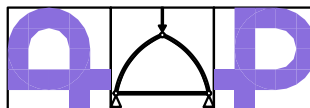




COMUNE DI BORGO SAN LORENZO (FI)
SERVIZIO TECNICO

Piazza Dante n.2
50032 - Borgo San Lorenzo (FI)




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COMUNE DI BORGO SAN LORENZO (FI)
PROGETTO DI MIGLIORAMENTO SISMICO DELLA SCUOLA PRIMARIA
"DON MINZONI" SITUATA IN VIA DON MINZONI, LOC. CAPOLUOGO
CON RIFACIMENTO DELL'ATRIO DI INGRESSO
PROGETTAZIONE ESECUTIVA

COMMITTENTE COMUNE DI BORGO SAN LORENZO Servizio Tecnico Piazza Dante n.2 50032 - Borgo San Lorenzo (FI)	ELABORATO STRUTTURALE A9 - FASCICOLO DEI CALCOLI - Fascolo Nuovo Atrio: dati di input e verifiche
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IL TECNICO INCARICATO Ing. Andrea Pagliazzi Via di Novoli, 97/D 50127 Firenze Tel. 3288264047 e-mail: a.pagliazzi@gmail.com	TIMBRO		COLLABORAZIONE AL PROGETTO ARCHITETTONICO Arch. Paola Guidotti Arch. Andrea Sighieri Dott.ssa Sandra Gualtieri
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FILE BSL_ST_675_5	REVIS. N° 0	DATA FEBBRAIO 2018	TAV. REL.	SCALA -
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Rev.	Data	Descrizione / Motivo della revisione	Redatto	Controllato / Approvato
0	Febbraio 2018	Progetto esecutivo	Dott. Ing. Andrea PAGLIAZZI	Dott. Ing. Andrea PAGLIAZZI

E' fatto obbligo alla ditta esecutrice dei lavori verificare le quote riportate nella presente documentazione, confrontarle con quelle del progetto architettonico e del progetto della ditta prefabbricatrice. Eventuali difformità dovranno essere comunicate alla D.L. che provvederà alle eventuali revisioni o chiarimenti.

PROPRIETA' RISERVATA. VIETATA LA RIPRODUZIONE E LA DIFFUSIONE



Software e Servizi
per l'Ingegneria s.r.l.

PRO_SAP

PROfessional **S**tructural **A**nalysis **P**rogram

Relazione di calcolo strutturale impostata e redatta secondo le modalità previste nel D.M. 14 Gennaio 2008 cap. 10 “Redazione dei progetti strutturali esecutivi e delle relazioni di calcolo”.

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D.M. 14/01/08 cap. 10.2 Affidabilità dei codici utilizzati
<http://www.2si.it/software/Affidabilità.htm>

RELAZIONE DI CALCOLO STRUTTURALE

Premessa

La presente relazione di calcolo strutturale, in conformità al §10.1 del DM 14/01/08, è comprensiva di una descrizione generale dell'opera e dei criteri generali di analisi e verifica. Segue inoltre le indicazioni fornite al §10.2 del DM stesso per quanto concerne analisi e verifiche svolte con l'ausilio di codici di calcolo.

Descrizione generale dell'opera

Descrizione generale dell'opera	
Fabbricato ad uso	Atrio scuola e pensilina esterna
Ubicazione	Comune di BORGO SAN LORENZO (FI) (Regione TOSCANA)
	Località BORGO SAN LORENZO (FI)
	Longitudine 11.389, Latitudine 43.958
Numero di piani	Fuori terra 1
	Interrati 0
	le dimensioni dell'opera (atrio) in pianta sono racchiuse in un rettangolo di circa 11,60 x 7,35 m
Numero vani scale	0
Numero vani ascensore	0
Tipo di fondazione	platea

Parametri della struttura

Classe d'uso	Vita Vn [anni]	Coeff. Uso	Periodo Vr [anni]
III	50.0	1.5	75.0

Fattore di struttura

q=1

Quadro normativo di riferimento adottato

Le norme ed i documenti assunti quale riferimento per la progettazione strutturale vengono indicati di seguito. Nel capitolo "normativa di riferimento" è comunque presente l'elenco completo delle normative disponibili.

Progetto-verifica degli elementi

Progetto cemento armato	D.M. 14-01-2008
Progetto acciaio	D.M. 14-01-2008
Progetto legno	D.M. 14-01-2008
Progetto muratura	D.M. 14-01-2008
Azione sismica	
Norma applicata per l'azione sismica	D.M. 14-01-2008

Azioni di progetto sulla costruzione

Nei capitoli “modellazione delle azioni” e “schematizzazione dei casi di carico” sono indicate le azioni sulla costruzione.

Nel prosieguo si indicano tipo di analisi strutturale condotta (statico, dinamico, lineare o non lineare) e il metodo adottato per la risoluzione del problema strutturale nonché le metodologie seguite per la verifica o per il progetto-verifica delle sezioni. Si riportano le combinazioni di carico adottate e, nel caso di calcoli non lineari, i percorsi di carico seguiti; le configurazioni studiate per la struttura in esame **sono risultate effettivamente esaustive per la progettazione-verifica**.

La verifica della sicurezza degli elementi strutturali avviene con i metodi della scienza delle costruzioni. L'analisi strutturale è condotta con il metodo degli spostamenti per la valutazione dello stato tensodeformativo indotto da carichi statici. L'analisi strutturale è condotta con il metodo dell'analisi modale e dello spettro di risposta in termini di accelerazione per la valutazione dello stato tensodeformativo indotto da carichi dinamici (tra cui quelli di tipo sismico).

L'analisi strutturale viene effettuata con il metodo degli elementi finiti. Il metodo sopraindicato si basa sulla schematizzazione della struttura in elementi connessi solo in corrispondenza di un numero prefissato di punti denominati nodi. I nodi sono definiti dalle tre coordinate cartesiane in un sistema di riferimento globale. Le incognite del problema (nell'ambito del metodo degli spostamenti) sono le componenti di spostamento dei nodi riferite al sistema di riferimento globale (traslazioni secondo X, Y, Z, rotazioni attorno X, Y, Z). La soluzione del problema si ottiene con un sistema di equazioni algebriche lineari i cui termini noti sono costituiti dai carichi agenti sulla struttura opportunamente concentrati ai nodi:

$$\mathbf{K} \cdot \mathbf{u} = \mathbf{F} \text{ dove}$$

\mathbf{K} = matrice di rigidezza
 \mathbf{u} = vettore spostamenti nodali
 \mathbf{F} = vettore forze nodali

Dagli spostamenti ottenuti con la risoluzione del sistema vengono quindi dedotte le sollecitazioni e/o le tensioni di ogni elemento, riferite generalmente ad una terna locale all'elemento stesso.

Il sistema di riferimento utilizzato è costituito da una terna cartesiana destrorsa XYZ. Si assume l'asse Z verticale ed orientato verso l'alto.

Gli elementi utilizzati per la modellazione dello schema statico della struttura sono i seguenti:

·	Elemento tipo TRUSS	(biella-D2)
·	Elemento tipo BEAM	(trave-D2)
·	Elemento tipo MEMBRANE	(membrana-D3)
·	Elemento tipo PLATE	(piastra-guscio-D3)
·	Elemento tipo BOUNDARY	(molla)
·	Elemento tipo STIFFNESS	(matrice di rigidezza)
·	Elemento tipo BRICK	(elemento solido)
·	Elemento tipo SOLAIO	(macro elemento composto da più membrane)

Modello numerico

In questa parte viene descritto il modello numerico utilizzato (o i modelli numerici utilizzati) per l'analisi della struttura. La presentazione delle informazioni deve essere, coerentemente con le prescrizioni del paragrafo 10.2 delle NTC-08, tale da garantirne la leggibilità, la corretta interpretazione e la riproducibilità

Tipo di analisi strutturale	
Statica lineare	SI
Statica non lineare	NO
Sismica statica lineare	NO
Sismica dinamica lineare	SI
Sismica statica non lineare (prop. masse)	NO
Sismica statica non lineare (prop. modo)	NO
Sismica statica non lineare (triangolare)	NO
Non linearità geometriche (fattore P delta)	SI

Di seguito si indicano l'origine e le caratteristiche dei codici di calcolo utilizzati riportando titolo, produttore e distributore, versione, estremi della licenza d'uso:

Informazioni sul codice di calcolo	
Titolo:	PRO_SAP PROfessional Structural Analysis Program
Versione:	PROFESSIONAL (build 2017-04-177)
Produttore-Distributore:	2S.I. Software e Servizi per l'Ingegneria s.r.l., Ferrara

Codice Licenza:	Licenza dsi3839

Un attento esame preliminare della documentazione a corredo del software **ha consentito di valutarne l'affidabilità e soprattutto l'idoneità al caso specifico**. La documentazione, fornita dal produttore e distributore del software, contiene una esauriente descrizione delle basi teoriche e degli algoritmi impiegati, l'individuazione dei campi d'impiego, nonché casi prova interamente risolti e commentati, corredati dei file di input necessari a riprodurre l'elaborazione:

Affidabilità dei codici utilizzati

2S.I. ha verificato l'affidabilità e la robustezza del codice di calcolo attraverso un numero significativo di casi prova in cui i risultati dell'analisi numerica sono stati confrontati con soluzioni teoriche.
E' possibile reperire la documentazione contenente alcuni dei più significativi casi trattati al seguente link:
<http://www.2si.it/Software/Affidabilità.htm>

Modellazione della geometria e proprietà meccaniche:

nodi	1149
elementi D2 (per aste, travi, pilastri...)	297
elementi D3 (per pareti, platee, gusci...)	997
elementi solaio	27
elementi solidi	0
Dimensione del modello strutturale [cm]:	
X min =	-25.00
Xmax =	1158.00
Ymin =	-2643.50
Ymax =	25.00
Zmin =	0.00
Zmax =	405.14
Strutture verticali:	
Elementi di tipo asta	NO
Pilastri	SI
Pareti	NO
Setti (a comportamento membranale)	NO
Strutture non verticali:	
Elementi di tipo asta	SI
Travi	SI
Gusci	NO
Membrane	NO
Orizzontamenti:	
Solai con la proprietà piano rigido	SI
Solai senza la proprietà piano rigido	SI

Tipo di vincoli:	
Nodi vincolati rigidamente	NO
Nodi vincolati elasticamente	NO
Nodi con isolatori sismici	NO
Fondazioni puntuali (plinti/plinti su palo)	NO
Fondazioni di tipo trave	SI
Fondazioni di tipo platea	SI
Fondazioni con elementi solidi	NO

Modellazione delle azioni

Si veda il capitolo **“Schematizzazione dei casi di carico”** per le informazioni necessarie alla comprensione ed alla ricostruzione delle azioni applicate al modello numerico, coerentemente con quanto indicato nella parte *“2.6. Azioni di progetto sulla costruzione”*.

Combinazioni e/o percorsi di carico

Si veda il capitolo **“Definizione delle combinazioni”** in cui sono indicate le combinazioni di carico adottate e, nel caso di calcoli non lineari, i percorsi di carico seguiti.

Combinazioni dei casi di carico	
APPROCCIO PROGETTUALE	Approccio 2
Tensioni ammissibili	NO
SLU	SI
SLV (SLU con sisma)	SI
SLC	NO
SLD	SI
SLO	SI
SLU GEO A2 (per approccio 1)	NO
SLU EQU	NO
Combinazione caratteristica (rara)	SI
Combinazione frequente	SI
Combinazione quasi permanente (SLE)	SI
SLA (accidentale quale incendio)	NO

Informazioni generali sull’elaborazione e giudizio motivato di accettabilità dei risultati.

Il programma prevede una serie di controlli automatici (check) che consentono l'individuazione di errori di modellazione. Al termine dell'analisi un controllo automatico identifica la presenza di spostamenti o rotazioni abnormi. Si può pertanto asserire che l'elaborazione sia corretta e completa. I risultati delle elaborazioni sono stati sottoposti a controlli che ne comprovano l'attendibilità. Tale valutazione ha compreso il confronto con i risultati di semplici calcoli, eseguiti con metodi tradizionali e adottati, anche in fase di primo proporzionamento della struttura. Inoltre, sulla base di considerazioni riguardanti gli stati tensionali e deformativi determinati, si è valutata la validità delle scelte operate in sede di schematizzazione e di modellazione della struttura e delle azioni.

Verifiche agli stati limite ultimi

Nel capitolo relativo alla progettazione degli elementi strutturali agli SLU vengono indicate, con riferimento alla normativa adottata, le modalità ed i criteri seguiti per valutare la sicurezza della struttura nei confronti delle possibili situazioni di crisi ed i risultati delle valutazioni svolte. In via generale, oltre alle verifiche di resistenza e di spostamento, devono essere prese in considerazione verifiche

nei confronti dei fenomeni di instabilità, locale e globale, di fatica, di duttilità, di degrado.

Verifiche agli stati limite di esercizio

Nel capitolo relativo alla progettazione degli elementi strutturali agli SLU vengono indicate, con riferimento alla normativa adottata, le modalità seguite per valutare l'affidabilità della struttura nei confronti delle possibili situazioni di perdita di funzionalità (per eccessive deformazioni, fessurazioni, vibrazioni, etc.) ed i risultati delle valutazioni svolte.

NORMATIVA DI RIFERIMENTO

1. D.Min. Infrastrutture Min. Interni e Prot. Civile 14 Gennaio 2008 e allegate "Norme tecniche per le costruzioni".
2. D.Min. Infrastrutture e trasporti 14 Settembre 2005 e allegate "Norme tecniche per le costruzioni".
3. D.M. LL.PP. 9 Gennaio 1996 "Norme tecniche per il calcolo, l'esecuzione ed il collaudo delle strutture in cemento armato, normale e precompresso e per le strutture metalliche".
4. D.M. LL.PP. 16 Gennaio 1996 "Norme tecniche relative ai <<Criteri generali per la verifica di sicurezza delle costruzioni e dei carichi e sovraccarichi>>".
5. D.M. LL.PP. 16 Gennaio 1996 "Norme tecniche per le costruzioni in zone sismiche".
6. Circolare 4/07/96, n.156AA.GG./STC. istruzioni per l'applicazione delle "Norme tecniche relative ai <<Criteri generali per la verifica di sicurezza delle costruzioni e dei carichi e sovraccarichi>>" di cui al D.M. 16/01/96.
7. Circolare 10/04/97, n.65AA.GG. istruzioni per l'applicazione delle "Norme tecniche per le costruzioni in zone sismiche" di cui al D.M. 16/01/96.
8. D.M. LL.PP. 20 Novembre 1987 "Norme tecniche per la progettazione, esecuzione e collaudo degli edifici in muratura e per il loro consolidamento".
9. Circolare 4 Gennaio 1989 n. 30787 "Istruzioni in merito alle norme tecniche per la progettazione, esecuzione e collaudo degli edifici in muratura e per il loro consolidamento".
10. D.M. LL.PP. 11 Marzo 1988 "Norme tecniche riguardanti le indagini sui terreni e sulle rocce, la stabilità dei pendii naturali e delle scarpate, i criteri generali e le prescrizioni per la progettazione, l'esecuzione e il collaudo delle opere di sostegno delle terre e delle opere di fondazione".
11. D.M. LL.PP. 3 Dicembre 1987 "Norme tecniche per la progettazione, esecuzione e collaudo delle costruzioni prefabbricate".
12. UNI 9502 - Procedimento analitico per valutare la resistenza al fuoco degli elementi costruttivi di conglomerato cementizio armato, normale e precompresso - edizione maggio 2001
13. Ordinanza del Presidente del Consiglio dei Ministri n. 3274 del 20 marzo 2003 "Primi elementi in materia di criteri generali per la classificazione sismica del territorio nazionale e di normative tecniche per le costruzioni in zona sismica" e successive modificazioni e integrazioni.
14. UNI EN 1990:2006 13/04/2006 Eurocodice 0 - Criteri generali di progettazione strutturale.
15. UNI EN 1991-1-1:2004 01/08/2004 Eurocodice 1 - Azioni sulle strutture - Parte 1-1: Azioni in generale - Pesì per unità di volume, pesì propri e sovraccarichi per gli edifici.
16. UNI EN 1991-2:2005 01/03/2005 Eurocodice 1 - Azioni sulle strutture - Parte 2: Carichi da traffico sui ponti.
17. UNI EN 1991-1-3:2004 01/10/2004 Eurocodice 1 - Azioni sulle strutture - Parte 1-3: Azioni in generale - Carichi da neve.
18. UNI EN 1991-1-4:2005 01/07/2005 Eurocodice 1 - Azioni sulle strutture - Parte 1-4: Azioni in generale - Azioni del vento.
19. UNI EN 1991-1-5:2004 01/10/2004 Eurocodice 1 - Azioni sulle strutture - Parte 1-5: Azioni in generale - Azioni termiche.
20. UNI EN 1992-1-1:2005 24/11/2005 Eurocodice 2 - Progettazione delle strutture di calcestruzzo - Parte 1-1: Regole generali e regole per gli edifici.
21. UNI EN 1992-1-2:2005 01/04/2005 Eurocodice 2 - Progettazione delle strutture di calcestruzzo - Parte 1-2: Regole generali - Progettazione strutturale contro l'incendio.
22. UNI EN 1993-1-1:2005 01/08/2005 Eurocodice 3 - Progettazione delle strutture di acciaio - Parte 1-1: Regole generali e regole per gli edifici.
23. UNI EN 1993-1-8:2005 01/08/2005 Eurocodice 3 - Progettazione delle strutture di acciaio - Parte 1-8: Progettazione dei collegamenti.
24. UNI EN 1994-1-1:2005 01/03/2005 Eurocodice 4 - Progettazione delle strutture composte acciaio-calcestruzzo - Parte 1-1: Regole generali e regole per gli edifici.
25. UNI EN 1994-2:2006 12/01/2006 Eurocodice 4 - Progettazione delle strutture composte acciaio-calcestruzzo - Parte 2: Regole generali e regole per i ponti.
26. UNI EN 1995-1-1:2005 01/02/2005 Eurocodice 5 - Progettazione delle strutture di legno - Parte 1-1: Regole generali - Regole comuni e regole per gli edifici.
27. UNI EN 1995-2:2005 01/01/2005 Eurocodice 5 - Progettazione delle strutture di legno - Parte 2: Ponti.
28. UNI EN 1996-1-1:2006 26/01/2006 Eurocodice 6 - Progettazione delle strutture di muratura - Parte 1-1: Regole generali per strutture di muratura armata e non armata.
29. UNI EN 1996-3:2006 09/03/2006 Eurocodice 6 - Progettazione delle strutture di muratura - Parte 3: Metodi di calcolo

semplificato per strutture di muratura non armata.

- 30. UNI EN 1997-1:2005 01/02/2005 Eurocodice 7 - Progettazione geotecnica - Parte 1: Regole generali.
- 31. UNI EN 1998-1:2005 01/03/2005 Eurocodice 8 - Progettazione delle strutture per la resistenza sismica - Parte 1: Regole generali, azioni sismiche e regole per gli edifici.
- 32. UNI EN 1998-3:2005 01/08/2005 Eurocodice 8 - Progettazione delle strutture per la resistenza sismica - Parte 3: Valutazione e adeguamento degli edifici.

UNI EN 1998-5:2005 01/01/2005 Eurocodice 8 - Progettazione delle strutture per la resistenza sismica - Parte 5: Fondazioni, strutture di contenimento ed aspetti geotecnici.

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:

<i>Young</i>	modulo di elasticità normale
<i>Poisson</i>	coefficiente di contrazione trasversale
<i>G</i>	modulo di elasticità tangenziale
<i>Gamma</i>	peso specifico
<i>Alfa</i>	coefficiente di dilatazione termica

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	cemento armato	
	Rck	resistenza caratteristica cubica
	Fctm	resistenza media a trazione semplice
2	acciaio	
	Ft	tensione di rottura a trazione
	Fy	tensione di snervamento
	Fd	resistenza di calcolo
	Fdt	resistenza di calcolo per spess. t>40 mm
	Sadm	tensione ammissibile
	Sadmt	tensione ammissibile per spess. t>40 mm
3	muratura	

4	legno	Resist. Fk	resistenza caratteristica a compressione
		Resist. Fvko	resistenza caratteristica a taglio
		Resist. fc0k	Resistenza caratteristica (tensione amm. per REGLES) per compressione
		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	Modulo elastico parallelo caratteristico
		Lamellare	lamellare o massiccio

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

Con riferimento al **Documento di Affidabilità** “*Test di validazione del software di calcolo PRO_SAP e dei moduli aggiuntivi PRO_SAP Modulo Geotecnico, PRO_CAD nodi acciaio e PRO_MST*” - versione Maggio 2011, disponibile per il download sul sito **www.2si.it**, si segnalano i seguenti esempi applicativi:

Modellazione di strutture in c.a.

Test N°	Titolo
41	GERARCHIA DELLE RESISTENZE PER TRAVI IN C.A.
42	GERARCHIA DELLE RESISTENZE PER PILASTRI IN C.A.
43	VERIFICA ALLE T.A. DI STRUTTURE IN C.A.
44	VERIFICA AGLI SLU DI STRUTTURE IN C.A.
45	VERIFICA A PUNZONAMENTO ALLO SLU DI PIASTRE IN C.A.
46	VERIFICA A PUNZONAMENTO ALLO SLU DI TRAVI IN C.A.
47	PROGETTAZIONE A TAGLIO DI STRUTTURE IN C.A. SECONDO IL D.M. 9/1/96
48	PROGETTAZIONE A TAGLIO DI STRUTTURE IN C.A. SECONDO IL D.M. 14/1/2008
49	VERIFICA ALLO SLE (TENSIONI E FESSURAZIONE) DI STRUTTURE IN C.A.
50	VERIFICA ALLO SLE (DEFORMAZIONE) DI STRUTTURE IN C.A.
51	FATTORE DI STRUTTURA
52	SOVRARESISTENZE
53	DETTAGLI COSTRUTTIVI C.A.: LIMITI D'ARMATURA PILASTRI E NODI TRAVE-PILASTRO
54	PARETI IN C.A. SNELLE IN ZONA SISMICA
80	ANALISI PUSHOVER DI UN EDIFICIO IN C.A.
120	PROGETTO E VERIFICA DI TRAVI PREM

Modellazione di strutture in acciaio

Test N°	Titolo
55	VERIFICA DI STABILITA' DI ASTE COMPRESSE IN ACCIAIO – METODO OMEGA
56	LUCE LIBERA DI TRAVI E ASTE IN ACCIAIO
57	LUCE LIBERA DI COLONNE IN ACCIAIO
58	SVERGOLAMENTO DI TRAVI IN ACCIAIO
59	FATTORE DI STRUTTURA
60	ACCIAIO D.M.2008
61	ACCIAIO EC3
62	GERARCHIA RESISTENZE STRUTTURE IN ACCIAIO
63	STABILITA' DI ASTE COMPOSTE IN ACCIAIO
73	COLLEGAMENTI IN ACCIAIO: NODO TRAVE COLONNA FLANGIATO CON PRESENZA IRRIGIDIMENTI TRASVERSALI
74	COLLEGAMENTI IN ACCIAIO: NODO TRAVE COLONNA FLANGIATO CON PRESENZA DI UN PIATTO DI RINFORZO SALDATO ALL'ANIMA DELLA COLONNA

75	COLLEGAMENTI IN ACCIAIO: NODO TRAVE COLONNA FLANGIATO CON PRESENZA DI DUE PIATTI DI RINFORZO SALDATI ALL'ANIMA DELLA COLONNA
76	COLLEGAMENTI IN ACCIAIO: NODO TRAVE COLONNA FLANGIATO A DUE VIE SU ALI COLONNA
77	COLLEGAMENTI IN ACCIAIO: NODO TRAVE COLONNA FLANGIATO A UNA VIA CON DUE COMBINAZIONI DI CARICO
78	COLLEGAMENTI IN ACCIAIO: NODO TRAVE COLONNA FLANGIATO SU ANIMA SENZA RINFORZI A QUATTRO FILE DI BULLONI DI CUI UNA SU PIASTRA INFERIORE E UNA SU PIASTRA SUPERIORE
79	VERIFICA DELLA PIASTRA NODO TRAVE COLONNA
85	TELAIO ACCIAIO: CONTROVENTI CONCENTRICI

Modellazione di strutture in muratura

Test N°	Titolo
81	ANALISI PUSHOVER DI UNA STRUTTURA IN MURATURA
84	ANALISI ELASTO PLASTICA INCREMENTALE, PARETE IN MURATURA
86	VERIFICA NON SISMICA DELLE MURATURE (D.M. 87 TA)
87	VERIFICA NON SISMICA DELLE MURATURE (D.M. 2005 SL)
88	FATTORE DI STRUTTURA

Modellazione di strutture in legno

Test N°	Titolo
17	SOLAIO: MISTO LEGNO-CALCESTRUZZO
89	VERIFICA ALLO SLU DI STRUTTURE IN LEGNO SECONDO EC5
90	VERIFICA ALLO SLE DI STRUTTURE IN LEGNO SECONDO EC5
91	FATTORE DI STRUTTURA
92	VERIFICHE EC5
93	SNELLEZZE EC5
94	VERIFICA AL FUOCO DI STRUTTURE IN LEGNO SECONDO EC5
117	PROGETTO E VERIFICA DI GUSCI IN MATERIALE XLAM
118	PROGETTO E VERIFICA DI PARETI IN MATERIALE XLAM E RELATIVI COLLEGAMENTI
119	PROGETTO E VERIFICA DI SOLAI IN MATERIALE XLAM

Id	Tipo / Note		Young	Poisson	G	Gamma	Alfa
		daN/cm2	daN/cm2		daN/cm2	daN/cm3	
1	Calcestruzzo Classe C25/30		3.145e+05	0.20	1.310e+05	2.50e-03	1.00e-05
	Rck	300.0					
	fctm	25.6					
11	acciaio Fe430 - S275		2.100e+06	0.30	8.077e+05	7.80e-03	1.20e-05

	ft	4300.0					
	fy	2750.0					
	fd	2750.0					
	fdt	2500.0					
	sadm	1900.0					
	sadmt	1700.0					
51	materiale inf rigido no peso E = 1.000e+09		1.000e+09	0.0	5.000e+08	0.0	1.20e-05

Aste acc.	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
Generalità						
Beta assegnato	1.00					
Verifica come controvento	Si					
Usa condizioni I e II	No					
Coefficiente gamma M0	1.05					
Coefficiente gamma M1	1.05					
Coefficiente gamma M2	1.25					

Pilastri acc.	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
Lunghezze libere						
Metodo di calcolo 2-2	Assegnato					
2-2 Beta assegnato	2.00					
2-2 Beta * L assegnato [cm]	0.0					
Metodo di calcolo 3-3	Assegnato					
3-3 Beta assegnato	2.00					
3-3 Beta * L assegnato [cm]	0.0					
1-1 Beta assegnato	1.00					
1-1 Beta * L assegnato [cm]	0.0					
Generalità						
Coefficiente gamma M0	1.05					
Coefficiente gamma M1	1.05					
Coefficiente gamma M2	1.25					
Effetti del 2 ordine	Si					
Momenti equivalenti	Si					
Usa condizioni I e II	Si					

Travi acc.	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
Lunghezze libere						

3-3 Beta * L automatico	Si		No	No	No	
3-3 Beta assegnato	1.00		1.00	1.00	1.00	
3-3 Beta assegnato [cm]	0.0		710.00	381.00	381.00	
2-2 Beta * L automatico	Si		No	No	No	
2-2 Beta assegnato	1.00		1.00	1.00	1.00	
2-2 Beta * L assegnato [cm]	0.0		355.00	381.00	381.00	
1-1 Beta * L automatico	Si		Si	Si	Si	
1-1 Beta assegnato	1.00		1.00	1.00	1.00	
1-1 Beta * L assegnato [cm]	0.0		0.0	0.0	0.0	
Generalità						
Coefficiente gamma M0	1.05		1.05	1.05	1.05	
Coefficiente gamma M1	1.05		1.05	1.05	1.05	
Coefficiente gamma M2	1.25		1.25	1.25	1.25	
Luce di taglio per GR [cm]	1.00		1.00	1.00	1.00	
Usa condizioni I e II	Si		Si	Si	Si	
Momenti equivalenti	Si		Si	Si	Si	

Gusci c.a.	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
Armatura						
Inclinazione Ax [gradi]		0.0				
Angolo Ax-Ay [gradi]		90.00				
Minima tesa		0.20				
Massima tesa		0.78				
Maglia unica centrale		No				
Copriferro [cm]		3.00				
Maglia x						
diametro		12				
passo		20				
diametro aggiuntivi		12				
Maglia y						
diametro		12				
passo		20				
diametro aggiuntivi		12				
Stati limite ultimi						
Tensione fy [daN/cm2]		4500.00				
Tipo acciaio		tipo C				
Coefficiente gamma s		1.15				

Coefficiente gamma c		1.50				
Fattore di confidenza FC		0.0				
Verifiche con N costante		Si				
Applica SLU da DIN		No				
Tensioni ammissibili						
Tensione amm. cls [daN/cm2]		97.50				
Tensione amm. acciaio [daN/cm2]		2600.00				
Rapporto omogeneizzazione N		15.00				
Massimo rapporto area compressa/tesa		1.00				
Resistenza al fuoco						
3- intradosso		No				
3+ estradosso		No				
Tempo di esposizione R		15				

Travi c.a.	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
Generalità						
Progetta a filo		Si				
Af inf: da $q \cdot L \cdot L /$		0.0				
Armatura						
Minima tesa		0.20				
Minima compressa		0.20				
Massima tesa		0.78				
Da sezione		Si				
Usa armatura teorica		No				
Stati limite ultimi						
Tensione fy [daN/cm2]		4500.00				
Tensione fy staffe [daN/cm2]		4500.00				
Tipo acciaio		tipo C				
		1.15				
Coefficiente gamma s						
		1.50				
Coefficiente gamma c						
Fattore di confidenza FC		0.0				
Verifiche con N costante		Si				
Fattore di		0.0				

ridistribuzione						
Modello per il confinamento						
Relazione tensio-deformativa		Mander				
Incrudimento acciaio		5.000e-03				
Fattore lambda		1.00				
epsilon max,s		4.000e-02				
epsilon cu2		4.500e-03				
epsilon c2		0.0				
epsilon cy		0.0				
Tensioni ammissibili						
Tensione amm. cls [daN/cm ²]		97.50				
Tensione amm. acciaio [daN/cm ²]		2600.00				
Rapporto omogeneizzazione N		15.00				
Massimo rapporto area compressa/tesa		1.00				
Staffe						
Diametro staffe		8.00				
Passo minimo [cm]		25.00				
Passo massimo [cm]		25.00				
Passo raffittito [cm]		25.00				
Lunghezza zona raffittita [cm]		0.0				
Ctg(Teta) Max		2.50				
Percentuale sagomati		0.0				
Luce di taglio per GR [cm]		1.00				
Adotta scorrimento medio		No				
Torsione non essenziale inclusa		No				

MODELLAZIONE DELLE SEZIONI

LEGENDA TABELLA DATI SEZIONI

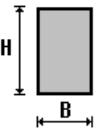
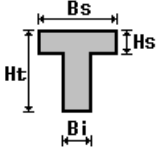
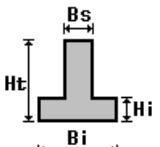
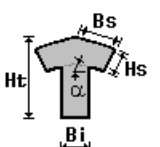
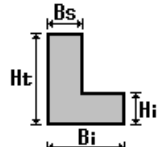
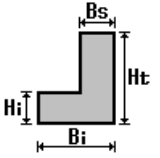
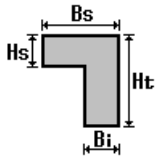
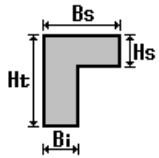
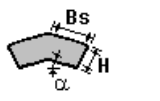
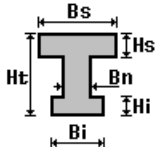
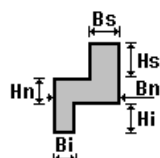
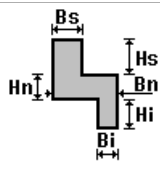
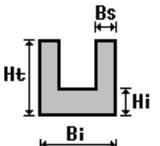
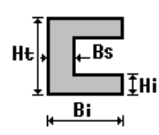
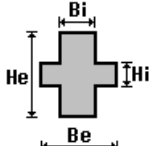
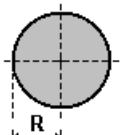
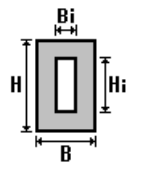
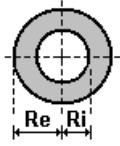
Il programma consente l'uso di sezioni diverse. Sono previsti i seguenti tipi di sezione:

- 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

Con riferimento al **Documento di Affidabilità** "Test di validazione del software di calcolo PRO_SAP e dei moduli aggiuntivi PRO_SAP Modulo Geotecnico, PRO_CAD nodi acciaio e PRO_MST" - versione Settembre 2014, disponibile per il download sul sito **www.2si.it**, si segnalano i seguenti esempi applicativi:

Test N°	Titolo
1	CARATTERISTICHE GEOMETRICHE E INERZIALI
45	VERIFICA AGLI SLU DI STRUTTURE IN C.A.
48	PROGETTAZIONE A TAGLIO DI STRUTTURE IN C.A. SECONDO IL D.M. 9/1/96
49	PROGETTAZIONE A TAGLIO DI STRUTTURE IN C.A. SECONDO IL D.M. 14/1/2008
50	VERIFICA ALLO SLE (TENSIONI E FESSURAZIONE) DI STRUTTURE IN C.A.
51	VERIFICA ALLO SLE (DEFORMAZIONE) DI STRUTTURE IN C.A.
104	ANALISI DI RESISTENZA AL FUOCO

Id	Tipo	Area cm2	A V2 cm2	A V3 cm2	Jt cm4	J 2-2 cm4	J 3-3 cm4	W 2-2 cm3	W 3-3 cm3	Wp 2-2 cm3	Wp 3-3 cm3
1	T.QU 180x180x 6.3	42.41	0.0	0.0	3382.71	2095.65	2095.65	232.85	232.85	273.09	273.09
2	IPE 300	53.80	0.0	0.0	20.10	604.00	8356.00	80.50	557.10	125.20	628.40
3	T.QU 180x180x 12.5	77.04	0.0	0.0	6049.85	3406.43	3406.43	378.49	378.49	467.08	467.08
4	tondini	3.14	2.65	2.65	1.57	0.79	0.79	0.79	0.79	1.33	1.33
5	IPE 160	20.10	0.0	0.0	3.60	68.00	869.00	16.70	108.70	26.10	123.90
6	HEA 160	38.80	0.0	0.0	12.20	616.00	1673.00	76.90	220.10	117.60	245.10
7	HEA 160	38.80	0.0	0.0	12.20	616.00	1673.00	76.90	220.10	117.60	245.10
8	IPE 160	20.10	0.0	0.0	3.60	68.00	869.00	16.70	108.70	26.10	123.90
9	nervature platea	1750.00	1458.33	1458.33	4.059e+05	1.786e+05	3.646e+05	1.021e+04	1.458e+04	1.531e+04	2.188e+04
10	scatolare 180x180x 4	28.16	0.0	0.0	2180.71	1454.56	1454.56	161.62	161.62	185.89	185.89
11	nervature platea 1	1190.00	991.67	991.67	1.985e+05	1.215e+05	1.146e+05	6941.67	6743.33	1.041e+04	1.012e+04
12	nervature platea 2	630.00	525.00	525.00	4.600e+04	6.431e+04	1.701e+04	3675.00	1890.00	5512.50	2835.00
13	UPN 160	24.00	0.0	0.0	7.39	85.10	925.00	18.20	116.00	35.20	138.00

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. 14/01/08

TABELLA DATI NODI

Nodo	X	Y	Z	Nodo	X	Y	Z	Nodo	X	Y	Z
	cm	cm	cm		cm	cm	cm		cm	cm	cm
1	-25.0	-2643.5	0.0	2	0.0	-2643.5	0.0	3	47.6	-2643.5	0.0
4	95.3	-2643.5	0.0	5	142.9	-2643.5	0.0	6	190.5	-2643.5	0.0
7	238.1	-2643.5	0.0	8	285.8	-2643.5	0.0	9	333.4	-2643.5	0.0
10	381.0	-2643.5	0.0	11	406.0	-2643.5	0.0	12	-25.0	-2618.5	0.0
13	0.0	-2618.5	0.0	14	47.6	-2618.5	0.0	15	95.3	-2618.5	0.0
16	142.9	-2618.5	0.0	17	190.5	-2618.5	0.0	18	238.1	-2618.5	0.0
19	285.8	-2618.5	0.0	20	333.4	-2618.5	0.0	21	381.0	-2618.5	0.0
22	406.0	-2618.5	0.0	23	-25.0	-2570.9	0.0	24	0.0	-2570.9	0.0
25	47.6	-2570.9	0.0	26	95.3	-2570.9	0.0	27	142.9	-2570.9	0.0
28	190.5	-2570.9	0.0	29	238.1	-2570.9	0.0	30	285.8	-2570.9	0.0
31	333.4	-2570.9	0.0	32	381.0	-2570.9	0.0	33	406.0	-2570.9	0.0
34	-25.0	-2523.3	0.0	35	0.0	-2523.3	0.0	36	47.6	-2523.3	0.0
37	95.3	-2523.3	0.0	38	142.9	-2523.3	0.0	39	190.5	-2523.3	0.0
40	238.1	-2523.3	0.0	41	285.8	-2523.3	0.0	42	333.4	-2523.3	0.0
43	381.0	-2523.3	0.0	44	406.0	-2523.3	0.0	45	-25.0	-2475.6	0.0
46	0.0	-2475.6	0.0	47	47.6	-2475.6	0.0	48	95.3	-2475.6	0.0
49	142.9	-2475.6	0.0	50	190.5	-2475.6	0.0	51	238.1	-2475.6	0.0
52	285.8	-2475.6	0.0	53	333.4	-2475.6	0.0	54	381.0	-2475.6	0.0
55	406.0	-2475.6	0.0	56	-25.0	-2428.0	0.0	57	0.0	-2428.0	0.0
58	47.6	-2428.0	0.0	59	95.3	-2428.0	0.0	60	142.9	-2428.0	0.0
61	190.5	-2428.0	0.0	62	238.1	-2428.0	0.0	63	285.8	-2428.0	0.0
64	333.4	-2428.0	0.0	65	381.0	-2428.0	0.0	66	406.0	-2428.0	0.0
67	-25.0	-2380.4	0.0	68	0.0	-2380.4	0.0	69	47.6	-2380.4	0.0
70	95.3	-2380.4	0.0	71	142.9	-2380.4	0.0	72	190.5	-2380.4	0.0
73	238.1	-2380.4	0.0	74	285.8	-2380.4	0.0	75	333.4	-2380.4	0.0
76	381.0	-2380.4	0.0	77	406.0	-2380.4	0.0	78	-25.0	-2332.8	0.0
79	0.0	-2332.8	0.0	80	47.6	-2332.8	0.0	81	95.3	-2332.8	0.0
82	142.9	-2332.8	0.0	83	190.5	-2332.8	0.0	84	238.1	-2332.8	0.0
85	285.8	-2332.8	0.0	86	333.4	-2332.8	0.0	87	381.0	-2332.8	0.0
88	406.0	-2332.8	0.0	89	-25.0	-2285.1	0.0	90	0.0	-2285.1	0.0
91	47.6	-2285.1	0.0	92	95.3	-2285.1	0.0	93	142.9	-2285.1	0.0
94	190.5	-2285.1	0.0	95	238.1	-2285.1	0.0	96	285.8	-2285.1	0.0
97	333.4	-2285.1	0.0	98	381.0	-2285.1	0.0	99	406.0	-2285.1	0.0

100	-25.0	-2237.5	0.0	101	0.0	-2237.5	0.0	102	47.6	-2237.5	0.0
103	95.3	-2237.5	0.0	104	142.9	-2237.5	0.0	105	190.5	-2237.5	0.0
106	238.1	-2237.5	0.0	107	285.8	-2237.5	0.0	108	333.4	-2237.5	0.0
109	381.0	-2237.5	0.0	110	406.0	-2237.5	0.0	111	-25.0	-2189.9	0.0
112	0.0	-2189.9	0.0	113	47.6	-2189.9	0.0	114	95.3	-2189.9	0.0
115	142.9	-2189.9	0.0	116	190.5	-2189.9	0.0	117	238.1	-2189.9	0.0
118	285.8	-2189.9	0.0	119	333.4	-2189.9	0.0	120	381.0	-2189.9	0.0
121	406.0	-2189.9	0.0	122	-25.0	-2142.3	0.0	123	0.0	-2142.3	0.0
124	47.6	-2142.3	0.0	125	95.3	-2142.3	0.0	126	142.9	-2142.3	0.0
127	190.5	-2142.3	0.0	128	238.1	-2142.3	0.0	129	285.8	-2142.3	0.0
130	333.4	-2142.3	0.0	131	381.0	-2142.3	0.0	132	406.0	-2142.3	0.0
133	-25.0	-2094.6	0.0	134	0.0	-2094.6	0.0	135	47.6	-2094.6	0.0
136	95.3	-2094.6	0.0	137	142.9	-2094.6	0.0	138	190.5	-2094.6	0.0
139	238.1	-2094.6	0.0	140	285.8	-2094.6	0.0	141	333.4	-2094.6	0.0
142	381.0	-2094.6	0.0	143	406.0	-2094.6	0.0	144	-25.0	-2047.0	0.0
145	0.0	-2047.0	0.0	146	47.6	-2047.0	0.0	147	95.3	-2047.0	0.0
148	142.9	-2047.0	0.0	149	190.5	-2047.0	0.0	150	238.1	-2047.0	0.0
151	285.8	-2047.0	0.0	152	333.4	-2047.0	0.0	153	381.0	-2047.0	0.0
154	406.0	-2047.0	0.0	155	-25.0	-1999.4	0.0	156	0.0	-1999.4	0.0
157	47.6	-1999.4	0.0	158	95.3	-1999.4	0.0	159	142.9	-1999.4	0.0
160	190.5	-1999.4	0.0	161	238.1	-1999.4	0.0	162	285.8	-1999.4	0.0
163	333.4	-1999.4	0.0	164	381.0	-1999.4	0.0	165	406.0	-1999.4	0.0
166	-25.0	-1951.8	0.0	167	0.0	-1951.8	0.0	168	47.6	-1951.8	0.0
169	95.3	-1951.8	0.0	170	142.9	-1951.8	0.0	171	190.5	-1951.8	0.0
172	238.1	-1951.8	0.0	173	285.8	-1951.8	0.0	174	333.4	-1951.8	0.0
175	381.0	-1951.8	0.0	176	406.0	-1951.8	0.0	177	-25.0	-1904.1	0.0
178	0.0	-1904.1	0.0	179	47.6	-1904.1	0.0	180	95.3	-1904.1	0.0
181	142.9	-1904.1	0.0	182	190.5	-1904.1	0.0	183	238.1	-1904.1	0.0
184	285.8	-1904.1	0.0	185	333.4	-1904.1	0.0	186	381.0	-1904.1	0.0
187	406.0	-1904.1	0.0	188	-25.0	-1856.5	0.0	189	0.0	-1856.5	0.0
190	47.6	-1856.5	0.0	191	95.3	-1856.5	0.0	192	142.9	-1856.5	0.0
193	190.5	-1856.5	0.0	194	238.1	-1856.5	0.0	195	285.8	-1856.5	0.0
196	333.4	-1856.5	0.0	197	381.0	-1856.5	0.0	198	406.0	-1856.5	0.0
199	-25.0	-1808.9	0.0	200	0.0	-1808.9	0.0	201	47.6	-1808.9	0.0
202	95.3	-1808.9	0.0	203	142.9	-1808.9	0.0	204	190.5	-1808.9	0.0
205	238.1	-1808.9	0.0	206	285.8	-1808.9	0.0	207	333.4	-1808.9	0.0
208	381.0	-1808.9	0.0	209	406.0	-1808.9	0.0	210	-25.0	-1761.3	0.0
211	0.0	-1761.3	0.0	212	47.6	-1761.3	0.0	213	95.3	-1761.3	0.0
214	142.9	-1761.3	0.0	215	190.5	-1761.3	0.0	216	238.1	-1761.3	0.0
217	285.8	-1761.3	0.0	218	333.4	-1761.3	0.0	219	381.0	-1761.3	0.0
220	406.0	-1761.3	0.0	221	-25.0	-1713.6	0.0	222	0.0	-1713.6	0.0
223	47.6	-1713.6	0.0	224	95.3	-1713.6	0.0	225	142.9	-1713.6	0.0
226	190.5	-1713.6	0.0	227	238.1	-1713.6	0.0	228	285.8	-1713.6	0.0
229	333.4	-1713.6	0.0	230	381.0	-1713.6	0.0	231	406.0	-1713.6	0.0
232	-25.0	-1666.0	0.0	233	0.0	-1666.0	0.0	234	47.6	-1666.0	0.0
235	95.3	-1666.0	0.0	236	142.9	-1666.0	0.0	237	190.5	-1666.0	0.0
238	238.1	-1666.0	0.0	239	285.8	-1666.0	0.0	240	333.4	-1666.0	0.0
241	381.0	-1666.0	0.0	242	406.0	-1666.0	0.0	243	-25.0	-1618.4	0.0
244	0.0	-1618.4	0.0	245	47.6	-1618.4	0.0	246	95.3	-1618.4	0.0
247	142.9	-1618.4	0.0	248	190.5	-1618.4	0.0	249	238.1	-1618.4	0.0
250	285.8	-1618.4	0.0	251	333.4	-1618.4	0.0	252	381.0	-1618.4	0.0
253	406.0	-1618.4	0.0	254	-25.0	-1570.8	0.0	255	0.0	-1570.8	0.0
256	47.6	-1570.8	0.0	257	95.3	-1570.8	0.0	258	142.9	-1570.8	0.0
259	190.5	-1570.8	0.0	260	238.1	-1570.8	0.0	261	285.8	-1570.8	0.0
262	333.4	-1570.8	0.0	263	381.0	-1570.8	0.0	264	406.0	-1570.8	0.0
265	-25.0	-1523.1	0.0	266	0.0	-1523.1	0.0	267	47.6	-1523.1	0.0
268	95.3	-1523.1	0.0	269	142.9	-1523.1	0.0	270	190.5	-1523.1	0.0
271	238.1	-1523.1	0.0	272	285.8	-1523.1	0.0	273	333.4	-1523.1	0.0
274	381.0	-1523.1	0.0	275	406.0	-1523.1	0.0	276	-25.0	-1475.5	0.0
277	0.0	-1475.5	0.0	278	47.6	-1475.5	0.0	279	95.3	-1475.5	0.0
280	142.9	-1475.5	0.0	281	190.5	-1475.5	0.0	282	238.1	-1475.5	0.0
283	285.8	-1475.5	0.0	284	333.4	-1475.5	0.0	285	381.0	-1475.5	0.0
286	406.0	-1475.5	0.0	287	-25.0	-1427.9	0.0	288	0.0	-1427.9	0.0
289	47.6	-1427.9	0.0	290	95.3	-1427.9	0.0	291	142.9	-1427.9	0.0
292	190.5	-1427.9	0.0	293	238.1	-1427.9	0.0	294	285.8	-1427.9	0.0
295	333.4	-1427.9	0.0	296	381.0	-1427.9	0.0	297	406.0	-1427.9	0.0
298	-25.0	-1380.3	0.0	299	0.0	-1380.3	0.0	300	47.6	-1380.3	0.0
301	95.3	-1380.3	0.0	302	142.9	-1380.3	0.0	303	190.5	-1380.3	0.0
304	238.1	-1380.3	0.0	305	285.8	-1380.3	0.0	306	333.4	-1380.3	0.0
307	381.0	-1380.3	0.0	308	406.0	-1380.3	0.0	309	-25.0	-1332.6	0.0
310	0.0	-1332.6	0.0	311	47.6	-1332.6	0.0	312	95.3	-1332.6	0.0
313	142.9	-1332.6	0.0	314	190.5	-1332.6	0.0	315	238.1	-1332.6	0.0
316	285.8	-1332.6	0.0	317	333.4	-1332.6	0.0	318	381.0	-1332.6	0.0
319	406.0	-1332.6	0.0	320	-25.0	-1285.0	0.0	321	0.0	-1285.0	0.0
322	47.6	-1285.0	0.0	323	95.3	-1285.0	0.0	324	142.9	-1285.0	0.0
325	190.5	-1285.0	0.0	326	238.1	-1285.0	0.0	327	285.8	-1285.0	0.0
328	333.4	-1285.0	0.0	329	381.0	-1285.0	0.0	330	406.0	-1285.0	0.0
331	-25.0	-1237.4	0.0	332	0.0	-1237.4	0.0	333	47.6	-1237.4	0.0

334	95.3	-1237.4	0.0	335	142.9	-1237.4	0.0	336	190.5	-1237.4	0.0
337	238.1	-1237.4	0.0	338	285.8	-1237.4	0.0	339	333.4	-1237.4	0.0
340	381.0	-1237.4	0.0	341	406.0	-1237.4	0.0	342	-25.0	-1189.8	0.0
343	0.0	-1189.8	0.0	344	47.6	-1189.8	0.0	345	95.3	-1189.8	0.0
346	142.9	-1189.8	0.0	347	190.5	-1189.8	0.0	348	238.1	-1189.8	0.0
349	285.8	-1189.8	0.0	350	333.4	-1189.8	0.0	351	381.0	-1189.8	0.0
352	406.0	-1189.8	0.0	353	-25.0	-1142.1	0.0	354	0.0	-1142.1	0.0
355	47.6	-1142.1	0.0	356	95.3	-1142.1	0.0	357	142.9	-1142.1	0.0
358	190.5	-1142.1	0.0	359	238.1	-1142.1	0.0	360	285.8	-1142.1	0.0
361	333.4	-1142.1	0.0	362	381.0	-1142.1	0.0	363	406.0	-1142.1	0.0
364	406.0	-1119.5	0.0	365	428.6	-1119.5	0.0	366	476.3	-1119.5	0.0
367	523.9	-1119.5	0.0	368	571.5	-1119.5	0.0	369	619.1	-1119.5	0.0
370	666.8	-1119.5	0.0	371	714.4	-1119.5	0.0	372	762.0	-1119.5	0.0
373	809.6	-1119.5	0.0	374	857.3	-1119.5	0.0	375	904.9	-1119.5	0.0
376	952.5	-1119.5	0.0	377	1000.1	-1119.5	0.0	378	1047.8	-1119.5	0.0
379	1095.4	-1119.5	0.0	380	1143.0	-1119.5	0.0	381	1158.0	-1119.5	0.0
382	-25.0	-1094.5	0.0	383	0.0	-1094.5	0.0	384	47.6	-1094.5	0.0
385	95.3	-1094.5	0.0	386	142.9	-1094.5	0.0	387	190.5	-1094.5	0.0
388	238.1	-1094.5	0.0	389	285.8	-1094.5	0.0	390	333.4	-1094.5	0.0
391	381.0	-1094.5	0.0	392	428.6	-1094.5	0.0	393	476.3	-1094.5	0.0
394	523.9	-1094.5	0.0	395	571.5	-1094.5	0.0	396	619.1	-1094.5	0.0
397	666.8	-1094.5	0.0	398	714.4	-1094.5	0.0	399	762.0	-1094.5	0.0
400	809.6	-1094.5	0.0	401	857.3	-1094.5	0.0	402	904.9	-1094.5	0.0
403	952.5	-1094.5	0.0	404	1000.1	-1094.5	0.0	405	1047.8	-1094.5	0.0
406	1095.4	-1094.5	0.0	407	1143.0	-1094.5	0.0	408	1158.0	-1094.5	0.0
409	-25.0	-1046.9	0.0	410	0.0	-1046.9	0.0	411	47.6	-1046.9	0.0
412	95.3	-1046.9	0.0	413	142.9	-1046.9	0.0	414	190.5	-1046.9	0.0
415	238.1	-1046.9	0.0	416	285.8	-1046.9	0.0	417	333.4	-1046.9	0.0
418	381.0	-1046.9	0.0	419	428.6	-1046.9	0.0	420	476.3	-1046.9	0.0
421	523.9	-1046.9	0.0	422	571.5	-1046.9	0.0	423	619.1	-1046.9	0.0
424	666.8	-1046.9	0.0	425	714.4	-1046.9	0.0	426	762.0	-1046.9	0.0
427	809.6	-1046.9	0.0	428	857.3	-1046.9	0.0	429	904.9	-1046.9	0.0
430	952.5	-1046.9	0.0	431	1000.1	-1046.9	0.0	432	1047.8	-1046.9	0.0
433	1095.4	-1046.9	0.0	434	1143.0	-1046.9	0.0	435	1158.0	-1046.9	0.0
436	-25.0	-999.3	0.0	437	0.0	-999.3	0.0	438	47.6	-999.3	0.0
439	95.3	-999.3	0.0	440	142.9	-999.3	0.0	441	190.5	-999.3	0.0
442	238.1	-999.3	0.0	443	285.8	-999.3	0.0	444	333.4	-999.3	0.0
445	381.0	-999.3	0.0	446	428.6	-999.3	0.0	447	476.3	-999.3	0.0
448	523.9	-999.3	0.0	449	571.5	-999.3	0.0	450	619.1	-999.3	0.0
451	666.8	-999.3	0.0	452	714.4	-999.3	0.0	453	762.0	-999.3	0.0
454	809.6	-999.3	0.0	455	857.3	-999.3	0.0	456	904.9	-999.3	0.0
457	952.5	-999.3	0.0	458	1000.1	-999.3	0.0	459	1047.8	-999.3	0.0
460	1095.4	-999.3	0.0	461	1143.0	-999.3	0.0	462	1158.0	-999.3	0.0
463	-25.0	-951.6	0.0	464	0.0	-951.6	0.0	465	47.6	-951.6	0.0
466	95.3	-951.6	0.0	467	142.9	-951.6	0.0	468	190.5	-951.6	0.0
469	238.1	-951.6	0.0	470	285.8	-951.6	0.0	471	333.4	-951.6	0.0
472	381.0	-951.6	0.0	473	428.6	-951.6	0.0	474	476.3	-951.6	0.0
475	523.9	-951.6	0.0	476	571.5	-951.6	0.0	477	619.1	-951.6	0.0
478	666.8	-951.6	0.0	479	714.4	-951.6	0.0	480	762.0	-951.6	0.0
481	809.6	-951.6	0.0	482	857.3	-951.6	0.0	483	904.9	-951.6	0.0
484	952.5	-951.6	0.0	485	1000.1	-951.6	0.0	486	1047.8	-951.6	0.0
487	1095.4	-951.6	0.0	488	1143.0	-951.6	0.0	489	1158.0	-951.6	0.0
490	-25.0	-904.0	0.0	491	0.0	-904.0	0.0	492	47.6	-904.0	0.0
493	95.3	-904.0	0.0	494	142.9	-904.0	0.0	495	190.5	-904.0	0.0
496	238.1	-904.0	0.0	497	285.8	-904.0	0.0	498	333.4	-904.0	0.0
499	381.0	-904.0	0.0	500	428.6	-904.0	0.0	501	476.3	-904.0	0.0
502	523.9	-904.0	0.0	503	571.5	-904.0	0.0	504	619.1	-904.0	0.0
505	666.8	-904.0	0.0	506	714.4	-904.0	0.0	507	762.0	-904.0	0.0
508	809.6	-904.0	0.0	509	857.3	-904.0	0.0	510	904.9	-904.0	0.0
511	952.5	-904.0	0.0	512	1000.1	-904.0	0.0	513	1047.8	-904.0	0.0
514	1095.4	-904.0	0.0	515	1143.0	-904.0	0.0	516	1158.0	-904.0	0.0
517	-25.0	-856.4	0.0	518	0.0	-856.4	0.0	519	47.6	-856.4	0.0
520	95.3	-856.4	0.0	521	142.9	-856.4	0.0	522	190.5	-856.4	0.0
523	238.1	-856.4	0.0	524	285.8	-856.4	0.0	525	333.4	-856.4	0.0
526	381.0	-856.4	0.0	527	428.6	-856.4	0.0	528	476.3	-856.4	0.0
529	523.9	-856.4	0.0	530	571.5	-856.4	0.0	531	619.1	-856.4	0.0
532	666.8	-856.4	0.0	533	714.4	-856.4	0.0	534	762.0	-856.4	0.0
535	809.6	-856.4	0.0	536	857.3	-856.4	0.0	537	904.9	-856.4	0.0
538	952.5	-856.4	0.0	539	1000.1	-856.4	0.0	540	1047.8	-856.4	0.0
541	1095.4	-856.4	0.0	542	1143.0	-856.4	0.0	543	1158.0	-856.4	0.0
544	-25.0	-808.8	0.0	545	0.0	-808.8	0.0	546	47.6	-808.8	0.0
547	95.3	-808.8	0.0	548	142.9	-808.8	0.0	549	190.5	-808.8	0.0
550	238.1	-808.8	0.0	551	285.8	-808.8	0.0	552	333.4	-808.8	0.0
553	381.0	-808.8	0.0	554	428.6	-808.8	0.0	555	476.3	-808.8	0.0
556	523.9	-808.8	0.0	557	571.5	-808.8	0.0	558	619.1	-808.8	0.0
559	666.8	-808.8	0.0	560	714.4	-808.8	0.0	561	762.0	-808.8	0.0
562	809.6	-808.8	0.0	563	857.3	-808.8	0.0	564	904.9	-808.8	0.0
565	952.5	-808.8	0.0	566	1000.1	-808.8	0.0	567	1047.8	-808.8	0.0

568	1095.4	-808.8	0.0	569	1143.0	-808.8	0.0	570	1158.0	-808.8	0.0
571	-25.0	-761.1	0.0	572	0.0	-761.1	0.0	573	47.6	-761.1	0.0
574	95.3	-761.1	0.0	575	142.9	-761.1	0.0	576	190.5	-761.1	0.0
577	238.1	-761.1	0.0	578	285.8	-761.1	0.0	579	333.4	-761.1	0.0
580	381.0	-761.1	0.0	581	428.6	-761.1	0.0	582	476.3	-761.1	0.0
583	523.9	-761.1	0.0	584	571.5	-761.1	0.0	585	619.1	-761.1	0.0
586	666.8	-761.1	0.0	587	714.4	-761.1	0.0	588	762.0	-761.1	0.0
589	809.6	-761.1	0.0	590	857.3	-761.1	0.0	591	904.9	-761.1	0.0
592	952.5	-761.1	0.0	593	1000.1	-761.1	0.0	594	1047.8	-761.1	0.0
595	1095.4	-761.1	0.0	596	1143.0	-761.1	0.0	597	1158.0	-761.1	0.0
598	-25.0	-713.5	0.0	599	0.0	-713.5	0.0	600	47.6	-713.5	0.0
601	95.3	-713.5	0.0	602	142.9	-713.5	0.0	603	190.5	-713.5	0.0
604	238.1	-713.5	0.0	605	285.8	-713.5	0.0	606	333.4	-713.5	0.0
607	381.0	-713.5	0.0	608	428.6	-713.5	0.0	609	476.3	-713.5	0.0
610	523.9	-713.5	0.0	611	571.5	-713.5	0.0	612	619.1	-713.5	0.0
613	666.8	-713.5	0.0	614	714.4	-713.5	0.0	615	762.0	-713.5	0.0
616	809.6	-713.5	0.0	617	857.3	-713.5	0.0	618	904.9	-713.5	0.0
619	952.5	-713.5	0.0	620	1000.1	-713.5	0.0	621	1047.8	-713.5	0.0
622	1095.4	-713.5	0.0	623	1143.0	-713.5	0.0	624	1158.0	-713.5	0.0
625	-25.0	-668.9	0.0	626	0.0	-668.9	0.0	627	47.6	-668.9	0.0
628	95.3	-668.9	0.0	629	142.9	-668.9	0.0	630	190.5	-668.9	0.0
631	238.1	-668.9	0.0	632	285.8	-668.9	0.0	633	333.4	-668.9	0.0
634	381.0	-668.9	0.0	635	428.6	-668.9	0.0	636	476.3	-668.9	0.0
637	523.9	-668.9	0.0	638	571.5	-668.9	0.0	639	619.1	-668.9	0.0
640	666.8	-668.9	0.0	641	714.4	-668.9	0.0	642	762.0	-668.9	0.0
643	809.6	-668.9	0.0	644	857.3	-668.9	0.0	645	904.9	-668.9	0.0
646	952.5	-668.9	0.0	647	1000.1	-668.9	0.0	648	1047.8	-668.9	0.0
649	1095.4	-668.9	0.0	650	1143.0	-668.9	0.0	651	1158.0	-668.9	0.0
652	-25.0	-624.3	0.0	653	0.0	-624.3	0.0	654	47.6	-624.3	0.0
655	95.3	-624.3	0.0	656	142.9	-624.3	0.0	657	190.5	-624.3	0.0
658	238.1	-624.3	0.0	659	285.8	-624.3	0.0	660	333.4	-624.3	0.0
661	381.0	-624.3	0.0	662	428.6	-624.3	0.0	663	476.3	-624.3	0.0
664	523.9	-624.3	0.0	665	571.5	-624.3	0.0	666	619.1	-624.3	0.0
667	666.8	-624.3	0.0	668	714.4	-624.3	0.0	669	762.0	-624.3	0.0
670	809.6	-624.3	0.0	671	857.3	-624.3	0.0	672	904.9	-624.3	0.0
673	952.5	-624.3	0.0	674	1000.1	-624.3	0.0	675	1047.8	-624.3	0.0
676	1095.4	-624.3	0.0	677	1143.0	-624.3	0.0	678	1158.0	-624.3	0.0
679	-25.0	-579.7	0.0	680	0.0	-579.7	0.0	681	47.6	-579.7	0.0
682	95.3	-579.7	0.0	683	142.9	-579.7	0.0	684	190.5	-579.7	0.0
685	238.1	-579.7	0.0	686	285.8	-579.7	0.0	687	333.4	-579.7	0.0
688	381.0	-579.7	0.0	689	428.6	-579.7	0.0	690	476.3	-579.7	0.0
691	523.9	-579.7	0.0	692	571.5	-579.7	0.0	693	619.1	-579.7	0.0
694	666.8	-579.7	0.0	695	714.4	-579.7	0.0	696	762.0	-579.7	0.0
697	809.6	-579.7	0.0	698	857.3	-579.7	0.0	699	904.9	-579.7	0.0
700	952.5	-579.7	0.0	701	1000.1	-579.7	0.0	702	1047.8	-579.7	0.0
703	1095.4	-579.7	0.0	704	1143.0	-579.7	0.0	705	1158.0	-579.7	0.0
706	-25.0	-535.1	0.0	707	0.0	-535.1	0.0	708	47.6	-535.1	0.0
709	95.3	-535.1	0.0	710	142.9	-535.1	0.0	711	190.5	-535.1	0.0
712	238.1	-535.1	0.0	713	285.8	-535.1	0.0	714	333.4	-535.1	0.0
715	381.0	-535.1	0.0	716	428.6	-535.1	0.0	717	476.3	-535.1	0.0
718	523.9	-535.1	0.0	719	571.5	-535.1	0.0	720	619.1	-535.1	0.0
721	666.8	-535.1	0.0	722	714.4	-535.1	0.0	723	762.0	-535.1	0.0
724	809.6	-535.1	0.0	725	857.3	-535.1	0.0	726	904.9	-535.1	0.0
727	952.5	-535.1	0.0	728	1000.1	-535.1	0.0	729	1047.8	-535.1	0.0
730	1095.4	-535.1	0.0	731	1143.0	-535.1	0.0	732	1158.0	-535.1	0.0
733	-25.0	-490.5	0.0	734	0.0	-490.5	0.0	735	47.6	-490.5	0.0
736	95.3	-490.5	0.0	737	142.9	-490.5	0.0	738	190.5	-490.5	0.0
739	238.1	-490.5	0.0	740	285.8	-490.5	0.0	741	333.4	-490.5	0.0
742	381.0	-490.5	0.0	743	428.6	-490.5	0.0	744	476.3	-490.5	0.0
745	523.9	-490.5	0.0	746	571.5	-490.5	0.0	747	619.1	-490.5	0.0
748	666.8	-490.5	0.0	749	714.4	-490.5	0.0	750	762.0	-490.5	0.0
751	809.6	-490.5	0.0	752	857.3	-490.5	0.0	753	904.9	-490.5	0.0
754	952.5	-490.5	0.0	755	1000.1	-490.5	0.0	756	1047.8	-490.5	0.0
757	1095.4	-490.5	0.0	758	1143.0	-490.5	0.0	759	1158.0	-490.5	0.0
760	-25.0	-445.9	0.0	761	0.0	-445.9	0.0	762	47.6	-445.9	0.0
763	95.3	-445.9	0.0	764	142.9	-445.9	0.0	765	190.5	-445.9	0.0
766	238.1	-445.9	0.0	767	285.8	-445.9	0.0	768	333.4	-445.9	0.0
769	381.0	-445.9	0.0	770	428.6	-445.9	0.0	771	476.3	-445.9	0.0
772	523.9	-445.9	0.0	773	571.5	-445.9	0.0	774	619.1	-445.9	0.0
775	666.8	-445.9	0.0	776	714.4	-445.9	0.0	777	762.0	-445.9	0.0
778	809.6	-445.9	0.0	779	857.3	-445.9	0.0	780	904.9	-445.9	0.0
781	952.5	-445.9	0.0	782	1000.1	-445.9	0.0	783	1047.8	-445.9	0.0
784	1095.4	-445.9	0.0	785	1143.0	-445.9	0.0	786	1158.0	-445.9	0.0
787	-25.0	-401.3	0.0	788	0.0	-401.3	0.0	789	47.6	-401.3	0.0
790	95.3	-401.3	0.0	791	142.9	-401.3	0.0	792	190.5	-401.3	0.0
793	238.1	-401.3	0.0	794	285.8	-401.3	0.0	795	333.4	-401.3	0.0
796	381.0	-401.3	0.0	797	428.6	-401.3	0.0	798	476.3	-401.3	0.0
799	523.9	-401.3	0.0	800	571.5	-401.3	0.0	801	619.1	-401.3	0.0

