.17	3.10e-03	4.64	8.25e-02	4.03e-05	0.0	0.0	0.0
68	9.834	0.102	0.094	42.25	0.8	118.93	2.1	0.49	8.68e-03	0.0	0.0
69	9.927	0.101	0.094	1.64	2.92e-02	7.56	0.1	0.08	1.39e-03	0.0	0.0
70	10.115	0.099	0.094	1.97	3.51e-02	9.83	0.2	0.06	1.09e-03	0.0	0.0
71	10.153	0.098	0.094	1.27	2.26e-02	0.46	8.21e-03	0.01	2.15e-04	0.0	0.0

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Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
72	10.283	0.097	0.094	19.04	0.3	1.38	2.46e-02	0.50	8.88e-03	0.0	0.0
73	10.513	0.095	0.093	7.51	0.1	4.11	7.30e-02	0.70	1.24e-02	0.0	0.0
74	10.866	0.092	0.093	26.38	0.5	0.09	1.63e-03	0.02	3.63e-04	0.0	0.0
75	11.132	0.090	0.092	2.38	4.23e-02	0.88	1.56e-02	0.07	1.31e-03	0.0	0.0
76	11.195	0.089	0.092	10.84	0.2	18.74	0.3	0.73	1.30e-02	0.0	0.0
77	11.347	0.088	0.092	1.34	2.38e-02	3.96	7.04e-02	0.22	3.82e-03	0.0	0.0
78	11.422	0.088	0.092	0.72	1.27e-02	0.75	1.34e-02	0.14	2.52e-03	0.0	0.0
79	11.574	0.086	0.091	0.71	1.27e-02	0.90	1.60e-02	0.07	1.32e-03	0.0	0.0
80	11.622	0.086	0.091	0.13	2.33e-03	2.80	4.98e-02	0.02	3.63e-04	0.0	0.0
81	11.666	0.086	0.091	3.77	6.69e-02	4.01	7.12e-02	9.24e-03	1.64e-04	0.0	0.0
82	11.872	0.084	0.091	1.47	2.60e-02	1.32	2.35e-02	0.72	1.28e-02	0.0	0.0
83	12.260	0.082	0.091	0.74	1.31e-02	78.71	1.4	0.06	1.11e-03	0.0	0.0
84	12.351	0.081	0.090	6.62	0.1	23.02	0.4	1.20	2.14e-02	0.0	0.0
85	12.542	0.080	0.090	207.92	3.7	145.47	2.6	1.06	1.88e-02	0.0	0.0
86	12.902	0.078	0.090	585.92	10.4	13.56	0.2	0.12	2.16e-03	0.0	0.0
87	12.974	0.077	0.090	84.06	1.5	4.00	7.11e-02	0.12	2.10e-03	0.0	0.0
88	13.025	0.077	0.090	472.11	8.4	6.41	0.1	0.04	7.03e-04	0.0	0.0
89	13.120	0.076	0.089	155.43	2.8	9.18e-04	1.63e-05	0.11	1.97e-03	0.0	0.0
90	13.149	0.076	0.089	49.67	0.9	2.92	5.18e-02	0.37	6.51e-03	0.0	0.0
91	13.373	0.075	0.089	17.83	0.3	3.72	6.60e-02	0.10	1.74e-03	0.0	0.0
92	13.423	0.074	0.089	31.23	0.6	3.56	6.32e-02	0.13	2.23e-03	0.0	0.0
93	13.446	0.074	0.089	708.57	12.6	5.79	0.1	0.21	3.73e-03	0.0	0.0
94	13.479	0.074	0.089	7.39	0.1	0.84	1.50e-02	0.02	2.82e-04	0.0	0.0
95	13.552	0.074	0.089	0.04	7.61e-04	68.19	1.2	0.22	3.98e-03	0.0	0.0
96	13.679	0.073	0.089	0.34	6.05e-03	6.52	0.1	0.31	5.55e-03	0.0	0.0
97	13.876	0.072	0.089	162.50	2.9	7.39	0.1	6.65	0.1	0.0	0.0
98	14.195	0.070	0.088	28.92	0.5	5.37e-04	9.55e-06	11.73	0.2	0.0	0.0
99	14.334	0.070	0.088	16.63	0.3	78.75	1.4	0.90	1.60e-02	0.0	0.0
100	14.492	0.069	0.088	18.78	0.3	5.11	9.08e-02	4.43	7.87e-02	0.0	0.0
101	14.639	0.068	0.088	34.59	0.6	0.52	9.18e-03	1.35	2.40e-02	0.0	0.0
102	14.873	0.067	0.088	247.84	4.4	7.19e-04	1.28e-05	0.39	7.01e-03	0.0	0.0
103	14.946	0.067	0.088	249.43	4.4	0.18	3.14e-03	0.01	2.16e-04	0.0	0.0
104	15.258	0.066	0.087	35.41	0.6	18.18	0.3	7.45e-04	1.32e-05	0.0	0.0
105	15.544	0.064	0.087	11.69	0.2	2.44	4.33e-02	0.0	0.0	0.0	0.0
106	15.756	0.063	0.087	0.60	1.06e-02	22.58	0.4	0.26	4.55e-03	0.0	0.0
107	15.888	0.063	0.087	0.14	2.54e-03	13.67	0.2	0.10	1.86e-03	0.0	0.0
108	16.263	0.061	0.087	12.87	0.2	1.67	2.97e-02	0.42	7.38e-03	0.0	0.0
109	16.531	0.060	0.086	22.56	0.4	5.32	9.46e-02	0.26	4.55e-03	0.0	0.0
110	16.721	0.060	0.086	17.52	0.3	3.08	5.46e-02	0.12	2.16e-03	0.0	0.0
111	16.917	0.059	0.086	93.40	1.7	0.82	1.45e-02	0.51	9.01e-03	0.0	0.0
112	17.019	0.059	0.086	130.19	2.3	5.29e-05	0.0	0.99	1.75e-02	0.0	0.0
113	17.069	0.059	0.086	3.49	6.19e-02	2.43	4.31e-02	9.51e-03	1.69e-04	0.0	0.0
114	17.262	0.058	0.086	0.45	7.97e-03	8.38e-03	1.49e-04	0.16	2.80e-03	0.0	0.0
115	17.450	0.057	0.086	38.35	0.7	1.51	2.68e-02	0.33	5.89e-03	0.0	0.0
116	17.912	0.056	0.085	2.90e-04	5.15e-06	6.57	0.1	1.26	2.24e-02	0.0	0.0
117	18.059	0.055	0.085	1.37	2.44e-02	29.04	0.5	0.54	9.61e-03	0.0	0.0
118	18.111	0.055	0.085	2.62	4.65e-02	1.92	3.41e-02	0.19	3.35e-03	0.0	0.0
119	18.135	0.055	0.085	2.15	3.83e-02	15.87	0.3	0.28	4.98e-03	0.0	0.0
120	18.501	0.054	0.085	0.45	7.99e-03	3.37	5.99e-02	0.04	7.28e-04	0.0	0.0
121	18.523	0.054	0.085	3.92e-03	6.96e-05	1.88	3.33e-02	0.03	4.51e-04	0.0	0.0
122	18.560	0.054	0.085	0.13	2.28e-03	2.38	4.22e-02	2.86e-03	5.08e-05	0.0	0.0
123	18.624	0.054	0.085	0.02	4.44e-04	0.69	1.22e-02	0.15	2.64e-03	0.0	0.0
124	18.686	0.054	0.085	0.39	6.98e-03	0.07	1.24e-03	0.08	1.38e-03	0.0	0.0
125	18.694	0.053	0.085	0.05	9.66e-04	21.97	0.4	0.04	7.78e-04	0.0	0.0
126	18.845	0.053	0.085	12.05	0.2	0.94	1.66e-02	0.05	8.26e-04	0.0	0.0
127	18.917	0.053	0.085	14.78	0.3	1.75e-03	3.12e-05	9.88	0.2	0.0	0.0
128	19.120	0.052	0.085	7.76	0.1	0.63	1.12e-02	6.32	0.1	0.0	0.0
129	19.225	0.052	0.085	18.05	0.3	0.06	1.13e-03	0.01	1.94e-04	0.0	0.0
130	19.262	0.052	0.085	0.07	1.21e-03	12.11	0.2	0.02	3.43e-04	0.0	0.0
131	19.533	0.051	0.085	65.37	1.2	0.54	9.61e-03	0.34	5.96e-03	0.0	0.0
132	19.553	0.051	0.085	0.09	1.52e-03	2.94	5.22e-02	1.49e-03	2.64e-05	0.0	0.0
133	20.001	0.050	0.084	12.14	0.2	4.03	7.17e-02	20.18	0.4	0.0	0.0
134	20.039	0.050	0.084	1.81	3.22e-02	1.54	2.74e-02	0.05	8.93e-04	0.0	0.0
135	20.110	0.050	0.084	3.95	7.01e-02	0.07	1.18e-03	24.11	0.4	0.0	0.0
136	20.123	0.050	0.084	7.14	0.1	8.59	0.2	41.73	0.7	0.0	0.0
137	20.179	0.050	0.084	1.59	2.82e-02	2.65	4.71e-02	13.55	0.2	0.0	0.0
138	20.300	0.049	0.084	0.10	1.70e-03	0.69	1.22e-02	0.31	5.45e-03	0.0	0.0
139	20.402	0.049	0.084	0.42	7.47e-03	0.57	1.01e-02	2.43	4.32e-02	0.0	0.0
140	20.614	0.049	0.084	6.16	0.1	13.19	0.2	45.16	0.8	0.0	0.0
141	20.742	0.048	0.084	1.42	2.52e-02	2.73	4.85e-02	10.23	0.2	0.0	0.0
142	20.827	0.048	0.084	3.73	6.63e-02	4.79	8.52e-02	89.32	1.6	0.0	0.0
143	20.862	0.048	0.084	4.34e-03	7.71e-05	7.52	0.1	0.30	5.41e-03	0.0	0.0
144	21.125	0.047	0.084	0.61	1.09e-02	0.03	6.02e-04	2.24	3.97e-02	0.0	0.0
145	21.160	0.047	0.084	0.42	7.55e-03	0.78	1.38e-02	5.57	9.89e-02	0.0	0.0
146	21.462	0.047	0.084	1.82	3.24e-02	4.61	8.20e-02	61.36	1.1	0.0	0.0

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	kN	m	m	m	m	m	m			
9.20	22.68	22.77	5.27	0.0	0.0	22.77	5.26	0.003	5.8650e-06	9.6147e-04
8.20	156.44	14.10	5.27	-1.14	0.0	22.77	5.26	5.2206e-04	52.444	0.001
7.95	7.09	22.77	5.93	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.94	7.20	22.77	4.58	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.89	5.18	0.06	6.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.73	6.73	0.06	4.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.70	3.43	0.06	6.58	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.54	13.73	15.21	7.02	-1.14	0.0	11.41	7.02	3.000	0.334	0.0
7.53	205.56	11.43	5.27	-0.73	0.0	0.0	0.0	0.0	0.0	0.0
7.53	13.89	14.86	3.49	-1.14	0.0	11.41	3.49	3.000	0.303	0.0
7.27	91.98	12.96	5.25	-1.14	0.0	19.41	5.26	1.242	0.801	1.0260e-04
7.15	7.28	22.77	2.51	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.15	7.39	22.77	8.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.88	7.66	0.06	8.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.87	204.79	11.43	5.27	-0.73	0.0	0.0	0.0	0.0	0.0	0.0
6.79	8.01	0.06	1.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.64	10.12	22.77	1.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.63	10.01	22.77	9.41	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.54	6.39	0.06	9.65	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.49	5.37	0.06	0.76	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.20	525.53	12.59	6.27	-1.14	0.0	14.71	7.06	0.415	0.061	0.150
5.98	1.52	21.82	15.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.95	0.90	0.06	11.21	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.77	4.92	20.87	15.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.71	0.58	0.06	11.86	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.55	0.60	19.93	14.93	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.34	594.17	11.63	7.68	-1.14	0.0	13.65	9.85	0.426	0.052	0.409
4.27	619.49	11.04	6.80	-1.14	0.0	13.73	9.79	0.464	0.070	0.540
4.10	3.67	-0.89	3.64	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.92	58.76	-1.84	5.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.83	1.35	-2.35	1.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.81	1.20	-2.49	8.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.69	0.97	-3.14	8.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.66	1.06	-3.27	1.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.57	59.72	-3.78	5.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.45	1.05	-4.47	5.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.32	0.50	-5.16	5.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.20	1550.32	13.19	7.77	-1.43	0.0	2.52	9.74	0.343	0.290	0.352
2.20	708.68	9.51	6.81	-1.43	0.0	1.83	9.74	0.339	0.205	0.526
1.07	691.36	9.35	6.82	-1.43	0.0	1.82	9.70	0.355	0.200	0.506
0.0	3.04	-5.85	3.36	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Risultato	5630.32									

INGEGNERE

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	kN		kN		kN			
1	0.517	1.934	0.022	76.63	1.4	3.49e-03	6.20e-05	1.65e-05	0.0	0.0	0.0
2	0.519	1.927	0.022	75.62	1.3	0.05	8.46e-04	0.0	0.0	0.0	0.0
3	0.531	1.885	0.023	7.46	0.1	8.13e-03	1.44e-04	0.0	0.0	0.0	0.0
4	0.533	1.878	0.023	1.70	3.01e-02	0.02	3.96e-04	0.0	0.0	0.0	0.0
5	0.534	1.874	0.024	251.79	4.5	9.45e-03	1.68e-04	0.0	0.0	0.0	0.0
6	1.364	0.733	0.063	0.48	8.60e-03	1182.33	21.0	3.95e-03	7.02e-05	0.0	0.0
7	1.582	0.632	0.073	219.73	3.9	6.07e-03	1.08e-04	6.14e-04	1.09e-05	0.0	0.0
8	1.590	0.629	0.073	1.06	1.88e-02	22.39	0.4	5.43e-06	0.0	0.0	0.0
9	1.594	0.627	0.073	0.40	7.09e-03	2.56	4.55e-02	2.19e-04	3.89e-06	0.0	0.0
10	1.617	0.618	0.074	7.09e-03	1.26e-04	1.93	3.42e-02	1.26e-04	2.24e-06	0.0	0.0
11	1.625	0.615	0.075	1.18e-03	2.10e-05	4.55	8.08e-02	1.19e-05	0.0	0.0	0.0
12	1.644	0.608	0.075	0.04	6.25e-04	33.61	0.6	8.68e-05	1.54e-06	0.0	0.0
13	1.970	0.508	0.090	0.02	3.47e-04	18.63	0.3	8.54e-03	1.52e-04	0.0	0.0
14	2.535	0.395	0.104	6.95	0.1	1.35	2.40e-02	7.13e-03	1.27e-04	0.0	0.0
15	2.538	0.394	0.104	19.36	0.3	17.43	0.3	4.04e-03	7.17e-05	0.0	0.0
16	2.594	0.385	0.104	4.12	7.31e-02	17.47	0.3	8.17e-03	1.45e-04	0.0	0.0
17	2.612	0.383	0.104	0.33	5.77e-03	3.45	6.13e-02	0.01	2.63e-04	0.0	0.0
18	2.619	0.382	0.104	191.03	3.4	0.07	1.21e-03	0.28	5.02e-03	0.0	0.0
19	2.619	0.382	0.104	0.11	2.01e-03	1.00	1.77e-02	0.14	2.43e-03	0.0	0.0
20	2.696	0.371	0.104	0.07	1.20e-03	286.51	5.1	0.05	9.00e-04	0.0	0.0
21	3.008	0.332	0.104	1.32	2.35e-02	306.58	5.4	0.08	1.43e-03	0.0	0.0
22	3.099	0.323	0.104	1.87	3.32e-02	0.52	9.31e-03	0.06	1.10e-03	0.0	0.0
23	3.316	0.302	0.104	5.61e-04	9.96e-06	23.27	0.4	0.03	5.87e-04	0.0	0.0
24	3.524	0.284	0.104	0.04	7.00e-04	0.20	3.49e-03	3.34e-04	5.93e-06	0.0	0.0
25	3.766	0.266	0.104	0.06	1.03e-03	30.68	0.5	9.09e-03	1.61e-04	0.0	0.0
26	3.796	0.263	0.104	1.10e-03	1.95e-05	2.10	3.72e-02	1.54e-03	2.74e-05	0.0	0.0
27	4.070	0.246	0.104	0.10	1.74e-03	0.08	1.36e-03	5.38e-03	9.56e-05	0.0	0.0
28	4.087	0.245	0.104	0.08	1.50e-03	0.46	8.24e-03	1.40e-03	2.48e-05	0.0	0.0
29	4.098	0.244	0.104	1.91	3.39e-02	0.99	1.76e-02	0.01	1.79e-04	0.0	0.0
30	4.105	0.244	0.104	4.67e-04	8.29e-06	2.13e-03	3.77e-05	1.89e-03	3.35e-05	0.0	0.0
31	4.113	0.243	0.104	8.66	0.2	0.07	1.20e-03	1.46e-03	2.58e-05	0.0	0.0
32	4.702	0.213	0.104	3.51e-03	6.23e-05	0.48	8.49e-03	1.10e-03	1.95e-05	0.0	0.0
33	4.723	0.212	0.104	8.02e-04	1.43e-05	0.05	8.91e-04	0.01	2.06e-04	0.0	0.0
34	4.807	0.208	0.104	0.18	3.19e-03	37.12	0.7	4.28e-03	7.60e-05	0.0	0.0
35	4.832	0.207	0.104	1.36e-03	2.41e-05	2.90e-04	5.15e-06	7.36e-03	1.31e-04	0.0	0.0
36	4.852	0.206	0.104	3.37e-04	5.99e-06	1.13e-05	0.0	2.11e-03	3.76e-05	0.0	0.0
37	4.855	0.206	0.104	5.16e-03	9.17e-05	2.57e-04	4.57e-06	2.10e-04	3.72e-06	0.0	0.0
38	4.923	0.203	0.104	1.91e-05	0.0	0.27	4.86e-03	4.08e-03	7.25e-05	0.0	0.0
39	5.269	0.190	0.104	5.98	0.1	0.01	2.02e-04	0.03	5.31e-04	0.0	0.0
40	5.289	0.189	0.104	11.30	0.2	0.08	1.34e-03	3.22e-04	5.72e-06	0.0	0.0
41	5.303	0.189	0.104	23.98	0.4	0.52	9.25e-03	0.06	1.15e-03	0.0	0.0
42	5.414	0.185	0.104	0.12	2.21e-03	0.10	1.77e-03	3.75e-03	6.67e-05	0.0	0.0
43	5.425	0.184	0.104	0.39	6.94e-03	0.24	4.23e-03	0.02	3.90e-04	0.0	0.0
44	5.430	0.184	0.104	16.25	0.3	0.01	2.12e-04	0.05	8.36e-04	0.0	0.0
45	5.809	0.172	0.104	0.11	1.95e-03	31.75	0.6	44.83	0.8	0.0	0.0
46	5.870	0.170	0.104	0.52	9.28e-03	90.48	1.6	0.78	1.39e-02	0.0	0.0
47	5.956	0.168	0.104	16.39	0.3	10.71	0.2	0.17	3.03e-03	0.0	0.0
48	6.081	0.164	0.104	4.12	7.33e-02	29.39	0.5	0.19	3.36e-03	0.0	0.0
49	6.208	0.161	0.104	0.13	2.26e-03	2.07	3.68e-02	2.13	3.79e-02	0.0	0.0
50	6.311	0.158	0.104	0.18	3.28e-03	11.50	0.2	134.27	2.4	0.0	0.0
51	6.391	0.156	0.104	0.15	2.60e-03	8.38	0.1	207.41	3.7	0.0	0.0
52	6.440	0.155	0.104	19.20	0.3	199.44	3.5	2.14	3.80e-02	0.0	0.0
53	6.481	0.154	0.104	0.37	6.49e-03	6.97	0.1	29.02	0.5	0.0	0.0
54	6.503	0.154	0.104	8.93e-04	1.59e-05	3.75	6.66e-02	121.20	2.2	0.0	0.0
55	6.749	0.148	0.104	0.05	8.57e-04	3.25	5.78e-02	20.43	0.4	0.0	0.0
56	7.228	0.138	0.102	9.79	0.2	4.81	8.53e-02	80.77	1.4	0.0	0.0
57	7.262	0.138	0.102	47.29	0.8	1268.68	22.5	2.84	5.05e-02	0.0	0.0
58	7.581	0.132	0.100	91.05	1.6	318.24	5.7	0.06	1.09e-03	0.0	0.0
59	7.826	0.128	0.100	1.43	2.54e-02	3.19	5.67e-02	1.61	2.86e-02	0.0	0.0
60	8.031	0.125	0.099	5.98	0.1	165.57	2.9	0.13	2.39e-03	0.0	0.0
61	8.399	0.119	0.098	29.31	0.5	0.04	6.49e-04	0.02	2.84e-04	0.0	0.0
62	8.579	0.117	0.097	34.29	0.6	6.81	0.1	0.07	1.28e-03	0.0	0.0
63	8.904	0.112	0.097	2.88	5.11e-02	32.09	0.6	0.01	1.90e-04	0.0	0.0
64	8.990	0.111	0.096	22.87	0.4	52.48	0.9	0.77	1.37e-02	0.0	0.0
65	9.181	0.109	0.096	2.47	4.39e-02	3.78	6.72e-02	1.62e-04	2.88e-06	0.0	0.0
66	9.455	0.106	0.095	0.22	3.86e-03	62.48	1.1	0.23	4.13e-03	0.0	0.0
67	9.554	0.105	0.095	0.22	3.97e-03	1.38	2.46e-02	0.01	2.18e-04	0.0	0.0
68	9.622	0.104	0.095	5.77	0.1	1.55	2.76e-02	0.03	5.05e-04	0.0	0.0
69	9.693	0.103	0.095	16.18	0.3	15.33	0.3	0.18	3.27e-03	0.0	0.0
70	10.054	0.099	0.094	20.76	0.4	1.97	3.50e-02	0.18	3.23e-03	0.0	0.0
71	10.583	0.094	0.093	2.59	4.59e-02	0.29	5.08e-03	9.30e-03	1.65e-04	0.0	0.0
72	11.160	0.090	0.092	5.67	0.1	74.48	1.3	2.97e-03	5.27e-05	0.0	0.0
73	11.328	0.088	0.092	1.18	2.09e-02	2.07	3.68e-02	4.89e-03	8.68e-05	0.0	0.0
74	11.407	0.088	0.092	1.27	2.26e-02	0.44	7.81e-03	0.14	2.55e-03	0.0	0.0

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Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
75	11.426	0.088	0.092	8.59	0.2	89.76	1.6	0.28	5.05e-03	0.0	0.0
76	11.447	0.087	0.092	6.85	0.1	43.80	0.8	1.68e-03	2.99e-05	0.0	0.0
77	11.479	0.087	0.092	2.06	3.66e-02	61.35	1.1	0.20	3.52e-03	0.0	0.0
78	11.655	0.086	0.091	2.53	4.50e-02	43.68	0.8	0.15	2.72e-03	0.0	0.0
79	11.678	0.086	0.091	3.72	6.61e-02	73.48	1.3	0.28	4.93e-03	0.0	0.0
80	11.849	0.084	0.091	9.93e-03	1.76e-04	40.21	0.7	0.46	8.10e-03	0.0	0.0
81	11.983	0.083	0.091	12.17	0.2	2.89	5.13e-02	0.70	1.25e-02	0.0	0.0
82	12.101	0.083	0.091	2.90	5.15e-02	30.20	0.5	0.01	2.22e-04	0.0	0.0
83	12.291	0.081	0.091	89.98	1.6	58.39	1.0	0.11	2.02e-03	0.0	0.0
84	12.557	0.080	0.090	126.53	2.2	1.01e-04	1.80e-06	0.06	1.11e-03	0.0	0.0
85	12.783	0.078	0.090	149.66	2.7	0.04	7.08e-04	0.72	1.28e-02	0.0	0.0
86	12.961	0.077	0.090	531.60	9.4	32.69	0.6	0.22	3.95e-03	0.0	0.0
87	12.991	0.077	0.090	212.10	3.8	5.26	9.35e-02	9.20e-03	1.63e-04	0.0	0.0
88	13.089	0.076	0.090	20.94	0.4	19.24	0.3	2.85e-04	5.06e-06	0.0	0.0
89	13.154	0.076	0.089	690.70	12.3	8.91	0.2	0.24	4.29e-03	0.0	0.0
90	13.210	0.076	0.089	135.27	2.4	0.08	1.39e-03	0.31	5.53e-03	0.0	0.0
91	13.308	0.075	0.089	11.12	0.2	1.89	3.36e-02	0.42	7.45e-03	0.0	0.0
92	13.411	0.075	0.089	14.01	0.2	0.13	2.34e-03	1.16e-03	2.06e-05	0.0	0.0
93	13.435	0.074	0.089	127.10	2.3	3.19	5.66e-02	0.61	1.08e-02	0.0	0.0
94	13.454	0.074	0.089	7.20	0.1	0.45	8.05e-03	0.06	1.13e-03	0.0	0.0
95	13.696	0.073	0.089	119.84	2.1	0.40	7.15e-03	0.79	1.41e-02	0.0	0.0
96	13.774	0.073	0.089	274.84	4.9	0.44	7.90e-03	11.93	0.2	0.0	0.0
97	13.868	0.072	0.089	92.95	1.7	5.58	9.91e-02	0.93	1.66e-02	0.0	0.0
98	14.122	0.071	0.088	0.03	4.51e-04	10.13	0.2	5.01	8.91e-02	0.0	0.0
99	14.145	0.071	0.088	29.20	0.5	1.95	3.46e-02	7.80	0.1	0.0	0.0
100	14.622	0.068	0.088	12.04	0.2	9.29	0.2	0.01	2.41e-04	0.0	0.0
101	14.819	0.067	0.088	234.19	4.2	0.55	9.84e-03	0.08	1.36e-03	0.0	0.0
102	14.862	0.067	0.088	128.96	2.3	2.18	3.87e-02	0.36	6.44e-03	0.0	0.0
103	15.130	0.066	0.088	66.26	1.2	0.60	1.07e-02	2.26e-05	0.0	0.0	0.0
104	15.274	0.065	0.087	65.65	1.2	4.90	8.71e-02	0.02	3.07e-04	0.0	0.0
105	15.543	0.064	0.087	9.87	0.2	0.27	4.86e-03	0.29	5.07e-03	0.0	0.0
106	15.805	0.063	0.087	8.19	0.1	0.98	1.74e-02	6.65e-03	1.18e-04	0.0	0.0
107	16.224	0.062	0.087	7.26	0.1	13.05	0.2	0.03	4.81e-04	0.0	0.0
108	16.334	0.061	0.087	1.67	2.97e-02	0.21	3.65e-03	0.56	9.88e-03	0.0	0.0
109	16.859	0.059	0.086	189.39	3.4	0.33	5.88e-03	0.36	6.45e-03	0.0	0.0
110	16.920	0.059	0.086	16.26	0.3	9.34	0.2	0.12	2.09e-03	0.0	0.0
111	16.974	0.059	0.086	45.02	0.8	6.32	0.1	6.55e-03	1.16e-04	0.0	0.0
112	17.046	0.059	0.086	5.93	0.1	0.54	9.64e-03	0.85	1.51e-02	0.0	0.0
113	17.208	0.058	0.086	16.18	0.3	0.08	1.41e-03	0.78	1.38e-02	0.0	0.0
114	17.428	0.057	0.086	26.44	0.5	0.56	9.93e-03	0.02	4.05e-04	0.0	0.0
115	17.602	0.057	0.086	1.13	2.01e-02	23.53	0.4	1.23	2.18e-02	0.0	0.0
116	17.729	0.056	0.086	16.19	0.3	0.96	1.70e-02	0.34	6.06e-03	0.0	0.0
117	17.888	0.056	0.086	1.36	2.42e-02	4.59	8.15e-02	0.03	6.10e-04	0.0	0.0
118	18.106	0.055	0.085	0.36	6.39e-03	1.11	1.97e-02	0.05	8.20e-04	0.0	0.0
119	18.504	0.054	0.085	0.03	4.94e-04	0.41	7.34e-03	0.01	2.28e-04	0.0	0.0
120	18.537	0.054	0.085	0.78	1.38e-02	0.09	1.58e-03	0.03	4.81e-04	0.0	0.0
121	18.570	0.054	0.085	0.61	1.08e-02	0.01	2.48e-04	0.06	1.04e-03	0.0	0.0
122	18.599	0.054	0.085	0.02	3.31e-04	0.98	1.73e-02	0.12	2.11e-03	0.0	0.0
123	18.661	0.054	0.085	0.02	3.89e-04	0.03	5.48e-04	0.05	9.65e-04	0.0	0.0
124	18.748	0.053	0.085	5.16	9.17e-02	22.39	0.4	0.44	7.88e-03	0.0	0.0
125	18.895	0.053	0.085	0.65	1.15e-02	1.42e-04	2.53e-06	0.80	1.41e-02	0.0	0.0
126	18.935	0.053	0.085	2.50	4.44e-02	5.43	9.64e-02	8.80	0.2	0.0	0.0
127	19.036	0.053	0.085	15.75	0.3	3.32	5.89e-02	0.54	9.68e-03	0.0	0.0
128	19.365	0.052	0.085	23.61	0.4	42.81	0.8	0.44	7.81e-03	0.0	0.0
129	19.530	0.051	0.085	17.39	0.3	0.57	1.02e-02	8.32	0.1	0.0	0.0
130	19.625	0.051	0.085	61.09	1.1	0.08	1.37e-03	3.79	6.72e-02	0.0	0.0
131	19.828	0.050	0.084	5.86	0.1	6.18e-03	1.10e-04	0.47	8.38e-03	0.0	0.0
132	20.088	0.050	0.084	1.09e-03	1.94e-05	4.69e-03	8.33e-05	78.30	1.4	0.0	0.0
133	20.141	0.050	0.084	1.76	3.13e-02	1.12	1.98e-02	3.83	6.81e-02	0.0	0.0
134	20.200	0.050	0.084	1.81	3.22e-02	10.60	0.2	8.88	0.2	0.0	0.0
135	20.277	0.049	0.084	0.16	2.91e-03	5.64	0.1	0.02	3.68e-04	0.0	0.0
136	20.300	0.049	0.084	3.80	6.74e-02	2.65	4.70e-02	0.58	1.03e-02	0.0	0.0
137	20.346	0.049	0.084	0.64	1.14e-02	0.13	2.36e-03	3.92	6.97e-02	0.0	0.0
138	20.575	0.049	0.084	2.11	3.75e-02	17.48	0.3	1.49	2.65e-02	0.0	0.0
139	20.850	0.048	0.084	0.47	8.42e-03	2.04e-04	3.62e-06	13.02	0.2	0.0	0.0
140	20.869	0.048	0.084	0.70	1.24e-02	17.89	0.3	1.64	2.91e-02	0.0	0.0
141	20.987	0.048	0.084	7.14	0.1	0.49	8.78e-03	157.87	2.8	0.0	0.0
142	21.329	0.047	0.084	5.80	0.1	0.07	1.18e-03	2.81	4.99e-02	0.0	0.0
143	21.403	0.047	0.084	0.69	1.22e-02	3.18	5.65e-02	13.19	0.2	0.0	0.0
144	21.462	0.047	0.084	0.09	1.65e-03	1.52	2.70e-02	2.32	4.13e-02	0.0	0.0
145	21.477	0.047	0.084	6.47	0.1	3.52	6.26e-02	8.58	0.2	0.0	0.0
146	21.694	0.046	0.084	0.34	5.98e-03	1.84	3.27e-02	292.70	5.2	0.0	0.0
147	21.774	0.046	0.084	3.40	6.03e-02	1.60	2.84e-02	130.57	2.3	0.0	0.0
148	21.854	0.046	0.084	22.94	0.4	3.89	6.90e-02	2.33	4.14e-02	0.0	0.0
149	21.925	0.046	0.083	1.53	2.71e-02	4.68	8.31e-02	148.61	2.6	0.0	0.0

INGEGNERE

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
150	22.044	0.045	0.083	55.68	1.0	0.82	1.46e-02	1.82	3.24e-02	0.0	0.0
Risulta				5044.85		5177.39		1583.40			
In percentuale				89.60		91.96		28.12			

CDC	Tipo	Sigla Id	Note
10	Edk	CDC=Ed (dinamico SLD) alfa=0.0 (ecc. +)	
			verifica esistenti: fattore FC 1.350
			categoria suolo: C
			fattore di sito S = 1.500
			ordinata spettro (tratto Tb-Tc) = 0.133 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.079 sec.
			numero di modi considerati:150
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	kN	m	m	m	m	m	m			
9.20	22.68	22.77	5.27	0.0	-0.53	22.77	5.26	0.003	5.8650e-06	9.6147e-04
8.20	156.44	14.10	5.27	0.0	-0.53	22.77	5.26	5.2206e-04	52.444	0.001
7.95	7.09	22.77	5.93	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.94	7.20	22.77	4.58	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.89	5.18	0.06	6.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.73	6.73	0.06	4.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.70	3.43	0.06	6.58	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.54	13.73	15.21	7.02	0.0	0.0	11.41	7.02	3.000	0.334	0.0
7.53	205.56	11.43	5.27	0.0	-0.18	0.0	0.0	0.0	0.0	0.0
7.53	13.89	14.86	3.49	0.0	0.0	11.41	3.49	3.000	0.303	0.0
7.27	91.98	12.96	5.25	0.0	-0.53	19.41	5.26	1.242	0.801	1.0260e-04
7.15	7.28	22.77	2.51	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.15	7.39	22.77	8.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.88	7.66	0.06	8.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.87	204.79	11.43	5.27	0.0	-0.35	0.0	0.0	0.0	0.0	0.0
6.79	8.01	0.06	1.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.64	10.12	22.77	1.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.63	10.01	22.77	9.41	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.54	6.39	0.06	9.65	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.49	5.37	0.06	0.76	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.20	525.53	12.59	6.27	0.0	-0.84	14.71	7.06	0.415	0.061	0.150
5.98	1.52	21.82	15.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.95	0.90	0.06	11.21	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.77	4.92	20.87	15.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.71	0.58	0.06	11.86	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.55	0.60	19.93	14.93	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.34	594.17	11.63	7.68	0.0	-0.84	13.65	9.85	0.426	0.052	0.409
4.27	619.49	11.04	6.80	0.0	-0.84	13.73	9.79	0.464	0.070	0.540
4.10	3.67	-0.89	3.64	0.0	-0.36	0.0	0.0	0.0	0.0	0.0
3.92	58.76	-1.84	5.11	0.0	-0.36	0.0	0.0	0.0	0.0	0.0
3.83	1.35	-2.35	1.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.81	1.20	-2.49	8.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.69	0.97	-3.14	8.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.66	1.06	-3.27	1.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.57	59.72	-3.78	5.15	0.0	-0.36	0.0	0.0	0.0	0.0	0.0
3.45	1.05	-4.47	5.14	0.0	-0.36	0.0	0.0	0.0	0.0	0.0
3.32	0.50	-5.16	5.14	0.0	-0.36	0.0	0.0	0.0	0.0	0.0
3.20	1550.32	13.19	7.77	0.0	-0.84	2.52	9.74	0.343	0.290	0.352
2.20	708.68	9.51	6.81	0.0	-0.84	1.83	9.74	0.339	0.205	0.526
1.07	691.36	9.35	6.82	0.0	-0.84	1.82	9.70	0.355	0.200	0.506
0.0	3.04	-5.85	3.36	0.0	-0.06	0.0	0.0	0.0	0.0	0.0
Risulta	5630.32									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	kN		kN		kN			
1	0.517	1.934	0.024	76.62	1.4	4.35e-03	7.72e-05	1.68e-05	0.0	0.0	0.0
2	0.519	1.928	0.024	75.87	1.3	0.05	9.63e-04	0.0	0.0	0.0	0.0
3	0.530	1.885	0.025	7.27	0.1	9.97e-03	1.77e-04	0.0	0.0	0.0	0.0
4	0.532	1.878	0.025	1.37	2.43e-02	0.03	5.41e-04	1.10e-06	0.0	0.0	0.0