802	666.8	-401.3	0.0	803	714.4	-401.3	0.0	804	762.0	-401.3	0.0
805	809.6	-401.3	0.0	806	857.3	-401.3	0.0	807	904.9	-401.3	0.0
808	952.5	-401.3	0.0	809	1000.1	-401.3	0.0	810	1047.8	-401.3	0.0
811	1095.4	-401.3	0.0	812	1143.0	-401.3	0.0	813	1158.0	-401.3	0.0
814	-25.0	-356.8	0.0	815	0.0	-356.8	0.0	816	47.6	-356.8	0.0
817	95.3	-356.8	0.0	818	142.9	-356.8	0.0	819	190.5	-356.8	0.0
820	238.1	-356.8	0.0	821	285.8	-356.8	0.0	822	333.4	-356.8	0.0
823	381.0	-356.8	0.0	824	428.6	-356.8	0.0	825	476.3	-356.8	0.0
826	523.9	-356.8	0.0	827	571.5	-356.8	0.0	828	619.1	-356.8	0.0
829	666.8	-356.8	0.0	830	714.4	-356.8	0.0	831	762.0	-356.8	0.0
832	809.6	-356.8	0.0	833	857.3	-356.8	0.0	834	904.9	-356.8	0.0
835	952.5	-356.8	0.0	836	1000.1	-356.8	0.0	837	1047.8	-356.8	0.0
838	1095.4	-356.8	0.0	839	1143.0	-356.8	0.0	840	1158.0	-356.8	0.0
841	-25.0	-312.2	0.0	842	0.0	-312.2	0.0	843	47.6	-312.2	0.0
844	95.3	-312.2	0.0	845	142.9	-312.2	0.0	846	190.5	-312.2	0.0
847	238.1	-312.2	0.0	848	285.8	-312.2	0.0	849	333.4	-312.2	0.0
850	381.0	-312.2	0.0	851	428.6	-312.2	0.0	852	476.3	-312.2	0.0
853	523.9	-312.2	0.0	854	571.5	-312.2	0.0	855	619.1	-312.2	0.0
856	666.8	-312.2	0.0	857	714.4	-312.2	0.0	858	762.0	-312.2	0.0
859	809.6	-312.2	0.0	860	857.3	-312.2	0.0	861	904.9	-312.2	0.0
862	952.5	-312.2	0.0	863	1000.1	-312.2	0.0	864	1047.8	-312.2	0.0
865	1095.4	-312.2	0.0	866	1143.0	-312.2	0.0	867	1158.0	-312.2	0.0
868	-25.0	-267.6	0.0	869	0.0	-267.6	0.0	870	47.6	-267.6	0.0
871	95.3	-267.6	0.0	872	142.9	-267.6	0.0	873	190.5	-267.6	0.0
874	238.1	-267.6	0.0	875	285.8	-267.6	0.0	876	333.4	-267.6	0.0
877	381.0	-267.6	0.0	878	428.6	-267.6	0.0	879	476.3	-267.6	0.0
880	523.9	-267.6	0.0	881	571.5	-267.6	0.0	882	619.1	-267.6	0.0
883	666.8	-267.6	0.0	884	714.4	-267.6	0.0	885	762.0	-267.6	0.0
886	809.6	-267.6	0.0	887	857.3	-267.6	0.0	888	904.9	-267.6	0.0
889	952.5	-267.6	0.0	890	1000.1	-267.6	0.0	891	1047.8	-267.6	0.0
892	1095.4	-267.6	0.0	893	1143.0	-267.6	0.0	894	1158.0	-267.6	0.0
895	-25.0	-223.0	0.0	896	0.0	-223.0	0.0	897	47.6	-223.0	0.0
898	95.3	-223.0	0.0	899	142.9	-223.0	0.0	900	190.5	-223.0	0.0
901	238.1	-223.0	0.0	902	285.8	-223.0	0.0	903	333.4	-223.0	0.0
904	381.0	-223.0	0.0	905	428.6	-223.0	0.0	906	476.3	-223.0	0.0
907	523.9	-223.0	0.0	908	571.5	-223.0	0.0	909	619.1	-223.0	0.0
910	666.8	-223.0	0.0	911	714.4	-223.0	0.0	912	762.0	-223.0	0.0
913	809.6	-223.0	0.0	914	857.3	-223.0	0.0	915	904.9	-223.0	0.0
916	952.5	-223.0	0.0	917	1000.1	-223.0	0.0	918	1047.8	-223.0	0.0
919	1095.4	-223.0	0.0	920	1143.0	-223.0	0.0	921	1158.0	-223.0	0.0
922	-25.0	-178.4	0.0	923	0.0	-178.4	0.0	924	47.6	-178.4	0.0
925	95.3	-178.4	0.0	926	142.9	-178.4	0.0	927	190.5	-178.4	0.0
928	238.1	-178.4	0.0	929	285.8	-178.4	0.0	930	333.4	-178.4	0.0
931	381.0	-178.4	0.0	932	428.6	-178.4	0.0	933	476.3	-178.4	0.0
934	523.9	-178.4	0.0	935	571.5	-178.4	0.0	936	619.1	-178.4	0.0
937	666.8	-178.4	0.0	938	714.4	-178.4	0.0	939	762.0	-178.4	0.0
940	809.6	-178.4	0.0	941	857.3	-178.4	0.0	942	904.9	-178.4	0.0
943	952.5	-178.4	0.0	944	1000.1	-178.4	0.0	945	1047.8	-178.4	0.0
946	1095.4	-178.4	0.0	947	1143.0	-178.4	0.0	948	1158.0	-178.4	0.0
949	-25.0	-133.8	0.0	950	0.0	-133.8	0.0	951	47.6	-133.8	0.0
952	95.3	-133.8	0.0	953	142.9	-133.8	0.0	954	190.5	-133.8	0.0
955	238.1	-133.8	0.0	956	285.8	-133.8	0.0	957	333.4	-133.8	0.0
958	381.0	-133.8	0.0	959	428.6	-133.8	0.0	960	476.3	-133.8	0.0
961	523.9	-133.8	0.0	962	571.5	-133.8	0.0	963	619.1	-133.8	0.0
964	666.8	-133.8	0.0	965	714.4	-133.8	0.0	966	762.0	-133.8	0.0
967	809.6	-133.8	0.0	968	857.3	-133.8	0.0	969	904.9	-133.8	0.0
970	952.5	-133.8	0.0	971	1000.1	-133.8	0.0	972	1047.8	-133.8	0.0
973	1095.4	-133.8	0.0	974	1143.0	-133.8	0.0	975	1158.0	-133.8	0.0
976	-25.0	-89.2	0.0	977	0.0	-89.2	0.0	978	47.6	-89.2	0.0
979	95.3	-89.2	0.0	980	142.9	-89.2	0.0	981	190.5	-89.2	0.0
982	238.1	-89.2	0.0	983	285.8	-89.2	0.0	984	333.4	-89.2	0.0
985	381.0	-89.2	0.0	986	428.6	-89.2	0.0	987	476.3	-89.2	0.0
988	523.9	-89.2	0.0	989	571.5	-89.2	0.0	990	619.1	-89.2	0.0
991	666.8	-89.2	0.0	992	714.4	-89.2	0.0	993	762.0	-89.2	0.0
994	809.6	-89.2	0.0	995	857.3	-89.2	0.0	996	904.9	-89.2	0.0
997	952.5	-89.2	0.0	998	1000.1	-89.2	0.0	999	1047.8	-89.2	0.0
1000	1095.4	-89.2	0.0	1001	1143.0	-89.2	0.0	1002	1158.0	-89.2	0.0
1003	-25.0	-44.6	0.0	1004	0.0	-44.6	0.0	1005	47.6	-44.6	0.0
1006	95.3	-44.6	0.0	1007	142.9	-44.6	0.0	1008	190.5	-44.6	0.0
1009	238.1	-44.6	0.0	1010	285.8	-44.6	0.0	1011	333.4	-44.6	0.0
1012	381.0	-44.6	0.0	1013	428.6	-44.6	0.0	1014	476.3	-44.6	0.0
1015	523.9	-44.6	0.0	1016	571.5	-44.6	0.0	1017	619.1	-44.6	0.0
1018	666.8	-44.6	0.0	1019	714.4	-44.6	0.0	1020	762.0	-44.6	0.0
1021	809.6	-44.6	0.0	1022	857.3	-44.6	0.0	1023	904.9	-44.6	0.0
1024	952.5	-44.6	0.0	1025	1000.1	-44.6	0.0	1026	1047.8	-44.6	0.0
1027	1095.4	-44.6	0.0	1028	1143.0	-44.6	0.0	1029	1158.0	-44.6	0.0
1030	-25.0	0.0	0.0	1031	0.0	0.0	0.0	1032	47.6	0.0	0.0
1033	95.3	0.0	0.0	1034	142.9	0.0	0.0	1035	190.5	0.0	0.0

1036	238.1	0.0	0.0	1037	285.8	0.0	0.0	1038	333.4	0.0	0.0
1039	381.0	0.0	0.0	1040	428.6	0.0	0.0	1041	476.3	0.0	0.0
1042	523.9	0.0	0.0	1043	571.5	0.0	0.0	1044	619.1	0.0	0.0
1045	666.8	0.0	0.0	1046	714.4	0.0	0.0	1047	762.0	0.0	0.0
1048	809.6	0.0	0.0	1049	857.3	0.0	0.0	1050	904.9	0.0	0.0
1051	952.5	0.0	0.0	1052	1000.1	0.0	0.0	1053	1047.8	0.0	0.0
1054	1095.4	0.0	0.0	1055	1143.0	0.0	0.0	1056	1158.0	0.0	0.0
1057	-25.0	25.0	0.0	1058	0.0	25.0	0.0	1059	47.6	25.0	0.0
1060	95.3	25.0	0.0	1061	142.9	25.0	0.0	1062	190.5	25.0	0.0
1063	238.1	25.0	0.0	1064	285.8	25.0	0.0	1065	333.4	25.0	0.0
1066	381.0	25.0	0.0	1067	428.6	25.0	0.0	1068	476.3	25.0	0.0
1069	523.9	25.0	0.0	1070	571.5	25.0	0.0	1071	619.1	25.0	0.0
1072	666.8	25.0	0.0	1073	714.4	25.0	0.0	1074	762.0	25.0	0.0
1075	809.6	25.0	0.0	1076	857.3	25.0	0.0	1077	904.9	25.0	0.0
1078	952.5	25.0	0.0	1079	1000.1	25.0	0.0	1080	1047.8	25.0	0.0
1081	1095.4	25.0	0.0	1082	1143.0	25.0	0.0	1083	1158.0	25.0	0.0
1084	0.0	-1856.5	34.0	1085	381.0	-1856.5	34.0	1086	0.0	-1475.5	50.0
1087	381.0	-1475.5	50.0	1088	0.0	-1094.5	50.0	1089	381.0	-1094.5	50.0
1090	762.0	-1094.5	50.0	1091	1143.0	-1094.5	50.0	1092	0.0	-713.5	50.0
1093	381.0	-713.5	50.0	1094	762.0	-713.5	50.0	1095	1143.0	-713.5	50.0
1096	0.0	0.0	50.0	1097	381.0	0.0	50.0	1098	762.0	0.0	50.0
1099	1143.0	0.0	50.0	1100	0.0	-713.5	380.0	1101	381.0	-713.5	380.0
1102	762.0	-713.5	380.0	1103	1143.0	-713.5	380.0	1104	0.0	0.0	380.0
1105	381.0	0.0	380.0	1106	762.0	0.0	380.0	1107	1143.0	0.0	380.0
1108	0.0	-2618.5	389.0	1109	127.0	-2618.5	389.0	1110	254.0	-2618.5	389.0
1111	381.0	-2618.5	389.0	1112	0.0	-2237.5	389.0	1113	127.0	-2237.5	389.0
1114	254.0	-2237.5	389.0	1115	381.0	-2237.5	389.0	1116	0.0	-1856.5	389.0
1117	127.0	-1856.5	389.0	1118	254.0	-1856.5	389.0	1119	381.0	-1856.5	389.0
1120	0.0	-1475.5	389.0	1121	127.0	-1475.5	389.0	1122	254.0	-1475.5	389.0
1123	381.0	-1475.5	389.0	1124	0.0	-1119.5	389.0	1125	127.0	-1119.5	389.0
1126	254.0	-1119.5	389.0	1127	381.0	-1119.5	389.0	1128	0.0	-1094.5	389.0
1129	127.0	-1094.5	389.0	1130	254.0	-1094.5	389.0	1131	381.0	-1094.5	389.0
1132	762.0	-1094.5	389.0	1133	1143.0	-1094.5	389.0	1134	0.0	-967.5	389.0
1135	381.0	-967.5	389.0	1136	762.0	-967.5	389.0	1137	1143.0	-967.5	389.0
1138	0.0	-840.5	389.0	1139	381.0	-840.5	389.0	1140	762.0	-840.5	389.0
1141	1143.0	-840.5	389.0	1142	0.0	-713.5	389.0	1143	381.0	-713.5	389.0
1144	762.0	-713.5	389.0	1145	1143.0	-713.5	389.0	1146	0.0	-358.5	405.1
1147	381.0	-358.5	405.1	1148	762.0	-358.5	405.1	1149	1143.0	-358.5	405.1

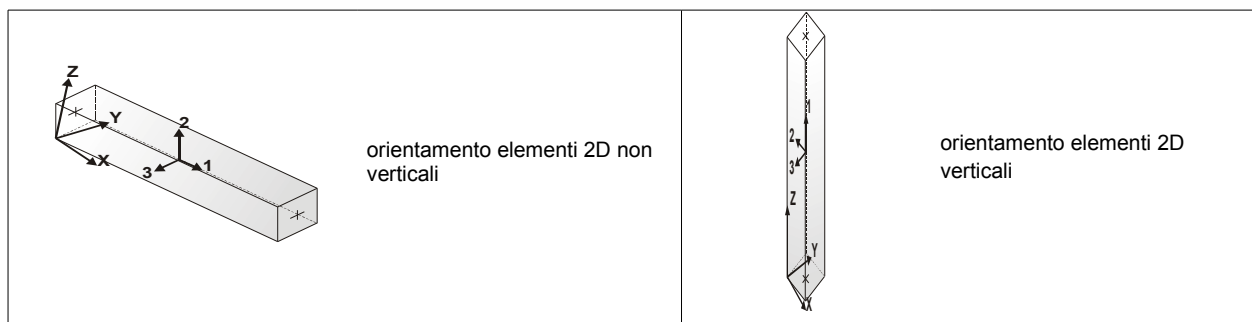
MODELLAZIONE STRUTTURA: ELEMENTI TRAVE

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

Con riferimento al **Documento di Affidabilità** "Test di validazione del software di calcolo PRO_SAP e dei moduli aggiuntivi PRO_SAP Modulo Geotecnico, PRO_CAD nodi acciaio e PRO_MST" - versione Settembre 2014, disponibile per il download sul sito www.2si.it, si segnalano i seguenti esempi applicativi:

Test N°	Titolo
2	TRAVI A UNA CAMPATA
3	TRAVE A PIU' CAMPATE
4	TRAVE A UNA CAMPATA SU TERRENO ALLA WINKLER
5	TRAVI SU TERRENO ALLA WINKLER CON CARICO TRASVERSALE
6	TELAI PIANI CON CERNIERE ALLA BASE
7	TELAI PIANI CON INCASTRI ALLA BASE
11	STRUTTURE SOGGETTE A VARIAZIONI TERMICHE
12	STRUTTURE SU TERRENO ALLA WINKLER SOTTOPOSTE A CARICHI DISTRIBUITI TRIANGOLARI
21	DRILLING
24	TENSIONI E ROTAZIONI RISPETTO ALLA CORDA DI ELEMENTI TRAVE
27	FRECCIA DI ELEMENTI TRAVE
42	GERARCHIA DELLE RESISTENZE PER TRAVI IN C.A.
43	GERARCHIA DELLE RESISTENZE PER PILASTRI IN C.A.
44	VERIFICA ALLE TA DI STRUTTURE IN C.A.
45	VERIFICA AGLI SLU DI STRUTTURE IN C.A.
47	VERIFICA A PUNZONAMENTO ALLO SLU DI TRAVI IN C.A.
48	PROGETTAZIONE A TAGLIO DI STRUTTURE IN C.A. SECONDO IL D.M. 9/1/96
49	PROGETTAZIONE A TAGLIO DI STRUTTURE IN C.A. SECONDO IL D.M. 14/1/2008
50	VERIFICA ALLO SLE (TENSIONI E FESSURAZIONE) DI STRUTTURE IN C.A.
51	VERIFICA ALLO SLE (DEFORMAZIONE) DI STRUTTURE IN C.A.
52	FATTORE DI STRUTTURA
53	SOVRARESISTENZE
54	DETTAGLI COSTRUTTIVI C.A.: LIMITI D'ARMATURA PILASTRI E NODI TRAVE-PILASTRO

56	VERIFICA DI STABILITA' DI ASTE COMPRESSE IN ACCIAIO – METODO OMEGA
57	LUCE LIBERA DI TRAVI E ASTE IN ACCIAIO
58	LUCE LIBERA DI COLONNE IN ACCIAIO
59	SVERGOLAMENTO DI TRAVI IN ACCIAIO
64	STABILITA' DI ASTE COMPOSTE IN ACCIAIO
73	VALUTAZIONE EFFETTO P- δ SU PILASTRATA
74	VALUTAZIONE EFFETTO P- δ SU TELAIO 3D
85	ANALISI PUSHOVER DI UN EDIFICIO IN C.A.
87	ANALISI ELASTO PLASTICA INCREMENTALE
88	ANALISI ELASTO PLASTICA INCREMENTALE
98	VERIFICA ALLO SLU DI STRUTTURE IN LEGNO SECONDO EC5
99	VERIFICA ALLO SLE DI STRUTTURE IN LEGNO SECONDO EC5
102	SNELLEZZE EC5
130	PROGETTO E VERIFICA DI TRAVI PREM

Elem.	Note	Nodo I	Nodo J	Mat.	Sez.	Rotaz. gradi	Svincolo I	Svincolo J	Wink V daN/cm3	Wink O daN/cm3
1	Asta	1088	1142	11	4					
2	Asta	1128	1092	11	4					
3	Asta	1091	1145	11	4					
4	Asta	1133	1095	11	4					
5	Asta	1101	1148	11	4					
6	Asta	1147	1102	11	4					
7	Asta	1147	1106	11	4					
8	Asta	1105	1148	11	4					
9	Trave f.	101	102	1	12				1.00	1.00
10	Trave f.	102	103	1	12				1.00	1.00
11	Trave f.	103	104	1	12				1.00	1.00
12	Trave f.	104	105	1	12				1.00	1.00
13	Trave f.	105	106	1	12				1.00	1.00
14	Trave f.	106	107	1	12				1.00	1.00
15	Trave f.	107	108	1	12				1.00	1.00
16	Trave f.	108	109	1	12				1.00	1.00
17	Trave f.	101	112	1	11				1.00	1.00
18	Trave f.	109	120	1	11				1.00	1.00
19	Trave f.	112	123	1	11				1.00	1.00
20	Trave f.	120	131	1	11				1.00	1.00
21	Trave f.	123	134	1	11				1.00	1.00
22	Trave f.	131	142	1	11				1.00	1.00
23	Trave f.	134	145	1	11				1.00	1.00
24	Trave f.	142	153	1	11				1.00	1.00
25	Trave f.	145	156	1	11				1.00	1.00
26	Trave f.	153	164	1	11				1.00	1.00
27	Trave f.	156	167	1	11				1.00	1.00
28	Trave f.	164	175	1	11				1.00	1.00
29	Trave f.	167	178	1	11				1.00	1.00
30	Trave f.	175	186	1	11				1.00	1.00
31	Trave f.	178	189	1	11				1.00	1.00
32	Trave f.	186	197	1	11				1.00	1.00
33	Trave f.	189	200	1	11				1.00	1.00
34	Trave f.	197	208	1	11				1.00	1.00
35	Trave f.	200	211	1	11				1.00	1.00
36	Trave f.	208	219	1	11				1.00	1.00
37	Trave f.	211	222	1	11				1.00	1.00
38	Trave f.	219	230	1	11				1.00	1.00
39	Trave f.	222	233	1	11				1.00	1.00
40	Trave f.	230	241	1	11				1.00	1.00
41	Trave f.	233	244	1	11				1.00	1.00
42	Trave f.	241	252	1	11				1.00	1.00
43	Trave f.	244	255	1	11				1.00	1.00
44	Trave f.	252	263	1	11				1.00	1.00

45	Trave f.	255	266	1	11				1.00	1.00
46	Trave f.	263	274	1	11				1.00	1.00
47	Trave f.	266	277	1	11				1.00	1.00
48	Trave f.	274	285	1	11				1.00	1.00
49	Trave f.	277	278	1	9				1.00	1.00
50	Trave f.	278	279	1	9				1.00	1.00
51	Trave f.	279	280	1	9				1.00	1.00
52	Trave f.	280	281	1	9				1.00	1.00
53	Trave f.	281	282	1	9				1.00	1.00
54	Trave f.	282	283	1	9				1.00	1.00
55	Trave f.	283	284	1	9				1.00	1.00
56	Trave f.	284	285	1	9				1.00	1.00
57	Trave f.	277	288	1	9				1.00	1.00
58	Trave f.	285	296	1	9				1.00	1.00
59	Trave f.	288	299	1	9				1.00	1.00
60	Trave f.	296	307	1	9				1.00	1.00
61	Trave f.	299	310	1	9				1.00	1.00
62	Trave f.	307	318	1	9				1.00	1.00
63	Trave f.	310	321	1	9				1.00	1.00
64	Trave f.	318	329	1	9				1.00	1.00
65	Trave f.	321	332	1	9				1.00	1.00
66	Trave f.	329	340	1	9				1.00	1.00
67	Trave f.	332	343	1	9				1.00	1.00
68	Trave f.	340	351	1	9				1.00	1.00
69	Trave f.	343	354	1	9				1.00	1.00
70	Trave f.	351	362	1	9				1.00	1.00
71	Trave f.	354	383	1	9				1.00	1.00
72	Trave f.	362	391	1	9				1.00	1.00
73	Trave f.	391	392	1	9				1.00	1.00
74	Trave f.	392	393	1	9				1.00	1.00
75	Trave f.	393	394	1	9				1.00	1.00
76	Trave f.	394	395	1	9				1.00	1.00
77	Trave f.	395	396	1	9				1.00	1.00
78	Trave f.	396	397	1	9				1.00	1.00
79	Trave f.	397	398	1	9				1.00	1.00
80	Trave f.	398	399	1	9				1.00	1.00
81	Trave f.	399	400	1	9				1.00	1.00
82	Trave f.	400	401	1	9				1.00	1.00
83	Trave f.	401	402	1	9				1.00	1.00
84	Trave f.	402	403	1	9				1.00	1.00
85	Trave f.	403	404	1	9				1.00	1.00
86	Trave f.	404	405	1	9				1.00	1.00
87	Trave f.	405	406	1	9				1.00	1.00
88	Trave f.	406	407	1	9				1.00	1.00
89	Trave f.	383	410	1	9				1.00	1.00
90	Trave f.	407	434	1	9				1.00	1.00
91	Trave f.	410	437	1	9				1.00	1.00
92	Trave f.	434	461	1	9				1.00	1.00
93	Trave f.	437	464	1	9				1.00	1.00
94	Trave f.	461	488	1	9				1.00	1.00
95	Trave f.	464	491	1	9				1.00	1.00
96	Trave f.	488	515	1	9				1.00	1.00
97	Trave f.	491	518	1	9				1.00	1.00
98	Trave f.	515	542	1	9				1.00	1.00
99	Trave f.	518	545	1	9				1.00	1.00
100	Trave f.	542	569	1	9				1.00	1.00
101	Trave f.	545	572	1	9				1.00	1.00
102	Trave f.	569	596	1	9				1.00	1.00
103	Trave f.	572	599	1	9				1.00	1.00
104	Trave f.	596	623	1	9				1.00	1.00
105	Trave f.	599	600	1	9				1.00	1.00
106	Trave f.	600	601	1	9				1.00	1.00
107	Trave f.	601	602	1	9				1.00	1.00
108	Trave f.	602	603	1	9				1.00	1.00
109	Trave f.	603	604	1	9				1.00	1.00
110	Trave f.	604	605	1	9				1.00	1.00
111	Trave f.	605	606	1	9				1.00	1.00
112	Trave f.	606	607	1	9				1.00	1.00
113	Trave f.	607	608	1	9				1.00	1.00
114	Trave f.	608	609	1	9				1.00	1.00
115	Trave f.	609	610	1	9				1.00	1.00
116	Trave f.	610	611	1	9				1.00	1.00
117	Trave f.	611	612	1	9				1.00	1.00
118	Trave f.	612	613	1	9				1.00	1.00
119	Trave f.	613	614	1	9				1.00	1.00
120	Trave f.	614	615	1	9				1.00	1.00
121	Trave f.	615	616	1	9				1.00	1.00
122	Trave f.	616	617	1	9				1.00	1.00

123	Trave f.	617	618	1	9				1.00	1.00
124	Trave f.	618	619	1	9				1.00	1.00
125	Trave f.	619	620	1	9				1.00	1.00
126	Trave f.	620	621	1	9				1.00	1.00
127	Trave f.	621	622	1	9				1.00	1.00
128	Trave f.	622	623	1	9				1.00	1.00
129	Trave f.	599	626	1	9				1.00	1.00
130	Trave f.	623	650	1	9				1.00	1.00
131	Trave f.	626	653	1	9				1.00	1.00
132	Trave f.	650	677	1	9				1.00	1.00
133	Trave f.	653	680	1	9				1.00	1.00
134	Trave f.	677	704	1	9				1.00	1.00
135	Trave f.	680	707	1	9				1.00	1.00
136	Trave f.	704	731	1	9				1.00	1.00
137	Trave f.	707	734	1	9				1.00	1.00
138	Trave f.	731	758	1	9				1.00	1.00
139	Trave f.	734	761	1	9				1.00	1.00
140	Trave f.	758	785	1	9				1.00	1.00
141	Trave f.	761	788	1	9				1.00	1.00
142	Trave f.	785	812	1	9				1.00	1.00
143	Trave f.	788	815	1	9				1.00	1.00
144	Trave f.	812	839	1	9				1.00	1.00
145	Trave f.	815	842	1	9				1.00	1.00
146	Trave f.	839	866	1	9				1.00	1.00
147	Trave f.	842	869	1	9				1.00	1.00
148	Trave f.	866	893	1	9				1.00	1.00
149	Trave f.	869	896	1	9				1.00	1.00
150	Trave f.	893	920	1	9				1.00	1.00
151	Trave f.	896	923	1	9				1.00	1.00
152	Trave f.	920	947	1	9				1.00	1.00
153	Trave f.	923	950	1	9				1.00	1.00
154	Trave f.	947	974	1	9				1.00	1.00
155	Trave f.	950	977	1	9				1.00	1.00
156	Trave f.	974	1001	1	9				1.00	1.00
157	Trave f.	977	1004	1	9				1.00	1.00
158	Trave f.	1001	1028	1	9				1.00	1.00
159	Trave f.	1004	1031	1	9				1.00	1.00
160	Trave f.	1028	1055	1	9				1.00	1.00
161	Trave f.	1031	1032	1	9				1.00	1.00
162	Trave f.	1032	1033	1	9				1.00	1.00
163	Trave f.	1033	1034	1	9				1.00	1.00
164	Trave f.	1034	1035	1	9				1.00	1.00
165	Trave f.	1035	1036	1	9				1.00	1.00
166	Trave f.	1036	1037	1	9				1.00	1.00
167	Trave f.	1037	1038	1	9				1.00	1.00
168	Trave f.	1038	1039	1	9				1.00	1.00
169	Trave f.	1039	1040	1	9				1.00	1.00
170	Trave f.	1040	1041	1	9				1.00	1.00
171	Trave f.	1041	1042	1	9				1.00	1.00
172	Trave f.	1042	1043	1	9				1.00	1.00
173	Trave f.	1043	1044	1	9				1.00	1.00
174	Trave f.	1044	1045	1	9				1.00	1.00
175	Trave f.	1045	1046	1	9				1.00	1.00
176	Trave f.	1046	1047	1	9				1.00	1.00
177	Trave f.	1047	1048	1	9				1.00	1.00
178	Trave f.	1048	1049	1	9				1.00	1.00
179	Trave f.	1049	1050	1	9				1.00	1.00
180	Trave f.	1050	1051	1	9				1.00	1.00
181	Trave f.	1051	1052	1	9				1.00	1.00
182	Trave f.	1052	1053	1	9				1.00	1.00
183	Trave f.	1053	1054	1	9				1.00	1.00
184	Trave f.	1054	1055	1	9				1.00	1.00
185	Pilas.	189	1084	51	10					
186	Pilas.	197	1085	51	10					
187	Pilas.	277	1086	51	10					
188	Pilas.	285	1087	51	10					
189	Pilas.	383	1088	51	1					
190	Pilas.	391	1089	51	1					
191	Pilas.	399	1090	51	1					
192	Pilas.	407	1091	51	1					
193	Pilas.	599	1092	51	3					
194	Pilas.	607	1093	51	1					
195	Pilas.	615	1094	51	1					
196	Pilas.	623	1095	51	1					
197	Pilas.	1031	1096	51	1					
198	Pilas.	1039	1097	51	1					
199	Pilas.	1047	1098	51	1					
200	Pilas.	1055	1099	51	1					

201	Pilas.	13	1108	11	10					
202	Pilas.	21	1111	11	10					
203	Pilas.	101	1112	11	10					
204	Pilas.	109	1115	11	10					
205	Pilas.	1084	1116	11	10					
206	Pilas.	1085	1119	11	10					
207	Pilas.	1092	1100	11	1					
208	Pilas.	1093	1101	11	1					
209	Pilas.	1094	1102	11	1					
210	Pilas.	1095	1103	11	1					
211	Pilas.	1096	1104	11	1					
212	Pilas.	1097	1105	11	1					
213	Pilas.	1098	1106	11	1					
214	Pilas.	1099	1107	11	1					
215	Pilas.	1086	1120	11	10					
216	Pilas.	1087	1123	11	10					
217	Pilas.	1088	1128	11	1					
218	Pilas.	1089	1131	11	1					
219	Pilas.	1090	1132	11	1					
220	Pilas.	1091	1133	11	1					
221	Trave	1104	1105	11	7					
222	Trave	1105	1106	11	7					
223	Trave	1106	1107	11	7					
224	Pilas.	1100	1142	51	3					
225	Pilas.	1101	1143	51	3					
226	Pilas.	1102	1144	51	3					
227	Pilas.	1103	1145	51	3					
228	Trave	1108	1109	11	6		000011			
229	Trave	1109	1110	11	6					
230	Trave	1110	1111	11	6			000011		
231	Trave	1108	1112	11	5		000011	000011		
232	Trave	1109	1113	11	5		000011	000011		
233	Trave	1110	1114	11	5		000011	000011		
234	Trave	1111	1115	11	13		000011	000011		
235	Trave	1112	1113	11	6		000011			
236	Trave	1113	1114	11	6					
237	Trave	1114	1115	11	6			000011		
238	Trave	1112	1116	11	5		000011	000011		
239	Trave	1113	1117	11	5		000011	000011		
240	Trave	1114	1118	11	5		000011	000011		
241	Trave	1115	1119	11	13		000011	000011		
242	Trave	1116	1117	11	6		000011			
243	Trave	1117	1118	11	6					
244	Trave	1118	1119	11	6			000011		
245	Trave	1116	1120	11	5		000011	000011		
246	Trave	1117	1121	11	5		000011	000011		
247	Trave	1118	1122	11	5		000011	000011		
248	Trave	1119	1123	11	13		000011	000011		
249	Trave	1120	1121	11	6		000011			
250	Trave	1121	1122	11	6					
251	Trave	1122	1123	11	6			000011		
252	Trave	1120	1124	11	5		000011			
253	Trave	1121	1125	11	5		000011	000011		
254	Trave	1122	1126	11	5		000011	000011		
255	Trave	1123	1127	11	13		000011			
256	Trave	1124	1125	11	13		000011			
257	Trave	1125	1126	11	13					
258	Trave	1126	1127	11	13			000011		
259	Trave	1124	1128	11	5			000011		
260	Trave	1127	1131	11	13			000011		
261	Trave	1128	1129	11	13		000011			
262	Trave	1129	1130	11	13					
263	Trave	1130	1131	11	13			000011		
264	Trave	1131	1132	11	13		000011	000011		
265	Trave	1132	1133	11	13		000011	000011		
266	Trave	1128	1134	11	6		000011			
267	Trave	1131	1135	11	6		000011			
268	Trave	1132	1136	11	6		000011			
269	Trave	1133	1137	11	6		000011			
270	Trave	1134	1135	11	5		000011	000011		
271	Trave	1135	1136	11	5		000011	000011		
272	Trave	1136	1137	11	5		000011	000011		
273	Trave	1134	1138	11	6					
274	Trave	1135	1139	11	6					
275	Trave	1136	1140	11	6					
276	Trave	1137	1141	11	6					
277	Trave	1138	1139	11	5		000011	000011		
278	Trave	1139	1140	11	5		000011	000011		

279	Trave	1140	1141	11	5		000011	000011		
280	Trave	1138	1142	11	6			000011		
281	Trave	1139	1143	11	6			000011		
282	Trave	1140	1144	11	6			000011		
283	Trave	1141	1145	11	6			000011		
284	Trave	1142	1143	11	7					
285	Trave	1143	1144	11	7					
286	Trave	1144	1145	11	7					
287	Trave	1100	1146	11	2		000011			
288	Trave	1101	1147	11	2		000011			
289	Trave	1102	1148	11	2		000011			
290	Trave	1103	1149	11	2		000011			
291	Trave	1146	1104	11	2			000011		
292	Trave	1147	1105	11	2			000011		
293	Trave	1148	1106	11	2			000011		
294	Trave	1149	1107	11	2			000011		
295	Trave	1146	1147	11	8		000011	000011		
296	Trave	1147	1148	11	8		000011	000011		
297	Trave	1148	1149	11	8		000011	000011		

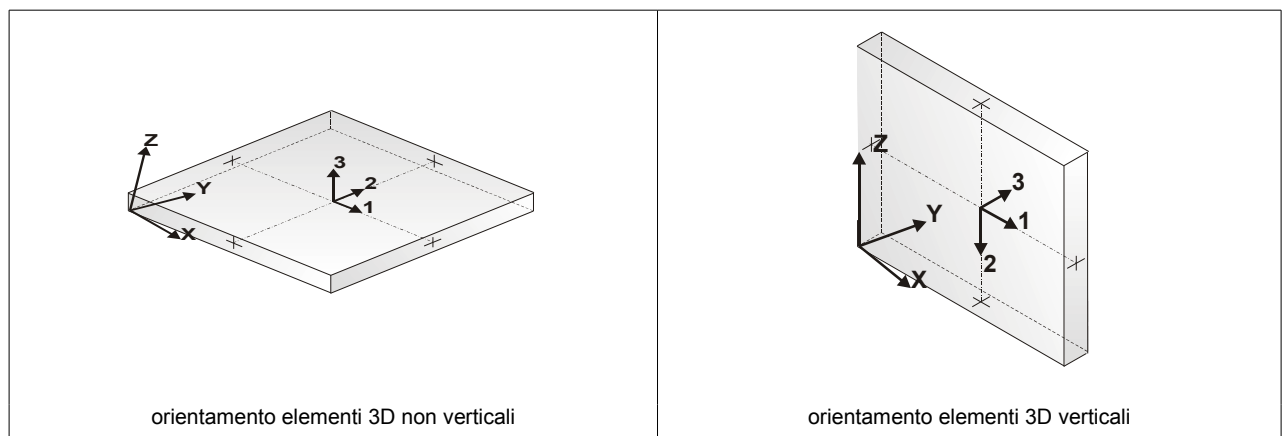
MODELLAZIONE STRUTTURA: ELEMENTI SHELL

LEGENDA TABELLA DATI SHELL

Il programma utilizza per la modellazione elementi a tre o quattro nodi denominati in generale shell.

Ogni elemento shell è individuato dai nodi I, J, K, L (L=I per gli elementi a tre nodi).

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: <i>Guscio</i> (elemento guscio in elevazione non verticale) <i>Guscio fond.</i> (elemento guscio su suolo elastico) <i>Setto</i> (elemento guscio in elevazione verticale) <i>Membrana</i> (elemento guscio con comportamento membranale)
Nodo I (J, K, L)	numero del nodo I (J, K, L)
Mat.	codice del materiale assegnato all'elemento
Spessore	spessore dell'elemento (costante)
Wink V	costante di sottofondo (coefficiente di Winkler) per la modellazione del suolo elastico verticale
Wink O	costante di sottofondo (coefficiente di Winkler) per la modellazione del suolo elastico orizzontale

Con riferimento al **Documento di Affidabilità** "Test di validazione del software di calcolo PRO_SAP e dei moduli aggiuntivi PRO_SAP Modulo Geotecnico, PRO_CAD nodi acciaio e PRO_MST" - versione Maggio 2011, disponibile per il download sul sito www.2si.it, si segnalano i seguenti esempi applicativi:

Test N°	Titolo
8	MENSOLE CON ELEMENTI PLATE E MATERIALE ORTOTROPO
10	PIASTRA CON ELEMENTI PLATE E MATERIALE ORTOTROPO
21	DRILLING
25	TENSIONI DI ELEMENTI PLATE
31	REALIZZAZIONE DI MESH PIANA SU GEOMETRIA CON PUNTI FISSI IMPORTATA DA FILE .DXF
32	REALIZZAZIONE DI MESH PIANA SU GEOMETRIA CON SEGMENTI E FORI INTERNI IMPORTATA DA FILE .DXF
33	REALIZZAZIONE DI MESH PIANE SU GEOMETRIE COSTRUITE IN PRO_SAP
34	ANALISI DI BUCKLING DI PIASTRA ISOTROPA
35	ANALISI DI BUCKLING DI UN CILINDRO COMPRESSO INCASTRATO ALLA BASE
36	ANALISI DI PARETI FORATE
37	BIMETALLIC STRIP (NAFEMS EXERCISE 6)
38	ANALISI ELASTICA DI PIASTRA CON INTAGLIO CIRCOLARE (FLAT BAR WITH EDGE NOTCHES-NAFEMS EXERCISE 9)
39	PLATEA NERVATA
45	VERIFICA A PUNZONAMENTO ALLO SLU DI PIASTRE IN C.A.
117	PROGETTO E VERIFICA DI GUSCI IN MATERIALE XLAM
118	PROGETTO E VERIFICA DI PARETI IN MATERIALE XLAM E RELATIVI COLLEGAMENTI

Elem.	Note	Nodo I	Nodo J	Nodo K	Nodo L	Mat.	Spessore	Wink V	Wink O
							cm	daN/cm3	daN/cm3
1	Guscio fond.	1	2	13	12	1	20.0	1.00	1.00
2	Guscio fond.	2	3	14	13	1	20.0	1.00	1.00
3	Guscio fond.	3	4	15	14	1	20.0	1.00	1.00
4	Guscio fond.	4	5	16	15	1	20.0	1.00	1.00
5	Guscio fond.	5	6	17	16	1	20.0	1.00	1.00
6	Guscio fond.	6	7	18	17	1	20.0	1.00	1.00
7	Guscio fond.	7	8	19	18	1	20.0	1.00	1.00
8	Guscio fond.	8	9	20	19	1	20.0	1.00	1.00
9	Guscio fond.	9	10	21	20	1	20.0	1.00	1.00
10	Guscio fond.	10	11	22	21	1	20.0	1.00	1.00
11	Guscio fond.	12	13	24	23	1	20.0	1.00	1.00
12	Guscio fond.	13	14	25	24	1	20.0	1.00	1.00
13	Guscio fond.	14	15	26	25	1	20.0	1.00	1.00
14	Guscio fond.	15	16	27	26	1	20.0	1.00	1.00
15	Guscio fond.	16	17	28	27	1	20.0	1.00	1.00
16	Guscio fond.	17	18	29	28	1	20.0	1.00	1.00
17	Guscio fond.	18	19	30	29	1	20.0	1.00	1.00
18	Guscio fond.	19	20	31	30	1	20.0	1.00	1.00
19	Guscio fond.	20	21	32	31	1	20.0	1.00	1.00
20	Guscio fond.	21	22	33	32	1	20.0	1.00	1.00
21	Guscio fond.	23	24	35	34	1	20.0	1.00	1.00
22	Guscio fond.	24	25	36	35	1	20.0	1.00	1.00
23	Guscio fond.	25	26	37	36	1	20.0	1.00	1.00
24	Guscio fond.	26	27	38	37	1	20.0	1.00	1.00
25	Guscio fond.	27	28	39	38	1	20.0	1.00	1.00
26	Guscio fond.	28	29	40	39	1	20.0	1.00	1.00
27	Guscio fond.	29	30	41	40	1	20.0	1.00	1.00
28	Guscio fond.	30	31	42	41	1	20.0	1.00	1.00
29	Guscio fond.	31	32	43	42	1	20.0	1.00	1.00
30	Guscio fond.	32	33	44	43	1	20.0	1.00	1.00
31	Guscio fond.	34	35	46	45	1	20.0	1.00	1.00
32	Guscio fond.	35	36	47	46	1	20.0	1.00	1.00
33	Guscio fond.	36	37	48	47	1	20.0	1.00	1.00
34	Guscio fond.	37	38	49	48	1	20.0	1.00	1.00
35	Guscio fond.	38	39	50	49	1	20.0	1.00	1.00
36	Guscio fond.	39	40	51	50	1	20.0	1.00	1.00
37	Guscio fond.	40	41	52	51	1	20.0	1.00	1.00
38	Guscio fond.	41	42	53	52	1	20.0	1.00	1.00
39	Guscio fond.	42	43	54	53	1	20.0	1.00	1.00
40	Guscio fond.	43	44	55	54	1	20.0	1.00	1.00
41	Guscio fond.	45	46	57	56	1	20.0	1.00	1.00

42	Guscio fond.	46	47	58	57	1	20.0	1.00	1.00
43	Guscio fond.	47	48	59	58	1	20.0	1.00	1.00
44	Guscio fond.	48	49	60	59	1	20.0	1.00	1.00
45	Guscio fond.	49	50	61	60	1	20.0	1.00	1.00
46	Guscio fond.	50	51	62	61	1	20.0	1.00	1.00
47	Guscio fond.	51	52	63	62	1	20.0	1.00	1.00
48	Guscio fond.	52	53	64	63	1	20.0	1.00	1.00
49	Guscio fond.	53	54	65	64	1	20.0	1.00	1.00
50	Guscio fond.	54	55	66	65	1	20.0	1.00	1.00
51	Guscio fond.	56	57	68	67	1	20.0	1.00	1.00
52	Guscio fond.	57	58	69	68	1	20.0	1.00	1.00
53	Guscio fond.	58	59	70	69	1	20.0	1.00	1.00
54	Guscio fond.	59	60	71	70	1	20.0	1.00	1.00
55	Guscio fond.	60	61	72	71	1	20.0	1.00	1.00
56	Guscio fond.	61	62	73	72	1	20.0	1.00	1.00
57	Guscio fond.	62	63	74	73	1	20.0	1.00	1.00
58	Guscio fond.	63	64	75	74	1	20.0	1.00	1.00
59	Guscio fond.	64	65	76	75	1	20.0	1.00	1.00
60	Guscio fond.	65	66	77	76	1	20.0	1.00	1.00
61	Guscio fond.	67	68	79	78	1	20.0	1.00	1.00
62	Guscio fond.	68	69	80	79	1	20.0	1.00	1.00
63	Guscio fond.	69	70	81	80	1	20.0	1.00	1.00
64	Guscio fond.	70	71	82	81	1	20.0	1.00	1.00
65	Guscio fond.	71	72	83	82	1	20.0	1.00	1.00
66	Guscio fond.	72	73	84	83	1	20.0	1.00	1.00
67	Guscio fond.	73	74	85	84	1	20.0	1.00	1.00
68	Guscio fond.	74	75	86	85	1	20.0	1.00	1.00
69	Guscio fond.	75	76	87	86	1	20.0	1.00	1.00
70	Guscio fond.	76	77	88	87	1	20.0	1.00	1.00
71	Guscio fond.	78	79	90	89	1	20.0	1.00	1.00
72	Guscio fond.	79	80	91	90	1	20.0	1.00	1.00
73	Guscio fond.	80	81	92	91	1	20.0	1.00	1.00
74	Guscio fond.	81	82	93	92	1	20.0	1.00	1.00
75	Guscio fond.	82	83	94	93	1	20.0	1.00	1.00
76	Guscio fond.	83	84	95	94	1	20.0	1.00	1.00
77	Guscio fond.	84	85	96	95	1	20.0	1.00	1.00
78	Guscio fond.	85	86	97	96	1	20.0	1.00	1.00
79	Guscio fond.	86	87	98	97	1	20.0	1.00	1.00
80	Guscio fond.	87	88	99	98	1	20.0	1.00	1.00
81	Guscio fond.	89	90	101	100	1	20.0	1.00	1.00
82	Guscio fond.	90	91	102	101	1	20.0	1.00	1.00
83	Guscio fond.	91	92	103	102	1	20.0	1.00	1.00
84	Guscio fond.	92	93	104	103	1	20.0	1.00	1.00
85	Guscio fond.	93	94	105	104	1	20.0	1.00	1.00
86	Guscio fond.	94	95	106	105	1	20.0	1.00	1.00
87	Guscio fond.	95	96	107	106	1	20.0	1.00	1.00
88	Guscio fond.	96	97	108	107	1	20.0	1.00	1.00
89	Guscio fond.	97	98	109	108	1	20.0	1.00	1.00
90	Guscio fond.	98	99	110	109	1	20.0	1.00	1.00
91	Guscio fond.	100	101	112	111	1	20.0	1.00	1.00
92	Guscio fond.	101	102	113	112	1	20.0	1.00	1.00
93	Guscio fond.	102	103	114	113	1	20.0	1.00	1.00
94	Guscio fond.	103	104	115	114	1	20.0	1.00	1.00
95	Guscio fond.	104	105	116	115	1	20.0	1.00	1.00
96	Guscio fond.	105	106	117	116	1	20.0	1.00	1.00
97	Guscio fond.	106	107	118	117	1	20.0	1.00	1.00
98	Guscio fond.	107	108	119	118	1	20.0	1.00	1.00
99	Guscio fond.	108	109	120	119	1	20.0	1.00	1.00
100	Guscio fond.	109	110	121	120	1	20.0	1.00	1.00
101	Guscio fond.	111	112	123	122	1	20.0	1.00	1.00
102	Guscio fond.	112	113	124	123	1	20.0	1.00	1.00
103	Guscio fond.	113	114	125	124	1	20.0	1.00	1.00
104	Guscio fond.	114	115	126	125	1	20.0	1.00	1.00
105	Guscio fond.	115	116	127	126	1	20.0	1.00	1.00
106	Guscio fond.	116	117	128	127	1	20.0	1.00	1.00
107	Guscio fond.	117	118	129	128	1	20.0	1.00	1.00
108	Guscio fond.	118	119	130	129	1	20.0	1.00	1.00
109	Guscio fond.	119	120	131	130	1	20.0	1.00	1.00
110	Guscio fond.	120	121	132	131	1	20.0	1.00	1.00
111	Guscio fond.	122	123	134	133	1	20.0	1.00	1.00
112	Guscio fond.	123	124	135	134	1	20.0	1.00	1.00
113	Guscio fond.	124	125	136	135	1	20.0	1.00	1.00
114	Guscio fond.	125	126	137	136	1	20.0	1.00	1.00
115	Guscio fond.	126	127	138	137	1	20.0	1.00	1.00
116	Guscio fond.	127	128	139	138	1	20.0	1.00	1.00
117	Guscio fond.	128	129	140	139	1	20.0	1.00	1.00
118	Guscio fond.	129	130	141	140	1	20.0	1.00	1.00
119	Guscio fond.	130	131	142	141	1	20.0	1.00	1.00

120	Guscio fond.	131	132	143	142	1	20.0	1.00	1.00
121	Guscio fond.	133	134	145	144	1	20.0	1.00	1.00
122	Guscio fond.	134	135	146	145	1	20.0	1.00	1.00
123	Guscio fond.	135	136	147	146	1	20.0	1.00	1.00
124	Guscio fond.	136	137	148	147	1	20.0	1.00	1.00
125	Guscio fond.	137	138	149	148	1	20.0	1.00	1.00
126	Guscio fond.	138	139	150	149	1	20.0	1.00	1.00
127	Guscio fond.	139	140	151	150	1	20.0	1.00	1.00
128	Guscio fond.	140	141	152	151	1	20.0	1.00	1.00
129	Guscio fond.	141	142	153	152	1	20.0	1.00	1.00
130	Guscio fond.	142	143	154	153	1	20.0	1.00	1.00
131	Guscio fond.	144	145	156	155	1	20.0	1.00	1.00
132	Guscio fond.	145	146	157	156	1	20.0	1.00	1.00
133	Guscio fond.	146	147	158	157	1	20.0	1.00	1.00
134	Guscio fond.	147	148	159	158	1	20.0	1.00	1.00
135	Guscio fond.	148	149	160	159	1	20.0	1.00	1.00
136	Guscio fond.	149	150	161	160	1	20.0	1.00	1.00
137	Guscio fond.	150	151	162	161	1	20.0	1.00	1.00
138	Guscio fond.	151	152	163	162	1	20.0	1.00	1.00
139	Guscio fond.	152	153	164	163	1	20.0	1.00	1.00
140	Guscio fond.	153	154	165	164	1	20.0	1.00	1.00
141	Guscio fond.	155	156	167	166	1	20.0	1.00	1.00
142	Guscio fond.	156	157	168	167	1	20.0	1.00	1.00
143	Guscio fond.	157	158	169	168	1	20.0	1.00	1.00
144	Guscio fond.	158	159	170	169	1	20.0	1.00	1.00
145	Guscio fond.	159	160	171	170	1	20.0	1.00	1.00
146	Guscio fond.	160	161	172	171	1	20.0	1.00	1.00
147	Guscio fond.	161	162	173	172	1	20.0	1.00	1.00
148	Guscio fond.	162	163	174	173	1	20.0	1.00	1.00
149	Guscio fond.	163	164	175	174	1	20.0	1.00	1.00
150	Guscio fond.	164	165	176	175	1	20.0	1.00	1.00
151	Guscio fond.	166	167	178	177	1	20.0	1.00	1.00
152	Guscio fond.	167	168	179	178	1	20.0	1.00	1.00
153	Guscio fond.	168	169	180	179	1	20.0	1.00	1.00
154	Guscio fond.	169	170	181	180	1	20.0	1.00	1.00
155	Guscio fond.	170	171	182	181	1	20.0	1.00	1.00
156	Guscio fond.	171	172	183	182	1	20.0	1.00	1.00
157	Guscio fond.	172	173	184	183	1	20.0	1.00	1.00
158	Guscio fond.	173	174	185	184	1	20.0	1.00	1.00
159	Guscio fond.	174	175	186	185	1	20.0	1.00	1.00
160	Guscio fond.	175	176	187	186	1	20.0	1.00	1.00
161	Guscio fond.	177	178	189	188	1	20.0	1.00	1.00
162	Guscio fond.	178	179	190	189	1	20.0	1.00	1.00
163	Guscio fond.	179	180	191	190	1	20.0	1.00	1.00
164	Guscio fond.	180	181	192	191	1	20.0	1.00	1.00
165	Guscio fond.	181	182	193	192	1	20.0	1.00	1.00
166	Guscio fond.	182	183	194	193	1	20.0	1.00	1.00
167	Guscio fond.	183	184	195	194	1	20.0	1.00	1.00
168	Guscio fond.	184	185	196	195	1	20.0	1.00	1.00
169	Guscio fond.	185	186	197	196	1	20.0	1.00	1.00
170	Guscio fond.	186	187	198	197	1	20.0	1.00	1.00
171	Guscio fond.	188	189	200	199	1	20.0	1.00	1.00
172	Guscio fond.	189	190	201	200	1	20.0	1.00	1.00
173	Guscio fond.	190	191	202	201	1	20.0	1.00	1.00
174	Guscio fond.	191	192	203	202	1	20.0	1.00	1.00
175	Guscio fond.	192	193	204	203	1	20.0	1.00	1.00
176	Guscio fond.	193	194	205	204	1	20.0	1.00	1.00
177	Guscio fond.	194	195	206	205	1	20.0	1.00	1.00
178	Guscio fond.	195	196	207	206	1	20.0	1.00	1.00
179	Guscio fond.	196	197	208	207	1	20.0	1.00	1.00
180	Guscio fond.	197	198	209	208	1	20.0	1.00	1.00
181	Guscio fond.	199	200	211	210	1	20.0	1.00	1.00
182	Guscio fond.	200	201	212	211	1	20.0	1.00	1.00
183	Guscio fond.	201	202	213	212	1	20.0	1.00	1.00
184	Guscio fond.	202	203	214	213	1	20.0	1.00	1.00
185	Guscio fond.	203	204	215	214	1	20.0	1.00	1.00
186	Guscio fond.	204	205	216	215	1	20.0	1.00	1.00
187	Guscio fond.	205	206	217	216	1	20.0	1.00	1.00
188	Guscio fond.	206	207	218	217	1	20.0	1.00	1.00
189	Guscio fond.	207	208	219	218	1	20.0	1.00	1.00
190	Guscio fond.	208	209	220	219	1	20.0	1.00	1.00
191	Guscio fond.	210	211	222	221	1	20.0	1.00	1.00
192	Guscio fond.	211	212	223	222	1	20.0	1.00	1.00
193	Guscio fond.	212	213	224	223	1	20.0	1.00	1.00
194	Guscio fond.	213	214	225	224	1	20.0	1.00	1.00
195	Guscio fond.	214	215	226	225	1	20.0	1.00	1.00
196	Guscio fond.	215	216	227	226	1	20.0	1.00	1.00
197	Guscio fond.	216	217	228	227	1	20.0	1.00	1.00

198	Guscio fond.	217	218	229	228	1	20.0	1.00	1.00
199	Guscio fond.	218	219	230	229	1	20.0	1.00	1.00
200	Guscio fond.	219	220	231	230	1	20.0	1.00	1.00
201	Guscio fond.	221	222	233	232	1	20.0	1.00	1.00
202	Guscio fond.	222	223	234	233	1	20.0	1.00	1.00
203	Guscio fond.	223	224	235	234	1	20.0	1.00	1.00
204	Guscio fond.	224	225	236	235	1	20.0	1.00	1.00
205	Guscio fond.	225	226	237	236	1	20.0	1.00	1.00
206	Guscio fond.	226	227	238	237	1	20.0	1.00	1.00
207	Guscio fond.	227	228	239	238	1	20.0	1.00	1.00
208	Guscio fond.	228	229	240	239	1	20.0	1.00	1.00
209	Guscio fond.	229	230	241	240	1	20.0	1.00	1.00
210	Guscio fond.	230	231	242	241	1	20.0	1.00	1.00
211	Guscio fond.	232	233	244	243	1	20.0	1.00	1.00
212	Guscio fond.	233	234	245	244	1	20.0	1.00	1.00
213	Guscio fond.	234	235	246	245	1	20.0	1.00	1.00
214	Guscio fond.	235	236	247	246	1	20.0	1.00	1.00
215	Guscio fond.	236	237	248	247	1	20.0	1.00	1.00
216	Guscio fond.	237	238	249	248	1	20.0	1.00	1.00
217	Guscio fond.	238	239	250	249	1	20.0	1.00	1.00
218	Guscio fond.	239	240	251	250	1	20.0	1.00	1.00
219	Guscio fond.	240	241	252	251	1	20.0	1.00	1.00
220	Guscio fond.	241	242	253	252	1	20.0	1.00	1.00
221	Guscio fond.	243	244	255	254	1	20.0	1.00	1.00
222	Guscio fond.	244	245	256	255	1	20.0	1.00	1.00
223	Guscio fond.	245	246	257	256	1	20.0	1.00	1.00
224	Guscio fond.	246	247	258	257	1	20.0	1.00	1.00
225	Guscio fond.	247	248	259	258	1	20.0	1.00	1.00
226	Guscio fond.	248	249	260	259	1	20.0	1.00	1.00
227	Guscio fond.	249	250	261	260	1	20.0	1.00	1.00
228	Guscio fond.	250	251	262	261	1	20.0	1.00	1.00
229	Guscio fond.	251	252	263	262	1	20.0	1.00	1.00
230	Guscio fond.	252	253	264	263	1	20.0	1.00	1.00
231	Guscio fond.	254	255	266	265	1	20.0	1.00	1.00
232	Guscio fond.	255	256	267	266	1	20.0	1.00	1.00
233	Guscio fond.	256	257	268	267	1	20.0	1.00	1.00
234	Guscio fond.	257	258	269	268	1	20.0	1.00	1.00
235	Guscio fond.	258	259	270	269	1	20.0	1.00	1.00
236	Guscio fond.	259	260	271	270	1	20.0	1.00	1.00
237	Guscio fond.	260	261	272	271	1	20.0	1.00	1.00
238	Guscio fond.	261	262	273	272	1	20.0	1.00	1.00
239	Guscio fond.	262	263	274	273	1	20.0	1.00	1.00
240	Guscio fond.	263	264	275	274	1	20.0	1.00	1.00
241	Guscio fond.	265	266	277	276	1	20.0	1.00	1.00
242	Guscio fond.	266	267	278	277	1	20.0	1.00	1.00
243	Guscio fond.	267	268	279	278	1	20.0	1.00	1.00
244	Guscio fond.	268	269	280	279	1	20.0	1.00	1.00
245	Guscio fond.	269	270	281	280	1	20.0	1.00	1.00
246	Guscio fond.	270	271	282	281	1	20.0	1.00	1.00
247	Guscio fond.	271	272	283	282	1	20.0	1.00	1.00
248	Guscio fond.	272	273	284	283	1	20.0	1.00	1.00
249	Guscio fond.	273	274	285	284	1	20.0	1.00	1.00
250	Guscio fond.	274	275	286	285	1	20.0	1.00	1.00
251	Guscio fond.	276	277	288	287	1	20.0	1.00	1.00
252	Guscio fond.	277	278	289	288	1	20.0	1.00	1.00
253	Guscio fond.	278	279	290	289	1	20.0	1.00	1.00
254	Guscio fond.	279	280	291	290	1	20.0	1.00	1.00
255	Guscio fond.	280	281	292	291	1	20.0	1.00	1.00
256	Guscio fond.	281	282	293	292	1	20.0	1.00	1.00
257	Guscio fond.	282	283	294	293	1	20.0	1.00	1.00
258	Guscio fond.	283	284	295	294	1	20.0	1.00	1.00
259	Guscio fond.	284	285	296	295	1	20.0	1.00	1.00
260	Guscio fond.	285	286	297	296	1	20.0	1.00	1.00
261	Guscio fond.	287	288	299	298	1	20.0	1.00	1.00
262	Guscio fond.	288	289	300	299	1	20.0	1.00	1.00
263	Guscio fond.	289	290	301	300	1	20.0	1.00	1.00
264	Guscio fond.	290	291	302	301	1	20.0	1.00	1.00
265	Guscio fond.	291	292	303	302	1	20.0	1.00	1.00
266	Guscio fond.	292	293	304	303	1	20.0	1.00	1.00
267	Guscio fond.	293	294	305	304	1	20.0	1.00	1.00
268	Guscio fond.	294	295	306	305	1	20.0	1.00	1.00
269	Guscio fond.	295	296	307	306	1	20.0	1.00	1.00
270	Guscio fond.	296	297	308	307	1	20.0	1.00	1.00
271	Guscio fond.	298	299	310	309	1	20.0	1.00	1.00
272	Guscio fond.	299	300	311	310	1	20.0	1.00	1.00
273	Guscio fond.	300	301	312	311	1	20.0	1.00	1.00
274	Guscio fond.	301	302	313	312	1	20.0	1.00	1.00
275	Guscio fond.	302	303	314	313	1	20.0	1.00	1.00

276	Guscio fond.	303	304	315	314	1	20.0	1.00	1.00
277	Guscio fond.	304	305	316	315	1	20.0	1.00	1.00
278	Guscio fond.	305	306	317	316	1	20.0	1.00	1.00
279	Guscio fond.	306	307	318	317	1	20.0	1.00	1.00
280	Guscio fond.	307	308	319	318	1	20.0	1.00	1.00
281	Guscio fond.	309	310	321	320	1	20.0	1.00	1.00
282	Guscio fond.	310	311	322	321	1	20.0	1.00	1.00
283	Guscio fond.	311	312	323	322	1	20.0	1.00	1.00
284	Guscio fond.	312	313	324	323	1	20.0	1.00	1.00
285	Guscio fond.	313	314	325	324	1	20.0	1.00	1.00
286	Guscio fond.	314	315	326	325	1	20.0	1.00	1.00
287	Guscio fond.	315	316	327	326	1	20.0	1.00	1.00
288	Guscio fond.	316	317	328	327	1	20.0	1.00	1.00
289	Guscio fond.	317	318	329	328	1	20.0	1.00	1.00
290	Guscio fond.	318	319	330	329	1	20.0	1.00	1.00
291	Guscio fond.	320	321	332	331	1	20.0	1.00	1.00
292	Guscio fond.	321	322	333	332	1	20.0	1.00	1.00
293	Guscio fond.	322	323	334	333	1	20.0	1.00	1.00
294	Guscio fond.	323	324	335	334	1	20.0	1.00	1.00
295	Guscio fond.	324	325	336	335	1	20.0	1.00	1.00
296	Guscio fond.	325	326	337	336	1	20.0	1.00	1.00
297	Guscio fond.	326	327	338	337	1	20.0	1.00	1.00
298	Guscio fond.	327	328	339	338	1	20.0	1.00	1.00
299	Guscio fond.	328	329	340	339	1	20.0	1.00	1.00
300	Guscio fond.	329	330	341	340	1	20.0	1.00	1.00
301	Guscio fond.	331	332	343	342	1	20.0	1.00	1.00
302	Guscio fond.	332	333	344	343	1	20.0	1.00	1.00
303	Guscio fond.	333	334	345	344	1	20.0	1.00	1.00
304	Guscio fond.	334	335	346	345	1	20.0	1.00	1.00
305	Guscio fond.	335	336	347	346	1	20.0	1.00	1.00
306	Guscio fond.	336	337	348	347	1	20.0	1.00	1.00
307	Guscio fond.	337	338	349	348	1	20.0	1.00	1.00
308	Guscio fond.	338	339	350	349	1	20.0	1.00	1.00
309	Guscio fond.	339	340	351	350	1	20.0	1.00	1.00
310	Guscio fond.	340	341	352	351	1	20.0	1.00	1.00
311	Guscio fond.	342	343	354	353	1	20.0	1.00	1.00
312	Guscio fond.	343	344	355	354	1	20.0	1.00	1.00
313	Guscio fond.	344	345	356	355	1	20.0	1.00	1.00
314	Guscio fond.	345	346	357	356	1	20.0	1.00	1.00
315	Guscio fond.	346	347	358	357	1	20.0	1.00	1.00
316	Guscio fond.	347	348	359	358	1	20.0	1.00	1.00
317	Guscio fond.	348	349	360	359	1	20.0	1.00	1.00
318	Guscio fond.	349	350	361	360	1	20.0	1.00	1.00
319	Guscio fond.	350	351	362	361	1	20.0	1.00	1.00
320	Guscio fond.	351	352	363	362	1	20.0	1.00	1.00
321	Guscio fond.	362	363	364	361	1	20.0	1.00	1.00
322	Guscio fond.	353	354	383	382	1	20.0	1.00	1.00
323	Guscio fond.	354	355	384	383	1	20.0	1.00	1.00
324	Guscio fond.	355	356	385	384	1	20.0	1.00	1.00
325	Guscio fond.	356	357	386	385	1	20.0	1.00	1.00
326	Guscio fond.	357	358	387	386	1	20.0	1.00	1.00
327	Guscio fond.	358	359	388	387	1	20.0	1.00	1.00
328	Guscio fond.	359	360	389	388	1	20.0	1.00	1.00
329	Guscio fond.	360	361	390	389	1	20.0	1.00	1.00
330	Guscio fond.	361	362	391	390	1	20.0	1.00	1.00
331	Guscio fond.	364	365	392	391	1	20.0	1.00	1.00
332	Guscio fond.	365	366	393	392	1	20.0	1.00	1.00
333	Guscio fond.	366	367	394	393	1	20.0	1.00	1.00
334	Guscio fond.	367	368	395	394	1	20.0	1.00	1.00
335	Guscio fond.	368	369	396	395	1	20.0	1.00	1.00
336	Guscio fond.	369	370	397	396	1	20.0	1.00	1.00
337	Guscio fond.	370	371	398	397	1	20.0	1.00	1.00
338	Guscio fond.	371	372	399	398	1	20.0	1.00	1.00
339	Guscio fond.	372	373	400	399	1	20.0	1.00	1.00
340	Guscio fond.	373	374	401	400	1	20.0	1.00	1.00
341	Guscio fond.	374	375	402	401	1	20.0	1.00	1.00
342	Guscio fond.	375	376	403	402	1	20.0	1.00	1.00
343	Guscio fond.	376	377	404	403	1	20.0	1.00	1.00
344	Guscio fond.	377	378	405	404	1	20.0	1.00	1.00
345	Guscio fond.	378	379	406	405	1	20.0	1.00	1.00
346	Guscio fond.	379	380	407	406	1	20.0	1.00	1.00
347	Guscio fond.	380	381	408	407	1	20.0	1.00	1.00
348	Guscio fond.	382	383	410	409	1	20.0	1.00	1.00
349	Guscio fond.	383	384	411	410	1	20.0	1.00	1.00
350	Guscio fond.	384	385	412	411	1	20.0	1.00	1.00
351	Guscio fond.	385	386	413	412	1	20.0	1.00	1.00
352	Guscio fond.	386	387	414	413	1	20.0	1.00	1.00
353	Guscio fond.	387	388	415	414	1	20.0	1.00	1.00

354	Guscio fond.	388	389	416	415	1	20.0	1.00	1.00
355	Guscio fond.	389	390	417	416	1	20.0	1.00	1.00
356	Guscio fond.	390	391	418	417	1	20.0	1.00	1.00
357	Guscio fond.	391	392	419	418	1	20.0	1.00	1.00
358	Guscio fond.	392	393	420	419	1	20.0	1.00	1.00
359	Guscio fond.	393	394	421	420	1	20.0	1.00	1.00
360	Guscio fond.	394	395	422	421	1	20.0	1.00	1.00
361	Guscio fond.	395	396	423	422	1	20.0	1.00	1.00
362	Guscio fond.	396	397	424	423	1	20.0	1.00	1.00
363	Guscio fond.	397	398	425	424	1	20.0	1.00	1.00
364	Guscio fond.	398	399	426	425	1	20.0	1.00	1.00
365	Guscio fond.	399	400	427	426	1	20.0	1.00	1.00
366	Guscio fond.	400	401	428	427	1	20.0	1.00	1.00
367	Guscio fond.	401	402	429	428	1	20.0	1.00	1.00
368	Guscio fond.	402	403	430	429	1	20.0	1.00	1.00
369	Guscio fond.	403	404	431	430	1	20.0	1.00	1.00
370	Guscio fond.	404	405	432	431	1	20.0	1.00	1.00
371	Guscio fond.	405	406	433	432	1	20.0	1.00	1.00
372	Guscio fond.	406	407	434	433	1	20.0	1.00	1.00
373	Guscio fond.	407	408	435	434	1	20.0	1.00	1.00
374	Guscio fond.	409	410	437	436	1	20.0	1.00	1.00
375	Guscio fond.	410	411	438	437	1	20.0	1.00	1.00
376	Guscio fond.	411	412	439	438	1	20.0	1.00	1.00
377	Guscio fond.	412	413	440	439	1	20.0	1.00	1.00
378	Guscio fond.	413	414	441	440	1	20.0	1.00	1.00
379	Guscio fond.	414	415	442	441	1	20.0	1.00	1.00
380	Guscio fond.	415	416	443	442	1	20.0	1.00	1.00
381	Guscio fond.	416	417	444	443	1	20.0	1.00	1.00
382	Guscio fond.	417	418	445	444	1	20.0	1.00	1.00
383	Guscio fond.	418	419	446	445	1	20.0	1.00	1.00
384	Guscio fond.	419	420	447	446	1	20.0	1.00	1.00
385	Guscio fond.	420	421	448	447	1	20.0	1.00	1.00
386	Guscio fond.	421	422	449	448	1	20.0	1.00	1.00
387	Guscio fond.	422	423	450	449	1	20.0	1.00	1.00
388	Guscio fond.	423	424	451	450	1	20.0	1.00	1.00
389	Guscio fond.	424	425	452	451	1	20.0	1.00	1.00
390	Guscio fond.	425	426	453	452	1	20.0	1.00	1.00
391	Guscio fond.	426	427	454	453	1	20.0	1.00	1.00
392	Guscio fond.	427	428	455	454	1	20.0	1.00	1.00
393	Guscio fond.	428	429	456	455	1	20.0	1.00	1.00
394	Guscio fond.	429	430	457	456	1	20.0	1.00	1.00
395	Guscio fond.	430	431	458	457	1	20.0	1.00	1.00
396	Guscio fond.	431	432	459	458	1	20.0	1.00	1.00
397	Guscio fond.	432	433	460	459	1	20.0	1.00	1.00
398	Guscio fond.	433	434	461	460	1	20.0	1.00	1.00
399	Guscio fond.	434	435	462	461	1	20.0	1.00	1.00
400	Guscio fond.	436	437	464	463	1	20.0	1.00	1.00
401	Guscio fond.	437	438	465	464	1	20.0	1.00	1.00
402	Guscio fond.	438	439	466	465	1	20.0	1.00	1.00
403	Guscio fond.	439	440	467	466	1	20.0	1.00	1.00
404	Guscio fond.	440	441	468	467	1	20.0	1.00	1.00
405	Guscio fond.	441	442	469	468	1	20.0	1.00	1.00
406	Guscio fond.	442	443	470	469	1	20.0	1.00	1.00
407	Guscio fond.	443	444	471	470	1	20.0	1.00	1.00
408	Guscio fond.	444	445	472	471	1	20.0	1.00	1.00
409	Guscio fond.	445	446	473	472	1	20.0	1.00	1.00
410	Guscio fond.	446	447	474	473	1	20.0	1.00	1.00
411	Guscio fond.	447	448	475	474	1	20.0	1.00	1.00
412	Guscio fond.	448	449	476	475	1	20.0	1.00	1.00
413	Guscio fond.	449	450	477	476	1	20.0	1.00	1.00
414	Guscio fond.	450	451	478	477	1	20.0	1.00	1.00
415	Guscio fond.	451	452	479	478	1	20.0	1.00	1.00
416	Guscio fond.	452	453	480	479	1	20.0	1.00	1.00
417	Guscio fond.	453	454	481	480	1	20.0	1.00	1.00
418	Guscio fond.	454	455	482	481	1	20.0	1.00	1.00
419	Guscio fond.	455	456	483	482	1	20.0	1.00	1.00
420	Guscio fond.	456	457	484	483	1	20.0	1.00	1.00
421	Guscio fond.	457	458	485	484	1	20.0	1.00	1.00
422	Guscio fond.	458	459	486	485	1	20.0	1.00	1.00
423	Guscio fond.	459	460	487	486	1	20.0	1.00	1.00
424	Guscio fond.	460	461	488	487	1	20.0	1.00	1.00
425	Guscio fond.	461	462	489	488	1	20.0	1.00	1.00
426	Guscio fond.	463	464	491	490	1	20.0	1.00	1.00
427	Guscio fond.	464	465	492	491	1	20.0	1.00	1.00
428	Guscio fond.	465	466	493	492	1	20.0	1.00	1.00
429	Guscio fond.	466	467	494	493	1	20.0	1.00	1.00
430	Guscio fond.	467	468	495	494	1	20.0	1.00	1.00
431	Guscio fond.	468	469	496	495	1	20.0	1.00	1.00

432	Guscio fond.	469	470	497	496	1	20.0	1.00	1.00
433	Guscio fond.	470	471	498	497	1	20.0	1.00	1.00
434	Guscio fond.	471	472	499	498	1	20.0	1.00	1.00
435	Guscio fond.	472	473	500	499	1	20.0	1.00	1.00
436	Guscio fond.	473	474	501	500	1	20.0	1.00	1.00
437	Guscio fond.	474	475	502	501	1	20.0	1.00	1.00
438	Guscio fond.	475	476	503	502	1	20.0	1.00	1.00
439	Guscio fond.	476	477	504	503	1	20.0	1.00	1.00
440	Guscio fond.	477	478	505	504	1	20.0	1.00	1.00
441	Guscio fond.	478	479	506	505	1	20.0	1.00	1.00
442	Guscio fond.	479	480	507	506	1	20.0	1.00	1.00
443	Guscio fond.	480	481	508	507	1	20.0	1.00	1.00
444	Guscio fond.	481	482	509	508	1	20.0	1.00	1.00
445	Guscio fond.	482	483	510	509	1	20.0	1.00	1.00
446	Guscio fond.	483	484	511	510	1	20.0	1.00	1.00
447	Guscio fond.	484	485	512	511	1	20.0	1.00	1.00
448	Guscio fond.	485	486	513	512	1	20.0	1.00	1.00
449	Guscio fond.	486	487	514	513	1	20.0	1.00	1.00
450	Guscio fond.	487	488	515	514	1	20.0	1.00	1.00
451	Guscio fond.	488	489	516	515	1	20.0	1.00	1.00
452	Guscio fond.	490	491	518	517	1	20.0	1.00	1.00
453	Guscio fond.	491	492	519	518	1	20.0	1.00	1.00
454	Guscio fond.	492	493	520	519	1	20.0	1.00	1.00
455	Guscio fond.	493	494	521	520	1	20.0	1.00	1.00
456	Guscio fond.	494	495	522	521	1	20.0	1.00	1.00
457	Guscio fond.	495	496	523	522	1	20.0	1.00	1.00
458	Guscio fond.	496	497	524	523	1	20.0	1.00	1.00
459	Guscio fond.	497	498	525	524	1	20.0	1.00	1.00
460	Guscio fond.	498	499	526	525	1	20.0	1.00	1.00
461	Guscio fond.	499	500	527	526	1	20.0	1.00	1.00
462	Guscio fond.	500	501	528	527	1	20.0	1.00	1.00
463	Guscio fond.	501	502	529	528	1	20.0	1.00	1.00
464	Guscio fond.	502	503	530	529	1	20.0	1.00	1.00
465	Guscio fond.	503	504	531	530	1	20.0	1.00	1.00
466	Guscio fond.	504	505	532	531	1	20.0	1.00	1.00
467	Guscio fond.	505	506	533	532	1	20.0	1.00	1.00
468	Guscio fond.	506	507	534	533	1	20.0	1.00	1.00
469	Guscio fond.	507	508	535	534	1	20.0	1.00	1.00
470	Guscio fond.	508	509	536	535	1	20.0	1.00	1.00
471	Guscio fond.	509	510	537	536	1	20.0	1.00	1.00
472	Guscio fond.	510	511	538	537	1	20.0	1.00	1.00
473	Guscio fond.	511	512	539	538	1	20.0	1.00	1.00
474	Guscio fond.	512	513	540	539	1	20.0	1.00	1.00
475	Guscio fond.	513	514	541	540	1	20.0	1.00	1.00
476	Guscio fond.	514	515	542	541	1	20.0	1.00	1.00
477	Guscio fond.	515	516	543	542	1	20.0	1.00	1.00
478	Guscio fond.	517	518	545	544	1	20.0	1.00	1.00
479	Guscio fond.	518	519	546	545	1	20.0	1.00	1.00
480	Guscio fond.	519	520	547	546	1	20.0	1.00	1.00
481	Guscio fond.	520	521	548	547	1	20.0	1.00	1.00
482	Guscio fond.	521	522	549	548	1	20.0	1.00	1.00
483	Guscio fond.	522	523	550	549	1	20.0	1.00	1.00
484	Guscio fond.	523	524	551	550	1	20.0	1.00	1.00
485	Guscio fond.	524	525	552	551	1	20.0	1.00	1.00
486	Guscio fond.	525	526	553	552	1	20.0	1.00	1.00
487	Guscio fond.	526	527	554	553	1	20.0	1.00	1.00
488	Guscio fond.	527	528	555	554	1	20.0	1.00	1.00
489	Guscio fond.	528	529	556	555	1	20.0	1.00	1.00
490	Guscio fond.	529	530	557	556	1	20.0	1.00	1.00
491	Guscio fond.	530	531	558	557	1	20.0	1.00	1.00
492	Guscio fond.	531	532	559	558	1	20.0	1.00	1.00
493	Guscio fond.	532	533	560	559	1	20.0	1.00	1.00
494	Guscio fond.	533	534	561	560	1	20.0	1.00	1.00
495	Guscio fond.	534	535	562	561	1	20.0	1.00	1.00
496	Guscio fond.	535	536	563	562	1	20.0	1.00	1.00
497	Guscio fond.	536	537	564	563	1	20.0	1.00	1.00
498	Guscio fond.	537	538	565	564	1	20.0	1.00	1.00
499	Guscio fond.	538	539	566	565	1	20.0	1.00	1.00
500	Guscio fond.	539	540	567	566	1	20.0	1.00	1.00
501	Guscio fond.	540	541	568	567	1	20.0	1.00	1.00
502	Guscio fond.	541	542	569	568	1	20.0	1.00	1.00
503	Guscio fond.	542	543	570	569	1	20.0	1.00	1.00
504	Guscio fond.	544	545	572	571	1	20.0	1.00	1.00
505	Guscio fond.	545	546	573	572	1	20.0	1.00	1.00
506	Guscio fond.	546	547	574	573	1	20.0	1.00	1.00
507	Guscio fond.	547	548	575	574	1	20.0	1.00	1.00
508	Guscio fond.	548	549	576	575	1	20.0	1.00	1.00
509	Guscio fond.	549	550	577	576	1	20.0	1.00	1.00

510	Guscio fond.	550	551	578	577	1	20.0	1.00	1.00
511	Guscio fond.	551	552	579	578	1	20.0	1.00	1.00
512	Guscio fond.	552	553	580	579	1	20.0	1.00	1.00
513	Guscio fond.	553	554	581	580	1	20.0	1.00	1.00
514	Guscio fond.	554	555	582	581	1	20.0	1.00	1.00
515	Guscio fond.	555	556	583	582	1	20.0	1.00	1.00
516	Guscio fond.	556	557	584	583	1	20.0	1.00	1.00
517	Guscio fond.	557	558	585	584	1	20.0	1.00	1.00
518	Guscio fond.	558	559	586	585	1	20.0	1.00	1.00
519	Guscio fond.	559	560	587	586	1	20.0	1.00	1.00
520	Guscio fond.	560	561	588	587	1	20.0	1.00	1.00
521	Guscio fond.	561	562	589	588	1	20.0	1.00	1.00
522	Guscio fond.	562	563	590	589	1	20.0	1.00	1.00
523	Guscio fond.	563	564	591	590	1	20.0	1.00	1.00
524	Guscio fond.	564	565	592	591	1	20.0	1.00	1.00
525	Guscio fond.	565	566	593	592	1	20.0	1.00	1.00
526	Guscio fond.	566	567	594	593	1	20.0	1.00	1.00
527	Guscio fond.	567	568	595	594	1	20.0	1.00	1.00
528	Guscio fond.	568	569	596	595	1	20.0	1.00	1.00
529	Guscio fond.	569	570	597	596	1	20.0	1.00	1.00
530	Guscio fond.	571	572	599	598	1	20.0	1.00	1.00
531	Guscio fond.	572	573	600	599	1	20.0	1.00	1.00
532	Guscio fond.	573	574	601	600	1	20.0	1.00	1.00
533	Guscio fond.	574	575	602	601	1	20.0	1.00	1.00
534	Guscio fond.	575	576	603	602	1	20.0	1.00	1.00
535	Guscio fond.	576	577	604	603	1	20.0	1.00	1.00
536	Guscio fond.	577	578	605	604	1	20.0	1.00	1.00
537	Guscio fond.	578	579	606	605	1	20.0	1.00	1.00
538	Guscio fond.	579	580	607	606	1	20.0	1.00	1.00
539	Guscio fond.	580	581	608	607	1	20.0	1.00	1.00
540	Guscio fond.	581	582	609	608	1	20.0	1.00	1.00
541	Guscio fond.	582	583	610	609	1	20.0	1.00	1.00
542	Guscio fond.	583	584	611	610	1	20.0	1.00	1.00
543	Guscio fond.	584	585	612	611	1	20.0	1.00	1.00
544	Guscio fond.	585	586	613	612	1	20.0	1.00	1.00
545	Guscio fond.	586	587	614	613	1	20.0	1.00	1.00
546	Guscio fond.	587	588	615	614	1	20.0	1.00	1.00
547	Guscio fond.	588	589	616	615	1	20.0	1.00	1.00
548	Guscio fond.	589	590	617	616	1	20.0	1.00	1.00
549	Guscio fond.	590	591	618	617	1	20.0	1.00	1.00
550	Guscio fond.	591	592	619	618	1	20.0	1.00	1.00
551	Guscio fond.	592	593	620	619	1	20.0	1.00	1.00
552	Guscio fond.	593	594	621	620	1	20.0	1.00	1.00
553	Guscio fond.	594	595	622	621	1	20.0	1.00	1.00
554	Guscio fond.	595	596	623	622	1	20.0	1.00	1.00
555	Guscio fond.	596	597	624	623	1	20.0	1.00	1.00
556	Guscio fond.	598	599	626	625	1	20.0	1.00	1.00
557	Guscio fond.	599	600	627	626	1	20.0	1.00	1.00
558	Guscio fond.	600	601	628	627	1	20.0	1.00	1.00
559	Guscio fond.	601	602	629	628	1	20.0	1.00	1.00
560	Guscio fond.	602	603	630	629	1	20.0	1.00	1.00
561	Guscio fond.	603	604	631	630	1	20.0	1.00	1.00
562	Guscio fond.	604	605	632	631	1	20.0	1.00	1.00
563	Guscio fond.	605	606	633	632	1	20.0	1.00	1.00
564	Guscio fond.	606	607	634	633	1	20.0	1.00	1.00
565	Guscio fond.	607	608	635	634	1	20.0	1.00	1.00
566	Guscio fond.	608	609	636	635	1	20.0	1.00	1.00
567	Guscio fond.	609	610	637	636	1	20.0	1.00	1.00
568	Guscio fond.	610	611	638	637	1	20.0	1.00	1.00
569	Guscio fond.	611	612	639	638	1	20.0	1.00	1.00
570	Guscio fond.	612	613	640	639	1	20.0	1.00	1.00
571	Guscio fond.	613	614	641	640	1	20.0	1.00	1.00
572	Guscio fond.	614	615	642	641	1	20.0	1.00	1.00
573	Guscio fond.	615	616	643	642	1	20.0	1.00	1.00
574	Guscio fond.	616	617	644	643	1	20.0	1.00	1.00
575	Guscio fond.	617	618	645	644	1	20.0	1.00	1.00
576	Guscio fond.	618	619	646	645	1	20.0	1.00	1.00
577	Guscio fond.	619	620	647	646	1	20.0	1.00	1.00
578	Guscio fond.	620	621	648	647	1	20.0	1.00	1.00
579	Guscio fond.	621	622	649	648	1	20.0	1.00	1.00
580	Guscio fond.	622	623	650	649	1	20.0	1.00	1.00
581	Guscio fond.	623	624	651	650	1	20.0	1.00	1.00
582	Guscio fond.	625	626	653	652	1	20.0	1.00	1.00
583	Guscio fond.	626	627	654	653	1	20.0	1.00	1.00
584	Guscio fond.	627	628	655	654	1	20.0	1.00	1.00
585	Guscio fond.	628	629	656	655	1	20.0	1.00	1.00
586	Guscio fond.	629	630	657	656	1	20.0	1.00	1.00
587	Guscio fond.	630	631	658	657	1	20.0	1.00	1.00

588	Guscio fond.	631	632	659	658	1	20.0	1.00	1.00
589	Guscio fond.	632	633	660	659	1	20.0	1.00	1.00
590	Guscio fond.	633	634	661	660	1	20.0	1.00	1.00
591	Guscio fond.	634	635	662	661	1	20.0	1.00	1.00
592	Guscio fond.	635	636	663	662	1	20.0	1.00	1.00
593	Guscio fond.	636	637	664	663	1	20.0	1.00	1.00
594	Guscio fond.	637	638	665	664	1	20.0	1.00	1.00
595	Guscio fond.	638	639	666	665	1	20.0	1.00	1.00
596	Guscio fond.	639	640	667	666	1	20.0	1.00	1.00
597	Guscio fond.	640	641	668	667	1	20.0	1.00	1.00
598	Guscio fond.	641	642	669	668	1	20.0	1.00	1.00
599	Guscio fond.	642	643	670	669	1	20.0	1.00	1.00
600	Guscio fond.	643	644	671	670	1	20.0	1.00	1.00
601	Guscio fond.	644	645	672	671	1	20.0	1.00	1.00
602	Guscio fond.	645	646	673	672	1	20.0	1.00	1.00
603	Guscio fond.	646	647	674	673	1	20.0	1.00	1.00
604	Guscio fond.	647	648	675	674	1	20.0	1.00	1.00
605	Guscio fond.	648	649	676	675	1	20.0	1.00	1.00
606	Guscio fond.	649	650	677	676	1	20.0	1.00	1.00
607	Guscio fond.	650	651	678	677	1	20.0	1.00	1.00
608	Guscio fond.	652	653	680	679	1	20.0	1.00	1.00
609	Guscio fond.	653	654	681	680	1	20.0	1.00	1.00
610	Guscio fond.	654	655	682	681	1	20.0	1.00	1.00
611	Guscio fond.	655	656	683	682	1	20.0	1.00	1.00
612	Guscio fond.	656	657	684	683	1	20.0	1.00	1.00
613	Guscio fond.	657	658	685	684	1	20.0	1.00	1.00
614	Guscio fond.	658	659	686	685	1	20.0	1.00	1.00
615	Guscio fond.	659	660	687	686	1	20.0	1.00	1.00
616	Guscio fond.	660	661	688	687	1	20.0	1.00	1.00
617	Guscio fond.	661	662	689	688	1	20.0	1.00	1.00
618	Guscio fond.	662	663	690	689	1	20.0	1.00	1.00
619	Guscio fond.	663	664	691	690	1	20.0	1.00	1.00
620	Guscio fond.	664	665	692	691	1	20.0	1.00	1.00
621	Guscio fond.	665	666	693	692	1	20.0	1.00	1.00
622	Guscio fond.	666	667	694	693	1	20.0	1.00	1.00
623	Guscio fond.	667	668	695	694	1	20.0	1.00	1.00
624	Guscio fond.	668	669	696	695	1	20.0	1.00	1.00
625	Guscio fond.	669	670	697	696	1	20.0	1.00	1.00
626	Guscio fond.	670	671	698	697	1	20.0	1.00	1.00
627	Guscio fond.	671	672	699	698	1	20.0	1.00	1.00
628	Guscio fond.	672	673	700	699	1	20.0	1.00	1.00
629	Guscio fond.	673	674	701	700	1	20.0	1.00	1.00
630	Guscio fond.	674	675	702	701	1	20.0	1.00	1.00
631	Guscio fond.	675	676	703	702	1	20.0	1.00	1.00
632	Guscio fond.	676	677	704	703	1	20.0	1.00	1.00
633	Guscio fond.	677	678	705	704	1	20.0	1.00	1.00
634	Guscio fond.	679	680	707	706	1	20.0	1.00	1.00
635	Guscio fond.	680	681	708	707	1	20.0	1.00	1.00
636	Guscio fond.	681	682	709	708	1	20.0	1.00	1.00
637	Guscio fond.	682	683	710	709	1	20.0	1.00	1.00
638	Guscio fond.	683	684	711	710	1	20.0	1.00	1.00
639	Guscio fond.	684	685	712	711	1	20.0	1.00	1.00
640	Guscio fond.	685	686	713	712	1	20.0	1.00	1.00
641	Guscio fond.	686	687	714	713	1	20.0	1.00	1.00
642	Guscio fond.	687	688	715	714	1	20.0	1.00	1.00
643	Guscio fond.	688	689	716	715	1	20.0	1.00	1.00
644	Guscio fond.	689	690	717	716	1	20.0	1.00	1.00
645	Guscio fond.	690	691	718	717	1	20.0	1.00	1.00
646	Guscio fond.	691	692	719	718	1	20.0	1.00	1.00
647	Guscio fond.	692	693	720	719	1	20.0	1.00	1.00
648	Guscio fond.	693	694	721	720	1	20.0	1.00	1.00
649	Guscio fond.	694	695	722	721	1	20.0	1.00	1.00
650	Guscio fond.	695	696	723	722	1	20.0	1.00	1.00
651	Guscio fond.	696	697	724	723	1	20.0	1.00	1.00
652	Guscio fond.	697	698	725	724	1	20.0	1.00	1.00
653	Guscio fond.	698	699	726	725	1	20.0	1.00	1.00
654	Guscio fond.	699	700	727	726	1	20.0	1.00	1.00
655	Guscio fond.	700	701	728	727	1	20.0	1.00	1.00
656	Guscio fond.	701	702	729	728	1	20.0	1.00	1.00
657	Guscio fond.	702	703	730	729	1	20.0	1.00	1.00
658	Guscio fond.	703	704	731	730	1	20.0	1.00	1.00
659	Guscio fond.	704	705	732	731	1	20.0	1.00	1.00
660	Guscio fond.	706	707	734	733	1	20.0	1.00	1.00
661	Guscio fond.	707	708	735	734	1	20.0	1.00	1.00
662	Guscio fond.	708	709	736	735	1	20.0	1.00	1.00
663	Guscio fond.	709	710	737	736	1	20.0	1.00	1.00
664	Guscio fond.	710	711	738	737	1	20.0	1.00	1.00
665	Guscio fond.	711	712	739	738	1	20.0	1.00	1.00

666	Guscio fond.	712	713	740	739	1	20.0	1.00	1.00
667	Guscio fond.	713	714	741	740	1	20.0	1.00	1.00
668	Guscio fond.	714	715	742	741	1	20.0	1.00	1.00
669	Guscio fond.	715	716	743	742	1	20.0	1.00	1.00
670	Guscio fond.	716	717	744	743	1	20.0	1.00	1.00
671	Guscio fond.	717	718	745	744	1	20.0	1.00	1.00
672	Guscio fond.	718	719	746	745	1	20.0	1.00	1.00
673	Guscio fond.	719	720	747	746	1	20.0	1.00	1.00
674	Guscio fond.	720	721	748	747	1	20.0	1.00	1.00
675	Guscio fond.	721	722	749	748	1	20.0	1.00	1.00
676	Guscio fond.	722	723	750	749	1	20.0	1.00	1.00
677	Guscio fond.	723	724	751	750	1	20.0	1.00	1.00
678	Guscio fond.	724	725	752	751	1	20.0	1.00	1.00
679	Guscio fond.	725	726	753	752	1	20.0	1.00	1.00
680	Guscio fond.	726	727	754	753	1	20.0	1.00	1.00
681	Guscio fond.	727	728	755	754	1	20.0	1.00	1.00
682	Guscio fond.	728	729	756	755	1	20.0	1.00	1.00
683	Guscio fond.	729	730	757	756	1	20.0	1.00	1.00
684	Guscio fond.	730	731	758	757	1	20.0	1.00	1.00
685	Guscio fond.	731	732	759	758	1	20.0	1.00	1.00
686	Guscio fond.	733	734	761	760	1	20.0	1.00	1.00
687	Guscio fond.	734	735	762	761	1	20.0	1.00	1.00
688	Guscio fond.	735	736	763	762	1	20.0	1.00	1.00
689	Guscio fond.	736	737	764	763	1	20.0	1.00	1.00
690	Guscio fond.	737	738	765	764	1	20.0	1.00	1.00
691	Guscio fond.	738	739	766	765	1	20.0	1.00	1.00
692	Guscio fond.	739	740	767	766	1	20.0	1.00	1.00
693	Guscio fond.	740	741	768	767	1	20.0	1.00	1.00
694	Guscio fond.	741	742	769	768	1	20.0	1.00	1.00
695	Guscio fond.	742	743	770	769	1	20.0	1.00	1.00
696	Guscio fond.	743	744	771	770	1	20.0	1.00	1.00
697	Guscio fond.	744	745	772	771	1	20.0	1.00	1.00
698	Guscio fond.	745	746	773	772	1	20.0	1.00	1.00
699	Guscio fond.	746	747	774	773	1	20.0	1.00	1.00
700	Guscio fond.	747	748	775	774	1	20.0	1.00	1.00
701	Guscio fond.	748	749	776	775	1	20.0	1.00	1.00
702	Guscio fond.	749	750	777	776	1	20.0	1.00	1.00
703	Guscio fond.	750	751	778	777	1	20.0	1.00	1.00
704	Guscio fond.	751	752	779	778	1	20.0	1.00	1.00
705	Guscio fond.	752	753	780	779	1	20.0	1.00	1.00
706	Guscio fond.	753	754	781	780	1	20.0	1.00	1.00
707	Guscio fond.	754	755	782	781	1	20.0	1.00	1.00
708	Guscio fond.	755	756	783	782	1	20.0	1.00	1.00
709	Guscio fond.	756	757	784	783	1	20.0	1.00	1.00
710	Guscio fond.	757	758	785	784	1	20.0	1.00	1.00
711	Guscio fond.	758	759	786	785	1	20.0	1.00	1.00
712	Guscio fond.	760	761	788	787	1	20.0	1.00	1.00
713	Guscio fond.	761	762	789	788	1	20.0	1.00	1.00
714	Guscio fond.	762	763	790	789	1	20.0	1.00	1.00
715	Guscio fond.	763	764	791	790	1	20.0	1.00	1.00
716	Guscio fond.	764	765	792	791	1	20.0	1.00	1.00
717	Guscio fond.	765	766	793	792	1	20.0	1.00	1.00
718	Guscio fond.	766	767	794	793	1	20.0	1.00	1.00
719	Guscio fond.	767	768	795	794	1	20.0	1.00	1.00
720	Guscio fond.	768	769	796	795	1	20.0	1.00	1.00
721	Guscio fond.	769	770	797	796	1	20.0	1.00	1.00
722	Guscio fond.	770	771	798	797	1	20.0	1.00	1.00
723	Guscio fond.	771	772	799	798	1	20.0	1.00	1.00
724	Guscio fond.	772	773	800	799	1	20.0	1.00	1.00
725	Guscio fond.	773	774	801	800	1	20.0	1.00	1.00
726	Guscio fond.	774	775	802	801	1	20.0	1.00	1.00
727	Guscio fond.	775	776	803	802	1	20.0	1.00	1.00
728	Guscio fond.	776	777	804	803	1	20.0	1.00	1.00
729	Guscio fond.	777	778	805	804	1	20.0	1.00	1.00
730	Guscio fond.	778	779	806	805	1	20.0	1.00	1.00
731	Guscio fond.	779	780	807	806	1	20.0	1.00	1.00
732	Guscio fond.	780	781	808	807	1	20.0	1.00	1.00
733	Guscio fond.	781	782	809	808	1	20.0	1.00	1.00
734	Guscio fond.	782	783	810	809	1	20.0	1.00	1.00
735	Guscio fond.	783	784	811	810	1	20.0	1.00	1.00
736	Guscio fond.	784	785	812	811	1	20.0	1.00	1.00
737	Guscio fond.	785	786	813	812	1	20.0	1.00	1.00
738	Guscio fond.	787	788	815	814	1	20.0	1.00	1.00
739	Guscio fond.	788	789	816	815	1	20.0	1.00	1.00
740	Guscio fond.	789	790	817	816	1	20.0	1.00	1.00
741	Guscio fond.	790	791	818	817	1	20.0	1.00	1.00
742	Guscio fond.	791	792	819	818	1	20.0	1.00	1.00
743	Guscio fond.	792	793	820	819	1	20.0	1.00	1.00

744	Guscio fond.	793	794	821	820	1	20.0	1.00	1.00
745	Guscio fond.	794	795	822	821	1	20.0	1.00	1.00
746	Guscio fond.	795	796	823	822	1	20.0	1.00	1.00
747	Guscio fond.	796	797	824	823	1	20.0	1.00	1.00
748	Guscio fond.	797	798	825	824	1	20.0	1.00	1.00
749	Guscio fond.	798	799	826	825	1	20.0	1.00	1.00
750	Guscio fond.	799	800	827	826	1	20.0	1.00	1.00
751	Guscio fond.	800	801	828	827	1	20.0	1.00	1.00
752	Guscio fond.	801	802	829	828	1	20.0	1.00	1.00
753	Guscio fond.	802	803	830	829	1	20.0	1.00	1.00
754	Guscio fond.	803	804	831	830	1	20.0	1.00	1.00
755	Guscio fond.	804	805	832	831	1	20.0	1.00	1.00
756	Guscio fond.	805	806	833	832	1	20.0	1.00	1.00
757	Guscio fond.	806	807	834	833	1	20.0	1.00	1.00
758	Guscio fond.	807	808	835	834	1	20.0	1.00	1.00
759	Guscio fond.	808	809	836	835	1	20.0	1.00	1.00
760	Guscio fond.	809	810	837	836	1	20.0	1.00	1.00
761	Guscio fond.	810	811	838	837	1	20.0	1.00	1.00
762	Guscio fond.	811	812	839	838	1	20.0	1.00	1.00
763	Guscio fond.	812	813	840	839	1	20.0	1.00	1.00
764	Guscio fond.	814	815	842	841	1	20.0	1.00	1.00
765	Guscio fond.	815	816	843	842	1	20.0	1.00	1.00
766	Guscio fond.	816	817	844	843	1	20.0	1.00	1.00
767	Guscio fond.	817	818	845	844	1	20.0	1.00	1.00
768	Guscio fond.	818	819	846	845	1	20.0	1.00	1.00
769	Guscio fond.	819	820	847	846	1	20.0	1.00	1.00
770	Guscio fond.	820	821	848	847	1	20.0	1.00	1.00
771	Guscio fond.	821	822	849	848	1	20.0	1.00	1.00
772	Guscio fond.	822	823	850	849	1	20.0	1.00	1.00
773	Guscio fond.	823	824	851	850	1	20.0	1.00	1.00
774	Guscio fond.	824	825	852	851	1	20.0	1.00	1.00
775	Guscio fond.	825	826	853	852	1	20.0	1.00	1.00
776	Guscio fond.	826	827	854	853	1	20.0	1.00	1.00
777	Guscio fond.	827	828	855	854	1	20.0	1.00	1.00
778	Guscio fond.	828	829	856	855	1	20.0	1.00	1.00
779	Guscio fond.	829	830	857	856	1	20.0	1.00	1.00
780	Guscio fond.	830	831	858	857	1	20.0	1.00	1.00
781	Guscio fond.	831	832	859	858	1	20.0	1.00	1.00
782	Guscio fond.	832	833	860	859	1	20.0	1.00	1.00
783	Guscio fond.	833	834	861	860	1	20.0	1.00	1.00
784	Guscio fond.	834	835	862	861	1	20.0	1.00	1.00
785	Guscio fond.	835	836	863	862	1	20.0	1.00	1.00
786	Guscio fond.	836	837	864	863	1	20.0	1.00	1.00
787	Guscio fond.	837	838	865	864	1	20.0	1.00	1.00
788	Guscio fond.	838	839	866	865	1	20.0	1.00	1.00
789	Guscio fond.	839	840	867	866	1	20.0	1.00	1.00
790	Guscio fond.	841	842	869	868	1	20.0	1.00	1.00
791	Guscio fond.	842	843	870	869	1	20.0	1.00	1.00
792	Guscio fond.	843	844	871	870	1	20.0	1.00	1.00
793	Guscio fond.	844	845	872	871	1	20.0	1.00	1.00
794	Guscio fond.	845	846	873	872	1	20.0	1.00	1.00
795	Guscio fond.	846	847	874	873	1	20.0	1.00	1.00
796	Guscio fond.	847	848	875	874	1	20.0	1.00	1.00
797	Guscio fond.	848	849	876	875	1	20.0	1.00	1.00
798	Guscio fond.	849	850	877	876	1	20.0	1.00	1.00
799	Guscio fond.	850	851	878	877	1	20.0	1.00	1.00
800	Guscio fond.	851	852	879	878	1	20.0	1.00	1.00
801	Guscio fond.	852	853	880	879	1	20.0	1.00	1.00
802	Guscio fond.	853	854	881	880	1	20.0	1.00	1.00
803	Guscio fond.	854	855	882	881	1	20.0	1.00	1.00
804	Guscio fond.	855	856	883	882	1	20.0	1.00	1.00
805	Guscio fond.	856	857	884	883	1	20.0	1.00	1.00
806	Guscio fond.	857	858	885	884	1	20.0	1.00	1.00
807	Guscio fond.	858	859	886	885	1	20.0	1.00	1.00
808	Guscio fond.	859	860	887	886	1	20.0	1.00	1.00
809	Guscio fond.	860	861	888	887	1	20.0	1.00	1.00
810	Guscio fond.	861	862	889	888	1	20.0	1.00	1.00
811	Guscio fond.	862	863	890	889	1	20.0	1.00	1.00
812	Guscio fond.	863	864	891	890	1	20.0	1.00	1.00
813	Guscio fond.	864	865	892	891	1	20.0	1.00	1.00
814	Guscio fond.	865	866	893	892	1	20.0	1.00	1.00
815	Guscio fond.	866	867	894	893	1	20.0	1.00	1.00
816	Guscio fond.	868	869	896	895	1	20.0	1.00	1.00
817	Guscio fond.	869	870	897	896	1	20.0	1.00	1.00
818	Guscio fond.	870	871	898	897	1	20.0	1.00	1.00
819	Guscio fond.	871	872	899	898	1	20.0	1.00	1.00
820	Guscio fond.	872	873	900	899	1	20.0	1.00	1.00
821	Guscio fond.	873	874	901	900	1	20.0	1.00	1.00

822	Guscio fond.	874	875	902	901	1	20.0	1.00	1.00
823	Guscio fond.	875	876	903	902	1	20.0	1.00	1.00
824	Guscio fond.	876	877	904	903	1	20.0	1.00	1.00
825	Guscio fond.	877	878	905	904	1	20.0	1.00	1.00
826	Guscio fond.	878	879	906	905	1	20.0	1.00	1.00
827	Guscio fond.	879	880	907	906	1	20.0	1.00	1.00
828	Guscio fond.	880	881	908	907	1	20.0	1.00	1.00
829	Guscio fond.	881	882	909	908	1	20.0	1.00	1.00
830	Guscio fond.	882	883	910	909	1	20.0	1.00	1.00
831	Guscio fond.	883	884	911	910	1	20.0	1.00	1.00
832	Guscio fond.	884	885	912	911	1	20.0	1.00	1.00
833	Guscio fond.	885	886	913	912	1	20.0	1.00	1.00
834	Guscio fond.	886	887	914	913	1	20.0	1.00	1.00
835	Guscio fond.	887	888	915	914	1	20.0	1.00	1.00
836	Guscio fond.	888	889	916	915	1	20.0	1.00	1.00
837	Guscio fond.	889	890	917	916	1	20.0	1.00	1.00
838	Guscio fond.	890	891	918	917	1	20.0	1.00	1.00
839	Guscio fond.	891	892	919	918	1	20.0	1.00	1.00
840	Guscio fond.	892	893	920	919	1	20.0	1.00	1.00
841	Guscio fond.	893	894	921	920	1	20.0	1.00	1.00
842	Guscio fond.	895	896	923	922	1	20.0	1.00	1.00
843	Guscio fond.	896	897	924	923	1	20.0	1.00	1.00
844	Guscio fond.	897	898	925	924	1	20.0	1.00	1.00
845	Guscio fond.	898	899	926	925	1	20.0	1.00	1.00
846	Guscio fond.	899	900	927	926	1	20.0	1.00	1.00
847	Guscio fond.	900	901	928	927	1	20.0	1.00	1.00
848	Guscio fond.	901	902	929	928	1	20.0	1.00	1.00
849	Guscio fond.	902	903	930	929	1	20.0	1.00	1.00
850	Guscio fond.	903	904	931	930	1	20.0	1.00	1.00
851	Guscio fond.	904	905	932	931	1	20.0	1.00	1.00
852	Guscio fond.	905	906	933	932	1	20.0	1.00	1.00
853	Guscio fond.	906	907	934	933	1	20.0	1.00	1.00
854	Guscio fond.	907	908	935	934	1	20.0	1.00	1.00
855	Guscio fond.	908	909	936	935	1	20.0	1.00	1.00
856	Guscio fond.	909	910	937	936	1	20.0	1.00	1.00
857	Guscio fond.	910	911	938	937	1	20.0	1.00	1.00
858	Guscio fond.	911	912	939	938	1	20.0	1.00	1.00
859	Guscio fond.	912	913	940	939	1	20.0	1.00	1.00
860	Guscio fond.	913	914	941	940	1	20.0	1.00	1.00
861	Guscio fond.	914	915	942	941	1	20.0	1.00	1.00
862	Guscio fond.	915	916	943	942	1	20.0	1.00	1.00
863	Guscio fond.	916	917	944	943	1	20.0	1.00	1.00
864	Guscio fond.	917	918	945	944	1	20.0	1.00	1.00
865	Guscio fond.	918	919	946	945	1	20.0	1.00	1.00
866	Guscio fond.	919	920	947	946	1	20.0	1.00	1.00
867	Guscio fond.	920	921	948	947	1	20.0	1.00	1.00
868	Guscio fond.	922	923	950	949	1	20.0	1.00	1.00
869	Guscio fond.	923	924	951	950	1	20.0	1.00	1.00
870	Guscio fond.	924	925	952	951	1	20.0	1.00	1.00
871	Guscio fond.	925	926	953	952	1	20.0	1.00	1.00
872	Guscio fond.	926	927	954	953	1	20.0	1.00	1.00
873	Guscio fond.	927	928	955	954	1	20.0	1.00	1.00
874	Guscio fond.	928	929	956	955	1	20.0	1.00	1.00
875	Guscio fond.	929	930	957	956	1	20.0	1.00	1.00
876	Guscio fond.	930	931	958	957	1	20.0	1.00	1.00
877	Guscio fond.	931	932	959	958	1	20.0	1.00	1.00
878	Guscio fond.	932	933	960	959	1	20.0	1.00	1.00
879	Guscio fond.	933	934	961	960	1	20.0	1.00	1.00
880	Guscio fond.	934	935	962	961	1	20.0	1.00	1.00
881	Guscio fond.	935	936	963	962	1	20.0	1.00	1.00
882	Guscio fond.	936	937	964	963	1	20.0	1.00	1.00
883	Guscio fond.	937	938	965	964	1	20.0	1.00	1.00
884	Guscio fond.	938	939	966	965	1	20.0	1.00	1.00
885	Guscio fond.	939	940	967	966	1	20.0	1.00	1.00
886	Guscio fond.	940	941	968	967	1	20.0	1.00	1.00
887	Guscio fond.	941	942	969	968	1	20.0	1.00	1.00
888	Guscio fond.	942	943	970	969	1	20.0	1.00	1.00
889	Guscio fond.	943	944	971	970	1	20.0	1.00	1.00
890	Guscio fond.	944	945	972	971	1	20.0	1.00	1.00
891	Guscio fond.	945	946	973	972	1	20.0	1.00	1.00
892	Guscio fond.	946	947	974	973	1	20.0	1.00	1.00
893	Guscio fond.	947	948	975	974	1	20.0	1.00	1.00
894	Guscio fond.	949	950	977	976	1	20.0	1.00	1.00
895	Guscio fond.	950	951	978	977	1	20.0	1.00	1.00
896	Guscio fond.	951	952	979	978	1	20.0	1.00	1.00
897	Guscio fond.	952	953	980	979	1	20.0	1.00	1.00
898	Guscio fond.	953	954	981	980	1	20.0	1.00	1.00
899	Guscio fond.	954	955	982	981	1	20.0	1.00	1.00

900	Guscio fond.	955	956	983	982	1	20.0	1.00	1.00
901	Guscio fond.	956	957	984	983	1	20.0	1.00	1.00
902	Guscio fond.	957	958	985	984	1	20.0	1.00	1.00
903	Guscio fond.	958	959	986	985	1	20.0	1.00	1.00
904	Guscio fond.	959	960	987	986	1	20.0	1.00	1.00
905	Guscio fond.	960	961	988	987	1	20.0	1.00	1.00
906	Guscio fond.	961	962	989	988	1	20.0	1.00	1.00
907	Guscio fond.	962	963	990	989	1	20.0	1.00	1.00
908	Guscio fond.	963	964	991	990	1	20.0	1.00	1.00
909	Guscio fond.	964	965	992	991	1	20.0	1.00	1.00
910	Guscio fond.	965	966	993	992	1	20.0	1.00	1.00
911	Guscio fond.	966	967	994	993	1	20.0	1.00	1.00
912	Guscio fond.	967	968	995	994	1	20.0	1.00	1.00
913	Guscio fond.	968	969	996	995	1	20.0	1.00	1.00
914	Guscio fond.	969	970	997	996	1	20.0	1.00	1.00
915	Guscio fond.	970	971	998	997	1	20.0	1.00	1.00
916	Guscio fond.	971	972	999	998	1	20.0	1.00	1.00
917	Guscio fond.	972	973	1000	999	1	20.0	1.00	1.00
918	Guscio fond.	973	974	1001	1000	1	20.0	1.00	1.00
919	Guscio fond.	974	975	1002	1001	1	20.0	1.00	1.00
920	Guscio fond.	976	977	1004	1003	1	20.0	1.00	1.00
921	Guscio fond.	977	978	1005	1004	1	20.0	1.00	1.00
922	Guscio fond.	978	979	1006	1005	1	20.0	1.00	1.00
923	Guscio fond.	979	980	1007	1006	1	20.0	1.00	1.00
924	Guscio fond.	980	981	1008	1007	1	20.0	1.00	1.00
925	Guscio fond.	981	982	1009	1008	1	20.0	1.00	1.00
926	Guscio fond.	982	983	1010	1009	1	20.0	1.00	1.00
927	Guscio fond.	983	984	1011	1010	1	20.0	1.00	1.00
928	Guscio fond.	984	985	1012	1011	1	20.0	1.00	1.00
929	Guscio fond.	985	986	1013	1012	1	20.0	1.00	1.00
930	Guscio fond.	986	987	1014	1013	1	20.0	1.00	1.00
931	Guscio fond.	987	988	1015	1014	1	20.0	1.00	1.00
932	Guscio fond.	988	989	1016	1015	1	20.0	1.00	1.00
933	Guscio fond.	989	990	1017	1016	1	20.0	1.00	1.00
934	Guscio fond.	990	991	1018	1017	1	20.0	1.00	1.00
935	Guscio fond.	991	992	1019	1018	1	20.0	1.00	1.00
936	Guscio fond.	992	993	1020	1019	1	20.0	1.00	1.00
937	Guscio fond.	993	994	1021	1020	1	20.0	1.00	1.00
938	Guscio fond.	994	995	1022	1021	1	20.0	1.00	1.00
939	Guscio fond.	995	996	1023	1022	1	20.0	1.00	1.00
940	Guscio fond.	996	997	1024	1023	1	20.0	1.00	1.00
941	Guscio fond.	997	998	1025	1024	1	20.0	1.00	1.00
942	Guscio fond.	998	999	1026	1025	1	20.0	1.00	1.00
943	Guscio fond.	999	1000	1027	1026	1	20.0	1.00	1.00
944	Guscio fond.	1000	1001	1028	1027	1	20.0	1.00	1.00
945	Guscio fond.	1001	1002	1029	1028	1	20.0	1.00	1.00
946	Guscio fond.	1003	1004	1031	1030	1	20.0	1.00	1.00
947	Guscio fond.	1004	1005	1032	1031	1	20.0	1.00	1.00
948	Guscio fond.	1005	1006	1033	1032	1	20.0	1.00	1.00
949	Guscio fond.	1006	1007	1034	1033	1	20.0	1.00	1.00
950	Guscio fond.	1007	1008	1035	1034	1	20.0	1.00	1.00
951	Guscio fond.	1008	1009	1036	1035	1	20.0	1.00	1.00
952	Guscio fond.	1009	1010	1037	1036	1	20.0	1.00	1.00
953	Guscio fond.	1010	1011	1038	1037	1	20.0	1.00	1.00
954	Guscio fond.	1011	1012	1039	1038	1	20.0	1.00	1.00
955	Guscio fond.	1012	1013	1040	1039	1	20.0	1.00	1.00
956	Guscio fond.	1013	1014	1041	1040	1	20.0	1.00	1.00
957	Guscio fond.	1014	1015	1042	1041	1	20.0	1.00	1.00
958	Guscio fond.	1015	1016	1043	1042	1	20.0	1.00	1.00
959	Guscio fond.	1016	1017	1044	1043	1	20.0	1.00	1.00
960	Guscio fond.	1017	1018	1045	1044	1	20.0	1.00	1.00
961	Guscio fond.	1018	1019	1046	1045	1	20.0	1.00	1.00
962	Guscio fond.	1019	1020	1047	1046	1	20.0	1.00	1.00
963	Guscio fond.	1020	1021	1048	1047	1	20.0	1.00	1.00
964	Guscio fond.	1021	1022	1049	1048	1	20.0	1.00	1.00
965	Guscio fond.	1022	1023	1050	1049	1	20.0	1.00	1.00
966	Guscio fond.	1023	1024	1051	1050	1	20.0	1.00	1.00
967	Guscio fond.	1024	1025	1052	1051	1	20.0	1.00	1.00
968	Guscio fond.	1025	1026	1053	1052	1	20.0	1.00	1.00
969	Guscio fond.	1026	1027	1054	1053	1	20.0	1.00	1.00
970	Guscio fond.	1027	1028	1055	1054	1	20.0	1.00	1.00
971	Guscio fond.	1028	1029	1056	1055	1	20.0	1.00	1.00
972	Guscio fond.	1030	1031	1058	1057	1	20.0	1.00	1.00
973	Guscio fond.	1031	1032	1059	1058	1	20.0	1.00	1.00
974	Guscio fond.	1032	1033	1060	1059	1	20.0	1.00	1.00
975	Guscio fond.	1033	1034	1061	1060	1	20.0	1.00	1.00
976	Guscio fond.	1034	1035	1062	1061	1	20.0	1.00	1.00
977	Guscio fond.	1035	1036	1063	1062	1	20.0	1.00	1.00

978	Guscio fond.	1036	1037	1064	1063	1	20.0	1.00	1.00
979	Guscio fond.	1037	1038	1065	1064	1	20.0	1.00	1.00
980	Guscio fond.	1038	1039	1066	1065	1	20.0	1.00	1.00
981	Guscio fond.	1039	1040	1067	1066	1	20.0	1.00	1.00
982	Guscio fond.	1040	1041	1068	1067	1	20.0	1.00	1.00
983	Guscio fond.	1041	1042	1069	1068	1	20.0	1.00	1.00
984	Guscio fond.	1042	1043	1070	1069	1	20.0	1.00	1.00
985	Guscio fond.	1043	1044	1071	1070	1	20.0	1.00	1.00
986	Guscio fond.	1044	1045	1072	1071	1	20.0	1.00	1.00
987	Guscio fond.	1045	1046	1073	1072	1	20.0	1.00	1.00
988	Guscio fond.	1046	1047	1074	1073	1	20.0	1.00	1.00
989	Guscio fond.	1047	1048	1075	1074	1	20.0	1.00	1.00
990	Guscio fond.	1048	1049	1076	1075	1	20.0	1.00	1.00
991	Guscio fond.	1049	1050	1077	1076	1	20.0	1.00	1.00
992	Guscio fond.	1050	1051	1078	1077	1	20.0	1.00	1.00
993	Guscio fond.	1051	1052	1079	1078	1	20.0	1.00	1.00
994	Guscio fond.	1052	1053	1080	1079	1	20.0	1.00	1.00
995	Guscio fond.	1053	1054	1081	1080	1	20.0	1.00	1.00
996	Guscio fond.	1054	1055	1082	1081	1	20.0	1.00	1.00
997	Guscio fond.	1055	1056	1083	1082	1	20.0	1.00	1.00

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 Variab. Carico variabile generico Var. rid. Carico variabile generico con riduzione in funzione dell' area (c.5.5. ...) Neve 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: per valore raro
Psi 1	Coefficiente combinatorio dei valori caratteristici delle azioni variabili: per valore frequente
Psi 2	Coefficiente combinatorio dei valori caratteristici delle azioni variabili: per valore quasi permanente
Psi S 2	Coefficiente di combinazione che fornisce il valore quasi-permanente dell'azione variabile: per la definizione

delle masse sismiche	
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 <div> S elemento utilizzato solo per scarico C elemento utilizzato per scarico e per modellazione piano rigido P elemento utilizzato come pannello M scarico monodirezionale B scarico bidirezionale </div>
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 Sd/Su con sollecitazioni ultime proporzionali: valore minore o uguale a 1 per verifica positiva
Verif.V	rapporto Sd/Su con sollecitazioni taglianti proporzionali valore minore o uguale a 1 per verifica positiva
rRfck	rapporto tra la massima compressione nel calcestruzzo e la tensione fck in combinazioni rare [normalizzato a 1]
rFfck	rapporto tra la massima compressione nel calcestruzzo e la tensione fck in combinazioni frequenti [normalizzato a 1]
rPfck	rapporto tra la massima compressione nel calcestruzzo e la tensione fck in combinazioni quasi permanenti [normalizzato a 1]
rRfyk	rapporto tra la massima tensione nell'acciaio e la tensione fyk in combinazioni frequenti [normalizzato a 1]
rFyk	rapporto tra la massima tensione nell'acciaio e la tensione fyk in combinazioni rare [normalizzato a 1]
rPfyk	rapporto tra la massima tensione nell'acciaio e la tensione fyk 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. 14.01.2008 - §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 cinematicismo 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 mezzzeria
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 mezzzeria
Ver. CIS	Rapporto pa/pr (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
pa	Pressione sulla parete causata dall'azione sismica
pr	Pressione resistente del meccanismo ad arco
Drift	Spostamento relativo interpiano allo SLV valutato secondo il D.M. 14.01.2008 - § 7.3.3.3
Beta a	Coef. riduttivo per tener conto del danneggiamento del piano dipendente dallo spostamento, ottenuto sperimentalmente

Con riferimento al **Documento di Affidabilità "Test di validazione del software di calcolo PRO_SAP e dei moduli aggiuntivi PRO_SAP Modulo Geotecnico, PRO_CAD nodi acciaio e PRO_MST"** - versione Maggio 2011, disponibile per il download sul sito **www.2si.it**, si segnalano i seguenti esempi applicativi:

Test N°	Titolo
14	ANALISI DEI CARICHI PER UN SOLAIO DI COPERTURA
15	EFFETTI DELLO SPESSORE SULLA RIGIDEZZA DEI SOLAI
16	SOLAIO: CONFRONTO FRA RIGIDO E DEFORMABILE
17	SOLAIO: MISTO LEGNO-CALCESTRUZZO
28	FRECCIA DI SOLAI IN C.A.
119	PROGETTO E VERIFICA DI SOLAI IN MATERIALE XLAM

ID Arch.	Tipo	G1k	G2k	Qk	Fatt. A	s sis.	Psi 0	Psi 1	Psi 2	Psi S 2	Fatt. Fi
		daN/cm2	daN/cm2	daN/cm2							
1	Neve	1.80e-02	7.50e-03	9.00e-03		1.00	0.50	0.20	0.0	0.0	1.00
2	Neve	1.50e-03	3.00e-03	8.00e-03		1.00	0.50	0.20	0.0	0.0	1.00

Elem.	Tipo	ID Arch.	Mat.	Spessore	Orditura	G1k	G2k	Qk	Nodo 1/6..	Nodo 2/7..	Nodo 3/8..	Nodo..	Nodo..
						daN/cm2	daN/cm2	daN/cm2					
1	SM	2	m=11	3.5	0.0	1.50e-03	3.00e-03	8.00e-03	1113	1112	1108	1109	
2	SM	2	m=11	3.5	0.0	1.50e-03	3.00e-03	8.00e-03	1114	1113	1109	1110	
3	SM	2	m=11	3.5	0.0	1.50e-03	3.00e-03	8.00e-03	1115	1114	1110	1111	
4	SM	2	m=11	3.5	0.0	1.50e-03	3.00e-03	8.00e-03	1117	1116	1112	1113	
5	SM	2	m=11	3.5	0.0	1.50e-03	3.00e-03	8.00e-03	1118	1117	1113	1114	
6	SM	2	m=11	3.5	0.0	1.50e-03	3.00e-03	8.00e-03	1119	1118	1114	1115	
7	SM	2	m=11	3.5	0.0	1.50e-03	3.00e-03	8.00e-03	1121	1120	1116	1117	
8	SM	2	m=11	3.5	0.0	1.50e-03	3.00e-03	8.00e-03	1122	1121	1117	1118	
9	SM	2	m=11	3.5	0.0	1.50e-03	3.00e-03	8.00e-03	1123	1122	1118	1119	
10	SM	2	m=11	3.5	0.0	1.50e-03	3.00e-03	8.00e-03	1125	1124	1120	1121	
11	SM	2	m=11	3.5	0.0	1.50e-03	3.00e-03	8.00e-03	1126	1125	1121	1122	
12	SM	2	m=11	3.5	0.0	1.50e-03	3.00e-03	8.00e-03	1127	1126	1122	1123	
13	SM	2	m=11	3.5	90.0	1.50e-03	3.00e-03	8.00e-03	1135	1134	1128	1129	1130
									1131				
14	SM	2	m=11	3.5	90.0	1.50e-03	3.00e-03	8.00e-03	1136	1135	1131	1132	
15	SM	2	m=11	3.5	90.0	1.50e-03	3.00e-03	8.00e-03	1137	1136	1132	1133	
16	SM	2	m=11	3.5	90.0	1.50e-03	3.00e-03	8.00e-03	1139	1138	1134	1135	
17	SM	2	m=11	3.5	90.0	1.50e-03	3.00e-03	8.00e-03	1140	1139	1135	1136	
18	SM	2	m=11	3.5	90.0	1.50e-03	3.00e-03	8.00e-03	1141	1140	1136	1137	
19	SM	2	m=11	3.5	90.0	1.50e-03	3.00e-03	8.00e-03	1143	1142	1138	1139	
20	SM	2	m=11	3.5	90.0	1.50e-03	3.00e-03	8.00e-03	1140	1144	1143	1139	
21	SM	2	m=11	3.5	90.0	1.50e-03	3.00e-03	8.00e-03	1141	1145	1144	1140	
22	CM	1	m=11	5.5	0.0	1.80e-02	7.50e-03	9.00e-03	1147	1146	1100	1101	

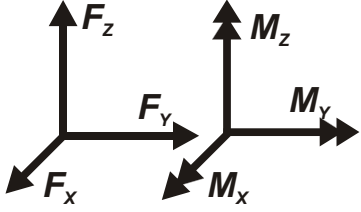
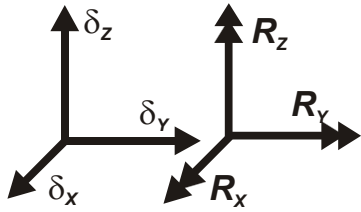
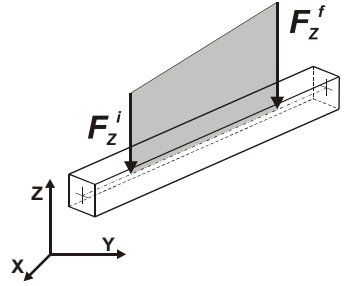
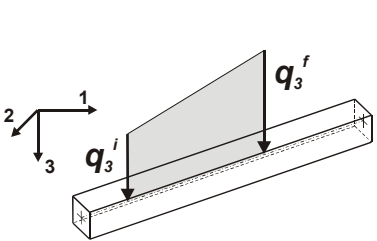
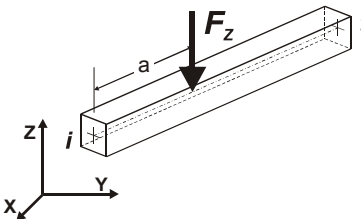
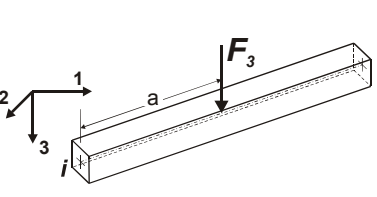
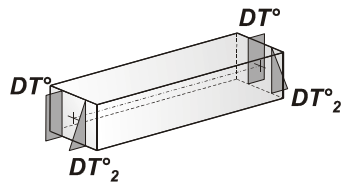
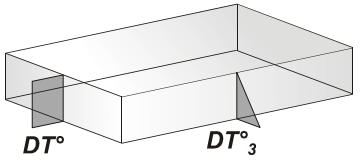
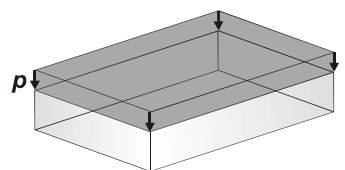
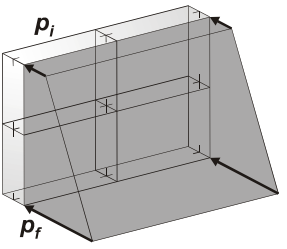
23	CM	1	m=11	5.5	0.0	1.80e-02	7.50e-03	9.00e-03	1148	1147	1101	1102	
24	CM	1	m=11	5.5	0.0	1.80e-02	7.50e-03	9.00e-03	1149	1148	1102	1103	
25	CM	1	m=11	5.5	0.0	1.80e-02	7.50e-03	9.00e-03	1105	1104	1146	1147	
26	CM	1	m=11	5.5	0.0	1.80e-02	7.50e-03	9.00e-03	1106	1105	1147	1148	
27	CM	1	m=11	5.5	0.0	1.80e-02	7.50e-03	9.00e-03	1107	1106	1148	1149	

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 Fx, Fy, Fz, momento Mx, My, Mz)
2	spostamento nodale impresso 6 dati (spostamento Tx,Ty,Tz, rotazione Rx,Ry,Rz)
3	carico distribuito globale su elemento tipo trave 7 dati (fx,fy,fz,mx,my,mz,ascissa di inizio carico) 7 dati (fx,fy,fz,mx,my,mz,ascissa di fine carico)
4	carico distribuito locale su elemento tipo trave 7 dati (f1,f2,f3,m1,m2,m3,ascissa di inizio carico) 7 dati (f1,f2,f3,m1,m2,m3,ascissa di fine carico)
5	carico concentrato globale su elemento tipo trave 7 dati (Fx,Fy,Fz,Mx,My,Mz,ascissa di carico)
6	carico concentrato locale su elemento tipo trave 7 dati (F1, F2, F3, M1, M2, M3, 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)

 <p>Carico concentrato nodale</p>	 <p>Spostamento impresso</p>
 <p>Carico distribuito globale</p>	 <p>Carico distribuito locale</p>
 <p>Carico concentrato globale</p>	 <p>Carico concentrato locale</p>
 <p>Carico termico 2D</p>	 <p>Carico termico 3D</p>
 <p>Carico pressione uniforme</p>	 <p>Carico pressione variabile</p>

Tipo	carico distribuito globale su trave

Id	Tipo	Pos. cm	fx daN/cm	fy daN/cm	fz daN/cm	mx daN	my daN	mz daN
5	vento da nord	0.0	0.0	-2.38	0.0	0.0	0.0	0.0
		0.0	0.0	-2.38	0.0	0.0	0.0	0.0
6	vento da nord/2	0.0	0.0	-1.19	0.0	0.0	0.0	0.0
		0.0	0.0	-1.19	0.0	0.0	0.0	0.0
7	vento da nord/4	0.0	0.0	-0.60	0.0	0.0	0.0	0.0
		0.0	0.0	-0.60	0.0	0.0	0.0	0.0
8	vento depressione cop atrio	0.0	0.0	0.0	1.19	0.0	0.0	0.0
		0.0	0.0	0.0	1.19	0.0	0.0	0.0
9	vento depressione cop atrio/2	0.0	0.0	0.0	0.60	0.0	0.0	0.0
		0.0	0.0	0.0	0.60	0.0	0.0	0.0

10	vento depressione cop tettoia	0.0	0.0	0.0	0.60	0.0	0.0	0.0
		0.0	0.0	0.0	3.57	0.0	0.0	0.0
11	vento depressione cop tettoia/2	0.0	0.0	0.0	3.57	0.0	0.0	0.0
		0.0	0.0	0.0	1.79	0.0	0.0	0.0
12	vento pressione cop tettoia	0.0	0.0	0.0	1.79	0.0	0.0	0.0
		0.0	0.0	0.0	-3.57	0.0	0.0	0.0
13	vento pressione cop tettoia/2	0.0	0.0	0.0	-3.57	0.0	0.0	0.0
		0.0	0.0	0.0	-1.79	0.0	0.0	0.0
14	vento da sud	0.0	0.0	2.38	0.0	0.0	0.0	0.0
		0.0	0.0	2.38	0.0	0.0	0.0	0.0
15	vento da sud/2	0.0	0.0	1.19	0.0	0.0	0.0	0.0
		0.0	0.0	1.19	0.0	0.0	0.0	0.0
16	vento da sud/4	0.0	0.0	0.60	0.0	0.0	0.0	0.0
		0.0	0.0	0.60	0.0	0.0	0.0	0.0
17	tamponamento	0.0	0.0	0.0	-9.30	0.0	0.0	0.0
		0.0	0.0	0.0	-9.30	0.0	0.0	0.0

Tipo	carico di pressione uniforme su piastra

Id	Tipo	pressione daN/cm2
1	variabile	0.04
2	permanente PT	0.05
3	permanente rampa	0.04
4	permanente fine rampa	0.02

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)	
3	Gsk	CDC=G2sk (permanente solai-coperture n.c.d.)	
4	Qnk	CDC=Qnk (carico da neve)	
5	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=Qnk (carico da neve)
			partecipazione:1.00 per 13 CDC=G2k (permanente generico n.c.d.)
			partecipazione:0.60 per 14 CDC=Qk (variabile generico) variabile
6	Edk	CDC=Ed (dinamico SLU) alfa=0.0 (ecc. -)	come precedente CDC sismico
7	Edk	CDC=Ed (dinamico SLU) alfa=90.00 (ecc. +)	come precedente CDC sismico
8	Edk	CDC=Ed (dinamico SLU) alfa=90.00 (ecc. -)	come precedente CDC sismico
9	Edk	CDC=Ed (dinamico SLD) alfa=0.0 (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=90.00 (ecc. +)	come precedente CDC sismico
12	Edk	CDC=Ed (dinamico SLD) alfa=90.00 (ecc. -)	come precedente CDC sismico
13	Gk	CDC=G2k (permanente generico n.c.d.)	D2 : 57 Azione : tamponamento

			D2 : 59 Azione : tamponamento
			D2 : 61 Azione : tamponamento
			D2 : 63 Azione : tamponamento
			D2 : 65 Azione : tamponamento
			D2 : 67 Azione : tamponamento
			D2 : 69 Azione : tamponamento
			D2 : 71 Azione : tamponamento
			D2 : 89 Azione : tamponamento
			D2 : 91 Azione : tamponamento
			D2 : 93 Azione : tamponamento
			D2 : 95 Azione : tamponamento
			D2 : 97 Azione : tamponamento
			D2 : 99 Azione : tamponamento
			D2 : 101 Azione : tamponamento
			D2 : 103 Azione : tamponamento
			D2 :da 105 a 128 Azione : tamponamento
			D2 :da 161 a 184 Azione : tamponamento
			D3 :da 1 a 90 Azione : permanente fine rampa
			D3 :da 91 a 581 Azione : permanente rampa
			D3 :da 582 a 997 Azione : permanente PT
14	Qk	CDC=Qk (variabile generico) variabile	D3 :da 1 a 90 Azione : variabile
			D3 :da 91 a 581 Azione : variabile
			D3 :da 582 a 997 Azione : variabile
15	Qvk	CDC=Qvk (carico da vento) da nord cop atrio	D2 : 207 Azione : vento da nord/4
			D2 :da 208 a 209 Azione : vento da nord/2
			D2 : 210 Azione : vento da nord/4
			D2 : 211 Azione : vento da nord/2
			D2 :da 212 a 213 Azione : vento da nord
			D2 : 214 Azione : vento da nord/2
			D2 : 287 Azione : vento depressione cop atrio/2
			D2 :da 288 a 289 Azione : vento depressione cop atrio
			D2 :da 290 a 291 Azione : vento depressione cop atrio/2
			D2 :da 292 a 293 Azione : vento depressione cop atrio
			D2 : 294 Azione : vento depressione cop atrio/2
16	Qvk	CDC=Qvk (carico da vento) da sud cop atrio	D2 : 207 Azione : vento da sud/2
			D2 :da 208 a 209 Azione : vento da sud
			D2 : 210 Azione : vento da sud/2
			D2 : 211 Azione : vento da sud/4
			D2 :da 212 a 213 Azione : vento da sud/2
			D2 : 214 Azione : vento da sud/4
			D2 : 287 Azione : vento depressione cop atrio/2
			D2 :da 288 a 289 Azione : vento depressione cop atrio
			D2 :da 290 a 291 Azione : vento depressione cop atrio/2
			D2 :da 292 a 293 Azione : vento depressione cop atrio
			D2 : 294 Azione : vento depressione cop atrio/2
17	Qvk	CDC=Qvk (carico da vento) pressione cop tettoia	D2 : 231 Azione : vento pressione cop tettoia/2
			D2 :da 232 a 233 Azione : vento pressione cop tettoia
			D2 : 234 Azione : vento pressione cop tettoia/2
			D2 : 238 Azione : vento pressione cop tettoia/2
			D2 :da 239 a 240 Azione : vento

			pressione cop tettoia
			D2 : 241 Azione : vento pressione cop tettoia/2
			D2 : 245 Azione : vento pressione cop tettoia/2
			D2 :da 246 a 247 Azione : vento pressione cop tettoia
			D2 : 248 Azione : vento pressione cop tettoia/2
			D2 : 252 Azione : vento pressione cop tettoia/2
			D2 :da 253 a 254 Azione : vento pressione cop tettoia
			D2 : 255 Azione : vento pressione cop tettoia/2
			D2 :da 261 a 265 Azione : vento pressione cop tettoia/2
			D2 :da 270 a 272 Azione : vento pressione cop tettoia
			D2 :da 277 a 279 Azione : vento pressione cop tettoia
			D2 :da 284 a 286 Azione : vento pressione cop tettoia/2
18	Qvk	CDC=Qvk (carico da vento) depressione cop tettoia	D2 : 231 Azione : vento depressione cop tettoia/2
			D2 :da 232 a 233 Azione : vento depressione cop tettoia
			D2 : 234 Azione : vento depressione cop tettoia/2
			D2 : 238 Azione : vento depressione cop tettoia/2
			D2 :da 239 a 240 Azione : vento depressione cop tettoia
			D2 : 241 Azione : vento depressione cop tettoia/2
			D2 : 245 Azione : vento depressione cop tettoia/2
			D2 :da 246 a 247 Azione : vento depressione cop tettoia
			D2 : 248 Azione : vento depressione cop tettoia/2
			D2 : 252 Azione : vento depressione cop tettoia/2
			D2 :da 253 a 254 Azione : vento depressione cop tettoia
			D2 : 255 Azione : vento depressione cop tettoia/2
			D2 :da 261 a 265 Azione : vento depressione cop tettoia/2
			D2 :da 270 a 272 Azione : vento depressione cop tettoia
			D2 :da 277 a 279 Azione : vento depressione cop tettoia
			D2 :da 284 a 286 Azione : vento depressione cop tettoia/2
19	Edk	CDC=Ed (dinamico SLO) alfa=0.0 (ecc. +)	come precedente CDC sismico
20	Edk	CDC=Ed (dinamico SLO) alfa=0.0 (ecc. -)	come precedente CDC sismico
21	Edk	CDC=Ed (dinamico SLO) alfa=90.00 (ecc. +)	come precedente CDC sismico
22	Edk	CDC=Ed (dinamico SLO) 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

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

Dove:

NTC 2008 Tabella 2.5.I

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 2008 Tabella 2.6.I

		Coefficiente γf	EQU	A1	A2
Carichi permanenti	Favorevoli	$\gamma G1$	0,9	1,0	1,0
	Sfavorevoli		1,1	1,3	1,0
Carichi permanenti non strutturali (Non compiutamente definiti)	Favorevoli	$\gamma G2$	0,0	0,0	0,0
	Sfavorevoli		1,5	1,5	1,3
Carichi variabili	Favorevoli	γQi	0,0	0,0	0,0
	Sfavorevoli		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	Si
3	SLU	Comb. SLU A1 3	
4	SLU	Comb. SLU A1 4	Si
5	SLU	Comb. SLU A1 5	
6	SLU	Comb. SLU A1 6	Si
7	SLU	Comb. SLU A1 7	
8	SLU	Comb. SLU A1 8	Si
9	SLU	Comb. SLU A1 9	
10	SLU	Comb. SLU A1 10	Si
11	SLU	Comb. SLU A1 11	
12	SLU	Comb. SLU A1 12	Si
13	SLU	Comb. SLU A1 13	
14	SLU	Comb. SLU A1 14	Si
15	SLU	Comb. SLU A1 15	
16	SLU	Comb. SLU A1 16	Si
17	SLU	Comb. SLU A1 17	Si
18	SLU	Comb. SLU A1 18	
19	SLU	Comb. SLU A1 19	Si
20	SLU	Comb. SLU A1 20	Si
21	SLU	Comb. SLU A1 21	
22	SLU	Comb. SLU A1 22	Si
23	SLU	Comb. SLU A1 23	Si
24	SLU	Comb. SLU A1 24	Si
25	SLU	Comb. SLU A1 25	Si
26	SLU	Comb. SLU A1 26	Si
27	SLU	Comb. SLU A1 27	Si
28	SLU	Comb. SLU A1 28	Si
29	SLU	Comb. SLU A1 29	Si
30	SLU	Comb. SLU A1 30	Si
31	SLU	Comb. SLU A1 31	Si
32	SLU	Comb. SLU A1 32	Si
33	SLU	Comb. SLU A1 33	Si
34	SLU	Comb. SLU A1 34	Si
35	SLU	Comb. SLU A1 35	Si
36	SLU	Comb. SLU A1 36	Si
37	SLU	Comb. SLU A1 37	Si
38	SLU	Comb. SLU A1 38	Si
39	SLU	Comb. SLU A1 39	Si
40	SLU	Comb. SLU A1 40	Si
41	SLU	Comb. SLU A1 41	Si
42	SLU	Comb. SLU A1 42	Si
43	SLU	Comb. SLU A1 43	Si
44	SLU	Comb. SLU A1 44	Si
45	SLU	Comb. SLU A1 45	Si
46	SLU	Comb. SLU A1 46	Si
47	SLU	Comb. SLU A1 47	Si
48	SLU	Comb. SLU A1 48	Si
49	SLU	Comb. SLU A1 49	Si
50	SLU	Comb. SLU A1 50	Si
51	SLU	Comb. SLU A1 51	Si
52	SLU	Comb. SLU A1 52	Si
53	SLU	Comb. SLU A1 53	Si
54	SLU	Comb. SLU A1 54	Si
55	SLU	Comb. SLU A1 55	Si
56	SLU	Comb. SLU A1 56	Si
57	SLU	Comb. SLU A1 57	Si
58	SLU	Comb. SLU A1 58	Si
59	SLU	Comb. SLU A1 59	Si
60	SLU	Comb. SLU A1 60	Si
61	SLU	Comb. SLU A1 61	Si
62	SLU	Comb. SLU A1 62	Si
63	SLU	Comb. SLU A1 63	Si
64	SLU	Comb. SLU A1 64	Si
65	SLU	Comb. SLU A1 65	Si
66	SLU	Comb. SLU A1 66	Si
67	SLU	Comb. SLU A1 67	Si
68	SLU	Comb. SLU A1 68	Si
69	SLU	Comb. SLU A1 69	Si
70	SLU	Comb. SLU A1 70	Si
71	SLU	Comb. SLU A1 71	Si
72	SLU	Comb. SLU A1 72	Si
73	SLU	Comb. SLU A1 73	Si
74	SLU	Comb. SLU A1 74	Si
75	SLU	Comb. SLU A1 75	Si
76	SLU	Comb. SLU A1 76	Si
77	SLU	Comb. SLU A1 77	Si

78	SLU	Comb. SLU A1 78	Si
79	SLU	Comb. SLU A1 79	Si
80	SLU	Comb. SLU A1 80	Si
81	SLU	Comb. SLU A1 81	Si
82	SLU	Comb. SLU A1 82	Si
83	SLU	Comb. SLU A1 83	Si
84	SLU	Comb. SLU A1 84	Si
85	SLU	Comb. SLU A1 85	Si
86	SLU	Comb. SLU A1 86	Si
87	SLU	Comb. SLU A1 87	Si
88	SLU	Comb. SLU A1 88	Si
89	SLU	Comb. SLU A1 89	Si
90	SLU	Comb. SLU A1 90	Si
91	SLU	Comb. SLU A1 91	Si
92	SLU	Comb. SLU A1 92	Si
93	SLU	Comb. SLU A1 93	Si
94	SLU	Comb. SLU A1 94	Si
95	SLU	Comb. SLU A1 95	Si
96	SLU	Comb. SLU A1 96	Si
97	SLU	Comb. SLU A1 97	Si
98	SLU	Comb. SLU A1 98	Si
99	SLU	Comb. SLU A1 99	Si
100	SLU	Comb. SLU A1 100	Si
101	SLU	Comb. SLU A1 101	Si
102	SLU	Comb. SLU A1 102	Si
103	SLU	Comb. SLU A1 103	Si
104	SLU	Comb. SLU A1 104	Si
105	SLU	Comb. SLU A1 105	Si
106	SLU	Comb. SLU A1 106	Si
107	SLU	Comb. SLU A1 107	Si
108	SLU	Comb. SLU A1 108	Si
109	SLU	Comb. SLU A1 109	Si
110	SLU	Comb. SLU A1 110	Si
111	SLU	Comb. SLU A1 111	Si
112	SLU	Comb. SLU A1 112	Si
113	SLU	Comb. SLU A1 113	Si
114	SLU	Comb. SLU A1 114	Si
115	SLU	Comb. SLU A1 115	Si
116	SLU	Comb. SLU A1 116	Si
117	SLU	Comb. SLU A1 117	Si
118	SLU	Comb. SLU A1 118	Si
119	SLU	Comb. SLU A1 119	Si
120	SLU	Comb. SLU A1 120	Si
121	SLU	Comb. SLU A1 121	Si
122	SLU	Comb. SLU A1 122	Si
123	SLU	Comb. SLU A1 123	Si
124	SLU	Comb. SLU A1 124	Si
125	SLU	Comb. SLU A1 125	Si
126	SLU	Comb. SLU A1 126	Si
127	SLU	Comb. SLU A1 127	Si
128	SLU	Comb. SLU A1 128	Si
129	SLU	Comb. SLU A1 129	Si
130	SLU	Comb. SLU A1 130	Si
131	SLU	Comb. SLU A1 131	Si
132	SLU	Comb. SLU A1 132	Si
133	SLU	Comb. SLU A1 133	Si
134	SLU	Comb. SLU A1 134	Si
135	SLU	Comb. SLU A1 135	Si
136	SLU	Comb. SLU A1 136	Si
137	SLU	Comb. SLU A1 137	Si
138	SLU	Comb. SLU A1 138	Si
139	SLU	Comb. SLU A1 (SLV sism.) 139	Si
140	SLU	Comb. SLU A1 (SLV sism.) 140	Si
141	SLU	Comb. SLU A1 (SLV sism.) 141	Si
142	SLU	Comb. SLU A1 (SLV sism.) 142	Si
143	SLU	Comb. SLU A1 (SLV sism.) 143	Si
144	SLU	Comb. SLU A1 (SLV sism.) 144	Si
145	SLU	Comb. SLU A1 (SLV sism.) 145	Si
146	SLU	Comb. SLU A1 (SLV sism.) 146	Si
147	SLU	Comb. SLU A1 (SLV sism.) 147	Si
148	SLU	Comb. SLU A1 (SLV sism.) 148	Si
149	SLU	Comb. SLU A1 (SLV sism.) 149	Si
150	SLU	Comb. SLU A1 (SLV sism.) 150	Si
151	SLU	Comb. SLU A1 (SLV sism.) 151	Si
152	SLU	Comb. SLU A1 (SLV sism.) 152	Si
153	SLU	Comb. SLU A1 (SLV sism.) 153	Si
154	SLU	Comb. SLU A1 (SLV sism.) 154	Si
155	SLU	Comb. SLU A1 (SLV sism.) 155	Si