INGEGNERE

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
5	0.534	1.874	0.025	252.28	4.5	0.01	2.02e-04	0.0	0.0	0.0	0.0
6	1.410	0.709	0.072	0.69	1.23e-02	1129.43	20.1	3.41e-03	6.06e-05	0.0	0.0
7	1.577	0.634	0.080	224.69	4.0	0.09	1.56e-03	5.88e-04	1.04e-05	0.0	0.0
8	1.592	0.628	0.081	1.40	2.48e-02	26.26	0.5	0.0	0.0	0.0	0.0
9	1.596	0.627	0.081	0.09	1.54e-03	3.90	6.92e-02	1.66e-04	2.94e-06	0.0	0.0
10	1.622	0.617	0.082	0.09	1.63e-03	2.78	4.94e-02	1.69e-04	3.01e-06	0.0	0.0
11	1.628	0.614	0.083	0.10	1.72e-03	8.75	0.2	5.68e-05	1.01e-06	0.0	0.0
12	1.647	0.607	0.084	0.11	1.88e-03	54.42	1.0	7.26e-05	1.29e-06	0.0	0.0
13	2.027	0.493	0.103	0.05	8.47e-04	19.22	0.3	0.02	2.72e-04	0.0	0.0
14	2.544	0.393	0.129	10.93	0.2	37.65	0.7	0.02	3.04e-04	0.0	0.0
15	2.545	0.393	0.129	12.58	0.2	0.78	1.38e-02	4.57e-03	8.12e-05	0.0	0.0
16	2.600	0.385	0.132	98.91	1.8	6.66	0.1	0.42	7.37e-03	0.0	0.0
17	2.605	0.384	0.132	48.00	0.9	23.76	0.4	0.02	3.76e-04	0.0	0.0
18	2.620	0.382	0.133	6.41	0.1	10.23	0.2	1.39e-04	2.47e-06	0.0	0.0
19	2.629	0.380	0.133	47.74	0.8	2.83	5.03e-02	1.36e-03	2.42e-05	0.0	0.0
20	2.696	0.371	0.133	0.03	5.80e-04	426.16	7.6	0.10	1.75e-03	0.0	0.0
21	2.932	0.341	0.133	0.10	1.81e-03	49.18	0.9	0.04	6.93e-04	0.0	0.0
22	3.093	0.323	0.133	2.73	4.85e-02	122.72	2.2	8.08e-04	1.44e-05	0.0	0.0
23	3.289	0.304	0.133	0.29	5.12e-03	16.80	0.3	0.01	2.18e-04	0.0	0.0
24	3.400	0.294	0.133	0.62	1.10e-02	6.69	0.1	2.37e-04	4.21e-06	0.0	0.0
25	3.601	0.278	0.133	0.02	4.20e-04	16.06	0.3	0.02	4.12e-04	0.0	0.0
26	3.839	0.261	0.133	0.07	1.22e-03	0.86	1.52e-02	2.90e-03	5.15e-05	0.0	0.0
27	4.003	0.250	0.133	0.09	1.58e-03	0.14	2.48e-03	4.90e-03	8.71e-05	0.0	0.0
28	4.019	0.249	0.133	0.07	1.19e-03	0.57	1.00e-02	1.58e-03	2.80e-05	0.0	0.0
29	4.029	0.248	0.133	1.86	3.30e-02	0.97	1.72e-02	8.06e-03	1.43e-04	0.0	0.0
30	4.036	0.248	0.133	2.21e-03	3.93e-05	3.89e-06	0.0	1.86e-03	3.30e-05	0.0	0.0
31	4.044	0.247	0.133	8.93	0.2	0.07	1.23e-03	7.85e-04	1.39e-05	0.0	0.0
32	4.597	0.218	0.133	23.82	0.4	0.10	1.81e-03	3.64e-04	6.47e-06	0.0	0.0
33	4.642	0.215	0.133	0.44	7.74e-03	0.29	5.18e-03	1.97e-03	3.49e-05	0.0	0.0
34	4.663	0.214	0.133	0.01	2.52e-04	0.09	1.57e-03	0.01	2.13e-04	0.0	0.0
35	4.770	0.210	0.133	0.17	3.04e-03	0.18	3.11e-03	8.13e-03	1.44e-04	0.0	0.0
36	4.788	0.209	0.133	0.30	5.27e-03	0.06	1.05e-03	5.01e-03	8.89e-05	0.0	0.0
37	4.790	0.209	0.133	1.54	2.73e-02	0.02	3.67e-04	3.84e-05	0.0	0.0	0.0
38	4.865	0.206	0.133	0.06	1.15e-03	38.51	0.7	4.58e-03	8.14e-05	0.0	0.0
39	4.878	0.205	0.133	0.02	3.06e-04	1.85	3.28e-02	7.56e-06	0.0	0.0	0.0
40	5.368	0.186	0.133	4.98	8.85e-02	9.88e-03	1.76e-04	0.03	4.87e-04	0.0	0.0
41	5.383	0.186	0.133	5.26	9.35e-02	0.34	6.02e-03	5.41e-05	0.0	0.0	0.0
42	5.431	0.184	0.133	0.21	3.81e-03	65.61	1.2	4.06e-05	0.0	0.0	0.0
43	5.512	0.181	0.133	0.56	9.97e-03	0.06	1.10e-03	1.11e-03	1.98e-05	0.0	0.0
44	5.526	0.181	0.133	1.28	2.27e-02	0.12	2.14e-03	0.03	4.68e-04	0.0	0.0
45	5.533	0.181	0.133	14.54	0.3	7.70e-03	1.37e-04	0.02	3.00e-04	0.0	0.0
46	5.982	0.167	0.133	0.26	4.62e-03	21.25	0.4	86.83	1.5	0.0	0.0
47	6.166	0.162	0.133	5.37	9.54e-02	67.83	1.2	0.82	1.46e-02	0.0	0.0
48	6.241	0.160	0.133	0.11	2.03e-03	2.07	3.67e-02	7.68	0.1	0.0	0.0
49	6.295	0.159	0.133	0.05	8.88e-04	11.09	0.2	139.82	2.5	0.0	0.0
50	6.412	0.156	0.133	0.04	7.18e-04	0.47	8.41e-03	105.22	1.9	0.0	0.0
51	6.458	0.155	0.133	24.79	0.4	624.29	11.1	3.55	6.30e-02	0.0	0.0
52	6.495	0.154	0.133	1.31	2.33e-02	11.59	0.2	9.10	0.2	0.0	0.0
53	6.542	0.153	0.133	0.20	3.62e-03	8.89	0.2	206.43	3.7	0.0	0.0
54	6.890	0.145	0.133	9.29e-03	1.65e-04	5.34	9.49e-02	3.34	5.94e-02	0.0	0.0
55	7.176	0.139	0.133	41.44	0.7	839.73	14.9	0.89	1.59e-02	0.0	0.0
56	7.223	0.138	0.133	14.89	0.3	0.17	2.97e-03	82.93	1.5	0.0	0.0
57	7.251	0.138	0.133	9.07	0.2	254.75	4.5	0.04	6.44e-04	0.0	0.0
58	7.519	0.133	0.133	102.41	1.8	197.72	3.5	0.03	6.12e-04	0.0	0.0
59	8.026	0.125	0.132	0.42	7.49e-03	19.48	0.3	0.83	1.47e-02	0.0	0.0
60	8.100	0.123	0.131	6.39	0.1	51.36	0.9	0.27	4.74e-03	0.0	0.0
61	8.288	0.121	0.129	0.03	5.17e-04	6.80	0.1	0.33	5.84e-03	0.0	0.0
62	8.570	0.117	0.127	13.91	0.2	6.65	0.1	0.03	5.47e-04	0.0	0.0
63	8.691	0.115	0.125	58.48	1.0	0.84	1.50e-02	0.23	4.11e-03	0.0	0.0
64	9.087	0.110	0.122	0.13	2.32e-03	38.97	0.7	0.45	8.07e-03	0.0	0.0
65	9.330	0.107	0.120	14.80	0.3	15.35	0.3	0.04	7.98e-04	0.0	0.0
66	9.545	0.105	0.119	1.33	2.36e-02	30.18	0.5	0.09	1.54e-03	0.0	0.0
67	9.576	0.104	0.119	3.34	5.92e-02	70.29	1.2	0.14	2.48e-03	0.0	0.0
68	9.763	0.102	0.117	14.81	0.3	28.73	0.5	0.30	5.35e-03	0.0	0.0
69	9.857	0.101	0.117	19.49	0.3	0.85	1.51e-02	4.41e-05	0.0	0.0	0.0
70	10.146	0.099	0.115	23.58	0.4	2.23	3.96e-02	0.14	2.55e-03	0.0	0.0
71	10.429	0.096	0.113	0.15	2.75e-03	2.85	5.06e-02	1.64e-03	2.92e-05	0.0	0.0
72	10.534	0.095	0.113	4.72	8.39e-02	0.72	1.28e-02	0.18	3.22e-03	0.0	0.0
73	10.834	0.092	0.111	11.65	0.2	2.46	4.37e-02	0.16	2.87e-03	0.0	0.0
74	11.043	0.091	0.110	13.28	0.2	7.55	0.1	0.03	4.93e-04	0.0	0.0
75	11.072	0.090	0.110	0.49	8.75e-03	11.57	0.2	0.17	3.04e-03	0.0	0.0
76	11.234	0.089	0.109	8.07	0.1	2.02	3.58e-02	0.04	7.47e-04	0.0	0.0
77	11.329	0.088	0.108	1.71	3.05e-02	7.34	0.1	0.02	2.86e-04	0.0	0.0
78	11.411	0.088	0.108	0.21	3.69e-03	12.84	0.2	0.20	3.55e-03	0.0	0.0
79	11.516	0.087	0.107	6.41	0.1	7.58	0.1	7.05e-03	1.25e-04	0.0	0.0

INGEGNERE

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
80	11.719	0.085	0.106	10.96	0.2	26.72	0.5	0.25	4.40e-03	0.0	0.0
81	11.863	0.084	0.106	394.27	7.0	242.93	4.3	2.01	3.57e-02	0.0	0.0
82	11.996	0.083	0.105	3.61	6.42e-02	16.95	0.3	0.21	3.74e-03	0.0	0.0
83	12.046	0.083	0.105	17.90	0.3	7.26e-03	1.29e-04	0.01	1.79e-04	0.0	0.0
84	12.103	0.083	0.105	1.19	2.11e-02	9.82	0.2	0.64	1.14e-02	0.0	0.0
85	12.355	0.081	0.104	165.00	2.9	8.27	0.1	0.07	1.20e-03	0.0	0.0
86	12.568	0.080	0.103	18.03	0.3	46.14	0.8	2.04e-04	3.62e-06	0.0	0.0
87	12.702	0.079	0.102	786.71	14.0	3.00	5.32e-02	8.72e-03	1.55e-04	0.0	0.0
88	12.893	0.078	0.101	1.43	2.53e-02	0.08	1.36e-03	0.02	3.89e-04	0.0	0.0
89	13.053	0.077	0.101	6.29	0.1	0.03	5.36e-04	0.02	2.76e-04	0.0	0.0
90	13.104	0.076	0.101	8.11	0.1	4.46	7.93e-02	0.19	3.44e-03	0.0	0.0
91	13.262	0.075	0.100	26.83	0.5	95.23	1.7	0.76	1.35e-02	0.0	0.0
92	13.357	0.075	0.100	6.87	0.1	1.07	1.90e-02	0.04	6.30e-04	0.0	0.0
93	13.430	0.074	0.099	1.83	3.25e-02	0.14	2.56e-03	0.11	1.98e-03	0.0	0.0
94	13.456	0.074	0.099	0.22	3.89e-03	0.19	3.39e-03	4.34e-03	7.72e-05	0.0	0.0
95	13.607	0.073	0.099	111.72	2.0	10.85	0.2	4.46	7.92e-02	0.0	0.0
96	13.795	0.072	0.098	81.44	1.4	27.41	0.5	0.08	1.44e-03	0.0	0.0
97	13.912	0.072	0.098	35.85	0.6	0.24	4.30e-03	2.88	5.11e-02	0.0	0.0
98	14.065	0.071	0.097	701.91	12.5	2.99	5.31e-02	6.76	0.1	0.0	0.0
99	14.130	0.071	0.097	72.23	1.3	0.63	1.12e-02	11.23	0.2	0.0	0.0
100	14.419	0.069	0.096	42.19	0.7	6.69	0.1	0.03	4.91e-04	0.0	0.0
101	14.575	0.069	0.096	415.80	7.4	1.59	2.83e-02	1.52	2.70e-02	0.0	0.0
102	14.973	0.067	0.095	2.75	4.89e-02	7.01	0.1	5.08e-05	0.0	0.0	0.0
103	15.113	0.066	0.094	102.17	1.8	0.20	3.51e-03	2.25e-04	3.99e-06	0.0	0.0
104	15.338	0.065	0.094	1.57	2.78e-02	0.23	4.05e-03	0.13	2.23e-03	0.0	0.0
105	15.671	0.064	0.093	0.49	8.71e-03	5.65	0.1	0.11	1.90e-03	0.0	0.0
106	15.803	0.063	0.092	4.93	8.76e-02	1.19	2.12e-02	0.14	2.50e-03	0.0	0.0
107	15.908	0.063	0.092	21.41	0.4	10.50	0.2	0.22	3.99e-03	0.0	0.0
108	16.165	0.062	0.091	20.87	0.4	18.84	0.3	6.35e-04	1.13e-05	0.0	0.0
109	16.579	0.060	0.090	87.47	1.6	6.35e-03	1.13e-04	0.05	9.48e-04	0.0	0.0
110	16.695	0.060	0.090	116.24	2.1	3.32	5.90e-02	1.58	2.81e-02	0.0	0.0
111	16.922	0.059	0.090	96.31	1.7	2.89	5.12e-02	0.40	7.11e-03	0.0	0.0
112	17.059	0.059	0.089	2.89	5.13e-02	2.17	3.85e-02	0.35	6.24e-03	0.0	0.0
113	17.179	0.058	0.089	22.32	0.4	0.02	3.55e-04	0.36	6.44e-03	0.0	0.0
114	17.508	0.057	0.088	0.81	1.43e-02	39.28	0.7	1.00	1.78e-02	0.0	0.0
115	17.677	0.057	0.088	54.62	1.0	0.27	4.82e-03	0.02	2.69e-04	0.0	0.0
116	17.794	0.056	0.088	0.37	6.51e-03	4.97	8.83e-02	1.48e-04	2.62e-06	0.0	0.0
117	18.132	0.055	0.087	38.45	0.7	0.69	1.22e-02	0.02	2.73e-04	0.0	0.0
118	18.257	0.055	0.087	0.04	7.69e-04	1.02	1.82e-02	0.13	2.24e-03	0.0	0.0
119	18.299	0.055	0.087	0.07	1.31e-03	0.07	1.18e-03	0.04	7.08e-04	0.0	0.0
120	18.320	0.055	0.087	0.14	2.48e-03	1.40	2.48e-02	0.04	7.69e-04	0.0	0.0
121	18.374	0.054	0.087	3.14	5.58e-02	0.67	1.20e-02	0.01	1.89e-04	0.0	0.0
122	18.429	0.054	0.087	10.22	0.2	0.59	1.05e-02	1.57e-05	0.0	0.0	0.0
123	18.437	0.054	0.087	30.28	0.5	4.86	8.63e-02	0.20	3.63e-03	0.0	0.0
124	18.787	0.053	0.086	17.76	0.3	0.17	3.03e-03	2.45	4.34e-02	0.0	0.0
125	18.883	0.053	0.086	3.72	6.60e-02	0.07	1.18e-03	4.86	8.62e-02	0.0	0.0
126	19.216	0.052	0.085	21.60	0.4	0.11	1.94e-03	0.90	1.60e-02	0.0	0.0
127	19.272	0.052	0.085	12.90	0.2	0.05	9.36e-04	2.89	5.13e-02	0.0	0.0
128	19.403	0.052	0.085	0.12	2.08e-03	2.31	4.10e-02	12.85	0.2	0.0	0.0
129	19.543	0.051	0.085	3.88	6.90e-02	12.01	0.2	0.28	4.98e-03	0.0	0.0
130	19.617	0.051	0.084	0.18	3.15e-03	0.82	1.45e-02	3.91	6.95e-02	0.0	0.0
131	19.640	0.051	0.084	1.61	2.86e-02	30.75	0.5	2.26	4.02e-02	0.0	0.0
132	19.767	0.051	0.084	4.43	7.87e-02	0.75	1.34e-02	1.98	3.52e-02	0.0	0.0
133	19.870	0.050	0.084	0.48	8.46e-03	11.82	0.2	0.12	2.09e-03	0.0	0.0
134	20.011	0.050	0.084	0.97	1.73e-02	5.46	9.70e-02	2.55	4.53e-02	0.0	0.0
135	20.101	0.050	0.084	7.38e-03	1.31e-04	0.11	1.95e-03	86.49	1.5	0.0	0.0
136	20.230	0.049	0.083	2.20e-03	3.92e-05	16.65	0.3	0.39	6.93e-03	0.0	0.0
137	20.306	0.049	0.083	0.02	4.08e-04	1.09	1.94e-02	3.85	6.84e-02	0.0	0.0
138	20.422	0.049	0.083	0.13	2.30e-03	0.11	1.98e-03	0.02	3.61e-04	0.0	0.0
139	20.572	0.049	0.083	0.31	5.42e-03	0.57	1.01e-02	6.74	0.1	0.0	0.0
140	20.943	0.048	0.082	0.16	2.78e-03	9.28	0.2	31.08	0.6	0.0	0.0
141	20.986	0.048	0.082	2.06e-03	3.66e-05	7.74	0.1	0.96	1.70e-02	0.0	0.0
142	21.022	0.048	0.082	0.69	1.22e-02	0.75	1.33e-02	0.36	6.44e-03	0.0	0.0
143	21.094	0.047	0.082	12.17	0.2	0.88	1.57e-02	145.07	2.6	0.0	0.0
144	21.306	0.047	0.082	1.08	1.93e-02	1.23	2.18e-02	0.14	2.53e-03	0.0	0.0
145	21.415	0.047	0.082	1.99	3.54e-02	1.48	2.62e-02	67.84	1.2	0.0	0.0
146	21.489	0.047	0.082	19.83	0.4	10.12	0.2	19.56	0.3	0.0	0.0
147	21.548	0.046	0.081	53.17	0.9	1.13	2.01e-02	6.52	0.1	0.0	0.0
148	21.678	0.046	0.081	16.34	0.3	3.87	6.88e-02	292.59	5.2	0.0	0.0
149	21.944	0.046	0.081	0.75	1.34e-02	1.10	1.96e-02	124.83	2.2	0.0	0.0
150	21.974	0.046	0.081	1.11	1.97e-02	1.05	1.87e-02	38.73	0.7	0.0	0.0
Risulta				5039.94		5178.96		1547.43			
In percentuale				89.51		91.98		27.48			

INGEGNERE

CDC	Tipo	Sigla Id	Note
11	Edk	CDC=Ed (dinamico SLD) alfa=0.0 (ecc. -)	
			verifica esistenti: fattore FC 1.350
			categoria suolo: C
			fattore di sito S = 1.500
			ordinata spettro (tratto Tb-Tc) = 0.133 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.078 sec.
			numero di modi considerati:150
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	kN	m	m	m	m	m	m			
9.20	22.68	22.77	5.27	0.0	0.53	22.77	5.26	0.003	5.8650e-06	9.6147e-04
8.20	156.44	14.10	5.27	0.0	0.53	22.77	5.26	5.2206e-04	52.444	0.001
7.95	7.09	22.77	5.93	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.94	7.20	22.77	4.58	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.89	5.18	0.06	6.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.73	6.73	0.06	4.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.70	3.43	0.06	6.58	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.54	13.73	15.21	7.02	0.0	0.0	11.41	7.02	3.000	0.334	0.0
7.53	205.56	11.43	5.27	0.0	0.18	0.0	0.0	0.0	0.0	0.0
7.53	13.89	14.86	3.49	0.0	0.0	11.41	3.49	3.000	0.303	0.0
7.27	91.98	12.96	5.25	0.0	0.53	19.41	5.26	1.242	0.801	1.0260e-04
7.15	7.28	22.77	2.51	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.15	7.39	22.77	8.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.88	7.66	0.06	8.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.87	204.79	11.43	5.27	0.0	0.35	0.0	0.0	0.0	0.0	0.0
6.79	8.01	0.06	1.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.64	10.12	22.77	1.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.63	10.01	22.77	9.41	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.54	6.39	0.06	9.65	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.49	5.37	0.06	0.76	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.20	525.53	12.59	6.27	0.0	0.84	14.71	7.06	0.415	0.061	0.150
5.98	1.52	21.82	15.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.95	0.90	0.06	11.21	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.77	4.92	20.87	15.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.71	0.58	0.06	11.86	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.55	0.60	19.93	14.93	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.34	594.17	11.63	7.68	0.0	0.84	13.65	9.85	0.426	0.052	0.409
4.27	619.49	11.04	6.80	0.0	0.84	13.73	9.79	0.464	0.070	0.540
4.10	3.67	-0.89	3.64	0.0	0.36	0.0	0.0	0.0	0.0	0.0
3.92	58.76	-1.84	5.11	0.0	0.36	0.0	0.0	0.0	0.0	0.0
3.83	1.35	-2.35	1.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.81	1.20	-2.49	8.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.69	0.97	-3.14	8.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.66	1.06	-3.27	1.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.57	59.72	-3.78	5.15	0.0	0.36	0.0	0.0	0.0	0.0	0.0
3.45	1.05	-4.47	5.14	0.0	0.36	0.0	0.0	0.0	0.0	0.0
3.32	0.50	-5.16	5.14	0.0	0.36	0.0	0.0	0.0	0.0	0.0
3.20	1550.32	13.19	7.77	0.0	0.84	2.52	9.74	0.343	0.290	0.352
2.20	708.68	9.51	6.81	0.0	0.84	1.83	9.74	0.339	0.205	0.526
1.07	691.36	9.35	6.82	0.0	0.84	1.82	9.70	0.355	0.200	0.506
0.0	3.04	-5.85	3.36	0.0	0.06	0.0	0.0	0.0	0.0	0.0
Risulta	5630.32									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	kN		kN		kN			
1	0.517	1.935	0.024	76.70	1.4	1.51e-03	2.69e-05	1.61e-05	0.0	0.0	0.0
2	0.519	1.928	0.024	75.41	1.3	0.05	9.67e-04	0.0	0.0	0.0	0.0
3	0.530	1.885	0.025	7.66	0.1	9.76e-03	1.73e-04	0.0	0.0	0.0	0.0
4	0.532	1.878	0.025	2.08	3.69e-02	0.02	3.84e-04	0.0	0.0	0.0	0.0
5	0.534	1.874	0.025	251.47	4.5	7.36e-03	1.31e-04	0.0	0.0	0.0	0.0
6	1.410	0.709	0.072	0.65	1.15e-02	1131.02	20.1	3.41e-03	6.05e-05	0.0	0.0
7	1.580	0.633	0.080	215.56	3.8	8.09e-03	1.44e-04	6.76e-04	1.20e-05	0.0	0.0
8	1.592	0.628	0.081	4.21e-03	7.47e-05	24.62	0.4	0.0	0.0	0.0	0.0
9	1.596	0.627	0.081	1.79	3.18e-02	5.43	9.64e-02	2.55e-04	4.54e-06	0.0	0.0
10	1.622	0.616	0.082	0.11	1.94e-03	2.68	4.76e-02	1.79e-04	3.18e-06	0.0	0.0

INGEGNERE

Modo	Frequenza	Periodo	Acc. Spetttrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
11	1.628	0.614	0.083	0.05	9.60e-04	8.35	0.1	6.10e-05	1.08e-06	0.0	0.0
12	1.647	0.607	0.084	0.54	9.67e-03	53.56	1.0	7.13e-05	1.27e-06	0.0	0.0
13	2.026	0.494	0.103	0.01	2.08e-04	19.10	0.3	0.02	2.78e-04	0.0	0.0
14	2.544	0.393	0.129	4.23	7.52e-02	36.60	0.7	0.02	2.69e-04	0.0	0.0
15	2.545	0.393	0.129	20.25	0.4	4.05	7.19e-02	4.87e-04	8.64e-06	0.0	0.0
16	2.602	0.384	0.132	6.83	0.1	32.23	0.6	0.01	1.87e-04	0.0	0.0
17	2.622	0.381	0.133	0.69	1.23e-02	4.90	8.71e-02	5.46e-03	9.69e-05	0.0	0.0
18	2.629	0.380	0.133	62.42	1.1	2.22	3.95e-02	2.23e-04	3.96e-06	0.0	0.0
19	2.635	0.380	0.133	123.67	2.2	0.23	4.12e-03	0.43	7.72e-03	0.0	0.0
20	2.697	0.371	0.133	0.02	2.69e-04	429.33	7.6	0.10	1.83e-03	0.0	0.0
21	2.932	0.341	0.133	0.07	1.20e-03	50.44	0.9	0.04	6.68e-04	0.0	0.0
22	3.089	0.324	0.133	3.45	6.12e-02	118.80	2.1	1.04e-03	1.84e-05	0.0	0.0
23	3.311	0.302	0.133	0.24	4.26e-03	20.85	0.4	0.01	1.92e-04	0.0	0.0
24	3.420	0.292	0.133	1.11e-03	1.98e-05	2.96	5.26e-02	3.47e-06	0.0	0.0	0.0
25	3.601	0.278	0.133	0.01	2.34e-04	15.90	0.3	0.02	4.11e-04	0.0	0.0
26	3.831	0.261	0.133	0.17	3.04e-03	0.95	1.68e-02	2.86e-03	5.08e-05	0.0	0.0
27	4.140	0.242	0.133	0.11	1.90e-03	0.16	2.89e-03	5.55e-03	9.86e-05	0.0	0.0
28	4.157	0.241	0.133	0.02	3.70e-04	0.71	1.26e-02	1.54e-03	2.73e-05	0.0	0.0
29	4.167	0.240	0.133	1.84	3.27e-02	0.78	1.39e-02	7.21e-03	1.28e-04	0.0	0.0
30	4.176	0.239	0.133	2.11e-03	3.74e-05	2.84e-04	5.04e-06	2.43e-03	4.32e-05	0.0	0.0
31	4.185	0.239	0.133	8.81	0.2	0.07	1.30e-03	8.06e-04	1.43e-05	0.0	0.0
32	4.643	0.215	0.133	0.93	1.65e-02	0.27	4.77e-03	1.17e-04	2.08e-06	0.0	0.0
33	4.658	0.215	0.133	0.73	1.30e-02	8.05e-05	1.43e-06	7.92e-03	1.41e-04	0.0	0.0
34	4.769	0.210	0.133	0.25	4.49e-03	0.06	1.06e-03	5.33e-03	9.47e-05	0.0	0.0
35	4.787	0.209	0.133	0.42	7.51e-03	0.01	2.49e-04	5.13e-04	9.11e-06	0.0	0.0
36	4.791	0.209	0.133	2.02	3.59e-02	1.35e-03	2.40e-05	3.26e-06	0.0	0.0	0.0
37	4.849	0.206	0.133	0.22	3.87e-03	36.55	0.6	7.14e-03	1.27e-04	0.0	0.0
38	4.982	0.201	0.133	0.10	1.72e-03	0.26	4.70e-03	0.02	3.78e-04	0.0	0.0
39	5.021	0.199	0.133	32.94	0.6	1.06	1.89e-02	0.06	1.02e-03	0.0	0.0
40	5.368	0.186	0.133	4.51	8.00e-02	0.03	5.42e-04	0.04	6.33e-04	0.0	0.0
41	5.391	0.186	0.133	5.71	0.1	0.10	1.84e-03	0.02	2.91e-04	0.0	0.0
42	5.430	0.184	0.133	0.24	4.18e-03	69.84	1.2	7.84e-05	1.39e-06	0.0	0.0
43	5.515	0.181	0.133	0.12	2.22e-03	0.17	3.09e-03	0.01	2.60e-04	0.0	0.0
44	5.528	0.181	0.133	0.23	4.00e-03	0.19	3.32e-03	0.06	1.10e-03	0.0	0.0
45	5.533	0.181	0.133	14.80	0.3	0.07	1.28e-03	0.05	9.30e-04	0.0	0.0
46	5.831	0.172	0.133	25.98	0.5	127.39	2.3	0.33	5.95e-03	0.0	0.0
47	5.985	0.167	0.133	0.13	2.31e-03	44.92	0.8	87.53	1.6	0.0	0.0
48	6.241	0.160	0.133	0.13	2.23e-03	1.78	3.16e-02	8.05	0.1	0.0	0.0
49	6.290	0.159	0.133	1.18	2.09e-02	66.12	1.2	78.85	1.4	0.0	0.0
50	6.306	0.159	0.133	3.74	6.64e-02	44.45	0.8	59.82	1.1	0.0	0.0
51	6.413	0.156	0.133	1.52e-03	2.69e-05	0.17	3.07e-03	107.53	1.9	0.0	0.0
52	6.493	0.154	0.133	1.02e-04	1.81e-06	6.36	0.1	5.39	9.57e-02	0.0	0.0
53	6.541	0.153	0.133	0.03	4.54e-04	40.86	0.7	211.38	3.8	0.0	0.0
54	6.804	0.147	0.133	16.52	0.3	116.86	2.1	0.80	1.42e-02	0.0	0.0
55	6.890	0.145	0.133	0.55	9.81e-03	17.99	0.3	3.53	6.26e-02	0.0	0.0
56	7.109	0.141	0.133	2.95	5.24e-02	1507.43	26.8	0.76	1.34e-02	0.0	0.0
57	7.233	0.138	0.133	11.53	0.2	0.02	4.27e-04	82.78	1.5	0.0	0.0
58	7.600	0.132	0.133	115.72	2.1	95.45	1.7	0.17	3.03e-03	0.0	0.0
59	8.020	0.125	0.132	0.62	1.10e-02	38.78	0.7	0.51	9.07e-03	0.0	0.0
60	8.064	0.124	0.131	7.15	0.1	15.57	0.3	0.61	1.09e-02	0.0	0.0
61	8.373	0.119	0.128	8.74	0.2	1.43	2.55e-02	0.23	4.06e-03	0.0	0.0
62	8.600	0.116	0.126	25.37	0.5	0.04	7.37e-04	0.04	6.24e-04	0.0	0.0
63	8.725	0.115	0.125	50.58	0.9	1.30	2.32e-02	0.21	3.81e-03	0.0	0.0
64	8.997	0.111	0.123	9.70	0.2	33.05	0.6	0.47	8.35e-03	0.0	0.0
65	9.388	0.107	0.120	1.49	2.65e-02	37.23	0.7	0.11	2.01e-03	0.0	0.0
66	9.546	0.105	0.119	8.96	0.2	36.39	0.6	0.05	8.14e-04	0.0	0.0
67	9.584	0.104	0.119	11.93	0.2	71.70	1.3	0.26	4.70e-03	0.0	0.0
68	9.815	0.102	0.117	1.73	3.07e-02	13.36	0.2	0.24	4.23e-03	0.0	0.0
69	9.871	0.101	0.117	11.59	0.2	0.98	1.74e-02	2.54e-04	4.50e-06	0.0	0.0
70	10.097	0.099	0.115	31.70	0.6	1.68	2.99e-02	0.14	2.44e-03	0.0	0.0
71	10.429	0.096	0.113	0.08	1.38e-03	3.02	5.37e-02	1.73e-03	3.07e-05	0.0	0.0
72	10.572	0.095	0.112	0.75	1.34e-02	3.04	5.41e-02	0.06	1.14e-03	0.0	0.0
73	10.712	0.093	0.112	0.07	1.27e-03	0.49	8.67e-03	0.25	4.40e-03	0.0	0.0
74	11.180	0.089	0.109	8.26	0.1	0.95	1.68e-02	0.57	1.01e-02	0.0	0.0
75	11.286	0.089	0.109	3.15	5.59e-02	38.44	0.7	0.08	1.44e-03	0.0	0.0
76	11.616	0.086	0.107	4.00	7.10e-02	1.65	2.93e-02	0.02	2.95e-04	0.0	0.0
77	11.684	0.086	0.107	0.38	6.67e-03	2.14	3.80e-02	0.06	1.04e-03	0.0	0.0
78	11.750	0.085	0.106	8.14	0.1	28.52	0.5	0.07	1.20e-03	0.0	0.0
79	11.850	0.084	0.106	2.77	4.92e-02	10.68	0.2	0.09	1.68e-03	0.0	0.0
80	11.932	0.084	0.105	0.05	8.28e-04	51.74	0.9	0.01	1.95e-04	0.0	0.0
81	12.019	0.083	0.105	20.50	0.4	37.33	0.7	0.14	2.48e-03	0.0	0.0
82	12.065	0.083	0.105	25.90	0.5	59.57	1.1	0.24	4.25e-03	0.0	0.0
83	12.148	0.082	0.105	107.08	1.9	41.38	0.7	1.66	2.94e-02	0.0	0.0
84	12.279	0.081	0.104	60.26	1.1	0.12	2.19e-03	0.01	1.83e-04	0.0	0.0
85	12.400	0.081	0.103	86.49	1.5	145.07	2.6	0.30	5.37e-03	0.0	0.0