156	SLU	Comb. SLU A1 (SLV sism.) 156	Si
157	SLU	Comb. SLU A1 (SLV sism.) 157	Si
158	SLU	Comb. SLU A1 (SLV sism.) 158	Si
159	SLU	Comb. SLU A1 (SLV sism.) 159	Si
160	SLU	Comb. SLU A1 (SLV sism.) 160	Si
161	SLU	Comb. SLU A1 (SLV sism.) 161	Si
162	SLU	Comb. SLU A1 (SLV sism.) 162	Si
163	SLU	Comb. SLU A1 (SLV sism.) 163	Si
164	SLU	Comb. SLU A1 (SLV sism.) 164	Si
165	SLU	Comb. SLU A1 (SLV sism.) 165	Si
166	SLU	Comb. SLU A1 (SLV sism.) 166	Si
167	SLU	Comb. SLU A1 (SLV sism.) 167	Si
168	SLU	Comb. SLU A1 (SLV sism.) 168	Si
169	SLU	Comb. SLU A1 (SLV sism.) 169	Si
170	SLU	Comb. SLU A1 (SLV sism.) 170	Si
171	SLD(sis)	Comb. SLE (SLD Danno sism.) 171	Si
172	SLD(sis)	Comb. SLE (SLD Danno sism.) 172	Si
173	SLD(sis)	Comb. SLE (SLD Danno sism.) 173	Si
174	SLD(sis)	Comb. SLE (SLD Danno sism.) 174	Si
175	SLD(sis)	Comb. SLE (SLD Danno sism.) 175	Si
176	SLD(sis)	Comb. SLE (SLD Danno sism.) 176	Si
177	SLD(sis)	Comb. SLE (SLD Danno sism.) 177	Si
178	SLD(sis)	Comb. SLE (SLD Danno sism.) 178	Si
179	SLD(sis)	Comb. SLE (SLD Danno sism.) 179	Si
180	SLD(sis)	Comb. SLE (SLD Danno sism.) 180	Si
181	SLD(sis)	Comb. SLE (SLD Danno sism.) 181	Si
182	SLD(sis)	Comb. SLE (SLD Danno sism.) 182	Si
183	SLD(sis)	Comb. SLE (SLD Danno sism.) 183	Si
184	SLD(sis)	Comb. SLE (SLD Danno sism.) 184	Si
185	SLD(sis)	Comb. SLE (SLD Danno sism.) 185	Si
186	SLD(sis)	Comb. SLE (SLD Danno sism.) 186	Si
187	SLD(sis)	Comb. SLE (SLD Danno sism.) 187	Si
188	SLD(sis)	Comb. SLE (SLD Danno sism.) 188	Si
189	SLD(sis)	Comb. SLE (SLD Danno sism.) 189	Si
190	SLD(sis)	Comb. SLE (SLD Danno sism.) 190	Si
191	SLD(sis)	Comb. SLE (SLD Danno sism.) 191	Si
192	SLD(sis)	Comb. SLE (SLD Danno sism.) 192	Si
193	SLD(sis)	Comb. SLE (SLD Danno sism.) 193	Si
194	SLD(sis)	Comb. SLE (SLD Danno sism.) 194	Si
195	SLD(sis)	Comb. SLE (SLD Danno sism.) 195	Si
196	SLD(sis)	Comb. SLE (SLD Danno sism.) 196	Si
197	SLD(sis)	Comb. SLE (SLD Danno sism.) 197	Si
198	SLD(sis)	Comb. SLE (SLD Danno sism.) 198	Si
199	SLD(sis)	Comb. SLE (SLD Danno sism.) 199	Si
200	SLD(sis)	Comb. SLE (SLD Danno sism.) 200	Si
201	SLD(sis)	Comb. SLE (SLD Danno sism.) 201	Si
202	SLD(sis)	Comb. SLE (SLD Danno sism.) 202	Si
203	SLD(sis)	Comb. SLE (SLO Operativo sism.) 203	Si
204	SLD(sis)	Comb. SLE (SLO Operativo sism.) 204	Si
205	SLD(sis)	Comb. SLE (SLO Operativo sism.) 205	Si
206	SLD(sis)	Comb. SLE (SLO Operativo sism.) 206	Si
207	SLD(sis)	Comb. SLE (SLO Operativo sism.) 207	Si
208	SLD(sis)	Comb. SLE (SLO Operativo sism.) 208	Si
209	SLD(sis)	Comb. SLE (SLO Operativo sism.) 209	Si
210	SLD(sis)	Comb. SLE (SLO Operativo sism.) 210	Si
211	SLD(sis)	Comb. SLE (SLO Operativo sism.) 211	Si
212	SLD(sis)	Comb. SLE (SLO Operativo sism.) 212	Si
213	SLD(sis)	Comb. SLE (SLO Operativo sism.) 213	Si
214	SLD(sis)	Comb. SLE (SLO Operativo sism.) 214	Si
215	SLD(sis)	Comb. SLE (SLO Operativo sism.) 215	Si
216	SLD(sis)	Comb. SLE (SLO Operativo sism.) 216	Si
217	SLD(sis)	Comb. SLE (SLO Operativo sism.) 217	Si
218	SLD(sis)	Comb. SLE (SLO Operativo sism.)	Si

		218	
219	SLD(sis)	Comb. SLE (SLO Operativo sism.) 219	Si
220	SLD(sis)	Comb. SLE (SLO Operativo sism.) 220	Si
221	SLD(sis)	Comb. SLE (SLO Operativo sism.) 221	Si
222	SLD(sis)	Comb. SLE (SLO Operativo sism.) 222	Si
223	SLD(sis)	Comb. SLE (SLO Operativo sism.) 223	Si
224	SLD(sis)	Comb. SLE (SLO Operativo sism.) 224	Si
225	SLD(sis)	Comb. SLE (SLO Operativo sism.) 225	Si
226	SLD(sis)	Comb. SLE (SLO Operativo sism.) 226	Si
227	SLD(sis)	Comb. SLE (SLO Operativo sism.) 227	Si
228	SLD(sis)	Comb. SLE (SLO Operativo sism.) 228	Si
229	SLD(sis)	Comb. SLE (SLO Operativo sism.) 229	Si
230	SLD(sis)	Comb. SLE (SLO Operativo sism.) 230	Si
231	SLD(sis)	Comb. SLE (SLO Operativo sism.) 231	Si
232	SLD(sis)	Comb. SLE (SLO Operativo sism.) 232	Si
233	SLD(sis)	Comb. SLE (SLO Operativo sism.) 233	Si
234	SLD(sis)	Comb. SLE (SLO Operativo sism.) 234	Si
235	SLE(r)	Comb. SLE(rara) 235	
236	SLE(r)	Comb. SLE(rara) 236	Si
237	SLE(r)	Comb. SLE(rara) 237	
238	SLE(r)	Comb. SLE(rara) 238	Si
239	SLE(r)	Comb. SLE(rara) 239	
240	SLE(r)	Comb. SLE(rara) 240	Si
241	SLE(r)	Comb. SLE(rara) 241	
242	SLE(r)	Comb. SLE(rara) 242	Si
243	SLE(r)	Comb. SLE(rara) 243	Si
244	SLE(r)	Comb. SLE(rara) 244	
245	SLE(r)	Comb. SLE(rara) 245	Si
246	SLE(r)	Comb. SLE(rara) 246	Si
247	SLE(r)	Comb. SLE(rara) 247	Si
248	SLE(r)	Comb. SLE(rara) 248	Si
249	SLE(r)	Comb. SLE(rara) 249	Si
250	SLE(r)	Comb. SLE(rara) 250	Si
251	SLE(r)	Comb. SLE(rara) 251	Si
252	SLE(r)	Comb. SLE(rara) 252	Si
253	SLE(r)	Comb. SLE(rara) 253	Si
254	SLE(r)	Comb. SLE(rara) 254	Si
255	SLE(r)	Comb. SLE(rara) 255	Si
256	SLE(r)	Comb. SLE(rara) 256	Si
257	SLE(r)	Comb. SLE(rara) 257	Si
258	SLE(r)	Comb. SLE(rara) 258	Si
259	SLE(r)	Comb. SLE(rara) 259	Si
260	SLE(r)	Comb. SLE(rara) 260	Si
261	SLE(r)	Comb. SLE(rara) 261	Si
262	SLE(r)	Comb. SLE(rara) 262	Si
263	SLE(r)	Comb. SLE(rara) 263	Si
264	SLE(r)	Comb. SLE(rara) 264	Si
265	SLE(r)	Comb. SLE(rara) 265	Si
266	SLE(r)	Comb. SLE(rara) 266	Si
267	SLE(r)	Comb. SLE(rara) 267	Si
268	SLE(r)	Comb. SLE(rara) 268	Si
269	SLE(r)	Comb. SLE(rara) 269	Si
270	SLE(r)	Comb. SLE(rara) 270	Si
271	SLE(r)	Comb. SLE(rara) 271	Si
272	SLE(r)	Comb. SLE(rara) 272	Si
273	SLE(r)	Comb. SLE(rara) 273	Si
274	SLE(r)	Comb. SLE(rara) 274	Si
275	SLE(r)	Comb. SLE(rara) 275	Si
276	SLE(r)	Comb. SLE(rara) 276	Si
277	SLE(r)	Comb. SLE(rara) 277	Si
278	SLE(r)	Comb. SLE(rara) 278	Si
279	SLE(r)	Comb. SLE(rara) 279	Si

280	SLE(r)	Comb. SLE(rara) 280	Si
281	SLE(r)	Comb. SLE(rara) 281	Si
282	SLE(r)	Comb. SLE(rara) 282	Si
283	SLE(r)	Comb. SLE(rara) 283	Si
284	SLE(r)	Comb. SLE(rara) 284	Si
285	SLE(r)	Comb. SLE(rara) 285	Si
286	SLE(r)	Comb. SLE(rara) 286	Si
287	SLE(r)	Comb. SLE(rara) 287	Si
288	SLE(r)	Comb. SLE(rara) 288	Si
289	SLE(r)	Comb. SLE(rara) 289	Si
290	SLE(r)	Comb. SLE(rara) 290	Si
291	SLE(r)	Comb. SLE(rara) 291	Si
292	SLE(r)	Comb. SLE(rara) 292	Si
293	SLE(r)	Comb. SLE(rara) 293	Si
294	SLE(r)	Comb. SLE(rara) 294	Si
295	SLE(r)	Comb. SLE(rara) 295	Si
296	SLE(r)	Comb. SLE(rara) 296	Si
297	SLE(r)	Comb. SLE(rara) 297	Si
298	SLE(r)	Comb. SLE(rara) 298	Si
299	SLE(r)	Comb. SLE(rara) 299	Si
300	SLE(r)	Comb. SLE(rara) 300	Si
301	SLE(r)	Comb. SLE(rara) 301	Si
302	SLE(r)	Comb. SLE(rara) 302	Si
303	SLE(r)	Comb. SLE(rara) 303	Si
304	SLE(f)	Comb. SLE(freq.) 304	
305	SLE(f)	Comb. SLE(freq.) 305	
306	SLE(f)	Comb. SLE(freq.) 306	
307	SLE(f)	Comb. SLE(freq.) 307	Si
308	SLE(f)	Comb. SLE(freq.) 308	Si
309	SLE(f)	Comb. SLE(freq.) 309	Si
310	SLE(f)	Comb. SLE(freq.) 310	Si
311	SLE(p)	Comb. SLE(perm.) 311	

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	1.50	1.05
	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.90	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	1.50	1.05
	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.90	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
5	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
6	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.90	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
7	1.00	1.00	0.0	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
8	1.00	1.00	0.0	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.90	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
9	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.50
	0.90	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
11	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.50
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
12	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.50
	0.90	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
13	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
14	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
	0.90	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
15	1.00	1.00	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
16	1.00	1.00	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
	0.90	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
17	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
18	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
19	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
20	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
21	1.00	1.00	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						

22	1.00	1.00	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
23	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.90	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
24	1.00	1.00	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.90	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
25	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.0	0.90	0.0	0.0	0.0	0.0	0.0	0.0						
26	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.0	0.90	0.0	0.0	0.0	0.0	0.0	0.0						
27	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	0.90	0.0	0.0	0.0	0.0	0.0	0.0						
28	1.00	1.00	0.0	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	0.90	0.0	0.0	0.0	0.0	0.0	0.0						
29	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.50
	0.0	0.90	0.0	0.0	0.0	0.0	0.0	0.0						
30	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.50
	0.0	0.90	0.0	0.0	0.0	0.0	0.0	0.0						
31	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
	0.0	0.90	0.0	0.0	0.0	0.0	0.0	0.0						
32	1.00	1.00	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
	0.0	0.90	0.0	0.0	0.0	0.0	0.0	0.0						
33	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.0	0.90	0.0	0.0	0.0	0.0	0.0	0.0						
34	1.00	1.00	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	0.90	0.0	0.0	0.0	0.0	0.0	0.0						
35	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.0	1.50	0.0	0.0	0.0	0.0	0.0	0.0						
36	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.0	1.50	0.0	0.0	0.0	0.0	0.0	0.0						
37	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	1.50	0.0	0.0	0.0	0.0	0.0	0.0						
38	1.00	1.00	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	1.50	0.0	0.0	0.0	0.0	0.0	0.0						
39	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.0	0.0	0.90	0.0	0.0	0.0	0.0	0.0						
40	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.0	0.0	0.90	0.0	0.0	0.0	0.0	0.0						
41	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	0.0	0.90	0.0	0.0	0.0	0.0	0.0						
42	1.00	1.00	0.0	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	0.0	0.90	0.0	0.0	0.0	0.0	0.0						
43	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.50
	0.0	0.0	0.90	0.0	0.0	0.0	0.0	0.0						
44	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.50
	0.0	0.0	0.90	0.0	0.0	0.0	0.0	0.0						
45	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
	0.0	0.0	0.90	0.0	0.0	0.0	0.0	0.0						
46	1.00	1.00	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
	0.0	0.0	0.90	0.0	0.0	0.0	0.0	0.0						
47	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.0	0.0	0.90	0.0	0.0	0.0	0.0	0.0						
48	1.00	1.00	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	0.0	0.90	0.0	0.0	0.0	0.0	0.0						
49	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.0	0.0	1.50	0.0	0.0	0.0	0.0	0.0						
50	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.0	0.0	1.50	0.0	0.0	0.0	0.0	0.0						
51	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	0.0	1.50	0.0	0.0	0.0	0.0	0.0						
52	1.00	1.00	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	0.0	1.50	0.0	0.0	0.0	0.0	0.0						
53	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.90	0.0	0.90	0.0	0.0	0.0	0.0	0.0						
54	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.90	0.0	0.90	0.0	0.0	0.0	0.0	0.0						
55	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.90	0.0	0.90	0.0	0.0	0.0	0.0	0.0						
56	1.00	1.00	0.0	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.90	0.0	0.90	0.0	0.0	0.0	0.0	0.0						
57	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.50
	0.90	0.0	0.90	0.0	0.0	0.0	0.0	0.0						
58	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.50
	0.90	0.0	0.90	0.0	0.0	0.0	0.0	0.0						
59	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
	0.90	0.0	0.90	0.0	0.0	0.0	0.0	0.0						
60	1.00	1.00	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
	0.90	0.0	0.90	0.0	0.0	0.0	0.0	0.0						

61	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	1.50	0.0	0.90	0.0	0.0	0.0	0.0	0.0						
62	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	1.50	0.0	0.90	0.0	0.0	0.0	0.0	0.0						
63	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	1.50	0.0	0.90	0.0	0.0	0.0	0.0	0.0						
64	1.00	1.00	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	1.50	0.0	0.90	0.0	0.0	0.0	0.0	0.0						
65	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.90	0.0	0.90	0.0	0.0	0.0	0.0	0.0						
66	1.00	1.00	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.90	0.0	0.90	0.0	0.0	0.0	0.0	0.0						
67	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.90	0.0	1.50	0.0	0.0	0.0	0.0	0.0						
68	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.90	0.0	1.50	0.0	0.0	0.0	0.0	0.0						
69	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.90	0.0	1.50	0.0	0.0	0.0	0.0	0.0						
70	1.00	1.00	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.90	0.0	1.50	0.0	0.0	0.0	0.0	0.0						
71	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.0	0.90	0.90	0.0	0.0	0.0	0.0	0.0						
72	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.0	0.90	0.90	0.0	0.0	0.0	0.0	0.0						
73	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	0.90	0.90	0.0	0.0	0.0	0.0	0.0						
74	1.00	1.00	0.0	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	0.90	0.90	0.0	0.0	0.0	0.0	0.0						
75	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.50
	0.0	0.90	0.90	0.0	0.0	0.0	0.0	0.0						
76	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.50
	0.0	0.90	0.90	0.0	0.0	0.0	0.0	0.0						
77	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
	0.0	0.90	0.90	0.0	0.0	0.0	0.0	0.0						
78	1.00	1.00	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
	0.0	0.90	0.90	0.0	0.0	0.0	0.0	0.0						
79	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.0	0.90	0.90	0.0	0.0	0.0	0.0	0.0						
80	1.00	1.00	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	0.90	0.90	0.0	0.0	0.0	0.0	0.0						
81	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.0	1.50	0.90	0.0	0.0	0.0	0.0	0.0						
82	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.0	1.50	0.90	0.0	0.0	0.0	0.0	0.0						
83	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	1.50	0.90	0.0	0.0	0.0	0.0	0.0						
84	1.00	1.00	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	1.50	0.90	0.0	0.0	0.0	0.0	0.0						
85	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.0	0.90	1.50	0.0	0.0	0.0	0.0	0.0						
86	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.0	0.90	1.50	0.0	0.0	0.0	0.0	0.0						
87	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	0.90	1.50	0.0	0.0	0.0	0.0	0.0						
88	1.00	1.00	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	0.90	1.50	0.0	0.0	0.0	0.0	0.0						
89	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.0	0.0	0.0	0.90	0.0	0.0	0.0	0.0						
90	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.0	0.0	0.0	0.90	0.0	0.0	0.0	0.0						
91	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	0.0	0.0	0.90	0.0	0.0	0.0	0.0						
92	1.00	1.00	0.0	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	0.0	0.0	0.90	0.0	0.0	0.0	0.0						
93	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.50
	0.0	0.0	0.0	0.90	0.0	0.0	0.0	0.0						
94	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.50
	0.0	0.0	0.0	0.90	0.0	0.0	0.0	0.0						
95	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
	0.0	0.0	0.0	0.90	0.0	0.0	0.0	0.0						
96	1.00	1.00	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
	0.0	0.0	0.0	0.90	0.0	0.0	0.0	0.0						
97	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.0	0.0	0.0	0.90	0.0	0.0	0.0	0.0						
98	1.00	1.00	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	0.0	0.0	0.90	0.0	0.0	0.0	0.0						
99	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.0	0.0	0.0	1.50	0.0	0.0	0.0	0.0						

100	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.0	0.0	0.0	1.50	0.0	0.0	0.0	0.0						
101	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	0.0	0.0	1.50	0.0	0.0	0.0	0.0						
102	1.00	1.00	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	0.0	0.0	1.50	0.0	0.0	0.0	0.0						
103	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.90	0.0	0.0	0.90	0.0	0.0	0.0	0.0						
104	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.90	0.0	0.0	0.90	0.0	0.0	0.0	0.0						
105	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.90	0.0	0.0	0.90	0.0	0.0	0.0	0.0						
106	1.00	1.00	0.0	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.90	0.0	0.0	0.90	0.0	0.0	0.0	0.0						
107	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.50
	0.90	0.0	0.0	0.90	0.0	0.0	0.0	0.0						
108	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.50
	0.90	0.0	0.0	0.90	0.0	0.0	0.0	0.0						
109	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
	0.90	0.0	0.0	0.90	0.0	0.0	0.0	0.0						
110	1.00	1.00	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
	0.90	0.0	0.0	0.90	0.0	0.0	0.0	0.0						
111	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	1.50	0.0	0.0	0.90	0.0	0.0	0.0	0.0						
112	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	1.50	0.0	0.0	0.90	0.0	0.0	0.0	0.0						
113	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	1.50	0.0	0.0	0.90	0.0	0.0	0.0	0.0						
114	1.00	1.00	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	1.50	0.0	0.0	0.90	0.0	0.0	0.0	0.0						
115	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.90	0.0	0.0	0.90	0.0	0.0	0.0	0.0						
116	1.00	1.00	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.90	0.0	0.0	0.90	0.0	0.0	0.0	0.0						
117	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.90	0.0	0.0	1.50	0.0	0.0	0.0	0.0						
118	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.90	0.0	0.0	1.50	0.0	0.0	0.0	0.0						
119	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.90	0.0	0.0	1.50	0.0	0.0	0.0	0.0						
120	1.00	1.00	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.90	0.0	0.0	1.50	0.0	0.0	0.0	0.0						
121	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.0	0.90	0.0	0.90	0.0	0.0	0.0	0.0						
122	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.0	0.90	0.0	0.90	0.0	0.0	0.0	0.0						
123	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	0.90	0.0	0.90	0.0	0.0	0.0	0.0						
124	1.00	1.00	0.0	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	0.90	0.0	0.90	0.0	0.0	0.0	0.0						
125	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.50
	0.0	0.90	0.0	0.90	0.0	0.0	0.0	0.0						
126	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.50
	0.0	0.90	0.0	0.90	0.0	0.0	0.0	0.0						
127	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
	0.0	0.90	0.0	0.90	0.0	0.0	0.0	0.0						
128	1.00	1.00	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50
	0.0	0.90	0.0	0.90	0.0	0.0	0.0	0.0						
129	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.0	0.90	0.0	0.90	0.0	0.0	0.0	0.0						
130	1.00	1.00	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	0.90	0.0	0.90	0.0	0.0	0.0	0.0						
131	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.0	1.50	0.0	0.90	0.0	0.0	0.0	0.0						
132	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.0	1.50	0.0	0.90	0.0	0.0	0.0	0.0						
133	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	1.50	0.0	0.90	0.0	0.0	0.0	0.0						
134	1.00	1.00	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	1.50	0.0	0.90	0.0	0.0	0.0	0.0						
135	1.30	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.0	0.90	0.0	1.50	0.0	0.0	0.0	0.0						
136	1.30	1.30	1.50	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.50	1.05
	0.0	0.90	0.0	1.50	0.0	0.0	0.0	0.0						
137	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	0.90	0.0	1.50	0.0	0.0	0.0	0.0						
138	1.00	1.00	0.0	0.75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.05
	0.0	0.90	0.0	1.50	0.0	0.0	0.0	0.0						

178	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.0	0.30	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
179	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	-1.00	-0.30	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
180	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	-1.00	0.30	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
181	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.00	-0.30	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
182	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.30	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
183	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	-0.30	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
184	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	0.30	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
185	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.0	-0.30	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
186	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.30	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
187	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	-1.00	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
188	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	1.00	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
189	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.30	0.0	-1.00	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
190	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.30	0.0	1.00	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
191	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	-0.30	-1.00	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
192	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	-0.30	1.00	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
193	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.30	-1.00	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
194	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.30	1.00	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
195	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0	-1.00	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
196	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	0.0	1.00	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
197	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0	-1.00	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
198	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0	1.00	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
199	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	-1.00	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
200	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	1.00	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
201	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.0	-1.00	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
202	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.0	1.00	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
203	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	-1.00	0.0	-0.30	0.0						
204	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	-1.00	0.0	0.30	0.0						
205	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	1.00	0.0	-0.30	0.0						
206	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	1.00	0.0	0.30	0.0						
207	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	-1.00	0.0	0.0	-0.30						
208	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	-1.00	0.0	0.0	0.30						
209	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	1.00	0.0	0.0	-0.30						
210	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	1.00	0.0	0.0	0.30						
211	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	-1.00	-0.30	0.0						
212	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	-1.00	0.30	0.0						
213	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	1.00	-0.30	0.0						
214	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	1.00	0.30	0.0						
215	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	-0.30						
216	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	0.30						

217	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	1.00	0.0	-0.30						
218	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.30						
219	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	-0.30	0.0	-1.00	0.0						
220	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	-0.30	0.0	1.00	0.0						
221	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.30	0.0	-1.00	0.0						
222	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.30	0.0	1.00	0.0						
223	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	-0.30	-1.00	0.0						
224	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	-0.30	1.00	0.0						
225	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.30	-1.00	0.0						
226	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.30	1.00	0.0						
227	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	-0.30	0.0	0.0	-1.00						
228	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	-0.30	0.0	0.0	1.00						
229	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.30	0.0	0.0	-1.00						
230	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.30	0.0	0.0	1.00						
231	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	-1.00						
232	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	1.00						
233	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.30	0.0	-1.00						
234	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.30	0.0	1.00						
235	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.70
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
236	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.70
	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
237	1.00	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.70
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
238	1.00	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.70
	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
239	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	1.00
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
240	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	1.00
	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
241	1.00	1.00	1.00	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	1.00
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
242	1.00	1.00	1.00	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	1.00
	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
243	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.70
	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
244	1.00	1.00	1.00	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.70
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
245	1.00	1.00	1.00	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.70
	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
246	1.00	1.00	1.00	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.70
	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
247	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.70
	0.0	0.60	0.0	0.0	0.0	0.0	0.0	0.0						
248	1.00	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.70
	0.0	0.60	0.0	0.0	0.0	0.0	0.0	0.0						
249	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	1.00
	0.0	0.60	0.0	0.0	0.0	0.0	0.0	0.0						
250	1.00	1.00	1.00	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	1.00
	0.0	0.60	0.0	0.0	0.0	0.0	0.0	0.0						
251	1.00	1.00	1.00	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.70
	0.0	0.60	0.0	0.0	0.0	0.0	0.0	0.0						
252	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.70
	0.0	1.00	0.0	0.0	0.0	0.0	0.0	0.0						
253	1.00	1.00	1.00	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.70
	0.0	1.00	0.0	0.0	0.0	0.0	0.0	0.0						
254	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.70
	0.0	0.0	0.60	0.0	0.0	0.0	0.0	0.0						
255	1.00	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.70
	0.0	0.0	0.60	0.0	0.0	0.0	0.0	0.0						

[illegible]

295	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.70
	0.0	0.60	0.0	0.60	0.0	0.0	0.0	0.0						
296	1.00	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.70
	0.0	0.60	0.0	0.60	0.0	0.0	0.0	0.0						
297	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	1.00
	0.0	0.60	0.0	0.60	0.0	0.0	0.0	0.0						
298	1.00	1.00	1.00	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	1.00
	0.0	0.60	0.0	0.60	0.0	0.0	0.0	0.0						
299	1.00	1.00	1.00	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.70
	0.0	0.60	0.0	0.60	0.0	0.0	0.0	0.0						
300	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.70
	0.0	1.00	0.0	0.60	0.0	0.0	0.0	0.0						
301	1.00	1.00	1.00	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.70
	0.0	1.00	0.0	0.60	0.0	0.0	0.0	0.0						
302	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.70
	0.0	0.60	0.0	1.00	0.0	0.0	0.0	0.0						
303	1.00	1.00	1.00	0.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.70
	0.0	0.60	0.0	1.00	0.0	0.0	0.0	0.0						
304	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
305	1.00	1.00	1.00	0.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
306	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.70
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
307	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
308	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.20	0.0	0.0	0.0	0.0	0.0	0.0						
309	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.20	0.0	0.0	0.0	0.0	0.0						
310	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.0						
311	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	0.60
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0						

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 $S = S_s \cdot S_t$ (3.2.5)

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.

Id nodo	Longitudine	Latitudine	Distanza
			Km
Loc.	11.389	43.958	
19394	11.339	43.915	6.219
19395	11.408	43.916	4.865
19173	11.406	43.966	1.606
19172	11.337	43.965	4.256

SL	P _{ver}	T _r	ag	Fo	T [*] c
		Anni	g		sec
SLO	81.0	45.0	0.075	2.450	0.260
SLD	63.0	75.0	0.094	2.430	0.270
SLV	10.0	712.0	0.223	2.390	0.290
SLC	5.0	1462.0	0.281	2.410	0.300

SL	ag	S	Fo	Fv	Tb	Tc	Td
	g				sec	sec	sec
SLO	0.075	1.500	2.450	0.904	0.142	0.426	1.899
SLD	0.094	1.500	2.430	1.007	0.146	0.437	1.977
SLV	0.223	1.380	2.390	1.525	0.153	0.458	2.493
SLC	0.281	1.293	2.410	1.725	0.156	0.469	2.725

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 di struttura q	Fattore dipendente dalla tipologia strutturale
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

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/Ls (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/Ls (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 ϵ_{dT} (dr) degli elementi strutturali verticali. Per semplicità di consultazione il livello è espresso anche in unità $1000 \cdot \epsilon_{dT}/h$ 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 ϵ_{dT} , ϵ_{dP} e ϵ_{dD} degli elementi strutturali verticali. Per semplicità di consultazione il livello è espresso in unità $1000 \cdot \epsilon_{dT}/h$ 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 l'allegato 10.A dell'Ordinanza 3274 e s.m.i. In particolare la tabella, per ogni combinazione SLU (SLC per il DM 14-01-2008) sismica riporta il codice di verifica e i valori utilizzati per la verifica: spostamento dE , area ridotta e dimensione $A2$, azione verticale, deformazioni di taglio dell'elastomero e tensioni nell'acciaio.

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
dE	Spostamento relativo tra le due facce (amplificato del 20% per Ordinanza 3274 e s.m.i) combinato con la regola del 30%
Ang fi	Angolo utilizzato per il calcolo dell'area ridotta A_r (per dispositivi circolari)
V	Azione verticale agente
Ar	Area ridotta efficace
Dim A2	Dimensione utile per il calcolo della deformazione per rotazione
Sig s	Tensione nell'inserto in acciaio
Gam c(a,s,t)	Deformazioni di taglio dell'elastomero
Vcr	Carico critico per instabilità

Affinché la verifica sia positiva deve essere:

- 1) $V > 0$
- 2) $\text{Sig s} < f_{yk}$
- 3) $\text{Gam t} < 5$
- 4) $\text{Gam s} < \text{Gam}^*$ (caratteristica dell'elastomero)
- 5) $\text{Gam s} < 2$
- 6) $V < 0.5 V_{cr}$

Con riferimento al **Documento di Affidabilità** "Test di validazione del software di calcolo PRO_SAP e dei moduli aggiuntivi PRO_SAP Modulo Geotecnico, PRO_CAD nodi acciaio e PRO_MST" - versione Maggio 2011, disponibile per il download sul sito www.2si.it, si segnalano i seguenti esempi applicativi:

Test N°	Titolo
23	DM 2008: SPETTRO
29	SISMICA 1000/H, SOMMA V, EFFETTO P- δ
30	ANALISI DI UN EDIFICIO CON ISOLATORI SISMICI
70	MASSE SISMICHE

75	PROGETTO DI ISOLATORI ELASTOMERICI
76	VERIFICA DI ISOLATORI ELASTOMERICI
77	VERIFICA DI ISOLATORI FRICTION PENDULUM

CDC	Tipo	Sigla Id	Note
5	Edk	CDC=Ed (dinamico SLU) alfa=0.0 (ecc. +)	
			categoria suolo: C
			fattore di sito S = 1.380
			ordinata spettro (tratto Tb-Tc) = 0.736 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.353 sec.
			fattore di struttura q: 1.000
			fattore per spost. μ d: 1.000
			classe di duttilità CD: B
			numero di modi considerati: 15
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	rapp. r/Ls	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
405.14	1.123e+04	571.50	-358.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0
389.00	8008.61	362.32	-1449.71	0.0	-95.25	570.82	-716.37	0.671	0.485	1.704
380.00	1.183e+04	571.50	-344.70	0.0	-35.68	571.50	-356.75	1.428	0.0	0.022
50.00	760.39	534.19	-701.89	0.0	-73.78	508.25	-694.07	1.214	0.040	0.012
34.00	77.98	190.50	-1856.50	0.0	0.0	190.50	-1856.50	1.732	0.0	0.0
Risultato	3.191e+04									

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	daN		daN		daN			
1	2.370	0.422	0.736	1407.64	4.4	3.87e-04	1.21e-06	7.98e-06	0.0	0.0	0.0
2	2.831	0.353	0.736	2.600e+04	81.5	0.01	3.82e-05	3.75e-03	1.17e-05	0.0	0.0
3	2.833	0.353	0.736	765.35	2.4	0.02	7.22e-05	1.60e-05	0.0	0.0	0.0
4	2.855	0.350	0.736	859.92	2.7	2.34e-03	7.33e-06	7.71e-06	0.0	0.0	0.0
5	3.272	0.306	0.736	1094.93	3.4	1.79	5.60e-03	1.72e-03	5.40e-06	0.0	0.0
6	4.296	0.233	0.736	812.34	2.5	960.66	3.0	493.71	1.5	0.0	0.0
7	4.339	0.230	0.736	59.00	0.2	7449.03	23.3	8056.13	25.2	0.0	0.0
8	4.762	0.210	0.736	2.83	8.87e-03	2.163e+04	67.8	3045.14	9.5	0.0	0.0
9	5.101	0.196	0.736	48.85	0.2	30.19	9.46e-02	5.87	1.84e-02	0.0	0.0
10	6.160	0.162	0.736	5.44	1.71e-02	355.57	1.1	35.49	0.1	0.0	0.0
11	6.619	0.151	0.731	0.24	7.56e-04	17.30	5.42e-02	0.06	1.78e-04	0.0	0.0
12	8.713	0.115	0.629	1.33	4.17e-03	614.95	1.9	23.94	7.50e-02	0.0	0.0
13	11.006	0.091	0.562	22.08	6.92e-02	0.81	2.55e-03	5.17e-03	1.62e-05	0.0	0.0
14	12.433	0.080	0.533	8.45e-06	0.0	1.86e-04	0.0	1084.57	3.4	0.0	0.0
15	12.502	0.080	0.532	1.72e-05	0.0	2.39e-03	7.48e-06	327.70	1.0	0.0	0.0
Risultato				3.108e+04		3.106e+04		1.307e+04			
In percentuale				97.39		97.34		40.97			

CDC	Tipo	Sigla Id	Note
6	Edk	CDC=Ed (dinamico SLU) alfa=0.0 (ecc. -)	
			categoria suolo: C
			fattore di sito S = 1.380
			ordinata spettro (tratto Tb-Tc) = 0.736 g
			angolo di ingresso:0.0

			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.357 sec.
			fattore di struttura q: 1.000
			fattore per spost. mu d: 1.000
			classe di duttilità CD: B
			numero di modi considerati: 15
			combinaz. modale: CQC

Modo	Frequenz a	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
1	Hz 2.799	sec 0.357	g 0.736	daN 2.687e+04	84.2	daN 0.06	1.95e-04	daN 1.70e-03	5.33e-06	0.0	0.0
2	2.918	0.343	0.736	976.67	3.1	6.25e-04	1.96e-06	1.03e-05	0.0	0.0	0.0
3	3.150	0.317	0.736	1024.26	3.2	0.06	1.79e-04	1.59e-04	0.0	0.0	0.0
4	3.292	0.304	0.736	1015.70	3.2	1.61	5.03e-03	1.45e-03	4.55e-06	0.0	0.0
5	3.877	0.258	0.736	668.57	2.1	29.83	9.35e-02	0.71	2.22e-03	0.0	0.0
6	3.908	0.256	0.736	445.89	1.4	0.02	6.49e-05	4.12e-04	1.29e-06	0.0	0.0
7	4.337	0.231	0.736	0.23	7.32e-04	8361.44	26.2	8537.83	26.8	0.0	0.0
8	4.762	0.210	0.736	0.72	2.24e-03	2.164e+04	67.8	3055.05	9.6	0.0	0.0
9	5.090	0.196	0.736	34.07	0.1		0.1	7.16	2.24e-02	0.0	0.0
10	6.129	0.163	0.736	0.82	2.58e-03	342.34	1.1	34.96	0.1	0.0	0.0
11	6.617	0.151	0.731	0.06	1.96e-04	20.29	6.36e-02	0.11	3.53e-04	0.0	0.0
12	8.674	0.115	0.631	2.53	7.91e-03	614.03	1.9	24.25	7.60e-02	0.0	0.0
13	9.787	0.102	0.594	36.31	0.1	10.93	3.43e-02	0.26	8.18e-04	0.0	0.0
14	12.433	0.080	0.533	7.94e-06	0.0	1.88e-04	0.0	1083.68	3.4	0.0	0.0
15	12.502	0.080	0.532	1.90e-05	0.0	2.35e-03	7.36e-06	330.10	1.0	0.0	0.0
Risult a				3.108e+04		3.106e+04		1.307e+04			
In perce ntuale				97.39		97.34		40.97			

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	rapp. r/Ls	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
405.14	1.123e+04	571.50	-358.50	57.15	0.0	0.0	0.0	0.0	0.0	0.0
389.00	8008.61	362.32	-1449.71	57.15	0.0	570.82	-716.37	0.671	0.485	1.704
380.00	1.183e+04	571.50	-344.70	57.15	0.0	571.50	-356.75	1.428	0.0	0.022
50.00	760.39	534.19	-701.89	57.15	0.0	508.25	-694.07	1.214	0.040	0.012

34.00	77.98	190.50	-1856.50	19.05	0.0	190.50	-1856.50	1.732	0.0	0.0
Risulta	3.191e+04									

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	daN		daN		daN			
1	2.602	0.384	0.736	1176.49	3.7	3.22e-04	1.01e-06	9.69e-06	0.0	0.0	0.0
2	2.815	0.355	0.736	2.622e+04	82.2	0.14	4.44e-04	5.34e-03	1.67e-05	0.0	0.0
3	2.979	0.336	0.736	1100.74	3.4	0.03	8.32e-05	7.00e-05	0.0	0.0	0.0
4	3.260	0.307	0.736	621.92	1.9	6.01e-03	1.88e-05	0.0	0.0	0.0	0.0
5	3.282	0.305	0.736	1088.14	3.4	1.34	4.19e-03	9.89e-04	3.10e-06	0.0	0.0
6	4.070	0.246	0.736	797.78	2.5	47.58	0.1	3.19	1.00e-02	0.0	0.0
7	4.327	0.231	0.736	8.71e-03	2.73e-05	9063.81	28.4	8186.84	25.7	0.0	0.0
8	4.750	0.211	0.736	0.86	2.70e-03	2.038e+04	63.9	3424.25	10.7	0.0	0.0
9	5.106	0.196	0.736	40.19	0.1	799.34	2.5	15.75	4.94e-02	0.0	0.0
10	6.109	0.164	0.736	2.65	8.29e-03	105.46	0.3	8.16	2.56e-02	0.0	0.0
11	6.934	0.144	0.712	0.08	2.49e-04	42.33	0.1	0.34	1.07e-03	0.0	0.0
12	9.149	0.109	0.614	2.47	7.73e-03	607.03	1.9	20.62	6.46e-02	0.0	0.0
13	10.342	0.097	0.579	28.25	8.85e-02	14.87	4.66e-02	0.26	8.06e-04	0.0	0.0
14	12.433	0.080	0.533	8.08e-06	0.0	2.02e-04	0.0	1083.63	3.4	0.0	0.0
15	12.502	0.080	0.532	1.82e-05	0.0	2.67e-03	8.38e-06	330.01	1.0	0.0	0.0
Risultato				3.108e+04		3.106e+04		1.307e+04			
In percentuale				97.39		97.34		40.97			

CDC	Tipo	Sigla Id	Note
8	Edk	CDC=Ed (dinamico SLU) alfa=90.00 (ecc. -)	
			categoria suolo: C
			fattore di sito S = 1.380
			ordinata spettro (tratto Tb-Tc) = 0.736 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.213 sec.
			fattore di struttura q: 1.000
			fattore per spost. mu d: 1.000
			classe di duttilità CD: B
			numero di modi considerati: 15
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	rapp. r/Ls	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
405.14	1.123e+04	571.50	-358.50	-57.15	0.0	0.0	0.0	0.0	0.0	0.0
389.00	8008.61	362.32	-1449.71	-57.15	0.0	570.82	-716.37	0.671	0.485	1.704
380.00	1.183e+04	571.50	-344.70	-57.15	0.0	571.50	-356.75	1.428	0.0	0.022
50.00	760.39	534.19	-701.89	-57.15	0.0	508.25	-694.07	1.214	0.040	0.012
34.00	77.98	190.50	-1856.50	-19.05	0.0	190.50	-1856.50	1.732	0.0	0.0
Risultato	3.191e+04									

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	daN		daN		daN			
1	2.602	0.384	0.736	1176.52	3.7	7.30e-04	2.29e-06	8.19e-06	0.0	0.0	0.0
2	2.815	0.355	0.736	2.622e+04	82.2	0.54	1.70e-03	8.42e-04	2.64e-06	0.0	0.0
3	2.979	0.336	0.736	1101.15	3.5	0.04	1.12e-04	8.77e-05	0.0	0.0	0.0
4	3.260	0.307	0.736	621.86	1.9	3.82e-03	1.20e-05	0.0	0.0	0.0	0.0
5	3.282	0.305	0.736	1089.31	3.4	2.26	7.09e-03	2.66e-03	8.35e-06	0.0	0.0
6	4.070	0.246	0.736	790.14	2.5	110.95	0.3	7.00	2.19e-02	0.0	0.0
7	4.324	0.231	0.736	4.54	1.42e-02	1.011e+04	31.7	7753.90	24.3	0.0	0.0
8	4.687	0.213	0.736	6.71	2.10e-02		56.0	3784.20	11.9	0.0	0.0

						1.787e+04					
9	5.117	0.195	0.736	36.15	0.1	666.60	2.1	28.11	8.81e-02	0.0	0.0
10	6.296	0.159	0.736	0.60	1.89e-03	751.52	2.4	25.72	8.06e-02	0.0	0.0
11	6.430	0.156	0.736	2.44	7.65e-03	957.49	3.0	35.48	0.1	0.0	0.0
12	8.306	0.120	0.645	1.22	3.81e-03	586.28	1.8	26.94	8.44e-02	0.0	0.0
13	10.326	0.097	0.579	29.33	9.19e-02	0.04	1.36e-04	1.40e-03	4.39e-06	0.0	0.0
14	12.433	0.080	0.533	1.04e-05	0.0	1.81e-04	0.0	1085.81	3.4	0.0	0.0
15	12.502	0.080	0.532	1.47e-05	0.0	2.12e-03	6.66e-06	329.46	1.0	0.0	0.0
Risult a				3.108e+04		3.106e+04		1.308e+04			
In perce ntuale				97.39		97.34		40.98			

CDC	Tipo	Sigla Id	Note
9	Edk	CDC=Ed (dinamico SLD) alfa=0.0 (ecc. +)	
			categoria suolo: C
			fattore di sito S = 1.500
			ordinata spettro (tratto Tb-Tc) = 0.344 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.353 sec.
			numero di modi considerati: 15
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	rapp. r/Ls	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
405.14	1.123e+04	571.50	-358.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0
389.00	8008.61	362.32	-1449.71	0.0	-95.25	570.82	-716.37	0.671	0.485	1.704
380.00	1.183e+04	571.50	-344.70	0.0	-35.68	571.50	-356.75	1.428	0.0	0.022
50.00	760.39	534.19	-701.89	0.0	-73.78	508.25	-694.07	1.214	0.040	0.012
34.00	77.98	190.50	-1856.50	0.0	0.0	190.50	-1856.50	1.732	0.0	0.0
Risult a	3.191e+04									

Modo	Frequenz a	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	daN		daN		daN			
1	2.370	0.422	0.344	1407.64	4.4	3.87e-04	1.21e-06	7.98e-06	0.0	0.0	0.0
2	2.831	0.353	0.344	2.600e+04	81.5	0.01	3.82e-05	3.75e-03	1.17e-05	0.0	0.0
3	2.833	0.353	0.344	765.35	2.4	0.02	7.22e-05	1.60e-05	0.0	0.0	0.0
4	2.855	0.350	0.344	859.92	2.7	2.34e-03	7.33e-06	7.71e-06	0.0	0.0	0.0
5	3.272	0.306	0.344	1094.93	3.4	1.79	5.60e-03	1.72e-03	5.40e-06	0.0	0.0
6	4.296	0.233	0.344	812.34	2.5	960.66	3.0	493.71	1.5	0.0	0.0
7	4.339	0.230	0.344	59.00	0.2	7449.03	23.3	8056.13	25.2	0.0	0.0
8	4.762	0.210	0.344	2.83	8.87e-03	2.163e+04	67.8	3045.14	9.5	0.0	0.0
9	5.101	0.196	0.344	48.85	0.2	30.19	9.46e-02	5.87	1.84e-02	0.0	0.0
10	6.160	0.162	0.344	5.44	1.71e-02	355.57	1.1	35.49	0.1	0.0	0.0
11	6.619	0.151	0.344	0.24	7.56e-04	17.30	5.42e-02	0.06	1.78e-04	0.0	0.0
12	8.713	0.115	0.300	1.33	4.17e-03	614.95	1.9	23.94	7.50e-02	0.0	0.0
13	11.006	0.091	0.267	22.08	6.92e-02	0.81	2.55e-03	5.17e-03	1.62e-05	0.0	0.0
14	12.433	0.080	0.253	8.45e-06	0.0	1.86e-04	0.0	1084.57	3.4	0.0	0.0
15	12.502	0.080	0.252	1.72e-05	0.0	2.39e-03	7.48e-06	327.70	1.0	0.0	0.0
Risult a				3.108e+04		3.106e+04		1.307e+04			
In perce ntuale				97.39		97.34		40.97			

CDC	Tipo	Sigla Id	Note
10	Edk	CDC=Ed (dinamico SLD) alfa=0.0 (ecc. -)	
			categoria suolo: C
			fattore di sito S = 1.500
			ordinata spettro (tratto Tb-Tc) =

			0.344 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.357 sec.
			numero di modi considerati: 15
			combinaz. modale: CQC

[illegible]

Modo	Frequenz a	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
1	Hz 2.799	sec 0.357	g 0.344	daN 2.687e+04	84.2	daN 0.06	1.95e-04	daN 1.70e-03	5.33e-06	0.0	0.0
2	2.918	0.343	0.344	976.67	3.1	6.25e-04	1.96e-06	1.03e-05	0.0	0.0	0.0
3	3.150	0.317	0.344	1024.26	3.2	0.06	1.79e-04	1.59e-04	0.0	0.0	0.0
4	3.292	0.304	0.344	1015.70	3.2	1.61	5.03e-03	1.45e-03	4.55e-06	0.0	0.0
5	3.877	0.258	0.344	668.57	2.1	29.83	9.35e-02	0.71	2.22e-03	0.0	0.0
6	3.908	0.256	0.344	445.89	1.4	0.02	6.49e-05	4.12e-04	1.29e-06	0.0	0.0
7	4.337	0.231	0.344	0.23	7.32e-04	8361.44	26.2	8537.83	26.8	0.0	0.0
8	4.762	0.210	0.344	0.72	2.24e-03	2.164e+04	67.8	3055.05	9.6	0.0	0.0
9	5.090	0.196	0.344	34.07	0.1		0.1	7.16	2.24e-02	0.0	0.0
10	6.129	0.163	0.344	0.82	2.58e-03	342.34	1.1	34.96	0.1	0.0	0.0
11	6.617	0.151	0.344	0.06	1.96e-04	20.29	6.36e-02	0.11	3.53e-04	0.0	0.0
12	8.674	0.115	0.301	2.53	7.91e-03	614.03	1.9	24.25	7.60e-02	0.0	0.0
13	9.787	0.102	0.283	36.31	0.1	10.93	3.43e-02	0.26	8.18e-04	0.0	0.0
14	12.433	0.080	0.253	7.94e-06	0.0	1.88e-04	0.0	1083.68	3.4	0.0	0.0
15	12.502	0.080	0.252	1.90e-05	0.0	2.35e-03	7.36e-06	330.10	1.0	0.0	0.0
Risult a				3.108e+04		3.106e+04		1.307e+04			
In perce ntuale				97.39		97.34		40.97			

CDC	Tipo	Sigla Id	Note
11	Edk	CDC=Ed (dinamico SLD) alfa=90.00 (ecc. +)	
			categoria suolo: C
			fattore di sito S = 1.500
			ordinata spettro (tratto Tb-Tc) = 0.344 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.211 sec.
			numero di modi considerati: 15
			combinaz. modale: CQC

[illegible]

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	daN		daN		daN			
1	2.602	0.384	0.344	1176.49	3.7	3.22e-04	1.01e-06	9.69e-06	0.0	0.0	0.0
2	2.815	0.355	0.344	2.622e+04	82.2	0.14	4.44e-04	5.34e-03	1.67e-05	0.0	0.0
3	2.979	0.336	0.344	1100.74	3.4	0.03	8.32e-05	7.00e-05	0.0	0.0	0.0
4	3.260	0.307	0.344	621.92	1.9	6.01e-03	1.88e-05	0.0	0.0	0.0	0.0
5	3.282	0.305	0.344	1088.14	3.4	1.34	4.19e-03	9.89e-04	3.10e-06	0.0	0.0
6	4.070	0.246	0.344	797.78	2.5	47.58	0.1	3.19	1.00e-02	0.0	0.0
7	4.327	0.231	0.344	8.71e-03	2.73e-05	9063.81	28.4	8186.84	25.7	0.0	0.0
8	4.750	0.211	0.344	0.86	2.70e-03	2.038e+04	63.9	3424.25	10.7	0.0	0.0
9	5.106	0.196	0.344	40.19	0.1	799.34	2.5	15.75	4.94e-02	0.0	0.0
10	6.109	0.164	0.344	2.65	8.29e-03	105.46	0.3	8.16	2.56e-02	0.0	0.0
11	6.934	0.144	0.341	0.08	2.49e-04	42.33	0.1	0.34	1.07e-03	0.0	0.0
12	9.149	0.109	0.293	2.47	7.73e-03	607.03	1.9	20.62	6.46e-02	0.0	0.0
13	10.342	0.097	0.275	28.25	8.85e-02	14.87	4.66e-02	0.26	8.06e-04	0.0	0.0
14	12.433	0.080	0.253	8.08e-06	0.0	2.02e-04	0.0	1083.63	3.4	0.0	0.0
15	12.502	0.080	0.252	1.82e-05	0.0	2.67e-03	8.38e-06	330.01	1.0	0.0	0.0
Risultato				3.108e+04		3.106e+04		1.307e+04			
In percentuale				97.39		97.34		40.97			

CDC	Tipo	Sigla Id	Note
12	Edk	CDC=Ed (dinamico SLD) alfa=90.00 (ecc. -)	
			categoria suolo: C
			fattore di sito S = 1.500
			ordinata spettro (tratto Tb-Tc) = 0.344 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.213 sec.
			numero di modi considerati: 15
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	rapp. r/Ls	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
405.14	1.123e+04	571.50	-358.50	-57.15	0.0	0.0	0.0	0.0	0.0	0.0
389.00	8008.61	362.32	-1449.71	-57.15	0.0	570.82	-716.37	0.671	0.485	1.704
380.00	1.183e+04	571.50	-344.70	-57.15	0.0	571.50	-356.75	1.428	0.0	0.022
50.00	760.39	534.19	-701.89	-57.15	0.0	508.25	-694.07	1.214	0.040	0.012
34.00	77.98	190.50	-1856.50	-19.05	0.0	190.50	-1856.50	1.732	0.0	0.0
	3.191e+04									
Risultato										

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	daN		daN		daN			
1	2.602	0.384	0.344	1176.52	3.7	7.30e-04	2.29e-06	8.19e-06	0.0	0.0	0.0
2	2.815	0.355	0.344	2.622e+04	82.2	0.54	1.70e-03	8.42e-04	2.64e-06	0.0	0.0
3	2.979	0.336	0.344	1101.15	3.5	0.04	1.12e-04	8.77e-05	0.0	0.0	0.0
4	3.260	0.307	0.344	621.86	1.9	3.82e-03	1.20e-05	0.0	0.0	0.0	0.0
5	3.282	0.305	0.344	1089.31	3.4	2.26	7.09e-03	2.66e-03	8.35e-06	0.0	0.0
6	4.070	0.246	0.344	790.14	2.5	110.95	0.3	7.00	2.19e-02	0.0	0.0
7	4.324	0.231	0.344	4.54	1.42e-02	1.011e+04	31.7	7753.90	24.3	0.0	0.0
8	4.687	0.213	0.344	6.71	2.10e-02	1.787e+04	56.0	3784.20	11.9	0.0	0.0
9	5.117	0.195	0.344	36.15	0.1	666.60	2.1	28.11	8.81e-02	0.0	0.0
10	6.296	0.159	0.344	0.60	1.89e-03	751.52	2.4	25.72	8.06e-02	0.0	0.0
11	6.430	0.156	0.344	2.44	7.65e-03	957.49	3.0	35.48	0.1	0.0	0.0
12	8.306	0.120	0.308	1.22	3.81e-03	586.28	1.8	26.94	8.44e-02	0.0	0.0
13	10.326	0.097	0.276	29.33	9.19e-02	0.04	1.36e-04	1.40e-03	4.39e-06	0.0	0.0
14	12.433	0.080	0.253	1.04e-05	0.0	1.81e-04	0.0	1085.81	3.4	0.0	0.0
15	12.502	0.080	0.252	1.47e-05	0.0	2.12e-03	6.66e-06	329.46	1.0	0.0	0.0

Risult a				3.108e+04		3.106e+04		1.308e+04			
In perce ntuale				97.39		97.34		40.98			

CDC	Tipo	Sigla Id	Note
19	Edk	CDC=Ed (dinamico SLO) alfa=0.0 (ecc. +)	
			categoria suolo: C
			fattore di sito S = 1.500
			ordinata spettro (tratto Tb-Tc) = 0.275 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.353 sec.
			numero di modi considerati: 15
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	rapp. r/Ls	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
405.14	1.123e+04	571.50	-358.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0
389.00	8008.61	362.32	-1449.71	0.0	-95.25	570.82	-716.37	0.671	0.485	1.704
380.00	1.183e+04	571.50	-344.70	0.0	-35.68	571.50	-356.75	1.428	0.0	0.022
50.00	760.39	534.19	-701.89	0.0	-73.78	508.25	-694.07	1.214	0.040	0.012
34.00	77.98	190.50	-1856.50	0.0	0.0	190.50	-1856.50	1.732	0.0	0.0
Risult a	3.191e+04									

Modo	Frequenz a	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	daN		daN		daN			
1	2.370	0.422	0.275	1407.64	4.4	3.87e-04	1.21e-06	7.98e-06	0.0	0.0	0.0
2	2.831	0.353	0.275	2.600e+04	81.5	0.01	3.82e-05	3.75e-03	1.17e-05	0.0	0.0
3	2.833	0.353	0.275	765.35	2.4	0.02	7.22e-05	1.60e-05	0.0	0.0	0.0
4	2.855	0.350	0.275	859.92	2.7	2.34e-03	7.33e-06	7.71e-06	0.0	0.0	0.0
5	3.272	0.306	0.275	1094.93	3.4	1.79	5.60e-03	1.72e-03	5.40e-06	0.0	0.0
6	4.296	0.233	0.275	812.34	2.5	960.66	3.0	493.71	1.5	0.0	0.0
7	4.339	0.230	0.275	59.00	0.2	7449.03	23.3	8056.13	25.2	0.0	0.0
8	4.762	0.210	0.275	2.83	8.87e-03	2.163e+04	67.8	3045.14	9.5	0.0	0.0
9	5.101	0.196	0.275	48.85	0.2	30.19	9.46e-02	5.87	1.84e-02	0.0	0.0
10	6.160	0.162	0.275	5.44	1.71e-02	355.57	1.1	35.49	0.1	0.0	0.0
11	6.619	0.151	0.275	0.24	7.56e-04	17.30	5.42e-02	0.06	1.78e-04	0.0	0.0
12	8.713	0.115	0.243	1.33	4.17e-03	614.95	1.9	23.94	7.50e-02	0.0	0.0
13	11.006	0.091	0.216	22.08	6.92e-02	0.81	2.55e-03	5.17e-03	1.62e-05	0.0	0.0
14	12.433	0.080	0.204	8.45e-06	0.0	1.86e-04	0.0	1084.57	3.4	0.0	0.0
15	12.502	0.080	0.204	1.72e-05	0.0	2.39e-03	7.48e-06	327.70	1.0	0.0	0.0
Risult a				3.108e+04		3.106e+04		1.307e+04			
In perce ntuale				97.39		97.34		40.97			

CDC	Tipo	Sigla Id	Note
20	Edk	CDC=Ed (dinamico SLO) alfa=0.0 (ecc. -)	
			categoria suolo: C
			fattore di sito S = 1.500
			ordinata spettro (tratto Tb-Tc) = 0.275 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.357 sec.
			numero di modi considerati: 15
			combinaz. modale: CQC

Quota	M Sismica	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	rapp. r/Ls	rapp.	rapp.
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	x g								ex/rx	ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
405.14	1.123e+04	571.50	-358.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0
389.00	8008.61	362.32	-1449.71	0.0	95.25	570.82	-716.37	0.671	0.485	1.704
380.00	1.183e+04	571.50	-344.70	0.0	35.68	571.50	-356.75	1.428	0.0	0.022
50.00	760.39	534.19	-701.89	0.0	73.78	508.25	-694.07	1.214	0.040	0.012
34.00	77.98	190.50	-1856.50	0.0	0.0	190.50	-1856.50	1.732	0.0	0.0
Risulta	3.191e+04									

Modo	Frequenz a	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	daN		daN		daN			
1	2.799	0.357	0.275	2.687e+04	84.2	0.06	1.95e-04	1.70e-03	5.33e-06	0.0	0.0
2	2.918	0.343	0.275	976.67	3.1	6.25e-04	1.96e-06	1.03e-05	0.0	0.0	0.0
3	3.150	0.317	0.275	1024.26	3.2	0.06	1.79e-04	1.59e-04	0.0	0.0	0.0
4	3.292	0.304	0.275	1015.70	3.2	1.61	5.03e-03	1.45e-03	4.55e-06	0.0	0.0
5	3.877	0.258	0.275	668.57	2.1	29.83	9.35e-02	0.71	2.22e-03	0.0	0.0
6	3.908	0.256	0.275	445.89	1.4	0.02	6.49e-05	4.12e-04	1.29e-06	0.0	0.0
7	4.337	0.231	0.275	0.23	7.32e-04	8361.44	26.2	8537.83	26.8	0.0	0.0
8	4.762	0.210	0.275	0.72	2.24e-03	2.164e+04	67.8	3055.05	9.6	0.0	0.0
9	5.090	0.196	0.275	34.07	0.1	36.69	0.1	7.16	2.24e-02	0.0	0.0
10	6.129	0.163	0.275	0.82	2.58e-03	342.34	1.1	34.96	0.1	0.0	0.0
11	6.617	0.151	0.275	0.06	1.96e-04	20.29	6.36e-02	0.11	3.53e-04	0.0	0.0
12	8.674	0.115	0.244	2.53	7.91e-03	614.03	1.9	24.25	7.60e-02	0.0	0.0
13	9.787	0.102	0.229	36.31	0.1	10.93	3.43e-02	0.26	8.18e-04	0.0	0.0
14	12.433	0.080	0.204	7.94e-06	0.0	1.88e-04	0.0	1083.68	3.4	0.0	0.0
15	12.502	0.080	0.204	1.90e-05	0.0	2.35e-03	7.36e-06	330.10	1.0	0.0	0.0
Risult a				3.108e+04		3.106e+04		1.307e+04			
In perce ntuale				97.39		97.34		40.97			

CDC	Tipo	Sigla Id	Note
21	Edk	CDC=Ed (dinamico SLO) alfa=90.00 (ecc. +)	
			categoria suolo: C
			fattore di sito S = 1.500
			ordinata spettro (tratto Tb-Tc) = 0.275 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.211 sec.
			numero di modi considerati: 15
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	rapp. r/Ls	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
405.14	1.123e+04	571.50	-358.50	57.15	0.0	0.0	0.0	0.0	0.0	0.0
389.00	8008.61	362.32	-1449.71	57.15	0.0	570.82	-716.37	0.671	0.485	1.704
380.00	1.183e+04	571.50	-344.70	57.15	0.0	571.50	-356.75	1.428	0.0	0.022
50.00	760.39	534.19	-701.89	57.15	0.0	508.25	-694.07	1.214	0.040	0.012
34.00	77.98	190.50	-1856.50	19.05	0.0	190.50	-1856.50	1.732	0.0	0.0
Risulta	3.191e+04									

Modo	Frequenz a	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	daN		daN		daN			
1	2.602	0.384	0.275	1176.49	3.7	3.22e-04	1.01e-06	9.69e-06	0.0	0.0	0.0
2	2.815	0.355	0.275	2.622e+04	82.2	0.14	4.44e-04	5.34e-03	1.67e-05	0.0	0.0
3	2.979	0.336	0.275	1100.74	3.4	0.03	8.32e-05	7.00e-05	0.0	0.0	0.0

4	3.260	0.307	0.275	621.92	1.9	6.01e-03	1.88e-05	0.0	0.0	0.0	0.0
5	3.282	0.305	0.275	1088.14	3.4	1.34	4.19e-03	9.89e-04	3.10e-06	0.0	0.0
6	4.070	0.246	0.275	797.78	2.5	47.58	0.1	3.19	1.00e-02	0.0	0.0
7	4.327	0.231	0.275	8.71e-03	2.73e-05	9063.81	28.4	8186.84	25.7	0.0	0.0
8	4.750	0.211	0.275	0.86	2.70e-03	2.038e+04	63.9	3424.25	10.7	0.0	0.0
9	5.106	0.196	0.275	40.19	0.1		799.34	2.5	15.75	4.94e-02	0.0
10	6.109	0.164	0.275	2.65	8.29e-03	105.46	0.3	8.16	2.56e-02	0.0	0.0
11	6.934	0.144	0.275	0.08	2.49e-04	42.33	0.1	0.34	1.07e-03	0.0	0.0
12	9.149	0.109	0.237	2.47	7.73e-03	607.03	1.9	20.62	6.46e-02	0.0	0.0
13	10.342	0.097	0.223	28.25	8.85e-02	14.87	4.66e-02	0.26	8.06e-04	0.0	0.0
14	12.433	0.080	0.204	8.08e-06	0.0	2.02e-04	0.0	1083.63	3.4	0.0	0.0
15	12.502	0.080	0.204	1.82e-05	0.0	2.67e-03	8.38e-06	330.01	1.0	0.0	0.0
Risult a				3.108e+04		3.106e+04		1.307e+04			
In perce ntuale				97.39		97.34		40.97			

CDC	Tipo	Sigla Id	Note
22	Edk	CDC=Ed (dinamico SLO) alfa=90.00 (ecc. -)	
			categoria suolo: C
			fattore di sito S = 1.500
			ordinata spettro (tratto Tb-Tc) = 0.275 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.213 sec.
			numero di modi considerati: 15
			combinaz. modale: CQC

Quota	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	rapp. r/Ls	rapp. ex/rx	rapp. ey/ry
cm	daN	cm	cm	cm	cm	cm	cm			
405.14	1.123e+04	571.50	-358.50	-57.15	0.0	0.0	0.0	0.0	0.0	0.0
389.00	8008.61	362.32	-1449.71	-57.15	0.0	570.82	-716.37	0.671	0.485	1.704
380.00	1.183e+04	571.50	-344.70	-57.15	0.0	571.50	-356.75	1.428	0.0	0.022
50.00	760.39	534.19	-701.89	-57.15	0.0	508.25	-694.07	1.214	0.040	0.012
34.00	77.98	190.50	-1856.50	-19.05	0.0	190.50	-1856.50	1.732	0.0	0.0
	3.191e+04									
Risulta										

Modo	Frequenz a	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	daN		daN		daN			
1	2.602	0.384	0.275	1176.52	3.7	7.30e-04	2.29e-06	8.19e-06	0.0	0.0	0.0
2	2.815	0.355	0.275	2.622e+04	82.2	0.54	1.70e-03	8.42e-04	2.64e-06	0.0	0.0
3	2.979	0.336	0.275		3.5	0.04	1.12e-04	8.77e-05	0.0	0.0	0.0
4	3.260	0.307	0.275	621.86	1.9	3.82e-03	1.20e-05	0.0	0.0	0.0	0.0
5	3.282	0.305	0.275	1089.31	3.4	2.26	7.09e-03	2.66e-03	8.35e-06	0.0	0.0
6	4.070	0.246	0.275	790.14	2.5	110.95	0.3	7.00	2.19e-02	0.0	0.0
7	4.324	0.231	0.275	4.54	1.42e-02	1.011e+04	31.7	7753.90	24.3	0.0	0.0
8	4.687	0.213	0.275	6.71	2.10e-02		56.0	3784.20	11.9	0.0	0.0
9	5.117	0.195	0.275	36.15	0.1	666.60	2.1	28.11	8.81e-02	0.0	0.0
10	6.296	0.159	0.275	0.60	1.89e-03	751.52	2.4	25.72	8.06e-02	0.0	0.0
11	6.430	0.156	0.275	2.44	7.65e-03	957.49	3.0	35.48	0.1	0.0	0.0
12	8.306	0.120	0.250	1.22	3.81e-03	586.28	1.8	26.94	8.44e-02	0.0	0.0
13	10.326	0.097	0.223	29.33	9.19e-02	0.04	1.36e-04	1.40e-03	4.39e-06	0.0	0.0
14	12.433	0.080	0.204	1.04e-05	0.0	1.81e-04	0.0	1085.81	3.4	0.0	0.0
15	12.502	0.080	0.204	1.47e-05	0.0	2.12e-03	6.66e-06	329.46	1.0	0.0	0.0
Risult a				3.108e+04		3.106e+04		1.308e+04			
In perce ntuale				97.39		97.34		40.98			

Cmb	Pilas.	1000 etaT/h	etaT	inter. h	Pilas.	1000 etaT/h	etaT	inter. h	Pilas.	1000 etaT/h	etaT	inter. h
			cm	cm			cm	cm			cm	cm
171	201	2.66	1.03	389.0	202	2.67	1.04	389.0	203	4.00	1.56	389.0
	204	4.01	1.56	389.0	205	2.98	1.06	355.0	206	2.98	1.06	355.0
	207	3.36	1.11	330.0	208	3.37	1.11	330.0	209	3.39	1.12	330.0
	210	3.39	1.12	330.0	211	3.19	1.05	330.0	212	3.22	1.06	330.0
	213	3.27	1.08	330.0	214	3.30	1.09	330.0	215	2.33	0.79	339.0
	216	2.34	0.79	339.0	217	1.03	0.35	339.0	218	1.05	0.36	339.0
	219	1.08	0.37	339.0	220	1.11	0.38	339.0				
172	201	2.67	1.04	389.0	202	2.67	1.04	389.0	203	4.01	1.56	389.0
	204	4.01	1.56	389.0	205	2.98	1.06	355.0	206	2.98	1.06	355.0
	207	3.30	1.09	330.0	208	3.30	1.09	330.0	209	3.31	1.09	330.0
	210	3.30	1.09	330.0	211	3.20	1.06	330.0	212	3.22	1.06	330.0
	213	3.23	1.07	330.0	214	3.22	1.06	330.0	215	2.29	0.77	339.0
	216	2.30	0.78	339.0	217	1.15	0.39	339.0	218	1.17	0.40	339.0
	219	1.15	0.39	339.0	220	1.12	0.38	339.0				
173	201	2.67	1.04	389.0	202	2.67	1.04	389.0	203	4.01	1.56	389.0
	204	4.01	1.56	389.0	205	3.02	1.07	355.0	206	3.02	1.07	355.0
	207	3.27	1.08	330.0	208	3.29	1.09	330.0	209	3.29	1.08	330.0
	210	3.28	1.08	330.0	211	3.39	1.12	330.0	212	3.39	1.12	330.0
	213	3.38	1.11	330.0	214	3.37	1.11	330.0	215	2.49	0.84	339.0
	216	2.50	0.85	339.0	217	1.24	0.42	339.0	218	1.28	0.43	339.0
	219	1.28	0.43	339.0	220	1.27	0.43	339.0				
174	201	2.66	1.03	389.0	202	2.66	1.04	389.0	203	4.00	1.56	389.0
	204	4.00	1.56	389.0	205	3.01	1.07	355.0	206	3.02	1.07	355.0
	207	3.34	1.10	330.0	208	3.36	1.11	330.0	209	3.35	1.11	330.0
	210	3.34	1.10	330.0	211	3.21	1.06	330.0	212	3.21	1.06	330.0
	213	3.19	1.05	330.0	214	3.17	1.05	330.0	215	2.52	0.86	339.0
	216	2.54	0.86	339.0	217	1.10	0.37	339.0	218	1.17	0.40	339.0
	219	1.19	0.40	339.0	220	1.20	0.41	339.0				
175	201	2.67	1.04	389.0	202	2.67	1.04	389.0	203	4.01	1.56	389.0
	204	4.01	1.56	389.0	205	2.99	1.06	355.0	206	2.98	1.06	355.0
	207	3.29	1.08	330.0	208	3.29	1.09	330.0	209	3.30	1.09	330.0
	210	3.30	1.09	330.0	211	3.31	1.09	330.0	212	3.33	1.10	330.0
	213	3.35	1.11	330.0	214	3.35	1.11	330.0	215	2.35	0.80	339.0
	216	2.35	0.80	339.0	217	1.01	0.34	339.0	218	1.02	0.35	339.0
	219	1.03	0.35	339.0	220	1.04	0.35	339.0				
176	201	2.68	1.04	389.0	202	2.67	1.04	389.0	203	4.01	1.56	389.0
	204	4.01	1.56	389.0	205	2.99	1.06	355.0	206	2.98	1.06	355.0
	207	3.39	1.12	330.0	208	3.38	1.12	330.0	209	3.39	1.12	330.0
	210	3.37	1.11	330.0	211	3.10	1.02	330.0	212	3.11	1.03	330.0
	213	3.14	1.04	330.0	214	3.15	1.04	330.0	215	2.29	0.78	339.0
	216	2.29	0.78	339.0	217	1.21	0.41	339.0	218	1.20	0.41	339.0
	219	1.17	0.40	339.0	220	1.14	0.39	339.0				
177	201	2.68	1.04	389.0	202	2.67	1.04	389.0	203	4.01	1.56	389.0
	204	4.01	1.56	389.0	205	3.03	1.07	355.0	206	3.02	1.07	355.0
	207	3.36	1.11	330.0	208	3.38	1.11	330.0	209	3.36	1.11	330.0
	210	3.35	1.10	330.0	211	3.32	1.10	330.0	212	3.30	1.09	330.0
	213	3.27	1.08	330.0	214	3.24	1.07	330.0	215	2.49	0.84	339.0
	216	2.49	0.84	339.0	217	1.30	0.44	339.0	218	1.31	0.45	339.0
	219	1.30	0.44	339.0	220	1.28	0.44	339.0				
178	201	2.66	1.04	389.0	202	2.67	1.04	389.0	203	4.00	1.56	389.0
	204	4.00	1.56	389.0	205	3.02	1.07	355.0	206	3.03	1.07	355.0
	207	3.26	1.08	330.0	208	3.28	1.08	330.0	209	3.27	1.08	330.0
	210	3.25	1.07	330.0	211	3.29	1.09	330.0	212	3.30	1.09	330.0
	213	3.29	1.09	330.0	214	3.28	1.08	330.0	215	2.54	0.86	339.0
	216	2.55	0.87	339.0	217	1.09	0.37	339.0	218	1.14	0.39	339.0
	219	1.14	0.39	339.0	220	1.14	0.39	339.0				
179	201	1.43	0.56	389.0	202	1.44	0.56	389.0	203	2.65	1.03	389.0
	204	2.66	1.03	389.0	205	2.41	0.86	355.0	206	2.42	0.86	355.0
	207	3.43	1.13	330.0	208	3.44	1.13	330.0	209	3.45	1.14	330.0
	210	3.45	1.14	330.0	211	3.33	1.10	330.0	212	3.35	1.11	330.0
	213	3.39	1.12	330.0	214	3.41	1.12	330.0	215	2.32	0.79	339.0
	216	2.33	0.79	339.0	217	1.31	0.44	339.0	218	1.32	0.45	339.0
	219	1.34	0.45	339.0	220	1.35	0.46	339.0				
180	201	1.44	0.56	389.0	202	1.45	0.56	389.0	203	2.66	1.03	389.0
	204	2.66	1.04	389.0	205	2.41	0.86	355.0	206	2.41	0.86	355.0
	207	3.36	1.11	330.0	208	3.37	1.11	330.0	209	3.38	1.11	330.0
	210	3.37	1.11	330.0	211	3.34	1.10	330.0	212	3.35	1.10	330.0
	213	3.36	1.11	330.0	214	3.35	1.10	330.0	215	2.27	0.77	339.0
	216	2.28	0.77	339.0	217	1.42	0.48	339.0	218	1.43	0.49	339.0
	219	1.42	0.48	339.0	220	1.40	0.48	339.0				
181	201	1.44	0.56	389.0	202	1.45	0.56	389.0	203	2.66	1.03	389.0
	204	2.66	1.03	389.0	205	2.45	0.87	355.0	206	2.46	0.87	355.0
	207	3.34	1.10	330.0	208	3.36	1.11	330.0	209	3.35	1.11	330.0
	210	3.35	1.10	330.0	211	3.50	1.16	330.0	212	3.52	1.16	330.0
	213	3.51	1.16	330.0	214	3.51	1.16	330.0	215	2.47	0.84	339.0

	216	2.48	0.84	339.0	217	1.50	0.51	339.0	218	1.55	0.52	339.0
	219	1.55	0.53	339.0	220	1.55	0.53	339.0				
182	201	1.43	0.56	389.0	202	1.44	0.56	389.0	203	2.65	1.03	389.0
	204	2.66	1.03	389.0	205	2.45	0.87	355.0	206	2.46	0.87	355.0
	207	3.41	1.12	330.0	208	3.43	1.13	330.0	209	3.42	1.13	330.0
	210	3.40	1.12	330.0	211	3.33	1.10	330.0	212	3.33	1.10	330.0
	213	3.32	1.09	330.0	214	3.30	1.09	330.0	215	2.52	0.85	339.0
	216	2.53	0.86	339.0	217	1.38	0.47	339.0	218	1.44	0.49	339.0
	219	1.45	0.49	339.0	220	1.45	0.49	339.0				
183	201	1.45	0.56	389.0	202	1.45	0.56	389.0	203	2.66	1.03	389.0
	204	2.66	1.03	389.0	205	2.42	0.86	355.0	206	2.42	0.86	355.0
	207	3.36	1.11	330.0	208	3.36	1.11	330.0	209	3.36	1.11	330.0
	210	3.35	1.11	330.0	211	3.45	1.14	330.0	212	3.45	1.14	330.0
	213	3.47	1.14	330.0	214	3.46	1.14	330.0	215	2.34	0.79	339.0
	216	2.34	0.79	339.0	217	1.30	0.44	339.0	218	1.30	0.44	339.0
	219	1.29	0.44	339.0	220	1.29	0.44	339.0				
184	201	1.46	0.57	389.0	202	1.45	0.56	389.0	203	2.67	1.04	389.0
	204	2.66	1.04	389.0	205	2.42	0.86	355.0	206	2.41	0.86	355.0
	207	3.45	1.14	330.0	208	3.45	1.14	330.0	209	3.45	1.14	330.0
	210	3.44	1.14	330.0	211	3.23	1.07	330.0	212	3.25	1.07	330.0
	213	3.27	1.08	330.0	214	3.27	1.08	330.0	215	2.27	0.77	339.0
	216	2.28	0.77	339.0	217	1.47	0.50	339.0	218	1.47	0.50	339.0
	219	1.45	0.49	339.0	220	1.42	0.48	339.0				
185	201	1.46	0.57	389.0	202	1.45	0.56	389.0	203	2.67	1.04	389.0
	204	2.66	1.04	389.0	205	2.46	0.87	355.0	206	2.46	0.87	355.0
	207	3.42	1.13	330.0	208	3.44	1.14	330.0	209	3.43	1.13	330.0
	210	3.42	1.13	330.0	211	3.43	1.13	330.0	212	3.42	1.13	330.0
	213	3.40	1.12	330.0	214	3.39	1.12	330.0	215	2.47	0.84	339.0
	216	2.48	0.84	339.0	217	1.55	0.53	339.0	218	1.58	0.54	339.0
	219	1.57	0.53	339.0	220	1.56	0.53	339.0				
186	201	1.44	0.56	389.0	202	1.44	0.56	389.0	203	2.66	1.03	389.0
	204	2.66	1.03	389.0	205	2.46	0.87	355.0	206	2.46	0.87	355.0
	207	3.33	1.10	330.0	208	3.35	1.10	330.0	209	3.33	1.10	330.0
	210	3.31	1.09	330.0	211	3.42	1.13	330.0	212	3.43	1.13	330.0
	213	3.42	1.13	330.0	214	3.41	1.13	330.0	215	2.54	0.86	339.0
	216	2.54	0.86	339.0	217	1.36	0.46	339.0	218	1.41	0.48	339.0
	219	1.41	0.48	339.0	220	1.40	0.47	339.0				
187	201	1.05	0.41	389.0	202	1.16	0.45	389.0	203	1.38	0.54	389.0
	204	1.47	0.57	389.0	205	1.16	0.41	355.0	206	1.28	0.45	355.0
	207	1.36	0.45	330.0	208	1.45	0.48	330.0	209	1.55	0.51	330.0
	210	1.66	0.55	330.0	211	1.56	0.51	330.0	212	1.67	0.55	330.0
	213	1.83	0.60	330.0	214	2.02	0.67	330.0	215	1.03	0.35	339.0
	216	1.18	0.40	339.0	217	0.75	0.25	339.0	218	0.94	0.32	339.0
	219	1.07	0.36	339.0	220	1.16	0.39	339.0				
188	201	1.08	0.42	389.0	202	1.17	0.46	389.0	203	1.40	0.54	389.0
	204	1.47	0.57	389.0	205	1.17	0.41	355.0	206	1.27	0.45	355.0
	207	1.19	0.39	330.0	208	1.28	0.42	330.0	209	1.35	0.45	330.0
	210	1.40	0.46	330.0	211	1.08	0.36	330.0	212	1.09	0.36	330.0
	213	1.12	0.37	330.0	214	1.17	0.39	330.0	215	0.95	0.32	339.0
	216	1.09	0.37	339.0	217	0.89	0.30	339.0	218	1.06	0.36	339.0
	219	1.11	0.38	339.0	220	1.10	0.37	339.0				
189	201	1.08	0.42	389.0	202	1.17	0.46	389.0	203	1.40	0.54	389.0
	204	1.47	0.57	389.0	205	1.19	0.42	355.0	206	1.30	0.46	355.0
	207	1.19	0.39	330.0	208	1.28	0.42	330.0	209	1.37	0.45	330.0
	210	1.47	0.48	330.0	211	1.81	0.60	330.0	212	1.88	0.62	330.0
	213	1.98	0.65	330.0	214	2.13	0.70	330.0	215	1.08	0.37	339.0
	216	1.21	0.41	339.0	217	0.96	0.33	339.0	218	1.11	0.38	339.0
	219	1.19	0.40	339.0	220	1.24	0.42	339.0				
190	201	1.04	0.41	389.0	202	1.15	0.45	389.0	203	1.37	0.53	389.0
	204	1.46	0.57	389.0	205	1.19	0.42	355.0	206	1.30	0.46	355.0
	207	1.34	0.44	330.0	208	1.43	0.47	330.0	209	1.50	0.50	330.0
	210	1.56	0.51	330.0	211	0.85	0.28	330.0	212	0.87	0.29	330.0
	213	0.90	0.30	330.0	214	0.99	0.33	330.0	215	1.18	0.40	339.0
	216	1.31	0.45	339.0	217	0.77	0.26	339.0	218	0.97	0.33	339.0
	219	1.06	0.36	339.0	220	1.08	0.37	339.0				
191	201	0.81	0.32	389.0	202	0.95	0.37	389.0	203	1.05	0.41	389.0
	204	1.16	0.45	389.0	205	1.04	0.37	355.0	206	1.17	0.41	355.0
	207	1.38	0.46	330.0	208	1.46	0.48	330.0	209	1.56	0.52	330.0
	210	1.66	0.55	330.0	211	1.59	0.52	330.0	212	1.69	0.56	330.0
	213	1.84	0.61	330.0	214	2.02	0.67	330.0	215	1.04	0.35	339.0
	216	1.18	0.40	339.0	217	0.78	0.26	339.0	218	0.96	0.32	339.0
	219	1.07	0.36	339.0	220	1.16	0.39	339.0				
192	201	0.83	0.32	389.0	202	0.95	0.37	389.0	203	1.06	0.41	389.0
	204	1.16	0.45	389.0	205	1.04	0.37	355.0	206	1.15	0.41	355.0
	207	1.20	0.40	330.0	208	1.29	0.43	330.0	209	1.37	0.45	330.0
	210	1.42	0.47	330.0	211	1.11	0.37	330.0	212	1.13	0.37	330.0
	213	1.16	0.38	330.0	214	1.22	0.40	330.0	215	0.94	0.32	339.0
	216	1.09	0.37	339.0	217	0.93	0.31	339.0	218	1.09	0.37	339.0

	219	1.15	0.39	339.0	220	1.15	0.39	339.0				
193	201	0.83	0.32	389.0	202	0.96	0.37	389.0	203	1.06	0.41	389.0
	204	1.17	0.45	389.0	205	1.06	0.38	355.0	206	1.18	0.42	355.0
	207	1.19	0.39	330.0	208	1.29	0.43	330.0	209	1.39	0.46	330.0
	210	1.49	0.49	330.0	211	1.82	0.60	330.0	212	1.90	0.63	330.0
	213	2.01	0.66	330.0	214	2.16	0.71	330.0	215	1.07	0.36	339.0
	216	1.21	0.41	339.0	217	1.00	0.34	339.0	218	1.15	0.39	339.0
	219	1.24	0.42	339.0	220	1.30	0.44	339.0				
194	201	0.81	0.31	389.0	202	0.94	0.37	389.0	203	1.05	0.41	389.0
	204	1.15	0.45	389.0	205	1.07	0.38	355.0	206	1.19	0.42	355.0
	207	1.36	0.45	330.0	208	1.45	0.48	330.0	209	1.51	0.50	330.0
	210	1.56	0.51	330.0	211	0.89	0.29	330.0	212	0.91	0.30	330.0
	213	0.94	0.31	330.0	214	1.01	0.33	330.0	215	1.19	0.40	339.0
	216	1.31	0.45	339.0	217	0.81	0.27	339.0	218	0.99	0.34	339.0
	219	1.07	0.36	339.0	220	1.09	0.37	339.0				
195	201	1.25	0.49	389.0	202	1.20	0.47	389.0	203	1.54	0.60	389.0
	204	1.50	0.58	389.0	205	1.38	0.49	355.0	206	1.32	0.47	355.0
	207	1.37	0.45	330.0	208	1.29	0.42	330.0	209	1.22	0.40	330.0
	210	1.17	0.39	330.0	211	2.03	0.67	330.0	212	1.91	0.63	330.0
	213	1.84	0.61	330.0	214	1.80	0.59	330.0	215	1.30	0.44	339.0
	216	1.25	0.42	339.0	217	1.05	0.35	339.0	218	0.99	0.34	339.0
	219	0.87	0.29	339.0	220	0.76	0.26	339.0				
196	201	1.28	0.50	389.0	202	1.21	0.47	389.0	203	1.56	0.61	389.0
	204	1.50	0.58	389.0	205	1.39	0.49	355.0	206	1.30	0.46	355.0
	207	1.59	0.53	330.0	208	1.51	0.50	330.0	209	1.42	0.47	330.0
	210	1.34	0.44	330.0	211	0.90	0.30	330.0	212	0.79	0.26	330.0
	213	0.75	0.25	330.0	214	0.75	0.25	330.0	215	1.22	0.41	339.0
	216	1.13	0.38	339.0	217	1.21	0.41	339.0	218	1.15	0.39	339.0
	219	0.99	0.34	339.0	220	0.82	0.28	339.0				
197	201	1.28	0.50	389.0	202	1.21	0.47	389.0	203	1.56	0.61	389.0
	204	1.50	0.58	389.0	205	1.41	0.50	355.0	206	1.34	0.47	355.0
	207	1.59	0.53	330.0	208	1.50	0.50	330.0	209	1.43	0.47	330.0
	210	1.37	0.45	330.0	211	1.93	0.64	330.0	212	1.76	0.58	330.0
	213	1.64	0.54	330.0	214	1.58	0.52	330.0	215	1.32	0.45	339.0
	216	1.24	0.42	339.0	217	1.28	0.43	339.0	218	1.21	0.41	339.0
	219	1.09	0.37	339.0	220	0.98	0.33	339.0				
198	201	1.25	0.49	389.0	202	1.19	0.46	389.0	203	1.53	0.60	389.0
	204	1.49	0.58	389.0	205	1.40	0.50	355.0	206	1.35	0.48	355.0
	207	1.35	0.45	330.0	208	1.27	0.42	330.0	209	1.17	0.39	330.0
	210	1.07	0.35	330.0	211	1.26	0.42	330.0	212	1.21	0.40	330.0
	213	1.18	0.39	330.0	214	1.16	0.38	330.0	215	1.43	0.48	339.0
	216	1.38	0.47	339.0	217	1.06	0.36	339.0	218	1.00	0.34	339.0
	219	0.85	0.29	339.0	220	0.67	0.23	339.0				
199	201	1.07	0.42	389.0	202	1.00	0.39	389.0	203	1.26	0.49	389.0
	204	1.20	0.47	389.0	205	1.28	0.45	355.0	206	1.21	0.43	355.0
	207	1.39	0.46	330.0	208	1.30	0.43	330.0	209	1.23	0.41	330.0
	210	1.18	0.39	330.0	211	2.06	0.68	330.0	212	1.93	0.64	330.0
	213	1.86	0.61	330.0	214	1.81	0.60	330.0	215	1.31	0.44	339.0
	216	1.25	0.42	339.0	217	1.06	0.36	339.0	218	0.99	0.34	339.0
	219	0.87	0.29	339.0	220	0.75	0.25	339.0				
200	201	1.08	0.42	389.0	202	1.00	0.39	389.0	203	1.27	0.49	389.0
	204	1.20	0.47	389.0	205	1.28	0.45	355.0	206	1.20	0.42	355.0
	207	1.60	0.53	330.0	208	1.52	0.50	330.0	209	1.44	0.48	330.0
	210	1.36	0.45	330.0	211	0.92	0.30	330.0	212	0.82	0.27	330.0
	213	0.79	0.26	330.0	214	0.79	0.26	330.0	215	1.20	0.41	339.0
	216	1.12	0.38	339.0	217	1.24	0.42	339.0	218	1.19	0.41	339.0
	219	1.04	0.35	339.0	220	0.89	0.30	339.0				
201	201	1.08	0.42	389.0	202	1.00	0.39	389.0	203	1.27	0.49	389.0
	204	1.20	0.47	389.0	205	1.30	0.46	355.0	206	1.23	0.43	355.0
	207	1.60	0.53	330.0	208	1.52	0.50	330.0	209	1.45	0.48	330.0
	210	1.39	0.46	330.0	211	1.93	0.64	330.0	212	1.78	0.59	330.0
	213	1.67	0.55	330.0	214	1.61	0.53	330.0	215	1.31	0.44	339.0
	216	1.23	0.42	339.0	217	1.31	0.44	339.0	218	1.26	0.43	339.0
	219	1.15	0.39	339.0	220	1.05	0.36	339.0				
202	201	1.06	0.41	389.0	202	0.99	0.38	389.0	203	1.25	0.49	389.0
	204	1.19	0.46	389.0	205	1.30	0.46	355.0	206	1.24	0.44	355.0
	207	1.38	0.45	330.0	208	1.29	0.43	330.0	209	1.18	0.39	330.0
	210	1.08	0.36	330.0	211	1.30	0.43	330.0	212	1.25	0.41	330.0
	213	1.22	0.40	330.0	214	1.20	0.40	330.0	215	1.43	0.49	339.0
	216	1.38	0.47	339.0	217	1.08	0.36	339.0	218	1.02	0.34	339.0
	219	0.86	0.29	339.0	220	0.67	0.23	339.0				
203	201	2.12	0.83	389.0	202	2.13	0.83	389.0	203	3.20	1.24	389.0
	204	3.20	1.24	389.0	205	2.37	0.84	355.0	206	2.38	0.84	355.0
	207	2.69	0.89	330.0	208	2.69	0.89	330.0	209	2.71	0.89	330.0
	210	2.71	0.90	330.0	211	2.57	0.85	330.0	212	2.60	0.86	330.0
	213	2.64	0.87	330.0	214	2.68	0.88	330.0	215	1.84	0.62	339.0
	216	1.85	0.63	339.0	217	0.80	0.27	339.0	218	0.83	0.28	339.0
	219	0.85	0.29	339.0	220	0.88	0.30	339.0				

204	201	2.13	0.83	389.0	202	2.14	0.83	389.0	203	3.20	1.25	389.0
	204	3.20	1.25	389.0	205	2.38	0.84	355.0	206	2.37	0.84	355.0
	207	2.63	0.87	330.0	208	2.64	0.87	330.0	209	2.65	0.87	330.0
	210	2.64	0.87	330.0	211	2.56	0.85	330.0	212	2.57	0.85	330.0
	213	2.59	0.85	330.0	214	2.59	0.85	330.0	215	1.80	0.61	339.0
	216	1.81	0.61	339.0	217	0.90	0.30	339.0	218	0.92	0.31	339.0
205	219	0.90	0.31	339.0	220	0.88	0.30	339.0				
	201	2.13	0.83	389.0	202	2.13	0.83	389.0	203	3.20	1.24	389.0
	204	3.20	1.24	389.0	205	2.41	0.86	355.0	206	2.42	0.86	355.0
	207	2.61	0.86	330.0	208	2.63	0.87	330.0	209	2.62	0.87	330.0
	210	2.61	0.86	330.0	211	2.75	0.91	330.0	212	2.75	0.91	330.0
	213	2.74	0.90	330.0	214	2.74	0.90	330.0	215	2.00	0.68	339.0
206	216	2.01	0.68	339.0	217	0.99	0.34	339.0	218	1.03	0.35	339.0
	219	1.03	0.35	339.0	220	1.03	0.35	339.0				
	201	2.12	0.83	389.0	202	2.13	0.83	389.0	203	3.19	1.24	389.0
	204	3.20	1.24	389.0	205	2.41	0.86	355.0	206	2.42	0.86	355.0
	207	2.66	0.88	330.0	208	2.68	0.89	330.0	209	2.68	0.88	330.0
	210	2.67	0.88	330.0	211	2.59	0.85	330.0	212	2.58	0.85	330.0
207	213	2.56	0.85	330.0	214	2.55	0.84	330.0	215	2.03	0.69	339.0
	216	2.05	0.69	339.0	217	0.88	0.30	339.0	218	0.94	0.32	339.0
	219	0.96	0.33	339.0	220	0.97	0.33	339.0				
	201	2.13	0.83	389.0	202	2.13	0.83	389.0	203	3.20	1.24	389.0
	204	3.20	1.24	389.0	205	2.38	0.85	355.0	206	2.38	0.84	355.0
	207	2.63	0.87	330.0	208	2.63	0.87	330.0	209	2.64	0.87	330.0
208	210	2.64	0.87	330.0	211	2.67	0.88	330.0	212	2.68	0.88	330.0
	213	2.70	0.89	330.0	214	2.71	0.90	330.0	215	1.85	0.63	339.0
	216	1.86	0.63	339.0	217	0.79	0.27	339.0	218	0.81	0.27	339.0
	219	0.81	0.28	339.0	220	0.82	0.28	339.0				
	201	2.14	0.83	389.0	202	2.14	0.83	389.0	203	3.21	1.25	389.0
	204	3.20	1.25	389.0	205	2.38	0.85	355.0	206	2.37	0.84	355.0
209	207	2.71	0.89	330.0	208	2.70	0.89	330.0	209	2.71	0.89	330.0
	210	2.70	0.89	330.0	211	2.47	0.82	330.0	212	2.49	0.82	330.0
	213	2.52	0.83	330.0	214	2.53	0.84	330.0	215	1.80	0.61	339.0
	216	1.80	0.61	339.0	217	0.95	0.32	339.0	218	0.95	0.32	339.0
	219	0.92	0.31	339.0	220	0.90	0.31	339.0				
	201	2.14	0.83	389.0	202	2.13	0.83	389.0	203	3.21	1.25	389.0
210	204	3.20	1.25	389.0	205	2.42	0.86	355.0	206	2.42	0.86	355.0
	207	2.68	0.89	330.0	208	2.70	0.89	330.0	209	2.68	0.89	330.0
	210	2.67	0.88	330.0	211	2.70	0.89	330.0	212	2.68	0.88	330.0
	213	2.65	0.87	330.0	214	2.63	0.87	330.0	215	2.01	0.68	339.0
	216	2.01	0.68	339.0	217	1.04	0.35	339.0	218	1.06	0.36	339.0
	219	1.05	0.36	339.0	220	1.04	0.35	339.0				
211	201	2.13	0.83	389.0	202	2.13	0.83	389.0	203	3.20	1.24	389.0
	204	3.20	1.24	389.0	205	2.42	0.86	355.0	206	2.42	0.86	355.0
	207	2.60	0.86	330.0	208	2.62	0.86	330.0	209	2.61	0.86	330.0
	210	2.59	0.86	330.0	211	2.65	0.87	330.0	212	2.66	0.88	330.0
	213	2.65	0.87	330.0	214	2.64	0.87	330.0	215	2.05	0.69	339.0
	216	2.06	0.70	339.0	217	0.87	0.30	339.0	218	0.92	0.31	339.0
212	219	0.92	0.31	339.0	220	0.92	0.31	339.0				
	201	1.14	0.45	389.0	202	1.15	0.45	389.0	203	2.12	0.82	389.0
	204	2.12	0.83	389.0	205	1.92	0.68	355.0	206	1.93	0.68	355.0
	207	2.74	0.90	330.0	208	2.75	0.91	330.0	209	2.76	0.91	330.0
	210	2.76	0.91	330.0	211	2.68	0.88	330.0	212	2.70	0.89	330.0
	213	2.74	0.90	330.0	214	2.76	0.91	330.0	215	1.83	0.62	339.0
213	216	1.84	0.62	339.0	217	1.03	0.35	339.0	218	1.05	0.35	339.0
	219	1.06	0.36	339.0	220	1.07	0.36	339.0				
	201	1.15	0.45	389.0	202	1.16	0.45	389.0	203	2.12	0.83	389.0
	204	2.13	0.83	389.0	205	1.92	0.68	355.0	206	1.92	0.68	355.0
	207	2.68	0.89	330.0	208	2.69	0.89	330.0	209	2.70	0.89	330.0
	210	2.69	0.89	330.0	211	2.67	0.88	330.0	212	2.68	0.88	330.0
214	213	2.69	0.89	330.0	214	2.68	0.89	330.0	215	1.79	0.61	339.0
	216	1.80	0.61	339.0	217	1.11	0.38	339.0	218	1.13	0.38	339.0
	219	1.12	0.38	339.0	220	1.11	0.38	339.0				
	201	1.15	0.45	389.0	202	1.15	0.45	389.0	203	2.12	0.83	389.0
	204	2.12	0.83	389.0	205	1.96	0.70	355.0	206	1.97	0.70	355.0
	207	2.66	0.88	330.0	208	2.68	0.89	330.0	209	2.68	0.88	330.0
...	210	2.67	0.88	330.0	211	2.84	0.94	330.0	212	2.85	0.94	330.0
234	219	0.68	0.23	339.0	220	0.53	0.18	339.0	218	0.81	0.28	339.0
Cmb		1000										
		etaT/h										
		4.01										

RISULTATI NODALI

LEGENDA RISULTATI NODALI

Il controllo dei risultati delle analisi condotte, per quanto concerne i nodi strutturali, è possibile in relazione alle tabelle sottoriportate.

Una prima tabella riporta infatti per ogni nodo e per ogni combinazione (o caso di carico) gli spostamenti nodali.

Una seconda tabella riporta per ogni nodo a cui sia associato un vincolo rigido e/o elastico o una fondazione speciale e per ogni combinazione (o caso di carico) i valori delle azioni esercitate dalla struttura sui vincoli (reazioni vincolari cambiate di segno).

Una terza tabella, infine riassume per ogni nodo le sei combinazioni in cui si attingono i valori minimi e massimi della reazione Fz, della reazione Mx e della reazione My.

Nodo	Cmb	Traslazione X cm	Traslazione Y cm	Traslazione Z cm	Rotazione X	Rotazione Y	Rotazione Z
13	1	6.38e-04	-1.78e-04	-0.15	8.62e-05	-7.99e-05	0.0
13	2	6.82e-04	-1.24e-03	-0.15	9.86e-05	-8.06e-05	0.0
13	3	6.63e-04	-1.73e-04	-0.17	1.58e-04	-1.55e-04	0.0
13	4	7.06e-04	-1.23e-03	-0.17	1.71e-04	-1.55e-04	0.0
13	5	-8.29e-05	-4.91e-05	-0.10	5.61e-05	-4.20e-05	0.0
13	6	-3.90e-05	-1.11e-03	-0.11	6.86e-05	-4.26e-05	0.0
13	7	-5.87e-05	-4.39e-05	-0.13	1.28e-04	-1.17e-04	0.0
13	8	-1.48e-05	-1.10e-03	-0.13	1.40e-04	-1.17e-04	0.0
13	9	6.81e-04	-1.50e-04	-0.17	9.20e-05	-7.92e-05	0.0
13	10	7.25e-04	-1.21e-03	-0.17	1.04e-04	-7.98e-05	0.0
13	11	6.93e-04	-1.48e-04	-0.18	1.28e-04	-1.17e-04	0.0
13	12	7.37e-04	-1.21e-03	-0.18	1.40e-04	-1.17e-04	0.0
13	13	-4.00e-05	-2.10e-05	-0.12	6.19e-05	-4.12e-05	0.0
13	14	3.81e-06	-1.08e-03	-0.12	7.44e-05	-4.19e-05	0.0
13	15	-2.79e-05	-1.84e-05	-0.13	9.79e-05	-7.86e-05	0.0
13	16	1.59e-05	-1.08e-03	-0.13	1.10e-04	-7.93e-05	0.0
13	17	7.11e-04	-1.94e-03	-0.15	1.07e-04	-8.10e-05	0.0
13	18	6.50e-04	-1.76e-04	-0.16	1.22e-04	-1.17e-04	0.0
13	19	7.24e-04	-1.94e-03	-0.16	1.43e-04	-1.18e-04	0.0
13	20	-9.83e-06	-1.81e-03	-0.11	7.69e-05	-4.31e-05	0.0
13	21	-7.08e-05	-4.65e-05	-0.11	9.20e-05	-7.94e-05	0.0
13	22	2.28e-06	-1.81e-03	-0.12	1.13e-04	-8.05e-05	0.0
13	23	6.94e-04	-1.24e-03	-0.16	1.35e-04	-1.18e-04	0.0
13	24	-2.69e-05	-1.11e-03	-0.12	1.04e-04	-8.00e-05	0.0
13	25	6.01e-04	8.93e-04	-0.15	7.42e-05	-7.93e-05	0.0
13	26	6.26e-04	8.98e-04	-0.17	1.46e-04	-1.54e-04	0.0
13	27	-1.20e-04	1.02e-03	-0.10	4.42e-05	-4.13e-05	0.0
13	28	-9.56e-05	1.03e-03	-0.12	1.16e-04	-1.16e-04	0.0
13	29	6.44e-04	9.21e-04	-0.17	8.00e-05	-7.86e-05	0.0
13	30	6.56e-04	9.24e-04	-0.18	1.16e-04	-1.16e-04	0.0
13	31	-7.70e-05	1.05e-03	-0.12	5.00e-05	-4.06e-05	0.0
13	32	-6.49e-05	1.05e-03	-0.13	8.59e-05	-7.80e-05	0.0
13	33	6.13e-04	8.96e-04	-0.16	1.10e-04	-1.17e-04	0.0
13	34	-1.08e-04	1.03e-03	-0.11	8.01e-05	-7.88e-05	0.0
13	35	5.77e-04	1.61e-03	-0.15	6.63e-05	-7.89e-05	0.0
13	36	5.89e-04	1.61e-03	-0.16	1.02e-04	-1.16e-04	0.0
13	37	-1.44e-04	1.74e-03	-0.10	3.62e-05	-4.09e-05	0.0
13	38	-1.32e-04	1.74e-03	-0.11	7.21e-05	-7.83e-05	0.0
13	39	7.54e-04	-1.59e-04	-0.20	2.40e-04	-2.38e-04	0.0
13	40	7.79e-04	-1.53e-04	-0.22	3.12e-04	-3.13e-04	0.0
13	41	3.32e-05	-2.93e-05	-0.15	2.10e-04	-2.00e-04	0.0
13	42	5.74e-05	-2.41e-05	-0.17	2.82e-04	-2.75e-04	0.0
13	43	7.97e-04	-1.30e-04	-0.22	2.46e-04	-2.37e-04	0.0
13	44	8.09e-04	-1.28e-04	-0.23	2.82e-04	-2.75e-04	0.0
13	45	7.60e-05	-1.16e-06	-0.17	2.16e-04	-1.99e-04	0.0
13	46	8.81e-05	1.44e-06	-0.18	2.52e-04	-2.37e-04	0.0
13	47	7.67e-04	-1.56e-04	-0.21	2.76e-04	-2.75e-04	0.0
13	48	4.53e-05	-2.67e-05	-0.16	2.46e-04	-2.38e-04	0.0
13	49	8.32e-04	-1.45e-04	-0.23	3.43e-04	-3.43e-04	0.0

13	50	8.44e-04	-1.43e-04	-0.24	3.79e-04	-3.81e-04	0.0
13	51	1.11e-04	-1.61e-05	-0.18	3.13e-04	-3.06e-04	0.0
13	52	1.23e-04	-1.35e-05	-0.19	3.49e-04	-3.43e-04	0.0
13	53	7.98e-04	-1.22e-03	-0.20	2.53e-04	-2.39e-04	0.0
13	54	8.22e-04	-1.21e-03	-0.22	3.25e-04	-3.14e-04	0.0
13	55	7.70e-05	-1.09e-03	-0.15	2.23e-04	-2.01e-04	0.0
13	56	1.01e-04	-1.08e-03	-0.17	2.95e-04	-2.76e-04	0.0
13	57	8.41e-04	-1.19e-03	-0.22	2.59e-04	-2.38e-04	0.0
13	58	8.53e-04	-1.19e-03	-0.23	2.95e-04	-2.75e-04	0.0
13	59	1.20e-04	-1.06e-03	-0.17	2.29e-04	-2.00e-04	0.0
13	60	1.32e-04	-1.06e-03	-0.18	2.65e-04	-2.37e-04	0.0
13	61	8.27e-04	-1.92e-03	-0.20	2.61e-04	-2.39e-04	0.0
13	62	8.40e-04	-1.92e-03	-0.21	2.97e-04	-2.77e-04	0.0
13	63	1.06e-04	-1.79e-03	-0.15	2.31e-04	-2.01e-04	0.0
13	64	1.18e-04	-1.79e-03	-0.16	2.67e-04	-2.39e-04	0.0
13	65	8.10e-04	-1.22e-03	-0.21	2.89e-04	-2.76e-04	0.0
13	66	8.91e-05	-1.09e-03	-0.16	2.59e-04	-2.38e-04	0.0
13	67	8.76e-04	-1.20e-03	-0.23	3.56e-04	-3.44e-04	0.0
13	68	8.88e-04	-1.20e-03	-0.24	3.92e-04	-3.82e-04	0.0
13	69	1.54e-04	-1.08e-03	-0.18	3.26e-04	-3.06e-04	0.0
13	70	1.66e-04	-1.07e-03	-0.19	3.62e-04	-3.44e-04	0.0
13	71	7.17e-04	9.13e-04	-0.20	2.29e-04	-2.37e-04	0.0
13	72	7.42e-04	9.18e-04	-0.22	3.00e-04	-3.12e-04	0.0
13	73	-3.78e-06	1.04e-03	-0.15	1.98e-04	-1.99e-04	0.0
13	74	2.04e-05	1.05e-03	-0.17	2.70e-04	-2.74e-04	0.0
13	75	7.60e-04	9.41e-04	-0.21	2.34e-04	-2.37e-04	0.0
13	76	7.72e-04	9.44e-04	-0.22	2.70e-04	-2.74e-04	0.0
13	77	3.91e-05	1.07e-03	-0.17	2.04e-04	-1.99e-04	0.0
13	78	5.12e-05	1.07e-03	-0.18	2.40e-04	-2.36e-04	0.0
13	79	7.30e-04	9.16e-04	-0.21	2.64e-04	-2.75e-04	0.0
13	80	8.32e-06	1.04e-03	-0.16	2.34e-04	-2.37e-04	0.0
13	81	6.93e-04	1.63e-03	-0.20	2.21e-04	-2.37e-04	0.0
13	82	7.05e-04	1.63e-03	-0.21	2.57e-04	-2.74e-04	0.0
13	83	-2.84e-05	1.76e-03	-0.15	1.90e-04	-1.99e-04	0.0
13	84	-1.63e-05	1.76e-03	-0.16	2.26e-04	-2.36e-04	0.0
13	85	7.95e-04	9.26e-04	-0.22	3.31e-04	-3.43e-04	0.0
13	86	8.07e-04	9.29e-04	-0.24	3.67e-04	-3.80e-04	0.0
13	87	7.36e-05	1.06e-03	-0.18	3.01e-04	-3.05e-04	0.0
13	88	8.57e-05	1.06e-03	-0.19	3.37e-04	-3.42e-04	0.0
13	89	5.22e-04	-1.98e-04	-0.11	-6.81e-05	7.82e-05	0.0
13	90	5.47e-04	-1.93e-04	-0.13	3.79e-06	3.39e-06	0.0
13	91	-1.99e-04	-6.89e-05	-0.06	-9.82e-05	1.16e-04	0.0
13	92	-1.75e-04	-6.37e-05	-0.08	-2.63e-05	4.13e-05	0.0
13	93	5.65e-04	-1.70e-04	-0.13	-6.23e-05	7.90e-05	0.0
13	94	5.77e-04	-1.68e-04	-0.14	-2.63e-05	4.16e-05	0.0
13	95	-1.56e-04	-4.08e-05	-0.08	-9.24e-05	1.17e-04	0.0
13	96	-1.44e-04	-3.82e-05	-0.09	-5.64e-05	7.95e-05	0.0
13	97	5.34e-04	-1.96e-04	-0.12	-3.22e-05	4.08e-05	0.0
13	98	-1.87e-04	-6.63e-05	-0.07	-6.22e-05	7.88e-05	0.0
13	99	4.45e-04	-2.11e-04	-0.08	-1.71e-04	1.84e-04	0.0
13	100	4.57e-04	-2.09e-04	-0.09	-1.35e-04	1.46e-04	0.0
13	101	-2.76e-04	-8.21e-05	-0.03	-2.01e-04	2.22e-04	0.0
13	102	-2.64e-04	-7.95e-05	-0.04	-1.65e-04	1.84e-04	0.0
13	103	5.66e-04	-1.26e-03	-0.11	-5.57e-05	7.76e-05	0.0
13	104	5.90e-04	-1.25e-03	-0.13	1.62e-05	2.74e-06	0.0
13	105	-1.55e-04	-1.13e-03	-0.06	-8.57e-05	1.16e-04	0.0
13	106	-1.31e-04	-1.12e-03	-0.08	-1.39e-05	4.07e-05	0.0
13	107	6.09e-04	-1.23e-03	-0.13	-4.98e-05	7.83e-05	0.0
13	108	6.21e-04	-1.23e-03	-0.14	-1.39e-05	4.09e-05	0.0
13	109	-1.12e-04	-1.10e-03	-0.08	-7.99e-05	1.16e-04	0.0
13	110	-1.00e-04	-1.10e-03	-0.09	-4.40e-05	7.89e-05	0.0
13	111	5.95e-04	-1.96e-03	-0.11	-4.74e-05	7.71e-05	0.0
13	112	6.07e-04	-1.96e-03	-0.12	-1.14e-05	3.97e-05	0.0
13	113	-1.26e-04	-1.83e-03	-0.06	-7.74e-05	1.15e-04	0.0
13	114	-1.14e-04	-1.83e-03	-0.07	-4.15e-05	7.77e-05	0.0
13	115	5.78e-04	-1.25e-03	-0.12	-1.97e-05	4.02e-05	0.0
13	116	-1.43e-04	-1.13e-03	-0.07	-4.98e-05	7.81e-05	0.0
13	117	4.89e-04	-1.27e-03	-0.08	-1.59e-04	1.83e-04	0.0
13	118	5.01e-04	-1.27e-03	-0.09	-1.23e-04	1.46e-04	0.0
13	119	-2.32e-04	-1.14e-03	-0.03	-1.89e-04	2.21e-04	0.0
13	120	-2.20e-04	-1.14e-03	-0.04	-1.53e-04	1.84e-04	0.0
13	121	4.85e-04	8.73e-04	-0.11	-8.01e-05	7.88e-05	0.0
13	122	5.10e-04	8.79e-04	-0.13	-8.16e-06	4.01e-06	0.0
13	123	-2.36e-04	1.00e-03	-0.06	-1.10e-04	1.17e-04	0.0
13	124	-2.12e-04	1.01e-03	-0.08	-3.83e-05	4.20e-05	0.0
13	125	5.28e-04	9.01e-04	-0.13	-7.42e-05	7.96e-05	0.0
13	126	5.40e-04	9.04e-04	-0.14	-3.83e-05	4.22e-05	0.0
13	127	-1.93e-04	1.03e-03	-0.08	-1.04e-04	1.18e-04	0.0

13	128	-1.81e-04	1.03e-03	-0.09	-6.84e-05	8.01e-05	0.0
13	129	4.97e-04	8.76e-04	-0.12	-4.41e-05	4.14e-05	0.0
13	130	-2.24e-04	1.01e-03	-0.07	-7.42e-05	7.94e-05	0.0
13	131	4.61e-04	1.59e-03	-0.11	-8.80e-05	7.93e-05	0.0
13	132	4.73e-04	1.59e-03	-0.12	-5.21e-05	4.18e-05	0.0
13	133	-2.61e-04	1.72e-03	-0.06	-1.18e-04	1.17e-04	0.0
13	134	-2.48e-04	1.72e-03	-0.07	-8.22e-05	7.98e-05	0.0
13	135	4.08e-04	8.60e-04	-0.08	-1.83e-04	1.84e-04	0.0
13	136	4.20e-04	8.63e-04	-0.09	-1.47e-04	1.47e-04	0.0
13	137	-3.13e-04	9.89e-04	-0.03	-2.13e-04	2.22e-04	0.0
13	138	-3.01e-04	9.92e-04	-0.04	-1.77e-04	1.85e-04	0.0
13	139	3.58e-03	3.49e-03	-0.07	-6.13e-05	5.41e-04	-2.37e-06
13	140	4.02e-03	-5.24e-04	-0.07	3.81e-05	5.34e-04	-1.51e-06
13	141	-3.24e-03	2.43e-04	-0.14	8.55e-05	-6.52e-04	0.0
13	142	-2.79e-03	-3.77e-03	-0.14	1.85e-04	-6.60e-04	1.71e-06
13	143	3.19e-03	3.79e-03	-0.07	-8.03e-05	5.44e-04	-2.14e-06
13	144	4.40e-03	-8.23e-04	-0.08	5.71e-05	5.31e-04	-1.74e-06
13	145	-3.62e-03	5.42e-04	-0.14	6.66e-05	-6.50e-04	1.08e-06
13	146	-2.41e-03	-4.07e-03	-0.15	2.04e-04	-6.62e-04	1.48e-06
13	147	2.33e-03	4.29e-03	-0.09	-3.68e-05	2.63e-04	-5.40e-06
13	148	2.77e-03	2.72e-04	-0.09	6.27e-05	2.55e-04	-4.55e-06
13	149	-1.99e-03	-5.53e-04	-0.12	6.10e-05	-3.74e-04	3.89e-06
13	150	-1.54e-03	-4.57e-03	-0.13	1.60e-04	-3.81e-04	4.74e-06
13	151	1.94e-03	4.59e-03	-0.08	-5.57e-05	2.65e-04	-5.17e-06
13	152	3.15e-03	-2.68e-05	-0.09	8.16e-05	2.53e-04	-4.78e-06
13	153	-2.37e-03	-2.54e-04	-0.12	4.21e-05	-3.71e-04	4.12e-06
13	154	-1.16e-03	-4.87e-03	-0.13	1.79e-04	-3.84e-04	4.51e-06
13	155	6.75e-04	7.04e-03	-0.09	-1.26e-04	1.32e-04	-2.24e-06
13	156	2.15e-03	-6.35e-03	-0.10	2.06e-04	1.07e-04	0.0
13	157	-1.37e-03	6.06e-03	-0.11	-8.19e-05	-2.26e-04	-1.28e-06
13	158	1.08e-04	-7.32e-03	-0.13	2.50e-04	-2.51e-04	1.58e-06
13	159	3.00e-04	7.28e-03	-0.09	-1.19e-04	4.86e-05	-3.15e-06
13	160	1.78e-03	-6.11e-03	-0.11	2.13e-04	2.37e-05	0.0
13	161	-9.94e-04	5.83e-03	-0.10	-8.92e-05	-1.42e-04	0.0
13	162	4.83e-04	-7.56e-03	-0.12	2.42e-04	-1.67e-04	2.49e-06
13	163	-6.06e-04	8.03e-03	-0.08	-1.89e-04	1.41e-04	-1.47e-06
13	164	3.43e-03	-7.34e-03	-0.11	2.69e-04	9.89e-05	0.0
13	165	-2.65e-03	7.06e-03	-0.11	-1.45e-04	-2.17e-04	0.0
13	166	1.39e-03	-8.31e-03	-0.13	3.13e-04	-2.59e-04	0.0
13	167	-9.81e-04	8.27e-03	-0.09	-1.82e-04	5.70e-05	-2.38e-06
13	168	3.06e-03	-7.10e-03	-0.11	2.76e-04	1.53e-05	-1.07e-06
13	169	-2.28e-03	6.82e-03	-0.10	-1.52e-04	-1.34e-04	0.0
13	170	1.76e-03	-8.55e-03	-0.12	3.05e-04	-1.76e-04	1.72e-06
13	171	1.88e-03	1.55e-03	-0.09	4.36e-06	2.21e-04	-1.28e-06
13	172	2.09e-03	-3.20e-04	-0.09	5.08e-05	2.17e-04	0.0
13	173	-1.30e-03	3.88e-05	-0.12	7.29e-05	-3.36e-04	0.0
13	174	-1.10e-03	-1.84e-03	-0.12	1.19e-04	-3.39e-04	0.0
13	175	1.70e-03	1.69e-03	-0.09	-4.49e-06	2.22e-04	-1.17e-06
13	176	2.26e-03	-4.59e-04	-0.09	5.96e-05	2.16e-04	0.0
13	177	-1.48e-03	1.78e-04	-0.12	6.41e-05	-3.35e-04	0.0
13	178	-9.16e-04	-1.97e-03	-0.12	1.28e-04	-3.41e-04	0.0
13	179	1.30e-03	1.93e-03	-0.10	1.58e-05	9.09e-05	-2.70e-06
13	180	1.50e-03	5.19e-05	-0.10	6.22e-05	8.75e-05	-2.30e-06
13	181	-7.19e-04	-3.33e-04	-0.11	6.15e-05	-2.06e-04	1.64e-06
13	182	-5.12e-04	-2.21e-03	-0.12	1.08e-04	-2.09e-04	2.04e-06
13	183	1.12e-03	2.07e-03	-0.10	6.96e-06	9.21e-05	-2.59e-06
13	184	1.68e-03	-8.75e-05	-0.10	7.11e-05	8.63e-05	-2.41e-06
13	185	-8.98e-04	-1.93e-04	-0.11	5.26e-05	-2.05e-04	1.75e-06
13	186	-3.32e-04	-2.35e-03	-0.12	1.17e-04	-2.11e-04	1.93e-06
13	187	5.24e-04	3.21e-03	-0.10	-2.58e-05	3.01e-05	-1.22e-06
13	188	1.21e-03	-3.04e-03	-0.11	1.29e-04	1.85e-05	0.0
13	189	-4.30e-04	2.76e-03	-0.11	-5.25e-06	-1.37e-04	0.0
13	190	2.59e-04	-3.49e-03	-0.12	1.49e-04	-1.49e-04	0.0
13	191	3.49e-04	3.32e-03	-0.10	-2.24e-05	-8.92e-06	-1.65e-06
13	192	1.04e-03	-2.93e-03	-0.11	1.32e-04	-2.05e-05	0.0
13	193	-2.55e-04	2.64e-03	-0.11	-8.68e-06	-9.80e-05	0.0
13	194	4.35e-04	-3.60e-03	-0.11	1.46e-04	-1.10e-04	0.0
13	195	-7.42e-05	3.68e-03	-0.10	-5.53e-05	3.40e-05	0.0
13	196	1.81e-03	-3.50e-03	-0.11	1.58e-04	1.45e-05	0.0
13	197	-1.03e-03	3.22e-03	-0.11	-3.48e-05	-1.33e-04	0.0
13	198	8.57e-04	-3.96e-03	-0.12	1.79e-04	-1.53e-04	0.0
13	199	-2.49e-04	3.79e-03	-0.10	-5.19e-05	-5.01e-06	-1.29e-06
13	200	1.64e-03	-3.39e-03	-0.11	1.62e-04	-2.45e-05	0.0
13	201	-8.53e-04	3.11e-03	-0.10	-3.82e-05	-9.41e-05	0.0
13	202	1.03e-03	-4.07e-03	-0.11	1.76e-04	-1.14e-04	0.0
13	203	1.58e-03	1.21e-03	-0.09	1.59e-05	1.65e-04	-1.09e-06
13	204	1.74e-03	-2.84e-04	-0.09	5.30e-05	1.62e-04	0.0
13	205	-9.61e-04	2.69e-06	-0.12	7.07e-05	-2.80e-04	0.0

13	206	-7.96e-04	-1.49e-03	-0.12	1.08e-04	-2.83e-04	0.0
13	207	1.44e-03	1.32e-03	-0.09	8.86e-06	1.65e-04	-1.00e-06
13	208	1.89e-03	-3.95e-04	-0.10	6.01e-05	1.61e-04	0.0
13	209	-1.10e-03	1.14e-04	-0.12	6.36e-05	-2.79e-04	0.0
13	210	-6.53e-04	-1.61e-03	-0.12	1.15e-04	-2.84e-04	0.0
13	211	1.11e-03	1.51e-03	-0.10	2.51e-05	6.07e-05	-2.22e-06
13	212	1.28e-03	1.31e-05	-0.10	6.22e-05	5.79e-05	-1.90e-06
13	213	-4.95e-04	-2.94e-04	-0.11	6.15e-05	-1.76e-04	1.24e-06
13	214	-3.30e-04	-1.79e-03	-0.11	9.86e-05	-1.79e-04	1.56e-06
13	215	9.70e-04	1.62e-03	-0.10	1.80e-05	6.16e-05	-2.14e-06
13	216	1.42e-03	-9.82e-05	-0.10	6.92e-05	5.70e-05	-1.99e-06
13	217	-6.38e-04	-1.83e-04	-0.11	5.45e-05	-1.76e-04	1.33e-06
13	218	-1.87e-04	-1.90e-03	-0.12	1.06e-04	-1.80e-04	1.47e-06
13	219	4.97e-04	2.54e-03	-0.10	-8.17e-06	1.21e-05	-1.04e-06
13	220	1.05e-03	-2.45e-03	-0.11	1.15e-04	2.80e-06	0.0
13	221	-2.65e-04	2.17e-03	-0.11	8.26e-06	-1.21e-04	0.0
13	222	2.86e-04	-2.82e-03	-0.11	1.32e-04	-1.31e-04	0.0
13	223	3.57e-04	2.63e-03	-0.10	-5.42e-06	-1.91e-05	-1.38e-06
13	224	9.08e-04	-2.36e-03	-0.11	1.18e-04	-2.83e-05	0.0
13	225	-1.25e-04	2.08e-03	-0.11	5.52e-06	-9.02e-05	0.0
13	226	4.26e-04	-2.91e-03	-0.11	1.29e-04	-9.95e-05	0.0
13	227	1.96e-05	2.91e-03	-0.10	-3.17e-05	1.52e-05	0.0
13	228	1.53e-03	-2.82e-03	-0.11	1.39e-04	0.0	0.0
13	229	-7.42e-04	2.54e-03	-0.11	-1.53e-05	-1.18e-04	0.0
13	230	7.64e-04	-3.19e-03	-0.12	1.55e-04	-1.34e-04	0.0
13	231	-1.20e-04	3.00e-03	-0.10	-2.90e-05	-1.59e-05	-1.09e-06
13	232	1.39e-03	-2.74e-03	-0.11	1.42e-04	-3.15e-05	0.0
13	233	-6.03e-04	2.45e-03	-0.10	-1.80e-05	-8.71e-05	0.0
13	234	9.04e-04	-3.28e-03	-0.11	1.53e-04	-1.03e-04	0.0
13	235	4.01e-04	-1.34e-04	-0.11	6.31e-05	-5.91e-05	0.0
13	236	4.30e-04	-8.40e-04	-0.11	7.14e-05	-5.95e-05	0.0
13	237	4.17e-04	-1.31e-04	-0.12	1.11e-04	-1.09e-04	0.0
13	238	4.47e-04	-8.37e-04	-0.12	1.19e-04	-1.09e-04	0.0
13	239	4.30e-04	-1.15e-04	-0.12	6.70e-05	-5.86e-05	0.0
13	240	4.59e-04	-8.22e-04	-0.12	7.53e-05	-5.90e-05	0.0
13	241	4.38e-04	-1.14e-04	-0.13	9.10e-05	-8.36e-05	0.0
13	242	4.67e-04	-8.20e-04	-0.13	9.93e-05	-8.40e-05	0.0
13	243	4.50e-04	-1.31e-03	-0.11	7.70e-05	-5.98e-05	0.0
13	244	4.09e-04	-1.32e-04	-0.12	8.71e-05	-8.41e-05	0.0
13	245	4.58e-04	-1.31e-03	-0.12	1.01e-04	-8.48e-05	0.0
13	246	4.38e-04	-8.39e-04	-0.12	9.54e-05	-8.45e-05	0.0
13	247	3.77e-04	5.80e-04	-0.11	5.52e-05	-5.87e-05	0.0
13	248	3.93e-04	5.84e-04	-0.12	1.03e-04	-1.09e-04	0.0
13	249	4.05e-04	5.99e-04	-0.12	5.90e-05	-5.82e-05	0.0
13	250	4.13e-04	6.01e-04	-0.13	8.30e-05	-8.31e-05	0.0
13	251	3.85e-04	5.82e-04	-0.12	7.91e-05	-8.36e-05	0.0
13	252	3.60e-04	1.06e-03	-0.11	4.99e-05	-5.84e-05	0.0
13	253	3.68e-04	1.06e-03	-0.12	7.38e-05	-8.34e-05	0.0
13	254	4.79e-04	-1.21e-04	-0.14	1.66e-04	-1.65e-04	0.0
13	255	4.95e-04	-1.18e-04	-0.15	2.14e-04	-2.14e-04	0.0
13	256	5.07e-04	-1.02e-04	-0.15	1.70e-04	-1.64e-04	0.0
13	257	5.15e-04	-1.01e-04	-0.16	1.94e-04	-1.89e-04	0.0
13	258	4.87e-04	-1.19e-04	-0.15	1.90e-04	-1.89e-04	0.0
13	259	5.30e-04	-1.12e-04	-0.16	2.35e-04	-2.35e-04	0.0
13	260	5.38e-04	-1.10e-04	-0.17	2.59e-04	-2.60e-04	0.0
13	261	5.08e-04	-8.27e-04	-0.14	1.74e-04	-1.65e-04	0.0
13	262	5.24e-04	-8.24e-04	-0.15	2.22e-04	-2.15e-04	0.0
13	263	5.36e-04	-8.08e-04	-0.15	1.78e-04	-1.64e-04	0.0
13	264	5.44e-04	-8.07e-04	-0.16	2.02e-04	-1.89e-04	0.0
13	265	5.27e-04	-1.30e-03	-0.14	1.80e-04	-1.65e-04	0.0
13	266	5.35e-04	-1.30e-03	-0.15	2.04e-04	-1.90e-04	0.0
13	267	5.16e-04	-8.25e-04	-0.15	1.98e-04	-1.90e-04	0.0
13	268	5.59e-04	-8.18e-04	-0.16	2.43e-04	-2.35e-04	0.0
13	269	5.67e-04	-8.17e-04	-0.17	2.67e-04	-2.60e-04	0.0
13	270	4.54e-04	5.93e-04	-0.14	1.58e-04	-1.64e-04	0.0
13	271	4.70e-04	5.97e-04	-0.15	2.06e-04	-2.14e-04	0.0
13	272	4.82e-04	6.12e-04	-0.15	1.62e-04	-1.64e-04	0.0
13	273	4.91e-04	6.14e-04	-0.16	1.86e-04	-1.89e-04	0.0
13	274	4.62e-04	5.95e-04	-0.15	1.82e-04	-1.89e-04	0.0
13	275	4.37e-04	1.07e-03	-0.14	1.53e-04	-1.64e-04	0.0
13	276	4.46e-04	1.07e-03	-0.15	1.77e-04	-1.89e-04	0.0
13	277	5.05e-04	6.02e-04	-0.16	2.27e-04	-2.34e-04	0.0
13	278	5.14e-04	6.04e-04	-0.16	2.51e-04	-2.59e-04	0.0
13	279	3.24e-04	-1.47e-04	-0.08	-3.97e-05	4.63e-05	0.0
13	280	3.40e-04	-1.44e-04	-0.10	8.20e-06	-3.57e-06	0.0
13	281	3.52e-04	-1.29e-04	-0.09	-3.59e-05	4.68e-05	0.0
13	282	3.60e-04	-1.27e-04	-0.10	-1.19e-05	2.19e-05	0.0
13	283	3.32e-04	-1.46e-04	-0.09	-1.58e-05	2.14e-05	0.0

13	284	2.72e-04	-1.56e-04	-0.06	-1.08e-04	1.17e-04	0.0
13	285	2.80e-04	-1.55e-04	-0.07	-8.43e-05	9.17e-05	0.0
13	286	3.53e-04	-8.54e-04	-0.08	-3.14e-05	4.59e-05	0.0
13	287	3.69e-04	-8.50e-04	-0.10	1.65e-05	-4.00e-06	0.0
13	288	3.82e-04	-8.35e-04	-0.09	-2.76e-05	4.64e-05	0.0
13	289	3.90e-04	-8.33e-04	-0.10	-3.59e-06	2.14e-05	0.0
13	290	3.73e-04	-1.32e-03	-0.08	-2.59e-05	4.56e-05	0.0
13	291	3.81e-04	-1.32e-03	-0.09	-1.93e-06	2.07e-05	0.0
13	292	3.61e-04	-8.52e-04	-0.09	-7.46e-06	2.09e-05	0.0
13	293	3.01e-04	-8.62e-04	-0.06	-1.00e-04	1.16e-04	0.0
13	294	3.10e-04	-8.61e-04	-0.07	-7.60e-05	9.12e-05	0.0
13	295	2.99e-04	5.67e-04	-0.08	-4.77e-05	4.67e-05	0.0
13	296	3.15e-04	5.70e-04	-0.10	0.0	-3.15e-06	0.0
13	297	3.28e-04	5.86e-04	-0.09	-4.38e-05	4.72e-05	0.0
13	298	3.36e-04	5.87e-04	-0.10	-1.99e-05	2.23e-05	0.0
...							
1149	311	-6.34e-03	0.13	-1.67	-1.48e-04	-1.58e-04	1.64e-05
Nodo		Traslazione X	Traslazione Y	Traslazione Z	Rotazione X	Rotazione Y	Rotazione Z
		-3.34	-1.68	-3.21	-6.53e-03	-0.01	-6.16e-03
		3.34	1.69	0.88	6.24e-03	0.01	6.03e-03

RISULTATI ELEMENTI TIPO TRAVE

LEGENDA RISULTATI ELEMENTI TIPO TRAVE

Il controllo dei risultati delle analisi condotte, per quanto concerne gli elementi tipo trave, è possibile in relazione alle tabelle sotto riportate.

Gli elementi vengono suddivisi in relazione alle proprietà in elementi:

- tipo **pilastro**
- tipo **trave in elevazione**
- tipo **trave in fondazione**

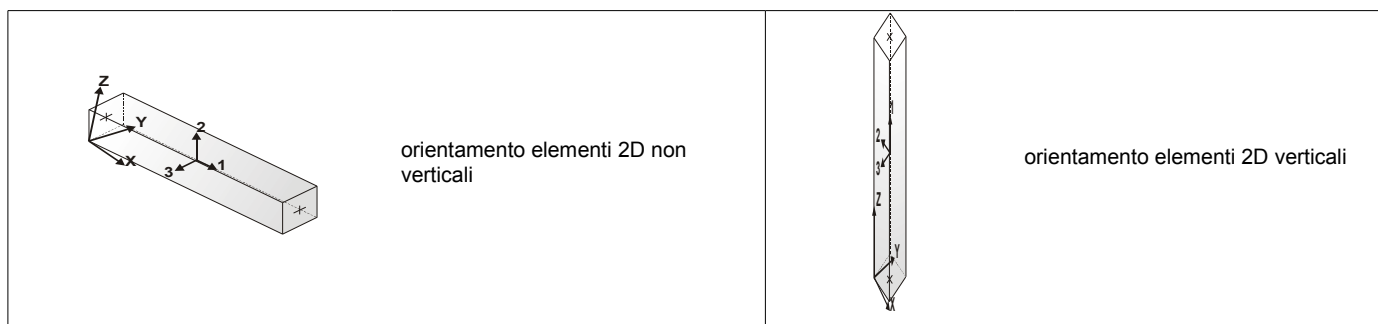
Per ogni elemento e per ogni combinazione (o caso di carico) vengono riportati i risultati più significativi.

Per gli elementi tipo *pilastro* sono riportati in tabella i seguenti valori:

Pilas.	numero dell'elemento pilastro
Cmb	combinazione in cui si verificano i valori riportati
M3 mx/mn	momento flettente in campata M3 max (prima riga) / min (seconda riga)
M2 mx/mn	momento flettente in campata M2 max (prima riga) / min (seconda riga)
D2/D3	freccia massima in direzione 2 (prima riga) / direzione 3 (seconda riga)
Q2/Q3	carico totale in direzione 2 (prima riga) / direzione 3 (seconda riga)
Pos.	ascissa del punto iniziale e finale dell'elemento
N, V2, ecc..	sei componenti di sollecitazione al piede ed in sommità dell'elemento

Per gli elementi tipo *trave in elevazione* sono riportati, oltre al numero dell'elemento, i medesimi risultati visti per i pilastri.

Per gli elementi tipo *trave in fondazione* (trave f.) sono riportati, oltre al numero dell'elemento, i medesimi risultati visti per i pilastri e la massima pressione sul terreno.