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Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
86	12.660	0.079	0.102	88.13	1.6	12.04	0.2	0.08	1.45e-03	0.0	0.0
87	12.768	0.078	0.102	1628.95	28.9	7.10	0.1	0.21	3.69e-03	0.0	0.0
88	12.978	0.077	0.101	97.46	1.7	0.97	1.73e-02	0.04	6.39e-04	0.0	0.0
89	13.050	0.077	0.101	2.93	5.21e-02	0.15	2.75e-03	0.02	2.76e-04	0.0	0.0
90	13.138	0.076	0.101	119.81	2.1	5.23	9.29e-02	0.28	4.99e-03	0.0	0.0
91	13.349	0.075	0.100	26.22	0.5	23.56	0.4	1.00e-03	1.78e-05	0.0	0.0
92	13.361	0.075	0.100	29.94	0.5	53.26	0.9	0.05	8.14e-04	0.0	0.0
93	13.428	0.074	0.099	1.31	2.33e-02	0.33	5.85e-03	0.06	1.10e-03	0.0	0.0
94	13.456	0.074	0.099	0.45	8.06e-03	0.62	1.11e-02	2.67e-04	4.74e-06	0.0	0.0
95	13.523	0.074	0.099	3.63	6.44e-02	11.98	0.2	0.05	8.11e-04	0.0	0.0
96	13.857	0.072	0.098	33.60	0.6	0.01	1.89e-04	12.82	0.2	0.0	0.0
97	13.956	0.072	0.098	3.68	6.54e-02	9.62	0.2	0.71	1.25e-02	0.0	0.0
98	14.193	0.070	0.097	21.11	0.4	1.26	2.23e-02	13.51	0.2	0.0	0.0
99	14.352	0.070	0.096	91.02	1.6	7.58	0.1	0.24	4.21e-03	0.0	0.0
100	14.538	0.069	0.096	0.56	9.90e-03	0.24	4.29e-03	0.10	1.86e-03	0.0	0.0
101	14.641	0.068	0.096	268.65	4.8	0.14	2.42e-03	0.06	9.97e-04	0.0	0.0
102	15.119	0.066	0.094	14.06	0.2	17.53	0.3	0.42	7.38e-03	0.0	0.0
103	15.184	0.066	0.094	413.75	7.3	0.51	9.00e-03	0.02	2.94e-04	0.0	0.0
104	15.369	0.065	0.093	0.69	1.23e-02	4.22e-04	7.49e-06	0.07	1.19e-03	0.0	0.0
105	15.600	0.064	0.093	0.17	2.97e-03	5.18	9.20e-02	0.14	2.57e-03	0.0	0.0
106	15.808	0.063	0.092	4.36	7.75e-02	6.48	0.1	0.18	3.12e-03	0.0	0.0
107	15.962	0.063	0.092	5.13	9.10e-02	1.21	2.15e-02	0.44	7.79e-03	0.0	0.0
108	16.071	0.062	0.092	11.30	0.2	0.14	2.42e-03	3.11e-04	5.53e-06	0.0	0.0
109	16.616	0.060	0.090	35.74	0.6	13.31	0.2	0.13	2.26e-03	0.0	0.0
110	16.748	0.060	0.090	59.14	1.1	4.81	8.55e-02	0.08	1.43e-03	0.0	0.0
111	16.881	0.059	0.090	63.06	1.1	1.86	3.31e-02	0.30	5.29e-03	0.0	0.0
112	17.186	0.058	0.089	112.87	2.0	0.98	1.74e-02	1.97	3.51e-02	0.0	0.0
113	17.260	0.058	0.089	1.98	3.51e-02	2.23e-03	3.96e-05	0.09	1.53e-03	0.0	0.0
114	17.505	0.057	0.088	0.53	9.38e-03	36.23	0.6	1.24	2.21e-02	0.0	0.0
115	17.785	0.056	0.088	1.36	2.41e-02	0.70	1.25e-02	0.52	9.15e-03	0.0	0.0
116	17.960	0.056	0.087	41.74	0.7	7.03	0.1	0.01	1.87e-04	0.0	0.0
117	18.243	0.055	0.087	2.22	3.94e-02	0.16	2.91e-03	0.13	2.35e-03	0.0	0.0
118	18.411	0.054	0.087	1.29	2.30e-02	0.78	1.39e-02	0.60	1.07e-02	0.0	0.0
119	18.795	0.053	0.086	11.92	0.2	3.87	6.87e-02	2.58e-06	0.0	0.0	0.0
120	18.887	0.053	0.086	0.21	3.77e-03	1.72	3.05e-02	0.27	4.82e-03	0.0	0.0
121	18.920	0.053	0.086	0.10	1.81e-03	0.22	3.92e-03	1.95	3.47e-02	0.0	0.0
122	18.943	0.053	0.086	3.48e-03	6.18e-05	0.08	1.36e-03	0.30	5.42e-03	0.0	0.0
123	18.981	0.053	0.086	2.94	5.22e-02	0.33	5.94e-03	8.66	0.2	0.0	0.0
124	19.008	0.053	0.085	1.02	1.82e-02	0.16	2.80e-03	1.81	3.21e-02	0.0	0.0
125	19.058	0.052	0.085	0.21	3.66e-03	0.05	8.48e-04	0.99	1.75e-02	0.0	0.0
126	19.078	0.052	0.085	0.11	1.97e-03	0.06	1.06e-03	0.08	1.38e-03	0.0	0.0
127	19.193	0.052	0.085	2.24	3.98e-02	1.64e-03	2.92e-05	4.41e-04	7.83e-06	0.0	0.0
128	19.467	0.051	0.085	6.55	0.1	13.28	0.2	4.14	7.35e-02	0.0	0.0
129	19.541	0.051	0.085	2.20	3.90e-02	0.26	4.55e-03	0.56	1.00e-02	0.0	0.0
130	19.654	0.051	0.084	0.11	1.92e-03	36.88	0.7	0.60	1.06e-02	0.0	0.0
131	19.850	0.050	0.084	1.16	2.05e-02	7.10	0.1	0.03	4.90e-04	0.0	0.0
132	19.992	0.050	0.084	15.67	0.3	4.94	8.78e-02	15.73	0.3	0.0	0.0
133	20.106	0.050	0.084	8.50e-03	1.51e-04	3.66	6.50e-02	59.77	1.1	0.0	0.0
134	20.121	0.050	0.084	9.26	0.2	9.53	0.2	7.49	0.1	0.0	0.0
135	20.272	0.049	0.083	2.18	3.86e-02	3.10	5.51e-02	10.16	0.2	0.0	0.0
136	20.359	0.049	0.083	3.02	5.36e-02	3.22	5.71e-02	8.12	0.1	0.0	0.0
137	20.451	0.049	0.083	5.10	9.05e-02	0.86	1.52e-02	2.78	4.93e-02	0.0	0.0
138	20.594	0.049	0.083	0.61	1.09e-02	4.98	8.84e-02	0.30	5.26e-03	0.0	0.0
139	20.775	0.048	0.083	10.95	0.2	5.62	9.99e-02	1.10	1.95e-02	0.0	0.0
140	20.942	0.048	0.082	0.26	4.54e-03	7.76	0.1	69.68	1.2	0.0	0.0
141	20.984	0.048	0.082	0.04	6.28e-04	2.14	3.80e-02	1.67	2.97e-02	0.0	0.0
142	21.023	0.048	0.082	0.35	6.28e-03	0.07	1.27e-03	8.28	0.1	0.0	0.0
143	21.056	0.047	0.082	5.55	9.86e-02	4.90	8.70e-02	84.55	1.5	0.0	0.0
144	21.266	0.047	0.082	4.07e-03	7.23e-05	3.79	6.73e-02	2.49	4.42e-02	0.0	0.0
145	21.377	0.047	0.082	20.48	0.4	0.55	9.85e-03	86.70	1.5	0.0	0.0
146	21.474	0.047	0.082	0.22	3.91e-03	7.37	0.1	106.93	1.9	0.0	0.0
147	21.666	0.046	0.081	51.36	0.9	4.59	8.15e-02	160.61	2.9	0.0	0.0
148	21.974	0.046	0.081	3.23	5.74e-02	1.06	1.88e-02	57.49	1.0	0.0	0.0
149	22.001	0.045	0.081	0.05	9.65e-04	2.52e-03	4.48e-05	158.46	2.8	0.0	0.0
150	22.155	0.045	0.081	0.50	8.87e-03	0.56	9.90e-03	26.14	0.5	0.0	0.0
Risulta				4948.40		5183.87		1576.66			
In percentuale				87.89		92.07		28.00			

CDC	Tipo	Sigla Id	Note
12	Edk	CDC=Ed (dinamico SLD) alfa=90.00 (ecc. +)	
			verifica esistenti: fattore FC 1.350
			categoria suolo: C

INGEGNERE

CDC	Tipo	Sigla Id	Note
			fattore di sito S = 1.500
			ordinata spettro (tratto Tb-Tc) = 0.133 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.144 sec.
			numero di modi considerati:150
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	kN	m	m	m	m	m	m			
9.20	22.68	22.77	5.27	0.0	0.0	22.77	5.26	0.003	5.8650e-06	9.6147e-04
8.20	156.44	14.10	5.27	1.14	0.0	22.77	5.26	5.2206e-04	52.444	0.001
7.95	7.09	22.77	5.93	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.94	7.20	22.77	4.58	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.89	5.18	0.06	6.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.73	6.73	0.06	4.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.70	3.43	0.06	6.58	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.54	13.73	15.21	7.02	1.14	0.0	11.41	7.02	3.000	0.334	0.0
7.53	205.56	11.43	5.27	0.73	0.0	0.0	0.0	0.0	0.0	0.0
7.53	13.89	14.86	3.49	1.14	0.0	11.41	3.49	3.000	0.303	0.0
7.27	91.98	12.96	5.25	1.14	0.0	19.41	5.26	1.242	0.801	1.0260e-04
7.15	7.28	22.77	2.51	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.15	7.39	22.77	8.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.88	7.66	0.06	8.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.87	204.79	11.43	5.27	0.73	0.0	0.0	0.0	0.0	0.0	0.0
6.79	8.01	0.06	1.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.64	10.12	22.77	1.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.63	10.01	22.77	9.41	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.54	6.39	0.06	9.65	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.49	5.37	0.06	0.76	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.20	525.53	12.59	6.27	1.14	0.0	14.71	7.06	0.415	0.061	0.150
5.98	1.52	21.82	15.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.95	0.90	0.06	11.21	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.77	4.92	20.87	15.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.71	0.58	0.06	11.86	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.55	0.60	19.93	14.93	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.34	594.17	11.63	7.68	1.14	0.0	13.65	9.85	0.426	0.052	0.409
4.27	619.49	11.04	6.80	1.14	0.0	13.73	9.79	0.464	0.070	0.540
4.10	3.67	-0.89	3.64	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.92	58.76	-1.84	5.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.83	1.35	-2.35	1.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.81	1.20	-2.49	8.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.69	0.97	-3.14	8.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.66	1.06	-3.27	1.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.57	59.72	-3.78	5.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.45	1.05	-4.47	5.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.32	0.50	-5.16	5.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.20	1550.32	13.19	7.77	1.43	0.0	2.52	9.74	0.343	0.290	0.352
2.20	708.68	9.51	6.81	1.43	0.0	1.83	9.74	0.339	0.205	0.526
1.07	691.36	9.35	6.82	1.43	0.0	1.82	9.70	0.355	0.200	0.506
0.0	3.04	-5.85	3.36	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	kN		kN		kN			
1	0.517	1.934	0.024	76.64	1.4	2.12e-03	3.76e-05	1.64e-05	0.0	0.0	0.0
2	0.519	1.927	0.024	75.59	1.3	0.06	1.10e-03	0.0	0.0	0.0	0.0
3	0.531	1.885	0.025	7.48	0.1	0.01	2.10e-04	0.0	0.0	0.0	0.0
4	0.533	1.878	0.025	1.73	3.07e-02	0.03	5.30e-04	0.0	0.0	0.0	0.0
5	0.534	1.874	0.025	251.75	4.5	9.10e-03	1.62e-04	0.0	0.0	0.0	0.0
6	1.453	0.688	0.074	0.94	1.67e-02	1058.84	18.8	2.58e-03	4.58e-05	0.0	0.0
7	1.582	0.632	0.080	218.53	3.9	2.35e-03	4.18e-05	6.36e-04	1.13e-05	0.0	0.0
8	1.590	0.629	0.081	1.36	2.41e-02	28.98	0.5	0.0	0.0	0.0	0.0
9	1.594	0.627	0.081	0.74	1.31e-02	8.60	0.2	2.05e-04	3.65e-06	0.0	0.0
10	1.622	0.616	0.082	3.62e-04	6.43e-06	1.48	2.62e-02	1.53e-04	2.72e-06	0.0	0.0
11	1.629	0.614	0.083	5.83e-03	1.04e-04	13.97	0.2	1.89e-04	3.36e-06	0.0	0.0
12	1.648	0.607	0.084	0.08	1.40e-03	98.94	1.8	4.59e-05	0.0	0.0	0.0
13	2.094	0.478	0.106	0.04	6.41e-04	24.08	0.4	0.03	5.05e-04	0.0	0.0
14	2.524	0.396	0.128	10.03	0.2	128.12	2.3	0.03	5.59e-04	0.0	0.0
15	2.535	0.394	0.129	10.12	0.2	0.25	4.35e-03	5.01e-03	8.89e-05	0.0	0.0
16	2.586	0.387	0.131	14.66	0.3	127.24	2.3	0.04	7.08e-04	0.0	0.0

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Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
17	2.608	0.383	0.132	1.36	2.41e-02	31.22	0.6	0.02	3.29e-04	0.0	0.0
18	2.618	0.382	0.133	80.05	1.4	9.49	0.2	0.01	2.34e-04	0.0	0.0
19	2.619	0.382	0.133	101.29	1.8	1.02	1.81e-02	0.41	7.36e-03	0.0	0.0
20	2.637	0.379	0.133	4.49	7.98e-02	247.90	4.4	0.04	7.75e-04	0.0	0.0
21	2.914	0.343	0.133	0.02	4.26e-04	16.82	0.3	3.82e-05	0.0	0.0	0.0
22	3.102	0.322	0.133	2.90	5.15e-02	151.37	2.7	2.35e-06	0.0	0.0	0.0
23	3.220	0.311	0.133	0.15	2.72e-03	17.84	0.3	1.77e-04	3.15e-06	0.0	0.0
24	3.334	0.300	0.133	0.13	2.36e-03	0.05	8.39e-04	3.23e-03	5.73e-05	0.0	0.0
25	3.603	0.278	0.133	2.87e-04	5.09e-06	6.16	0.1	0.03	5.27e-04	0.0	0.0
26	3.887	0.257	0.133	0.37	6.58e-03	2.20	3.91e-02	3.31e-03	5.88e-05	0.0	0.0
27	4.071	0.246	0.133	0.09	1.59e-03	0.22	3.90e-03	5.14e-03	9.12e-05	0.0	0.0
28	4.087	0.245	0.133	0.02	2.72e-04	0.73	1.30e-02	1.75e-03	3.10e-05	0.0	0.0
29	4.097	0.244	0.133	1.78	3.17e-02	0.77	1.38e-02	6.29e-03	1.12e-04	0.0	0.0
30	4.106	0.244	0.133	2.73e-03	4.85e-05	1.98e-03	3.51e-05	2.33e-03	4.13e-05	0.0	0.0
31	4.113	0.243	0.133	8.83	0.2	0.07	1.25e-03	4.40e-04	7.82e-06	0.0	0.0
32	4.705	0.213	0.133	2.56e-03	4.54e-05	0.21	3.64e-03	1.09e-03	1.94e-05	0.0	0.0
33	4.720	0.212	0.133	1.24e-03	2.20e-05	1.04e-03	1.85e-05	0.01	1.96e-04	0.0	0.0
34	4.832	0.207	0.133	3.26e-04	5.78e-06	0.20	3.51e-03	8.91e-03	1.58e-04	0.0	0.0
35	4.852	0.206	0.133	5.88e-04	1.04e-05	0.02	3.49e-04	2.96e-03	5.26e-05	0.0	0.0
36	4.856	0.206	0.133	3.59e-03	6.37e-05	0.04	7.79e-04	2.90e-05	0.0	0.0	0.0
37	4.923	0.203	0.133	0.17	2.95e-03	37.90	0.7	0.01	2.17e-04	0.0	0.0
38	4.928	0.203	0.133	0.02	3.92e-04	7.94	0.1	2.14e-03	3.80e-05	0.0	0.0
39	5.078	0.197	0.133	0.16	2.92e-03	63.66	1.1	4.72e-04	8.38e-06	0.0	0.0
40	5.271	0.190	0.133	6.21	0.1	3.96e-04	7.03e-06	0.02	3.36e-04	0.0	0.0
41	5.288	0.189	0.133	10.19	0.2	0.08	1.47e-03	9.84e-04	1.75e-05	0.0	0.0
42	5.302	0.189	0.133	25.63	0.5	1.07	1.89e-02	0.07	1.19e-03	0.0	0.0
43	5.414	0.185	0.133	0.16	2.87e-03	0.16	2.88e-03	7.65e-03	1.36e-04	0.0	0.0
44	5.425	0.184	0.133	1.05	1.87e-02	0.35	6.22e-03	0.03	4.66e-04	0.0	0.0
45	5.430	0.184	0.133	15.60	0.3	0.09	1.53e-03	4.88e-03	8.67e-05	0.0	0.0
46	5.863	0.171	0.133	29.73	0.5	214.33	3.8	0.64	1.14e-02	0.0	0.0
47	6.032	0.166	0.133	0.49	8.73e-03	112.17	2.0	0.35	6.27e-03	0.0	0.0
48	6.110	0.164	0.133	0.07	1.32e-03	42.74	0.8	144.87	2.6	0.0	0.0
49	6.265	0.160	0.133	0.04	7.76e-04	3.20	5.68e-02	15.28	0.3	0.0	0.0
50	6.284	0.159	0.133	2.51e-03	4.46e-05	17.89	0.3	139.20	2.5	0.0	0.0
51	6.361	0.157	0.133	2.30	4.09e-02	315.49	5.6	0.68	1.20e-02	0.0	0.0
52	6.426	0.156	0.133	0.04	7.99e-04	1.64	2.91e-02	51.19	0.9	0.0	0.0
53	6.495	0.154	0.133	0.02	4.03e-04	0.76	1.34e-02	15.17	0.3	0.0	0.0
54	6.602	0.151	0.133	6.15e-04	1.09e-05	49.26	0.9	195.43	3.5	0.0	0.0
55	6.932	0.144	0.133	2.15	3.82e-02	1192.70	21.2	0.79	1.40e-02	0.0	0.0
56	7.121	0.140	0.133	1.20	2.13e-02	142.10	2.5	0.20	3.56e-03	0.0	0.0
57	7.229	0.138	0.133	12.01	0.2	0.05	8.10e-04	82.74	1.5	0.0	0.0
58	7.504	0.133	0.133	124.24	2.2	82.54	1.5	0.44	7.89e-03	0.0	0.0
59	7.875	0.127	0.133	1.69	3.01e-02	1.01	1.79e-02	0.20	3.51e-03	0.0	0.0
60	8.136	0.123	0.131	6.40	0.1	22.53	0.4	0.04	7.36e-04	0.0	0.0
61	8.311	0.120	0.129	21.50	0.4	4.66	8.28e-02	0.82	1.46e-02	0.0	0.0
62	8.330	0.120	0.129	23.07	0.4	2.83	5.03e-02	0.19	3.45e-03	0.0	0.0
63	8.751	0.114	0.125	56.16	1.0	0.98	1.73e-02	0.30	5.37e-03	0.0	0.0
64	8.802	0.114	0.125	0.24	4.24e-03	21.87	0.4	0.40	7.11e-03	0.0	0.0
65	9.281	0.108	0.121	0.35	6.27e-03	0.71	1.26e-02	8.38e-03	1.49e-04	0.0	0.0
66	9.559	0.105	0.119	0.20	3.47e-03	0.69	1.22e-02	2.19e-05	0.0	0.0	0.0
67	9.711	0.103	0.118	0.17	3.10e-03	4.64	8.25e-02	4.03e-05	0.0	0.0	0.0
68	9.834	0.102	0.117	42.25	0.8	118.93	2.1	0.49	8.68e-03	0.0	0.0
69	9.927	0.101	0.116	1.64	2.92e-02	7.56	0.1	0.08	1.39e-03	0.0	0.0
70	10.115	0.099	0.115	1.97	3.51e-02	9.83	0.2	0.06	1.09e-03	0.0	0.0
71	10.153	0.098	0.115	1.27	2.26e-02	0.46	8.21e-03	0.01	2.15e-04	0.0	0.0
72	10.283	0.097	0.114	19.04	0.3	1.38	2.46e-02	0.50	8.88e-03	0.0	0.0
73	10.513	0.095	0.113	7.51	0.1	4.11	7.30e-02	0.70	1.24e-02	0.0	0.0
74	10.866	0.092	0.111	26.38	0.5	0.09	1.63e-03	0.02	3.63e-04	0.0	0.0
75	11.132	0.090	0.109	2.38	4.23e-02	0.88	1.56e-02	0.07	1.31e-03	0.0	0.0
76	11.195	0.089	0.109	10.84	0.2	18.74	0.3	0.73	1.30e-02	0.0	0.0
77	11.347	0.088	0.108	1.34	2.38e-02	3.96	7.04e-02	0.22	3.82e-03	0.0	0.0
78	11.422	0.088	0.108	0.72	1.27e-02	0.75	1.34e-02	0.14	2.52e-03	0.0	0.0
79	11.574	0.086	0.107	0.71	1.27e-02	0.90	1.60e-02	0.07	1.32e-03	0.0	0.0
80	11.622	0.086	0.107	0.13	2.33e-03	2.80	4.98e-02	0.02	3.63e-04	0.0	0.0
81	11.666	0.086	0.107	3.77	6.69e-02	4.01	7.12e-02	9.24e-03	1.64e-04	0.0	0.0
82	11.872	0.084	0.106	1.47	2.60e-02	1.32	2.35e-02	0.72	1.28e-02	0.0	0.0
83	12.260	0.082	0.104	0.74	1.31e-02	78.71	1.4	0.06	1.11e-03	0.0	0.0
84	12.351	0.081	0.104	6.62	0.1	23.02	0.4	1.20	2.14e-02	0.0	0.0
85	12.542	0.080	0.103	207.92	3.7	145.47	2.6	1.06	1.88e-02	0.0	0.0
86	12.902	0.078	0.101	585.92	10.4	13.56	0.2	0.12	2.16e-03	0.0	0.0
87	12.974	0.077	0.101	84.06	1.5	4.00	7.11e-02	0.12	2.10e-03	0.0	0.0
88	13.025	0.077	0.101	472.11	8.4	6.41	0.1	0.04	7.03e-04	0.0	0.0
89	13.120	0.076	0.101	155.43	2.8	9.18e-04	1.63e-05	0.11	1.97e-03	0.0	0.0
90	13.149	0.076	0.100	49.67	0.9	2.92	5.18e-02	0.37	6.51e-03	0.0	0.0
91	13.373	0.075	0.100	17.83	0.3	3.72	6.60e-02	0.10	1.74e-03	0.0	0.0

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Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
92	13.423	0.074	0.100	31.23	0.6	3.56	6.32e-02	0.13	2.23e-03	0.0	0.0
93	13.446	0.074	0.099	708.57	12.6	5.79	0.1	0.21	3.73e-03	0.0	0.0
94	13.479	0.074	0.099	7.39	0.1	0.84	1.50e-02	0.02	2.82e-04	0.0	0.0
95	13.552	0.074	0.099	0.04	7.61e-04	68.19	1.2	0.22	3.98e-03	0.0	0.0
96	13.679	0.073	0.099	0.34	6.05e-03	6.52	0.1	0.31	5.55e-03	0.0	0.0
97	13.876	0.072	0.098	162.50	2.9	7.39	0.1	6.65	0.1	0.0	0.0
98	14.195	0.070	0.097	28.92	0.5	5.37e-04	9.55e-06	11.73	0.2	0.0	0.0
99	14.334	0.070	0.096	16.63	0.3	78.75	1.4	0.90	1.60e-02	0.0	0.0
100	14.492	0.069	0.096	18.78	0.3	5.11	9.08e-02	4.43	7.87e-02	0.0	0.0
101	14.639	0.068	0.096	34.59	0.6	0.52	9.18e-03	1.35	2.40e-02	0.0	0.0
102	14.873	0.067	0.095	247.84	4.4	7.19e-04	1.28e-05	0.39	7.01e-03	0.0	0.0
103	14.946	0.067	0.095	249.43	4.4	0.18	3.14e-03	0.01	2.16e-04	0.0	0.0
104	15.258	0.066	0.094	35.41	0.6	18.18	0.3	7.45e-04	1.32e-05	0.0	0.0
105	15.544	0.064	0.093	11.69	0.2	2.44	4.33e-02	0.0	0.0	0.0	0.0
106	15.756	0.063	0.092	0.60	1.06e-02	22.58	0.4	0.26	4.55e-03	0.0	0.0
107	15.888	0.063	0.092	0.14	2.54e-03	13.67	0.2	0.10	1.86e-03	0.0	0.0
108	16.263	0.061	0.091	12.87	0.2	1.67	2.97e-02	0.42	7.38e-03	0.0	0.0
109	16.531	0.060	0.091	22.56	0.4	5.32	9.46e-02	0.26	4.55e-03	0.0	0.0
110	16.721	0.060	0.090	17.52	0.3	3.08	5.46e-02	0.12	2.16e-03	0.0	0.0
111	16.917	0.059	0.090	93.40	1.7	0.82	1.45e-02	0.51	9.01e-03	0.0	0.0
112	17.019	0.059	0.089	130.19	2.3	5.29e-05	0.0	0.99	1.75e-02	0.0	0.0
113	17.069	0.059	0.089	3.49	6.19e-02	2.43	4.31e-02	9.51e-03	1.69e-04	0.0	0.0
114	17.262	0.058	0.089	0.45	7.97e-03	8.38e-03	1.49e-04	0.16	2.80e-03	0.0	0.0
115	17.450	0.057	0.088	38.35	0.7	1.51	2.68e-02	0.33	5.89e-03	0.0	0.0
116	17.912	0.056	0.088	2.90e-04	5.15e-06	6.57	0.1	1.26	2.24e-02	0.0	0.0
117	18.059	0.055	0.087	1.37	2.44e-02	29.04	0.5	0.54	9.61e-03	0.0	0.0
118	18.111	0.055	0.087	2.62	4.65e-02	1.92	3.41e-02	0.19	3.35e-03	0.0	0.0
119	18.135	0.055	0.087	2.15	3.83e-02	15.87	0.3	0.28	4.98e-03	0.0	0.0
120	18.501	0.054	0.086	0.45	7.99e-03	3.37	5.99e-02	0.04	7.28e-04	0.0	0.0
121	18.523	0.054	0.086	3.92e-03	6.96e-05	1.88	3.33e-02	0.03	4.51e-04	0.0	0.0
122	18.560	0.054	0.086	0.13	2.28e-03	2.38	4.22e-02	2.86e-03	5.08e-05	0.0	0.0
123	18.624	0.054	0.086	0.02	4.44e-04	0.69	1.22e-02	0.15	2.64e-03	0.0	0.0
124	18.686	0.054	0.086	0.39	6.98e-03	0.07	1.24e-03	0.08	1.38e-03	0.0	0.0
125	18.694	0.053	0.086	0.05	9.66e-04	21.97	0.4	0.04	7.78e-04	0.0	0.0
126	18.845	0.053	0.086	12.05	0.2	0.94	1.66e-02	0.05	8.26e-04	0.0	0.0
127	18.917	0.053	0.086	14.78	0.3	1.75e-03	3.12e-05	9.88	0.2	0.0	0.0
128	19.120	0.052	0.085	7.76	0.1	0.63	1.12e-02	6.32	0.1	0.0	0.0
129	19.225	0.052	0.085	18.05	0.3	0.06	1.13e-03	0.01	1.94e-04	0.0	0.0
130	19.262	0.052	0.085	0.07	1.21e-03	12.11	0.2	0.02	3.43e-04	0.0	0.0
131	19.533	0.051	0.085	65.37	1.2	0.54	9.61e-03	0.34	5.96e-03	0.0	0.0
132	19.553	0.051	0.085	0.09	1.52e-03	2.94	5.22e-02	1.49e-03	2.64e-05	0.0	0.0
133	20.001	0.050	0.084	12.14	0.2	4.03	7.17e-02	20.18	0.4	0.0	0.0
134	20.039	0.050	0.084	1.81	3.22e-02	1.54	2.74e-02	0.05	8.93e-04	0.0	0.0
135	20.110	0.050	0.084	3.95	7.01e-02	0.07	1.18e-03	24.11	0.4	0.0	0.0
136	20.123	0.050	0.084	7.14	0.1	8.59	0.2	41.73	0.7	0.0	0.0
137	20.179	0.050	0.084	1.59	2.82e-02	2.65	4.71e-02	13.55	0.2	0.0	0.0
138	20.300	0.049	0.083	0.10	1.70e-03	0.69	1.22e-02	0.31	5.45e-03	0.0	0.0
139	20.402	0.049	0.083	0.42	7.47e-03	0.57	1.01e-02	2.43	4.32e-02	0.0	0.0
140	20.614	0.049	0.083	6.16	0.1	13.19	0.2	45.16	0.8	0.0	0.0
141	20.742	0.048	0.083	1.42	2.52e-02	2.73	4.85e-02	10.23	0.2	0.0	0.0
142	20.827	0.048	0.083	3.73	6.63e-02	4.79	8.52e-02	89.32	1.6	0.0	0.0
143	20.862	0.048	0.082	4.34e-03	7.71e-05	7.52	0.1	0.30	5.41e-03	0.0	0.0
144	21.125	0.047	0.082	0.61	1.09e-02	0.03	6.02e-04	2.24	3.97e-02	0.0	0.0
145	21.160	0.047	0.082	0.42	7.55e-03	0.78	1.38e-02	5.57	9.89e-02	0.0	0.0
146	21.462	0.047	0.082	1.82	3.24e-02	4.61	8.20e-02	61.36	1.1	0.0	0.0
147	21.632	0.046	0.081	2.46	4.37e-02	12.42	0.2	0.64	1.14e-02	0.0	0.0
148	21.686	0.046	0.081	1.71	3.03e-02	0.89	1.58e-02	418.06	7.4	0.0	0.0
149	21.916	0.046	0.081	56.13	1.0	1.81	3.22e-02	0.85	1.50e-02	0.0	0.0
150	21.984	0.045	0.081	24.52	0.4	0.10	1.78e-03	54.36	1.0	0.0	0.0
Risulta				5038.63		5193.12		1495.98			
In percentuale				89.49		92.23		26.57			

CDC	Tipo	Sigla Id	Note
13	Edk	CDC=Ed (dinamico SLD) alfa=90.00 (ecc. -)	
			verifica esistenti: fattore FC 1.350
			categoria suolo: C
			fattore di sito S = 1.500
			ordinata spettro (tratto Tb-Tc) = 0.133 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.138 sec.
			numero di modi considerati:150

INGEGNERE

CDC	Tipo	Sigla Id	Note
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
m	kN	m	m	m	m	m	m			
9.20	22.68	22.77	5.27	0.0	0.0	22.77	5.26	0.003	5.8650e-06	9.6147e-04
8.20	156.44	14.10	5.27	-1.14	0.0	22.77	5.26	5.2206e-04	52.444	0.001
7.95	7.09	22.77	5.93	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.94	7.20	22.77	4.58	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.89	5.18	0.06	6.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.73	6.73	0.06	4.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.70	3.43	0.06	6.58	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.54	13.73	15.21	7.02	-1.14	0.0	11.41	7.02	3.000	0.334	0.0
7.53	205.56	11.43	5.27	-0.73	0.0	0.0	0.0	0.0	0.0	0.0
7.53	13.89	14.86	3.49	-1.14	0.0	11.41	3.49	3.000	0.303	0.0
7.27	91.98	12.96	5.25	-1.14	0.0	19.41	5.26	1.242	0.801	1.0260e-04
7.15	7.28	22.77	2.51	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.15	7.39	22.77	8.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.88	7.66	0.06	8.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.87	204.79	11.43	5.27	-0.73	0.0	0.0	0.0	0.0	0.0	0.0
6.79	8.01	0.06	1.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.64	10.12	22.77	1.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.63	10.01	22.77	9.41	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.54	6.39	0.06	9.65	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.49	5.37	0.06	0.76	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6.20	525.53	12.59	6.27	-1.14	0.0	14.71	7.06	0.415	0.061	0.150
5.98	1.52	21.82	15.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.95	0.90	0.06	11.21	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.77	4.92	20.87	15.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.71	0.58	0.06	11.86	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.55	0.60	19.93	14.93	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5.34	594.17	11.63	7.68	-1.14	0.0	13.65	9.85	0.426	0.052	0.409
4.27	619.49	11.04	6.80	-1.14	0.0	13.73	9.79	0.464	0.070	0.540
4.10	3.67	-0.89	3.64	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.92	58.76	-1.84	5.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.83	1.35	-2.35	1.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.81	1.20	-2.49	8.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.69	0.97	-3.14	8.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.66	1.06	-3.27	1.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.57	59.72	-3.78	5.15	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.45	1.05	-4.47	5.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.32	0.50	-5.16	5.14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3.20	1550.32	13.19	7.77	-1.43	0.0	2.52	9.74	0.343	0.290	0.352
2.20	708.68	9.51	6.81	-1.43	0.0	1.83	9.74	0.339	0.205	0.526
1.07	691.36	9.35	6.82	-1.43	0.0	1.82	9.70	0.355	0.200	0.506
0.0	3.04	-5.85	3.36	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Risulta	5630.32									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	kN		kN		kN			
1	0.517	1.934	0.024	76.63	1.4	3.49e-03	6.20e-05	1.65e-05	0.0	0.0	0.0
2	0.519	1.927	0.024	75.62	1.3	0.05	8.46e-04	0.0	0.0	0.0	0.0
3	0.531	1.885	0.025	7.46	0.1	8.13e-03	1.44e-04	0.0	0.0	0.0	0.0
4	0.533	1.878	0.025	1.70	3.01e-02	0.02	3.96e-04	0.0	0.0	0.0	0.0
5	0.534	1.874	0.025	251.79	4.5	9.45e-03	1.68e-04	0.0	0.0	0.0	0.0
6	1.364	0.733	0.069	0.48	8.60e-03	1182.33	21.0	3.95e-03	7.02e-05	0.0	0.0
7	1.582	0.632	0.080	219.73	3.9	6.07e-03	1.08e-04	6.14e-04	1.09e-05	0.0	0.0
8	1.590	0.629	0.081	1.06	1.88e-02	22.39	0.4	5.43e-06	0.0	0.0	0.0
9	1.594	0.627	0.081	0.40	7.09e-03	2.56	4.55e-02	2.19e-04	3.89e-06	0.0	0.0
10	1.617	0.618	0.082	7.09e-03	1.26e-04	1.93	3.42e-02	1.26e-04	2.24e-06	0.0	0.0
11	1.625	0.615	0.082	1.18e-03	2.10e-05	4.55	8.08e-02	1.19e-05	0.0	0.0	0.0
12	1.644	0.608	0.083	0.04	6.25e-04	33.61	0.6	8.68e-05	1.54e-06	0.0	0.0
13	1.970	0.508	0.100	0.02	3.47e-04	18.63	0.3	8.54e-03	1.52e-04	0.0	0.0
14	2.535	0.395	0.129	6.95	0.1	1.35	2.40e-02	7.13e-03	1.27e-04	0.0	0.0
15	2.538	0.394	0.129	19.36	0.3	17.43	0.3	4.04e-03	7.17e-05	0.0	0.0
16	2.594	0.385	0.132	4.12	7.31e-02	17.47	0.3	8.17e-03	1.45e-04	0.0	0.0
17	2.612	0.383	0.132	0.33	5.77e-03	3.45	6.13e-02	0.01	2.63e-04	0.0	0.0
18	2.619	0.382	0.133	191.03	3.4	0.07	1.21e-03	0.28	5.02e-03	0.0	0.0
19	2.619	0.382	0.133	0.11	2.01e-03	1.00	1.77e-02	0.14	2.43e-03	0.0	0.0
20	2.696	0.371	0.133	0.07	1.20e-03	286.51	5.1	0.05	9.00e-04	0.0	0.0
21	3.008	0.332	0.133	1.32	2.35e-02	306.58	5.4	0.08	1.43e-03	0.0	0.0
22	3.099	0.323	0.133	1.87	3.32e-02	0.52	9.31e-03	0.06	1.10e-03	0.0	0.0

INGEGNERE

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
23	3.316	0.302	0.133	5.61e-04	9.96e-06	23.27	0.4	0.03	5.87e-04	0.0	0.0
24	3.524	0.284	0.133	0.04	7.00e-04	0.20	3.49e-03	3.34e-04	5.93e-06	0.0	0.0
25	3.766	0.266	0.133	0.06	1.03e-03	30.68	0.5	9.09e-03	1.61e-04	0.0	0.0
26	3.796	0.263	0.133	1.10e-03	1.95e-05	2.10	3.72e-02	1.54e-03	2.74e-05	0.0	0.0
27	4.070	0.246	0.133	0.10	1.74e-03	0.08	1.36e-03	5.38e-03	9.56e-05	0.0	0.0
28	4.087	0.245	0.133	0.08	1.50e-03	0.46	8.24e-03	1.40e-03	2.48e-05	0.0	0.0
29	4.098	0.244	0.133	1.91	3.39e-02	0.99	1.76e-02	0.01	1.79e-04	0.0	0.0
30	4.105	0.244	0.133	4.67e-04	8.29e-06	2.13e-03	3.77e-05	1.89e-03	3.35e-05	0.0	0.0
31	4.113	0.243	0.133	8.66		0.07	1.20e-03	1.46e-03	2.58e-05	0.0	0.0
32	4.702	0.213	0.133	3.51e-03	6.23e-05	0.48	8.49e-03	1.10e-03	1.95e-05	0.0	0.0
33	4.723	0.212	0.133	8.02e-04	1.43e-05	0.05	8.91e-04	0.01	2.06e-04	0.0	0.0
34	4.807	0.208	0.133	0.18	3.19e-03	37.12	0.7	4.28e-03	7.60e-05	0.0	0.0
35	4.832	0.207	0.133	1.36e-03	2.41e-05	2.90e-04	5.15e-06	7.36e-03	1.31e-04	0.0	0.0
36	4.852	0.206	0.133	3.37e-04	5.99e-06	1.13e-05	0.0	2.11e-03	3.76e-05	0.0	0.0
37	4.855	0.206	0.133	5.16e-03	9.17e-05	2.57e-04	4.57e-06	2.10e-04	3.72e-06	0.0	0.0
38	4.923	0.203	0.133	1.91e-05	0.0	0.27	4.86e-03	4.08e-03	7.25e-05	0.0	0.0
39	5.269	0.190	0.133	5.98	0.1	0.01	2.02e-04	0.03	5.31e-04	0.0	0.0
40	5.289	0.189	0.133	11.30	0.2	0.08	1.34e-03	3.22e-04	5.72e-06	0.0	0.0
41	5.303	0.189	0.133	23.98	0.4	0.52	9.25e-03	0.06	1.15e-03	0.0	0.0
42	5.414	0.185	0.133	0.12	2.21e-03	0.10	1.77e-03	3.75e-03	6.67e-05	0.0	0.0
43	5.425	0.184	0.133	0.39	6.94e-03	0.24	4.23e-03	0.02	3.90e-04	0.0	0.0
44	5.430	0.184	0.133	16.25	0.3	0.01	2.12e-04	0.05	8.36e-04	0.0	0.0
45	5.809	0.172	0.133	0.11	1.95e-03	31.75	0.6	44.83	0.8	0.0	0.0
46	5.870	0.170	0.133	0.52	9.28e-03	90.48	1.6	0.78	1.39e-02	0.0	0.0
47	5.956	0.168	0.133	16.39	0.3	10.71	0.2	0.17	3.03e-03	0.0	0.0
48	6.081	0.164	0.133	4.12	7.33e-02	29.39	0.5	0.19	3.36e-03	0.0	0.0
49	6.208	0.161	0.133	0.13	2.26e-03	2.07	3.68e-02	2.13	3.79e-02	0.0	0.0
50	6.311	0.158	0.133	0.18	3.28e-03	11.50	0.2	134.27	2.4	0.0	0.0
51	6.391	0.156	0.133	0.15	2.60e-03	8.38	0.1	207.41	3.7	0.0	0.0
52	6.440	0.155	0.133	19.20	0.3	199.44	3.5	2.14	3.80e-02	0.0	0.0
53	6.481	0.154	0.133	0.37	6.49e-03	6.97	0.1	29.02	0.5	0.0	0.0
54	6.503	0.154	0.133	8.93e-04	1.59e-05	3.75	6.66e-02	121.20	2.2	0.0	0.0
55	6.749	0.148	0.133	0.05	8.57e-04	3.25	5.78e-02	20.43	0.4	0.0	0.0
56	7.228	0.138	0.133	9.79	0.2	4.81	8.53e-02	80.77	1.4	0.0	0.0
57	7.262	0.138	0.133	47.29	0.8	1268.68	22.5	2.84	5.05e-02	0.0	0.0
58	7.581	0.132	0.133	91.05	1.6	318.24	5.7	0.06	1.09e-03	0.0	0.0
59	7.826	0.128	0.133	1.43	2.54e-02	3.19	5.67e-02	1.61	2.86e-02	0.0	0.0
60	8.031	0.125	0.132	5.98	0.1	165.57	2.9	0.13	2.39e-03	0.0	0.0
61	8.399	0.119	0.128	29.31	0.5	0.04	6.49e-04	0.02	2.84e-04	0.0	0.0
62	8.579	0.117	0.126	34.29	0.6	6.81	0.1	0.07	1.28e-03	0.0	0.0
63	8.904	0.112	0.124	2.88	5.11e-02	32.09	0.6	0.01	1.90e-04	0.0	0.0
64	8.990	0.111	0.123	22.87	0.4	52.48	0.9	0.77	1.37e-02	0.0	0.0
65	9.181	0.109	0.122	2.47	4.39e-02	3.78	6.72e-02	1.62e-04	2.88e-06	0.0	0.0
66	9.455	0.106	0.120	0.22	3.86e-03	62.48	1.1	0.23	4.13e-03	0.0	0.0
67	9.554	0.105	0.119	0.22	3.97e-03	1.38	2.46e-02	0.01	2.18e-04	0.0	0.0
68	9.622	0.104	0.118	5.77	0.1	1.55	2.76e-02	0.03	5.05e-04	0.0	0.0
69	9.693	0.103	0.118	16.18	0.3	15.33	0.3	0.18	3.27e-03	0.0	0.0
70	10.054	0.099	0.116	20.76	0.4	1.97	3.50e-02	0.18	3.23e-03	0.0	0.0
71	10.583	0.094	0.112	2.59	4.59e-02	0.29	5.08e-03	9.30e-03	1.65e-04	0.0	0.0
72	11.160	0.090	0.109	5.67	0.1	74.48	1.3	2.97e-03	5.27e-05	0.0	0.0
73	11.328	0.088	0.108	1.18	2.09e-02	2.07	3.68e-02	4.89e-03	8.68e-05	0.0	0.0
74	11.407	0.088	0.108	1.27	2.26e-02	0.44	7.81e-03	0.14	2.55e-03	0.0	0.0
75	11.426	0.088	0.108	8.59	0.2	89.76	1.6	0.28	5.05e-03	0.0	0.0
76	11.447	0.087	0.108	6.85	0.1	43.80	0.8	1.68e-03	2.99e-05	0.0	0.0
77	11.479	0.087	0.108	2.06	3.66e-02	61.35	1.1	0.20	3.52e-03	0.0	0.0
78	11.655	0.086	0.107	2.53	4.50e-02	43.68	0.8	0.15	2.72e-03	0.0	0.0
79	11.678	0.086	0.107	3.72	6.61e-02	73.48	1.3	0.28	4.93e-03	0.0	0.0
80	11.849	0.084	0.106	9.93e-03	1.76e-04	40.21	0.7	0.46	8.10e-03	0.0	0.0
81	11.983	0.083	0.105	12.17	0.2	2.89	5.13e-02	0.70	1.25e-02	0.0	0.0
82	12.101	0.083	0.105	2.90	5.15e-02	30.20	0.5	0.01	2.22e-04	0.0	0.0
83	12.291	0.081	0.104	89.98	1.6	58.39	1.0	0.11	2.02e-03	0.0	0.0
84	12.557	0.080	0.103	126.53	2.2	1.01e-04	1.80e-06	0.06	1.11e-03	0.0	0.0
85	12.783	0.078	0.102	149.66	2.7	0.04	7.08e-04	0.72	1.28e-02	0.0	0.0
86	12.961	0.077	0.101	531.60	9.4	32.69	0.6	0.22	3.95e-03	0.0	0.0
87	12.991	0.077	0.101	212.10	3.8	5.26	9.35e-02	9.20e-03	1.63e-04	0.0	0.0
88	13.089	0.076	0.101	20.94	0.4	19.24	0.3	2.85e-04	5.06e-06	0.0	0.0
89	13.154	0.076	0.100	690.70	12.3	8.91	0.2	0.24	4.29e-03	0.0	0.0
90	13.210	0.076	0.100	135.27	2.4	0.08	1.39e-03	0.31	5.53e-03	0.0	0.0
91	13.308	0.075	0.100	11.12	0.2	1.89	3.36e-02	0.42	7.45e-03	0.0	0.0
92	13.411	0.075	0.100	14.01	0.2	0.13	2.34e-03	1.16e-03	2.06e-05	0.0	0.0
93	13.435	0.074	0.099	127.10	2.3	3.19	5.66e-02	0.61	1.08e-02	0.0	0.0
94	13.454	0.074	0.099	7.20	0.1	0.45	8.05e-03	0.06	1.13e-03	0.0	0.0
95	13.696	0.073	0.099	119.84	2.1	0.40	7.15e-03	0.79	1.41e-02	0.0	0.0
96	13.774	0.073	0.098	274.84	4.9	0.44	7.90e-03	11.93	0.2	0.0	0.0
97	13.868	0.072	0.098	92.95	1.7	5.58	9.91e-02	0.93	1.66e-02	0.0	0.0

INGEGNERE

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
98	14.122	0.071	0.097	0.03	4.51e-04	10.13	0.2	5.01	8.91e-02	0.0	0.0
99	14.145	0.071	0.097	29.20	0.5	1.95	3.46e-02	7.80	0.1	0.0	0.0
100	14.622	0.068	0.096	12.04	0.2	9.29	0.2	0.01	2.41e-04	0.0	0.0
101	14.819	0.067	0.095	234.19	4.2	0.55	9.84e-03	0.08	1.36e-03	0.0	0.0
102	14.862	0.067	0.095	128.96	2.3	2.18	3.87e-02	0.36	6.44e-03	0.0	0.0
103	15.130	0.066	0.094	66.26	1.2	0.60	1.07e-02	2.26e-05	0.0	0.0	0.0
104	15.274	0.065	0.094	65.65	1.2	4.90	8.71e-02	0.02	3.07e-04	0.0	0.0
105	15.543	0.064	0.093	9.87	0.2	0.27	4.86e-03	0.29	5.07e-03	0.0	0.0
106	15.805	0.063	0.092	8.19	0.1	0.98	1.74e-02	6.65e-03	1.18e-04	0.0	0.0
107	16.224	0.062	0.091	7.26	0.1	13.05	0.2	0.03	4.81e-04	0.0	0.0
108	16.334	0.061	0.091	1.67	2.97e-02	0.21	3.65e-03	0.56	9.88e-03	0.0	0.0
109	16.859	0.059	0.090	189.39	3.4	0.33	5.88e-03	0.36	6.45e-03	0.0	0.0
110	16.920	0.059	0.090	16.26	0.3	9.34	0.2	0.12	2.09e-03	0.0	0.0
111	16.974	0.059	0.090	45.02	0.8	6.32	0.1	6.55e-03	1.16e-04	0.0	0.0
112	17.046	0.059	0.089	5.93	0.1	0.54	9.64e-03	0.85	1.51e-02	0.0	0.0
113	17.208	0.058	0.089	16.18	0.3	0.08	1.41e-03	0.78	1.38e-02	0.0	0.0
114	17.428	0.057	0.089	26.44	0.5	0.56	9.93e-03	0.02	4.05e-04	0.0	0.0
115	17.602	0.057	0.088	1.13	2.01e-02	23.53	0.4	1.23	2.18e-02	0.0	0.0
116	17.729	0.056	0.088	16.19	0.3	0.96	1.70e-02	0.34	6.06e-03	0.0	0.0
117	17.888	0.056	0.088	1.36	2.42e-02	4.59	8.15e-02	0.03	6.10e-04	0.0	0.0
118	18.106	0.055	0.087	0.36	6.39e-03	1.11	1.97e-02	0.05	8.20e-04	0.0	0.0
119	18.504	0.054	0.086	0.03	4.94e-04	0.41	7.34e-03	0.01	2.28e-04	0.0	0.0
120	18.537	0.054	0.086	0.78	1.38e-02	0.09	1.58e-03	0.03	4.81e-04	0.0	0.0
121	18.570	0.054	0.086	0.61	1.08e-02	0.01	2.48e-04	0.06	1.04e-03	0.0	0.0
122	18.599	0.054	0.086	0.02	3.31e-04	0.98	1.73e-02	0.12	2.11e-03	0.0	0.0
123	18.661	0.054	0.086	0.02	3.89e-04	0.03	5.48e-04	0.05	9.65e-04	0.0	0.0
124	18.748	0.053	0.086	5.16	9.17e-02	22.39	0.4	0.44	7.88e-03	0.0	0.0
125	18.895	0.053	0.086	0.65	1.15e-02	1.42e-04	2.53e-06	0.80	1.41e-02	0.0	0.0
126	18.935	0.053	0.086	2.50	4.44e-02	5.43	9.64e-02	8.80	0.2	0.0	0.0
127	19.036	0.053	0.085	15.75	0.3	3.32	5.89e-02	0.54	9.68e-03	0.0	0.0
128	19.365	0.052	0.085	23.61	0.4	42.81	0.8	0.44	7.81e-03	0.0	0.0
129	19.530	0.051	0.085	17.39	0.3	0.57	1.02e-02	8.32	0.1	0.0	0.0
130	19.625	0.051	0.084	61.09	1.1	0.08	1.37e-03	3.79	6.72e-02	0.0	0.0
131	19.828	0.050	0.084	5.86	0.1	6.18e-03	1.10e-04	0.47	8.38e-03	0.0	0.0
132	20.088	0.050	0.084	1.09e-03	1.94e-05	4.69e-03	8.33e-05	78.30	1.4	0.0	0.0
133	20.141	0.050	0.084	1.76	3.13e-02	1.12	1.98e-02	3.83	6.81e-02	0.0	0.0
134	20.200	0.050	0.083	1.81	3.22e-02	10.60	0.2	8.88	0.2	0.0	0.0
135	20.277	0.049	0.083	0.16	2.91e-03	5.64	0.1	0.02	3.68e-04	0.0	0.0
136	20.300	0.049	0.083	3.80	6.74e-02	2.65	4.70e-02	0.58	1.03e-02	0.0	0.0
137	20.346	0.049	0.083	0.64	1.14e-02	0.13	2.36e-03	3.92	6.97e-02	0.0	0.0
138	20.575	0.049	0.083	2.11	3.75e-02	17.48	0.3	1.49	2.65e-02	0.0	0.0
139	20.850	0.048	0.082	0.47	8.42e-03	2.04e-04	3.62e-06	13.02	0.2	0.0	0.0
140	20.869	0.048	0.082	0.70	1.24e-02	17.89	0.3	1.64	2.91e-02	0.0	0.0
141	20.987	0.048	0.082	7.14	0.1	0.49	8.78e-03	157.87	2.8	0.0	0.0
142	21.329	0.047	0.082	5.80	0.1	0.07	1.18e-03	2.81	4.99e-02	0.0	0.0
143	21.403	0.047	0.082	0.69	1.22e-02	3.18	5.65e-02	13.19	0.2	0.0	0.0
144	21.462	0.047	0.082	0.09	1.65e-03	1.52	2.70e-02	2.32	4.13e-02	0.0	0.0
145	21.477	0.047	0.082	6.47	0.1	3.52	6.26e-02	8.58	0.2	0.0	0.0
146	21.694	0.046	0.081	0.34	5.98e-03	1.84	3.27e-02	292.70	5.2	0.0	0.0
147	21.774	0.046	0.081	3.40	6.03e-02	1.60	2.84e-02	130.57	2.3	0.0	0.0
148	21.854	0.046	0.081	22.94	0.4	3.89	6.90e-02	2.33	4.14e-02	0.0	0.0
149	21.925	0.046	0.081	1.53	2.71e-02	4.68	8.31e-02	148.61	2.6	0.0	0.0
150	22.044	0.045	0.081	55.68	1.0	0.82	1.46e-02	1.82	3.24e-02	0.0	0.0
Risulta				5044.85		5177.39		1583.40			
In percentuale				89.60		91.96		28.12			

Cmb	Pilas. 1000 etaT/h		etaT cm	inter. h cm	Pilas. 1000 etaT/h		etaT cm	inter. h cm	Pilas. 1000 etaT/h		etaT cm	inter. h cm
47	7	13.90	2.78	200.0	14	13.72	2.74	200.0	21	13.77	2.75	200.0
	28	13.79	2.76	200.0	35	13.67	2.73	200.0				
48	7	13.88	2.78	200.0	14	13.66	2.73	200.0	21	13.74	2.75	200.0
	28	13.91	2.78	200.0	35	13.54	2.71	200.0				
49	7	13.88	2.78	200.0	14	13.62	2.72	200.0	21	13.73	2.75	200.0
	28	13.87	2.77	200.0	35	13.48	2.70	200.0				
50	7	13.89	2.78	200.0	14	13.67	2.73	200.0	21	13.76	2.75	200.0
	28	13.75	2.75	200.0	35	13.60	2.72	200.0				
51	7	13.88	2.78	200.0	14	13.72	2.74	200.0	21	13.74	2.75	200.0
	28	13.72	2.74	200.0	35	13.78	2.76	200.0				
52	7	13.89	2.78	200.0	14	13.66	2.73	200.0	21	13.77	2.75	200.0
	28	13.98	2.80	200.0	35	13.44	2.69	200.0				
53	7	13.89	2.78	200.0	14	13.62	2.72	200.0	21	13.76	2.75	200.0
	28	13.94	2.79	200.0	35	13.37	2.67	200.0				

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54	7	13.88	2.78	200.0	14	13.67	2.73	200.0	21	13.73	2.75	200.0
	28	13.68	2.74	200.0	35	13.71	2.74	200.0				
55	7	13.95	2.79	200.0	14	13.78	2.76	200.0	21	13.83	2.77	200.0
	28	13.88	2.78	200.0	35	13.72	2.74	200.0				
56	7	13.94	2.79	200.0	14	13.72	2.74	200.0	21	13.80	2.76	200.0
	28	14.00	2.80	200.0	35	13.59	2.72	200.0				
57	7	13.94	2.79	200.0	14	13.67	2.73	200.0	21	13.79	2.76	200.0
	28	13.96	2.79	200.0	35	13.53	2.71	200.0				
58	7	13.95	2.79	200.0	14	13.73	2.75	200.0	21	13.82	2.76	200.0
	28	13.84	2.77	200.0	35	13.65	2.73	200.0				
59	7	13.94	2.79	200.0	14	13.78	2.76	200.0	21	13.80	2.76	200.0
	28	13.81	2.76	200.0	35	13.82	2.76	200.0				
60	7	13.95	2.79	200.0	14	13.72	2.74	200.0	21	13.84	2.77	200.0
	28	14.07	2.81	200.0	35	13.49	2.70	200.0				
61	7	13.95	2.79	200.0	14	13.68	2.74	200.0	21	13.82	2.76	200.0
	28	14.03	2.81	200.0	35	13.42	2.68	200.0				
62	7	13.94	2.79	200.0	14	13.73	2.75	200.0	21	13.79	2.76	200.0
	28	13.77	2.75	200.0	35	13.76	2.75	200.0				
63	7	4.19	0.84	200.0	14	4.22	0.84	200.0	21	4.18	0.84	200.0
	28	3.97	0.79	200.0	35	2.12	0.42	200.0				
64	7	4.14	0.83	200.0	14	4.03	0.81	200.0	21	4.08	0.82	200.0
	28	2.07	0.41	200.0	35	3.89	0.78	200.0				
65	7	4.14	0.83	200.0	14	3.98	0.80	200.0	21	4.07	0.81	200.0
	28	2.45	0.49	200.0	35	3.83	0.77	200.0				
66	7	4.19	0.84	200.0	14	4.17	0.83	200.0	21	4.17	0.83	200.0
	28	3.93	0.79	200.0	35	1.74	0.35	200.0				
67	7	4.21	0.84	200.0	14	4.24	0.85	200.0	21	4.20	0.84	200.0
	28	3.99	0.80	200.0	35	2.10	0.42	200.0				
68	7	4.16	0.83	200.0	14	4.04	0.81	200.0	21	4.10	0.82	200.0
	28	2.04	0.41	200.0	35	3.91	0.78	200.0				
69	7	4.16	0.83	200.0	14	4.00	0.80	200.0	21	4.09	0.82	200.0
	28	2.42	0.48	200.0	35	3.84	0.77	200.0				
70	7	4.21	0.84	200.0	14	4.15	0.83	200.0	21	4.19	0.84	200.0
	28	3.95	0.79	200.0	35	1.72	0.34	200.0				
71	7	4.15	0.83	200.0	14	4.22	0.84	200.0	21	4.07	0.81	200.0
	28	3.74	0.75	200.0	35	2.76	0.55	200.0				
72	7	4.19	0.84	200.0	14	4.03	0.81	200.0	21	4.19	0.84	200.0
	28	2.57	0.51	200.0	35	3.54	0.71	200.0				
73	7	4.18	0.84	200.0	14	3.98	0.80	200.0	21	4.18	0.84	200.0
	28	2.95	0.59	200.0	35	3.48	0.70	200.0				
74	7	4.15	0.83	200.0	14	4.05	0.81	200.0	21	4.06	0.81	200.0
	28	3.70	0.74	200.0	35	2.37	0.47	200.0				
75	7	4.17	0.83	200.0	14	4.24	0.85	200.0	21	4.09	0.82	200.0
	28	3.77	0.75	200.0	35	2.74	0.55	200.0				
76	7	4.20	0.84	200.0	14	4.05	0.81	200.0	21	4.21	0.84	200.0
	28	2.55	0.51	200.0	35	3.56	0.71	200.0				
77	7	4.20	0.84	200.0	14	4.00	0.80	200.0	21	4.19	0.84	200.0
	28	2.93	0.59	200.0	35	3.49	0.70	200.0				
78	7	4.16	0.83	200.0	14	4.03	0.81	200.0	21	4.08	0.82	200.0
	28	3.73	0.75	200.0	35	2.35	0.47	200.0				

Cmb **1000 etaT/h**
 14.07

VERIFICHE PER ELEMENTI IN ACCIAIO

LEGENDA TABELLA VERIFICHE PER ELEMENTI IN ACCIAIO

Il programma consente la verifica dei seguenti tipi di elementi:

1. **aste** 2. **travi** 3. **pilastr**

L'esito delle verifiche è espresso con un codice come di seguito indicato

- Ok:** verifica con esito positivo
NV: verifica con esito negativo
Nr: verifica non richiesta.

Per comodità gli elementi vengono raggruppati in tabelle in relazione al tipo.

Ai fini delle verifiche (come da D.M. 17 Gennaio 2018 e circolare 21 Gennaio 2019 n.7) i tipi elementi differiscono per i seguenti aspetti:

Verifica	Aste	Travi	Pilastr
4.2.3.1 Classificazione	X	X	X
4.2.4.1.2.1 Trazione	X	X	X
4.2.4.1.2.2 Compressione	X	X	X
4.2.4.1.2.4 Taglio		X	X
4.2.4.1.2.5 Torsione		X	X
Flessione, taglio e forza assiale		X	X
4.2.4.1.3.1 Aste compresse	X	X	X
4.2.4.1.3.2 Instabilità flesso-torsionale		X	X
4.2.4.1.3.3 Membrature inflesse e compresse		X	X

Ai fini delle verifiche per strutture dissipative (come da D.M. 17 Gennaio 2018 e 2018 e circolare 21 Gennaio 2019 n.7) per strutture intelaiate e a controventi concentrici) si considerano le verifiche del capitolo 4 con azioni amplificate e le verifiche del capitolo 7:

Verifica	Travi	Pilastr
4.2.4.1.2.1 Trazione	X	X
4.2.4.1.2.2 Compressione	X	X
4.2.4.1.2.4 Taglio	X	X
4.2.4.1.2.5 Torsione	X	X
Flessione, taglio e forza assiale	X	X
4.2.4.1.3.1 Aste compresse	X	X
4.2.4.1.3.2 Instabilità flesso-torsionale	X	X
4.2.4.1.3.3 Membrature inflesse e compresse	X	X
7.5.3 Sfruttamento per momento	X	
7.5.4 Sfruttamento per sforzo normale	X	
7.5.5 Sfruttamento per taglio da capacità flessionale	X	
7.5.9 Sfruttamento per taglio amplificato		X

Viene inoltre riportata la verifica della “Gerarchia delle resistenze trave-colonna” per ogni colonna, considerando piede e testa in entrambe le direzioni globali X e Y.

L'insieme delle verifiche sopra riportate è condotto sugli elementi purché dotati di sezione idonea come da tabella seguente:

Azione	SEZIONI GENERICHE	PROFILI SEMPLICI	PROFILI ACCOPPIATI
4.2.3.1 Classificazione automatica	L, doppio T, C, rettangolare cava, circolare cava	Tutti	Da profilo semplice
4.2.3.1 Classificazione di default 2	Circolare		
4.2.3.1 Classificazione di default 3	restanti		
4.2.4.1.2.1 Trazione	sì	sì	sì
4.2.4.1.2.2 Compressione	sì	sì	sì
4.2.4.1.2.4 Taglio	sì	sì	sì
4.2.4.1.2.5 Torsione	sì	sì	sì
Flessione, taglio e forza assiale	sì	sì	sì
4.2.4.1.3.1 Aste compresse	sì	sì	per elementi ravvicinati e a croce o coppie calastrellate
4.2.4.1.3.2 Travi inflesse	doppio T simmetrica	doppio T	no

Le verifiche sono riportate in tabelle con il significato sotto indicato; le verifiche sono espresse dal rapporto tra l'azione di progetto e la capacità ultima, pertanto la verifica ha esito positivo per rapporti non superiori all'unità.

Asta	Trave	Pilastr o			numero dell'elemento
Stato					codice di verifica per resistenza, stabilità, svergolamento
Note					sezione e materiali adottati per l'elemento
V N					(ASTE) verifica come da par. 4.2.4.1.2 per punto (4.2.6) e (4.2.10)
V V/T					(TRAVI E PILASTRI) verifica di resistenza come da par. 4.2.4.1.2 per azioni taglio-torsione (4.2.16 e 4.2.28)
V N/M					(TRAVI E PILASTRI) verifica di resistenza come da par. 4.2.4.1.2 per azioni composte (4.2.33) con riduzione per taglio (4.2.40) ove richiesto
N	M 3	M 2	V2	V3	T sollecitazioni di interesse per la verifica
V stab					(ASTE) verifica come da par. 4.2.4.1.3.1 per punto (4.2.41)
V stab					(TRAVI E PILASTRI) verifica come da par. 4.2.4.1.3 per punti (C4.2.32) o (C4.2.36) (membrature inflesse e compresse senza/con presenza di instabilità flesso-torsionale)
BetaxL		B22x L	B33x L	lunghezze libere di inflessione (se indicato riferiti al piano di normale 22 o 33 rispettivamente)	
Snellezza					snellezza massima
Classe					classe del profilo
Chi mn					coefficiente di riduzione (della capacità) per la modalità di instabilità pertinente
Rif. cmb					combinazioni in cui si sono rispettivamente attinti i valori di verifica più elevati
V flst					(TRAVI E PILASTRI) verifica di stabilità come da par. 4.2.4.1.3.2 per punto (4.2.48)
B1-1 x L					Beta1-1 x L: interasse tra i ritegni torsionali
Chi LT					coefficiente di riduzione (della capacità) per la modalità di instabilità flesso-torsionale
Snell adim					Valore della snellezza adimensionale, utilizzato per il controllo previsto al par. 7.5.5

v.Omeg	Valore del rapporto capacità/domanda per l' azione di interesse (momento per travi e azione assiale per aste) utilizzato per l' amplificazione delle azioni
f.Om. N	Fattore di amplificazione delle azioni assiali per travi e colonne (prodotto di 1.1 x Omega x gamma rd materiale); utilizzato come specificato al par. 7.5.5
f.Om. T	Fattore di amplificazione delle azioni (assiali, flettenti e taglianti) per colonne (prodotto di 1.1 x Omega x gamma rd materiale); utilizzato come specificato al par. 7.5.4
V.7.5.4 M Ed	Verifica come prevista al punto 7.5.4 e valore dell' azione flettente
V.7.5.5 N Ed	Verifica come prevista al punto 7.5.5 e valore dell' azione assiale
V.7.5.6 V Ed,G V Ed,M	Verifica come prevista al punto 7.5.6 e valore dei tagli dovuti ai carichi e alla capacità
V.7.5.10 V Ed	Verifica come prevista al punto 7.5.10 e valore dell' azione di taglio
sovr. Xi (Xf, Yi, Yf)	Valore della sovreresistenza come prevista al par. 7.5.4.2 (i valori non sono normalizzati pertanto saranno maggiori uguali a gamma rd in base alla classe di duttilità)

Nel caso in cui $\lambda_{S\alpha}$ sia minore di 0.2, oppure nel caso in cui la sollecitazione di calcolo N_{Ed} sia inferiore a $0.04 N_{cr}$, gli effetti legati ai fenomeni di instabilità sono trascurati, come da paragrafo 4.2.4.1.3.1

< TABELLA VERIFICHE ELEMENTI - MATERIALI ESISTENTI >

Asta	Stato	Note	V N	N kN	V stab	N kN	Cl.	Beta x L cm	Snell. LambDaS	Chi mn	v.Omeg	Rif. cmb	
1		oks=9,m=161	0.35	-42.7			1	88.4	70.5	0.75	0.69	0.0	11,0
2		oks=9,m=161	0.23	28.1			1	127.8	102.0	1.09	0.49	0.0	11,0
3		oks=9,m=161	0.47	-57.6			1	176.7	141.0	1.50	0.31	0.0	11,0
4		oks=9,m=161	0.47	-57.6			1	176.7	141.0	1.50	0.31	0.0	11,0
5		oks=9,m=161	0.23	28.1			1	127.8	102.0	1.09	0.49	0.0	11,0
6		oks=9,m=161	0.35	-42.7			1	88.4	70.5	0.75	0.69	0.0	11,0
7		oks=9,m=161	0.61	74.3			1	160.0	127.7	1.36	0.36	0.0	11,0
8		oks=9,m=161	0.37	-45.3			1	88.4	70.5	0.75	0.69	0.0	11,0
9		oks=9,m=161	0.24	29.8			1	127.8	102.0	1.09	0.49	0.0	11,0
10		oks=9,m=161	0.50	-61.0			1	176.7	141.0	1.50	0.31	0.0	11,0
11		oks=9,m=161	0.50	-61.0			1	176.7	141.0	1.50	0.31	0.0	11,0
12		oks=9,m=161	0.24	29.8			1	127.8	102.0	1.09	0.49	0.0	11,0
13		oks=9,m=161	0.37	-45.3			1	88.4	70.5	0.75	0.69	0.0	11,0
14		oks=9,m=161	0.65	78.7			1	160.0	127.7	1.36	0.36	0.0	11,0
15		oks=9,m=161	0.35	-42.8			1	88.4	70.5	0.75	0.69	0.0	9,0
16		oks=9,m=161	0.23	28.1			1	127.8	102.0	1.09	0.49	0.0	9,0
17		oks=9,m=161	0.47	-57.7			1	176.7	141.0	1.50	0.31	0.0	9,0
18		oks=9,m=161	0.47	-57.7			1	176.7	141.0	1.50	0.31	0.0	9,0
19		oks=9,m=161	0.23	28.1			1	127.8	102.0	1.09	0.49	0.0	9,0
20		oks=9,m=161	0.35	-42.8			1	88.4	70.5	0.75	0.69	0.0	9,0
21		oks=9,m=161	0.61	74.5			1	160.0	127.7	1.36	0.36	0.0	9,0
22		oks=9,m=161	0.35	-42.8			1	88.4	70.5	0.75	0.69	0.0	11,0
23		oks=9,m=161	0.23	28.2			1	127.8	102.0	1.09	0.49	0.0	11,0
24		oks=9,m=161	0.47	-57.7			1	176.7	141.0	1.50	0.31	0.0	11,0
25		oks=9,m=161	0.47	-57.7			1	176.7	141.0	1.50	0.31	0.0	11,0
26		oks=9,m=161	0.23	28.2			1	127.8	102.0	1.09	0.49	0.0	11,0
27		oks=9,m=161	0.35	-42.8			1	88.4	70.5	0.75	0.69	0.0	11,0
28		oks=9,m=161	0.61	74.5			1	160.0	127.7	1.36	0.36	0.0	11,0
29		oks=9,m=161	0.37	-45.1			1	88.4	70.5	0.75	0.69	0.0	9,0
30		oks=9,m=161	0.24	29.6			1	127.8	102.0	1.09	0.49	0.0	9,0
31		oks=9,m=161	0.50	-60.6			1	176.7	141.0	1.50	0.31	0.0	9,0
32		oks=9,m=161	0.50	-60.6			1	176.7	141.0	1.50	0.31	0.0	9,0
33		oks=9,m=161	0.24	29.6			1	127.8	102.0	1.09	0.49	0.0	9,0
34		oks=9,m=161	0.37	-45.1			1	88.4	70.5	0.75	0.69	0.0	9,0
35		oks=9,m=161	0.64	78.2			1	160.0	127.7	1.36	0.36	0.0	9,0
Asta			V N	N	V stab	N		Beta x L	Snell. LambDaS	Chi mn	v.Omeg		
				-61.01						0.75	0.31	0.0	
			0.65	78.72				176.72	141.00	1.50		0.0	