Pilas.	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		daN cm	daN cm	cm	daN	cm	daN	daN	daN	daN cm	daN cm	daN cm
201	1	0.14	-0.18	5.78e-03	0.0	0.0	-497.75	4.96	5.21	0.0	-2025.17	-1928.96
		-1928.96	-2025.17	6.40e-03	0.0	389.0	-386.67	4.96	5.21	0.0	-0.18	0.14
201	2	0.15	0.20	5.82e-03	0.0	0.0	-497.75	5.01	0.09	0.0	-33.00	-1947.18
		-1947.18	-33.00	0.04	0.0	389.0	-386.67	5.01	0.09	0.0	0.20	0.15
201	3	0.19	0.09	0.01	0.0	0.0	-933.23	9.50	9.33	0.0	-3629.49	-3693.78
		-3693.78	-3629.49	0.01	0.0	389.0	-822.16	9.50	9.33	0.0	0.09	0.19

201	4	0.19	0.47	0.01	0.0	0.0	-933.23	9.54	4.21	0.0	-1637.32	-3711.99
		-3711.99	-1637.32	0.04	0.0	389.0	-822.16	9.54	4.21	0.0	0.47	0.19
201	5	0.06	0.46	3.03e-03	0.0	0.0	-257.26	2.61	4.09	0.0	-1590.66	-1015.85
		-1015.85	-1590.66	-4.43e-03	0.0	389.0	-171.82	2.61	4.09	0.0	0.46	0.06
201	6	0.06	401.51	3.07e-03	0.0	0.0	-257.26	2.66	-1.03	0.0	401.51	-1034.06
		-1034.06	0.83	0.03	0.0	389.0	-171.82	2.66	-1.03	0.0	0.83	0.06
201	7	0.10	0.72	8.57e-03	0.0	0.0	-692.75	7.15	8.22	0.0	-3194.97	-2780.66
		-2780.66	-3194.97	8.94e-03	0.0	389.0	-607.30	7.15	8.22	0.0	0.72	0.10
201	8	0.10	1.10	8.60e-03	0.0	0.0	-692.75	7.20	3.09	0.0	-1202.80	-2798.88
		-2798.88	-1202.80	0.03	0.0	389.0	-607.30	7.20	3.09	0.0	1.10	0.10
201	9	0.17	-0.23	5.73e-03	0.0	0.0	-497.75	4.91	5.51	0.0	-2141.69	-1910.80
		-1910.80	-2141.69	6.89e-03	0.0	389.0	-386.67	4.91	5.51	0.0	-0.23	0.17
201	10	0.17	0.14	5.77e-03	0.0	0.0	-497.75	4.96	0.38	0.0	-149.52	-1929.01
		-1929.01	-149.52	0.04	0.0	389.0	-386.67	4.96	0.38	0.0	0.14	0.17
201	11	0.19	-0.10	8.50e-03	0.0	0.0	-715.49	7.18	7.57	0.0	-2943.85	-2793.21
		-2793.21	-2943.85	9.70e-03	0.0	389.0	-604.42	7.18	7.57	0.0	-0.10	0.19
201	12	0.19	0.28	8.54e-03	0.0	0.0	-715.49	7.23	2.45	0.0	-951.68	-2811.42
		-2811.42	-951.68	0.04	0.0	389.0	-604.42	7.23	2.45	0.0	0.28	0.19
201	13	0.08	0.40	2.97e-03	0.0	0.0	-257.26	2.56	4.39	0.0	-1707.17	-997.69
		-997.69	-1707.17	-4.10e-03	0.0	389.0	-171.82	2.56	4.39	0.0	0.40	0.08
201	14	0.08	284.99	3.01e-03	0.0	0.0	-257.26	2.61	-0.73	0.0	284.99	-1015.90
		-1015.90	0.78	0.03	0.0	389.0	-171.82	2.61	-0.73	0.0	0.78	0.08
201	15	0.10	0.54	5.74e-03	0.0	0.0	-475.01	4.83	6.45	0.0	-2509.33	-1880.10
		-1880.10	-2509.33	6.63e-03	0.0	389.0	-389.56	4.83	6.45	0.0	0.54	0.10
201	16	0.10	0.92	5.78e-03	0.0	0.0	-475.01	4.88	1.33	0.0	-517.16	-1898.31
		-1898.31	-517.16	0.03	0.0	389.0	-389.56	4.88	1.33	0.0	0.92	0.10
201	17	0.15	1295.11	5.85e-03	0.0	0.0	-497.75	5.04	-3.33	0.0	1295.11	-1959.32
		-1959.32	0.45	0.06	0.0	389.0	-386.67	5.04	-3.33	0.0	0.45	0.15
201	18	0.16	-0.05	8.55e-03	0.0	0.0	-715.49	7.23	7.27	0.0	-2827.33	-2811.37
		-2811.37	-2827.33	9.20e-03	0.0	389.0	-604.42	7.23	7.27	0.0	-0.05	0.16
201	19	0.17	492.95	8.62e-03	0.0	0.0	-715.49	7.31	-1.27	0.0	492.95	-2841.73
		-2841.73	0.58	0.06	0.0	389.0	-604.42	7.31	-1.27	0.0	0.58	0.17
201	20	0.06	1729.62	3.09e-03	0.0	0.0	-257.26	2.69	-4.44	0.0	1729.62	-1046.21
		-1046.21	1.09	0.06	0.0	389.0	-171.82	2.69	-4.44	0.0	1.09	0.06
201	21	0.08	0.59	5.80e-03	0.0	0.0	-475.01	4.88	6.15	0.0	-2392.81	-1898.26
		-1898.26	-2392.81	6.14e-03	0.0	389.0	-389.56	4.88	6.15	0.0	0.59	0.08
201	22	0.08	927.47	5.86e-03	0.0	0.0	-475.01	4.96	-2.38	0.0	927.47	-1928.61
		-1928.61	1.22	0.06	0.0	389.0	-389.56	4.96	-2.38	0.0	1.22	0.08
201	23	0.17	0.33	8.59e-03	0.0	0.0	-715.49	7.27	2.15	0.0	-835.16	-2829.58
		-2829.58	-835.16	0.04	0.0	389.0	-604.42	7.27	2.15	0.0	0.33	0.17
201	24	0.08	0.97	5.84e-03	0.0	0.0	-475.01	4.93	1.03	0.0	-400.65	-1916.47
		-1916.47	-400.65	0.03	0.0	389.0	-389.56	4.93	1.03	0.0	0.97	0.08
201	25	0.14	-0.56	5.74e-03	0.0	0.0	-497.75	4.91	10.13	0.0	-3940.53	-1911.33
		-1911.33	-3940.53	-0.04	0.0	389.0	-386.67	4.91	10.13	0.0	-0.56	0.14
201	26	0.18	-0.29	0.01	0.0	0.0	-933.23	9.45	14.25	0.0	-5544.85	-3676.15
		-3676.15	-5544.85	-0.03	0.0	389.0	-822.16	9.45	14.25	0.0	-0.29	0.18
201	27	0.05	0.08	2.99e-03	0.0	0.0	-257.26	2.57	9.01	0.0	-3506.01	-998.22
		-998.22	-3506.01	-0.04	0.0	389.0	-171.82	2.57	9.01	0.0	0.08	0.05
201	28	0.09	0.35	8.53e-03	0.0	0.0	-692.75	7.10	13.14	0.0	-5110.33	-2763.04
		-2763.04	-5110.33	-0.04	0.0	389.0	-607.30	7.10	13.14	0.0	0.35	0.09
201	29	0.17	-0.61	5.69e-03	0.0	0.0	-497.75	4.87	10.43	0.0	-4057.05	-1893.17
		-1893.17	-4057.05	-0.04	0.0	389.0	-386.67	4.87	10.43	0.0	-0.61	0.17
201	30	0.19	-0.48	8.46e-03	0.0	0.0	-715.49	7.14	12.49	0.0	-4859.21	-2775.58
		-2775.58	-4859.21	-0.04	0.0	389.0	-604.42	7.14	12.49	0.0	-0.48	0.19
201	31	0.08	0.03	2.94e-03	0.0	0.0	-257.26	2.52	9.31	0.0	-3622.53	-980.06
		-980.06	-3622.53	-0.04	0.0	389.0	-171.82	2.52	9.31	0.0	0.03	0.08
201	32	0.10	0.16	5.71e-03	0.0	0.0	-475.01	4.79	11.37	0.0	-4424.69	-1862.47
		-1862.47	-4424.69	-0.04	0.0	389.0	-389.56	4.79	11.37	0.0	0.16	0.10
201	33	0.16	-0.42	8.51e-03	0.0	0.0	-715.49	7.18	12.19	0.0	-4742.69	-2793.74
		-2793.74	-4742.69	-0.04	0.0	389.0	-604.42	7.18	12.19	0.0	-0.42	0.16
201	34	0.07	0.21	5.76e-03	0.0	0.0	-475.01	4.83	11.08	0.0	-4308.17	-1880.63
		-1880.63	-4308.17	-0.04	0.0	389.0	-389.56	4.83	11.08	0.0	0.21	0.07
201	35	0.14	-0.81	5.72e-03	0.0	0.0	-497.75	4.88	13.41	0.0	-5217.44	-1899.58
		-1899.58	-5217.44	-0.06	0.0	389.0	-386.67	4.88	13.41	0.0	-0.81	0.14
201	36	0.16	-0.68	8.49e-03	0.0	0.0	-715.49	7.15	15.47	0.0	-6019.59	-2781.99
		-2781.99	-6019.59	-0.06	0.0	389.0	-604.42	7.15	15.47	0.0	-0.68	0.16
201	37	0.05	-0.17	2.97e-03	0.0	0.0	-257.26	2.54	12.29	0.0	-4782.92	-986.47
		-986.47	-4782.92	-0.06	0.0	389.0	-171.82	2.54	12.29	0.0	-0.17	0.05
201	38	0.07	-0.04	5.73e-03	0.0	0.0	-475.01	4.80	14.36	0.0	-5585.08	-1868.88
		-1868.88	-5585.08	-0.06	0.0	389.0	-389.56	4.80	14.36	0.0	-0.04	0.07
201	39	0.23	-0.06	0.02	0.0	0.0	-1416.72	14.54	12.85	0.0	-4998.31	-5655.30
		-5655.30	-4998.31	0.02	0.0	389.0	-1305.65	14.54	12.85	0.0	-0.06	0.23
201	40	0.27	0.21	0.02	0.0	0.0	-1852.20	19.08	16.97	0.0	-6602.62	-7420.12
		-7420.12	-6602.62	0.03	0.0	389.0	-1741.13	19.08	16.97	0.0	0.21	0.27
201	41	0.14	0.58	0.01	0.0	0.0	-1176.24	12.19	11.73	0.0	-4563.79	-4742.19
		-4742.19	-4563.79	0.02	0.0	389.0	-1090.79	12.19	11.73	0.0	0.58	0.14
201	42	0.18	0.85	0.02	0.0	0.0	-1611.72	16.73	15.86	0.0	-6168.11	-6507.01
		-6507.01	-6168.11	0.02	0.0	389.0	-1526.28	16.73	15.86	0.0	0.85	0.18

201	43	0.25	-0.11	0.02	0.0	0.0	-1416.72	14.49	13.15	0.0	-5114.83	-5637.14
		-5637.14	-5114.83	0.02	0.0	389.0	-1305.65	14.49	13.15	0.0	-0.11	0.25
201	44	0.27	0.02	0.02	0.0	0.0	-1634.46	16.76	15.21	0.0	-5916.98	-6519.55
		-6519.55	-5916.98	0.02	0.0	389.0	-1523.39	16.76	15.21	0.0	0.02	0.27
201	45	0.17	0.53	0.01	0.0	0.0	-1176.24	12.14	12.03	0.0	-4680.31	-4724.03
		-4724.03	-4680.31	0.02	0.0	389.0	-1090.79	12.14	12.03	0.0	0.53	0.17
201	46	0.19	0.66	0.02	0.0	0.0	-1393.98	14.41	14.10	0.0	-5482.47	-5606.44
		-5606.44	-5482.47	0.02	0.0	389.0	-1308.53	14.41	14.10	0.0	0.66	0.19
201	47	0.25	0.08	0.02	0.0	0.0	-1634.46	16.81	14.91	0.0	-5800.47	-6537.71
		-6537.71	-5800.47	0.02	0.0	389.0	-1523.39	16.81	14.91	0.0	0.08	0.25
201	48	0.16	0.71	0.02	0.0	0.0	-1393.98	14.46	13.80	0.0	-5365.95	-5624.60
		-5624.60	-5365.95	0.02	0.0	389.0	-1308.53	14.46	13.80	0.0	0.71	0.16
201	49	0.29	0.02	0.03	0.0	0.0	-2029.37	20.92	17.94	0.0	-6980.40	-8139.53
		-8139.53	-6980.40	0.03	0.0	389.0	-1918.29	20.92	17.94	0.0	0.02	0.29
201	50	0.31	0.16	0.03	0.0	0.0	-2247.11	23.19	20.01	0.0	-7782.56	-9021.94
		-9021.94	-7782.56	0.03	0.0	389.0	-2136.04	23.19	20.01	0.0	0.16	0.31
201	51	0.20	0.66	0.02	0.0	0.0	-1788.88	18.58	16.83	0.0	-6545.88	-7226.42
		-7226.42	-6545.88	0.03	0.0	389.0	-1703.44	18.58	16.83	0.0	0.66	0.20
201	52	0.22	0.79	0.03	0.0	0.0	-2006.63	20.85	18.89	0.0	-7348.04	-8108.83
		-8108.83	-7348.04	0.03	0.0	389.0	-1921.18	20.85	18.89	0.0	0.79	0.22
201	53	0.23	0.32	0.02	0.0	0.0	-1416.72	14.59	7.73	0.0	-3006.14	-5673.52
		-5673.52	-3006.14	0.05	0.0	389.0	-1305.65	14.59	7.73	0.0	0.32	0.23
201	54	0.27	0.59	0.02	0.0	0.0	-1852.20	19.12	11.85	0.0	-4610.45	-7438.33
		-7438.33	-4610.45	0.05	0.0	389.0	-1741.13	19.12	11.85	0.0	0.59	0.27
201	55	0.14	0.96	0.01	0.0	0.0	-1176.24	12.24	6.61	0.0	-2571.62	-4760.41
		-4760.41	-2571.62	0.04	0.0	389.0	-1090.79	12.24	6.61	0.0	0.96	0.14
201	56	0.18	1.22	0.02	0.0	0.0	-1611.72	16.77	10.74	0.0	-4175.94	-6525.22
		-6525.22	-4175.94	0.05	0.0	389.0	-1526.28	16.77	10.74	0.0	1.22	0.18
201	57	0.26	0.27	0.02	0.0	0.0	-1416.72	14.54	8.03	0.0	-3122.66	-5655.36
		-5655.36	-3122.66	0.05	0.0	389.0	-1305.65	14.54	8.03	0.0	0.27	0.26
201	58	0.28	0.40	0.02	0.0	0.0	-1634.46	16.81	10.09	0.0	-3924.81	-6537.77
		-6537.77	-3924.81	0.05	0.0	389.0	-1523.39	16.81	10.09	0.0	0.40	0.28
201	59	0.17	0.90	0.01	0.0	0.0	-1176.24	12.19	6.91	0.0	-2688.14	-4742.25
		-4742.25	-2688.14	0.04	0.0	389.0	-1090.79	12.19	6.91	0.0	0.90	0.17
201	60	0.19	1.04	0.02	0.0	0.0	-1393.98	14.46	8.98	0.0	-3490.30	-5624.65
		-5624.65	-3490.30	0.05	0.0	389.0	-1308.53	14.46	8.98	0.0	1.04	0.19
201	61	0.23	0.57	0.02	0.0	0.0	-1416.72	14.62	4.32	0.0	-1678.03	-5685.66
		-5685.66	-1678.03	0.07	0.0	389.0	-1305.65	14.62	4.32	0.0	0.57	0.23
201	62	0.25	0.71	0.02	0.0	0.0	-1634.46	16.89	6.38	0.0	-2480.18	-6568.07
		-6568.07	-2480.18	0.07	0.0	389.0	-1523.39	16.89	6.38	0.0	0.71	0.25
201	63	0.14	1.21	0.01	0.0	0.0	-1176.24	12.27	3.20	0.0	-1243.51	-4772.55
		-4772.55	-1243.51	0.07	0.0	389.0	-1090.79	12.27	3.20	0.0	1.21	0.14
201	64	0.16	1.34	0.02	0.0	0.0	-1393.98	14.54	5.26	0.0	-2045.67	-5654.96
		-5654.96	-2045.67	0.07	0.0	389.0	-1308.53	14.54	5.26	0.0	1.34	0.16
201	65	0.25	0.45	0.02	0.0	0.0	-1634.46	16.85	9.79	0.0	-3808.30	-6555.93
		-6555.93	-3808.30	0.05	0.0	389.0	-1523.39	16.85	9.79	0.0	0.45	0.25
201	66	0.16	1.09	0.02	0.0	0.0	-1393.98	14.51	8.68	0.0	-3373.78	-5642.82
		-5642.82	-3373.78	0.04	0.0	389.0	-1308.53	14.51	8.68	0.0	1.09	0.16
201	67	0.29	0.40	0.03	0.0	0.0	-2029.37	20.97	12.82	0.0	-4988.23	-8157.75
		-8157.75	-4988.23	0.06	0.0	389.0	-1918.29	20.97	12.82	0.0	0.40	0.29
201	68	0.31	0.53	0.03	0.0	0.0	-2247.11	23.24	14.89	0.0	-5790.39	-9040.16
		-9040.16	-5790.39	0.06	0.0	389.0	-2136.04	23.24	14.89	0.0	0.53	0.31
201	69	0.20	1.04	0.02	0.0	0.0	-1788.88	18.62	11.71	0.0	-4553.71	-7244.64
		-7244.64	-4553.71	0.05	0.0	389.0	-1703.44	18.62	11.71	0.0	1.04	0.20
201	70	0.22	1.17	0.03	0.0	0.0	-2006.63	20.89	13.77	0.0	-5355.87	-8127.04
		-8127.04	-5355.87	0.05	0.0	389.0	-1921.18	20.89	13.77	0.0	1.17	0.22
201	71	0.23	-0.44	0.02	0.0	0.0	-1416.72	14.49	17.77	0.0	-6913.67	-5637.68
		-5637.68	-6913.67	-0.03	0.0	389.0	-1305.65	14.49	17.77	0.0	-0.44	0.23
201	72	0.27	-0.17	0.02	0.0	0.0	-1852.20	19.03	21.90	0.0	-8517.98	-7402.49
		-7402.49	-8517.98	-0.02	0.0	389.0	-1741.13	19.03	21.90	0.0	-0.17	0.27
201	73	0.14	0.20	0.01	0.0	0.0	-1176.24	12.15	16.66	0.0	-6479.15	-4724.56
		-4724.56	-6479.15	-0.03	0.0	389.0	-1090.79	12.15	16.66	0.0	0.20	0.14
201	74	0.18	0.47	0.02	0.0	0.0	-1611.72	16.68	20.78	0.0	-8083.47	-6489.38
		-6489.38	-8083.47	-0.03	0.0	389.0	-1526.28	16.68	20.78	0.0	0.47	0.18
201	75	0.25	-0.49	0.02	0.0	0.0	-1416.72	14.45	18.07	0.0	-7030.18	-5619.51
		-5619.51	-7030.18	-0.02	0.0	389.0	-1305.65	14.45	18.07	0.0	-0.49	0.25
201	76	0.27	-0.36	0.02	0.0	0.0	-1634.46	16.72	20.13	0.0	-7832.34	-6501.92
		-6501.92	-7832.34	-0.02	0.0	389.0	-1523.39	16.72	20.13	0.0	-0.36	0.27
201	77	0.16	0.15	0.01	0.0	0.0	-1176.24	12.10	16.96	0.0	-6595.67	-4706.40
		-4706.40	-6595.67	-0.03	0.0	389.0	-1090.79	12.10	16.96	0.0	0.15	0.16
201	78	0.18	0.28	0.02	0.0	0.0	-1393.98	14.37	19.02	0.0	-7397.83	-5588.81
		-5588.81	-7397.83	-0.03	0.0	389.0	-1308.53	14.37	19.02	0.0	0.28	0.18
201	79	0.25	-0.30	0.02	0.0	0.0	-1634.46	16.76	19.83	0.0	-7715.82	-6520.08
		-6520.08	-7715.82	-0.02	0.0	389.0	-1523.39	16.76	19.83	0.0	-0.30	0.25
201	80	0.16	0.33	0.02	0.0	0.0	-1393.98	14.41	18.72	0.0	-7281.31	-5606.97
		-5606.97	-7281.31	-0.03	0.0	389.0	-1308.53	14.41	18.72	0.0	0.33	0.16
201	81	0.23	-0.69	0.02	0.0	0.0	-1416.72	14.46	21.05	0.0	-8190.57	-5625.92
		-5625.92	-8190.57	-0.05	0.0	389.0	-1305.65	14.46	21.05	0.0	-0.69	0.23

201	82	0.25	-0.55	0.02	0.0	0.0	-1634.46	16.73	23.12	0.0	-8992.73	-6508.33
		-6508.33	-8992.73	-0.05	0.0	389.0	-1523.39	16.73	23.12	0.0	-0.55	0.25
201	83	0.14	-0.05	0.01	0.0	0.0	-1176.24	12.12	19.94	0.0	-7756.06	-4712.81
		-4712.81	-7756.06	-0.05	0.0	389.0	-1090.79	12.12	19.94	0.0	-0.05	0.14
201	84	0.16	0.08	0.02	0.0	0.0	-1393.98	14.38	22.00	0.0	-8558.21	-5595.22
		-5595.22	-8558.21	-0.05	0.0	389.0	-1308.53	14.38	22.00	0.0	0.08	0.16
201	85	0.29	-0.36	0.03	0.0	0.0	-2029.37	20.88	22.87	0.0	-8895.76	-8121.90
		-8121.90	-8895.76	0.02	0.0	389.0	-1918.29	20.88	22.87	0.0	-0.36	0.29
201	86	0.31	-0.22	0.03	0.0	0.0	-2247.11	23.15	24.93	0.0	-9697.91	-9004.31
		-9004.31	-9697.91	0.02	0.0	389.0	-2136.04	23.15	24.93	0.0	-0.22	0.31
201	87	0.20	0.28	0.02	0.0	0.0	-1788.88	18.53	21.75	0.0	-8461.24	-7208.79
		-7208.79	-8461.24	-0.02	0.0	389.0	-1703.44	18.53	21.75	0.0	0.28	0.20
201	88	0.22	0.42	0.03	0.0	0.0	-2006.63	20.80	23.81	0.0	-9263.40	-8091.20
		-8091.20	-9263.40	-0.02	0.0	389.0	-1921.18	20.80	23.81	0.0	0.42	0.22
201	89	1797.38	947.96	-5.94e-03	0.0	0.0	421.22	-4.62	-2.44	0.0	947.96	1797.38
		0.06	-0.30	-0.01	0.0	389.0	532.30	-4.62	-2.44	0.0	-0.30	0.06
201	90	32.57	-0.03	-7.80e-04	0.0	0.0	-14.26	-0.08	1.69	0.0	-656.35	32.57
		0.10	-656.35	-9.36e-03	0.0	389.0	96.82	-0.08	1.69	0.0	-0.03	0.10
201	91	2710.49	1382.48	-8.69e-03	0.0	0.0	661.71	-6.97	-3.55	0.0	1382.48	2710.49
		-0.03	0.34	-0.02	0.0	389.0	747.15	-6.97	-3.55	0.0	0.34	-0.03
201	92	945.68	0.60	-3.16e-03	0.0	0.0	226.22	-2.43	0.57	0.0	-221.84	945.68
		0.01	-221.84	-0.01	0.0	389.0	311.67	-2.43	0.57	0.0	0.60	0.01
201	93	1815.54	831.45	-6.00e-03	0.0	0.0	421.22	-4.67	-2.14	0.0	831.45	1815.54
		0.08	-0.35	-0.01	0.0	389.0	532.30	-4.67	-2.14	0.0	-0.35	0.08
201	94	933.14	29.29	-3.27e-03	0.0	0.0	203.48	-2.40	-0.08	0.0	29.29	933.14
		0.10	-0.22	-9.77e-03	0.0	389.0	314.56	-2.40	-0.08	0.0	-0.22	0.10
201	95	2728.66	1265.96	-8.74e-03	0.0	0.0	661.71	-7.01	-3.25	0.0	1265.96	2728.66
		-5.41e-03	0.28	-0.02	0.0	389.0	747.15	-7.01	-3.25	0.0	0.28	-5.41e-03
201	96	1846.25	463.80	-5.97e-03	0.0	0.0	443.97	-4.75	-1.19	0.0	463.80	1846.25
		0.01	0.42	-0.01	0.0	389.0	529.41	-4.75	-1.19	0.0	0.42	0.01
201	97	914.98	145.81	-3.22e-03	0.0	0.0	203.48	-2.35	-0.38	0.0	145.81	914.98
		0.08	-0.17	-0.01	0.0	389.0	314.56	-2.35	-0.38	0.0	-0.17	0.08
201	98	1828.09	580.32	-5.92e-03	0.0	0.0	443.97	-4.70	-1.49	0.0	580.32	1828.09
		-9.58e-03	0.47	-0.01	0.0	389.0	529.41	-4.70	-1.49	0.0	0.47	-9.58e-03
201	99	4281.61	2930.05	-0.01	0.0	0.0	1033.87	-11.01	-7.53	0.0	2930.05	4281.61
		1.81e-03	-0.38	-0.02	0.0	389.0	1144.95	-11.01	-7.53	0.0	-0.38	1.81e-03
201	100	3399.20	2127.90	-0.01	0.0	0.0	816.13	-8.74	-5.47	0.0	2127.90	3399.20
		0.02	-0.25	-0.02	0.0	389.0	927.20	-8.74	-5.47	0.0	-0.25	0.02
201	101	5194.72	3364.57	-0.02	0.0	0.0	1274.36	-13.35	-8.65	0.0	3364.57	5194.72
		-0.09	0.25	-0.02	0.0	389.0	1359.80	-13.35	-8.65	0.0	0.25	-0.09
201	102	4312.32	2562.41	-0.01	0.0	0.0	1056.61	-11.09	-6.59	0.0	2562.41	4312.32
		-0.07	0.39	-0.02	0.0	389.0	1142.06	-11.09	-6.59	0.0	0.39	-0.07
201	103	1779.17	2940.13	-5.91e-03	0.0	0.0	421.22	-4.57	-7.56	0.0	2940.13	1779.17
		0.06	0.08	0.03	0.0	389.0	532.30	-4.57	-7.56	0.0	0.08	0.06
201	104	14.35	1335.82	-8.28e-04	0.0	0.0	-14.26	-0.04	-3.43	0.0	1335.82	14.35
		0.10	0.34	0.03	0.0	389.0	96.82	-0.04	-3.43	0.0	0.34	0.10
201	105	2692.28	3374.65	-8.65e-03	0.0	0.0	661.71	-6.92	-8.67	0.0	3374.65	2692.28
		-0.03	0.71	0.02	0.0	389.0	747.15	-6.92	-8.67	0.0	0.71	-0.03
201	106	927.46	1770.33	-3.13e-03	0.0	0.0	226.22	-2.38	-4.55	0.0	1770.33	927.46
		0.01	0.98	0.02	0.0	389.0	311.67	-2.38	-4.55	0.0	0.98	0.01
201	107	1797.33	2823.61	-5.96e-03	0.0	0.0	421.22	-4.62	-7.26	0.0	2823.61	1797.33
		0.09	0.02	0.03	0.0	389.0	532.30	-4.62	-7.26	0.0	0.02	0.09
201	108	914.92	2021.46	-3.24e-03	0.0	0.0	203.48	-2.35	-5.20	0.0	2021.46	914.92
		0.11	0.16	0.03	0.0	389.0	314.56	-2.35	-5.20	0.0	0.16	0.11
201	109	2710.44	3258.13	-8.70e-03	0.0	0.0	661.71	-6.97	-8.37	0.0	3258.13	2710.44
		-3.59e-03	0.66	0.02	0.0	389.0	747.15	-6.97	-8.37	0.0	0.66	-3.59e-03
201	110	1828.03	2455.97	-5.93e-03	0.0	0.0	443.97	-4.70	-6.31	0.0	2455.97	1828.03
		0.02	0.79	0.02	0.0	389.0	529.41	-4.70	-6.31	0.0	0.79	0.02
201	111	1767.03	4268.24	-5.89e-03	0.0	0.0	421.22	-4.54	-10.97	0.0	4268.24	1767.03
		0.06	0.33	0.05	0.0	389.0	532.30	-4.54	-10.97	0.0	0.33	0.06
201	112	884.62	3466.09	-3.16e-03	0.0	0.0	203.48	-2.27	-8.91	0.0	3466.09	884.62
		0.08	0.46	0.05	0.0	389.0	314.56	-2.27	-8.91	0.0	0.46	0.08
201	113	2680.14	4702.76	-8.62e-03	0.0	0.0	661.71	-6.89	-12.09	0.0	4702.76	2680.14
		-0.03	0.97	0.05	0.0	389.0	747.15	-6.89	-12.09	0.0	0.97	-0.03
201	114	1797.73	3900.60	-5.85e-03	0.0	0.0	443.97	-4.62	-10.02	0.0	3900.60	1797.73
		-6.53e-03	1.10	0.05	0.0	389.0	529.41	-4.62	-10.02	0.0	1.10	-6.53e-03
201	115	896.76	2137.97	-3.18e-03	0.0	0.0	203.48	-2.31	-5.50	0.0	2137.97	896.76
		0.08	0.21	0.03	0.0	389.0	314.56	-2.31	-5.50	0.0	0.21	0.08
201	116	1809.87	2572.49	-5.88e-03	0.0	0.0	443.97	-4.65	-6.61	0.0	2572.49	1809.87
		-7.75e-03	0.85	0.02	0.0	389.0	529.41	-4.65	-6.61	0.0	0.85	-7.75e-03
201	117	4263.40	4922.22	-0.01	0.0	0.0	1033.87	-10.96	-12.65	0.0	4922.22	4263.40
		3.63e-03	-4.65e-03	0.02	0.0	389.0	1144.95	-10.96	-12.65	0.0	-4.65e-03	3.63e-03
201	118	3380.99	4120.07	-0.01	0.0	0.0	816.13	-8.69	-10.59	0.0	4120.07	3380.99
		0.02	0.13	0.02	0.0	389.0	927.20	-8.69	-10.59	0.0	0.13	0.02
201	119	5176.51	5356.74	-0.02	0.0	0.0	1274.36	-13.31	-13.77	0.0	5356.74	5176.51
		-0.09	0.63	0.02	0.0	389.0	1359.80	-13.31	-13.77	0.0	0.63	-0.09
201	120	4294.10	4554.58	-0.01	0.0	0.0	1056.61	-11.04	-11.71	0.0	4554.58	4294.10
		-0.06	0.77	0.02	0.0	389.0	1142.06	-11.04	-11.71	0.0	0.77	-0.06

201	121	1815.01	-0.68	-5.97e-03	0.0	0.0	421.22	-4.67	2.49	0.0	-967.39	1815.01
		0.06	-967.39	-0.05	0.0	389.0	532.30	-4.67	2.49	0.0	-0.68	0.06
201	122	50.20	-0.41	-7.31e-04	0.0	0.0	-14.26	-0.13	6.61	0.0	-2571.71	50.20
		0.10	-2571.71	-0.05	0.0	389.0	96.82	-0.13	6.61	0.0	-0.41	0.10
201	123	2728.12	-0.04	-8.72e-03	0.0	0.0	661.71	-7.01	1.37	0.0	-532.88	2728.12
		-0.03	-532.88	-0.05	0.0	389.0	747.15	-7.01	1.37	0.0	-0.04	-0.03
201	124	963.31	0.23	-3.19e-03	0.0	0.0	226.22	-2.48	5.49	0.0	-2137.19	963.31
		8.99e-03	-2137.19	-0.05	0.0	389.0	311.67	-2.48	5.49	0.0	0.23	8.99e-03
201	125	1833.17	-0.73	-6.03e-03	0.0	0.0	421.22	-4.71	2.78	0.0	-1083.91	1833.17
		0.08	-1083.91	-0.05	0.0	389.0	532.30	-4.71	2.78	0.0	-0.73	0.08
201	126	950.77	-0.60	-3.30e-03	0.0	0.0	203.48	-2.44	4.85	0.0	-1886.07	950.77
		0.10	-1886.07	-0.05	0.0	389.0	314.56	-2.44	4.85	0.0	-0.60	0.10
201	127	2746.28	-0.10	-8.78e-03	0.0	0.0	661.71	-7.06	1.67	0.0	-649.40	2746.28
		-7.07e-03	-649.40	-0.05	0.0	389.0	747.15	-7.06	1.67	0.0	-0.10	-7.07e-03
201	128	1863.88	0.04	-6.01e-03	0.0	0.0	443.97	-4.79	3.73	0.0	-1451.55	1863.88
		0.01	-1451.55	-0.05	0.0	389.0	529.41	-4.79	3.73	0.0	0.04	0.01
201	129	932.60	-0.55	-3.25e-03	0.0	0.0	203.48	-2.40	4.55	0.0	-1769.55	932.60
		0.08	-1769.55	-0.05	0.0	389.0	314.56	-2.40	4.55	0.0	-0.55	0.08
201	130	1845.72	0.09	-5.96e-03	0.0	0.0	443.97	-4.74	3.43	0.0	-1335.04	1845.72
		-0.01	-1335.04	-0.05	0.0	389.0	529.41	-4.74	3.43	0.0	0.09	-0.01
201	131	1826.76	-0.93	-6.00e-03	0.0	0.0	421.22	-4.70	5.77	0.0	-2244.30	1826.76
		0.06	-2244.30	-0.07	0.0	389.0	532.30	-4.70	5.77	0.0	-0.93	0.06
201	132	944.36	-0.80	-3.27e-03	0.0	0.0	203.48	-2.43	7.83	0.0	-3046.46	944.36
		0.08	-3046.46	-0.07	0.0	389.0	314.56	-2.43	7.83	0.0	-0.80	0.08
201	133	2739.88	-0.29	-8.75e-03	0.0	0.0	661.71	-7.04	4.65	0.0	-1809.78	2739.88
		-0.03	-1809.78	-0.08	0.0	389.0	747.15	-7.04	4.65	0.0	-0.29	-0.03
201	134	1857.47	-0.16	-5.98e-03	0.0	0.0	443.97	-4.78	6.71	0.0	-2611.94	1857.47
		-0.01	-2611.94	-0.08	0.0	389.0	529.41	-4.78	6.71	0.0	-0.16	-0.01
201	135	4299.24	1014.70	-0.01	0.0	0.0	1033.87	-11.05	-2.61	0.0	1014.70	4299.24
		1.50e-04	-0.76	-0.05	0.0	389.0	1144.95	-11.05	-2.61	0.0	-0.76	1.50e-04
201	136	3416.83	212.54	-0.01	0.0	0.0	816.13	-8.78	-0.55	0.0	212.54	3416.83
		0.02	-0.63	-0.05	0.0	389.0	927.20	-8.78	-0.55	0.0	-0.63	0.02
201	137	5212.35	1449.21	-0.02	0.0	0.0	1274.36	-13.40	-3.73	0.0	1449.21	5212.35
		-0.09	-0.12	-0.06	0.0	389.0	1359.80	-13.40	-3.73	0.0	-0.12	-0.09
201	138	4329.94	647.05	-0.01	0.0	0.0	1056.61	-11.13	-1.66	0.0	647.05	4329.94
		-0.07	0.01	-0.06	0.0	389.0	1142.06	-11.13	-1.66	0.0	0.01	-0.07
201	139	-102.85	-9.34	-2.21	0.0	0.0	-367.19	312.37	16.00	0.0	-6232.95	-1.215e+05
		-1.215e+05	-6232.95	-0.12	0.0	389.0	-281.75	312.37	16.00	0.0	-9.34	-102.85
201	140	-102.77	1.265e+04	-2.22	0.0	0.0	-368.79	312.82	-32.52	0.0	1.265e+04	-1.216e+05
		-1.216e+05	-1.90	0.23	0.0	389.0	-283.35	312.82	-32.52	0.0	-1.90	-102.77
201	141	1.188e+05	1.84	2.21	0.0	0.0	-363.48	-305.46	40.23	0.0	-1.565e+04	1.188e+05
		102.96	-1.565e+04	-0.23	0.0	389.0	-278.03	-305.46	40.23	0.0	1.84	102.96
201	142	1.186e+05	3232.84	2.21	0.0	0.0	-365.08	-305.01	-8.29	0.0	3232.84	1.186e+05
		103.03	9.28	0.12	0.0	389.0	-279.64	-305.01	-8.29	0.0	9.28	103.03
201	143	-102.85	-2.50	-2.21	0.0	0.0	-368.97	312.31	25.96	0.0	-1.010e+04	-1.214e+05
		-1.214e+05	-1.010e+04	-0.20	0.0	389.0	-283.53	312.31	25.96	0.0	-2.50	-102.85
201	144	-102.78	1.652e+04	-2.21	0.0	0.0	-367.01	312.87	-42.48	0.0	1.652e+04	-1.217e+05
		-1.217e+05	-8.73	0.30	0.0	389.0	-281.56	312.87	-42.48	0.0	-8.73	-102.78
201	145	1.188e+05	8.67	2.21	0.0	0.0	-365.26	-305.52	50.19	0.0	-1.952e+04	1.188e+05
		102.96	-1.952e+04	-0.30	0.0	389.0	-279.82	-305.52	50.19	0.0	8.67	102.96
201	146	1.186e+05	7101.53	2.21	0.0	0.0	-363.30	-304.96	-18.25	0.0	7101.53	1.186e+05

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		103.03	2.44	0.19	0.0	389.0	-277.85	-304.96	-18.25	0.0	2.44	103.03
201	147	-68.84	-5.48	-1.18	0.0	0.0	-367.21	168.80	23.61	0.0	-9188.11	-6.564e+04
		-6.564e+04	-9188.11	-0.15	0.0	389.0	-281.77	168.80	23.61	0.0	-5.48	-68.84
201	148	-68.76	9691.55	-1.19	0.0	0.0	-368.82	169.25	-24.91	0.0	9691.55	-6.581e+04
		-6.581e+04	1.96	0.20	0.0	389.0	-283.38	169.25	-24.91	0.0	1.96	-68.76
201	149	6.295e+04	-2.02	1.18	0.0	0.0	-363.45	-161.90	32.62	0.0	-1.269e+04	6.295e+04
		68.95	-1.269e+04	-0.20	0.0	389.0	-278.01	-161.90	32.62	0.0	-2.02	68.95
...												
220	311	-0.66	0.71	-0.02	0.0	339.0	-284.11	-12.71	-1.45	0.0	0.71	-0.66
Pilas.		M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3		N	V 2	V 3	T		
		-4.905e+05	-1.282e+05	-3.33	-1178.10		-9561.72	-2692.20	-751.85	-2620.89		
		4.869e+05	1.243e+05	3.33	1178.10		3960.28	2689.08	758.61	2900.82		

Trave	Cmb	M3 mx/mn daN cm	M2 mx/mn daN cm	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
1	1	773.71	0.0	0.0	-12.14	0.0	-98.52	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-87.72	-6.07	0.0	0.0	0.0	0.0
1	2	773.71	0.0	0.0	-12.14	0.0	-408.73	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-397.93	-6.07	0.0	0.0	0.0	0.0
1	3	773.71	0.0	0.0	-12.14	0.0	-170.34	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-159.54	-6.07	0.0	0.0	0.0	0.0
1	4	773.71	0.0	0.0	-12.14	0.0	-480.55	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-469.75	-6.07	0.0	0.0	0.0	0.0
1	5	595.16	0.0	0.0	-9.34	0.0	-90.01	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-81.71	-4.67	0.0	0.0	0.0	0.0
1	6	595.16	0.0	0.0	-9.34	0.0	-400.22	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-391.91	-4.67	0.0	0.0	0.0	0.0
1	7	595.16	0.0	0.0	-9.34	0.0	-161.84	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-153.53	-4.67	0.0	0.0	0.0	0.0
1	8	595.16	0.0	0.0	-9.34	0.0	-472.05	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-463.74	-4.67	0.0	0.0	0.0	0.0
1	9	773.71	0.0	0.0	-12.14	0.0	-99.72	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-88.92	-6.07	0.0	0.0	0.0	0.0
1	10	773.71	0.0	0.0	-12.14	0.0	-409.93	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-399.13	-6.07	0.0	0.0	0.0	0.0
1	11	773.71	0.0	0.0	-12.14	0.0	-135.63	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-124.83	-6.07	0.0	0.0	0.0	0.0
1	12	773.71	0.0	0.0	-12.14	0.0	-445.84	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-435.04	-6.07	0.0	0.0	0.0	0.0
1	13	595.16	0.0	0.0	-9.34	0.0	-91.22	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-82.91	-4.67	0.0	0.0	0.0	0.0
1	14	595.16	0.0	0.0	-9.34	0.0	-401.42	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-393.12	-4.67	0.0	0.0	0.0	0.0
1	15	595.16	0.0	0.0	-9.34	0.0	-127.13	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-118.82	-4.67	0.0	0.0	0.0	0.0
1	16	595.16	0.0	0.0	-9.34	0.0	-437.34	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-429.03	-4.67	0.0	0.0	0.0	0.0
1	17	773.71	0.0	0.0	-12.14	0.0	-615.53	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-604.73	-6.07	0.0	0.0	0.0	0.0
1	18	773.71	0.0	0.0	-12.14	0.0	-134.43	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-123.63	-6.07	0.0	0.0	0.0	0.0
1	19	773.71	0.0	0.0	-12.14	0.0	-651.44	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-640.65	-6.07	0.0	0.0	0.0	0.0
1	20	595.16	0.0	0.0	-9.34	0.0	-607.03	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-598.72	-4.67	0.0	0.0	0.0	0.0
1	21	595.16	0.0	0.0	-9.34	0.0	-125.93	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-117.62	-4.67	0.0	0.0	0.0	0.0
1	22	595.16	0.0	0.0	-9.34	0.0	-642.94	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-634.63	-4.67	0.0	0.0	0.0	0.0

1	23	773.71	0.0	0.0	-12.14	0.0	-444.64	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-433.84	-6.07	0.0	0.0	0.0	0.0
1	24	595.16	0.0	0.0	-9.34	0.0	-436.13	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-427.83	-4.67	0.0	0.0	0.0	0.0
1	25	773.71	0.0	0.0	-12.14	0.0	232.01	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	242.81	-6.07	0.0	0.0	0.0	0.0
1	26	773.71	0.0	0.0	-12.14	0.0	168.19	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	170.99	-6.07	0.0	0.0	0.0	0.0
1	27	595.16	0.0	0.0	-9.34	0.0	240.52	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	248.83	-4.67	0.0	0.0	0.0	0.0
1	28	595.16	0.0	0.0	-9.34	0.0	168.70	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	177.00	-4.67	0.0	0.0	0.0	0.0
1	29	773.71	0.0	0.0	-12.14	0.0	230.81	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	241.61	-6.07	0.0	0.0	0.0	0.0
1	30	773.71	0.0	0.0	-12.14	0.0	194.90	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	205.70	-6.07	0.0	0.0	0.0	0.0
1	31	595.16	0.0	0.0	-9.34	0.0	239.32	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	247.63	-4.67	0.0	0.0	0.0	0.0
1	32	595.16	0.0	0.0	-9.34	0.0	203.41	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	211.71	-4.67	0.0	0.0	0.0	0.0
1	33	773.71	0.0	0.0	-12.14	0.0	196.10	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	206.90	-6.07	0.0	0.0	0.0	0.0
1	34	595.16	0.0	0.0	-9.34	0.0	204.61	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	212.92	-4.67	0.0	0.0	0.0	0.0
1	35	773.71	0.0	0.0	-12.14	0.0	452.37	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	463.17	-6.07	0.0	0.0	0.0	0.0
1	36	773.71	0.0	0.0	-12.14	0.0	416.46	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	427.26	-6.07	0.0	0.0	0.0	0.0
1	37	595.16	0.0	0.0	-9.34	0.0	460.88	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	469.18	-4.67	0.0	0.0	0.0	0.0
1	38	595.16	0.0	0.0	-9.34	0.0	424.96	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	433.27	-4.67	0.0	0.0	0.0	0.0
1	39	773.71	0.0	0.0	-12.14	0.0	-139.37	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-128.58	-6.07	0.0	0.0	0.0	0.0
1	40	773.71	0.0	0.0	-12.14	0.0	-211.20	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-200.40	-6.07	0.0	0.0	0.0	0.0
1	41	595.16	0.0	0.0	-9.34	0.0	-130.87	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-122.56	-4.67	0.0	0.0	0.0	0.0
1	42	595.16	0.0	0.0	-9.34	0.0	-202.69	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-194.39	-4.67	0.0	0.0	0.0	0.0
1	43	773.71	0.0	0.0	-12.14	0.0	-140.58	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-129.78	-6.07	0.0	0.0	0.0	0.0
1	44	773.71	0.0	0.0	-12.14	0.0	-176.49	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-165.69	-6.07	0.0	0.0	0.0	0.0
1	45	595.16	0.0	0.0	-9.34	0.0	-132.07	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-123.76	-4.67	0.0	0.0	0.0	0.0
1	46	595.16	0.0	0.0	-9.34	0.0	-167.98	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-159.68	-4.67	0.0	0.0	0.0	0.0
1	47	773.71	0.0	0.0	-12.14	0.0	-175.29	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-164.49	-6.07	0.0	0.0	0.0	0.0
1	48	595.16	0.0	0.0	-9.34	0.0	-166.78	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-158.47	-4.67	0.0	0.0	0.0	0.0
1	49	773.71	0.0	0.0	-12.14	0.0	-166.61	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-155.81	-6.07	0.0	0.0	0.0	0.0
1	50	773.71	0.0	0.0	-12.14	0.0	-202.52	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-191.72	-6.07	0.0	0.0	0.0	0.0
1	51	595.16	0.0	0.0	-9.34	0.0	-158.11	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-149.80	-4.67	0.0	0.0	0.0	0.0
1	52	595.16	0.0	0.0	-9.34	0.0	-194.02	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-185.71	-4.67	0.0	0.0	0.0	0.0
1	53	773.71	0.0	0.0	-12.14	0.0	-449.58	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-438.78	-6.07	0.0	0.0	0.0	0.0
1	54	773.71	0.0	0.0	-12.14	0.0	-521.41	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-510.61	-6.07	0.0	0.0	0.0	0.0
1	55	595.16	0.0	0.0	-9.34	0.0	-441.08	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-432.77	-4.67	0.0	0.0	0.0	0.0
1	56	595.16	0.0	0.0	-9.34	0.0	-512.90	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-504.59	-4.67	0.0	0.0	0.0	0.0
1	57	773.71	0.0	0.0	-12.14	0.0	-450.78	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-439.98	-6.07	0.0	0.0	0.0	0.0
1	58	773.71	0.0	0.0	-12.14	0.0	-486.70	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-475.90	-6.07	0.0	0.0	0.0	0.0
1	59	595.16	0.0	0.0	-9.34	0.0	-442.28	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-433.97	-4.67	0.0	0.0	0.0	0.0
1	60	595.16	0.0	0.0	-9.34	0.0	-478.19	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-469.88	-4.67	0.0	0.0	0.0	0.0
1	61	773.71	0.0	0.0	-12.14	0.0	-656.39	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-645.59	-6.07	0.0	0.0	0.0	0.0

1	62	773.71	0.0	0.0	-12.14	0.0	-692.30	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-681.50	-6.07	0.0	0.0	0.0	0.0
1	63	595.16	0.0	0.0	-9.34	0.0	-647.88	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-639.57	-4.67	0.0	0.0	0.0	0.0
1	64	595.16	0.0	0.0	-9.34	0.0	-683.79	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-675.49	-4.67	0.0	0.0	0.0	0.0
1	65	773.71	0.0	0.0	-12.14	0.0	-485.49	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-474.70	-6.07	0.0	0.0	0.0	0.0
1	66	595.16	0.0	0.0	-9.34	0.0	-476.99	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-468.68	-4.67	0.0	0.0	0.0	0.0
1	67	773.71	0.0	0.0	-12.14	0.0	-476.82	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-466.02	-6.07	0.0	0.0	0.0	0.0
1	68	773.71	0.0	0.0	-12.14	0.0	-512.73	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-501.93	-6.07	0.0	0.0	0.0	0.0
1	69	595.16	0.0	0.0	-9.34	0.0	-468.31	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-460.01	-4.67	0.0	0.0	0.0	0.0
1	70	595.16	0.0	0.0	-9.34	0.0	-504.22	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-495.92	-4.67	0.0	0.0	0.0	0.0
1	71	773.71	0.0	0.0	-12.14	0.0	191.16	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	201.96	-6.07	0.0	0.0	0.0	0.0
1	72	773.71	0.0	0.0	-12.14	0.0	119.34	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	130.13	-6.07	0.0	0.0	0.0	0.0
1	73	595.16	0.0	0.0	-9.34	0.0	199.67	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	207.97	-4.67	0.0	0.0	0.0	0.0
1	74	595.16	0.0	0.0	-9.34	0.0	127.84	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	136.15	-4.67	0.0	0.0	0.0	0.0
1	75	773.71	0.0	0.0	-12.14	0.0	189.96	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	200.76	-6.07	0.0	0.0	0.0	0.0
1	76	773.71	0.0	0.0	-12.14	0.0	154.05	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	164.85	-6.07	0.0	0.0	0.0	0.0
1	77	595.16	0.0	0.0	-9.34	0.0	198.46	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	206.77	-4.67	0.0	0.0	0.0	0.0
1	78	595.16	0.0	0.0	-9.34	0.0	162.55	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	170.86	-4.67	0.0	0.0	0.0	0.0
1	79	773.71	0.0	0.0	-12.14	0.0	155.25	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	166.05	-6.07	0.0	0.0	0.0	0.0
1	80	595.16	0.0	0.0	-9.34	0.0	163.75	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	172.06	-4.67	0.0	0.0	0.0	0.0
1	81	773.71	0.0	0.0	-12.14	0.0	411.52	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	422.31	-6.07	0.0	0.0	0.0	0.0
1	82	773.71	0.0	0.0	-12.14	0.0	375.60	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	386.40	-6.07	0.0	0.0	0.0	0.0
1	83	595.16	0.0	0.0	-9.34	0.0	420.02	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	428.33	-4.67	0.0	0.0	0.0	0.0
1	84	595.16	0.0	0.0	-9.34	0.0	384.11	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	392.42	-4.67	0.0	0.0	0.0	0.0
1	85	773.71	0.0	0.0	-12.14	0.0	163.92	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	174.72	-6.07	0.0	0.0	0.0	0.0
1	86	773.71	0.0	0.0	-12.14	0.0	128.01	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	138.81	-6.07	0.0	0.0	0.0	0.0
1	87	595.16	0.0	0.0	-9.34	0.0	172.43	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	180.74	-4.67	0.0	0.0	0.0	0.0
1	88	595.16	0.0	0.0	-9.34	0.0	136.52	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	144.82	-4.67	0.0	0.0	0.0	0.0
1	89	773.71	0.0	0.0	-12.14	0.0	-57.67	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-46.87	-6.07	0.0	0.0	0.0	0.0
1	90	773.71	0.0	0.0	-12.14	0.0	-129.49	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-118.69	-6.07	0.0	0.0	0.0	0.0
1	91	595.16	0.0	0.0	-9.34	0.0	-49.16	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-40.85	-4.67	0.0	0.0	0.0	0.0
1	92	595.16	0.0	0.0	-9.34	0.0	-120.98	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-112.68	-4.67	0.0	0.0	0.0	0.0
1	93	773.71	0.0	0.0	-12.14	0.0	-58.87	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-48.07	-6.07	0.0	0.0	0.0	0.0
1	94	773.71	0.0	0.0	-12.14	0.0	-94.78	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-83.98	-6.07	0.0	0.0	0.0	0.0
1	95	595.16	0.0	0.0	-9.34	0.0	-50.36	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-42.05	-4.67	0.0	0.0	0.0	0.0
1	96	595.16	0.0	0.0	-9.34	0.0	-86.27	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-77.97	-4.67	0.0	0.0	0.0	0.0
1	97	773.71	0.0	0.0	-12.14	0.0	-93.58	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-82.78	-6.07	0.0	0.0	0.0	0.0
1	98	595.16	0.0	0.0	-9.34	0.0	-85.07	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-76.76	-4.67	0.0	0.0	0.0	0.0
1	99	773.71	0.0	0.0	-12.14	0.0	-30.43	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-19.63	-6.07	0.0	0.0	0.0	0.0
1	100	773.71	0.0	0.0	-12.14	0.0	-66.34	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-55.54	-6.07	0.0	0.0	0.0	0.0

1	101	595.16	0.0	0.0	-9.34	0.0	-21.92	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-13.62	-4.67	0.0	0.0	0.0	0.0
1	102	595.16	0.0	0.0	-9.34	0.0	-57.83	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-49.53	-4.67	0.0	0.0	0.0	0.0
1	103	773.71	0.0	0.0	-12.14	0.0	-367.87	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-357.07	-6.07	0.0	0.0	0.0	0.0
1	104	773.71	0.0	0.0	-12.14	0.0	-439.70	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-428.90	-6.07	0.0	0.0	0.0	0.0
1	105	595.16	0.0	0.0	-9.34	0.0	-359.37	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-351.06	-4.67	0.0	0.0	0.0	0.0
1	106	595.16	0.0	0.0	-9.34	0.0	-431.19	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-422.88	-4.67	0.0	0.0	0.0	0.0
1	107	773.71	0.0	0.0	-12.14	0.0	-369.07	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-358.28	-6.07	0.0	0.0	0.0	0.0
1	108	773.71	0.0	0.0	-12.14	0.0	-404.99	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-394.19	-6.07	0.0	0.0	0.0	0.0
1	109	595.16	0.0	0.0	-9.34	0.0	-360.57	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-352.26	-4.67	0.0	0.0	0.0	0.0
1	110	595.16	0.0	0.0	-9.34	0.0	-396.48	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-388.17	-4.67	0.0	0.0	0.0	0.0
1	111	773.71	0.0	0.0	-12.14	0.0	-574.68	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-563.88	-6.07	0.0	0.0	0.0	0.0
1	112	773.71	0.0	0.0	-12.14	0.0	-610.59	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-599.79	-6.07	0.0	0.0	0.0	0.0
1	113	595.16	0.0	0.0	-9.34	0.0	-566.17	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-557.86	-4.67	0.0	0.0	0.0	0.0
1	114	595.16	0.0	0.0	-9.34	0.0	-602.08	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-593.78	-4.67	0.0	0.0	0.0	0.0
1	115	773.71	0.0	0.0	-12.14	0.0	-403.78	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-392.99	-6.07	0.0	0.0	0.0	0.0
1	116	595.16	0.0	0.0	-9.34	0.0	-395.28	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-386.97	-4.67	0.0	0.0	0.0	0.0
1	117	773.71	0.0	0.0	-12.14	0.0	-340.64	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-329.84	-6.07	0.0	0.0	0.0	0.0
1	118	773.71	0.0	0.0	-12.14	0.0	-376.55	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-365.75	-6.07	0.0	0.0	0.0	0.0
1	119	595.16	0.0	0.0	-9.34	0.0	-332.13	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-323.82	-4.67	0.0	0.0	0.0	0.0
1	120	595.16	0.0	0.0	-9.34	0.0	-368.04	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-359.74	-4.67	0.0	0.0	0.0	0.0
1	121	773.71	0.0	0.0	-12.14	0.0	272.87	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	283.67	-6.07	0.0	0.0	0.0	0.0
1	122	773.71	0.0	0.0	-12.14	0.0	201.05	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	211.84	-6.07	0.0	0.0	0.0	0.0
1	123	595.16	0.0	0.0	-9.34	0.0	281.37	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	289.68	-4.67	0.0	0.0	0.0	0.0
1	124	595.16	0.0	0.0	-9.34	0.0	209.55	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	217.86	-4.67	0.0	0.0	0.0	0.0
1	125	773.71	0.0	0.0	-12.14	0.0	271.67	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	282.47	-6.07	0.0	0.0	0.0	0.0
1	126	773.71	0.0	0.0	-12.14	0.0	235.76	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	246.55	-6.07	0.0	0.0	0.0	0.0
1	127	595.16	0.0	0.0	-9.34	0.0	280.17	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	288.48	-4.67	0.0	0.0	0.0	0.0
1	128	595.16	0.0	0.0	-9.34	0.0	244.26	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	252.57	-4.67	0.0	0.0	0.0	0.0
1	129	773.71	0.0	0.0	-12.14	0.0	236.96	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	247.76	-6.07	0.0	0.0	0.0	0.0
1	130	595.16	0.0	0.0	-9.34	0.0	245.46	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	253.77	-4.67	0.0	0.0	0.0	0.0
1	131	773.71	0.0	0.0	-12.14	0.0	493.23	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	504.02	-6.07	0.0	0.0	0.0	0.0
1	132	773.71	0.0	0.0	-12.14	0.0	457.31	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	468.11	-6.07	0.0	0.0	0.0	0.0
1	133	595.16	0.0	0.0	-9.34	0.0	501.73	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	510.04	-4.67	0.0	0.0	0.0	0.0
1	134	595.16	0.0	0.0	-9.34	0.0	465.82	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	474.13	-4.67	0.0	0.0	0.0	0.0
1	135	773.71	0.0	0.0	-12.14	0.0	300.11	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	310.90	-6.07	0.0	0.0	0.0	0.0
1	136	773.71	0.0	0.0	-12.14	0.0	264.19	6.07	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	274.99	-6.07	0.0	0.0	0.0	0.0
1	137	595.16	0.0	0.0	-9.34	0.0	308.61	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	316.92	-4.67	0.0	0.0	0.0	0.0
1	138	595.16	0.0	0.0	-9.34	0.0	272.70	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	281.01	-4.67	0.0	0.0	0.0	0.0
1	139	595.16	0.0	0.0	-9.34	0.0	1086.72	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	1095.03	-4.67	0.0	0.0	0.0	0.0

1	140	595.16	0.0	0.0	-9.34	0.0	-1795.26	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-1786.95	-4.67	0.0	0.0	0.0	0.0
1	141	595.16	0.0	0.0	-9.34	0.0	1641.17	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	1649.48	-4.67	0.0	0.0	0.0	0.0
1	142	595.16	0.0	0.0	-9.34	0.0	-1240.80	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-1232.50	-4.67	0.0	0.0	0.0	0.0
1	143	595.16	0.0	0.0	-9.34	0.0	1631.89	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	1640.20	-4.67	0.0	0.0	0.0	0.0
1	144	595.16	0.0	0.0	-9.34	0.0	-2340.43	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-2332.12	-4.67	0.0	0.0	0.0	0.0
1	145	595.16	0.0	0.0	-9.34	0.0	2186.35	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	2194.66	-4.67	0.0	0.0	0.0	0.0
1	146	595.16	0.0	0.0	-9.34	0.0	-1785.98	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-1777.67	-4.67	0.0	0.0	0.0	0.0
1	147	595.16	0.0	0.0	-9.34	0.0	1461.59	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	1469.90	-4.67	0.0	0.0	0.0	0.0
1	148	595.16	0.0	0.0	-9.34	0.0	-1420.38	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	-1412.07	-4.67	0.0	0.0	0.0	0.0
1	149	595.16	0.0	0.0	-9.34	0.0	1266.30	4.67	0.0	0.0	0.0	0.0
		0.0	0.0	0.0	0.0	510.0	1274.61	-4.67	0.0	0.0	0.0	0.0
...												
297	311	0.0	0.0	-6.22e-03	0.0	381.0	-155.45	-29.87	0.0	-0.02	0.0	0.0
Trave		M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3		N	V 2	V 3	T		
		-2.673e+05	-4.841e+04	-2.94	-6767.79		-6780.75	-5844.31	-381.20	-217.64		
		9.632e+05	4.841e+04	2.84	1907.94		6634.97	5835.37	381.19	217.20		

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. 14 Gennaio 2008 e circ. 2 Febbraio 2009 n.617) 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	Trazione, Compressione	X	X	X
	Taglio, 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. 14 Gennaio 2008 e circ. 2 Febbraio 2009 n.617 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	Trazione, Compressione	X	X
	Taglio, Torsione		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
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 del par. 7.5.4.3 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
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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	Trazione	si	si	si
4.2.4.1.2	Compressione	si	si	si
4.2.4.1.2	Taglio, Torsione	si	si	si
4.2.4.1.2	Flessione, taglio e forza assiale	si	si	si
4.2.4.1.3.1	Aste compresse	si	si	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		Pilastro		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 (4.2.17 e 4.2.29)
V N/M						(TRAVI E PILASTRI) verifica di resistenza come da par. 4.2.4.1.2 per azioni composte (4.2.34) con riduzione per taglio (4.2.41) ove richiesto
N	M3	M2	V2	V3	T	sollecitazioni di interesse per la verifica
V stab						(ASTE) verifica come da par. 4.2.4.1.3 per punto (4.2.42)
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		B22xL		B33xL		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 (4.2.49)
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.7.5.3 M Ed	Verifica come prevista al punto 7.5.3 e valore dell' azione flettente
V.7.5.4 N Ed	Verifica come prevista al punto 7.5.4 e valore dell' azione assiale
V.7.5.5 V Ed,G V Ed,M	Verifica come prevista al punto 7.5.5 e valore dei tagli dovuti ai carichi e alla capacità
V.7.5.9 V Ed	Verifica come prevista al punto 7.5.9 e valore dell' azione di taglio
sovr. Xi (Xf, Yi, Yf)	Valore della sovrarresistenza come prevista al par. 7.5.4.3 (i valori non sono normalizzati pertanto saranno maggiori uguali a gamma rd classe di duttilità)

Con riferimento al **Documento di Affidabilità** "Test di validazione del software di calcolo PRO_SAP e dei moduli aggiuntivi PRO_SAP Modulo Geotecnico, PRO_CAD nodi acciaio e PRO_MST" - versione Settembre 2014, disponibile per il download sul sito www.2si.it, si segnalano i seguenti esempi applicativi:

Test N°	Titolo
56	VERIFICA DI STABILITA' DI ASTE COMPRESSE IN ACCIAIO – METODO OMEGA
57	LUCE LIBERA DI TRAVI E ASTE IN ACCIAIO
58	LUCE LIBERA DI COLONNE IN ACCIAIO
59	SVERGOLAMENTO DI TRAVI IN ACCIAIO
61	ACCIAIO D.M. 2008
63	GERARCHIA RESISTENZE STRUTTURE IN ACCIAIO
64	STABILITA' DI ASTE COMPOSTE IN ACCIAIO
73	VALUTAZIONE EFFETTO P-δ SU PILASTRATA
74	VALUTAZIONE EFFETTO P-δ SU TELAIO 3D

Asta	Stato	Note	V N	N	V stab	N	Cl.	Beta x L	Snell.	LambDa S	Chi mn	v.Omeg	Rif. cmb
				daN		daN		cm					
1	ok	s=4,m=1 1	0.82	-6776.6			2	510.0	1020.0	11.75	6.96e-03	0.0	164,0
2	ok	s=4,m=1 1	0.81	-6632.7			2	510.0	1020.0	11.75	6.96e-03	0.0	165,0
3	ok	s=4,m=1 1	0.72	-5939.5			2	510.0	1020.0	11.75	6.96e-03	0.0	158,0
4	ok	s=4,m=1 1	0.71	-5882.2			2	510.0	1020.0	11.75	6.96e-03	0.0	155,0
5	ok	s=4,m=1 1	1.02e-03	-8.4			2	521.4	1042.7	12.01	6.66e-03	0.0	169,0
6	ok	s=4,m=1 1	8.62e-04	-7.1			2	521.4	1042.7	12.01	6.66e-03	0.0	147,0
7	ok	s=4,m=1 1	9.56e-04	-7.9			2	523.8	1047.5	12.07	6.60e-03	0.0	156,0
8	ok	s=4,m=1 1	9.57e-04	-7.9			2	523.8	1047.5	12.07	6.60e-03	0.0	146,0
Asta			V N	N	V stab	N		Beta x L	Snell.	LambDa S	Chi mn	v.Omeg	
				-6776.60						11.75	6.60e-03	0.0	

			0.82	-7.09				523.75	1047.50	12.07		0.0	
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Trav e	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
221	ok	s=7,m=1 1	0.07	0.42		1					0.41	0.5	1.00	154,154,0,15 4
222	ok	s=7,m=1 1	0.05	0.29		1					0.29	0.4	1.00	154,154,0,15 4
223	ok	s=7,m=1 1	0.07	0.41		1					0.41	0.5	1.00	154,151,0,15 1
228	ok	s=6,m=1 1	0.07	0.28		1					0.28	0.2	1.00	68,86,0,68
229	ok	s=6,m=1 1	1.25e- 03	0.28		1					0.28	0.3	1.00	131,86,0,68
230	ok	s=6,m=1 1	0.07	0.28		1					0.28	0.2	1.00	68,86,0,86
231	ok	s=5,m=1 1	0.05	0.21		1					0.41	1.4	0.50	68,50,0,50
232	ok	s=5,m=1 1	0.09	0.40		1					0.80	1.4	0.50	86,50,0,50
233	ok	s=5,m=1 1	0.09	0.40		1					0.80	1.4	0.50	68,50,0,50
234	ok	s=13,m=11	0.04	0.19		1								68,86,0,0
235	ok	s=6,m=1 1	0.14	0.55		1					0.55	0.2	1.00	68,86,0,68
236	ok	s=6,m=1 1	1.25e- 03	0.55		1					0.55	0.3	1.00	131,86,0,86
237	ok	s=6,m=1 1	0.14	0.55		1					0.55	0.2	1.00	68,86,0,86
238	ok	s=5,m=1 1	0.05	0.21	0.14	1	2.4	0.7	207.1	0.15	0.41	1.4	0.50	68,50,163,50
239	ok	s=5,m=1 1	0.09	0.40		1					0.80	1.4	0.50	68,50,0,50
240	ok	s=5,m=1 1	0.09	0.40		1					0.80	1.4	0.50	68,50,0,50
241	ok	s=13,m=11	0.04	0.19	0.10	1	2.3	0.7	202.3	0.15				68,86,165,0
242	ok	s=6,m=1 1	0.14	0.55		1					0.55	0.2	1.00	86,86,0,68
243	ok	s=6,m=1 1	1.25e- 03	0.55		1					0.55	0.3	1.00	135,86,0,68
244	ok	s=6,m=1 1	0.14	0.55		1					0.55	0.2	1.00	86,86,0,86
245	ok	s=5,m=1 1	0.05	0.21	0.19	1	2.4	0.7	207.1	0.15	0.41	1.4	0.50	68,50,163,50
246	ok	s=5,m=1 1	0.09	0.40		1					0.80	1.4	0.50	68,50,0,50
247	ok	s=5,m=1 1	0.09	0.40		1					0.80	1.4	0.50	86,50,0,50
248	ok	s=13,m=11	0.04	0.19	0.14	1	2.3	0.7	202.3	0.15				68,86,165,0

249	ok	s=6,m=1 1	0.14	0.53		1					0.53	0.2	1.00	86,86,0,68
250	ok	s=6,m=1 1	1.25e- 03	0.53		1					0.53	0.3	1.00	81,86,0,50
251	ok	s=6,m=1 1	0.14	0.53		1					0.53	0.2	1.00	86,86,0,86
252	ok	s=5,m=1 1	0.05	0.26	0.25	1	2.4	0.7	207.1	0.15	0.35	1.0	0.74	68,68,169,68
253	ok	s=5,m=1 1	0.09	0.35		1					0.66	1.3	0.53	68,50,0,50
254	ok	s=5,m=1 1	0.09	0.35		1					0.66	1.3	0.53	86,50,0,50
255	ok	s=13,m=11	0.04	0.23	0.20	1	2.3	0.7	202.3	0.15				68,86,167,0
256	ok	s=13,m=11	0.07	0.46		1								86,86,0,0
257	ok	s=13,m=11	8.35e- 04	0.46		1								117,86,0,0
258	ok	s=13,m=11	0.07	0.46		1								86,86,0,0
259	ok	s=5,m=1 1	0.13	0.14	0.24	1	2.4	0.7	207.1	0.15	0.14	0.1	1.00	68,68,169,86
260	ok	s=13,m=11	0.10	0.13	0.19	1	2.3	0.7	202.3	0.15				68,86,167,0
261	ok	s=13,m=11	0.04	0.17		1								68,68,0,0
262	ok	s=13,m=11	0.01	0.19		1								68,68,0,0
263	ok	s=13,m=11	0.04	0.17		1								68,68,0,0
264	ok	s=13,m=11	0.04	0.19		1								86,68,0,0
265	ok	s=13,m=11	0.04	0.19		1								68,68,0,0
266	ok	s=6,m=1 1	0.07	0.28		1					0.28	0.2	1.00	86,68,0,86
267	ok	s=6,m=1 1	0.14	0.55		1					0.55	0.2	1.00	86,50,0,68
268	ok	s=6,m=1 1	0.14	0.55		1					0.55	0.2	1.00	86,50,0,68
269	ok	s=6,m=1 1	0.07	0.28	0.13	1	1.1	0.7	95.6	0.48	0.28	0.2	1.00	68,68,162,86
270	ok	s=5,m=1 1	0.09	0.40		1					0.80	1.4	0.50	68,50,0,50
271	ok	s=5,m=1 1	0.09	0.40		1					0.80	1.4	0.50	86,50,0,50
272	ok	s=5,m=1 1	0.09	0.40		1					0.80	1.4	0.50	68,50,0,50
273	ok	s=6,m=1 1	5.86e- 03	0.28		1					0.28	0.3	1.00	143,86,0,68
274	ok	s=6,m=1 1	4.59e- 03	0.55		1					0.55	0.3	1.00	145,50,0,50
275	ok		4.57e-	0.55		1					0.55	0.3	1.00	146,50,0,68

		s=6,m=1 1	03											
276	ok	s=6,m=1 1	5.90e- 03	0.28	0.16	1	1.1	0.7	95.6	0.48	0.28	0.3	1.00	144,50,162,5 0
277	ok	s=5,m=1 1	0.09	0.40		1					0.80	1.4	0.50	86,50,0,50
278	ok	s=5,m=1 1	0.09	0.40		1					0.80	1.4	0.50	86,50,0,50
279	ok	s=5,m=1 1	0.09	0.40		1					0.80	1.4	0.50	86,50,0,50
280	ok	s=6,m=1 1	0.07	0.28		1					0.28	0.2	1.00	86,86,0,68
281	ok	s=6,m=1 1	0.14	0.55		1					0.55	0.2	1.00	86,50,0,86
282	ok	s=6,m=1 1	0.14	0.55		1					0.55	0.2	1.00	86,50,0,86
283	ok	s=6,m=1 1	0.07	0.28	0.13	1	1.1	0.7	95.6	0.48	0.28	0.2	1.00	68,86,162,68
284	ok	s=7,m=1 1	0.07	0.41		1					0.41	0.5	1.00	147,150,0,15 0
285	ok	s=7,m=1 1	0.06	0.32		1					0.32	0.4	1.00	153,153,0,15 3
286	ok	s=7,m=1 1	0.07	0.42		1					0.42	0.5	1.00	153,152,0,15 2
287	ok	s=2,m=1 1	0.11	0.59		1					0.69	0.7	0.85	40,40,0,40
288	ok	s=2,m=1 1	0.15	0.55		1					0.65	0.7	0.85	90,90,0,90
289	ok	s=2,m=1 1	0.15	0.55		1					0.64	0.7	0.85	90,90,0,90
290	ok	s=2,m=1 1	0.11	0.59		1					0.69	0.7	0.85	40,40,0,40
291	ok	s=2,m=1 1	0.11	0.59		1					0.69	0.7	0.85	40,40,0,40
292	ok	s=2,m=1 1	0.15	0.55		1					0.65	0.7	0.85	90,90,0,90
293	ok	s=2,m=1 1	0.15	0.55		1					0.65	0.7	0.85	90,90,0,90
294	ok	s=2,m=1 1	0.11	0.59		1					0.69	0.7	0.85	40,40,0,40
295	ok	s=8,m=1 1	2.66e- 03	0.01		1					0.02	1.4	0.50	131,17,0,17
296	ok	s=8,m=1 1	2.66e- 03	0.01	0.09	1	2.4	0.7	207.1	0.15	0.02	1.4	0.50	68,4,40,4
297	ok	s=8,m=1 1	2.66e- 03	0.01		1					0.02	1.4	0.50	68,26,0,26
Trav e			V V/T	V N/M	V stab		LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	
			0.15	0.59	0.25		2.39	0.71	207.14	0.15	0.80	1.36	0.50	

Pila s.	Stato	Note	V V/T	V N/M	V stab	Cl.	LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	Rif. cmb
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201	ok	s=10,m=11	0.01	0.35	0.10	4	1.2	1.2	108.3	0.50				144,145,86,0
202	ok	s=10,m=11	0.01	0.34	0.10	4	1.2	1.2	108.3	0.50				142,143,86,0
203	ok	s=10,m=11	0.02	0.54	0.15	4	1.2	1.2	108.3	0.50				144,144,68,0
204	ok	s=10,m=11	0.02	0.53	0.15	4	1.2	1.2	108.3	0.50				146,145,68,0
205	ok	s=10,m=11	0.02	0.46	0.13	4	1.1	1.1	98.8	0.57				144,144,68,0
206	ok	s=10,m=11	0.02	0.44	0.13	4	1.1	1.1	98.8	0.57				146,145,68,0
207	ok	s=1,m=11	0.07	0.70	0.35	1	1.1	1.1	93.9	0.61				150,153,145,0
208	ok	s=1,m=11	0.08	0.76	0.37	1	1.1	1.1	93.9	0.61				147,153,147,0
209	ok	s=1,m=11	0.08	0.76	0.36	1	1.1	1.1	93.9	0.61				152,147,153,0
210	ok	s=1,m=11	0.07	0.71	0.36	1	1.1	1.1	93.9	0.61				152,147,139,0
211	ok	s=1,m=11	0.06	0.65	0.32	1	1.1	1.1	93.9	0.61				154,149,153,0
212	ok	s=1,m=11	0.08	0.75	0.23	1	1.1	1.1	93.9	0.61				154,151,167,0
213	ok	s=1,m=11	0.08	0.76	0.24	1	1.1	1.1	93.9	0.61				154,149,161,0
214	ok	s=1,m=11	0.06	0.65	0.32	1	1.1	1.1	93.9	0.61				151,149,147,0
215	ok	s=10,m=11	0.02	0.43	0.13	4	1.1	1.1	94.3	0.61				144,144,68,0
216	ok	s=10,m=11	0.02	0.40	0.12	4	1.1	1.1	94.3	0.61				146,146,68,0
217	ok	s=1,m=11	0.01	0.25	0.21	1	1.1	1.1	96.5	0.59				152,168,168,0
218	ok	s=1,m=11	0.01	0.21	0.11	1	1.1	1.1	96.5	0.59				153,153,68,0
219	ok	s=1,m=11	0.01	0.21	0.08	1	1.1	1.1	96.5	0.59				154,150,86,0
220	ok	s=1,m=11	0.01	0.21	0.17	1	1.1	1.1	96.5	0.59				154,150,162,0
Pila S.			V V/T	V N/M	V stab		LamS 22	LamS 33	Snell.	Chi mn	V flst	LamS LT	Chi LT	
										0.50				
			0.08	0.76	0.37		1.25	1.25	108.25					

RISULTATI NODALI FONDAZIONI

LEGENDA RISULTATI NODALI

Il controllo dei risultati delle analisi condotte, per quanto concerne i nodi strutturali, è possibile in relazione alle tabelle sottoriportate.

Una prima tabella riporta infatti per ogni nodo e per ogni combinazione (o caso di carico) gli spostamenti nodali.

Una seconda tabella riporta per ogni nodo a cui sia associato un vincolo rigido e/o elastico o una fondazione speciale e per ogni combinazione (o caso di carico) i valori delle azioni esercitate dalla struttura sui vincoli (reazioni vincolari cambiate di segno).

Una terza tabella, infine riassume per ogni nodo le sei combinazioni in cui si attingono i valori minimi e massimi della reazione Fz, della reazione Mx e della reazione My.