INGEGNERE

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.LamS 22	LamS 33	Snell.	Chi mn	V flstLamS LT	Chi LT	Rif. cmb	
39	oks=10,m=160	0.11	0.74			1						11,11,0,0	
40	oks=10,m=160	0.12	0.61			1						9,11,0,0	
41	oks=10,m=160	0.01	0.58			1						9,11,0,0	
49	oks=10,m=160	0.12	0.61			1						9,11,0,0	
50	oks=10,m=160	0.11	0.62			1						9,9,0,0	
51	oks=10,m=160	0.01	0.49			1						9,9,0,0	
52	oks=10,m=160	0.11	0.62			1						9,11,0,0	
53	oks=10,m=160	0.01	0.49			1						9,11,0,0	
54	oks=10,m=160	0.11	0.74			1						11,11,0,0	
55	oks=10,m=160	0.01	0.58			1						9,9,0,0	
56	oks=10,m=160	0.12	0.79			1						11,9,0,0	
57	oks=10,m=160	0.13	0.65			1						9,11,0,0	
58	oks=10,m=160	0.01	0.61			1						9,9,0,0	
66	oks=10,m=160	0.13	0.65			1						9,9,0,0	
67	oks=10,m=160	0.11	0.65			1						9,11,0,0	
68	oks=10,m=160	0.01	0.52			1						9,9,0,0	
69	oks=10,m=160	0.11	0.66			1						9,9,0,0	
70	oks=10,m=160	0.01	0.52			1						9,9,0,0	
71	oks=10,m=160	0.12	0.79			1						11,9,0,0	
72	oks=10,m=160	0.01	0.61			1						9,9,0,0	
73	oks=10,m=160	0.11	0.75			1						9,11,0,0	
74	oks=10,m=160	0.12	0.61			1						11,9,0,0	
75	oks=10,m=160	0.01	0.58			1						11,11,0,0	
82	oks=3,m=160	0.20	0.67			1				0.61	0.4	1.00	11,11,0,11
83	oks=10,m=160	0.12	0.61			1							11,11,0,0
84	oks=10,m=160	0.11	0.62			1							11,11,0,0
85	oks=10,m=160	0.01	0.49			1							11,11,0,0
86	oks=10,m=160	0.11	0.62			1							11,11,0,0
87	oks=10,m=160	0.01	0.49			1							11,11,0,0
88	oks=10,m=160	0.11	0.75			1							9,11,0,0
89	oks=10,m=160	0.01	0.58			1							11,11,0,0
90	oks=10,m=160	0.11	0.75			1							11,11,0,0
91	oks=10,m=160	0.12	0.61			1							9,11,0,0
92	oks=10,m=160	0.01	0.58			1							9,11,0,0
100	oks=10,m=160	0.12	0.61			1							9,11,0,0
101	oks=10,m=160	0.11	0.62			1							9,11,0,0
102	oks=10,m=160	0.01	0.49			1							9,9,0,0
103	oks=10,m=160	0.11	0.62			1							9,11,0,0
104	oks=10,m=160	0.01	0.49			1							9,11,0,0
105	oks=10,m=160	0.11	0.75			1							11,11,0,0
106	oks=10,m=160	0.01	0.58			1							9,9,0,0
107	oks=10,m=160	0.12	0.79			1							9,11,0,0
108	oks=10,m=160	0.13	0.64			1							11,11,0,0
109	oks=10,m=160	0.01	0.60			1							11,11,0,0
117	oks=10,m=160	0.13	0.64			1							11,11,0,0
118	oks=10,m=160	0.11	0.65			1							11,9,0,0
119	oks=10,m=160	0.01	0.51			1							11,11,0,0
120	oks=10,m=160	0.11	0.65			1							11,11,0,0
121	oks=10,m=160	0.01	0.51			1							11,11,0,0
122	oks=10,m=160	0.12	0.78			1							9,9,0,0
123	oks=10,m=160	0.01	0.60			1							11,11,0,0
181	oks=6,m=160	0.12	0.49			1				0.48	0.5	1.00	9,9,0,9
182	oks=6,m=160	6.27e-03	0.43			1				0.43	0.4	0.99	20,11,0,11
183	oks=6,m=160	0.12	0.42			1				0.42	0.4	1.00	11,11,0,11
253	oks=3,m=160	0.11	0.22			1				0.22	0.5	0.98	11,9,0,9
254	oks=3,m=160	0.12	0.23			1				0.23	0.5	0.98	11,11,0,11
255	oks=3,m=160	0.10	0.17			1				0.16	0.5	1.00	9,11,0,11
256	oks=3,m=160	0.10	0.19			1				0.18	0.5	1.00	11,9,0,9
257	oks=3,m=160	0.17	0.47			1				0.45	0.4	1.00	11,11,0,11
258	oks=3,m=160	0.19	0.63			1				0.59	0.5	0.99	9,9,0,9
259	oks=3,m=160	0.20	0.63			1				0.58	0.5	0.99	9,9,0,9
260	oks=3,m=160	0.10	0.20			1				0.19	0.5	1.00	11,9,0,9
261	oks=3,m=160	0.10	0.21			1				0.20	0.5	1.00	9,11,0,11
262	oks=3,m=160	0.10	0.18			1				0.18	0.5	1.00	11,9,0,9
263	oks=3,m=160	0.10	0.19			1				0.18	0.5	1.00	9,9,0,9

Trave			V V/T	V N/M	V stab	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	
			0.20	0.79						0.61	0.55	0.98	
Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed kN m	V[7.5.5]	N Ed kN	V[7.5.6]	V Ed,G kN	V Ed,M kN
39							0.0	0.0	0.0	0.0	0.0	0.0	0.0
40							0.0	0.0	0.0	0.0	0.0	0.0	0.0
41							0.0	0.0	0.0	0.0	0.0	0.0	0.0

INGEGNERE

49	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
53	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
54	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
66	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
68	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
69	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
71	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
73	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
74	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
89	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
91	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
101	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
103	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
104	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
106	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
108	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
109	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
118	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
119	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
121	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
123	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
181	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
182	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
183	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
253	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
254	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
255	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
256	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
257	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
258	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
259	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
260	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
261	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
262	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
263	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Trave v.Omeg	V N/M	V stab	V[7.5.4]	M Ed	V[7.5.5]	N Ed	V[7.5.6]	V Ed,G	V Ed,M
			0.0	0.0	0.0	0.0	0.0	0.0	0.0
			0.0	0.0	0.0	0.0	0.0	0.0	0.0

< TABELLA VERIFICHE ELEMENTI - MATERIALI NUOVI >

Trave	Stato	Note	V V/T	V N/M	V stab	Cl.LamS 22	LamS 33	Snell.	Chi mn	V flstLamS LT	Chi LT	Rif. cmb
81	ok	s=6,m=12	3.80e-03	0.26		1				0.26	0.4	27,9,0,9
179	ok	s=6,m=12	0.07	0.29		1				0.29	0.5	9,9,0,9
180	ok	s=6,m=12	4.29e-03	0.28		1				0.28	0.4	20,11,0,11
235	ok	s=8,m=12	0.12	0.60		1				0.73	0.8	4,4,0,3
236	ok	s=8,m=12	0.12	0.62		1				0.75	0.8	3,4,0,3

INGEGNERE

237	ok s=8,m=12	0.07	0.34	1		0.41	0.8	0.83	4,4,0,3
238	ok s=8,m=12	0.06	0.32	1		0.39	0.8	0.83	4,4,0,3
244	ok s=6,m=12	0.03	0.12	1		0.12	0.5	1.00	9,9,0,9
245	ok s=6,m=12	3.37e-03	0.13	1		0.13	0.4	1.00	9,9,0,9
246	ok s=6,m=12	0.04	0.13	1		0.13	0.4	1.00	9,11,0,11
247	ok s=6,m=12	0.08	0.27	1		0.27	0.4	1.00	11,11,0,11
248	ok s=6,m=12	0.04	0.17	1		0.16	0.5	1.00	11,9,0,9
249	ok s=6,m=12	3.52e-03	0.16	1		0.15	0.4	1.00	11,11,0,11
250	ok s=6,m=12	0.07	0.25	1		0.25	0.4	1.00	11,9,0,9
251	ok s=6,m=12	0.07	0.27	1		0.27	0.5	1.00	9,9,0,9
252	ok s=6,m=12	0.04	0.16	1		0.16	0.4	1.00	11,11,0,11
264	ok s=3,m=12	0.07	0.15	1		0.14	0.9	0.79	11,37,0,11

Trave	V V/T	V N/M	V stab	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT
	0.12	0.62						0.75	0.92	0.79

Trave	v.Omeg	f.Om. N	Stato	V N/M	V stab	Rif. cmb	V[7.5.4]	M Ed kN m	V[7.5.5]	N Ed kN	V[7.5.6]	V Ed,G kN	V Ed,M kN
81							0.0	0.0	0.0	0.0	0.0	0.0	0.0
179							0.0	0.0	0.0	0.0	0.0	0.0	0.0
180							0.0	0.0	0.0	0.0	0.0	0.0	0.0
235							0.0	0.0	0.0	0.0	0.0	0.0	0.0
236							0.0	0.0	0.0	0.0	0.0	0.0	0.0
237							0.0	0.0	0.0	0.0	0.0	0.0	0.0
238							0.0	0.0	0.0	0.0	0.0	0.0	0.0
244							0.0	0.0	0.0	0.0	0.0	0.0	0.0
245							0.0	0.0	0.0	0.0	0.0	0.0	0.0
246							0.0	0.0	0.0	0.0	0.0	0.0	0.0
247							0.0	0.0	0.0	0.0	0.0	0.0	0.0
248							0.0	0.0	0.0	0.0	0.0	0.0	0.0
249							0.0	0.0	0.0	0.0	0.0	0.0	0.0
250							0.0	0.0	0.0	0.0	0.0	0.0	0.0
251							0.0	0.0	0.0	0.0	0.0	0.0	0.0
252							0.0	0.0	0.0	0.0	0.0	0.0	0.0
264							0.0	0.0	0.0	0.0	0.0	0.0	0.0

Trave	v.Omeg	V N/M	V stab	V[7.5.4]	M Ed 0.0	V[7.5.5]	N Ed 0.0	V[7.5.6]	V Ed,G 0.0	V Ed,M 0.0
				0.0	0.0	0.0	0.0	0.0	0.0	0.0

VERIFICHE ELEMENTI MURATURA

LEGENDA TABELLA VERIFICHE ELEMENTI MURATURA

In tabella vengono riportati per ogni elemento il numero dello stesso ed il codice di verifica.

Le verifiche sono state condotte secondo le Norme Tecniche 17 Gennaio 2018.

In particolare sono previste le seguenti verifiche:

Par. 4.5.6.2 Verifiche agli stati limite ultimi, con riferimento in particolare a carichi laterali (fuori dal piano del muro) in assenza di sisma e a stabilità

Par. 7.8.2.2.3 Verifiche a pressoflessione per carichi laterali (fuori dal piano del muro) in presenza di sisma

Par. 7.8.2.2.1 Verifiche a pressoflessione nel piano del muro (in tutte le combinazioni)

Par. 7.8.2.2.2 Verifiche a taglio per azioni nel piano del muro (in tutte le combinazioni)

Par. 7.8.2.2.4 Travi in muratura, con riferimento alle verifiche a flessione e taglio

Con riferimento ai punti succitati le verifiche vengono così tabulate:

Setto/Fascia/Elem.	numero del macroelemento (D3) o elemento (D2) considerato	
Mat.	Materiale	
s=m=	Indice della sezione e del materiale assegnati all' elemento (per D2)	
Spessore	spessore dell'elemento	
Stato	ok L	elemento verificato (stati limite ultimi)
	ok T	elemento verificato (tensioni)
	NV L	elemento non verificato (stati limite ultimi)
	NV T	elemento non verificato (tensioni)

Nodo/Pos.	numero del nodo appartenente al setto / posizione relativa al nodo I per D2
h0/t	valore della snellezza convenzionale
Ecc/t (M)	massimo valore del rapporto $e1/t$ o $e2/t$
Ecc/t	valore del rapporto di eccentricità trasversale utilizzato per la verifica a taglio - Par. 7.8.2.2.2
Fi t	fattore f_i per la riduzione della resistenza in funzione dell'eccentricità trasversale calcolato con Ecc/t
P/A	tensione verticale media (A_o relativamente alla verifica di pressoflessione per carichi laterali in assenza di sisma, $A_o(s)$ relativamente alla verifica di pressoflessione per carichi laterali in presenza di sisma, A_p relativamente alla verifica a pressoflessione nel piano del muro, A_v relativamente alla verifica a taglio nel piano del muro per edifici esistenti formula C8.7.1.16 della circolare 21-01-19)
P/A_{cv}	tensione verticale media nella parte compressa, utilizzata nella verifica a taglio nel piano del muro
V. Mo	rapporto tra l' azione assiale di progetto e l' azione assiale ultima in relazione alla verifica Par. 4.5.6.2 (pressoflessione ortogonale) effettuato per le combinazioni senza sisma
V. Mo(S)	rapporto tra l' azione assiale di progetto e l' azione assiale ultima in relazione alla verifica Par. 7.8.2.2.3 (pressoflessione ortogonale) effettuato per le combinazioni con sisma
V. Mp	rapporto tra il momento di progetto e il momento M_{rd} in relazione alla verifica Par. 7.8.2.2.1 (pressoflessione complanare) effettuato per tutte le combinazioni
Ver. V	rapporto il taglio di progetto e il taglio ultimo in relazione alla verifica Par. 7.8.2.2.2 (taglio complanare) o C8.7.1.16 della circolare 21-01-19 per edifici esistenti effettuato per tutte le combinazioni
	Per travi in muratura:
Ver. V	rapporto tra il taglio di progetto e il minore dei tagli resistenti V_p e V_t in relazione alla verifica del par. 7.8.2.2.3
Rif. cmb	Combinazioni in cui si hanno i massimi valori dei rapporti V. Mo, V. Mo(S), V. Mp, Ver. V

Per elementi consolidati secondo il paragrafo C8.5.3.1 il programma opera come per gli elementi non rinforzati, considerando ai fini delle analisi e delle verifiche gli opportuni coefficienti correttivi delle rigidità e delle resistenze.

Per elementi consolidati con fibrorinforzi il programma implementa le verifiche previste dalle “Linee guida per la Progettazione, l'Esecuzione ed il Collaudo di Interventi di Rinforzo di strutture di c.a., c.a.p. e murarie mediante FRP” approvate dal CSLP il 24/07/2009. Per questi elementi vengono effettuate le verifiche di resistenza previste al cap. 4.4.1.1.2 flessione ortogonale in assenza/presenza di sisma, 4.4.1.2 flessione e taglio nel piano. Per semplicità la simbologia adottata nelle tabelle è uniformata a quella degli elementi non rinforzati. Le tabelle riportano inoltre i seguenti parametri:

Fibra	Tipo di fibra del fibrorinforzo
E frp	Modulo elastico del fibrorinforzo
epsr	Dilatazione di rottura del fibrorinforzo
epsd	Dilatazione di calcolo
epsd(s)	Dilatazione di calcolo per combinazioni sismiche
Spess.	Spessore del fibrorinforzo, il programma prevede l' applicazione di uno strato di spessore s su entrambe le facce della parete (o sui quattro lati della sezione in caso di confinamento)
AO frp	Area orizzontale complessiva di fibrorinforzo per metro lineare
AV frp	Area verticale complessiva di fibrorinforzo per metro lineare

Affinché l'elemento sia verificato deve essere:

h0/t	non superiore a 20 e al limite imposto per zona sismica e tecnica costruttiva
Ecc/t (M)	non superiore a 0.33
V.Mo, V.Mo(S), V.Mp, Ver.V	non superiore a 1

< TABELLA VERIFICHE ELEMENTI - MATERIALI ESISTENTI >

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
		cm			
1	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04- muratura E = 1.500e+04	28.0	4.05	3.24	ok L

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
				daN/cm2	daN/cm2	daN/cm2	daN/cm2						
1	9.7	0.06	0.06	0.68	3.08	2.05	2.99	2.04	0.53	0.07	0.21	0.19 (TC)	11,39,4,29
2	9.7	0.07	0.06	0.68	3.08	1.95	2.86	1.94	0.53	0.09	0.22	0.20 (TC)	11,33,4,29
3	9.7	0.07	0.06	0.68	3.08	1.95	2.86	1.94	0.53	0.09	0.22	0.20 (TC)	11,33,4,29
4	9.7	0.06	0.06	0.68	3.08	2.05	2.99	2.04	0.53	0.07	0.21	0.19 (TC)	11,39,4,29
5	9.7	0.09	0.07	0.67	2.94	1.71	2.86	1.72	0.52	0.39	0.22	0.20 (TC)	11,39,4,29
6	9.7	0.09	0.07	0.67	2.94	1.71	2.86	1.72	0.52	0.39	0.22	0.20 (TC)	11,39,4,29
7	9.7	0.09	0.08	0.61	2.65	1.71	2.56	1.72	0.51	0.39	0.21	0.20 (TC)	11,39,4,29
8	9.7	0.09	0.08	0.61	2.65	1.71	2.56	1.72	0.51	0.39	0.21	0.20 (TC)	11,39,4,29
9	9.7	0.07	0.06	0.68	3.08	1.95	2.86	1.94	0.53	0.09	0.22	0.20 (TC)	11,33,4,29
10	9.7	0.06	0.06	0.68	3.08	2.05	2.99	2.04	0.53	0.07	0.21	0.19 (TC)	11,39,4,29
11	9.7	0.09	0.07	0.67	2.94	1.71	2.86	1.72	0.52	0.39	0.22	0.20 (TC)	11,39,4,29
12	9.7	0.09	0.08	0.61	2.65	1.71	2.56	1.72	0.51	0.39	0.21	0.20 (TC)	11,39,4,29
13	9.7	0.07	0.06	0.68	3.08	1.95	2.86	1.94	0.53	0.09	0.22	0.20 (TC)	11,33,4,29
14	9.7	0.06	0.06	0.68	3.08	2.05	2.99	2.04	0.53	0.07	0.21	0.19 (TC)	11,39,4,29
15	9.7	0.09	0.07	0.67	2.94	1.71	2.86	1.72	0.52	0.39	0.22	0.20 (TC)	11,39,4,29
16	9.7	0.09	0.08	0.61	2.65	1.71	2.56	1.72	0.51	0.39	0.21	0.20 (TC)	11,39,4,29
17	9.7	0.07	0.06	0.68	3.08	1.95	2.86	1.94	0.53	0.09	0.22	0.20 (TC)	11,33,4,29
18	9.7	0.06	0.06	0.68	3.08	2.05	2.99	2.04	0.53	0.07	0.21	0.19 (TC)	11,39,4,29
19	9.7	0.09	0.07	0.67	2.94	1.71	2.86	1.72	0.52	0.39	0.22	0.20 (TC)	11,39,4,29
20	9.7	0.09	0.08	0.61	2.65	1.71	2.56	1.72	0.51	0.39	0.21	0.20 (TC)	11,39,4,29
21	9.7	0.07	0.06	0.68	3.08	1.95	2.86	1.94	0.53	0.09	0.22	0.20 (TC)	11,33,4,29

22	9.7	0.06	0.06	0.68	3.08	2.05	2.99	2.04	0.53	0.07	0.21	0.19 (TC)	11,39,4,29
23	9.7	0.09	0.07	0.67	2.94	1.71	2.86	1.72	0.52	0.39	0.22	0.20 (TC)	11,39,4,29
24	9.7	0.09	0.08	0.61	2.65	1.71	2.56	1.72	0.51	0.39	0.21	0.20 (TC)	11,39,4,29
25	9.7	0.07	0.06	0.68	3.08	1.95	2.86	1.94	0.53	0.09	0.22	0.20 (TC)	11,33,4,29
26	9.7	0.06	0.06	0.68	3.08	2.05	2.99	2.04	0.53	0.07	0.21	0.19 (TC)	11,39,4,29
27	9.7	0.09	0.07	0.67	2.94	1.71	2.86	1.72	0.52	0.39	0.22	0.20 (TC)	11,39,4,29
28	9.7	0.09	0.08	0.61	2.65	1.71	2.56	1.72	0.51	0.39	0.21	0.20 (TC)	11,39,4,29
29	9.7	0.07	0.06	0.68	3.08	1.95	2.86	1.94	0.53	0.09	0.22	0.20 (TC)	11,33,4,29
30	9.7	0.06	0.06	0.68	3.08	2.05	2.99	2.04	0.53	0.07	0.21	0.19 (TC)	11,39,4,29
31	9.7	0.09	0.07	0.67	2.94	1.71	2.86	1.72	0.52	0.39	0.22	0.20 (TC)	11,39,4,29
32	9.7	0.09	0.08	0.61	2.65	1.71	2.56	1.72	0.51	0.39	0.21	0.20 (TC)	11,39,4,29
33	9.7	0.07	0.06	0.68	3.08	1.95	2.86	1.94	0.53	0.09	0.22	0.20 (TC)	11,33,4,29
34	9.7	0.06	0.06	0.68	3.08	2.05	2.99	2.04	0.53	0.07	0.21	0.19 (TC)	11,39,4,29
35	9.7	0.09	0.07	0.67	2.94	1.71	2.86	1.72	0.52	0.39	0.22	0.20 (TC)	11,39,4,29
36	9.7	0.09	0.08	0.61	2.65	1.71	2.56	1.72	0.51	0.39	0.21	0.20 (TC)	11,39,4,29
37	9.7	0.07	0.06	0.68	3.08	1.95	2.86	1.94	0.53	0.09	0.22	0.20 (TC)	11,33,4,29
38	9.7	0.06	0.06	0.68	3.08	2.05	2.99	2.04	0.53	0.07	0.21	0.19 (TC)	11,39,4,29
39	9.7	0.09	0.07	0.67	2.94	1.71	2.86	1.72	0.52	0.39	0.22	0.20 (TC)	11,39,4,29
40	9.7	0.09	0.08	0.61	2.65	1.71	2.56	1.72	0.51	0.39	0.21	0.20 (TC)	11,39,4,29
41	9.7	0.07	0.06	0.68	3.08	1.95	2.86	1.94	0.53	0.09	0.22	0.20 (TC)	11,33,4,29
42	9.7	0.06	0.06	0.68	3.08	2.05	2.99	2.04	0.53	0.07	0.21	0.19 (TC)	11,39,4,29
43	9.7	0.09	0.07	0.67	2.94	1.71	2.86	1.72	0.52	0.39	0.22	0.20 (TC)	11,39,4,29
44	9.7	0.09	0.08	0.61	2.65	1.71	2.56	1.72	0.51	0.39	0.21	0.20 (TC)	11,39,4,29
45	9.7	0.07	0.06	0.68	3.08	1.95	2.86	1.94	0.53	0.09	0.22	0.20 (TC)	11,33,4,29
46	9.7	0.06	0.06	0.68	3.08	2.05	2.99	2.04	0.53	0.07	0.21	0.19 (TC)	11,39,4,29
47	9.7	0.09	0.07	0.67	2.94	1.71	2.86	1.72	0.52	0.39	0.22	0.20 (TC)	11,39,4,29
48	9.7	0.09	0.08	0.61	2.65	1.71	2.56	1.72	0.51	0.39	0.21	0.20 (TC)	11,39,4,29
49	9.7	0.07	0.06	0.68	3.08	1.95	2.86	1.94	0.53	0.09	0.22	0.20 (TC)	11,33,4,29
50	9.7	0.06	0.06	0.68	3.08	2.05	2.99	2.04	0.53	0.07	0.21	0.19 (TC)	11,39,4,29
51	9.7	0.09	0.07	0.67	2.94	1.71	2.86	1.72	0.52	0.39	0.22	0.20 (TC)	11,39,4,29
52	9.7	0.09	0.08	0.61	2.65	1.71	2.56	1.72	0.51	0.39	0.21	0.20 (TC)	11,39,4,29
53	9.7	0.07	0.06	0.68	3.08	1.95	2.86	1.94	0.53	0.09	0.22	0.20 (TC)	11,33,4,29
54	9.7	0.06	0.06	0.68	3.08	2.05	2.99	2.04	0.53	0.07	0.21	0.19 (TC)	11,39,4,29
55	9.7	0.09	0.07	0.67	2.94	1.71	2.86	1.72	0.52	0.39	0.22	0.20 (TC)	11,39,4,29
56	9.7	0.09	0.08	0.61	2.65	1.71	2.56	1.72	0.51	0.39	0.21	0.20 (TC)	11,39,4,29
57	9.7	0.07	0.06	0.68	3.08	1.95	2.86	1.94	0.53	0.09	0.22	0.20 (TC)	11,33,4,29
58	9.7	0.06	0.06	0.68	3.08	2.05	2.99	2.04	0.53	0.07	0.21	0.19 (TC)	11,39,4,29
59	9.7	0.09	0.07	0.67	2.94	1.71	2.86	1.72	0.52	0.39	0.22	0.20 (TC)	11,39,4,29
60	9.7	0.09	0.08	0.61	2.65	1.71	2.56	1.72	0.51	0.39	0.21	0.20 (TC)	11,39,4,29
61	9.7	0.07	0.06	0.68	3.08	1.95	2.86	1.94	0.53	0.09	0.22	0.20 (TC)	11,33,4,29
62	9.7	0.06	0.06	0.68	3.08	2.05	2.99	2.04	0.53	0.07	0.21	0.19 (TC)	11,39,4,29
63	9.7	0.09	0.07	0.67	2.94	1.71	2.86	1.72	0.52	0.39	0.22	0.20 (TC)	11,39,4,29
64	9.7	0.09	0.08	0.61	2.65	1.71	2.56	1.72	0.51	0.39	0.21	0.20 (TC)	11,39,4,29
65	9.7	0.07	0.06	0.68	3.08	1.95	2.86	1.94	0.53	0.09	0.22	0.20 (TC)	11,33,4,29
66	9.7	0.06	0.06	0.68	3.08	2.05	2.99	2.04	0.53	0.07	0.21	0.19 (TC)	11,39,4,29
67	9.7	0.09	0.07	0.67	2.94	1.71	2.86	1.72	0.52	0.39	0.22	0.20 (TC)	11,39,4,29
68	9.7	0.09	0.08	0.61	2.65	1.71	2.56	1.72	0.51	0.39	0.21	0.20 (TC)	11,39,4,29
69	9.7	0.07	0.06	0.68	3.08	1.95	2.86	1.94	0.53	0.09	0.22	0.20 (TC)	11,33,4,29
70	9.7	0.06	0.06	0.68	3.08	2.05	2.99	2.04	0.53	0.07	0.21	0.19 (TC)	11,39,4,29
71	9.7	0.09	0.07	0.67	2.94	1.71	2.86	1.72	0.52	0.39	0.22	0.20 (TC)	11,39,4,29
72	9.7	0.09	0.08	0.61	2.65	1.71	2.56	1.72	0.51	0.39	0.21	0.20 (TC)	11,39,4,29
73	9.7	0.07	0.06	0.68	3.08	1.95	2.86	1.94	0.53	0.09	0.22	0.20 (TC)	11,33,4,29
74	9.7	0.06	0.06	0.68	3.08	2.05	2.99	2.04	0.53	0.07	0.21	0.19 (TC)	11,39,4,29
75	9.7	0.09	0.07	0.67	2.94	1.71	2.86	1.72	0.52	0.39	0.22	0.20 (TC)	11,39,4,29
76	9.7	0.09	0.08	0.61	2.65	1.71	2.56	1.72	0.51	0.39	0.21	0.20 (TC)	11,39,4,29
77	9.7	0.07	0.06	0.68	3.08	1.95	2.86	1.94	0.53	0.09	0.22	0.20 (TC)	11,33,4,29
78	9.7	0.06	0.06	0.68	3.08	2.05	2.99	2.04	0.53	0.07	0.21	0.19 (TC)	11,39,4,29
79	9.7	0.09	0.07	0.67	2.94	1.71	2.86	1.72	0.52	0.39	0.22	0.20 (TC)	11,39,4,29
80	9.7	0.09	0.08	0.61	2.65	1.71	2.56	1.72	0.51	0.39	0.21	0.20 (TC)	11,39,4,29
81	9.7	0.07	0.06	0.68	3.08	1.95	2.86	1.94	0.53	0.09	0.22	0.20 (TC)	11,33,4,29
82	9.7	0.06	0.06	0.68	3.08	2.05	2.99	2.04	0.53	0.07	0.21	0.19 (TC)	11,39,4,29
83	9.7	0.09	0.07	0.67	2.94	1.71	2.86	1.72	0.52	0.39	0.22	0.20 (TC)	11,39,4,29
84	9.7	0.09	0.08	0.61	2.65	1.71	2.56	1.72	0.51	0.39	0.21	0.20 (TC)	11,39,4,29
85	9.7	0.07	0.06	0.68	3.08	1.95	2.86	1.94	0.53	0.09	0.22	0.20 (TC)	11,33,4,29
86	9.7	0.06	0.06	0.68	3.08	2.05	2.99	2.04	0.53	0.07	0.21	0.19 (TC)	11,39,4,29
87	9.7	0.09	0.07	0.67	2.94	1.71	2.86	1.72	0.52	0.39	0.22	0.20 (TC)	11,39,4,29
88	9.7	0.09	0.08	0.61	2.65	1.71	2.56	1.72	0.51	0.39	0.21	0.20 (TC)	11,39,4,29
89	9.7	0.07	0.06	0.68	3.08	1.95	2.86	1.94	0.53	0.09	0.22	0.20 (TC)	11,33,4,29
90	9.7	0.09	0.08	0.61	2.65	1.71	2.56	1.72	0.51	0.39	0.21	0.20 (TC)	11,39,4,29
101	9.7	0.09	0.07	0.67	2.94	1.71	2.86	1.72	0.52	0.39	0.22	0.20 (TC)	11,39,4,29
102	9.7	0.09	0.08	0.61	2.65	1.71	2.56	1.72	0.51	0.39	0.21	0.20 (TC)	11,39,4,29
970	9.7	0.06	0.06	0.68	3.08	2.05	2.99	2.04	0.53	0.07	0.21	0.19 (TC)	11,39,4,29
978	9.7	0.07	0.06	0.68	3.08	1.95	2.86	1.94	0.53	0.09	0.22	0.20 (TC)	11,33,4,29
979	9.7	0.06	0.06	0.68	3.08	2.05	2.99	2.04	0.53	0.07	0.21	0.19 (TC)	11,39,4,29
980	9.7	0.09	0.07	0.67	2.94	1.71	2.86	1.72	0.52	0.39	0.22	0.20 (TC)	11,39,4,29
984	9.7	0.09	0.08	0.61	2.65	1.71	2.56	1.72	0.51	0.39	0.21	0.20 (TC)	11,39,4,29
986	9.7	0.07	0.06	0.68	3.08	1.95	2.86	1.94	0.53	0.09	0.22	0.20 (TC)	11,33,4,29
987	9.7	0.06	0.06	0.68	3.08	2.05	2.99	2.04	0.53	0.07	0.21	0.19 (TC)	11,39,4,29
988	9.7	0.09	0.07	0.67	2.94	1.71	2.86	1.72	0.52	0.39	0.22	0.20 (TC)	11,39,4,29

INGEGNERE

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V
	9.71	0.09	0.08	0.61	3.08	2.05	2.99	2.04	0.53	0.39	0.22	0.20

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
		cm			
2	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04- muratura E = 1.500e+04	28.0	4.05	3.24	ok L

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
					daN/cm2	daN/cm2	daN/cm2	daN/cm2					
91	9.7	0.06	0.06	0.69	3.54	2.11	3.54	3.54	0.60	0.08	0.36	0.81 (TC)	4,31,4,4
92	9.7	0.06	0.06	0.69	2.97	2.11	2.96	1.99	0.50	0.08	0.01	0.61 (TC)	4,31,11,28
94	9.7	0.06	0.06	0.69	3.54	2.38	3.54	3.54	0.60	0.02	0.36	0.81 (TC)	4,38,4,4
97	9.7	0.06	0.06	0.69	3.54	2.11	3.54	3.54	0.60	0.08	0.36	0.81 (TC)	4,31,4,4
98	9.7	0.06	0.06	0.69	2.97	2.11	2.96	1.99	0.50	0.08	0.01	0.61 (TC)	4,31,11,28
99	9.7	0.06	0.06	0.69	3.54	2.38	3.54	3.54	0.60	0.02	0.36	0.81 (TC)	4,38,4,4
Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	
	9.71	0.06	0.06	0.69	3.54	2.38	3.54	3.54	0.60	0.08	0.36	0.81	

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
		cm			
4	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04- muratura E = 1.500e+04	14.0	4.05	3.24	ok L

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
					daN/cm2	daN/cm2	daN/cm2	daN/cm2					
251	18.2	0.11	0.11	0.36	0.19	0.15	0.15	0.15	0.06	0.03	0.04	0.07 (TC)	11,30,35,33
527	18.2	0.13	0.13	0.33	0.33	0.20	0.20	0.20	0.12	0.21	0.07	0.10 (TC)	4,25,35,36
555	18.2	0.11	0.11	0.36	0.19	0.15	0.15	0.15	0.06	0.03	0.04	0.07 (TC)	11,30,35,33
558	18.2	0.15	0.15	0.30	0.50	0.18	0.18	0.17	0.20	0.45	0.15	0.12 (TC)	3,29,35,36
572	18.2	0.14	0.14	0.31	0.38	0.20	0.20	0.20	0.14	0.36	0.10	0.12 (TC)	3,25,35,36
584	18.2	0.13	0.13	0.32	0.35	0.21	0.21	0.20	0.13	0.30	0.08	0.11 (TC)	4,25,35,36
624	18.2	0.12	0.12	0.34	0.30	0.22	0.21	0.22	0.10	0.17	0.06	0.10 (TC)	4,22,35,32
628	18.2	0.11	0.11	0.36	0.19	0.15	0.15	0.15	0.06	0.03	0.04	0.07 (TC)	11,30,35,33
654	18.2	0.14	0.14	0.30	0.53	0.18	0.17	0.17	0.21	0.34	0.12	0.10 (TC)	3,29,35,36
657	18.2	0.14	0.14	0.30	0.53	0.18	0.17	0.20	0.21	0.34	0.12	0.11 (TC)	3,29,35,36
670	18.2	0.13	0.13	0.32	0.35	0.21	0.21	0.20	0.13	0.30	0.08	0.11 (TC)	4,25,35,36
674	18.2	0.11	0.11	0.36	0.19	0.15	0.15	0.15	0.06	0.03	0.04	0.07 (TC)	11,30,35,33
678	18.2	0.15	0.14	0.30	0.53	0.17	0.17	0.20	0.21	0.36	0.13	0.11 (TC)	3,29,35,36
690	18.2	0.13	0.13	0.32	0.35	0.21	0.21	0.20	0.13	0.30	0.08	0.11 (TC)	4,25,35,36
694	18.2	0.11	0.11	0.36	0.19	0.15	0.15	0.15	0.06	0.03	0.04	0.07 (TC)	11,30,35,33
702	18.2	0.15	0.15	0.30	0.50	0.18	0.18	0.17	0.20	0.45	0.14	0.12 (TC)	3,29,35,36
710	18.2	0.14	0.14	0.31	0.38	0.20	0.20	0.20	0.14	0.36	0.10	0.12 (TC)	3,25,35,36
718	18.2	0.11	0.11	0.36	0.19	0.15	0.15	0.15	0.06	0.03	0.04	0.07 (TC)	11,30,35,33
734	18.2	0.13	0.13	0.33	0.33	0.20	0.20	0.20	0.12	0.21	0.07	0.10 (TC)	4,25,35,36
738	18.2	0.11	0.11	0.36	0.19	0.15	0.15	0.15	0.06	0.03	0.04	0.07 (TC)	11,30,35,33
754	18.2	0.12	0.12	0.34	0.30	0.22	0.21	0.20	0.10	0.17	0.06	0.10 (TC)	4,22,35,36
756	18.2	0.14	0.14	0.30	0.53	0.18	0.17	0.17	0.21	0.34	0.12	0.10 (TC)	3,29,35,36
758	18.2	0.11	0.11	0.36	0.19	0.15	0.15	0.15	0.06	0.03	0.04	0.07 (TC)	11,30,35,33
766	18.2	0.11	0.11	0.36	0.19	0.15	0.15	0.15	0.06	0.03	0.04	0.07 (TC)	11,30,35,33
770	18.2	0.15	0.14	0.30	0.53	0.17	0.17	0.20	0.21	0.35	0.13	0.11 (TC)	3,29,35,36
786	18.2	0.13	0.13	0.32	0.35	0.21	0.21	0.20	0.13	0.30	0.08	0.11 (TC)	4,25,35,36
790	18.2	0.11	0.11	0.36	0.19	0.15	0.15	0.15	0.06	0.03	0.04	0.07 (TC)	11,30,35,33
802	18.2	0.12	0.12	0.34	0.30	0.22	0.21	0.20	0.10	0.17	0.06	0.10 (TC)	4,22,35,36
804	18.2	0.12	0.12	0.34	0.30	0.22	0.21	0.22	0.10	0.17	0.06	0.10 (TC)	4,22,35,32
814	18.2	0.15	0.15	0.30	0.50	0.18	0.18	0.17	0.20	0.45	0.15	0.12 (TC)	3,29,35,36
820	18.2	0.15	0.15	0.29	0.45	0.18	0.18	0.17	0.19	0.45	0.15	0.12 (TC)	3,29,35,36
830	18.2	0.15	0.14	0.30	0.53	0.17	0.17	0.16	0.21	0.35	0.13	0.10 (TC)	3,29,35,36
834	18.2	0.13	0.13	0.33	0.33	0.20	0.20	0.20	0.12	0.21	0.07	0.10 (TC)	4,25,35,36
860	18.2	0.15	0.15	0.30	0.50	0.18	0.18	0.17	0.20	0.45	0.14	0.12 (TC)	3,29,35,36
888	18.2	0.15	0.15	0.29	0.45	0.18	0.18	0.17	0.19	0.45	0.14	0.12 (TC)	3,29,35,36
892	18.2	0.11	0.11	0.36	0.19	0.15	0.15	0.15	0.06	0.03	0.04	0.07 (TC)	11,30,35,33
925	18.2	0.12	0.11	0.35	0.31	0.22	0.22	0.22	0.10	0.17	0.05	0.10 (TC)	11,22,35,32
931	18.2	0.13	0.13	0.33	0.33	0.20	0.20	0.20	0.12	0.21	0.07	0.10 (TC)	4,25,35,36
932	18.2	0.15	0.14	0.30	0.53	0.17	0.17	0.16	0.21	0.36	0.13	0.11 (TC)	3,29,35,36
956	18.2	0.14	0.14	0.30	0.53	0.18	0.17	0.20	0.21	0.34	0.12	0.11 (TC)	3,29,35,36
Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	
	18.21	0.15	0.15	0.29	0.53	0.22	0.22	0.22	0.21	0.45	0.15	0.12	

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
		cm			
5	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04- muratura E = 1.500e+04	25.0	4.05	3.24	ok L

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/AP	P/ACv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
					daN/cm2	daN/cm2	daN/cm2	daN/cm2					
246	10.2	0.09	0.09	0.59	0.76	0.50	0.76	0.50	0.15	0.71	0.07	0.08 (TC)	9,44,11,30
262	10.2	0.09	0.09	0.59	0.76	0.50	0.76	0.50	0.15	0.71	0.07	0.08 (TC)	9,44,11,30
266	10.2	0.09	0.09	0.59	0.76	0.50	0.76	0.50	0.15	0.71	0.07	0.08 (TC)	9,44,11,30
270	10.2	0.09	0.09	0.59	0.76	0.50	0.76	0.50	0.15	0.71	0.07	0.08 (TC)	9,44,11,30
274	10.2	0.09	0.09	0.59	0.76	0.50	0.76	0.50	0.15	0.71	0.07	0.08 (TC)	9,44,11,30
278	10.2	0.09	0.09	0.59	0.76	0.50	0.76	0.50	0.15	0.71	0.07	0.08 (TC)	9,44,11,30
282	10.2	0.09	0.09	0.59	0.76	0.50	0.76	0.50	0.15	0.71	0.07	0.08 (TC)	9,44,11,30
286	10.2	0.09	0.09	0.59	0.76	0.50	0.76	0.50	0.15	0.71	0.07	0.08 (TC)	9,44,11,30
290	10.2	0.09	0.09	0.59	0.76	0.50	0.76	0.50	0.15	0.71	0.07	0.08 (TC)	9,44,11,30
294	10.2	0.09	0.09	0.59	0.76	0.50	0.76	0.50	0.15	0.71	0.07	0.08 (TC)	9,44,11,30
298	10.2	0.09	0.09	0.59	0.76	0.50	0.76	0.50	0.15	0.71	0.07	0.08 (TC)	9,44,11,30
302	10.2	0.09	0.09	0.59	0.76	0.50	0.76	0.50	0.15	0.71	0.07	0.08 (TC)	9,44,11,30
306	10.2	0.09	0.09	0.59	0.76	0.50	0.76	0.50	0.15	0.71	0.07	0.08 (TC)	9,44,11,30
310	10.2	0.09	0.09	0.59	0.76	0.50	0.76	0.50	0.15	0.71	0.07	0.08 (TC)	9,44,11,30
314	10.2	0.09	0.09	0.59	0.76	0.50	0.76	0.50	0.15	0.71	0.07	0.08 (TC)	9,44,11,30
318	10.2	0.09	0.09	0.59	0.76	0.50	0.76	0.50	0.15	0.71	0.07	0.08 (TC)	9,44,11,30
322	10.2	0.09	0.09	0.59	0.76	0.50	0.76	0.50	0.15	0.71	0.07	0.08 (TC)	9,44,11,30
326	10.2	0.09	0.09	0.59	0.76	0.50	0.76	0.50	0.15	0.71	0.07	0.08 (TC)	9,44,11,30
330	10.2	0.09	0.09	0.59	0.76	0.50	0.76	0.50	0.15	0.71	0.07	0.08 (TC)	9,44,11,30
334	10.2	0.09	0.09	0.59	0.76	0.50	0.76	0.50	0.15	0.71	0.07	0.08 (TC)	9,44,11,30
338	10.2	0.09	0.09	0.59	0.76	0.50	0.76	0.50	0.15	0.71	0.07	0.08 (TC)	9,44,11,30
342	10.2	0.09	0.09	0.59	0.76	0.50	0.76	0.50	0.15	0.71	0.07	0.08 (TC)	9,44,11,30
346	10.2	0.09	0.09	0.59	0.76	0.50	0.76	0.50	0.15	0.71	0.07	0.08 (TC)	9,44,11,30
350	10.2	0.09	0.09	0.59	0.76	0.50	0.76	0.50	0.15	0.71	0.07	0.08 (TC)	9,44,11,30
354	10.2	0.09	0.09	0.59	0.76	0.50	0.76	0.50	0.15	0.71	0.07	0.08 (TC)	9,44,11,30
382	10.2	0.09	0.09	0.59	0.76	0.50	0.76	0.50	0.15	0.71	0.07	0.08 (TC)	9,44,11,30
797	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.50	0.20	0.77	0.08	0.08 (TC)	11,44,11,30
799	10.2	0.31	0.20	0.36	0.63	0.40	0.29	0.40	0.20	0.77	0.14	0.07 (TC)	11,44,41,30
800	10.2	0.31	0.0	0.0	0.0	0.30	0.29	0.30	0.0	0.73	0.14	0.06 (TC)	0,44,41,26
813	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.50	0.20	0.77	0.08	0.08 (TC)	11,44,11,30
815	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.40	0.20	0.77	0.08	0.07 (TC)	11,44,11,30
817	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.50	0.20	0.77	0.08	0.08 (TC)	11,44,11,30
819	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.40	0.20	0.77	0.08	0.07 (TC)	11,44,11,30
821	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.50	0.20	0.77	0.08	0.08 (TC)	11,44,11,30
823	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.40	0.20	0.77	0.08	0.07 (TC)	11,44,11,30
825	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.50	0.20	0.77	0.08	0.08 (TC)	11,44,11,30
827	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.40	0.20	0.77	0.08	0.07 (TC)	11,44,11,30
829	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.50	0.20	0.77	0.08	0.08 (TC)	11,44,11,30
831	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.40	0.20	0.77	0.08	0.07 (TC)	11,44,11,30
833	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.50	0.20	0.77	0.08	0.08 (TC)	11,44,11,30
835	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.40	0.20	0.77	0.08	0.07 (TC)	11,44,11,30
837	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.50	0.20	0.77	0.08	0.08 (TC)	11,44,11,30
839	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.40	0.20	0.77	0.08	0.07 (TC)	11,44,11,30
841	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.50	0.20	0.77	0.08	0.08 (TC)	11,44,11,30
843	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.40	0.20	0.77	0.08	0.07 (TC)	11,44,11,30
845	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.50	0.20	0.77	0.08	0.08 (TC)	11,44,11,30
847	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.40	0.20	0.77	0.08	0.07 (TC)	11,44,11,30
849	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.50	0.20	0.77	0.08	0.08 (TC)	11,44,11,30
851	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.40	0.20	0.77	0.08	0.07 (TC)	11,44,11,30
853	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.50	0.20	0.77	0.08	0.08 (TC)	11,44,11,30
855	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.40	0.20	0.77	0.08	0.07 (TC)	11,44,11,30
857	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.50	0.20	0.77	0.08	0.08 (TC)	11,44,11,30
859	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.40	0.20	0.77	0.08	0.07 (TC)	11,44,11,30
861	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.50	0.20	0.77	0.08	0.08 (TC)	11,44,11,30
863	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.40	0.20	0.77	0.08	0.07 (TC)	11,44,11,30
865	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.50	0.20	0.77	0.08	0.08 (TC)	11,44,11,30
867	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.40	0.20	0.77	0.08	0.07 (TC)	11,44,11,30
869	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.50	0.20	0.77	0.08	0.08 (TC)	11,44,11,30
871	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.40	0.20	0.77	0.08	0.07 (TC)	11,44,11,30
873	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.50	0.20	0.77	0.08	0.08 (TC)	11,44,11,30
875	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.40	0.20	0.77	0.08	0.07 (TC)	11,44,11,30
877	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.50	0.20	0.77	0.08	0.08 (TC)	11,44,11,30
879	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.40	0.20	0.77	0.08	0.07 (TC)	11,44,11,30
881	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.50	0.20	0.77	0.08	0.08 (TC)	11,44,11,30
883	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.40	0.20	0.77	0.08	0.07 (TC)	11,44,11,30
885	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.50	0.20	0.77	0.08	0.08 (TC)	11,44,11,30
887	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.40	0.20	0.77	0.08	0.07 (TC)	11,44,11,30
889	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.50	0.20	0.77	0.08	0.08 (TC)	11,44,11,30

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891	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.40	0.20	0.77	0.08	0.07 (TC)	11,44,11,30
893	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.50	0.20	0.77	0.08	0.08 (TC)	11,44,11,30
895	10.2	0.31	0.20	0.36	0.63	0.40	0.29	0.40	0.20	0.77	0.13	0.07 (TC)	11,44,41,30
897	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.50	0.20	0.77	0.08	0.08 (TC)	11,44,11,30
899	10.2	0.31	0.20	0.36	0.63	0.40	0.28	0.40	0.20	0.77	0.17	0.07 (TC)	11,44,41,30
900	10.2	0.31	0.0	0.0	0.0	0.29	0.28	0.29	0.0	0.72	0.17	0.06 (TC)	0,44,41,30
901	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.50	0.20	0.77	0.08	0.08 (TC)	11,44,11,30
903	10.2	0.31	0.20	0.36	0.63	0.40	0.29	0.40	0.20	0.77	0.18	0.07 (TC)	11,44,41,30
904	10.2	0.31	0.0	0.0	0.0	0.29	0.29	0.28	0.0	0.72	0.18	0.06 (TC)	0,44,41,27
905	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.50	0.20	0.77	0.08	0.08 (TC)	11,44,11,30
907	10.2	0.31	0.20	0.36	0.63	0.40	0.29	0.40	0.20	0.77	0.18	0.07 (TC)	11,44,41,30
908	10.2	0.31	0.0	0.0	0.0	0.30	0.29	0.30	0.0	0.73	0.18	0.06 (TC)	0,44,41,26
933	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.50	0.20	0.77	0.08	0.08 (TC)	11,44,11,30
935	10.2	0.21	0.20	0.36	0.63	0.40	0.63	0.40	0.20	0.77	0.08	0.07 (TC)	11,44,11,30

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V
	10.20	0.31	0.20	0.0								
	10.20	0.31	0.20		0.76	0.50	0.76	0.50	0.20	0.77	0.18	0.08

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
		cm			
6	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04- muratura E = 1.500e+04	28.0	4.05	3.24	ok L

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
					daN/cm2	daN/cm2	daN/cm2	daN/cm2					
554	14.2	0.11	0.11	0.46	0.72	0.46	0.37	0.48	0.18	0.54	0.06	0.30 (TC)	11,20,7,45
643	14.2	0.08	0.08	0.50	0.63	0.38	0.37	0.39	0.15	0.48	0.06	0.30 (TC)	11,20,7,39
959	14.2	0.09	0.09	0.49	0.84	0.57	0.56	0.58	0.20	0.73	0.02	0.24 (TC)	11,22,5,41
960	14.2	0.11	0.09	0.49	0.84	0.57	0.46	0.48	0.20	0.73	0.04	0.30 (TC)	11,22,7,45
1024	14.2	0.11	0.11	0.46	0.72	0.46	0.37	0.48	0.18	0.54	0.06	0.30 (TC)	11,20,7,45
1025	14.2	0.08	0.08	0.50	0.63	0.38	0.37	0.39	0.15	0.48	0.06	0.30 (TC)	11,20,7,39
1026	14.2	0.11	0.09	0.49	0.84	0.57	0.46	0.48	0.20	0.73	0.04	0.30 (TC)	11,22,7,45
1027	14.2	0.09	0.09	0.49	0.84	0.57	0.56	0.58	0.20	0.73	0.02	0.24 (TC)	11,22,5,41

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V
				0.46								
	14.24	0.11	0.11		0.84	0.57	0.56	0.58	0.20	0.73	0.06	0.30

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
		cm			
7	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04- muratura E = 1.500e+04	28.0	4.05	3.24	ok L

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
					daN/cm2	daN/cm2	daN/cm2	daN/cm2					
175	9.7	0.06	0.06	0.69	2.83	1.88	1.79	1.78	0.48	0.11	0.11	0.22 (TC)	11,33,33,21
176	9.7	0.06	0.06	0.69	2.83	1.88	1.88	1.89	0.48	0.11	0.11	0.22 (TC)	11,33,33,21
177	9.7	0.07	0.06	0.69	2.68	1.53	1.79	1.57	0.46	0.12	0.11	0.24 (TC)	11,34,33,20
178	9.7	0.07	0.07	0.66	2.34	1.53	1.58	1.57	0.42	0.12	0.09	0.24 (TC)	11,34,33,20
179	9.7	0.06	0.06	0.69	2.83	1.88	1.79	1.78	0.48	0.11	0.11	0.22 (TC)	11,33,33,21
180	9.7	0.06	0.06	0.69	2.83	1.88	1.88	1.89	0.48	0.11	0.11	0.22 (TC)	11,33,33,21
181	9.7	0.07	0.06	0.69	2.68	1.53	1.79	1.57	0.46	0.12	0.11	0.24 (TC)	11,34,33,20
182	9.7	0.07	0.07	0.66	2.34	1.53	1.58	1.57	0.42	0.12	0.09	0.24 (TC)	11,34,33,20
183	9.7	0.06	0.06	0.69	2.83	1.88	1.79	1.78	0.48	0.11	0.11	0.22 (TC)	11,33,33,21
184	9.7	0.06	0.06	0.69	2.83	1.88	1.88	1.89	0.48	0.11	0.11	0.22 (TC)	11,33,33,21
185	9.7	0.07	0.06	0.69	2.68	1.53	1.79	1.57	0.46	0.12	0.11	0.24 (TC)	11,34,33,20
186	9.7	0.07	0.07	0.66	2.34	1.53	1.58	1.57	0.42	0.12	0.09	0.24 (TC)	11,34,33,20
187	9.7	0.06	0.06	0.69	2.83	1.88	1.79	1.78	0.48	0.11	0.11	0.22 (TC)	11,33,33,21
188	9.7	0.06	0.06	0.69	2.83	1.88	1.88	1.89	0.48	0.11	0.11	0.22 (TC)	11,33,33,21
189	9.7	0.07	0.06	0.69	2.68	1.53	1.79	1.57	0.46	0.12	0.11	0.24 (TC)	11,34,33,20
190	9.7	0.07	0.07	0.66	2.34	1.53	1.58	1.57	0.42	0.12	0.09	0.24 (TC)	11,34,33,20
191	9.7	0.06	0.06	0.69	2.83	1.88	1.79	1.78	0.48	0.11	0.11	0.22 (TC)	11,33,33,21
192	9.7	0.06	0.06	0.69	2.83	1.88	1.88	1.89	0.48	0.11	0.11	0.22 (TC)	11,33,33,21
193	9.7	0.07	0.06	0.69	2.68	1.53	1.79	1.57	0.46	0.12	0.11	0.24 (TC)	11,34,33,20
194	9.7	0.07	0.07	0.66	2.34	1.53	1.58	1.57	0.42	0.12	0.09	0.24 (TC)	11,34,33,20
195	9.7	0.06	0.06	0.69	2.83	1.88	1.79	1.78	0.48	0.11	0.11	0.22 (TC)	11,33,33,21
196	9.7	0.06	0.06	0.69	2.83	1.88	1.88	1.89	0.48	0.11	0.11	0.22 (TC)	11,33,33,21
197	9.7	0.07	0.06	0.69	2.68	1.53	1.79	1.57	0.46	0.12	0.11	0.24 (TC)	11,34,33,20
198	9.7	0.07	0.07	0.66	2.34	1.53	1.58	1.57	0.42	0.12	0.09	0.24 (TC)	11,34,33,20
199	9.7	0.06	0.06	0.69	2.83	1.88	1.79	1.78	0.48	0.11	0.11	0.22 (TC)	11,33,33,21
200	9.7	0.06	0.06	0.69	2.83	1.88	1.88	1.89	0.48	0.11	0.11	0.22 (TC)	11,33,33,21
201	9.7	0.07	0.06	0.69	2.68	1.53	1.79	1.57	0.46	0.12	0.11	0.24 (TC)	11,34,33,20
202	9.7	0.07	0.07	0.66	2.34	1.53	1.58	1.57	0.42	0.12	0.09	0.24 (TC)	11,34,33,20

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985	9.7	0.07	0.07	0.66	2.34	1.53	1.58	1.57	0.42	0.12	0.09	0.24 (TC)	11,34,33,20
992	9.7	0.06	0.06	0.69	2.83	1.88	1.79	1.78	0.48	0.11	0.11	0.22 (TC)	11,33,33,21
993	9.7	0.06	0.06	0.69	2.83	1.88	1.88	1.89	0.48	0.11	0.11	0.22 (TC)	11,33,33,21
994	9.7	0.07	0.06	0.69	2.68	1.53	1.79	1.57	0.46	0.12	0.11	0.24 (TC)	11,34,33,20

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V
	9.71	0.07	0.07	0.66	2.83	1.88	1.88	1.89	0.48	0.12	0.11	0.24

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
		cm			
8	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04- muratura E = 1.500e+04	28.0	4.05	3.24	ok L

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
					daN/cm2	daN/cm2	daN/cm2	daN/cm2					
201	9.7	0.08	0.08	0.62	2.03	1.43	1.14	1.71	0.39	0.10	0.13	0.81 (TC)	4,18,33,34
202	9.7	0.08	0.08	0.62	2.03	1.43	1.14	1.71	0.39	0.10	0.13	0.81 (TC)	4,18,33,34
205	9.7	0.08	0.08	0.62	2.03	1.43	1.14	1.71	0.39	0.10	0.13	0.81 (TC)	4,18,33,34
206	9.7	0.08	0.08	0.62	2.03	1.43	1.14	1.71	0.39	0.10	0.13	0.81 (TC)	4,18,33,34
Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	
	9.71	0.08	0.08	0.62	2.03	1.43	1.14	1.71	0.39	0.10	0.13	0.81	

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
		cm			
9	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04- muratura E = 1.500e+04	14.0	4.05	3.24	ok L

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
					daN/cm2	daN/cm2	daN/cm2	daN/cm2					
253	18.2	0.11	0.11	0.36	0.99	0.29	0.38	0.74	0.32	0.16	0.39	0.17 (TC)	11,37,31,20
522	18.2	0.11	0.11	0.36	0.45	0.20	0.20	0.26	0.15	0.32	0.23	0.12 (TC)	11,37,31,17
529	18.2	0.11	0.11	0.36	0.99	0.38	0.38	0.74	0.32	0.05	0.39	0.17 (TC)	11,31,31,20
533	18.2	0.11	0.11	0.36	0.99	0.38	0.38	0.74	0.32	0.05	0.39	0.17 (TC)	11,31,31,20
537	18.2	0.11	0.11	0.36	0.99	0.38	0.38	0.74	0.32	0.05	0.39	0.17 (TC)	11,31,31,20
541	18.2	0.11	0.11	0.36	0.99	0.38	0.38	0.74	0.32	0.05	0.39	0.17 (TC)	11,31,31,20
545	18.2	0.11	0.11	0.36	0.99	0.38	0.38	0.74	0.32	0.05	0.39	0.17 (TC)	11,31,31,20
549	18.2	0.11	0.11	0.36	0.99	0.38	0.38	0.74	0.32	0.05	0.39	0.17 (TC)	11,31,31,20
553	18.2	0.11	0.11	0.36	0.99	0.38	0.38	0.74	0.32	0.05	0.39	0.17 (TC)	11,31,31,20
564	18.2	0.11	0.11	0.36	0.75	0.20	0.29	0.46	0.25	0.32	0.38	0.16 (TC)	11,37,31,17
568	18.2	0.11	0.11	0.36	0.45	0.20	0.20	0.26	0.15	0.32	0.23	0.12 (TC)	11,37,31,17
909	18.2	0.11	0.11	0.36	0.99	0.29	0.38	0.74	0.32	0.16	0.39	0.17 (TC)	11,37,31,20
916	18.2	0.11	0.11	0.36	0.75	0.20	0.29	0.46	0.25	0.32	0.38	0.16 (TC)	11,37,31,17
919	18.2	0.11	0.11	0.36	0.45	0.20	0.20	0.26	0.15	0.32	0.23	0.12 (TC)	11,37,31,17
924	18.2	0.11	0.11	0.36	0.99	0.29	0.38	0.74	0.32	0.16	0.39	0.17 (TC)	11,37,31,20
926	18.2	0.11	0.11	0.36	0.75	0.20	0.29	0.46	0.25	0.32	0.38	0.16 (TC)	11,37,31,17
930	18.2	0.11	0.11	0.36	0.75	0.20	0.29	0.46	0.25	0.32	0.38	0.16 (TC)	11,37,31,17
934	18.2	0.11	0.11	0.36	0.45	0.20	0.20	0.26	0.15	0.32	0.23	0.12 (TC)	11,37,31,17
938	18.2	0.11	0.11	0.36	0.99	0.29	0.38	0.74	0.32	0.16	0.39	0.17 (TC)	11,37,31,20
942	18.2	0.11	0.11	0.36	0.75	0.20	0.29	0.46	0.25	0.32	0.38	0.16 (TC)	11,37,31,17
944	18.2	0.11	0.11	0.36	0.45	0.20	0.20	0.26	0.15	0.32	0.23	0.12 (TC)	11,37,31,17
946	18.2	0.11	0.11	0.36	0.99	0.29	0.38	0.74	0.32	0.16	0.39	0.17 (TC)	11,37,31,20
950	18.2	0.11	0.11	0.36	0.75	0.20	0.29	0.46	0.25	0.32	0.38	0.16 (TC)	11,37,31,17
952	18.2	0.11	0.11	0.36	0.45	0.20	0.20	0.26	0.15	0.32	0.23	0.12 (TC)	11,37,31,17
954	18.2	0.11	0.11	0.36	0.99	0.29	0.38	0.74	0.32	0.16	0.39	0.17 (TC)	11,37,31,20
958	18.2	0.11	0.11	0.36	0.75	0.20	0.29	0.46	0.25	0.32	0.38	0.16 (TC)	11,37,31,17
962	18.2	0.11	0.11	0.36	0.45	0.20	0.20	0.26	0.15	0.32	0.23	0.12 (TC)	11,37,31,17
966	18.2	0.11	0.11	0.36	0.99	0.29	0.38	0.74	0.32	0.16	0.39	0.17 (TC)	11,37,31,20
Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	
	18.21	0.11	0.11	0.36	0.99	0.38	0.38	0.74	0.32	0.32	0.39	0.17	

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
		cm			
11	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04- muratura E = 1.500e+04	28.0	4.05	3.24	ok L

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
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INGEGNERE

					daN/cm2	daN/cm2	daN/cm2	daN/cm2						
207	9.7	0.13	0.13	0.53	3.52	2.51	2.50	2.57	0.78	0.22	0.18	0.90 (TC)	4,22,37,32	
208	9.7	0.11	0.11	0.57	3.67	2.51	2.50	2.68	0.76	0.22	0.18	0.86 (TC)	4,22,37,32	
209	9.7	0.22	0.22	0.35	2.79	1.91	2.01	2.57	0.94	0.54	0.11	0.90 (TC)	4,22,34,32	
210	9.7	0.22	0.22	0.35	2.79	1.91	2.01	2.04	0.94	0.54	0.11	0.66 (TC)	4,22,34,32	
211	9.7	0.13	0.13	0.53	3.52	2.51	2.50	2.57	0.78	0.22	0.18	0.90 (TC)	4,22,37,32	
212	9.7	0.11	0.11	0.57	3.67	2.51	2.50	2.68	0.76	0.22	0.18	0.86 (TC)	4,22,37,32	
213	9.7	0.22	0.22	0.35	2.79	1.91	2.01	2.57	0.94	0.54	0.11	0.90 (TC)	4,22,34,32	
214	9.7	0.22	0.22	0.35	2.79	1.91	2.01	2.04	0.94	0.54	0.11	0.66 (TC)	4,22,34,32	
215	9.7	0.13	0.13	0.53	3.52	2.51	2.50	2.57	0.78	0.22	0.18	0.90 (TC)	4,22,37,32	
216	9.7	0.11	0.11	0.57	3.67	2.51	2.50	2.68	0.76	0.22	0.18	0.86 (TC)	4,22,37,32	
217	9.7	0.22	0.22	0.35	2.79	1.91	2.01	2.57	0.94	0.54	0.11	0.90 (TC)	4,22,34,32	
218	9.7	0.22	0.22	0.35	2.79	1.91	2.01	2.04	0.94	0.54	0.11	0.66 (TC)	4,22,34,32	
Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V		
	9.71	0.22	0.22	0.35	3.67	2.51	2.50	2.68	0.94	0.54	0.18	0.90		

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
		cm			
13	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04- muratura E = 1.500e+04	28.0	4.05	3.24	ok L

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
					daN/cm2	daN/cm2	daN/cm2	daN/cm2					
219	9.7	0.13	0.13	0.53	3.56	2.54	2.57	2.48	0.78	0.22	0.17	0.87 (TC)	4,30,34,37
220	9.7	0.11	0.11	0.57	3.71	2.54	2.57	2.60	0.77	0.22	0.17	0.83 (TC)	4,30,34,37
221	9.7	0.21	0.21	0.36	2.82	1.93	2.00	2.48	0.91	0.53	0.10	0.87 (TC)	4,25,31,37
222	9.7	0.21	0.21	0.36	2.82	1.93	2.00	1.98	0.91	0.53	0.10	0.64 (TC)	4,25,31,37
223	9.7	0.13	0.13	0.53	3.56	2.54	2.57	2.48	0.78	0.22	0.17	0.87 (TC)	4,30,34,37
224	9.7	0.11	0.11	0.57	3.71	2.54	2.57	2.60	0.77	0.22	0.17	0.83 (TC)	4,30,34,37
225	9.7	0.21	0.21	0.36	2.82	1.93	2.00	2.48	0.91	0.53	0.10	0.87 (TC)	4,25,31,37
226	9.7	0.21	0.21	0.36	2.82	1.93	2.00	1.98	0.91	0.53	0.10	0.64 (TC)	4,25,31,37
227	9.7	0.13	0.13	0.53	3.56	2.54	2.57	2.48	0.78	0.22	0.17	0.87 (TC)	4,30,34,37
228	9.7	0.11	0.11	0.57	3.71	2.54	2.57	2.60	0.77	0.22	0.17	0.83 (TC)	4,30,34,37
229	9.7	0.21	0.21	0.36	2.82	1.93	2.00	2.48	0.91	0.53	0.10	0.87 (TC)	4,25,31,37
230	9.7	0.21	0.21	0.36	2.82	1.93	2.00	1.98	0.91	0.53	0.10	0.64 (TC)	4,25,31,37
Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	
	9.71	0.21	0.21	0.36	3.71	2.54	2.57	2.60	0.91	0.53	0.17	0.87	

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
		cm			
15	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04- muratura E = 1.500e+04	28.0	4.05	3.24	ok L

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
					daN/cm2	daN/cm2	daN/cm2	daN/cm2					
97	9.7	0.08	0.07	0.66	2.75	1.66	1.83	1.84	0.49	0.07	0.22	0.80 (TC)	11,29,34,31
98	9.7	0.07	0.07	0.66	2.75	1.66	1.83	2.04	0.49	0.06	0.22	0.74 (TC)	11,24,34,31
99	9.7	0.08	0.08	0.63	2.48	1.66	1.35	1.84	0.46	0.07	0.18	0.80 (TC)	4,29,37,31
100	9.7	0.07	0.07	0.66	1.88	1.26	1.35	1.38	0.33	0.03	0.18	0.69 (TC)	11,34,37,31
231	9.7	0.08	0.07	0.66	2.75	1.66	1.83	1.84	0.49	0.07	0.22	0.80 (TC)	11,29,34,31
232	9.7	0.07	0.07	0.66	2.75	1.66	1.83	2.04	0.49	0.06	0.22	0.74 (TC)	11,24,34,31
233	9.7	0.08	0.08	0.63	2.48	1.66	1.35	1.84	0.46	0.07	0.18	0.80 (TC)	4,29,37,31
234	9.7	0.07	0.07	0.66	1.88	1.26	1.35	1.38	0.33	0.03	0.18	0.69 (TC)	11,34,37,31
235	9.7	0.08	0.07	0.66	2.75	1.66	1.83	1.84	0.49	0.07	0.22	0.80 (TC)	11,29,34,31
236	9.7	0.07	0.07	0.66	2.75	1.66	1.83	2.04	0.49	0.06	0.22	0.74 (TC)	11,24,34,31
237	9.7	0.08	0.08	0.63	2.48	1.66	1.35	1.84	0.46	0.07	0.18	0.80 (TC)	4,29,37,31
238	9.7	0.07	0.07	0.66	1.88	1.26	1.35	1.38	0.33	0.03	0.18	0.69 (TC)	11,34,37,31
Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	
	9.71	0.08	0.08	0.63	2.75	1.66	1.83	2.04	0.49	0.07	0.22	0.80	

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
		cm			
17	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04- muratura E = 1.500e+04	28.0	4.05	3.24	ok L

INGEGNERE

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
					daN/cm2	daN/cm2	daN/cm2	daN/cm2					
239	9.7	0.06	0.06	0.69	1.66	0.91	0.77	1.45	0.28	0.05	0.22	0.95 (TC)	11,26,38,31
240	9.7	0.06	0.06	0.69	1.66	0.91	0.87	1.50	0.28	0.05	0.17	0.91 (TC)	11,26,38,31
241	9.7	0.06	0.06	0.69	1.57	0.58	0.77	1.45	0.27	0.04	0.22	0.95 (TC)	11,38,38,31
242	9.7	0.06	0.06	0.69	1.21	0.58	1.21	1.13	0.21	0.04	0.18	0.80 (TC)	11,38,4,31
243	9.7	0.06	0.06	0.69	1.66	0.91	0.77	1.45	0.28	0.05	0.22	0.95 (TC)	11,26,38,31
244	9.7	0.06	0.06	0.69	1.66	0.91	0.87	1.50	0.28	0.05	0.17	0.91 (TC)	11,26,38,31
245	9.7	0.06	0.06	0.69	1.57	0.58	0.77	1.45	0.27	0.04	0.22	0.95 (TC)	11,38,38,31
246	9.7	0.06	0.06	0.69	1.21	0.58	1.21	1.13	0.21	0.04	0.18	0.80 (TC)	11,38,4,31
355	9.7	0.06	0.06	0.69	1.66	0.91	0.87	1.50	0.28	0.05	0.17	0.91 (TC)	11,26,38,31
356	9.7	0.06	0.06	0.69	1.66	0.91	0.77	1.45	0.28	0.05	0.22	0.95 (TC)	11,26,38,31
357	9.7	0.06	0.06	0.69	1.57	0.58	0.77	1.45	0.27	0.04	0.22	0.95 (TC)	11,38,38,31
358	9.7	0.06	0.06	0.69	1.21	0.58	1.21	1.13	0.21	0.04	0.18	0.80 (TC)	11,38,4,31

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V
				0.69								
	9.71	0.06	0.06		1.66	0.91	1.21	1.50	0.28	0.05	0.22	0.95

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
		cm			
19	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04- muratura E = 1.500e+04	25.0	4.05	3.24	ok L

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
					daN/cm2	daN/cm2	daN/cm2	daN/cm2					
249	10.9	0.07	0.06	0.64	1.99	1.39	1.01	1.01	0.36	0.03	0.06	0.44 (TC)	11,30,44,44
250	10.9	0.06	0.06	0.64	1.99	1.39	0.95	1.90	0.36	0.03	0.02	0.29 (TC)	11,30,40,45
252	10.9	0.07	0.07	0.64	1.79	0.91	1.01	0.86	0.33	0.03	0.06	0.62 (TC)	11,42,44,44
254	10.9	0.07	0.07	0.63	1.22	0.91	1.19	0.86	0.23	0.03	0.05	0.62 (TC)	11,42,3,44
255	10.9	0.07	0.06	0.64	1.99	1.39	1.01	1.01	0.36	0.03	0.06	0.44 (TC)	11,30,44,44
256	10.9	0.06	0.06	0.64	1.99	1.39	0.95	1.90	0.36	0.03	0.02	0.29 (TC)	11,30,40,45
257	10.9	0.07	0.07	0.64	1.79	0.91	1.01	0.86	0.33	0.03	0.06	0.62 (TC)	11,42,44,44
258	10.9	0.07	0.07	0.63	1.22	0.91	1.19	0.86	0.23	0.03	0.05	0.62 (TC)	11,42,3,44

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V
				0.63								
	10.88	0.07	0.07		1.99	1.39	1.19	1.90	0.36	0.03	0.06	0.62

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
		cm			
20	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04- muratura E = 1.500e+04	28.0	4.05	3.24	ok L