Nodo	Cmb	Traslazione X	Traslazione Y	Traslazione Z	Rotazione X	Rotazione Y	Rotazione Z
		cm	cm	cm			
1	1	6.28e-04	-1.68e-04	-0.16	8.98e-05	-8.33e-05	0.0
1	2	6.76e-04	-1.23e-03	-0.16	9.93e-05	-8.42e-05	0.0
1	3	6.50e-04	-1.61e-04	-0.18	1.64e-04	-1.61e-04	0.0
1	4	6.99e-04	-1.22e-03	-0.18	1.74e-04	-1.62e-04	0.0
1	5	-8.68e-05	-4.52e-05	-0.11	5.87e-05	-4.37e-05	0.0
1	6	-3.87e-05	-1.11e-03	-0.11	6.82e-05	-4.46e-05	0.0
1	7	-6.40e-05	-3.87e-05	-0.13	1.33e-04	-1.22e-04	0.0
1	8	-1.59e-05	-1.10e-03	-0.13	1.43e-04	-1.22e-04	0.0
1	9	6.72e-04	-1.41e-04	-0.18	9.58e-05	-8.26e-05	0.0
1	10	7.20e-04	-1.20e-03	-0.18	1.05e-04	-8.34e-05	0.0
1	11	6.83e-04	-1.38e-04	-0.19	1.33e-04	-1.22e-04	0.0
1	12	7.31e-04	-1.20e-03	-0.19	1.43e-04	-1.22e-04	0.0
1	13	-4.28e-05	-1.83e-05	-0.13	6.47e-05	-4.29e-05	0.0
1	14	5.32e-06	-1.08e-03	-0.13	7.42e-05	-4.38e-05	0.0
1	15	-3.14e-05	-1.50e-05	-0.14	1.02e-04	-8.19e-05	0.0
1	16	1.67e-05	-1.08e-03	-0.14	1.12e-04	-8.27e-05	0.0
1	17	7.08e-04	-1.94e-03	-0.16	1.06e-04	-8.48e-05	0.0
1	18	6.39e-04	-1.65e-04	-0.17	1.27e-04	-1.22e-04	0.0
1	19	7.19e-04	-1.94e-03	-0.17	1.43e-04	-1.24e-04	0.0
1	20	-6.58e-06	-1.82e-03	-0.11	7.45e-05	-4.52e-05	0.0
1	21	-7.54e-05	-4.20e-05	-0.12	9.60e-05	-8.26e-05	0.0
1	22	4.82e-06	-1.81e-03	-0.12	1.12e-04	-8.41e-05	0.0
1	23	6.87e-04	-1.23e-03	-0.17	1.37e-04	-1.23e-04	0.0
1	24	-2.73e-05	-1.11e-03	-0.12	1.06e-04	-8.35e-05	0.0
1	25	5.87e-04	9.08e-04	-0.16	8.07e-05	-8.25e-05	0.0
1	26	6.10e-04	9.14e-04	-0.18	1.55e-04	-1.60e-04	0.0
1	27	-1.28e-04	1.03e-03	-0.11	4.96e-05	-4.28e-05	0.0
1	28	-1.05e-04	1.04e-03	-0.13	1.24e-04	-1.21e-04	0.0
1	29	6.31e-04	9.35e-04	-0.18	8.66e-05	-8.17e-05	0.0
1	30	6.42e-04	9.38e-04	-0.19	1.24e-04	-1.21e-04	0.0
1	31	-8.37e-05	1.06e-03	-0.13	5.55e-05	-4.21e-05	0.0
1	32	-7.23e-05	1.06e-03	-0.14	9.29e-05	-8.10e-05	0.0
1	33	5.98e-04	9.11e-04	-0.17	1.18e-04	-1.21e-04	0.0
1	34	-1.16e-04	1.03e-03	-0.12	8.69e-05	-8.18e-05	0.0
1	35	5.59e-04	1.62e-03	-0.16	7.46e-05	-8.19e-05	0.0
1	36	5.71e-04	1.63e-03	-0.17	1.12e-04	-1.21e-04	0.0
1	37	-1.55e-04	1.75e-03	-0.11	4.35e-05	-4.23e-05	0.0
1	38	-1.44e-04	1.75e-03	-0.12	8.08e-05	-8.12e-05	0.0
1	39	7.44e-04	-1.48e-04	-0.21	2.49e-04	-2.48e-04	0.0
1	40	7.66e-04	-1.42e-04	-0.23	3.24e-04	-3.26e-04	0.0
1	41	2.92e-05	-2.55e-05	-0.16	2.18e-04	-2.08e-04	0.0
1	42	5.20e-05	-1.90e-05	-0.18	2.93e-04	-2.86e-04	0.0
1	43	7.88e-04	-1.21e-04	-0.23	2.55e-04	-2.47e-04	0.0
1	44	7.99e-04	-1.18e-04	-0.24	2.93e-04	-2.86e-04	0.0
1	45	7.32e-05	1.44e-06	-0.18	2.24e-04	-2.08e-04	0.0
1	46	8.46e-05	4.69e-06	-0.19	2.62e-04	-2.47e-04	0.0
1	47	7.55e-04	-1.45e-04	-0.22	2.87e-04	-2.87e-04	0.0
1	48	4.06e-05	-2.23e-05	-0.17	2.56e-04	-2.47e-04	0.0
1	49	8.21e-04	-1.35e-04	-0.24	3.56e-04	-3.58e-04	0.0
1	50	8.32e-04	-1.32e-04	-0.25	3.93e-04	-3.97e-04	0.0
1	51	1.07e-04	-1.24e-05	-0.19	3.25e-04	-3.18e-04	0.0

1	52	1.18e-04	-9.12e-06	-0.20	3.62e-04	-3.57e-04	0.0
1	53	7.92e-04	-1.21e-03	-0.21	2.59e-04	-2.49e-04	0.0
1	54	8.15e-04	-1.21e-03	-0.23	3.34e-04	-3.27e-04	0.0
1	55	7.73e-05	-1.09e-03	-0.16	2.28e-04	-2.09e-04	0.0
1	56	1.00e-04	-1.08e-03	-0.18	3.02e-04	-2.87e-04	0.0
1	57	8.36e-04	-1.18e-03	-0.23	2.65e-04	-2.48e-04	0.0
1	58	8.47e-04	-1.18e-03	-0.24	3.02e-04	-2.87e-04	0.0
1	59	1.21e-04	-1.06e-03	-0.18	2.34e-04	-2.08e-04	0.0
1	60	1.33e-04	-1.06e-03	-0.19	2.71e-04	-2.47e-04	0.0
1	61	8.24e-04	-1.92e-03	-0.21	2.65e-04	-2.49e-04	0.0
1	62	8.35e-04	-1.92e-03	-0.22	3.03e-04	-2.88e-04	0.0
1	63	1.09e-04	-1.80e-03	-0.16	2.34e-04	-2.10e-04	0.0
1	64	1.21e-04	-1.79e-03	-0.17	2.71e-04	-2.49e-04	0.0
1	65	8.03e-04	-1.21e-03	-0.22	2.96e-04	-2.88e-04	0.0
1	66	8.87e-05	-1.09e-03	-0.17	2.65e-04	-2.48e-04	0.0
1	67	8.69e-04	-1.20e-03	-0.24	3.65e-04	-3.59e-04	0.0
1	68	8.80e-04	-1.20e-03	-0.26	4.03e-04	-3.98e-04	0.0
1	69	1.55e-04	-1.08e-03	-0.19	3.34e-04	-3.19e-04	0.0
1	70	1.66e-04	-1.07e-03	-0.20	3.71e-04	-3.58e-04	0.0
1	71	7.03e-04	9.27e-04	-0.21	2.40e-04	-2.47e-04	0.0
1	72	7.26e-04	9.34e-04	-0.23	3.15e-04	-3.25e-04	0.0
1	73	-1.17e-05	1.05e-03	-0.16	2.09e-04	-2.08e-04	0.0
1	74	1.11e-05	1.06e-03	-0.18	2.84e-04	-2.85e-04	0.0
1	75	7.47e-04	9.54e-04	-0.23	2.46e-04	-2.46e-04	0.0
1	76	7.58e-04	9.57e-04	-0.24	2.84e-04	-2.85e-04	0.0
1	77	3.23e-05	1.08e-03	-0.18	2.15e-04	-2.07e-04	0.0
1	78	4.37e-05	1.08e-03	-0.19	2.52e-04	-2.46e-04	0.0
1	79	7.14e-04	9.31e-04	-0.22	2.78e-04	-2.86e-04	0.0
1	80	0.0	1.05e-03	-0.17	2.46e-04	-2.46e-04	0.0
1	81	6.75e-04	1.64e-03	-0.21	2.34e-04	-2.47e-04	0.0
1	82	6.87e-04	1.65e-03	-0.22	2.71e-04	-2.86e-04	0.0
1	83	-3.89e-05	1.77e-03	-0.16	2.03e-04	-2.07e-04	0.0
1	84	-2.75e-05	1.77e-03	-0.17	2.40e-04	-2.46e-04	0.0
1	85	7.80e-04	9.40e-04	-0.24	3.47e-04	-3.57e-04	0.0
1	86	7.91e-04	9.44e-04	-0.25	3.84e-04	-3.96e-04	0.0
1	87	6.56e-05	1.06e-03	-0.19	3.15e-04	-3.17e-04	0.0
1	88	7.71e-05	1.07e-03	-0.20	3.53e-04	-3.56e-04	0.0
1	89	5.12e-04	-1.87e-04	-0.11	-6.98e-05	8.13e-05	0.0
1	90	5.34e-04	-1.81e-04	-0.13	4.89e-06	3.43e-06	0.0
1	91	-2.03e-04	-6.49e-05	-0.06	-1.01e-04	1.21e-04	0.0
1	92	-1.80e-04	-5.84e-05	-0.08	-2.62e-05	4.31e-05	0.0
1	93	5.56e-04	-1.61e-04	-0.13	-6.38e-05	8.21e-05	0.0
1	94	5.67e-04	-1.57e-04	-0.14	-2.65e-05	4.32e-05	0.0
1	95	-1.59e-04	-3.80e-05	-0.08	-9.49e-05	1.22e-04	0.0
1	96	-1.47e-04	-3.47e-05	-0.09	-5.76e-05	8.28e-05	0.0
1	97	5.23e-04	-1.84e-04	-0.12	-3.24e-05	4.24e-05	0.0
1	98	-1.91e-04	-6.16e-05	-0.07	-6.35e-05	8.20e-05	0.0
1	99	4.34e-04	-2.01e-04	-0.07	-1.76e-04	1.91e-04	0.0
1	100	4.46e-04	-1.97e-04	-0.09	-1.39e-04	1.52e-04	0.0
1	101	-2.80e-04	-7.80e-05	-0.02	-2.07e-04	2.31e-04	0.0
1	102	-2.69e-04	-7.48e-05	-0.03	-1.70e-04	1.92e-04	0.0
1	103	5.60e-04	-1.25e-03	-0.11	-6.03e-05	8.04e-05	0.0
1	104	5.83e-04	-1.24e-03	-0.13	1.44e-05	2.55e-06	0.0
1	105	-1.55e-04	-1.13e-03	-0.06	-9.14e-05	1.20e-04	0.0
1	106	-1.32e-04	-1.12e-03	-0.08	-1.67e-05	4.22e-05	0.0
1	107	6.04e-04	-1.22e-03	-0.13	-5.43e-05	8.12e-05	0.0
1	108	6.15e-04	-1.22e-03	-0.14	-1.70e-05	4.23e-05	0.0
1	109	-1.11e-04	-1.10e-03	-0.08	-8.54e-05	1.21e-04	0.0
1	110	-9.93e-05	-1.10e-03	-0.09	-4.81e-05	8.19e-05	0.0
1	111	5.92e-04	-1.96e-03	-0.11	-5.39e-05	7.99e-05	0.0
1	112	6.03e-04	-1.96e-03	-0.12	-1.66e-05	4.09e-05	0.0
1	113	-1.23e-04	-1.84e-03	-0.06	-8.50e-05	1.20e-04	0.0
1	114	-1.11e-04	-1.83e-03	-0.07	-4.77e-05	8.06e-05	0.0
1	115	5.71e-04	-1.25e-03	-0.12	-2.29e-05	4.15e-05	0.0
1	116	-1.43e-04	-1.13e-03	-0.07	-5.40e-05	8.11e-05	0.0
1	117	4.82e-04	-1.26e-03	-0.07	-1.67e-04	1.90e-04	0.0
1	118	4.94e-04	-1.26e-03	-0.09	-1.29e-04	1.51e-04	0.0
1	119	-2.32e-04	-1.14e-03	-0.02	-1.98e-04	2.30e-04	0.0
1	120	-2.21e-04	-1.14e-03	-0.04	-1.60e-04	1.91e-04	0.0
1	121	4.71e-04	8.88e-04	-0.11	-7.89e-05	8.22e-05	0.0
1	122	4.94e-04	8.94e-04	-0.13	-4.23e-06	4.27e-06	0.0
1	123	-2.44e-04	1.01e-03	-0.06	-1.10e-04	1.22e-04	0.0
1	124	-2.21e-04	1.02e-03	-0.08	-3.53e-05	4.39e-05	0.0
1	125	5.15e-04	9.15e-04	-0.13	-7.29e-05	8.30e-05	0.0
1	126	5.26e-04	9.18e-04	-0.14	-3.56e-05	4.40e-05	0.0
1	127	-2.00e-04	1.04e-03	-0.07	-1.04e-04	1.23e-04	0.0
1	128	-1.88e-04	1.04e-03	-0.09	-6.67e-05	8.37e-05	0.0
1	129	4.82e-04	8.91e-04	-0.12	-4.16e-05	4.32e-05	0.0

1	130	-2.32e-04	1.01e-03	-0.07	-7.27e-05	8.29e-05	0.0
1	131	4.43e-04	1.60e-03	-0.11	-8.50e-05	8.27e-05	0.0
1	132	4.55e-04	1.61e-03	-0.12	-4.77e-05	4.38e-05	0.0
1	133	-2.71e-04	1.73e-03	-0.06	-1.16e-04	1.22e-04	0.0
1	134	-2.60e-04	1.73e-03	-0.07	-7.87e-05	8.34e-05	0.0
1	135	3.93e-04	8.75e-04	-0.07	-1.85e-04	1.92e-04	0.0
1	136	4.05e-04	8.78e-04	-0.08	-1.48e-04	1.53e-04	0.0
1	137	-3.21e-04	9.97e-04	-0.02	-2.16e-04	2.32e-04	0.0
1	138	-3.10e-04	1.00e-03	-0.03	-1.79e-04	1.93e-04	0.0
1	139	3.57e-03	3.53e-03	-0.06	-6.55e-05	4.99e-04	0.0
1	140	4.04e-03	-5.07e-04	-0.06	2.76e-05	4.90e-04	0.0
1	141	-3.27e-03	2.42e-04	-0.16	1.01e-04	-6.14e-04	0.0
1	142	-2.81e-03	-3.79e-03	-0.16	1.95e-04	-6.22e-04	0.0
1	143	3.20e-03	3.82e-03	-0.05	-8.32e-05	5.02e-04	0.0
1	144	4.41e-03	-7.98e-04	-0.06	4.52e-05	4.87e-04	0.0
1	145	-3.65e-03	5.33e-04	-0.15	8.37e-05	-6.11e-04	0.0
1	146	-2.43e-03	-4.08e-03	-0.17	2.12e-04	-6.25e-04	0.0
1	147	2.36e-03	4.42e-03	-0.08	-3.58e-05	2.39e-04	0.0
1	148	2.83e-03	3.80e-04	-0.09	5.73e-05	2.30e-04	0.0
1	149	-2.06e-03	-6.45e-04	-0.13	7.17e-05	-3.54e-04	0.0
1	150	-1.60e-03	-4.68e-03	-0.14	1.65e-04	-3.63e-04	0.0
1	151	1.99e-03	4.71e-03	-0.08	-5.35e-05	2.42e-04	0.0
1	152	3.20e-03	8.91e-05	-0.09	7.49e-05	2.28e-04	0.0
1	153	-2.44e-03	-3.54e-04	-0.13	5.40e-05	-3.51e-04	0.0
1	154	-1.22e-03	-4.97e-03	-0.14	1.82e-04	-3.66e-04	0.0
1	155	6.38e-04	7.09e-03	-0.08	-1.16e-04	1.20e-04	0.0
1	156	2.18e-03	-6.37e-03	-0.11	1.95e-04	9.05e-05	0.0
1	157	-1.41e-03	6.10e-03	-0.11	-6.56e-05	-2.14e-04	0.0
1	158	1.28e-04	-7.35e-03	-0.14	2.45e-04	-2.43e-04	0.0
1	159	2.76e-04	7.35e-03	-0.09	-1.07e-04	4.18e-05	0.0
1	160	1.82e-03	-6.10e-03	-0.11	2.04e-04	1.26e-05	0.0
1	161	-1.05e-03	5.84e-03	-0.11	-7.46e-05	-1.36e-04	0.0
1	162	4.91e-04	-7.62e-03	-0.13	2.36e-04	-1.65e-04	0.0
1	163	-6.18e-04	8.06e-03	-0.08	-1.75e-04	1.29e-04	0.0
1	164	3.44e-03	-7.34e-03	-0.11	2.54e-04	8.11e-05	0.0
1	165	-2.67e-03	7.07e-03	-0.11	-1.25e-04	-2.05e-04	0.0
1	166	1.38e-03	-8.32e-03	-0.14	3.04e-04	-2.53e-04	0.0
1	167	-9.81e-04	8.32e-03	-0.08	-1.66e-04	5.11e-05	0.0
1	168	3.07e-03	-7.07e-03	-0.12	2.62e-04	3.20e-06	0.0
1	169	-2.31e-03	6.81e-03	-0.10	-1.33e-04	-1.27e-04	0.0
1	170	1.75e-03	-8.59e-03	-0.14	2.95e-04	-1.75e-04	0.0
1	171	1.87e-03	1.58e-03	-0.08	3.79e-06	2.00e-04	0.0
1	172	2.09e-03	-3.07e-04	-0.09	4.73e-05	1.96e-04	0.0
1	173	-1.32e-03	4.26e-05	-0.13	8.17e-05	-3.19e-04	0.0
1	174	-1.11e-03	-1.84e-03	-0.13	1.25e-04	-3.23e-04	0.0
1	175	1.70e-03	1.71e-03	-0.08	-4.46e-06	2.01e-04	0.0
1	176	2.26e-03	-4.43e-04	-0.09	5.55e-05	1.94e-04	0.0
1	177	-1.50e-03	1.79e-04	-0.13	7.35e-05	-3.18e-04	0.0
1	178	-9.29e-04	-1.98e-03	-0.14	1.33e-04	-3.25e-04	0.0
1	179	1.31e-03	1.99e-03	-0.10	1.77e-05	7.87e-05	0.0
1	180	1.52e-03	1.07e-04	-0.10	6.11e-05	7.46e-05	0.0
1	181	-7.57e-04	-3.71e-04	-0.12	6.79e-05	-1.98e-04	0.0
1	182	-5.41e-04	-2.26e-03	-0.12	1.11e-04	-2.02e-04	0.0
1	183	1.13e-03	2.13e-03	-0.09	9.40e-06	8.00e-05	0.0
1	184	1.70e-03	-2.90e-05	-0.10	6.94e-05	7.33e-05	0.0
1	185	-9.33e-04	-2.36e-04	-0.12	5.96e-05	-1.97e-04	0.0
1	186	-3.65e-04	-2.39e-03	-0.12	1.20e-04	-2.04e-04	0.0
1	187	5.02e-04	3.24e-03	-0.10	-1.96e-05	2.29e-05	0.0
1	188	1.22e-03	-3.04e-03	-0.11	1.25e-04	9.27e-06	0.0
1	189	-4.56e-04	2.78e-03	-0.11	3.74e-06	-1.33e-04	0.0
1	190	2.64e-04	-3.50e-03	-0.12	1.49e-04	-1.47e-04	0.0
1	191	3.33e-04	3.36e-03	-0.10	-1.55e-05	-1.35e-05	0.0
1	192	1.05e-03	-2.92e-03	-0.11	1.29e-04	-2.71e-05	0.0
1	193	-2.87e-04	2.65e-03	-0.11	0.0	-9.65e-05	0.0
1	194	4.34e-04	-3.63e-03	-0.12	1.44e-04	-1.10e-04	0.0
1	195	-8.42e-05	3.69e-03	-0.09	-4.71e-05	2.73e-05	0.0
1	196	1.81e-03	-3.50e-03	-0.11	1.53e-04	4.89e-06	0.0
1	197	-1.04e-03	3.23e-03	-0.11	-2.38e-05	-1.28e-04	0.0
1	198	8.51e-04	-3.96e-03	-0.12	1.76e-04	-1.51e-04	0.0
1	199	-2.53e-04	3.82e-03	-0.10	-4.30e-05	-9.08e-06	0.0
1	200	1.64e-03	-3.37e-03	-0.11	1.57e-04	-3.15e-05	0.0
1	201	-8.73e-04	3.11e-03	-0.11	-2.79e-05	-9.21e-05	0.0
1	202	1.02e-03	-4.08e-03	-0.12	1.72e-04	-1.15e-04	0.0
1	203	1.57e-03	1.23e-03	-0.09	1.60e-05	1.47e-04	0.0
1	204	1.74e-03	-2.72e-04	-0.09	5.07e-05	1.44e-04	0.0
1	205	-9.78e-04	7.41e-06	-0.13	7.83e-05	-2.68e-04	0.0
1	206	-8.06e-04	-1.50e-03	-0.13	1.13e-04	-2.71e-04	0.0
1	207	1.43e-03	1.34e-03	-0.09	9.42e-06	1.48e-04	0.0

1	208	1.89e-03	-3.80e-04	-0.09	5.73e-05	1.43e-04	0.0
1	209	-1.12e-03	1.16e-04	-0.13	7.17e-05	-2.66e-04	0.0
1	210	-6.65e-04	-1.61e-03	-0.13	1.20e-04	-2.72e-04	0.0
1	211	1.12e-03	1.56e-03	-0.10	2.71e-05	5.04e-05	0.0
1	212	1.29e-03	5.87e-05	-0.10	6.18e-05	4.71e-05	0.0
1	213	-5.28e-04	-3.23e-04	-0.12	6.72e-05	-1.71e-04	0.0
1	214	-3.55e-04	-1.83e-03	-0.12	1.02e-04	-1.74e-04	0.0
1	215	9.81e-04	1.67e-03	-0.10	2.05e-05	5.14e-05	0.0
1	216	1.43e-03	-4.98e-05	-0.10	6.84e-05	4.61e-05	0.0
1	217	-6.68e-04	-2.15e-04	-0.12	6.06e-05	-1.70e-04	0.0
1	218	-2.15e-04	-1.94e-03	-0.12	1.08e-04	-1.75e-04	0.0
1	219	4.78e-04	2.56e-03	-0.10	-2.71e-06	5.85e-06	0.0
1	220	1.05e-03	-2.46e-03	-0.11	1.13e-04	-5.04e-06	0.0
1	221	-2.87e-04	2.19e-03	-0.11	1.60e-05	-1.19e-04	0.0
1	222	2.88e-04	-2.82e-03	-0.12	1.32e-04	-1.29e-04	0.0
1	223	3.43e-04	2.66e-03	-0.10	0.0	-2.32e-05	0.0
1	224	9.18e-04	-2.36e-03	-0.11	1.16e-04	-3.41e-05	0.0
1	225	-1.52e-04	2.09e-03	-0.11	1.26e-05	-8.95e-05	0.0
1	226	4.24e-04	-2.92e-03	-0.12	1.28e-04	-1.00e-04	0.0
1	227	9.89e-06	2.92e-03	-0.10	-2.47e-05	9.34e-06	0.0
1	228	1.52e-03	-2.82e-03	-0.11	1.35e-04	-8.53e-06	0.0
1	229	-7.55e-04	2.55e-03	-0.11	-6.00e-06	-1.15e-04	0.0
1	230	7.57e-04	-3.19e-03	-0.12	1.54e-04	-1.33e-04	0.0
1	231	-1.25e-04	3.02e-03	-0.10	-2.13e-05	-1.97e-05	0.0
1	232	1.39e-03	-2.72e-03	-0.11	1.38e-04	-3.76e-05	0.0
1	233	-6.20e-04	2.45e-03	-0.11	-9.32e-06	-8.60e-05	0.0
1	234	8.92e-04	-3.29e-03	-0.12	1.50e-04	-1.04e-04	0.0
1	235	3.93e-04	-1.26e-04	-0.11	6.58e-05	-6.16e-05	0.0
1	236	4.25e-04	-8.35e-04	-0.11	7.22e-05	-6.22e-05	0.0
1	237	4.08e-04	-1.22e-04	-0.13	1.16e-04	-1.14e-04	0.0
1	238	4.40e-04	-8.31e-04	-0.13	1.22e-04	-1.14e-04	0.0
1	239	4.22e-04	-1.08e-04	-0.13	6.98e-05	-6.11e-05	0.0
1	240	4.55e-04	-8.17e-04	-0.13	7.61e-05	-6.17e-05	0.0
1	241	4.30e-04	-1.06e-04	-0.13	9.47e-05	-8.71e-05	0.0
1	242	4.62e-04	-8.15e-04	-0.13	1.01e-04	-8.77e-05	0.0
1	243	4.47e-04	-1.31e-03	-0.11	7.64e-05	-6.26e-05	0.0
1	244	4.01e-04	-1.24e-04	-0.12	9.07e-05	-8.76e-05	0.0
1	245	4.54e-04	-1.31e-03	-0.12	1.01e-04	-8.86e-05	0.0
1	246	4.33e-04	-8.33e-04	-0.12	9.70e-05	-8.82e-05	0.0
1	247	3.66e-04	5.91e-04	-0.11	5.97e-05	-6.11e-05	0.0
1	248	3.81e-04	5.95e-04	-0.13	1.10e-04	-1.13e-04	0.0
1	249	3.95e-04	6.09e-04	-0.13	6.37e-05	-6.05e-05	0.0
1	250	4.03e-04	6.11e-04	-0.13	8.86e-05	-8.65e-05	0.0
1	251	3.73e-04	5.93e-04	-0.12	8.46e-05	-8.70e-05	0.0
1	252	3.48e-04	1.07e-03	-0.11	5.57e-05	-6.07e-05	0.0
1	253	3.55e-04	1.07e-03	-0.12	8.06e-05	-8.67e-05	0.0
1	254	4.70e-04	-1.13e-04	-0.15	1.72e-04	-1.71e-04	0.0
1	255	4.86e-04	-1.09e-04	-0.16	2.22e-04	-2.23e-04	0.0
1	256	5.00e-04	-9.52e-05	-0.16	1.76e-04	-1.71e-04	0.0
1	257	5.07e-04	-9.30e-05	-0.17	2.01e-04	-1.97e-04	0.0
1	258	4.78e-04	-1.11e-04	-0.16	1.97e-04	-1.97e-04	0.0
1	259	5.22e-04	-1.04e-04	-0.17	2.43e-04	-2.45e-04	0.0
1	260	5.30e-04	-1.02e-04	-0.18	2.68e-04	-2.71e-04	0.0
1	261	5.03e-04	-8.22e-04	-0.15	1.79e-04	-1.72e-04	0.0
1	262	5.18e-04	-8.18e-04	-0.16	2.28e-04	-2.24e-04	0.0
1	263	5.32e-04	-8.04e-04	-0.16	1.83e-04	-1.71e-04	0.0
1	264	5.40e-04	-8.02e-04	-0.17	2.07e-04	-1.97e-04	0.0
1	265	5.24e-04	-1.29e-03	-0.15	1.83e-04	-1.72e-04	0.0
1	266	5.32e-04	-1.29e-03	-0.16	2.08e-04	-1.98e-04	0.0
1	267	5.10e-04	-8.20e-04	-0.16	2.03e-04	-1.98e-04	0.0
1	268	5.54e-04	-8.13e-04	-0.17	2.49e-04	-2.45e-04	0.0
1	269	5.62e-04	-8.11e-04	-0.18	2.74e-04	-2.71e-04	0.0
1	270	4.43e-04	6.04e-04	-0.15	1.66e-04	-1.71e-04	0.0
1	271	4.58e-04	6.08e-04	-0.16	2.16e-04	-2.23e-04	0.0
1	272	4.73e-04	6.22e-04	-0.16	1.70e-04	-1.70e-04	0.0
1	273	4.80e-04	6.24e-04	-0.17	1.95e-04	-1.96e-04	0.0
1	274	4.51e-04	6.06e-04	-0.16	1.91e-04	-1.97e-04	0.0
1	275	4.25e-04	1.08e-03	-0.15	1.62e-04	-1.70e-04	0.0
1	276	4.33e-04	1.08e-03	-0.16	1.87e-04	-1.96e-04	0.0
1	277	4.95e-04	6.13e-04	-0.17	2.37e-04	-2.44e-04	0.0
1	278	5.02e-04	6.15e-04	-0.18	2.62e-04	-2.70e-04	0.0
1	279	3.16e-04	-1.39e-04	-0.08	-4.06e-05	4.81e-05	0.0
1	280	3.31e-04	-1.35e-04	-0.10	9.23e-06	-3.78e-06	0.0
1	281	3.45e-04	-1.21e-04	-0.09	-3.66e-05	4.87e-05	0.0
1	282	3.53e-04	-1.19e-04	-0.10	-1.17e-05	2.27e-05	0.0
1	283	3.23e-04	-1.37e-04	-0.09	-1.57e-05	2.22e-05	0.0
1	284	2.64e-04	-1.48e-04	-0.06	-1.11e-04	1.21e-04	0.0
1	285	2.72e-04	-1.46e-04	-0.07	-8.66e-05	9.54e-05	0.0

1	286	3.48e-04	-8.48e-04	-0.08	-3.42e-05	4.76e-05	0.0
1	287	3.63e-04	-8.44e-04	-0.10	1.56e-05	-4.37e-06	0.0
1	288	3.77e-04	-8.30e-04	-0.09	-3.02e-05	4.81e-05	0.0
1	289	3.85e-04	-8.28e-04	-0.10	-5.34e-06	2.21e-05	0.0
1	290	3.69e-04	-1.32e-03	-0.08	-3.00e-05	4.72e-05	0.0
1	291	3.77e-04	-1.32e-03	-0.09	-5.10e-06	2.12e-05	0.0
1	292	3.55e-04	-8.46e-04	-0.09	-9.33e-06	2.16e-05	0.0
1	293	2.96e-04	-8.57e-04	-0.06	-1.05e-04	1.21e-04	0.0
1	294	3.04e-04	-8.55e-04	-0.07	-8.02e-05	9.48e-05	0.0
1	295	2.89e-04	5.78e-04	-0.08	-4.66e-05	4.87e-05	0.0
1	296	3.04e-04	5.82e-04	-0.10	3.14e-06	-3.22e-06	0.0
1	297	3.18e-04	5.95e-04	-0.09	-4.27e-05	4.92e-05	0.0
1	298	3.25e-04	5.98e-04	-0.10	-1.78e-05	2.33e-05	0.0
...							
1083	311	1.64e-03	-4.02e-03	-0.24	-3.58e-04	1.18e-05	0.0
Nodo		Traslazione X	Traslazione Y	Traslazione Z	Rotazione X	Rotazione Y	Rotazione Z
		-0.02	-0.02	-0.38	-9.52e-04	-6.62e-04	-5.81e-05
		0.02	0.02	0.08	7.90e-04	6.66e-04	5.78e-05

RISULTATI OPERE DI FONDAZIONE

LEGENDA RISULTATI OPERE DI FONDAZIONE

Il controllo dei risultati delle analisi condotte, per quanto concerne le opere di fondazione, è possibile in relazione alle tabelle sotto riportate.

La prima tabella è riferita alle fondazioni tipo palo e plinto su pali.

Per questo tipo di fondazione vengono riportate le sei componenti di sollecitazione (esprese nel riferimento globale della struttura) per ogni palo componente l'opera.

In particolare viene riportato:

Nodo	numero del nodo a cui è applicato il plinto
Tipo	codice corrispondente al nome assegnato al tipo di plinto di fondazione: 3) palo singolo (<i>PALO</i>) 4) plinto su palo 5) plinto su due pali (<i>PL.2P</i>) 6) plinto su tre pali (<i>PL.3P</i>) 7) plinto su quattro pali (<i>PL.4P</i>) 8) plinto rettangolare su cinque pali (<i>PL.5P.R</i>) 9) plinto pentagonale su cinque pali (<i>PL.5P</i>) 10) plinto su sei pali (<i>PL.6P</i>)
Palo	numero del palo
Comb.	combinazione di carico in cui si verificano le sei componenti di sollecitazione.
Quota	quota assoluta della sezione del palo per cui si riportano le sei componenti di sollecitazione.

L'azione F_z (corrispondente allo sforzo normale nel palo) è costante poiché il peso del palo stesso non è considerato nella modellazione.

La seconda tabella è riferita alle fondazioni tipo plinto su suolo elastico.

Per questo tipo di fondazione vengono riportate le pressioni nei quattro vertici dell'impronta sul terreno.

In particolare viene riportato:

Nodo	numero del nodo a cui è applicato il plinto
Tipo	Codice identificativo del nome assegnato al plinto
area	area dell'impronta del plinto
Wink O Wink V	coefficienti di Winkler (orizzontale e verticale) adottati
Comb	Combinazione di carico in cui si verificano i valori riportati
Pt (P1 P2 P3 P4)	valori di pressione nei vertici

La terza tabella è riferita alle fondazioni tipo platea su suolo elastico.

Per questo tipo di fondazione vengono riportate le pressioni in ogni vertice (nodo) degli elementi costituenti la platea.

La quarta tabella è riferita alle fondazioni tipo trave su suolo elastico.

Per questo tipo di fondazione vengono riportate le pressioni alle estremità dell'elemento e la massima (in valore assoluto) pressione lungo lo sviluppo dell'elemento.

Vengono inoltre riportati, con funzione statistica, i valori massimo e minimo delle pressioni che compaiono nella tabella.

Con riferimento al **Documento di Affidabilità** "Test di validazione del software di calcolo PRO_SAP e dei moduli aggiuntivi PRO_SAP Modulo Geotecnico, PRO_CAD nodi acciaio e PRO_MST" - versione Settembre 2014, disponibile per il download sul sito **www.2si.it**, si segnalano i seguenti esempi applicativi:

Test N°	Titolo
105	PLINTO SUPERFICIALE
106	PLINTO SUPERFICIALE
107	PLINTO SUPERFICIALE
108	PLINTO SUPERFICIALE
109	PLINTO SUPERFICIALE
110	PLINTO SUPERFICIALE
111	PLINTO SUPERFICIALE
112	PLINTO SUPERFICIALE
113	PLINTO SUPERFICIALE
114	PLINTO SUPERFICIALE
115	PLINTO SUPERFICIALE
116	PLINTO SUPERFICIALE
117	PLINTO SUPERFICIALE
118	PLINTO SUPERFICIALE
119	PLINTO SUPERFICIALE
120	PLINTO SUPERFICIALE
121	PLINTO SUPERFICIALE
122	PLINTO SUPERFICIALE
123	PLINTO SUPERFICIALE
124	FONDAZIONE NASTRIFORME
125	CALCOLO DEI K DI WINKLER

Nodo (G)	Pt 1/12	Pt 2/13	Pt 3...	Pt 4...							
	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2
1	-0.16	-0.16	-0.18	-0.18	-0.11	-0.11	-0.13	-0.13	-0.18	-0.18	-0.19
	-0.19	-0.13	-0.13	-0.14	-0.14	-0.16	-0.17	-0.17	-0.11	-0.12	-0.12
	-0.17	-0.12	-0.16	-0.18	-0.11	-0.13	-0.18	-0.19	-0.13	-0.14	-0.17
	-0.12	-0.16	-0.17	-0.11	-0.12	-0.21	-0.23	-0.16	-0.18	-0.23	-0.24
	-0.18	-0.19	-0.22	-0.17	-0.24	-0.25	-0.19	-0.20	-0.21	-0.23	-0.16
	-0.18	-0.23	-0.24	-0.18	-0.19	-0.21	-0.22	-0.16	-0.17	-0.22	-0.17
	-0.24	-0.26	-0.19	-0.20	-0.21	-0.23	-0.16	-0.18	-0.23	-0.24	-0.18
	-0.19	-0.22	-0.17	-0.21	-0.22	-0.16	-0.17	-0.24	-0.25	-0.19	-0.20
	-0.11	-0.13	-0.06	-0.08	-0.13	-0.14	-0.08	-0.09	-0.12	-0.07	-0.07
	-0.09	-0.02	-0.03	-0.11	-0.13	-0.06	-0.08	-0.13	-0.14	-0.08	-0.09
	-0.11	-0.12	-0.06	-0.07	-0.12	-0.07	-0.07	-0.09	-0.02	-0.04	-0.11
	-0.13	-0.06	-0.08	-0.13	-0.14	-0.07	-0.09	-0.12	-0.07	-0.11	-0.12
	-0.06	-0.07	-0.07	-0.08	-0.02	-0.03	-0.06	-0.06	-0.16	-0.16	-0.05
	-0.06	-0.15	-0.17	-0.08	-0.09	-0.13	-0.14	-0.08	-0.09	-0.13	-0.14
	-0.08	-0.11	-0.11	-0.14	-0.09	-0.11	-0.11	-0.13	-0.08	-0.11	-0.11
	-0.14	-0.08	-0.12	-0.10	-0.14	-0.08	-0.09	-0.13	-0.13	-0.08	-0.09
	-0.13	-0.14	-0.10	-0.10	-0.12	-0.12	-0.09	-0.10	-0.12	-0.12	-0.10
	-0.11	-0.11	-0.12	-0.10	-0.11	-0.11	-0.12	-0.09	-0.11	-0.11	-0.12

	-0.10	-0.11	-0.11	-0.12	-0.09	-0.09	-0.13	-0.13	-0.09	-0.09	-0.13
	-0.13	-0.10	-0.10	-0.12	-0.12	-0.10	-0.10	-0.12	-0.12	-0.10	-0.11
	-0.11	-0.12	-0.10	-0.11	-0.11	-0.12	-0.10	-0.11	-0.11	-0.12	-0.10
	-0.11	-0.11	-0.12	-0.11	-0.11	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13
	-0.11	-0.12	-0.12	-0.12	-0.11	-0.13	-0.13	-0.13	-0.12	-0.11	-0.12
	-0.15	-0.16	-0.16	-0.17	-0.16	-0.17	-0.18	-0.15	-0.16	-0.16	-0.17
	-0.15	-0.16	-0.16	-0.17	-0.18	-0.15	-0.16	-0.16	-0.17	-0.16	-0.15
	-0.16	-0.17	-0.18	-0.08	-0.10	-0.09	-0.10	-0.09	-0.06	-0.07	-0.08
	-0.10	-0.09	-0.10	-0.08	-0.09	-0.09	-0.06	-0.07	-0.08	-0.10	-0.09
	-0.10	-0.09	-0.08	-0.09	-0.06	-0.07	-0.11	-0.11	-0.11	-0.11	-0.11
	-0.12	-0.10	-0.11								
2	-0.16	-0.16	-0.18	-0.18	-0.11	-0.11	-0.13	-0.13	-0.17	-0.18	-0.19
	-0.19	-0.12	-0.13	-0.14	-0.14	-0.16	-0.17	-0.17	-0.11	-0.12	-0.12
	-0.17	-0.12	-0.16	-0.18	-0.11	-0.13	-0.17	-0.18	-0.12	-0.14	-0.17
	-0.12	-0.15	-0.17	-0.10	-0.12	-0.20	-0.22	-0.15	-0.17	-0.22	-0.23
	-0.17	-0.18	-0.21	-0.16	-0.23	-0.24	-0.18	-0.19	-0.20	-0.23	-0.15
	-0.18	-0.22	-0.23	-0.17	-0.18	-0.20	-0.21	-0.15	-0.17	-0.21	-0.16
	-0.23	-0.25	-0.18	-0.20	-0.20	-0.22	-0.15	-0.17	-0.22	-0.23	-0.17
	-0.18	-0.21	-0.16	-0.20	-0.21	-0.15	-0.16	-0.23	-0.24	-0.18	-0.19
	-0.11	-0.13	-0.06	-0.08	-0.13	-0.14	-0.08	-0.09	-0.12	-0.07	-0.08
	-0.09	-0.03	-0.04	-0.11	-0.13	-0.06	-0.08	-0.13	-0.14	-0.08	-0.09
	-0.11	-0.12	-0.06	-0.07	-0.12	-0.07	-0.08	-0.09	-0.03	-0.04	-0.11
	-0.13	-0.06	-0.08	-0.13	-0.14	-0.08	-0.09	-0.12	-0.07	-0.11	-0.12
	-0.06	-0.07	-0.08	-0.09	-0.03	-0.04	-0.07	-0.08	-0.14	-0.15	-0.07
	-0.08	-0.14	-0.15	-0.08	-0.09	-0.12	-0.13	-0.08	-0.09	-0.12	-0.13
	-0.09	-0.11	-0.11	-0.13	-0.09	-0.11	-0.10	-0.13	-0.08	-0.11	-0.10
	-0.14	-0.09	-0.12	-0.10	-0.13	-0.09	-0.09	-0.12	-0.13	-0.09	-0.09
	-0.12	-0.13	-0.10	-0.10	-0.12	-0.12	-0.10	-0.10	-0.12	-0.12	-0.10
	-0.11	-0.11	-0.12	-0.10	-0.11	-0.11	-0.12	-0.10	-0.11	-0.11	-0.12
	-0.10	-0.11	-0.10	-0.12	-0.09	-0.10	-0.12	-0.12	-0.09	-0.10	-0.12
	-0.12	-0.10	-0.10	-0.11	-0.12	-0.10	-0.10	-0.11	-0.12	-0.10	-0.11
	-0.11	-0.12	-0.10	-0.11	-0.11	-0.12	-0.10	-0.11	-0.11	-0.12	-0.10
	-0.11	-0.10	-0.12	-0.11	-0.11	-0.13	-0.13	-0.12	-0.13	-0.13	-0.13
	-0.11	-0.12	-0.12	-0.12	-0.11	-0.13	-0.12	-0.13	-0.12	-0.11	-0.12
	-0.14	-0.16	-0.16	-0.16	-0.15	-0.16	-0.17	-0.14	-0.16	-0.16	-0.16
	-0.14	-0.15	-0.15	-0.16	-0.17	-0.14	-0.16	-0.16	-0.16	-0.15	-0.14
	-0.15	-0.16	-0.17	-0.08	-0.10	-0.09	-0.10	-0.09	-0.06	-0.07	-0.08
	-0.10	-0.09	-0.10	-0.08	-0.09	-0.09	-0.06	-0.07	-0.08	-0.10	-0.09
	-0.10	-0.09	-0.08	-0.09	-0.06	-0.07	-0.11	-0.11	-0.11	-0.11	-0.11
	-0.12	-0.10	-0.11								
3	-0.15	-0.15	-0.17	-0.17	-0.10	-0.10	-0.12	-0.12	-0.17	-0.17	-0.18
	-0.18	-0.12	-0.12	-0.13	-0.13	-0.15	-0.16	-0.16	-0.10	-0.11	-0.11
	-0.16	-0.11	-0.15	-0.17	-0.10	-0.12	-0.17	-0.18	-0.12	-0.13	-0.16
	-0.11	-0.15	-0.16	-0.10	-0.11	-0.19	-0.21	-0.14	-0.16	-0.21	-0.22
	-0.16	-0.17	-0.20	-0.15	-0.21	-0.22	-0.17	-0.18	-0.19	-0.21	-0.14
	-0.16	-0.21	-0.22	-0.16	-0.17	-0.19	-0.20	-0.14	-0.15	-0.20	-0.15
	-0.22	-0.22	-0.17	-0.18	-0.19	-0.21	-0.14	-0.16	-0.21	-0.22	-0.16
	-0.17	-0.20	-0.15	-0.19	-0.20	-0.14	-0.15	-0.21	-0.22	-0.17	-0.18
	-0.11	-0.13	-0.07	-0.08	-0.13	-0.14	-0.08	-0.09	-0.12	-0.07	-0.09
	-0.10	-0.04	-0.05	-0.11	-0.13	-0.07	-0.08	-0.13	-0.14	-0.09	-0.09
	-0.11	-0.12	-0.07	-0.08	-0.12	-0.08	-0.09	-0.10	-0.04	-0.05	-0.11
	-0.13	-0.07	-0.08	-0.13	-0.14	-0.08	-0.09	-0.12	-0.07	-0.11	-0.12
	-0.07	-0.07	-0.09	-0.10	-0.04	-0.05	-0.09	-0.09	-0.12	-0.12	-0.08
	-0.09	-0.12	-0.13	-0.09	-0.10	-0.11	-0.12	-0.09	-0.10	-0.11	-0.12
	-0.09	-0.11	-0.10	-0.12	-0.09	-0.11	-0.10	-0.12	-0.09	-0.11	-0.10
	-0.12	-0.09	-0.12	-0.09	-0.12	-0.10	-0.10	-0.11	-0.11	-0.10	-0.10
	-0.11	-0.11	-0.10	-0.10	-0.11	-0.11	-0.10	-0.10	-0.11	-0.11	-0.10
	-0.11	-0.10	-0.11	-0.10	-0.11	-0.10	-0.11	-0.10	-0.11	-0.10	-0.11
	-0.10	-0.11	-0.10	-0.11	-0.10	-0.10	-0.11	-0.11	-0.10	-0.10	-0.11
	-0.11	-0.10	-0.10	-0.11	-0.11	-0.10	-0.10	-0.11	-0.11	-0.10	-0.11
	-0.10	-0.11	-0.10	-0.11	-0.10	-0.11	-0.10	-0.11	-0.10	-0.11	-0.10
	-0.11	-0.10	-0.11	-0.11	-0.11	-0.12	-0.12	-0.12	-0.12	-0.13	-0.13
	-0.11	-0.12	-0.12	-0.12	-0.11	-0.12	-0.12	-0.13	-0.11	-0.11	-0.11
	-0.13	-0.15	-0.15	-0.15	-0.14	-0.15	-0.16	-0.13	-0.15	-0.15	-0.15
	-0.14	-0.14	-0.14	-0.15	-0.16	-0.13	-0.15	-0.15	-0.15	-0.14	-0.13
	-0.14	-0.15	-0.16	-0.08	-0.10	-0.10	-0.10	-0.09	-0.07	-0.07	-0.08
	-0.10	-0.10	-0.10	-0.08	-0.09	-0.09	-0.07	-0.07	-0.08	-0.10	-0.10
	-0.10	-0.09	-0.08	-0.09	-0.07	-0.07	-0.10	-0.11	-0.11	-0.11	-0.10
	-0.11	-0.10	-0.10								
4	-0.15	-0.15	-0.16	-0.16	-0.10	-0.10	-0.12	-0.12	-0.17	-0.17	-0.17
	-0.17	-0.12	-0.12	-0.13	-0.13	-0.15	-0.15	-0.16	-0.10	-0.11	-0.11
	-0.16	-0.11	-0.15	-0.16	-0.10	-0.12	-0.17	-0.17	-0.12	-0.13	-0.15
	-0.11	-0.15	-0.15	-0.10	-0.11	-0.18	-0.19	-0.13	-0.15	-0.20	-0.20
	-0.15	-0.16	-0.18	-0.14	-0.20	-0.20	-0.15	-0.16	-0.18	-0.19	-0.13
	-0.15	-0.20	-0.20	-0.15	-0.16	-0.18	-0.19	-0.13	-0.14	-0.19	-0.14
	-0.20	-0.21	-0.15	-0.16	-0.18	-0.19	-0.13	-0.15	-0.20	-0.20	-0.15
	-0.16	-0.18	-0.14	-0.18	-0.18	-0.13	-0.14	-0.20	-0.20	-0.15	-0.16
	-0.12	-0.13	-0.07	-0.09	-0.14	-0.14	-0.09	-0.10	-0.12	-0.08	-0.10

	-0.10	-0.05	-0.06	-0.12	-0.13	-0.07	-0.09	-0.14	-0.14	-0.09	-0.10
	-0.12	-0.13	-0.07	-0.08	-0.13	-0.08	-0.10	-0.11	-0.05	-0.06	-0.12
	-0.13	-0.07	-0.09	-0.14	-0.14	-0.09	-0.10	-0.12	-0.08	-0.12	-0.12
	-0.07	-0.08	-0.10	-0.10	-0.05	-0.06	-0.09	-0.10	-0.11	-0.11	-0.09
	-0.10	-0.11	-0.11	-0.10	-0.10	-0.10	-0.11	-0.09	-0.10	-0.10	-0.11
	-0.09	-0.11	-0.10	-0.11	-0.09	-0.11	-0.09	-0.11	-0.09	-0.11	-0.09
	-0.12	-0.09	-0.11	-0.09	-0.11	-0.10	-0.10	-0.10	-0.11	-0.10	-0.10
	-0.10	-0.11	-0.10	-0.10	-0.10	-0.11	-0.10	-0.10	-0.10	-0.11	-0.10
	-0.11	-0.10	-0.11	-0.10	-0.11	-0.10	-0.11	-0.10	-0.11	-0.10	-0.11
	-0.10	-0.11	-0.10	-0.11	-0.10	-0.10	-0.10	-0.11	-0.10	-0.10	-0.10
	-0.11	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10
	-0.10	-0.11	-0.10	-0.10	-0.10	-0.11	-0.10	-0.11	-0.10	-0.11	-0.10
	-0.11	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10
	-0.10	-0.11	-0.10	-0.10	-0.10	-0.11	-0.10	-0.11	-0.10	-0.11	-0.10
	-0.11	-0.10	-0.11	-0.11	-0.11	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12
	-0.11	-0.11	-0.11	-0.11	-0.11	-0.12	-0.12	-0.12	-0.11	-0.11	-0.11
	-0.13	-0.14	-0.14	-0.14	-0.13	-0.14	-0.14	-0.13	-0.14	-0.14	-0.14
	-0.13	-0.13	-0.13	-0.14	-0.14	-0.13	-0.14	-0.14	-0.14	-0.13	-0.13
	-0.13	-0.14	-0.14	-0.09	-0.10	-0.10	-0.10	-0.09	-0.07	-0.08	-0.09
	-0.10	-0.10	-0.10	-0.09	-0.09	-0.09	-0.07	-0.08	-0.09	-0.10	-0.10
	-0.10	-0.09	-0.09	-0.09	-0.07	-0.08	-0.10	-0.10	-0.11	-0.10	-0.10
	-0.11	-0.10	-0.10								
5	-0.14	-0.15	-0.16	-0.16	-0.10	-0.10	-0.11	-0.11	-0.16	-0.16	-0.17
	-0.17	-0.12	-0.12	-0.12	-0.13	-0.15	-0.15	-0.15	-0.10	-0.11	-0.11
	-0.15	-0.11	-0.14	-0.16	-0.10	-0.11	-0.16	-0.17	-0.12	-0.12	-0.15
	-0.11	-0.14	-0.15	-0.10	-0.11	-0.17	-0.18	-0.13	-0.14	-0.19	-0.19
	-0.14	-0.15	-0.18	-0.13	-0.19	-0.19	-0.14	-0.15	-0.17	-0.18	-0.13
	-0.14	-0.19	-0.19	-0.14	-0.15	-0.17	-0.18	-0.13	-0.13	-0.18	-0.13
	-0.19	-0.19	-0.14	-0.15	-0.17	-0.18	-0.12	-0.14	-0.19	-0.19	-0.14
	-0.15	-0.18	-0.13	-0.17	-0.17	-0.12	-0.13	-0.19	-0.19	-0.14	-0.15
	-0.12	-0.13	-0.08	-0.09	-0.14	-0.14	-0.09	-0.10	-0.13	-0.08	-0.10
	-0.11	-0.06	-0.06	-0.12	-0.13	-0.08	-0.09	-0.14	-0.15	-0.09	-0.10
	-0.12	-0.13	-0.08	-0.08	-0.13	-0.08	-0.10	-0.11	-0.06	-0.07	-0.12
	-0.13	-0.08	-0.09	-0.14	-0.14	-0.09	-0.10	-0.13	-0.08	-0.12	-0.13
	-0.07	-0.08	-0.10	-0.11	-0.06	-0.06	-0.10	-0.10	-0.10	-0.10	-0.09
	-0.10	-0.10	-0.11	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10
	-0.09	-0.11	-0.09	-0.11	-0.09	-0.11	-0.09	-0.11	-0.09	-0.11	-0.09
	-0.11	-0.09	-0.11	-0.09	-0.11	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10
	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10
	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.09	-0.10	-0.10	-0.11
	-0.10	-0.10	-0.10	-0.11	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10
	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10
	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10
	-0.10	-0.10	-0.10	-0.10	-0.10	-0.11	-0.11	-0.12	-0.12	-0.12	-0.12
	-0.10	-0.11	-0.11	-0.11	-0.10	-0.11	-0.12	-0.12	-0.11	-0.10	-0.11
	-0.12	-0.13	-0.13	-0.14	-0.12	-0.13	-0.14	-0.12	-0.13	-0.13	-0.14
	-0.12	-0.13	-0.13	-0.13	-0.14	-0.12	-0.13	-0.13	-0.14	-0.12	-0.12
	-0.12	-0.13	-0.14	-0.09	-0.10	-0.10	-0.10	-0.09	-0.08	-0.08	-0.09
	-0.10	-0.10	-0.10	-0.09	-0.09	-0.09	-0.08	-0.08	-0.09	-0.10	-0.10
	-0.10	-0.09	-0.09	-0.09	-0.08	-0.08	-0.10	-0.10	-0.10	-0.10	-0.10
	-0.11	-0.09	-0.10								
6	-0.14	-0.14	-0.16	-0.16	-0.10	-0.10	-0.11	-0.11	-0.16	-0.16	-0.17
	-0.17	-0.12	-0.12	-0.12	-0.12	-0.14	-0.15	-0.15	-0.10	-0.11	-0.11
	-0.15	-0.11	-0.14	-0.15	-0.10	-0.11	-0.16	-0.17	-0.12	-0.12	-0.15
	-0.10	-0.14	-0.15	-0.10	-0.10	-0.17	-0.18	-0.12	-0.13	-0.19	-0.19
	-0.14	-0.15	-0.17	-0.13	-0.18	-0.19	-0.14	-0.14	-0.17	-0.18	-0.12
	-0.13	-0.19	-0.19	-0.14	-0.15	-0.17	-0.17	-0.12	-0.13	-0.17	-0.13
	-0.18	-0.19	-0.14	-0.14	-0.17	-0.18	-0.12	-0.13	-0.19	-0.19	-0.14
	-0.15	-0.17	-0.13	-0.17	-0.17	-0.12	-0.13	-0.18	-0.19	-0.14	-0.14
	-0.12	-0.13	-0.08	-0.09	-0.14	-0.15	-0.10	-0.10	-0.13	-0.08	-0.11
	-0.11	-0.06	-0.07	-0.12	-0.13	-0.08	-0.09	-0.14	-0.15	-0.10	-0.10
	-0.12	-0.13	-0.08	-0.08	-0.13	-0.08	-0.11	-0.11	-0.06	-0.07	-0.12
	-0.13	-0.08	-0.09	-0.14	-0.14	-0.10	-0.10	-0.13	-0.08	-0.12	-0.13
	-0.08	-0.08	-0.11	-0.11	-0.06	-0.07	-0.10	-0.10	-0.10	-0.10	-0.10
	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10
	-0.09	-0.11	-0.09	-0.11	-0.09	-0.11	-0.09	-0.11	-0.09	-0.11	-0.09
	-0.11	-0.09	-0.11	-0.09	-0.11	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10
	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10
	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.09	-0.10	-0.09	-0.10
	-0.09	-0.10	-0.09	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10
	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10
	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10
	-0.10	-0.10	-0.10	-0.10	-0.10	-0.11	-0.11	-0.12	-0.12	-0.12	-0.12
	-0.10	-0.11	-0.11	-0.11	-0.10	-0.11	-0.12	-0.12	-0.11	-0.10	-0.11
	-0.12	-0.13	-0.13	-0.14	-0.12	-0.13	-0.13	-0.12	-0.13	-0.13	-0.14
	-0.12	-0.12	-0.12	-0.13	-0.13	-0.12	-0.13	-0.13	-0.13	-0.12	-0.12
	-0.12	-0.13	-0.13	-0.09	-0.10	-0.10	-0.10	-0.09	-0.08	-0.08	-0.09
	-0.10	-0.10	-0.10	-0.09	-0.09	-0.09	-0.08	-0.08	-0.09	-0.10	-0.10
	-0.10	-0.09	-0.09	-0.09	-0.08	-0.08	-0.10	-0.10	-0.10	-0.10	-0.10
	-0.10	-0.09	-0.10								
	-0.10	-0.09	-0.10								

7	-0.15	-0.15	-0.16	-0.16	-0.10	-0.10	-0.11	-0.11	-0.16	-0.16	-0.17	
	-0.17	-0.12	-0.12	-0.13	-0.13	-0.15	-0.15	-0.15	-0.10	-0.11	-0.11	
	-0.15	-0.11	-0.14	-0.16	-0.10	-0.11	-0.16	-0.17	-0.12	-0.12	-0.15	
	-0.11	-0.14	-0.15	-0.10	-0.11	-0.17	-0.18	-0.13	-0.14	-0.19	-0.19	
	-0.14	-0.15	-0.18	-0.13	-0.19	-0.19	-0.14	-0.15	-0.17	-0.18	-0.13	
	-0.14	-0.19	-0.19	-0.14	-0.15	-0.17	-0.18	-0.13	-0.13	-0.18	-0.13	
	-0.19	-0.19	-0.14	-0.15	-0.17	-0.18	-0.12	-0.14	-0.19	-0.19	-0.14	
	-0.15	-0.18	-0.13	-0.17	-0.18	-0.12	-0.13	-0.19	-0.19	-0.14	-0.15	
	-0.12	-0.13	-0.08	-0.09	-0.14	-0.14	-0.09	-0.10	-0.13	-0.08	-0.10	
	-0.11	-0.06	-0.06	-0.12	-0.13	-0.08	-0.09	-0.14	-0.15	-0.09	-0.10	
	-0.12	-0.13	-0.08	-0.08	-0.13	-0.08	-0.10	-0.11	-0.06	-0.07	-0.12	
	-0.13	-0.08	-0.09	-0.14	-0.14	-0.09	-0.10	-0.13	-0.08	-0.12	-0.13	
	-0.07	-0.08	-0.10	-0.11	-0.06	-0.06	-0.10	-0.11	-0.09	-0.10	-0.10	
	-0.11	-0.09	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	
	-0.09	-0.11	-0.09	-0.11	-0.09	-0.11	-0.09	-0.11	-0.09	-0.11	-0.09	
	-0.11	-0.09	-0.11	-0.09	-0.11	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	
	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	
	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.11	-0.10	-0.10	
	-0.10	-0.11	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	
	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	
	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	
	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	
	-0.10	-0.10	-0.10	-0.10	-0.10	-0.11	-0.11	-0.12	-0.12	-0.12	-0.12	
	-0.10	-0.11	-0.11	-0.11	-0.10	-0.11	-0.12	-0.12	-0.11	-0.10	-0.11	
	-0.12	-0.13	-0.13	-0.14	-0.12	-0.13	-0.14	-0.12	-0.13	-0.13	-0.14	
	-0.12	-0.13	-0.13	-0.13	-0.14	-0.12	-0.13	-0.13	-0.14	-0.12	-0.12	
	-0.12	-0.13	-0.14	-0.09	-0.10	-0.10	-0.10	-0.09	-0.08	-0.08	-0.09	
	-0.10	-0.10	-0.10	-0.09	-0.09	-0.09	-0.08	-0.08	-0.09	-0.10	-0.10	
	-0.10	-0.09	-0.09	-0.09	-0.08	-0.08	-0.10	-0.10	-0.10	-0.10	-0.10	
	-0.11	-0.09	-0.10									
	8	-0.15	-0.15	-0.16	-0.16	-0.10	-0.10	-0.12	-0.12	-0.17	-0.17	-0.17
		-0.17	-0.12	-0.12	-0.13	-0.13	-0.15	-0.15	-0.16	-0.10	-0.11	-0.11
-0.16		-0.11	-0.15	-0.16	-0.10	-0.12	-0.17	-0.17	-0.12	-0.13	-0.15	
-0.11		-0.15	-0.15	-0.10	-0.11	-0.18	-0.19	-0.13	-0.15	-0.20	-0.20	
-0.15		-0.16	-0.18	-0.14	-0.20	-0.20	-0.15	-0.16	-0.18	-0.19	-0.13	
-0.15		-0.20	-0.20	-0.15	-0.16	-0.18	-0.19	-0.13	-0.14	-0.19	-0.14	
-0.20		-0.21	-0.15	-0.16	-0.18	-0.19	-0.13	-0.15	-0.20	-0.20	-0.15	
-0.16		-0.18	-0.14	-0.18	-0.18	-0.13	-0.14	-0.20	-0.20	-0.15	-0.16	
-0.12		-0.13	-0.07	-0.09	-0.14	-0.14	-0.09	-0.10	-0.12	-0.08	-0.10	
-0.10		-0.05	-0.06	-0.12	-0.13	-0.07	-0.09	-0.14	-0.14	-0.09	-0.10	
-0.12		-0.13	-0.07	-0.08	-0.13	-0.08	-0.10	-0.11	-0.05	-0.06	-0.12	
-0.13		-0.07	-0.09	-0.14	-0.14	-0.09	-0.10	-0.12	-0.08	-0.12	-0.12	
-0.07		-0.08	-0.10	-0.10	-0.05	-0.06	-0.11	-0.11	-0.09	-0.10	-0.11	
-0.11		-0.09	-0.10	-0.10	-0.11	-0.10	-0.10	-0.10	-0.11	-0.09	-0.10	
-0.09		-0.11	-0.09	-0.11	-0.09	-0.11	-0.09	-0.11	-0.09	-0.12	-0.09	
-0.11		-0.09	-0.11	-0.09	-0.11	-0.10	-0.11	-0.10	-0.10	-0.10	-0.11	
-0.10		-0.10	-0.10	-0.11	-0.10	-0.10	-0.10	-0.11	-0.10	-0.10	-0.10	
-0.11		-0.10	-0.11	-0.10	-0.11	-0.10	-0.11	-0.10	-0.11	-0.10	-0.11	
-0.10		-0.11	-0.10	-0.11	-0.10	-0.11	-0.10	-0.10	-0.10	-0.11	-0.10	
-0.10		-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.11	
-0.10		-0.11	-0.10	-0.11	-0.10	-0.11	-0.10	-0.11	-0.10	-0.11	-0.10	
-0.11		-0.10	-0.11	-0.11	-0.11	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	
-0.11		-0.11	-0.11	-0.11	-0.11	-0.12	-0.12	-0.12	-0.12	-0.11	-0.11	
-0.13		-0.14	-0.14	-0.14	-0.13	-0.14	-0.14	-0.13	-0.14	-0.14	-0.14	
-0.13		-0.13	-0.13	-0.14	-0.14	-0.13	-0.14	-0.14	-0.14	-0.13	-0.13	
-0.13		-0.14	-0.14	-0.09	-0.10	-0.10	-0.10	-0.09	-0.07	-0.08	-0.09	
-0.10		-0.10	-0.10	-0.09	-0.09	-0.09	-0.07	-0.08	-0.09	-0.10	-0.10	
-0.10		-0.09	-0.09	-0.09	-0.07	-0.08	-0.10	-0.10	-0.11	-0.10	-0.10	
-0.11		-0.10	-0.10									
9		-0.15	-0.15	-0.17	-0.17	-0.10	-0.10	-0.12	-0.12	-0.17	-0.17	-0.18
		-0.18	-0.12	-0.12	-0.13	-0.13	-0.15	-0.16	-0.16	-0.11	-0.11	-0.11
		-0.16	-0.11	-0.15	-0.17	-0.10	-0.12	-0.17	-0.18	-0.12	-0.13	-0.16
	-0.11	-0.15	-0.16	-0.10	-0.11	-0.19	-0.21	-0.14	-0.16	-0.21	-0.22	
	-0.16	-0.17	-0.20	-0.15	-0.22	-0.22	-0.17	-0.18	-0.19	-0.21	-0.14	
	-0.16	-0.21	-0.22	-0.16	-0.17	-0.19	-0.20	-0.14	-0.15	-0.20	-0.15	
	-0.22	-0.22	-0.17	-0.18	-0.19	-0.21	-0.14	-0.16	-0.21	-0.22	-0.16	
	-0.17	-0.20	-0.15	-0.19	-0.20	-0.14	-0.15	-0.21	-0.22	-0.17	-0.18	
	-0.11	-0.13	-0.07	-0.08	-0.13	-0.14	-0.08	-0.09	-0.12	-0.08	-0.09	
	-0.10	-0.04	-0.05	-0.11	-0.13	-0.07	-0.08	-0.13	-0.14	-0.09	-0.09	
	-0.12	-0.12	-0.07	-0.08	-0.12	-0.08	-0.09	-0.10	-0.04	-0.05	-0.11	
	-0.13	-0.07	-0.08	-0.13	-0.14	-0.08	-0.09	-0.12	-0.07	-0.11	-0.12	
	-0.07	-0.07	-0.09	-0.10	-0.04	-0.05	-0.12	-0.13	-0.08	-0.09	-0.12	
	-0.13	-0.08	-0.09	-0.11	-0.12	-0.09	-0.10	-0.11	-0.12	-0.09	-0.10	
	-0.10	-0.12	-0.09	-0.11	-0.10	-0.12	-0.09	-0.11	-0.10	-0.12	-0.09	
	-0.11	-0.10	-0.12	-0.09	-0.12	-0.11	-0.12	-0.10	-0.10	-0.11	-0.12	
-0.10	-0.10	-0.11	-0.11	-0.10	-0.10	-0.11	-0.11	-0.10	-0.10	-0.10		
-0.11	-0.10	-0.11	-0.10	-0.11	-0.10	-0.11	-0.10	-0.11	-0.10	-0.11		
-0.10	-0.11	-0.10	-0.11	-0.11	-0.11	-0.10	-0.10	-0.11	-0.11	-0.10		
-0.10	-0.11	-0.11	-0.10	-0.10	-0.11	-0.11	-0.10	-0.10	-0.10	-0.11		

	-0.10	-0.11	-0.10	-0.11	-0.10	-0.11	-0.10	-0.11	-0.10	-0.11	-0.10
	-0.11	-0.10	-0.11	-0.11	-0.11	-0.12	-0.12	-0.12	-0.12	-0.13	-0.13
	-0.11	-0.12	-0.12	-0.12	-0.11	-0.12	-0.12	-0.13	-0.11	-0.11	-0.11
	-0.13	-0.15	-0.15	-0.15	-0.14	-0.15	-0.16	-0.14	-0.15	-0.15	-0.15
	-0.14	-0.14	-0.14	-0.15	-0.16	-0.13	-0.15	-0.15	-0.15	-0.14	-0.13
	-0.14	-0.15	-0.16	-0.08	-0.10	-0.10	-0.10	-0.09	-0.07	-0.07	-0.08
	-0.10	-0.10	-0.10	-0.09	-0.09	-0.09	-0.07	-0.07	-0.08	-0.10	-0.10
	-0.10	-0.09	-0.08	-0.09	-0.07	-0.07	-0.11	-0.11	-0.11	-0.11	-0.11
	-0.11	-0.10	-0.11								
10	-0.16	-0.16	-0.18	-0.18	-0.11	-0.11	-0.13	-0.13	-0.18	-0.18	-0.19
	-0.19	-0.13	-0.13	-0.14	-0.14	-0.16	-0.17	-0.17	-0.11	-0.12	-0.12
	-0.17	-0.12	-0.16	-0.18	-0.11	-0.13	-0.17	-0.19	-0.12	-0.14	-0.17
	-0.12	-0.16	-0.17	-0.11	-0.12	-0.20	-0.23	-0.15	-0.18	-0.22	-0.23
	-0.17	-0.18	-0.21	-0.16	-0.23	-0.25	-0.18	-0.20	-0.20	-0.23	-0.15
	-0.18	-0.22	-0.23	-0.17	-0.18	-0.20	-0.22	-0.15	-0.17	-0.22	-0.17
	-0.24	-0.25	-0.19	-0.20	-0.20	-0.22	-0.15	-0.17	-0.22	-0.23	-0.17
	-0.18	-0.21	-0.16	-0.20	-0.21	-0.15	-0.16	-0.23	-0.24	-0.18	-0.19
	-0.11	-0.13	-0.06	-0.08	-0.13	-0.14	-0.08	-0.09	-0.12	-0.07	-0.08
	-0.09	-0.03	-0.04	-0.11	-0.13	-0.06	-0.08	-0.13	-0.14	-0.08	-0.09
	-0.11	-0.12	-0.06	-0.07	-0.12	-0.07	-0.08	-0.09	-0.03	-0.04	-0.11
	-0.13	-0.06	-0.08	-0.13	-0.14	-0.08	-0.09	-0.12	-0.07	-0.11	-0.12
	-0.06	-0.07	-0.08	-0.09	-0.03	-0.04	-0.14	-0.15	-0.07	-0.08	-0.14
	-0.15	-0.07	-0.08	-0.12	-0.13	-0.08	-0.09	-0.12	-0.13	-0.08	-0.09
	-0.11	-0.13	-0.08	-0.11	-0.10	-0.13	-0.09	-0.12	-0.10	-0.14	-0.08
	-0.11	-0.10	-0.13	-0.09	-0.12	-0.12	-0.13	-0.09	-0.09	-0.12	-0.13
	-0.09	-0.09	-0.12	-0.12	-0.10	-0.10	-0.12	-0.12	-0.10	-0.10	-0.11
	-0.12	-0.10	-0.11	-0.10	-0.12	-0.10	-0.11	-0.11	-0.12	-0.10	-0.11
	-0.10	-0.12	-0.10	-0.11	-0.12	-0.12	-0.09	-0.10	-0.12	-0.12	-0.09
	-0.10	-0.11	-0.12	-0.10	-0.10	-0.11	-0.12	-0.10	-0.10	-0.11	-0.12
	-0.10	-0.11	-0.11	-0.12	-0.10	-0.11	-0.11	-0.12	-0.10	-0.11	-0.11
	-0.12	-0.10	-0.11	-0.11	-0.11	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13
	-0.11	-0.12	-0.12	-0.12	-0.11	-0.13	-0.12	-0.13	-0.12	-0.11	-0.12
	-0.14	-0.16	-0.16	-0.16	-0.15	-0.16	-0.17	-0.14	-0.16	-0.16	-0.16
	-0.14	-0.15	-0.15	-0.17	-0.17	-0.14	-0.16	-0.16	-0.16	-0.15	-0.14
	-0.15	-0.16	-0.17	-0.08	-0.10	-0.09	-0.10	-0.09	-0.06	-0.07	-0.08
	-0.10	-0.09	-0.10	-0.08	-0.09	-0.09	-0.06	-0.07	-0.08	-0.10	-0.09
	-0.10	-0.09	-0.08	-0.09	-0.06	-0.07	-0.11	-0.11	-0.11	-0.11	-0.11
	-0.12	-0.10	-0.11								
11	-0.16	-0.16	-0.18	-0.18	-0.11	-0.11	-0.13	-0.13	-0.18	-0.18	-0.19
	-0.19	-0.13	-0.13	-0.14	-0.14	-0.16	-0.17	-0.17	-0.11	-0.12	-0.12
	-0.17	-0.12	-0.16	-0.18	-0.11	-0.13	-0.18	-0.19	-0.13	-0.14	-0.17
	-0.12	-0.16	-0.17	-0.11	-0.12	-0.21	-0.23	-0.16	-0.18	-0.23	-0.24
	-0.18	-0.19	-0.22	-0.17	-0.24	-0.26	-0.19	-0.20	-0.21	-0.23	-0.16
	-0.18	-0.23	-0.24	-0.18	-0.19	-0.21	-0.22	-0.16	-0.17	-0.22	-0.17
	-0.24	-0.26	-0.19	-0.21	-0.21	-0.23	-0.16	-0.18	-0.23	-0.24	-0.18
	-0.19	-0.22	-0.17	-0.21	-0.22	-0.16	-0.17	-0.24	-0.25	-0.19	-0.20
...											
1083	-0.24	-0.24	-0.24	-0.25	-0.24	-0.25	-0.24	-0.24	-0.24	-0.23	-0.23
Nodo (G)	Pt 1/12	Pt 2/13	Pt 3...	Pt 4...							
	-0.38										
	0.08										