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
					daN/cm2	daN/cm2	daN/cm2	daN/cm2					
7	9.1	0.10	0.10	0.59	1.54	0.96	1.21	0.96	0.31	0.86	0.02	0.13 (TC)	9,43,12,29
8	9.1	0.10	0.10	0.59	1.54	0.96	1.21	0.96	0.31	0.86	0.02	0.13 (TC)	9,43,12,29
12	9.1	0.10	0.10	0.59	1.54	0.96	1.21	0.96	0.31	0.86	0.02	0.13 (TC)	9,43,12,29
16	9.1	0.10	0.10	0.59	1.54	0.96	1.21	0.96	0.31	0.86	0.02	0.13 (TC)	9,43,12,29
20	9.1	0.10	0.10	0.59	1.54	0.96	1.21	0.96	0.31	0.86	0.02	0.13 (TC)	9,43,12,29
24	9.1	0.10	0.10	0.59	1.54	0.96	1.21	0.96	0.31	0.86	0.02	0.13 (TC)	9,43,12,29
28	9.1	0.10	0.10	0.59	1.54	0.96	1.21	0.96	0.31	0.86	0.02	0.13 (TC)	9,43,12,29
32	9.1	0.10	0.10	0.59	1.54	0.96	1.21	0.96	0.31	0.86	0.02	0.13 (TC)	9,43,12,29
36	9.1	0.10	0.10	0.59	1.54	0.96	1.21	0.96	0.31	0.86	0.02	0.13 (TC)	9,43,12,29
40	9.1	0.10	0.10	0.59	1.54	0.96	1.21	0.96	0.31	0.86	0.02	0.13 (TC)	9,43,12,29
44	9.1	0.10	0.10	0.59	1.54	0.96	1.21	0.96	0.31	0.86	0.02	0.13 (TC)	9,43,12,29
48	9.1	0.10	0.10	0.59	1.54	0.96	1.21	0.96	0.31	0.86	0.02	0.13 (TC)	9,43,12,29
52	9.1	0.10	0.10	0.59	1.54	0.96	1.21	0.96	0.31	0.86	0.02	0.13 (TC)	9,43,12,29
56	9.1	0.10	0.10	0.59	1.54	0.96	1.21	0.96	0.31	0.86	0.02	0.13 (TC)	9,43,12,29
60	9.1	0.10	0.10	0.59	1.54	0.96	1.21	0.96	0.31	0.86	0.02	0.13 (TC)	9,43,12,29
64	9.1	0.10	0.10	0.59	1.54	0.96	1.21	0.96	0.31	0.86	0.02	0.13 (TC)	9,43,12,29
68	9.1	0.10	0.10	0.59	1.54	0.96	1.21	0.96	0.31	0.86	0.02	0.13 (TC)	9,43,12,29
72	9.1	0.10	0.10	0.59	1.54	0.96	1.21	0.96	0.31	0.86	0.02	0.13 (TC)	9,43,12,29
76	9.1	0.10	0.10	0.59	1.54	0.96	1.21	0.96	0.31	0.86	0.02	0.13 (TC)	9,43,12,29
80	9.1	0.10	0.10	0.59	1.54	0.96	1.21	0.96	0.31	0.86	0.02	0.13 (TC)	9,43,12,29
84	9.1	0.10	0.10	0.59	1.54	0.96	1.21	0.96	0.31	0.86	0.02	0.13 (TC)	9,43,12,29
88	9.1	0.10	0.10	0.59	1.54	0.96	1.21	0.96	0.31	0.86	0.02	0.13 (TC)	9,43,12,29
90	9.1	0.10	0.10	0.59	1.54	0.96	1.21	0.96	0.31	0.86	0.02	0.13 (TC)	9,43,12,29
95	9.1	0.10	0.10	0.59	1.54	0.96	1.21	0.96	0.31	0.86	0.02	0.13 (TC)	9,43,12,29
96	9.1	0.10	0.10	0.59	1.54	0.96	1.21	0.96	0.31	0.86	0.02	0.13 (TC)	9,43,12,29
102	9.1	0.10	0.10	0.59	1.54	0.96	1.21	0.96	0.31	0.86	0.02	0.13 (TC)	9,43,12,29
556	9.1	0.10	0.10	0.59	1.54	0.96	1.34	0.96	0.31	0.86	0.03	0.13 (TC)	9,43,9,29
557	9.1	0.10	0.10	0.59	1.54	0.96	1.34	0.96	0.31	0.86	0.03	0.13 (TC)	9,43,9,29

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/AP	P/ACv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
					daN/cm2	daN/cm2	daN/cm2	daN/cm2					
243	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.28	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
244	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.38	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
245	10.9	0.07	0.07	0.63	1.85	1.08	1.25	1.07	0.35	0.24	0.05	0.22 (TC)	11,45,38,27
246	10.9	0.07	0.07	0.63	1.59	1.08	1.05	1.07	0.30	0.24	0.04	0.22 (TC)	11,45,38,27
259	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.28	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
260	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.38	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
261	10.9	0.07	0.07	0.63	1.85	1.08	1.25	1.07	0.35	0.24	0.05	0.22 (TC)	11,45,38,27
262	10.9	0.07	0.07	0.63	1.59	1.08	1.05	1.07	0.30	0.24	0.04	0.22 (TC)	11,45,38,27
263	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.28	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
264	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.38	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
265	10.9	0.07	0.07	0.63	1.85	1.08	1.25	1.07	0.35	0.24	0.05	0.22 (TC)	11,45,38,27
266	10.9	0.07	0.07	0.63	1.59	1.08	1.05	1.07	0.30	0.24	0.04	0.22 (TC)	11,45,38,27
267	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.28	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
268	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.38	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
269	10.9	0.07	0.07	0.63	1.85	1.08	1.25	1.07	0.35	0.24	0.05	0.22 (TC)	11,45,38,27
270	10.9	0.07	0.07	0.63	1.59	1.08	1.05	1.07	0.30	0.24	0.04	0.22 (TC)	11,45,38,27
271	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.28	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
272	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.38	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
273	10.9	0.07	0.07	0.63	1.85	1.08	1.25	1.07	0.35	0.24	0.05	0.22 (TC)	11,45,38,27
274	10.9	0.07	0.07	0.63	1.59	1.08	1.05	1.07	0.30	0.24	0.04	0.22 (TC)	11,45,38,27
275	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.28	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
276	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.38	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
277	10.9	0.07	0.07	0.63	1.85	1.08	1.25	1.07	0.35	0.24	0.05	0.22 (TC)	11,45,38,27
278	10.9	0.07	0.07	0.63	1.59	1.08	1.05	1.07	0.30	0.24	0.04	0.22 (TC)	11,45,38,27
279	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.28	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
280	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.38	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
281	10.9	0.07	0.07	0.63	1.85	1.08	1.25	1.07	0.35	0.24	0.05	0.22 (TC)	11,45,38,27
282	10.9	0.07	0.07	0.63	1.59	1.08	1.05	1.07	0.30	0.24	0.04	0.22 (TC)	11,45,38,27
283	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.28	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
284	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.38	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
285	10.9	0.07	0.07	0.63	1.85	1.08	1.25	1.07	0.35	0.24	0.05	0.22 (TC)	11,45,38,27
286	10.9	0.07	0.07	0.63	1.59	1.08	1.05	1.07	0.30	0.24	0.04	0.22 (TC)	11,45,38,27
287	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.28	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
288	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.38	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
289	10.9	0.07	0.07	0.63	1.85	1.08	1.25	1.07	0.35	0.24	0.05	0.22 (TC)	11,45,38,27
290	10.9	0.07	0.07	0.63	1.59	1.08	1.05	1.07	0.30	0.24	0.04	0.22 (TC)	11,45,38,27
291	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.28	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
292	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.38	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
293	10.9	0.07	0.07	0.63	1.85	1.08	1.25	1.07	0.35	0.24	0.05	0.22 (TC)	11,45,38,27
294	10.9	0.07	0.07	0.63	1.59	1.08	1.05	1.07	0.30	0.24	0.04	0.22 (TC)	11,45,38,27
295	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.28	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
296	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.38	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
297	10.9	0.07	0.07	0.63	1.85	1.08	1.25	1.07	0.35	0.24	0.05	0.22 (TC)	11,45,38,27
298	10.9	0.07	0.07	0.63	1.59	1.08	1.05	1.07	0.30	0.24	0.04	0.22 (TC)	11,45,38,27
299	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.28	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
300	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.38	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
301	10.9	0.07	0.07	0.63	1.85	1.08	1.25	1.07	0.35	0.24	0.05	0.22 (TC)	11,45,38,27
302	10.9	0.07	0.07	0.63	1.59	1.08	1.05	1.07	0.30	0.24	0.04	0.22 (TC)	11,45,38,27
303	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.28	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
304	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.38	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
305	10.9	0.07	0.07	0.63	1.85	1.08	1.25	1.07	0.35	0.24	0.05	0.22 (TC)	11,45,38,27
306	10.9	0.07	0.07	0.63	1.59	1.08	1.05	1.07	0.30	0.24	0.04	0.22 (TC)	11,45,38,27
307	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.28	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
308	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.38	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
309	10.9	0.07	0.07	0.63	1.85	1.08	1.25	1.07	0.35	0.24	0.05	0.22 (TC)	11,45,38,27
310	10.9	0.07	0.07	0.63	1.59	1.08	1.05	1.07	0.30	0.24	0.04	0.22 (TC)	11,45,38,27
311	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.28	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
312	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.38	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
313	10.9	0.07	0.07	0.63	1.85	1.08	1.25	1.07	0.35	0.24	0.05	0.22 (TC)	11,45,38,27
314	10.9	0.07	0.07	0.63	1.59	1.08	1.05	1.07	0.30	0.24	0.04	0.22 (TC)	11,45,38,27
315	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.28	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
316	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.38	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
317	10.9	0.07	0.07	0.63	1.85	1.08	1.25	1.07	0.35	0.24	0.05	0.22 (TC)	11,45,38,27

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318	10.9	0.07	0.07	0.63	1.59	1.08	1.05	1.07	0.30	0.24	0.04	0.22 (TC)	11,45,38,27
319	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.28	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
320	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.38	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
321	10.9	0.07	0.07	0.63	1.85	1.08	1.25	1.07	0.35	0.24	0.05	0.22 (TC)	11,45,38,27
322	10.9	0.07	0.07	0.63	1.59	1.08	1.05	1.07	0.30	0.24	0.04	0.22 (TC)	11,45,38,27
323	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.28	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
324	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.38	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
325	10.9	0.07	0.07	0.63	1.85	1.08	1.25	1.07	0.35	0.24	0.05	0.22 (TC)	11,45,38,27
326	10.9	0.07	0.07	0.63	1.59	1.08	1.05	1.07	0.30	0.24	0.04	0.22 (TC)	11,45,38,27
327	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.28	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
328	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.38	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
329	10.9	0.07	0.07	0.63	1.85	1.08	1.25	1.07	0.35	0.24	0.05	0.22 (TC)	11,45,38,27
330	10.9	0.07	0.07	0.63	1.59	1.08	1.05	1.07	0.30	0.24	0.04	0.22 (TC)	11,45,38,27
331	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.28	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
332	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.38	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
333	10.9	0.07	0.07	0.63	1.85	1.08	1.25	1.07	0.35	0.24	0.05	0.22 (TC)	11,45,38,27
334	10.9	0.07	0.07	0.63	1.59	1.08	1.05	1.07	0.30	0.24	0.04	0.22 (TC)	11,45,38,27
335	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.28	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
336	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.38	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
337	10.9	0.07	0.07	0.63	1.85	1.08	1.25	1.07	0.35	0.24	0.05	0.22 (TC)	11,45,38,27
338	10.9	0.07	0.07	0.63	1.59	1.08	1.05	1.07	0.30	0.24	0.04	0.22 (TC)	11,45,38,27
339	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.28	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
340	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.38	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
341	10.9	0.07	0.07	0.63	1.85	1.08	1.25	1.07	0.35	0.24	0.05	0.22 (TC)	11,45,38,27
342	10.9	0.07	0.07	0.63	1.59	1.08	1.05	1.07	0.30	0.24	0.04	0.22 (TC)	11,45,38,27
343	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.28	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
344	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.38	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
345	10.9	0.07	0.07	0.63	1.85	1.08	1.25	1.07	0.35	0.24	0.05	0.22 (TC)	11,45,38,27
346	10.9	0.07	0.07	0.63	1.59	1.08	1.05	1.07	0.30	0.24	0.04	0.22 (TC)	11,45,38,27
347	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.28	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
348	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.38	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
349	10.9	0.07	0.07	0.63	1.85	1.08	1.25	1.07	0.35	0.24	0.05	0.22 (TC)	11,45,38,27
350	10.9	0.07	0.07	0.63	1.59	1.08	1.05	1.07	0.30	0.24	0.04	0.22 (TC)	11,45,38,27
351	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.28	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
352	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.38	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
353	10.9	0.07	0.07	0.63	1.85	1.08	1.25	1.07	0.35	0.24	0.05	0.22 (TC)	11,45,38,27
354	10.9	0.07	0.07	0.63	1.59	1.08	1.05	1.07	0.30	0.24	0.04	0.22 (TC)	11,45,38,27
379	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.28	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
380	10.9	0.07	0.07	0.63	1.99	1.40	1.34	1.38	0.37	0.18	0.05	0.21 (TC)	11,41,38,27
381	10.9	0.07	0.07	0.63	1.85	1.08	1.25	1.07	0.35	0.24	0.05	0.22 (TC)	11,45,38,27
382	10.9	0.07	0.07	0.63	1.59	1.08	1.05	1.07	0.30	0.24	0.04	0.22 (TC)	11,45,38,27

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V
	10.88	0.07	0.07	0.63	1.99	1.40	1.34	1.38	0.37	0.24	0.05	0.22

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
		cm			
23	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04- muratura E = 1.500e+04	14.0	4.05	3.24	ok L

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
					daN/cm2	daN/cm2	daN/cm2	daN/cm2					
355	19.4	0.11	0.11	0.32	1.73	1.03	1.05	1.04	0.63	0.12	0.13	0.21 (TC)	4,37,27,23
356	19.4	0.12	0.11	0.32	1.73	1.03	1.05	0.96	0.63	0.12	0.13	0.22 (TC)	4,37,27,23
357	19.4	0.12	0.11	0.32	1.61	0.75	0.92	0.74	0.58	0.11	0.12	0.23 (TC)	4,37,35,23
358	19.4	0.12	0.12	0.32	1.26	0.75	0.73	0.74	0.46	0.11	0.10	0.23 (TC)	4,37,35,23
359	19.4	0.11	0.11	0.32	1.73	1.03	1.05	1.04	0.63	0.12	0.13	0.21 (TC)	4,37,27,23
360	19.4	0.12	0.11	0.32	1.73	1.03	1.05	0.96	0.63	0.12	0.13	0.22 (TC)	4,37,27,23
361	19.4	0.12	0.11	0.32	1.73	1.03	1.05	0.96	0.63	0.12	0.13	0.22 (TC)	4,37,27,23
362	19.4	0.11	0.11	0.32	1.73	1.03	1.05	1.04	0.63	0.12	0.13	0.21 (TC)	4,37,27,23
363	19.4	0.12	0.11	0.32	1.61	0.75	0.92	0.74	0.58	0.11	0.12	0.23 (TC)	4,37,35,23
364	19.4	0.12	0.11	0.32	1.61	0.75	0.92	0.74	0.58	0.11	0.12	0.23 (TC)	4,37,35,23
365	19.4	0.12	0.12	0.32	1.26	0.75	0.73	0.74	0.46	0.11	0.10	0.23 (TC)	4,37,35,23
366	19.4	0.12	0.12	0.32	1.26	0.75	0.73	0.74	0.46	0.11	0.10	0.23 (TC)	4,37,35,23
367	19.4	0.12	0.11	0.32	1.73	1.03	1.05	0.96	0.63	0.12	0.13	0.22 (TC)	4,37,27,23
368	19.4	0.11	0.11	0.32	1.73	1.03	1.05	1.04	0.63	0.12	0.13	0.21 (TC)	4,37,27,23
369	19.4	0.12	0.11	0.32	1.61	0.75	0.92	0.74	0.58	0.11	0.12	0.23 (TC)	4,37,35,23
370	19.4	0.12	0.12	0.32	1.26	0.75	0.73	0.74	0.46	0.11	0.10	0.23 (TC)	4,37,35,23
371	19.4	0.12	0.11	0.32	1.73	1.03	1.05	0.96	0.63	0.12	0.13	0.22 (TC)	4,37,27,23
372	19.4	0.11	0.11	0.32	1.73	1.03	1.05	1.04	0.63	0.12	0.13	0.21 (TC)	4,37,27,23
373	19.4	0.12	0.11	0.32	1.61	0.75	0.92	0.74	0.58	0.11	0.12	0.23 (TC)	4,37,35,23
374	19.4	0.12	0.12	0.32	1.26	0.75	0.73	0.74	0.46	0.11	0.10	0.23 (TC)	4,37,35,23
375	19.4	0.12	0.11	0.32	1.73	1.03	1.05	0.96	0.63	0.12	0.13	0.22 (TC)	4,37,27,23
376	19.4	0.11	0.11	0.32	1.73	1.03	1.05	1.04	0.63	0.12	0.13	0.21 (TC)	4,37,27,23
377	19.4	0.12	0.11	0.32	1.61	0.75	0.92	0.74	0.58	0.11	0.12	0.23 (TC)	4,37,35,23

INGEGNERE

378	19.4	0.12	0.12	0.32	1.26	0.75	0.73	0.74	0.46	0.11	0.10	0.23 (TC)	4,37,35,23
Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	
	19.43	0.12	0.12	0.32	1.73	1.03	1.05	1.04	0.63	0.12	0.13	0.23	

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
25	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04- muratura E = 1.500e+04	cm 28.0	4.05	3.24	ok L

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
					daN/cm2	daN/cm2	daN/cm2	daN/cm2					
414	12.3	0.28	0.25	0.22	0.70	0.72	0.71	0.75	0.37	0.68	6.70e-03	0.59 (TC)	5,30,7,39
418	12.3	0.28	0.25	0.22	0.70	0.72	0.71	0.75	0.37	0.68	6.70e-03	0.59 (TC)	5,30,7,39
652	12.3	0.12	0.12	0.48	0.66	0.42	0.51	0.43	0.16	0.67	0.02	0.32 (TC)	11,29,12,39
864	12.3	0.12	0.12	0.48	0.66	0.42	0.51	0.43	0.16	0.67	0.02	0.32 (TC)	11,29,12,39
918	12.3	0.12	0.11	0.49	0.82	0.55	0.51	0.57	0.20	0.72	0.02	0.41 (TC)	11,30,12,45
940	12.3	0.29	0.11	0.49	0.82	0.75	0.73	0.78	0.20	0.86	0.02	0.49 (TC)	11,30,7,45
948	12.3	0.12	0.11	0.49	0.82	0.55	0.51	0.57	0.20	0.72	0.02	0.41 (TC)	11,30,12,45
965	12.3	0.29	0.25	0.22	0.70	0.75	0.73	0.75	0.37	0.86	0.02	0.59 (TC)	5,30,7,39
967	12.3	0.29	0.11	0.49	0.82	0.75	0.73	0.78	0.20	0.86	0.02	0.49 (TC)	11,30,7,45
969	12.3	0.29	0.25	0.22	0.70	0.75	0.73	0.75	0.37	0.86	0.02	0.59 (TC)	5,30,7,39
Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	
	12.35	0.29	0.25	0.22	0.82	0.75	0.73	0.78	0.37	0.86	0.02	0.59	

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
29	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04- muratura E = 1.500e+04	cm 28.0	4.05	3.24	ok L

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
					daN/cm2	daN/cm2	daN/cm2	daN/cm2					
210	15.2	0.11	0.11	0.43	1.45	1.05	1.01	1.04	0.39	0.60	0.01	0.17 (TC)	11,15,33,32
214	15.2	0.11	0.11	0.43	1.45	1.05	1.01	1.04	0.39	0.60	0.01	0.17 (TC)	11,15,33,32
218	15.2	0.11	0.11	0.43	1.45	1.05	1.01	1.04	0.39	0.60	0.01	0.17 (TC)	11,15,33,32
222	15.2	0.11	0.11	0.43	1.45	1.05	1.01	1.04	0.39	0.60	0.01	0.17 (TC)	11,15,33,32
226	15.2	0.11	0.11	0.43	1.45	1.05	1.01	1.04	0.39	0.60	0.01	0.17 (TC)	11,15,33,32
230	15.2	0.11	0.11	0.43	1.45	1.05	1.01	1.04	0.39	0.60	0.01	0.17 (TC)	11,15,33,32
521	15.2	0.12	0.12	0.41	0.88	0.61	0.60	0.43	0.25	0.54	0.02	0.17 (TC)	11,19,34,33
612	15.2	0.12	0.12	0.41	0.88	0.61	0.60	0.48	0.25	0.54	0.02	0.17 (TC)	11,19,34,33
722	15.2	0.12	0.12	0.41	0.88	0.61	0.60	0.43	0.25	0.54	0.02	0.17 (TC)	11,19,34,33
742	15.2	0.12	0.12	0.41	0.88	0.61	0.60	0.48	0.25	0.54	0.02	0.18 (TC)	11,19,34,33
761	15.2	0.20	0.16	0.34	1.32	0.95	0.91	0.95	0.46	0.73	0.03	0.19 (TC)	9,19,33,32
763	15.2	0.20	0.16	0.34	1.32	0.95	0.91	0.80	0.46	0.73	0.03	0.21 (TC)	9,19,33,32
764	15.2	0.16	0.14	0.36	1.12	0.80	0.76	0.80	0.37	0.62	0.02	0.21 (TC)	11,19,33,32
765	15.2	0.20	0.16	0.34	1.32	0.95	0.91	0.95	0.46	0.73	0.03	0.19 (TC)	9,19,33,32
767	15.2	0.20	0.16	0.34	1.32	0.95	0.91	0.80	0.46	0.73	0.03	0.21 (TC)	9,19,33,32
768	15.2	0.16	0.14	0.36	1.12	0.80	0.76	0.80	0.37	0.62	0.02	0.21 (TC)	11,19,33,32
769	15.2	0.20	0.16	0.34	1.32	0.95	0.91	0.95	0.46	0.73	0.03	0.19 (TC)	9,19,33,32
771	15.2	0.20	0.16	0.34	1.32	0.95	0.91	0.80	0.46	0.73	0.03	0.21 (TC)	9,19,33,32
772	15.2	0.16	0.14	0.36	1.12	0.80	0.76	0.80	0.37	0.62	0.02	0.21 (TC)	11,19,33,32
773	15.2	0.20	0.16	0.34	1.32	0.95	0.91	0.95	0.46	0.73	0.03	0.19 (TC)	9,19,33,32
775	15.2	0.20	0.16	0.34	1.32	0.95	0.91	0.80	0.46	0.73	0.03	0.21 (TC)	9,19,33,32
776	15.2	0.16	0.14	0.36	1.12	0.80	0.76	0.80	0.37	0.62	0.02	0.21 (TC)	11,19,33,32
777	15.2	0.20	0.16	0.34	1.32	0.95	0.91	0.95	0.46	0.73	0.03	0.19 (TC)	9,19,33,32
779	15.2	0.20	0.16	0.34	1.32	0.95	0.91	0.80	0.46	0.73	0.03	0.21 (TC)	9,19,33,32
780	15.2	0.16	0.14	0.36	1.12	0.80	0.76	0.80	0.37	0.62	0.02	0.21 (TC)	11,19,33,32
781	15.2	0.20	0.16	0.34	1.32	0.95	0.91	0.95	0.46	0.73	0.03	0.19 (TC)	9,19,33,32
783	15.2	0.20	0.16	0.34	1.32	0.95	0.91	0.80	0.46	0.73	0.03	0.21 (TC)	9,19,33,32
784	15.2	0.16	0.14	0.36	1.12	0.80	0.76	0.80	0.37	0.62	0.02	0.21 (TC)	11,19,33,32
802	15.2	0.11	0.10	0.44	0.73	0.44	0.43	0.48	0.19	0.53	0.02	0.18 (TC)	11,19,33,33
804	15.2	0.11	0.10	0.44	0.73	0.44	0.48	0.48	0.19	0.53	0.01	0.17 (TC)	11,19,33,33
812	15.2	0.12	0.12	0.41	0.88	0.61	0.60	0.48	0.25	0.54	0.02	0.18 (TC)	11,19,34,33
814	15.2	0.12	0.12	0.41	0.88	0.61	0.60	0.58	0.25	0.54	0.02	0.15 (TC)	11,19,34,33
820	15.2	0.12	0.12	0.41	0.88	0.61	0.60	0.58	0.25	0.54	0.02	0.15 (TC)	11,19,34,33
834	15.2	0.11	0.10	0.44	0.66	0.44	0.43	0.43	0.18	0.53	0.01	0.17 (TC)	11,19,33,33
860	15.2	0.12	0.12	0.41	0.88	0.61	0.60	0.58	0.25	0.54	0.02	0.15 (TC)	11,19,34,33
888	15.2	0.12	0.12	0.41	0.88	0.61	0.60	0.58	0.25	0.54	0.02	0.15 (TC)	11,19,34,33
921	15.2	0.16	0.14	0.36	1.12	0.80	0.76	0.80	0.37	0.62	0.02	0.21 (TC)	11,19,33,32
925	15.2	0.11	0.10	0.44	0.73	0.49	0.48	0.48	0.19	0.52	0.01	0.18 (TC)	11,19,33,33
927	15.2	0.11	0.11	0.43	1.45	1.05	1.01	1.04	0.39	0.60	0.01	0.17 (TC)	11,15,33,32

INGEGNERE

928	15.2	0.20	0.16	0.34	1.32	0.95	0.91	0.95	0.46	0.73	0.03	0.19 (TC)	9,19,33,32
929	15.2	0.20	0.16	0.34	1.32	0.95	0.91	0.80	0.46	0.73	0.03	0.21 (TC)	9,19,33,32
931	15.2	0.11	0.10	0.44	0.66	0.44	0.43	0.43	0.18	0.54	0.02	0.17 (TC)	11,19,33,33

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V
	15.18	0.20	0.16	0.34	1.45	1.05	1.01	1.04	0.46	0.73	0.03	0.21

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
		cm			
30	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04-muratura (consolidata) E = 2.250e+04	34.0	4.05	3.24	ok L

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
					daN/cm2	daN/cm2	daN/cm2	daN/cm2					
451	8.0	0.29	0.29	0.27	1.07	0.68	0.78	0.72	0.42	0.50	0.26	0.26 (TC)	11,19,39,40
452	8.0	0.21	0.21	0.41	1.18	0.87	0.78	0.80	0.30	0.35	0.26	0.25 (TC)	9,22,39,40
453	8.0	0.29	0.29	0.27	1.07	0.68	0.70	0.72	0.42	0.50	0.26	0.26 (TC)	11,19,39,40
455	8.0	0.29	0.29	0.27	1.07	0.68	0.78	0.72	0.42	0.50	0.26	0.26 (TC)	11,19,39,40
456	8.0	0.21	0.21	0.41	1.18	0.87	0.78	0.80	0.30	0.35	0.26	0.25 (TC)	9,22,39,40
457	8.0	0.29	0.29	0.27	1.07	0.68	0.70	0.72	0.42	0.50	0.26	0.26 (TC)	11,19,39,40
459	8.0	0.29	0.29	0.27	1.07	0.68	0.78	0.72	0.42	0.50	0.26	0.26 (TC)	11,19,39,40
460	8.0	0.21	0.21	0.41	1.18	0.87	0.78	0.80	0.30	0.35	0.26	0.25 (TC)	9,22,39,40
461	8.0	0.29	0.29	0.27	1.07	0.68	0.70	0.72	0.42	0.50	0.26	0.26 (TC)	11,19,39,40
463	8.0	0.29	0.29	0.27	1.07	0.68	0.78	0.72	0.42	0.50	0.26	0.26 (TC)	11,19,39,40
464	8.0	0.21	0.21	0.41	1.18	0.87	0.78	0.80	0.30	0.35	0.26	0.25 (TC)	9,22,39,40
465	8.0	0.29	0.29	0.27	1.07	0.68	0.70	0.72	0.42	0.50	0.26	0.26 (TC)	11,19,39,40
467	8.0	0.29	0.29	0.27	1.07	0.68	0.78	0.72	0.42	0.50	0.26	0.26 (TC)	11,19,39,40
468	8.0	0.21	0.21	0.41	1.18	0.87	0.78	0.80	0.30	0.35	0.26	0.25 (TC)	9,22,39,40
469	8.0	0.29	0.29	0.27	1.07	0.68	0.70	0.72	0.42	0.50	0.26	0.26 (TC)	11,19,39,40
471	8.0	0.29	0.29	0.27	1.07	0.68	0.78	0.72	0.42	0.50	0.26	0.26 (TC)	11,19,39,40
472	8.0	0.21	0.21	0.41	1.18	0.87	0.78	0.80	0.30	0.35	0.26	0.25 (TC)	9,22,39,40
473	8.0	0.29	0.29	0.27	1.07	0.68	0.70	0.72	0.42	0.50	0.26	0.26 (TC)	11,19,39,40
475	8.0	0.29	0.29	0.27	1.07	0.68	0.78	0.72	0.42	0.50	0.26	0.26 (TC)	11,19,39,40
476	8.0	0.21	0.21	0.41	1.18	0.87	0.78	0.80	0.30	0.35	0.26	0.25 (TC)	9,22,39,40
477	8.0	0.29	0.29	0.27	1.07	0.68	0.70	0.72	0.42	0.50	0.26	0.26 (TC)	11,19,39,40
1006	8.0	0.29	0.29	0.27	1.07	0.68	0.70	0.72	0.42	0.50	0.26	0.26 (TC)	11,19,39,40
1015	8.0	0.21	0.21	0.41	1.18	0.87	0.78	0.80	0.30	0.35	0.26	0.25 (TC)	9,22,39,40
1016	8.0	0.29	0.29	0.27	1.07	0.68	0.78	0.72	0.42	0.50	0.26	0.26 (TC)	11,19,39,40
1017	8.0	0.29	0.29	0.27	1.07	0.68	0.70	0.72	0.42	0.50	0.26	0.26 (TC)	11,19,39,40
1018	8.0	0.21	0.21	0.41	1.18	0.87	0.78	0.80	0.30	0.35	0.26	0.25 (TC)	9,22,39,40
1019	8.0	0.29	0.29	0.27	1.07	0.68	0.78	0.72	0.42	0.50	0.26	0.26 (TC)	11,19,39,40

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V
	8.00	0.29	0.29	0.27	1.18	0.87	0.78	0.80	0.42	0.50	0.26	0.26

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
		cm			
32	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04-muratura (consolidata) E = 2.250e+04	34.0	4.05	3.24	ok L

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
					daN/cm2	daN/cm2	daN/cm2	daN/cm2					
479	8.0	0.14	0.14	0.54	0.95	0.44	0.44	0.78	0.18	0.29	0.37	0.60 (TC)	11,20,20,11
480	8.0	0.09	0.09	0.65	0.78	0.82	0.31	0.78	0.13	0.10	0.08	0.60 (TC)	11,21,20,11
481	8.0	0.14	0.14	0.54	0.95	0.44	0.44	0.95	0.18	0.29	0.37	0.53 (TC)	11,20,20,11
483	8.0	0.14	0.14	0.54	0.95	0.44	0.44	0.78	0.18	0.29	0.37	0.60 (TC)	11,20,20,11
484	8.0	0.09	0.09	0.65	0.78	0.82	0.31	0.78	0.13	0.10	0.08	0.60 (TC)	11,21,20,11
485	8.0	0.14	0.14	0.54	0.95	0.44	0.44	0.95	0.18	0.29	0.37	0.53 (TC)	11,20,20,11

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V
	8.00	0.14	0.14	0.54	0.95	0.82	0.44	0.95	0.18	0.29	0.37	0.60

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
		cm			
34	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04-muratura E = 1.500e+04	14.0	4.05	3.24	ok L

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
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					daN/cm2	daN/cm2	daN/cm2	daN/cm2						
525	19.4	0.12	0.12	0.32	2.02	0.90	0.77	1.18	0.74	0.25	0.33	0.18 (TC)	11,33,31,17	
526	19.4	0.12	0.12	0.32	2.02	0.90	0.88	1.31	0.74	0.25	0.29	0.17 (TC)	11,33,31,17	
528	19.4	0.12	0.12	0.32	1.85	0.78	0.58	0.93	0.68	0.15	0.38	0.18 (TC)	11,33,31,17	
529	19.4	0.12	0.12	0.32	1.49	0.58	0.58	0.93	0.55	0.12	0.38	0.18 (TC)	11,31,31,17	
530	19.4	0.12	0.12	0.32	2.02	0.90	0.77	1.18	0.74	0.25	0.33	0.18 (TC)	11,33,31,17	
531	19.4	0.12	0.12	0.32	2.02	0.90	0.88	1.31	0.74	0.25	0.29	0.17 (TC)	11,33,31,17	
532	19.4	0.12	0.12	0.32	1.85	0.78	0.58	0.93	0.68	0.15	0.38	0.18 (TC)	11,33,31,17	
533	19.4	0.12	0.12	0.32	1.49	0.58	0.58	0.93	0.55	0.12	0.38	0.18 (TC)	11,31,31,17	
534	19.4	0.12	0.12	0.32	2.02	0.90	0.77	1.18	0.74	0.25	0.33	0.18 (TC)	11,33,31,17	
535	19.4	0.12	0.12	0.32	2.02	0.90	0.88	1.31	0.74	0.25	0.29	0.17 (TC)	11,33,31,17	
536	19.4	0.12	0.12	0.32	1.85	0.78	0.58	0.93	0.68	0.15	0.38	0.18 (TC)	11,33,31,17	
537	19.4	0.12	0.12	0.32	1.49	0.58	0.58	0.93	0.55	0.12	0.38	0.18 (TC)	11,31,31,17	
538	19.4	0.12	0.12	0.32	2.02	0.90	0.77	1.18	0.74	0.25	0.33	0.18 (TC)	11,33,31,17	
539	19.4	0.12	0.12	0.32	2.02	0.90	0.88	1.31	0.74	0.25	0.29	0.17 (TC)	11,33,31,17	
540	19.4	0.12	0.12	0.32	1.85	0.78	0.58	0.93	0.68	0.15	0.38	0.18 (TC)	11,33,31,17	
541	19.4	0.12	0.12	0.32	1.49	0.58	0.58	0.93	0.55	0.12	0.38	0.18 (TC)	11,31,31,17	
542	19.4	0.12	0.12	0.32	2.02	0.90	0.77	1.18	0.74	0.25	0.33	0.18 (TC)	11,33,31,17	
543	19.4	0.12	0.12	0.32	2.02	0.90	0.88	1.31	0.74	0.25	0.29	0.17 (TC)	11,33,31,17	
544	19.4	0.12	0.12	0.32	1.85	0.78	0.58	0.93	0.68	0.15	0.38	0.18 (TC)	11,33,31,17	
545	19.4	0.12	0.12	0.32	1.49	0.58	0.58	0.93	0.55	0.12	0.38	0.18 (TC)	11,31,31,17	
546	19.4	0.12	0.12	0.32	2.02	0.90	0.77	1.18	0.74	0.25	0.33	0.18 (TC)	11,33,31,17	
547	19.4	0.12	0.12	0.32	2.02	0.90	0.88	1.31	0.74	0.25	0.29	0.17 (TC)	11,33,31,17	
548	19.4	0.12	0.12	0.32	1.85	0.78	0.58	0.93	0.68	0.15	0.38	0.18 (TC)	11,33,31,17	
549	19.4	0.12	0.12	0.32	1.49	0.58	0.58	0.93	0.55	0.12	0.38	0.18 (TC)	11,31,31,17	
550	19.4	0.12	0.12	0.32	2.02	0.90	0.77	1.18	0.74	0.25	0.33	0.18 (TC)	11,33,31,17	
551	19.4	0.12	0.12	0.32	2.02	0.90	0.88	1.31	0.74	0.25	0.29	0.17 (TC)	11,33,31,17	
552	19.4	0.12	0.12	0.32	1.85	0.78	0.58	0.93	0.68	0.15	0.38	0.18 (TC)	11,33,31,17	
553	19.4	0.12	0.12	0.32	1.49	0.58	0.58	0.93	0.55	0.12	0.38	0.18 (TC)	11,31,31,17	

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V
	19.43	0.12	0.12	0.32	2.02	0.90	0.88	1.31	0.74	0.25	0.38	0.18

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
38	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04- muratura E = 1.500e+04	cm 28.0	4.05	3.24	ok L

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
					daN/cm2	daN/cm2	daN/cm2	daN/cm2					
182	9.1	0.08	0.08	0.63	1.42	0.92	1.42	0.90	0.27	0.46	0.15	0.19 (TC)	11,36,9,15
186	9.1	0.08	0.08	0.63	1.42	0.92	1.42	0.90	0.27	0.46	0.15	0.19 (TC)	11,36,9,15
190	9.1	0.08	0.08	0.63	1.42	0.92	1.42	0.90	0.27	0.46	0.15	0.19 (TC)	11,36,9,15
194	9.1	0.08	0.08	0.63	1.42	0.92	1.42	0.90	0.27	0.46	0.15	0.19 (TC)	11,36,9,15
198	9.1	0.08	0.08	0.63	1.42	0.92	1.42	0.90	0.27	0.46	0.15	0.19 (TC)	11,36,9,15
202	9.1	0.08	0.08	0.63	1.42	0.92	1.42	0.90	0.27	0.46	0.15	0.19 (TC)	11,36,9,15
733	9.1	0.08	0.08	0.63	1.42	0.92	1.17	0.73	0.27	0.46	0.20	0.20 (TC)	11,36,9,15
735	9.1	0.07	0.07	0.67	1.17	0.72	0.74	0.45	0.20	0.41	0.28	0.20 (TC)	9,36,9,15
736	9.1	0.06	0.06	0.70	0.74	0.43	0.74	0.45	0.12	0.28	0.28	0.20 (TC)	9,32,9,15
737	9.1	0.08	0.08	0.63	1.42	0.92	1.17	0.73	0.27	0.46	0.20	0.20 (TC)	11,36,9,15
739	9.1	0.07	0.07	0.67	1.17	0.72	0.74	0.45	0.20	0.41	0.28	0.20 (TC)	9,36,9,15
740	9.1	0.06	0.06	0.70	0.74	0.43	0.74	0.45	0.12	0.28	0.28	0.20 (TC)	9,32,9,15
741	9.1	0.08	0.08	0.63	1.42	0.92	1.17	0.73	0.27	0.46	0.20	0.20 (TC)	11,36,9,15
743	9.1	0.07	0.07	0.67	1.17	0.72	0.74	0.45	0.20	0.41	0.28	0.20 (TC)	9,36,9,15
744	9.1	0.06	0.06	0.70	0.74	0.43	0.74	0.45	0.12	0.28	0.28	0.20 (TC)	9,32,9,15
745	9.1	0.08	0.08	0.63	1.42	0.92	1.17	0.73	0.27	0.46	0.20	0.20 (TC)	11,36,9,15
747	9.1	0.07	0.07	0.67	1.17	0.72	0.74	0.45	0.20	0.41	0.28	0.20 (TC)	9,36,9,15
748	9.1	0.06	0.06	0.70	0.74	0.43	0.74	0.45	0.12	0.28	0.28	0.20 (TC)	9,32,9,15
749	9.1	0.08	0.08	0.63	1.42	0.92	1.17	0.73	0.27	0.46	0.20	0.20 (TC)	11,36,9,15
751	9.1	0.07	0.07	0.67	1.17	0.72	0.74	0.45	0.20	0.41	0.28	0.20 (TC)	9,36,9,15
752	9.1	0.06	0.06	0.70	0.74	0.43	0.74	0.45	0.12	0.28	0.28	0.20 (TC)	9,32,9,15
753	9.1	0.08	0.08	0.63	1.42	0.92	1.17	0.73	0.27	0.46	0.20	0.20 (TC)	11,36,9,15
755	9.1	0.07	0.07	0.67	1.17	0.72	0.74	0.45	0.20	0.41	0.28	0.20 (TC)	9,36,9,15
756	9.1	0.06	0.06	0.70	0.74	0.43	0.74	0.45	0.12	0.28	0.28	0.20 (TC)	9,32,9,15
778	9.1	0.06	0.06	0.70	0.74	0.43	0.74	0.45	0.12	0.28	0.28	0.20 (TC)	9,32,9,15
985	9.1	0.08	0.08	0.63	1.42	0.92	1.42	0.90	0.27	0.46	0.15	0.19 (TC)	11,36,9,15
995	9.1	0.08	0.08	0.63	1.42	0.92	1.17	0.73	0.27	0.46	0.20	0.20 (TC)	11,36,9,15
996	9.1	0.07	0.07	0.67	1.17	0.72	0.74	0.45	0.20	0.41	0.28	0.20 (TC)	9,36,9,15

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V
	9.11	0.08	0.08	0.63	1.42	0.92	1.42	0.90	0.27	0.46	0.28	0.20

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
		cm			

INGEGNERE

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
39	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04- muratura E = 1.500e+04	28.0	4.05	3.24	ok L

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
					daN/cm2	daN/cm2	daN/cm2	daN/cm2					
202	10.5	0.07	0.07	0.65	1.20	0.88	1.14	0.88	0.22	0.08	0.10	0.35 (TC)	11,34,3,34
206	10.5	0.07	0.07	0.65	1.20	0.88	1.14	0.88	0.22	0.08	0.10	0.35 (TC)	11,34,3,34
753	10.5	0.07	0.06	0.65	1.23	0.80	1.14	0.85	0.22	0.11	0.10	0.48 (TC)	9,18,3,34
755	10.5	0.10	0.09	0.59	1.25	0.79	1.25	0.89	0.25	0.41	0.26	0.61 (TC)	11,17,11,34
756	10.5	0.11	0.10	0.57	1.22	0.75	0.70	1.22	0.25	0.63	0.39	0.70 (TC)	11,17,33,11
757	10.5	0.07	0.06	0.65	1.23	0.80	1.14	0.85	0.22	0.11	0.10	0.48 (TC)	9,18,3,34
759	10.5	0.10	0.09	0.59	1.25	0.79	1.25	0.89	0.25	0.41	0.26	0.61 (TC)	11,17,11,34
760	10.5	0.11	0.10	0.57	1.22	0.75	0.70	1.22	0.25	0.63	0.39	0.70 (TC)	11,17,33,11
932	10.5	0.11	0.10	0.57	1.22	0.75	0.70	1.22	0.25	0.63	0.39	0.70 (TC)	11,17,33,11
Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	
	10.45	0.11	0.10	0.57	1.25	0.88	1.25	1.22	0.25	0.63	0.39	0.70	

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
		cm			
42	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04- muratura E = 1.500e+04	28.0	4.05	3.24	ok L

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
					daN/cm2	daN/cm2	daN/cm2	daN/cm2					
100	10.4	0.08	0.08	0.62	1.53	1.11	1.43	1.13	0.29	0.11	0.11	0.24 (TC)	11,24,3,33
234	10.4	0.08	0.08	0.62	1.53	1.11	1.43	1.13	0.29	0.11	0.11	0.24 (TC)	11,24,3,33
651	10.4	0.09	0.09	0.58	1.50	0.97	1.43	1.03	0.30	0.17	0.11	0.27 (TC)	11,25,3,37
653	10.4	0.13	0.09	0.58	1.50	0.81	0.81	0.92	0.30	0.39	0.12	0.48 (TC)	11,26,26,37
654	10.4	0.13	0.12	0.52	1.30	0.68	0.63	0.89	0.29	0.49	0.28	0.60 (TC)	11,26,38,37
785	10.4	0.09	0.09	0.58	1.50	0.97	1.43	1.03	0.30	0.17	0.11	0.27 (TC)	11,25,3,37
787	10.4	0.13	0.09	0.58	1.50	0.81	0.81	0.92	0.30	0.39	0.12	0.48 (TC)	11,26,26,37
788	10.4	0.13	0.12	0.52	1.30	0.68	0.63	0.89	0.29	0.49	0.28	0.60 (TC)	11,26,38,37
830	10.4	0.11	0.10	0.56	1.14	0.68	0.63	0.89	0.24	0.49	0.28	0.60 (TC)	11,26,38,37
Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	
	10.43	0.13	0.12	0.52	1.53	1.11	1.43	1.13	0.30	0.49	0.28	0.60	

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
		cm			
43	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04- muratura E = 1.500e+04	14.0	4.05	3.24	ok L

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
					daN/cm2	daN/cm2	daN/cm2	daN/cm2					
100	18.2	0.13	0.13	0.32	1.19	0.85	0.75	0.88	0.43	0.19	0.24	0.36 (TC)	11,24,38,33
238	18.2	0.13	0.13	0.32	1.19	0.85	0.75	0.88	0.43	0.19	0.24	0.36 (TC)	11,24,38,33
242	18.2	0.13	0.13	0.32	1.19	0.85	0.75	0.88	0.43	0.19	0.24	0.36 (TC)	11,24,38,33
246	18.2	0.13	0.13	0.32	1.19	0.85	0.75	0.88	0.43	0.19	0.24	0.36 (TC)	11,24,38,33
358	18.2	0.13	0.13	0.32	1.19	0.85	0.75	0.88	0.43	0.19	0.24	0.36 (TC)	11,24,38,33
651	18.2	0.13	0.13	0.32	1.19	0.85	0.75	0.71	0.43	0.19	0.24	0.37 (TC)	11,24,38,33
653	18.2	0.22	0.13	0.32	0.97	0.36	0.58	0.71	0.35	0.32	0.19	0.37 (TC)	11,44,34,33
654	18.2	0.22	0.0	0.0	0.0	0.36	0.35	0.43	0.0	0.32	0.14	0.31 (TC)	0,44,36,37
789	18.2	0.13	0.13	0.32	1.19	0.85	0.75	0.71	0.43	0.19	0.24	0.37 (TC)	11,24,38,33
791	18.2	0.22	0.13	0.32	0.97	0.36	0.58	0.71	0.35	0.32	0.19	0.37 (TC)	11,44,34,33
792	18.2	0.22	0.0	0.0	0.0	0.36	0.35	0.43	0.0	0.32	0.14	0.31 (TC)	0,44,36,37
793	18.2	0.13	0.13	0.32	1.19	0.85	0.75	0.71	0.43	0.19	0.24	0.37 (TC)	11,24,38,33
795	18.2	0.22	0.13	0.32	0.97	0.36	0.58	0.71	0.35	0.32	0.19	0.37 (TC)	11,44,34,33
796	18.2	0.22	0.0	0.0	0.0	0.36	0.35	0.43	0.0	0.32	0.14	0.31 (TC)	0,44,36,37
797	18.2	0.13	0.13	0.32	1.19	0.85	0.75	0.71	0.43	0.19	0.24	0.37 (TC)	11,24,38,33
799	18.2	0.22	0.13	0.32	0.97	0.36	0.58	0.71	0.35	0.32	0.19	0.37 (TC)	11,44,34,33
800	18.2	0.22	0.0	0.0	0.0	0.36	0.35	0.43	0.0	0.32	0.14	0.31 (TC)	0,44,36,37
910	18.2	0.13	0.13	0.32	1.19	0.85	0.75	0.71	0.43	0.19	0.24	0.37 (TC)	11,24,38,33
911	18.2	0.22	0.13	0.32	0.97	0.36	0.58	0.71	0.35	0.32	0.19	0.37 (TC)	11,44,34,33
912	18.2	0.22	0.0	0.0	0.0	0.36	0.35	0.43	0.0	0.32	0.14	0.31 (TC)	0,44,36,37
Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	
	18.21	0.22	0.13	0.0	1.19	0.85	0.75	0.88	0.43	0.32	0.24	0.37	

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
		cm			
45	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04- muratura E = 1.500e+04	25.0	4.05	3.24	ok L

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
					daN/cm2	daN/cm2	daN/cm2	daN/cm2					
258	8.5	0.06	0.06	0.71	0.40	0.16	0.16	0.16	0.07	0.09	0.11	0.42 (TC)	11,41,41,45
262	8.5	0.06	0.06	0.71	0.40	0.16	0.16	0.16	0.07	0.09	0.11	0.42 (TC)	11,41,41,45
640	8.5	0.07	0.07	0.69	0.26	0.16	0.20	0.17	0.04	0.22	0.21	0.33 (TC)	9,43,14,41
809	8.5	0.06	0.06	0.71	0.40	0.16	0.16	0.16	0.07	0.09	0.11	0.42 (TC)	11,41,41,45
811	8.5	0.07	0.06	0.71	0.38	0.16	0.20	0.20	0.06	0.22	0.21	0.35 (TC)	11,43,14,45
813	8.5	0.06	0.06	0.71	0.40	0.16	0.16	0.16	0.07	0.09	0.11	0.42 (TC)	11,41,41,45
815	8.5	0.07	0.06	0.71	0.38	0.16	0.20	0.20	0.06	0.22	0.21	0.35 (TC)	11,43,14,45

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
				0.69									
	8.52	0.07	0.07		0.40	0.16	0.20	0.20	0.07	0.22	0.21	0.42	

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
		cm			
46	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04- muratura E = 1.500e+04	28.0	4.05	3.24	ok L

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
					daN/cm2	daN/cm2	daN/cm2	daN/cm2					
103	18.8	0.13	0.13	0.31	2.21	1.47	1.53	1.55	0.84	0.42	0.10	0.16 (TC)	11,40,31,17
104	18.8	0.13	0.13	0.31	2.21	1.47	1.42	1.42	0.84	0.42	0.11	0.16 (TC)	11,40,31,17
105	18.8	0.13	0.13	0.31	2.21	1.47	1.42	1.42	0.84	0.42	0.11	0.16 (TC)	11,40,31,17
106	18.8	0.13	0.13	0.31	2.21	1.47	1.53	1.55	0.84	0.42	0.10	0.16 (TC)	11,40,31,17
107	18.8	0.13	0.13	0.31	2.06	1.35	1.22	1.21	0.77	0.37	0.12	0.17 (TC)	11,40,31,17
108	18.8	0.13	0.13	0.31	2.06	1.35	1.22	1.21	0.77	0.37	0.12	0.17 (TC)	11,40,31,17
109	18.8	0.13	0.13	0.31	1.78	1.15	1.22	1.21	0.67	0.32	0.12	0.17 (TC)	11,40,31,17
110	18.8	0.13	0.13	0.31	1.78	1.15	1.22	1.21	0.67	0.32	0.12	0.17 (TC)	11,40,31,17
111	18.8	0.13	0.13	0.31	2.21	1.47	1.42	1.42	0.84	0.42	0.11	0.16 (TC)	11,40,31,17
112	18.8	0.13	0.13	0.31	2.21	1.47	1.53	1.55	0.84	0.42	0.10	0.16 (TC)	11,40,31,17
113	18.8	0.13	0.13	0.31	2.06	1.35	1.22	1.21	0.77	0.37	0.12	0.17 (TC)	11,40,31,17
114	18.8	0.13	0.13	0.31	1.78	1.15	1.22	1.21	0.67	0.32	0.12	0.17 (TC)	11,40,31,17
115	18.8	0.13	0.13	0.31	2.21	1.47	1.42	1.42	0.84	0.42	0.11	0.16 (TC)	11,40,31,17
116	18.8	0.13	0.13	0.31	2.21	1.47	1.53	1.55	0.84	0.42	0.10	0.16 (TC)	11,40,31,17
117	18.8	0.13	0.13	0.31	2.06	1.35	1.22	1.21	0.77	0.37	0.12	0.17 (TC)	11,40,31,17
118	18.8	0.13	0.13	0.31	1.78	1.15	1.22	1.21	0.67	0.32	0.12	0.17 (TC)	11,40,31,17
119	18.8	0.13	0.13	0.31	2.21	1.47	1.42	1.42	0.84	0.42	0.11	0.16 (TC)	11,40,31,17
120	18.8	0.13	0.13	0.31	2.21	1.47	1.53	1.55	0.84	0.42	0.10	0.16 (TC)	11,40,31,17
121	18.8	0.13	0.13	0.31	2.06	1.35	1.22	1.21	0.77	0.37	0.12	0.17 (TC)	11,40,31,17
122	18.8	0.13	0.13	0.31	1.78	1.15	1.22	1.21	0.67	0.32	0.12	0.17 (TC)	11,40,31,17
123	18.8	0.13	0.13	0.31	2.21	1.47	1.42	1.42	0.84	0.42	0.11	0.16 (TC)	11,40,31,17
124	18.8	0.13	0.13	0.31	2.21	1.47	1.53	1.55	0.84	0.42	0.10	0.16 (TC)	11,40,31,17
125	18.8	0.13	0.13	0.31	2.06	1.35	1.22	1.21	0.77	0.37	0.12	0.17 (TC)	11,40,31,17
126	18.8	0.13	0.13	0.31	1.78	1.15	1.22	1.21	0.67	0.32	0.12	0.17 (TC)	11,40,31,17
127	18.8	0.13	0.13	0.31	2.21	1.47	1.42	1.42	0.84	0.42	0.11	0.16 (TC)	11,40,31,17
128	18.8	0.13	0.13	0.31	2.21	1.47	1.53	1.55	0.84	0.42	0.10	0.16 (TC)	11,40,31,17
129	18.8	0.13	0.13	0.31	2.06	1.35	1.22	1.21	0.77	0.37	0.12	0.17 (TC)	11,40,31,17
130	18.8	0.13	0.13	0.31	1.78	1.15	1.22	1.21	0.67	0.32	0.12	0.17 (TC)	11,40,31,17
131	18.8	0.13	0.13	0.31	2.21	1.47	1.42	1.42	0.84	0.42	0.11	0.16 (TC)	11,40,31,17
132	18.8	0.13	0.13	0.31	2.21	1.47	1.53	1.55	0.84	0.42	0.10	0.16 (TC)	11,40,31,17
133	18.8	0.13	0.13	0.31	2.06	1.35	1.22	1.21	0.77	0.37	0.12	0.17 (TC)	11,40,31,17
134	18.8	0.13	0.13	0.31	1.78	1.15	1.22	1.21	0.67	0.32	0.12	0.17 (TC)	11,40,31,17
135	18.8	0.13	0.13	0.31	2.21	1.47	1.42	1.42	0.84	0.42	0.11	0.16 (TC)	11,40,31,17
136	18.8	0.13	0.13	0.31	2.21	1.47	1.53	1.55	0.84	0.42	0.10	0.16 (TC)	11,40,31,17
137	18.8	0.13	0.13	0.31	2.06	1.35	1.22	1.21	0.77	0.37	0.12	0.17 (TC)	11,40,31,17
138	18.8	0.13	0.13	0.31	1.78	1.15	1.22	1.21	0.67	0.32	0.12	0.17 (TC)	11,40,31,17
139	18.8	0.13	0.13	0.31	2.21	1.47	1.42	1.42	0.84	0.42	0.11	0.16 (TC)	11,40,31,17
140	18.8	0.13	0.13	0.31	2.21	1.47	1.53	1.55	0.84	0.42	0.10	0.16 (TC)	11,40,31,17
141	18.8	0.13	0.13	0.31	2.06	1.35	1.22	1.21	0.77	0.37	0.12	0.17 (TC)	11,40,31,17
142	18.8	0.13	0.13	0.31	1.78	1.15	1.22	1.21	0.67	0.32	0.12	0.17 (TC)	11,40,31,17
143	18.8	0.13	0.13	0.31	2.21	1.47	1.42	1.42	0.84	0.42	0.11	0.16 (TC)	11,40,31,17
144	18.8	0.13	0.13	0.31	2.21	1.47	1.53	1.55	0.84	0.42	0.10	0.16 (TC)	11,40,31,17
145	18.8	0.13	0.13	0.31	2.06	1.35	1.22	1.21	0.77	0.37	0.12	0.17 (TC)	11,40,31,17
146	18.8	0.13	0.13	0.31	1.78	1.15	1.22	1.21	0.67	0.32	0.12	0.17 (TC)	11,40,31,17
147	18.8	0.13	0.13	0.31	2.21	1.47	1.42	1.42	0.84	0.42	0.11	0.16 (TC)	11,40,31,17
148	18.8	0.13	0.13	0.31	2.21	1.47	1.53	1.55	0.84	0.42	0.10	0.16 (TC)	11,40,31,17
149	18.8	0.13	0.13	0.31	2.06	1.35	1.22	1.21	0.77	0.37	0.12	0.17 (TC)	11,40,31,17

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
		cm			
47	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04- muratura E = 1.500e+04	28.0	4.05	3.24	ok L

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
		cm			
51	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04- muratura E = 1.500e+04	28.0	4.05	3.24	ok L

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
		cm			
52	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04- muratura E = 1.500e+04	28.0	4.05	3.24	ok L

[illegible]

INGEGNERE

394	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
395	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
396	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
397	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
398	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
399	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
400	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
401	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
402	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
403	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
404	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
405	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
406	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
407	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
408	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
409	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
410	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
411	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
412	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
413	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
414	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
519	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
520	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
523	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
524	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
554	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
643	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
794	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
808	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
828	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
832	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
840	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
844	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
848	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
852	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
864	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
872	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
902	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
906	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
914	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
917	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
918	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
920	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
936	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
945	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
947	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
949	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
951	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
953	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
955	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
957	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
959	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
960	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
961	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
963	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
964	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
965	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
967	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
998	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
1020	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
1021	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
1022	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
1023	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
1024	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
1025	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
1026	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
1027	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V
	24.89	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
54	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04-	cm			
	muratura E = 1.500e+04	28.0	4.05	3.24	ok L

INGEGNERE

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
					daN/cm2	daN/cm2	daN/cm2	daN/cm2					
103	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
104	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
107	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
109	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
383	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
384	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
385	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
386	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
387	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
388	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
389	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
390	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
658	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
661	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
663	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
816	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
856	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
868	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
923	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
937	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
939	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
941	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
943	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V
	20.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
		cm			
56	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04-muratura E = 1.500e+04	25.0	4.05	3.24	ok L

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
					daN/cm2	daN/cm2	daN/cm2	daN/cm2					
1	23.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
2	23.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
5	23.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
7	23.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
247	20.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
248	20.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
249	23.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
250	23.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
252	23.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
254	23.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
415	20.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
416	20.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
417	20.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
418	20.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
419	20.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
420	20.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
421	20.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
422	20.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
556	23.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
559	23.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
561	23.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
652	20.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
803	23.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
806	23.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
876	20.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
915	23.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
940	20.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
948	20.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
968	20.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
969	20.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V
	23.41	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
		cm			

INGEGNERE

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
57	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04- muratura (consolidata) E = 2.250e+04	14.0	4.05	3.24	ok L

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
					daN/cm2	daN/cm2	daN/cm2	daN/cm2					
415	25.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
416	25.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
417	25.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
418	25.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
507	25.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
508	25.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
509	25.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
510	25.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
511	25.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
512	25.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
513	25.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0
514	25.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 (nd)	0,0,0,0

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V
				0.0								
	25.90	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
		cm			
59	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04- muratura (consolidata) E = 2.250e+04	34.0	4.05	3.24	ok L

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
					daN/cm2	daN/cm2	daN/cm2	daN/cm2					
483	9.8	0.13	0.13	0.52	1.05	0.80	0.55	0.55	0.21	0.20	0.30	0.38 (TC)	11,39,20,20
484	9.8	0.13	0.13	0.52	1.05	0.80	0.69	0.69	0.21	0.20	0.26	0.32 (TC)	11,39,20,20
485	9.8	0.40	0.10	0.57	0.86	0.35	0.33	0.33	0.16	0.69	0.35	0.48 (TC)	11,27,20,20
486	9.8	0.40	0.0	0.0	0.0	0.35	0.33	0.33	0.0	0.69	0.35	0.48 (TC)	0,27,20,20
487	9.8	0.13	0.13	0.52	1.05	0.80	0.55	0.55	0.21	0.20	0.30	0.38 (TC)	11,39,20,20
488	9.8	0.13	0.13	0.52	1.05	0.80	0.69	0.69	0.21	0.20	0.26	0.32 (TC)	11,39,20,20
489	9.8	0.40	0.10	0.57	0.86	0.35	0.33	0.33	0.16	0.69	0.35	0.48 (TC)	11,27,20,20
490	9.8	0.40	0.0	0.0	0.0	0.35	0.33	0.33	0.0	0.69	0.35	0.48 (TC)	0,27,20,20
491	9.8	0.13	0.13	0.52	1.05	0.80	0.55	0.55	0.21	0.20	0.30	0.38 (TC)	11,39,20,20
492	9.8	0.13	0.13	0.52	1.05	0.80	0.69	0.69	0.21	0.20	0.26	0.32 (TC)	11,39,20,20
493	9.8	0.40	0.10	0.57	0.86	0.35	0.33	0.33	0.16	0.69	0.35	0.48 (TC)	11,27,20,20
494	9.8	0.40	0.0	0.0	0.0	0.35	0.33	0.33	0.0	0.69	0.35	0.48 (TC)	0,27,20,20
495	9.8	0.13	0.13	0.52	1.05	0.80	0.55	0.55	0.21	0.20	0.30	0.38 (TC)	11,39,20,20
496	9.8	0.13	0.13	0.52	1.05	0.80	0.69	0.69	0.21	0.20	0.26	0.32 (TC)	11,39,20,20
497	9.8	0.40	0.10	0.57	0.86	0.35	0.33	0.33	0.16	0.69	0.35	0.48 (TC)	11,27,20,20
498	9.8	0.40	0.0	0.0	0.0	0.35	0.33	0.33	0.0	0.69	0.35	0.48 (TC)	0,27,20,20
499	9.8	0.13	0.13	0.52	1.05	0.80	0.55	0.55	0.21	0.20	0.30	0.38 (TC)	11,39,20,20
500	9.8	0.13	0.13	0.52	1.05	0.80	0.69	0.69	0.21	0.20	0.26	0.32 (TC)	11,39,20,20
501	9.8	0.40	0.10	0.57	0.86	0.35	0.33	0.33	0.16	0.69	0.35	0.48 (TC)	11,27,20,20
502	9.8	0.40	0.0	0.0	0.0	0.35	0.33	0.33	0.0	0.69	0.35	0.48 (TC)	0,27,20,20
503	9.8	0.13	0.13	0.52	1.05	0.80	0.55	0.55	0.21	0.20	0.30	0.38 (TC)	11,39,20,20
504	9.8	0.13	0.13	0.52	1.05	0.80	0.69	0.69	0.21	0.20	0.26	0.32 (TC)	11,39,20,20
505	9.8	0.40	0.10	0.57	0.86	0.35	0.33	0.33	0.16	0.69	0.35	0.48 (TC)	11,27,20,20
506	9.8	0.40	0.0	0.0	0.0	0.35	0.33	0.33	0.0	0.69	0.35	0.48 (TC)	0,27,20,20
507	9.8	0.13	0.13	0.52	1.05	0.80	0.55	0.55	0.21	0.20	0.30	0.38 (TC)	11,39,20,20
508	9.8	0.13	0.13	0.52	1.05	0.80	0.69	0.69	0.21	0.20	0.26	0.32 (TC)	11,39,20,20
509	9.8	0.40	0.10	0.57	0.86	0.35	0.33	0.33	0.16	0.69	0.35	0.48 (TC)	11,27,20,20
510	9.8	0.40	0.0	0.0	0.0	0.35	0.33	0.33	0.0	0.69	0.35	0.48 (TC)	0,27,20,20

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V
				0.0								
	9.81	0.40	0.13		1.05	0.80	0.69	0.69	0.21	0.69	0.35	0.48

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
		cm			
63	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04- muratura (consolidata) E = 2.250e+04	34.0	4.05	3.24	ok L

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
					daN/cm2	daN/cm2	daN/cm2	daN/cm2					
435	9.2	0.10	0.10	0.60	0.94	0.76	0.59	0.48	0.16	0.14	0.31	0.52 (TC)	9,40,39,19
436	9.2	0.10	0.10	0.60	0.94	0.76	0.59	0.63	0.16	0.14	0.31	0.45 (TC)	9,40,39,19

INGEGNERE

437	9.2	0.36	0.31	0.20	0.43	0.25	0.46	0.24	0.22	0.69	0.30	0.59 (TC)	3,15,39,19
438	9.2	0.36	0.31	0.20	0.43	0.25	0.25	0.24	0.22	0.69	0.24	0.59 (TC)	3,15,39,19
439	9.2	0.10	0.10	0.60	0.94	0.76	0.59	0.48	0.16	0.14	0.31	0.52 (TC)	9,40,39,19
440	9.2	0.10	0.10	0.60	0.94	0.76	0.59	0.63	0.16	0.14	0.31	0.45 (TC)	9,40,39,19
441	9.2	0.36	0.31	0.20	0.43	0.25	0.46	0.24	0.22	0.69	0.30	0.59 (TC)	3,15,39,19
442	9.2	0.36	0.31	0.20	0.43	0.25	0.25	0.24	0.22	0.69	0.24	0.59 (TC)	3,15,39,19
443	9.2	0.10	0.10	0.60	0.94	0.76	0.59	0.48	0.16	0.14	0.31	0.52 (TC)	9,40,39,19
444	9.2	0.10	0.10	0.60	0.94	0.76	0.59	0.63	0.16	0.14	0.31	0.45 (TC)	9,40,39,19
445	9.2	0.36	0.31	0.20	0.43	0.25	0.46	0.24	0.22	0.69	0.30	0.59 (TC)	3,15,39,19
446	9.2	0.36	0.31	0.20	0.43	0.25	0.25	0.24	0.22	0.69	0.24	0.59 (TC)	3,15,39,19
447	9.2	0.10	0.10	0.60	0.94	0.76	0.59	0.48	0.16	0.14	0.31	0.52 (TC)	9,40,39,19
448	9.2	0.10	0.10	0.60	0.94	0.76	0.59	0.63	0.16	0.14	0.31	0.45 (TC)	9,40,39,19
449	9.2	0.36	0.31	0.20	0.43	0.25	0.46	0.24	0.22	0.69	0.30	0.59 (TC)	3,15,39,19
450	9.2	0.36	0.31	0.20	0.43	0.25	0.25	0.24	0.22	0.69	0.24	0.59 (TC)	3,15,39,19
451	9.2	0.10	0.10	0.60	0.94	0.76	0.59	0.48	0.16	0.14	0.31	0.52 (TC)	9,40,39,19
452	9.2	0.10	0.10	0.60	0.94	0.76	0.59	0.63	0.16	0.14	0.31	0.45 (TC)	9,40,39,19
453	9.2	0.36	0.31	0.20	0.43	0.25	0.46	0.24	0.22	0.69	0.30	0.59 (TC)	3,15,39,19
454	9.2	0.36	0.31	0.20	0.43	0.25	0.25	0.24	0.22	0.69	0.24	0.59 (TC)	3,15,39,19

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V
	9.16	0.36	0.31	0.20	0.94	0.76	0.59	0.63	0.22	0.69	0.31	0.59

Setto	Mat.	Spessore	Gamma non sis.	Gamma sis.	Stato
65	Muratura in mattoni pieni e malta di calce - Circ. n7/2019-muratura E = 1.500e+04- muratura (consolidata) E = 2.250e+04	cm 34.0	4.05	3.24	ok L

Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	Rif. cmb
					daN/cm2	daN/cm2	daN/cm2	daN/cm2					
387	10.7	0.09	0.09	0.57	1.86	1.33	1.34	1.24	0.34	0.13	0.19	0.32 (TC)	9,40,19,22
388	10.7	0.09	0.09	0.57	1.86	1.33	1.34	1.34	0.34	0.13	0.19	0.31 (TC)	9,40,19,22
389	10.7	0.14	0.08	0.59	1.75	0.93	0.93	0.90	0.31	0.19	0.21	0.36 (TC)	9,40,42,22
390	10.7	0.14	0.14	0.48	1.28	0.93	0.93	0.90	0.28	0.19	0.21	0.36 (TC)	9,40,42,22
423	10.7	0.09	0.09	0.57	1.86	1.33	1.34	1.24	0.34	0.13	0.19	0.32 (TC)	9,40,19,22
424	10.7	0.09	0.09	0.57	1.86	1.33	1.34	1.34	0.34	0.13	0.19	0.31 (TC)	9,40,19,22
425	10.7	0.14	0.08	0.59	1.75	0.93	0.93	0.90	0.31	0.19	0.21	0.36 (TC)	9,40,42,22
426	10.7	0.14	0.14	0.48	1.28	0.93	0.93	0.90	0.28	0.19	0.21	0.36 (TC)	9,40,42,22
427	10.7	0.09	0.09	0.57	1.86	1.33	1.34	1.24	0.34	0.13	0.19	0.32 (TC)	9,40,19,22
428	10.7	0.09	0.09	0.57	1.86	1.33	1.34	1.34	0.34	0.13	0.19	0.31 (TC)	9,40,19,22
429	10.7	0.14	0.08	0.59	1.75	0.93	0.93	0.90	0.31	0.19	0.21	0.36 (TC)	9,40,42,22
430	10.7	0.14	0.14	0.48	1.28	0.93	0.93	0.90	0.28	0.19	0.21	0.36 (TC)	9,40,42,22
431	10.7	0.09	0.09	0.57	1.86	1.33	1.34	1.24	0.34	0.13	0.19	0.32 (TC)	9,40,19,22
432	10.7	0.09	0.09	0.57	1.86	1.33	1.34	1.34	0.34	0.13	0.19	0.31 (TC)	9,40,19,22
433	10.7	0.14	0.08	0.59	1.75	0.93	0.93	0.90	0.31	0.19	0.21	0.36 (TC)	9,40,42,22
434	10.7	0.14	0.14	0.48	1.28	0.93	0.93	0.90	0.28	0.19	0.21	0.36 (TC)	9,40,42,22
Nodo	h0/t	Ecc/t(M)	Ecc/t	Fi t	P/Ao	P/Ao(s)	P/Ap	P/Acv	Ver Mo	Ver Mo(S)	Ver Mp	Ver. V	
	10.67	0.14	0.14	0.48	1.86	1.33	1.34	1.34	0.34	0.19	0.21	0.36	

Suzzara, 10/12/2021

Il tecnico

Dott. Ing. Claudio Vincenzi