Elem.	Cmb	Pt ini	Pt fin	Pt max	Cmb	Pt ini	Pt fin	Pt max	Cmb	Pt ini	Pt fin	Pt max
		daN/cm2	daN/cm2	daN/cm2		daN/cm2	daN/cm2	daN/cm2		daN/cm2	daN/cm2	daN/cm2
9	1	-0.15	-0.15	-0.15	2	-0.15	-0.15	-0.15	3	-0.17	-0.16	-0.17
	4	-0.17	-0.16	-0.17	5	-0.09	-0.09	-0.09	6	-0.09	-0.09	-0.09
	7	-0.11	-0.10	-0.11	8	-0.11	-0.10	-0.11	9	-0.17	-0.16	-0.17
	10	-0.17	-0.16	-0.17	11	-0.17	-0.17	-0.17	12	-0.17	-0.17	-0.17
	13	-0.11	-0.11	-0.11	14	-0.11	-0.11	-0.11	15	-0.12	-0.11	-0.12
	16	-0.12	-0.11	-0.12	17	-0.15	-0.15	-0.15	18	-0.16	-0.16	-0.16
	19	-0.16	-0.16	-0.16	20	-0.09	-0.09	-0.09	21	-0.10	-0.10	-0.10
	22	-0.10	-0.10	-0.10	23	-0.16	-0.16	-0.16	24	-0.10	-0.10	-0.10
	25	-0.15	-0.15	-0.15	26	-0.17	-0.16	-0.17	27	-0.09	-0.09	-0.09
	28	-0.11	-0.10	-0.11	29	-0.17	-0.16	-0.17	30	-0.17	-0.17	-0.17
	31	-0.11	-0.11	-0.11	32	-0.12	-0.11	-0.12	33	-0.16	-0.16	-0.16
	34	-0.10	-0.10	-0.10	35	-0.15	-0.15	-0.15	36	-0.16	-0.16	-0.16
	37	-0.09	-0.09	-0.09	38	-0.10	-0.10	-0.10	39	-0.18	-0.17	-0.18
	40	-0.19	-0.18	-0.19	41	-0.12	-0.11	-0.12	42	-0.14	-0.13	-0.14
	43	-0.20	-0.19	-0.20	44	-0.20	-0.19	-0.20	45	-0.14	-0.13	-0.14
	46	-0.15	-0.14	-0.15	47	-0.19	-0.18	-0.19	48	-0.13	-0.12	-0.13
	49	-0.20	-0.19	-0.20	50	-0.21	-0.19	-0.21	51	-0.14	-0.13	-0.14
	52	-0.15	-0.14	-0.15	53	-0.18	-0.17	-0.18	54	-0.19	-0.18	-0.19
	55	-0.12	-0.11	-0.12	56	-0.14	-0.13	-0.14	57	-0.20	-0.19	-0.20
	58	-0.20	-0.19	-0.20	59	-0.14	-0.13	-0.14	60	-0.15	-0.14	-0.15
	61	-0.18	-0.17	-0.18	62	-0.19	-0.18	-0.19	63	-0.12	-0.11	-0.12
	64	-0.13	-0.12	-0.13	65	-0.19	-0.18	-0.19	66	-0.13	-0.12	-0.13

67	-0.20	-0.19	-0.20	68	-0.21	-0.19	-0.21	69	-0.14	-0.13	-0.14
70	-0.15	-0.14	-0.15	71	-0.18	-0.17	-0.18	72	-0.19	-0.18	-0.19
73	-0.12	-0.11	-0.12	74	-0.14	-0.13	-0.14	75	-0.20	-0.19	-0.20
76	-0.20	-0.19	-0.20	77	-0.14	-0.13	-0.14	78	-0.15	-0.14	-0.15
79	-0.19	-0.18	-0.19	80	-0.13	-0.12	-0.13	81	-0.18	-0.17	-0.18
82	-0.19	-0.18	-0.19	83	-0.12	-0.11	-0.12	84	-0.13	-0.12	-0.13
85	-0.20	-0.19	-0.20	86	-0.21	-0.19	-0.21	87	-0.14	-0.13	-0.14
88	-0.15	-0.13	-0.15	89	-0.12	-0.13	-0.13	90	-0.14	-0.14	-0.14
91	-0.06	-0.07	-0.07	92	-0.08	-0.08	-0.08	93	-0.14	-0.14	-0.14
94	-0.14	-0.15	-0.15	95	-0.08	-0.09	-0.09	96	-0.09	-0.09	-0.09
97	-0.13	-0.13	-0.13	98	-0.07	-0.08	-0.08	99	-0.10	-0.11	-0.11
100	-0.11	-0.12	-0.12	101	-0.05	-0.05	-0.05	102	-0.05	-0.06	-0.06
103	-0.12	-0.13	-0.13	104	-0.14	-0.14	-0.14	105	-0.06	-0.07	-0.07
106	-0.08	-0.08	-0.08	107	-0.14	-0.14	-0.14	108	-0.14	-0.15	-0.15
109	-0.08	-0.09	-0.09	110	-0.09	-0.09	-0.09	111	-0.12	-0.13	-0.13
112	-0.13	-0.13	-0.13	113	-0.06	-0.07	-0.07	114	-0.07	-0.08	-0.08
115	-0.13	-0.13	-0.13	116	-0.07	-0.08	-0.08	117	-0.10	-0.11	-0.11
118	-0.11	-0.12	-0.12	119	-0.05	-0.05	-0.05	120	-0.05	-0.06	-0.06
121	-0.12	-0.13	-0.13	122	-0.14	-0.14	-0.14	123	-0.06	-0.07	-0.07
124	-0.08	-0.08	-0.08	125	-0.14	-0.14	-0.14	126	-0.14	-0.15	-0.15
127	-0.08	-0.09	-0.09	128	-0.09	-0.09	-0.09	129	-0.13	-0.13	-0.13
130	-0.07	-0.08	-0.08	131	-0.12	-0.13	-0.13	132	-0.13	-0.13	-0.13
133	-0.06	-0.07	-0.07	134	-0.07	-0.08	-0.08	135	-0.10	-0.11	-0.11
136	-0.11	-0.12	-0.12	137	-0.05	-0.05	-0.05	138	-0.05	-0.06	-0.06
139	-0.13	-0.12	-0.13	140	-0.13	-0.12	-0.13	141	-0.08	-0.09	-0.09
142	-0.08	-0.09	-0.09	143	-0.13	-0.12	-0.13	144	-0.13	-0.12	-0.13
145	-0.08	-0.09	-0.09	146	-0.08	-0.09	-0.09	147	-0.12	-0.11	-0.12
148	-0.12	-0.11	-0.12	149	-0.09	-0.10	-0.10	150	-0.09	-0.10	-0.10
151	-0.12	-0.11	-0.12	152	-0.12	-0.11	-0.12	153	-0.09	-0.10	-0.10
154	-0.09	-0.10	-0.10	155	-0.11	-0.11	-0.11	156	-0.11	-0.11	-0.11
157	-0.10	-0.10	-0.10	158	-0.10	-0.10	-0.10	159	-0.11	-0.11	-0.11
160	-0.11	-0.11	-0.11	161	-0.10	-0.10	-0.10	162	-0.10	-0.10	-0.10
163	-0.11	-0.11	-0.11	164	-0.11	-0.11	-0.11	165	-0.10	-0.10	-0.10
166	-0.10	-0.10	-0.10	167	-0.11	-0.11	-0.11	168	-0.11	-0.11	-0.11
169	-0.10	-0.10	-0.10	170	-0.10	-0.10	-0.10	171	-0.12	-0.11	-0.12
172	-0.12	-0.11	-0.12	173	-0.10	-0.10	-0.10	174	-0.10	-0.10	-0.10
175	-0.12	-0.11	-0.12	176	-0.12	-0.11	-0.12	177	-0.10	-0.10	-0.10
178	-0.10	-0.10	-0.10	179	-0.11	-0.11	-0.11	180	-0.11	-0.11	-0.11
181	-0.10	-0.10	-0.10	182	-0.10	-0.10	-0.10	183	-0.11	-0.11	-0.11
184	-0.11	-0.11	-0.11	185	-0.10	-0.10	-0.10	186	-0.10	-0.10	-0.10
187	-0.11	-0.11	-0.11	188	-0.11	-0.11	-0.11	189	-0.10	-0.10	-0.10
190	-0.10	-0.10	-0.10	191	-0.11	-0.11	-0.11	192	-0.11	-0.11	-0.11
193	-0.10	-0.10	-0.10	194	-0.10	-0.10	-0.10	195	-0.11	-0.11	-0.11
196	-0.11	-0.11	-0.11	197	-0.10	-0.10	-0.10	198	-0.10	-0.10	-0.10
199	-0.11	-0.11	-0.11	200	-0.11	-0.11	-0.11	201	-0.10	-0.10	-0.10
202	-0.10	-0.10	-0.10	203	-0.11	-0.11	-0.11	204	-0.11	-0.11	-0.11
205	-0.10	-0.10	-0.10	206	-0.10	-0.10	-0.10	207	-0.11	-0.11	-0.11
208	-0.11	-0.11	-0.11	209	-0.10	-0.10	-0.10	210	-0.10	-0.10	-0.10
211	-0.11	-0.11	-0.11	212	-0.11	-0.11	-0.11	213	-0.10	-0.10	-0.10
214	-0.10	-0.10	-0.10	215	-0.11	-0.11	-0.11	216	-0.11	-0.11	-0.11
217	-0.10	-0.10	-0.10	218	-0.10	-0.10	-0.10	219	-0.11	-0.11	-0.11
220	-0.11	-0.11	-0.11	221	-0.10	-0.10	-0.10	222	-0.10	-0.10	-0.10
223	-0.11	-0.10	-0.11	224	-0.11	-0.10	-0.11	225	-0.10	-0.10	-0.10
226	-0.10	-0.10	-0.10	227	-0.11	-0.11	-0.11	228	-0.11	-0.11	-0.11
229	-0.10	-0.10	-0.10	230	-0.10	-0.10	-0.10	231	-0.11	-0.10	-0.11
232	-0.11	-0.10	-0.11	233	-0.10	-0.10	-0.10	234	-0.10	-0.10	-0.10
235	-0.11	-0.11	-0.11	236	-0.11	-0.11	-0.11	237	-0.12	-0.11	-0.12
238	-0.12	-0.11	-0.12	239	-0.12	-0.12	-0.12	240	-0.12	-0.12	-0.12
241	-0.12	-0.12	-0.12	242	-0.12	-0.12	-0.12	243	-0.11	-0.11	-0.11
244	-0.11	-0.11	-0.11	245	-0.11	-0.11	-0.11	246	-0.11	-0.11	-0.11
247	-0.11	-0.11	-0.11	248	-0.12	-0.11	-0.12	249	-0.12	-0.12	-0.12
250	-0.12	-0.12	-0.12	251	-0.11	-0.11	-0.11	252	-0.11	-0.11	-0.11
253	-0.11	-0.11	-0.11	254	-0.13	-0.12	-0.13	255	-0.14	-0.13	-0.14
256	-0.14	-0.13	-0.14	257	-0.14	-0.14	-0.14	258	-0.13	-0.13	-0.13
259	-0.14	-0.13	-0.14	260	-0.15	-0.14	-0.15	261	-0.13	-0.12	-0.13
262	-0.14	-0.13	-0.14	263	-0.14	-0.13	-0.14	264	-0.14	-0.14	-0.14
265	-0.13	-0.12	-0.13	266	-0.13	-0.13	-0.13	267	-0.13	-0.13	-0.13
268	-0.14	-0.13	-0.14	269	-0.15	-0.14	-0.15	270	-0.13	-0.12	-0.13
271	-0.14	-0.13	-0.14	272	-0.14	-0.13	-0.14	273	-0.14	-0.14	-0.14
274	-0.13	-0.13	-0.13	275	-0.13	-0.12	-0.13	276	-0.13	-0.13	-0.13
277	-0.14	-0.13	-0.14	278	-0.15	-0.14	-0.15	279	-0.09	-0.09	-0.09
280	-0.10	-0.10	-0.10	281	-0.10	-0.10	-0.10	282	-0.10	-0.11	-0.11
283	-0.09	-0.10	-0.10	284	-0.08	-0.08	-0.08	285	-0.08	-0.09	-0.09
286	-0.09	-0.09	-0.09	287	-0.10	-0.10	-0.10	288	-0.10	-0.10	-0.10
289	-0.10	-0.11	-0.11	290	-0.09	-0.09	-0.09	291	-0.09	-0.10	-0.10
292	-0.09	-0.10	-0.10	293	-0.08	-0.08	-0.08	294	-0.08	-0.09	-0.09
295	-0.09	-0.09	-0.09	296	-0.10	-0.10	-0.10	297	-0.10	-0.10	-0.10
298	-0.10	-0.11	-0.11	299	-0.09	-0.10	-0.10	300	-0.09	-0.09	-0.09

	301	-0.09	-0.10	-0.10	302	-0.08	-0.08	-0.08	303	-0.08	-0.09	-0.09
	304	-0.11	-0.10	-0.11	305	-0.11	-0.11	-0.11	306	-0.11	-0.11	-0.11
	307	-0.11	-0.10	-0.11	308	-0.11	-0.10	-0.11	309	-0.11	-0.11	-0.11
	310	-0.10	-0.10	-0.10	311	-0.11	-0.10	-0.11				
10	1	-0.15	-0.15	-0.15	2	-0.15	-0.15	-0.15	3	-0.16	-0.16	-0.16
	4	-0.16	-0.16	-0.16	5	-0.09	-0.09	-0.09	6	-0.09	-0.09	-0.09
	7	-0.10	-0.10	-0.10	8	-0.10	-0.10	-0.10	9	-0.16	-0.16	-0.16
	10	-0.16	-0.16	-0.16	11	-0.17	-0.17	-0.17	12	-0.17	-0.17	-0.17
	13	-0.11	-0.11	-0.11	14	-0.11	-0.11	-0.11	15	-0.11	-0.11	-0.11
	16	-0.11	-0.11	-0.11	17	-0.15	-0.15	-0.15	18	-0.16	-0.15	-0.16
	19	-0.16	-0.15	-0.16	20	-0.09	-0.09	-0.09	21	-0.10	-0.10	-0.10
	22	-0.10	-0.09	-0.10	23	-0.16	-0.15	-0.16	24	-0.10	-0.09	-0.10
	25	-0.15	-0.15	-0.15	26	-0.16	-0.16	-0.16	27	-0.09	-0.09	-0.09
	28	-0.10	-0.10	-0.10	29	-0.16	-0.16	-0.16	30	-0.17	-0.17	-0.17
	31	-0.11	-0.11	-0.11	32	-0.11	-0.11	-0.11	33	-0.16	-0.15	-0.16
	34	-0.10	-0.10	-0.10	35	-0.15	-0.15	-0.15	36	-0.16	-0.15	-0.16
	37	-0.09	-0.09	-0.09	38	-0.10	-0.10	-0.10	39	-0.17	-0.16	-0.17
	40	-0.18	-0.17	-0.18	41	-0.11	-0.11	-0.11	42	-0.13	-0.12	-0.13
	43	-0.19	-0.18	-0.19	44	-0.19	-0.18	-0.19	45	-0.13	-0.12	-0.13
	46	-0.14	-0.13	-0.14	47	-0.18	-0.17	-0.18	48	-0.12	-0.11	-0.12
	49	-0.19	-0.18	-0.19	50	-0.19	-0.18	-0.19	51	-0.13	-0.12	-0.13
	52	-0.14	-0.12	-0.14	53	-0.17	-0.16	-0.17	54	-0.18	-0.17	-0.18
	55	-0.11	-0.11	-0.11	56	-0.13	-0.12	-0.13	57	-0.19	-0.18	-0.19
	58	-0.19	-0.18	-0.19	59	-0.13	-0.12	-0.13	60	-0.14	-0.13	-0.14
	61	-0.17	-0.16	-0.17	62	-0.18	-0.17	-0.18	63	-0.11	-0.11	-0.11
	64	-0.12	-0.11	-0.12	65	-0.18	-0.17	-0.18	66	-0.12	-0.11	-0.12
	67	-0.19	-0.18	-0.19	68	-0.19	-0.18	-0.19	69	-0.13	-0.12	-0.13
	70	-0.14	-0.12	-0.14	71	-0.17	-0.16	-0.17	72	-0.18	-0.17	-0.18
	73	-0.11	-0.11	-0.11	74	-0.13	-0.12	-0.13	75	-0.19	-0.18	-0.19
	76	-0.19	-0.18	-0.19	77	-0.13	-0.12	-0.13	78	-0.14	-0.13	-0.14
	79	-0.18	-0.17	-0.18	80	-0.12	-0.11	-0.12	81	-0.17	-0.16	-0.17
	82	-0.18	-0.17	-0.18	83	-0.11	-0.11	-0.11	84	-0.12	-0.11	-0.12
	85	-0.19	-0.18	-0.19	86	-0.19	-0.18	-0.19	87	-0.13	-0.12	-0.13
	88	-0.13	-0.12	-0.13	89	-0.13	-0.13	-0.13	90	-0.14	-0.14	-0.14
	91	-0.07	-0.07	-0.07	92	-0.08	-0.08	-0.08	93	-0.14	-0.15	-0.15
	94	-0.15	-0.15	-0.15	95	-0.09	-0.09	-0.09	96	-0.09	-0.09	-0.09
	97	-0.13	-0.13	-0.13	98	-0.08	-0.08	-0.08	99	-0.11	-0.12	-0.12
	100	-0.12	-0.12	-0.12	101	-0.05	-0.06	-0.06	102	-0.06	-0.07	-0.07
	103	-0.13	-0.13	-0.13	104	-0.14	-0.14	-0.14	105	-0.07	-0.07	-0.07
	106	-0.08	-0.08	-0.08	107	-0.14	-0.15	-0.15	108	-0.15	-0.15	-0.15
	109	-0.09	-0.09	-0.09	110	-0.09	-0.09	-0.09	111	-0.13	-0.13	-0.13
	112	-0.13	-0.13	-0.13	113	-0.07	-0.07	-0.07	114	-0.08	-0.08	-0.08
	115	-0.13	-0.13	-0.13	116	-0.08	-0.08	-0.08	117	-0.11	-0.12	-0.12
	118	-0.12	-0.12	-0.12	119	-0.05	-0.06	-0.06	120	-0.06	-0.07	-0.07
	121	-0.13	-0.13	-0.13	122	-0.14	-0.14	-0.14	123	-0.07	-0.07	-0.07
	124	-0.08	-0.08	-0.08	125	-0.14	-0.15	-0.15	126	-0.15	-0.15	-0.15
	127	-0.09	-0.09	-0.09	128	-0.09	-0.09	-0.09	129	-0.13	-0.13	-0.13
	130	-0.08	-0.08	-0.08	131	-0.13	-0.13	-0.13	132	-0.13	-0.13	-0.13
	133	-0.07	-0.07	-0.07	134	-0.08	-0.08	-0.08	135	-0.11	-0.12	-0.12
	136	-0.12	-0.12	-0.12	137	-0.05	-0.06	-0.06	138	-0.06	-0.07	-0.07
	139	-0.12	-0.11	-0.12	140	-0.12	-0.11	-0.12	141	-0.09	-0.10	-0.10
	142	-0.09	-0.10	-0.10	143	-0.12	-0.11	-0.12	144	-0.12	-0.11	-0.12
	145	-0.09	-0.10	-0.10	146	-0.09	-0.10	-0.10	147	-0.11	-0.11	-0.11
	148	-0.11	-0.11	-0.11	149	-0.10	-0.10	-0.10	150	-0.10	-0.10	-0.10
	151	-0.11	-0.11	-0.11	152	-0.11	-0.11	-0.11	153	-0.10	-0.10	-0.10
	154	-0.10	-0.10	-0.10	155	-0.11	-0.10	-0.11	156	-0.11	-0.10	-0.11
	157	-0.10	-0.10	-0.10	158	-0.10	-0.10	-0.10	159	-0.11	-0.10	-0.11
	160	-0.11	-0.10	-0.11	161	-0.10	-0.10	-0.10	162	-0.10	-0.10	-0.10
	163	-0.11	-0.10	-0.11	164	-0.11	-0.10	-0.11	165	-0.10	-0.10	-0.10
	166	-0.10	-0.10	-0.10	167	-0.11	-0.10	-0.11	168	-0.11	-0.10	-0.11
	169	-0.10	-0.10	-0.10	170	-0.10	-0.10	-0.10	171	-0.11	-0.11	-0.11
	172	-0.11	-0.11	-0.11	173	-0.10	-0.10	-0.10	174	-0.10	-0.10	-0.10
	175	-0.11	-0.11	-0.11	176	-0.11	-0.11	-0.11	177	-0.10	-0.10	-0.10
	178	-0.10	-0.10	-0.10	179	-0.11	-0.10	-0.11	180	-0.11	-0.10	-0.11
	181	-0.10	-0.10	-0.10	182	-0.10	-0.10	-0.10	183	-0.11	-0.10	-0.11
	184	-0.11	-0.10	-0.11	185	-0.10	-0.10	-0.10	186	-0.10	-0.10	-0.10
	187	-0.11	-0.10	-0.11	188	-0.11	-0.10	-0.11	189	-0.10	-0.10	-0.10
	190	-0.10	-0.10	-0.10	191	-0.11	-0.10	-0.11	192	-0.11	-0.10	-0.11
	193	-0.10	-0.10	-0.10	194	-0.10	-0.10	-0.10	195	-0.11	-0.10	-0.11
	196	-0.11	-0.10	-0.11	197	-0.10	-0.10	-0.10	198	-0.10	-0.10	-0.10
	199	-0.11	-0.10	-0.11	200	-0.11	-0.10	-0.11	201	-0.10	-0.10	-0.10
	202	-0.10	-0.10	-0.10	203	-0.11	-0.10	-0.11	204	-0.11	-0.10	-0.11
	205	-0.10	-0.10	-0.10	206	-0.10	-0.10	-0.10	207	-0.11	-0.10	-0.11
	208	-0.11	-0.10	-0.11	209	-0.10	-0.10	-0.10	210	-0.10	-0.10	-0.10
	211	-0.11	-0.10	-0.11	212	-0.11	-0.10	-0.11	213	-0.10	-0.10	-0.10
	214	-0.10	-0.10	-0.10	215	-0.11	-0.10	-0.11	216	-0.11	-0.10	-0.11
	217	-0.10	-0.10	-0.10	218	-0.10	-0.10	-0.10	219	-0.11	-0.10	-0.11
	220	-0.11	-0.10	-0.11	221	-0.10	-0.10	-0.10	222	-0.10	-0.10	-0.10

	223	-0.10	-0.10	-0.10	224	-0.10	-0.10	-0.10	225	-0.10	-0.10	-0.10
	226	-0.10	-0.10	-0.10	227	-0.11	-0.10	-0.11	228	-0.11	-0.10	-0.11
	229	-0.10	-0.10	-0.10	230	-0.10	-0.10	-0.10	231	-0.10	-0.10	-0.10
	232	-0.10	-0.10	-0.10	233	-0.10	-0.10	-0.10	234	-0.10	-0.10	-0.10
	235	-0.11	-0.11	-0.11	236	-0.11	-0.11	-0.11	237	-0.11	-0.11	-0.11
	238	-0.11	-0.11	-0.11	239	-0.12	-0.12	-0.12	240	-0.12	-0.12	-0.12
	241	-0.12	-0.12	-0.12	242	-0.12	-0.12	-0.12	243	-0.11	-0.11	-0.11
	244	-0.11	-0.11	-0.11	245	-0.11	-0.11	-0.11	246	-0.11	-0.11	-0.11
	247	-0.11	-0.11	-0.11	248	-0.11	-0.11	-0.11	249	-0.12	-0.12	-0.12
	250	-0.12	-0.12	-0.12	251	-0.11	-0.11	-0.11	252	-0.11	-0.11	-0.11
	253	-0.11	-0.11	-0.11	254	-0.12	-0.12	-0.12	255	-0.13	-0.12	-0.13
	256	-0.13	-0.13	-0.13	257	-0.14	-0.13	-0.14	258	-0.13	-0.12	-0.13
	259	-0.13	-0.12	-0.13	260	-0.14	-0.13	-0.14	261	-0.12	-0.12	-0.12
	262	-0.13	-0.12	-0.13	263	-0.13	-0.13	-0.13	264	-0.14	-0.13	-0.14
	265	-0.12	-0.12	-0.12	266	-0.13	-0.12	-0.13	267	-0.13	-0.12	-0.13
	268	-0.13	-0.12	-0.13	269	-0.14	-0.13	-0.14	270	-0.12	-0.12	-0.12
	271	-0.13	-0.12	-0.13	272	-0.13	-0.13	-0.13	273	-0.14	-0.13	-0.14
	274	-0.13	-0.12	-0.13	275	-0.12	-0.12	-0.12	276	-0.13	-0.12	-0.13
	277	-0.13	-0.12	-0.13	278	-0.14	-0.13	-0.14	279	-0.09	-0.09	-0.09
	280	-0.10	-0.10	-0.10	281	-0.10	-0.10	-0.10	282	-0.11	-0.11	-0.11
	283	-0.10	-0.10	-0.10	284	-0.08	-0.09	-0.09	285	-0.09	-0.09	-0.09
	286	-0.09	-0.09	-0.09	287	-0.10	-0.10	-0.10	288	-0.10	-0.10	-0.10
	289	-0.11	-0.11	-0.11	290	-0.09	-0.09	-0.09	291	-0.10	-0.10	-0.10
	292	-0.10	-0.10	-0.10	293	-0.08	-0.09	-0.09	294	-0.09	-0.09	-0.09
	295	-0.09	-0.09	-0.09	296	-0.10	-0.10	-0.10	297	-0.10	-0.10	-0.10
	298	-0.11	-0.11	-0.11	299	-0.10	-0.10	-0.10	300	-0.09	-0.09	-0.09
	301	-0.10	-0.10	-0.10	302	-0.08	-0.09	-0.09	303	-0.09	-0.09	-0.09
	304	-0.10	-0.10	-0.10	305	-0.11	-0.10	-0.11	306	-0.11	-0.11	-0.11
	307	-0.10	-0.10	-0.10	308	-0.10	-0.10	-0.10	309	-0.11	-0.11	-0.11
	310	-0.10	-0.10	-0.10	311	-0.10	-0.10	-0.10				
11	1	-0.15	-0.15	-0.15	2	-0.15	-0.15	-0.15	3	-0.16	-0.15	-0.16
	4	-0.16	-0.15	-0.16	5	-0.09	-0.09	-0.09	6	-0.09	-0.09	-0.09
	7	-0.10	-0.10	-0.10	8	-0.10	-0.10	-0.10	9	-0.16	-0.16	-0.16
	10	-0.16	-0.16	-0.16	11	-0.17	-0.17	-0.17	12	-0.17	-0.17	-0.17
	13	-0.11	-0.11	-0.11	14	-0.11	-0.11	-0.11	15	-0.11	-0.11	-0.11
	16	-0.11	-0.11	-0.11	17	-0.15	-0.15	-0.15	18	-0.15	-0.15	-0.15
	19	-0.15	-0.15	-0.15	20	-0.09	-0.09	-0.09	21	-0.10	-0.09	-0.10
	22	-0.09	-0.09	-0.09	23	-0.15	-0.15	-0.15	24	-0.09	-0.09	-0.09
	25	-0.15	-0.15	-0.15	26	-0.16	-0.15	-0.16	27	-0.09	-0.09	-0.09
	28	-0.10	-0.10	-0.10	29	-0.16	-0.16	-0.16	30	-0.17	-0.17	-0.17
	31	-0.11	-0.11	-0.11	32	-0.11	-0.11	-0.11	33	-0.15	-0.15	-0.15
	34	-0.10	-0.09	-0.10	35	-0.15	-0.15	-0.15	36	-0.15	-0.15	-0.15
	37	-0.09	-0.09	-0.09	38	-0.10	-0.09	-0.10	39	-0.16	-0.16	-0.16
	40	-0.17	-0.17	-0.17	41	-0.11	-0.10	-0.11	42	-0.12	-0.11	-0.12
	43	-0.18	-0.18	-0.18	44	-0.18	-0.18	-0.18	45	-0.12	-0.12	-0.12
	46	-0.13	-0.12	-0.13	47	-0.17	-0.16	-0.17	48	-0.11	-0.11	-0.11
	49	-0.18	-0.17	-0.18	50	-0.18	-0.17	-0.18	51	-0.12	-0.11	-0.12
	52	-0.12	-0.12	-0.12	53	-0.16	-0.16	-0.16	54	-0.17	-0.17	-0.17
	55	-0.11	-0.10	-0.11	56	-0.12	-0.11	-0.12	57	-0.18	-0.18	-0.18
	58	-0.18	-0.18	-0.18	59	-0.12	-0.12	-0.12	60	-0.13	-0.12	-0.13
	61	-0.16	-0.16	-0.16	62	-0.17	-0.16	-0.17	63	-0.11	-0.10	-0.11
	64	-0.11	-0.11	-0.11	65	-0.17	-0.16	-0.17	66	-0.11	-0.11	-0.11
	67	-0.18	-0.17	-0.18	68	-0.18	-0.17	-0.18	69	-0.12	-0.11	-0.12
	70	-0.12	-0.12	-0.12	71	-0.16	-0.16	-0.16	72	-0.17	-0.17	-0.17
	73	-0.11	-0.10	-0.11	74	-0.12	-0.11	-0.12	75	-0.18	-0.18	-0.18
	76	-0.18	-0.18	-0.18	77	-0.12	-0.12	-0.12	78	-0.13	-0.12	-0.13
	79	-0.17	-0.16	-0.17	80	-0.11	-0.11	-0.11	81	-0.16	-0.16	-0.16
	82	-0.17	-0.16	-0.17	83	-0.11	-0.10	-0.11	84	-0.11	-0.11	-0.11
	85	-0.18	-0.17	-0.18	86	-0.18	-0.17	-0.18	87	-0.12	-0.11	-0.12
	88	-0.12	-0.12	-0.12	89	-0.13	-0.13	-0.13	90	-0.14	-0.14	-0.14
	91	-0.07	-0.08	-0.08	92	-0.08	-0.08	-0.08	93	-0.15	-0.15	-0.15
	94	-0.15	-0.15	-0.15	95	-0.09	-0.09	-0.09	96	-0.09	-0.10	-0.10
	97	-0.13	-0.14	-0.14	98	-0.08	-0.08	-0.08	99	-0.12	-0.12	-0.12
	100	-0.12	-0.13	-0.13	101	-0.06	-0.07	-0.07	102	-0.07	-0.07	-0.07
	103	-0.13	-0.13	-0.13	104	-0.14	-0.14	-0.14	105	-0.07	-0.08	-0.08
	106	-0.08	-0.08	-0.08	107	-0.15	-0.15	-0.15	108	-0.15	-0.15	-0.15
	109	-0.09	-0.09	-0.09	110	-0.09	-0.10	-0.10	111	-0.13	-0.13	-0.13
	112	-0.13	-0.14	-0.14	113	-0.07	-0.08	-0.08	114	-0.08	-0.08	-0.08
	115	-0.13	-0.14	-0.14	116	-0.08	-0.08	-0.08	117	-0.12	-0.12	-0.12
	118	-0.12	-0.13	-0.13	119	-0.06	-0.07	-0.07	120	-0.07	-0.07	-0.07
	121	-0.13	-0.13	-0.13	122	-0.14	-0.14	-0.14	123	-0.07	-0.08	-0.08
	124	-0.08	-0.08	-0.08	125	-0.15	-0.15	-0.15	126	-0.15	-0.15	-0.15
	127	-0.09	-0.09	-0.09	128	-0.09	-0.10	-0.10	129	-0.13	-0.14	-0.14
	130	-0.08	-0.08	-0.08	131	-0.13	-0.13	-0.13	132	-0.13	-0.14	-0.14
	133	-0.07	-0.08	-0.08	134	-0.08	-0.08	-0.08	135	-0.12	-0.12	-0.12
	136	-0.12	-0.13	-0.13	137	-0.06	-0.07	-0.07	138	-0.07	-0.07	-0.07
	139	-0.11	-0.10	-0.11	140	-0.11	-0.10	-0.11	141	-0.10	-0.10	-0.10
	142	-0.10	-0.10	-0.10	143	-0.11	-0.10	-0.11	144	-0.11	-0.10	-0.11

	145	-0.10	-0.10	-0.10	146	-0.10	-0.10	-0.10	147	-0.11	-0.10	-0.11
	148	-0.11	-0.10	-0.11	149	-0.10	-0.10	-0.10	150	-0.10	-0.10	-0.10
	151	-0.11	-0.10	-0.11	152	-0.11	-0.10	-0.11	153	-0.10	-0.10	-0.10
	154	-0.10	-0.10	-0.10	155	-0.10	-0.10	-0.10	156	-0.10	-0.10	-0.10
	157	-0.10	-0.10	-0.10	158	-0.10	-0.10	-0.10	159	-0.10	-0.10	-0.10
	160	-0.10	-0.10	-0.10	161	-0.10	-0.10	-0.10	162	-0.10	-0.10	-0.10
	163	-0.10	-0.10	-0.10	164	-0.10	-0.10	-0.10	165	-0.10	-0.10	-0.10
	166	-0.10	-0.10	-0.10	167	-0.10	-0.10	-0.10	168	-0.10	-0.10	-0.10
	169	-0.10	-0.10	-0.10	170	-0.10	-0.10	-0.10	171	-0.11	-0.10	-0.11
	172	-0.11	-0.10	-0.11	173	-0.10	-0.10	-0.10	174	-0.10	-0.10	-0.10
	175	-0.11	-0.10	-0.11	176	-0.11	-0.10	-0.11	177	-0.10	-0.10	-0.10
	178	-0.10	-0.10	-0.10	179	-0.10	-0.10	-0.10	180	-0.10	-0.10	-0.10
	181	-0.10	-0.10	-0.10	182	-0.10	-0.10	-0.10	183	-0.10	-0.10	-0.10
	184	-0.10	-0.10	-0.10	185	-0.10	-0.10	-0.10	186	-0.10	-0.10	-0.10
	187	-0.10	-0.10	-0.10	188	-0.10	-0.10	-0.10	189	-0.10	-0.10	-0.10
	190	-0.10	-0.10	-0.10	191	-0.10	-0.10	-0.10	192	-0.10	-0.10	-0.10
	193	-0.10	-0.10	-0.10	194	-0.10	-0.10	-0.10	195	-0.10	-0.10	-0.10
	196	-0.10	-0.10	-0.10	197	-0.10	-0.10	-0.10	198	-0.10	-0.10	-0.10
	199	-0.10	-0.10	-0.10	200	-0.10	-0.10	-0.10	201	-0.10	-0.10	-0.10
	202	-0.10	-0.10	-0.10	203	-0.10	-0.10	-0.10	204	-0.10	-0.10	-0.10
	205	-0.10	-0.10	-0.10	206	-0.10	-0.10	-0.10	207	-0.10	-0.10	-0.10
	208	-0.10	-0.10	-0.10	209	-0.10	-0.10	-0.10	210	-0.10	-0.10	-0.10
	211	-0.10	-0.10	-0.10	212	-0.10	-0.10	-0.10	213	-0.10	-0.10	-0.10
	214	-0.10	-0.10	-0.10	215	-0.10	-0.10	-0.10	216	-0.10	-0.10	-0.10
	217	-0.10	-0.10	-0.10	218	-0.10	-0.10	-0.10	219	-0.10	-0.10	-0.10
	220	-0.10	-0.10	-0.10	221	-0.10	-0.10	-0.10	222	-0.10	-0.10	-0.10
	223	-0.10	-0.10	-0.10	224	-0.10	-0.10	-0.10	225	-0.10	-0.10	-0.10
	226	-0.10	-0.10	-0.10	227	-0.10	-0.10	-0.10	228	-0.10	-0.10	-0.10
	229	-0.10	-0.10	-0.10	230	-0.10	-0.10	-0.10	231	-0.10	-0.10	-0.10
	232	-0.10	-0.10	-0.10	233	-0.10	-0.10	-0.10	234	-0.10	-0.10	-0.10
	235	-0.11	-0.10	-0.11	236	-0.11	-0.10	-0.11	237	-0.11	-0.11	-0.11
	238	-0.11	-0.11	-0.11	239	-0.12	-0.12	-0.12	240	-0.12	-0.12	-0.12
	241	-0.12	-0.12	-0.12	242	-0.12	-0.12	-0.12	243	-0.11	-0.10	-0.11
	244	-0.11	-0.11	-0.11	245	-0.11	-0.11	-0.11	246	-0.11	-0.11	-0.11
	247	-0.11	-0.10	-0.11	248	-0.11	-0.11	-0.11	249	-0.12	-0.12	-0.12
	250	-0.12	-0.12	-0.12	251	-0.11	-0.11	-0.11	252	-0.11	-0.10	-0.11
	253	-0.11	-0.11	-0.11	254	-0.12	-0.11	-0.12	255	-0.12	-0.12	-0.12
	256	-0.13	-0.12	-0.13	257	-0.13	-0.13	-0.13	258	-0.12	-0.12	-0.12
	259	-0.12	-0.12	-0.12	260	-0.13	-0.12	-0.13	261	-0.12	-0.11	-0.12
	262	-0.12	-0.12	-0.12	263	-0.13	-0.12	-0.13	264	-0.13	-0.13	-0.13
	265	-0.12	-0.11	-0.12	266	-0.12	-0.12	-0.12	267	-0.12	-0.12	-0.12
	268	-0.12	-0.12	-0.12	269	-0.13	-0.12	-0.13	270	-0.12	-0.11	-0.12
...												
184	310	-0.23	-0.23	-0.23	311	-0.23	-0.23	-0.23	309	-0.23	-0.23	-0.23
Elem.		Pt ini	Pt fin	Pt max		Pt ini	Pt fin	Pt max		Pt ini	Pt fin	Pt max
		-0.37										
		-0.01										

VERIFICHE ELEMENTI TRAVE C.A.

LEGENDA TABELLA VERIFICHE ELEMENTI TRAVE C.A.

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

Nel caso in cui si sia proceduto alla progettazione con le tensioni ammissibili vengono riportate le massime tensioni nell'elemento (massima compressione nel calcestruzzo, massima compressione media nel calcestruzzo, massima tensione nell'acciaio, massima tensione tangenziale) con l'indicazione delle combinazioni in cui si sono attinti i rispettivi valori.

Nel caso in cui si sia proceduto alla progettazione con il metodo degli stati limite vengono riportati il rapporto x/d , le verifiche per sollecitazioni proporzionali e la verifica per compressione media con l'indicazione delle combinazioni in cui si sono attinti i rispettivi valori.

Per gli elementi tipo pilastro sono riportati numero e diametro dei ferri di vertice, numero e diametro di ferri disposti lungo i lati L1 (paralleli alla base della sezione) e lungo i lati L2 (paralleli all'altezza della sezione).

Per gli elementi tipo trave sono riportati infine le quantità di armatura inferiore e superiore.

In particolare i simboli utilizzati con il metodo delle tensioni ammissibili assumono il seguente significato:

M_P X Y	Numero della pilastrata e posizione in pianta
M_T Z P P	Numero della travata, quota media pilastrata iniziale e finale (nodo in assenza di pilastrata)
Pilas. o Trave	numero identificativo dell'elemento
Note	Viene riportato il codice relativo alla sezione(s) e relativo al materiale(m); nella terza riga viene riportato il valore delle snellezze in direzione 2-2 e 3-3
Stato	Codici di verifica relativi alle tensioni normali e alle tensioni tangenziali
Quota	Ascissa del punto di verifica
%Af	Percentuale di area di armatura rispetto a quella di calcestruzzo
Armat. long.	Numero e diametro dei ferri di armatura longitudinale: ferri di vertice + ferri di lato (vedi seguente figura)
Af inf.	Area di armatura longitudinale posta all'intradosso della trave
Af sup	Area di armatura longitudinale posta all'estradosso della trave
Sc max	Massima tensione di compressione del calcestruzzo
Sc med	Massima tensione media di compressione del calcestruzzo
Sf max	Tensione massima nell'acciaio
staffe	Vengono riportati i dati del tratto di staffatura in cui cade la sezione di verifica; in particolare: numero dei bracci, diametro, passo, lunghezza tratto
Tau max	Tensione massima tangenziale nel cls
Rif. comb	Combinazioni in cui si generano i seguenti valori di tensione: Sc max, Sc med, Sf max, Tau max
AfV	area dell'armatura atta ad assorbire le azioni di taglio
AfT	area dell'armatura atta ad assorbire le azioni di torsione
Scorr. P	Scorrimento dei piegati
Af long.	Area del ferro longitudinale aggiuntivo per assorbire la torsione

Progettazione delle fondazioni

Il D.M.14/02/2008 - par: 7.2.5 prevede:

“Per le strutture progettate sia per CD “A” sia per CD “B” il dimensionamento delle strutture di fondazione e la verifica di sicurezza del complesso fondazione-terreno devono essere eseguiti assumendo come azioni in fondazione le resistenze degli elementi strutturali soprastanti [...] si richiede tuttavia che tali azioni risultino non maggiori di quelle trasferite dagli elementi soprastanti, amplificate con un γ_{Rd} pari a 1,1 in CD “B” e 1,3 in CD “A” e comunque non maggiori di quelle derivanti da una analisi elastica della struttura in elevazione eseguita con un fattore di struttura q pari a 1....”

Nel contesto visualizzazione risultati e nella stampa della relazione sulle fondazioni PRO_SAP mostra le sollecitazioni che derivano dall'analisi non incrementate sia in termini di pressioni sul terreno che in termini di sollecitazioni.

La progettazione degli elementi strutturali con proprietà fondazione è effettuata da PRO_SAP (per travi e platee) o da PRO_CAD Plinti (per plinti e pali di fondazione) incrementando le sollecitazioni delle combinazioni con sisma del fattore: $\gamma_{rd} = 1.1$ in CDB $\gamma_{rd} = 1.3$ in CDA per pali, plinti, travi e platee.

Per i bicchieri dei plinti di fondazione prefabbricati l'incremento delle sollecitazioni ha un fattore: $\gamma_{rd} = 1.2$ in CDB $\gamma_{rd} = 1.35$ in CDA.

N.B.: se il fattore di struttura q è $=1$ la progettazione viene effettuata senza nessun incremento.

Le verifiche geotecniche vengono effettuate dal modulo geotecnico incrementando automaticamente le sollecitazioni del fattore: $\gamma_{rd} = 1.1$ in CDB $\gamma_{rd} = 1.3$ in CDA per pali, plinti, travi e platee.

N.B.: se il fattore di struttura q è $=1$ le verifiche geotecniche vengono effettuate senza nessun incremento.

Mentre i simboli utilizzati con il metodo degli stati limite assumono il seguente significato:

r. snell.	Rapporto λ su λ^* : valore superiore a 1 per elementi snelli, caso in cui viene effettuata la verifica con il metodo diretto dello stato di equilibrio
Verifica(verif.)	rapporto S_d/S_u con sollecitazioni ultime proporzionali o a sforzo normale costante: valore minore o uguale a 1 per verifica positiva
ver.sis	rapporto N_d/N_u con N_u calcolato come al punto 7.4.4.2.2.1; valore minore o uguale a 1 per verifica positiva
ver.V/T	rapporto S_d/S_u con sollecitazioni taglianti e torcenti proporzionali valore minore o uguale a 1 per verifica positiva
x/d	rapporto tra posizione dell'asse neutro e altezza utile alla rottura della sezione (per sola flessione)

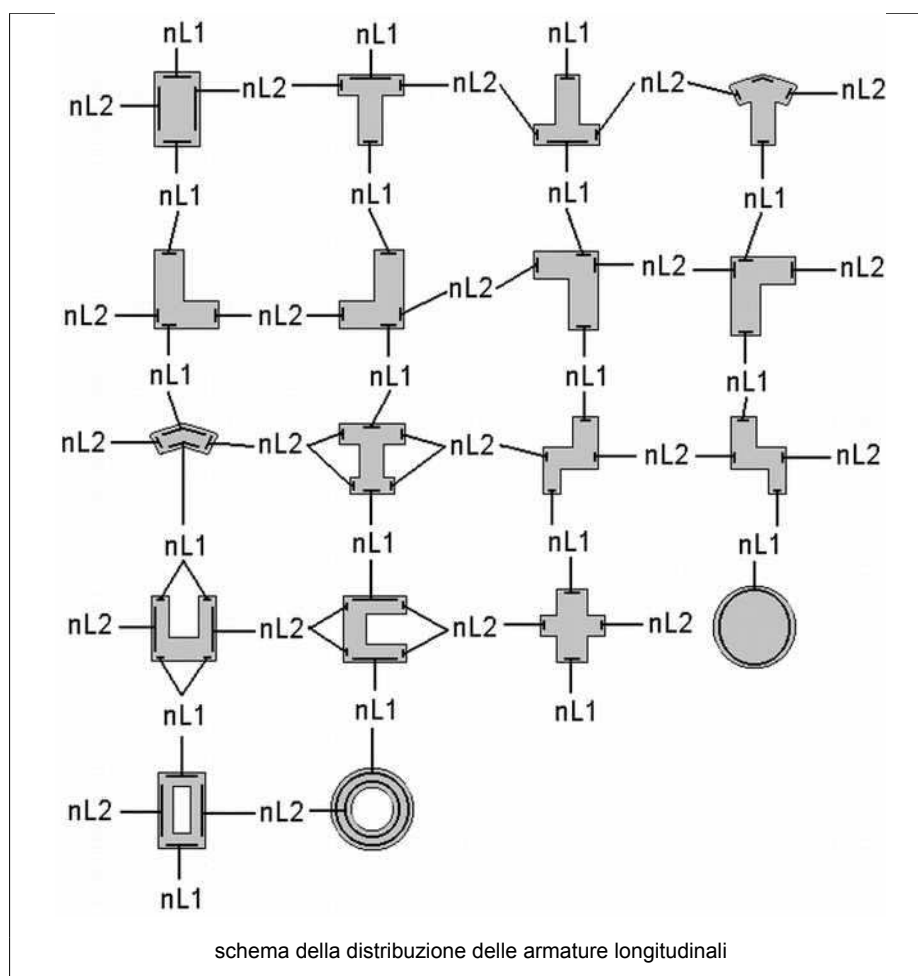
Per gli elementi progettati secondo il criterio della gerarchia delle resistenze (pilastri e travi) si riporta una ulteriore tabella di seguito descritta:

M negativo i	Valore del momento resistente negativo (positivo) all' estremità iniziale i (finale f) della trave
V M-i M+f	Taglio generato dai momenti resistenti negativo i e positivo f (positivo i e negativo f)
V totale	Massimo valore assoluto ottenuto per combinazione del taglio isostatico e dei tagli concomitanti (p.to 7.4.4.1.1.)
Verif. V	Rapporto tra il taglio massimo e V_{r1} (p.to 7.4.4.1.2.2);
Sovr. 2-2 i	Sovraresistenza del pilastro (come da formula 7.4.4). Rapporto tra i momenti resistenti delle travi e dei pilastri. Il valore del fattore rispettivamente per il momento 2-2 (3-3) alla base i ed alla sommità f del pilastro deve essere maggiore del γ_{maRd} adottato
M 2-2 i	Valore del momento resistente rispettivamente per 2-2 (3-3) alla base i ed alla sommità f del pilastro (massimo momento in presenza dello sforzo normale di calcolo)
Luce per V	Luce di calcolo per la definizione del taglio (generato dai momenti resistenti)
V M2-2	Valore del taglio generato dai momenti resistenti 2-2 (3-3)

Per i nodi trave-pilastro viene riportata la seguente tabella relativa al calcolo delle armature di confinamento e

alla verifica di resistenza del nodo (richiesta solo per strutture in classe di duttilità alta); le caselle vuote indicano parametri non riportati in quanto non necessari.

Stato	Esito della verifica (come da formula 7.4.8) per resistenza a compressione del nodo (solo CDA)
I 7.4.29	Passo delle staffe di confinamento come richiesto dalla formula 7.4.29
Bj2(3)	Dimensione del nodo per il taglio in direzione 2 (3)
Hjc2(2)	Distanza tra le giaciture di armatura del pilastro per il taglio in direzione 2 (3)
V. 7.4.8	Rapporto tra il taglio V_{jbd} e il taglio resistente come da formula 7.4.8 (solo CDA)
I 7.4.10	Passo delle staffe valutato in funzione della formula 7.4.10 (solo CDA)



Con riferimento al **Documento di Affidabilità** "Test di validazione del software di calcolo PRO_SAP e dei moduli aggiuntivi PRO_SAP Modulo Geotecnico, PRO_CAD nodi acciaio e PRO_MST" - versione Maggio 2011, disponibile per il download sul sito www.2si.it, si segnalano i seguenti esempi applicativi:

Test N°	Titolo
24	TENSIONI E ROTAZIONI RISPETTO ALLA CORDA DI ELEMENTI TRAVE
27	FRECCIA DI ELEMENTI TRAVE
41	GERARCHIA DELLE RESISTENZE PER TRAVI IN C.A.
42	GERARCHIA DELLE RESISTENZE PER PILASTRI IN C.A.
43	VERIFICA ALLE TA DI STRUTTURE IN C.A.
44	VERIFICA AGLI SLU DI STRUTTURE IN C.A.
46	VERIFICA A PUNZONAMENTO ALLO SLU DI TRAVI IN C.A.
47	PROGETTAZIONE A TAGLIO DI STRUTTURE IN C.A. SECONDO IL D.M. 9/1/96
48	PROGETTAZIONE A TAGLIO DI STRUTTURE IN C.A. SECONDO IL D.M. 14/1/2008
49	VERIFICA ALLO SLE (TENSIONI E FESSURAZIONE) DI STRUTTURE IN C.A.
50	VERIFICA ALLO SLE (DEFORMAZIONE) DI STRUTTURE IN C.A.
52	SOVRARESISTENZE
53	DETTAGLI COSTRUTTIVI C.A.: LIMITI D'ARMATURA PILASTRI E NODI TRAVE-PILASTRO
68	VALUTAZIONE EFFETTO P-δ SU PILASTRATA

69	VALUTAZIONE EFFETTO P-8 SU TELAIO 3D
120	PROGETTO E VERIFICA DI TRAVI PREM

							M_T= 9	Z=0.0	P=3	P=4			
Trav e	Note	Pos.	%Af	Af inf.	Af. sup	Af long.	x/d	V N/M	V V/T cls	V V/T acc	Staffe	Rif. cmb	
		cm									L=cm		
9	ok,ok	0.0	0.96	6.0	6.0	0.0	0.37	0.11	0.19	0.20	2d8/25 L=48	143,68, 68	
	s=12,m =1	47.6	0.96	6.0	6.0	0.0	0.37	0.07	0.17	0.15	2d8/25 L=48	68,68,6 8	
10	ok,ok	0.0	0.96	6.0	6.0	0.0	0.37	0.04	0.08	0.08	2d8/25 L=48	146,68, 68	
	s=12,m =1	47.6	0.96	6.0	6.0	0.0	0.37	0.06	0.06	0.04	2d8/25 L=48	68,68,1 35	
11	ok,ok	0.0	0.96	6.0	6.0	0.0	0.37	0.03	0.03	0.05	2d8/25 L=48	68,68,6 8	
	s=12,m =1	47.6	0.96	6.0	6.0	0.0	0.37	0.06	0.02	0.03	2d8/25 L=48	68,143, 139	
12	ok,ok	0.0	0.96	6.0	6.0	0.0	0.37	0.05	0.02	0.03	2d8/25 L=48	68,146, 146	
	s=12,m =1	47.6	0.96	6.0	6.0	0.0	0.37	0.06	0.02	0.03	2d8/25 L=48	68,143, 139	
13	ok,ok	0.0	0.96	6.0	6.0	0.0	0.37	0.06	0.02	0.03	2d8/25 L=48	68,142, 146	
	s=12,m =1	47.6	0.96	6.0	6.0	0.0	0.37	0.05	0.02	0.03	2d8/25 L=48	68,139, 143	
14	ok,ok	0.0	0.96	6.0	6.0	0.0	0.37	0.06	0.02	0.03	2d8/25 L=48	68,142, 146	
	s=12,m =1	47.6	0.96	6.0	6.0	0.0	0.37	0.03	0.03	0.05	2d8/25 L=48	68,68,6 8	
15	ok,ok	0.0	0.96	6.0	6.0	0.0	0.37	0.06	0.06	0.04	2d8/25 L=48	68,68,1 35	
	s=12,m =1	47.6	0.96	6.0	6.0	0.0	0.37	0.05	0.08	0.08	2d8/25 L=48	139,68, 68	
16	ok,ok	0.0	0.96	6.0	6.0	0.0	0.37	0.07	0.18	0.15	2d8/25 L=48	68,68,6 8	
	s=12,m =1	47.6	0.96	6.0	6.0	0.0	0.37	0.13	0.20	0.20	2d8/25 L=48	139,68, 68	
							M_T= 10	Z=0.0	P=3	P=34			
Trav e	Note	Pos.	%Af	Af inf.	Af. sup	Af long.	x/d	V N/M	V V/T cls	V V/T acc	Staffe	Rif. cmb	
17	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.04	0.20	0.07	2d8/25 L=48	86,146, 88	
	s=11,m =1	47.6	0.51	6.0	6.0	0.0	0.17	0.02	0.19	0.06	2d8/25 L=48	143,14 6,88	
19	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.02	0.13	0.07	2d8/25 L=48	86,146, 86	
	s=11,m =1	47.6	0.51	6.0	6.0	0.0	0.17	0.03	0.13	0.06	2d8/25 L=48	70,146, 88	
21	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	9.67e-03	0.09	0.05	2d8/25 L=48		

												163,14 6,86	
	s=11,m =1	47.6	0.51	6.0	6.0	0.0	0.17	0.04	0.09	0.03	2d8/25 L=48	70,146, 88	
23	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.03	0.07	0.02	2d8/25 L=48	70,146, 86	
	s=11,m =1	47.6	0.51	6.0	6.0	0.0	0.17	0.03	0.07	6.21e-03	2d8/25 L=48	70,146, 146	
25	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.04	0.06	0.02	2d8/25 L=48	70,143, 135	
	s=11,m =1	47.6	0.51	6.0	6.0	0.0	0.17	0.02	0.06	0.03	2d8/25 L=48	68,143, 70	
27	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.04	0.08	0.05	2d8/25 L=48	70,143, 70	
	s=11,m =1	47.6	0.51	6.0	6.0	0.0	0.17	8.92e-03	0.08	0.06	2d8/25 L=48	146,14 3,70	
29	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.03	0.11	0.08	2d8/25 L=48	68,143, 70	
	s=11,m =1	47.6	0.51	6.0	6.0	0.0	0.17	0.04	0.12	0.09	2d8/25 L=48	70,143, 68	
31	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.01	0.18	0.13	2d8/25 L=48	146,14 3,70	
	s=11,m =1	47.6	0.51	6.0	6.0	0.0	0.17	0.09	0.18	0.14	2d8/25 L=48	70,143, 68	
33	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.10	0.20	0.17	2d8/25 L=48	86,139, 86	
	s=11,m =1	47.6	0.51	6.0	6.0	0.0	0.17	0.03	0.20	0.15	2d8/25 L=48	166,13 9,86	
35	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.04	0.13	0.11	2d8/25 L=48	88,143, 86	
	s=11,m =1	47.6	0.51	6.0	6.0	0.0	0.17	0.05	0.13	0.10	2d8/25 L=48	68,143, 86	
37	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.03	0.10	0.07	2d8/25 L=48	166,14 3,86	
	s=11,m =1	47.6	0.51	6.0	6.0	0.0	0.17	0.06	0.10	0.05	2d8/25 L=48	68,143, 86	
39	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.04	0.08	0.03	2d8/25 L=48	68,143, 86	
	s=11,m =1	47.6	0.51	6.0	6.0	0.0	0.17	0.06	0.08	0.01	2d8/25 L=48	68,143, 88	
41	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.06	0.07	0.01	2d8/25 L=48	68,143, 143	
	s=11,m =1	47.6	0.51	6.0	6.0	0.0	0.17	0.04	0.08	0.03	2d8/25 L=48	68,143, 68	
43	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.06	0.08	0.05	2d8/25 L=48	68,117, 68	
	s=11,m =1	47.6	0.51	6.0	6.0	0.0	0.17	0.02	0.08	0.07	2d8/25 L=48	142,14 3,68	
45	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.05	0.09	0.09	2d8/25 L=48	68,143, 68	
	s=11,m =1	47.6	0.51	6.0	6.0	0.0	0.17	0.03	0.09	0.11	2d8/25 L=48	86,143, 68	
47	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.03	0.09	0.14	2d8/25 L=48	68,107,	

		47.6	0.51	6.0	6.0	0.0	0.17	0.09	0.10	0.16	2d8/25 L=48	68	
	s=11,m=1											68,58,68	
57	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.06	0.12	0.12	2d8/25 L=48	166,167,117	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.03	0.11	0.08	2d8/25 L=48	143,167,117	
59	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.03	0.14	0.09	2d8/25 L=48	163,167,117	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.04	0.13	0.06	2d8/25 L=48	117,167,163	
61	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.03	0.14	0.08	2d8/25 L=48	163,167,163	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.05	0.13	0.06	2d8/25 L=48	163,167,163	
63	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.03	0.13	0.09	2d8/25 L=48	135,167,163	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.08	0.13	0.07	2d8/25 L=48	163,167,166	
65	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.04	0.13	0.10	2d8/25 L=48	163,167,163	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.12	0.12	0.09	2d8/25 L=48	163,167,166	
67	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.07	0.12	0.12	2d8/25 L=48	163,167,163	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.17	0.11	0.11	2d8/25 L=48	163,167,166	
69	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.12	0.12	0.15	2d8/25 L=48	163,151,163	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.25	0.11	0.13	2d8/25 L=48	163,151,163	
71	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.19	0.13	0.18	2d8/25 L=48	163,151,163	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.39	0.12	0.17	2d8/25 L=48	163,151,163	
89	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.21	0.12	0.11	2d8/25 L=48	163,170,166	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.10	0.13	0.13	2d8/25 L=48	163,170,166	
91	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.14	0.14	0.11	2d8/25 L=48	163,170,163	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.06	0.14	0.11	2d8/25 L=48	163,170,166	
93	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.10	0.15	0.10	2d8/25 L=48	163,170,163	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.05	0.16	0.09	2d8/25 L=48	117,170,166	
95	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.07	0.16	0.11	2d8/25 L=48	163,166,163	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.05	0.17	0.08	2d8/25 L=48	100,166,163	
97	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.04	0.17	0.11	2d8/25 L=48	163,166,163	

	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.08	0.18	0.09	2d8/25 L=48	163,16 6,163	
99	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.05	0.18	0.12	2d8/25 L=48	117,16 6,163	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.11	0.20	0.10	2d8/25 L=48	163,16 6,163	
101	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.06	0.20	0.13	2d8/25 L=48	100,16 6,163	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.14	0.21	0.11	2d8/25 L=48	143,16 6,163	
103	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.10	0.19	0.12	2d8/25 L=48	143,16 6,163	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.17	0.21	0.11	2d8/25 L=48	143,16 6,163	
129	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.24	0.17	0.27	2d8/25 L=45	143,15 4,166	
	s=9,m=1	44.6	0.34	6.0	6.0	0.0	0.11	0.13	0.16	0.26	2d8/25 L=45	166,15 4,166	
131	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.17	0.15	0.24	2d8/25 L=45	163,15 4,166	
	s=9,m=1	44.6	0.34	6.0	6.0	0.0	0.11	0.12	0.15	0.23	2d8/25 L=45	168,15 4,166	
133	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.12	0.11	0.22	2d8/25 L=45	163,72, 166	
	s=9,m=1	44.6	0.34	6.0	6.0	0.0	0.11	0.14	0.11	0.21	2d8/25 L=45	170,72, 166	
135	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.11	0.10	0.19	2d8/25 L=45	166,72, 166	
	s=9,m=1	44.6	0.34	6.0	6.0	0.0	0.11	0.15	0.10	0.18	2d8/25 L=45	170,72, 166	
137	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.12	0.08	0.16	2d8/25 L=45	170,72, 166	
	s=9,m=1	44.6	0.34	6.0	6.0	0.0	0.11	0.18	0.08	0.15	2d8/25 L=45	40,72,1 66	
139	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.13	0.07	0.13	2d8/25 L=45	170,12 2,166	
	s=9,m=1	44.6	0.34	6.0	6.0	0.0	0.11	0.22	0.07	0.12	2d8/25 L=45	40,122, 166	
141	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.17	0.07	0.10	2d8/25 L=45	40,170, 166	
	s=9,m=1	44.6	0.34	6.0	6.0	0.0	0.11	0.25	0.06	0.10	2d8/25 L=45	40,170, 166	
143	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.21	0.07	0.08	2d8/25 L=45	40,170, 166	
	s=9,m=1	44.6	0.34	6.0	6.0	0.0	0.11	0.28	0.06	0.08	2d8/25 L=45	40,170, 166	
145	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.25	0.07	0.06	2d8/25 L=45	40,170, 166	
	s=9,m=1	44.6	0.34	6.0	6.0	0.0	0.11	0.30	0.06	0.05	2d8/25 L=45	40,170, 166	
147	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.28	0.07	0.04	2d8/25 L=45	40,154, 166	
		44.6	0.34	6.0	6.0	0.0	0.11	0.30	0.06	0.03	2d8/25 L=45		

	s=9,m=1											40,154,166	
149	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.30	0.07	0.02	2d8/25 L=45	40,154,167	
	s=9,m=1	44.6	0.34	6.0	6.0	0.0	0.11	0.29	0.07	0.02	2d8/25 L=45	40,154,62	
151	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.31	0.09	0.04	2d8/25 L=45	40,154,54	
	s=9,m=1	44.6	0.34	6.0	6.0	0.0	0.11	0.27	0.09	0.05	2d8/25 L=45	40,154,54	
153	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.30	0.11	0.08	2d8/25 L=45	40,154,54	
	s=9,m=1	44.6	0.34	6.0	6.0	0.0	0.11	0.22	0.11	0.09	2d8/25 L=45	72,154,151	
155	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.27	0.14	0.13	2d8/25 L=45	40,40,151	
	s=9,m=1	44.6	0.34	6.0	6.0	0.0	0.11	0.16	0.15	0.14	2d8/25 L=45	72,40,151	
157	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.22	0.17	0.18	2d8/25 L=45	72,40,151	
	s=9,m=1	44.6	0.34	6.0	6.0	0.0	0.11	0.07	0.18	0.19	2d8/25 L=45	72,40,151	
159	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.15	0.19	0.23	2d8/25 L=45	72,40,151	
	s=9,m=1	44.6	0.34	6.0	6.0	0.0	0.11	0.08	0.20	0.24	2d8/25 L=45	151,40,151	
							M_T=11	Z=0.0	P=4	P=16			
Trav e	Note	Pos.	%Af	Af inf.	Af. sup	Af long.	x/d	V N/M	V V/T cls	V V/T acc	Staffe	Rif. cmb	
18	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.04	0.20	0.07	2d8/25 L=48	86,139,88	
	s=11,m=1	47.6	0.51	6.0	6.0	0.0	0.17	0.02	0.20	0.06	2d8/25 L=48	139,139,88	
20	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.02	0.13	0.07	2d8/25 L=48	86,139,88	
	s=11,m=1	47.6	0.51	6.0	6.0	0.0	0.17	0.03	0.13	0.06	2d8/25 L=48	70,139,88	
22	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.01	0.09	0.04	2d8/25 L=48	139,139,86	
	s=11,m=1	47.6	0.51	6.0	6.0	0.0	0.17	0.04	0.10	0.03	2d8/25 L=48	70,139,88	
24	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.03	0.07	0.01	2d8/25 L=48	70,143,86	
	s=11,m=1	47.6	0.51	6.0	6.0	0.0	0.17	0.03	0.08	0.01	2d8/25 L=48	88,143,107	
26	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.04	0.07	0.02	2d8/25 L=48	70,143,70	
	s=11,m=1	47.6	0.51	6.0	6.0	0.0	0.17	0.02	0.07	0.03	2d8/25 L=48	117,143,68	
28	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.04	0.08	0.05	2d8/25 L=48	88,143,70	
	s=11,m=1	47.6	0.51	6.0	6.0	0.0	0.17	0.02	0.09	0.06	2d8/25 L=48	139,143,68	

30	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.03	0.12	0.08	2d8/25 L=48	117,14 3,68	
	s=11,m=1	47.6	0.51	6.0	6.0	0.0	0.17	0.05	0.12	0.10	2d8/25 L=48	68,143, 68	
32	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.02	0.18	0.14	2d8/25 L=48	139,14 3,68	
	s=11,m=1	47.6	0.51	6.0	6.0	0.0	0.17	0.11	0.18	0.15	2d8/25 L=48	68,143, 68	
34	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.11	0.20	0.16	2d8/25 L=48	86,140, 86	
	s=11,m=1	47.6	0.51	6.0	6.0	0.0	0.17	0.02	0.20	0.15	2d8/25 L=48	139,14 0,86	
36	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.05	0.13	0.11	2d8/25 L=48	86,143, 86	
	s=11,m=1	47.6	0.51	6.0	6.0	0.0	0.17	0.03	0.13	0.10	2d8/25 L=48	68,143, 86	
38	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.01	0.10	0.07	2d8/25 L=48	139,14 3,86	
	s=11,m=1	47.6	0.51	6.0	6.0	0.0	0.17	0.04	0.09	0.06	2d8/25 L=48	68,143, 86	
40	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.02	0.08	0.04	2d8/25 L=48	70,68,8 6	
	s=11,m=1	47.6	0.51	6.0	6.0	0.0	0.17	0.04	0.07	0.03	2d8/25 L=48	86,68,8 6	
42	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.03	0.07	0.02	2d8/25 L=48	68,68,1 25	
	s=11,m=1	47.6	0.51	6.0	6.0	0.0	0.17	0.03	0.07	0.01	2d8/25 L=48	86,68,7 0	
44	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.04	0.07	0.03	2d8/25 L=48	68,68,7 0	
	s=11,m=1	47.6	0.51	6.0	6.0	0.0	0.17	0.02	0.08	0.04	2d8/25 L=48	86,68,7 0	
46	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.04	0.08	0.06	2d8/25 L=48	86,68,7 0	
	s=11,m=1	47.6	0.51	6.0	6.0	0.0	0.17	0.02	0.09	0.07	2d8/25 L=48	135,68, 70	
48	ok,ok	0.0	0.51	6.0	6.0	0.0	0.17	0.02	0.09	0.08	2d8/25 L=48	86,68,7 0	
	s=11,m=1	47.6	0.51	6.0	6.0	0.0	0.17	0.05	0.09	0.09	2d8/25 L=48	70,68,7 0	
58	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.04	0.06	0.06	2d8/25 L=48	88,150, 86	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.02	0.06	0.06	2d8/25 L=48	146,15 0,86	
60	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.02	0.06	0.05	2d8/25 L=48	146,15 0,86	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.03	0.06	0.05	2d8/25 L=48	50,150, 86	
62	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.01	0.06	0.03	2d8/25 L=48	146,15 0,86	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.04	0.06	0.03	2d8/25 L=48	50,150, 86	
64	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.03	0.05	0.02	2d8/25 L=48		

												68,150,162	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.04	0.05	0.02	2d8/25 L=48	50,150,162	
66	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.04	0.05	0.02	2d8/25 L=48	68,150,135	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.03	0.05	0.02	2d8/25 L=48	50,117,137	
68	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.04	0.07	0.04	2d8/25 L=48	50,117,68	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.02	0.07	0.05	2d8/25 L=48	100,117,68	
70	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.03	0.09	0.07	2d8/25 L=48	50,88,68	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.04	0.10	0.08	2d8/25 L=48	99,117,68	
72	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.03	0.12	0.09	2d8/25 L=48	100,88,68	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.06	0.12	0.09	2d8/25 L=48	68,88,68	
							M_T=12	Z=0.0	P=10	P=12			
Trav e	Note	Pos.	%Af	Af inf.	Af. sup	Af long.	x/d	V N/M	V V/T cls	V V/T acc	Staffe	Rif. cmb	
49	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.07	0.13	0.17	2d8/25 L=48	143,68,68	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.09	0.12	0.16	2d8/25 L=48	68,68,68	
50	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.06	0.11	0.12	2d8/25 L=48	154,68,68	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.13	0.11	0.11	2d8/25 L=48	68,68,68	
51	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.09	0.08	0.07	2d8/25 L=48	68,68,68	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.15	0.08	0.06	2d8/25 L=48	68,170,68	
52	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.13	0.07	0.04	2d8/25 L=48	68,154,151	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.14	0.07	0.04	2d8/25 L=48	68,154,151	
53	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.15	0.06	0.06	2d8/25 L=48	68,154,151	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.11	0.06	0.06	2d8/25 L=48	68,68,151	
54	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.14	0.07	0.08	2d8/25 L=48	68,68,68	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.07	0.07	0.08	2d8/25 L=48	68,68,68	
55	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.12	0.08	0.11	2d8/25 L=48	68,68,68	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.05	0.08	0.12	2d8/25 L=48	154,68,68	
56	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.07	0.09	0.15	2d8/25 L=48	68,68,68	

	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.07	0.09	0.15	2d8/25 L=48	143,68,68	
							M_T=13	Z=0.0	P=16	P=20			
Trav e	Note	Pos.	%Af	Af inf.	Af. sup	Af long.	x/d	V N/M	V V/T cls	V V/T acc	Staffe	Rif. cmb	
73	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.05	0.15	0.09	2d8/25 L=48	154,70,68	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.05	0.15	0.08	2d8/25 L=48	162,70,68	
74	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.05	0.13	0.07	2d8/25 L=48	150,70,68	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.05	0.13	0.06	2d8/25 L=48	162,70,68	
75	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.04	0.10	0.04	2d8/25 L=48	150,70,68	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.06	0.10	0.04	2d8/25 L=48	162,70,150	
76	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.05	0.08	0.04	2d8/25 L=48	162,159,150	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.06	0.08	0.04	2d8/25 L=48	162,159,150	
77	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.05	0.09	0.04	2d8/25 L=48	162,155,147	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.07	0.09	0.04	2d8/25 L=48	162,155,147	
78	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.05	0.10	0.04	2d8/25 L=48	162,155,147	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.08	0.10	0.05	2d8/25 L=48	162,155,86	
79	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.06	0.12	0.07	2d8/25 L=48	162,155,86	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.08	0.12	0.08	2d8/25 L=48	162,155,86	
80	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.07	0.15	0.10	2d8/25 L=48	162,155,86	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.09	0.15	0.11	2d8/25 L=48	162,155,86	
81	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.08	0.08	0.12	2d8/25 L=48	86,158,68	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.10	0.08	0.12	2d8/25 L=48	162,158,68	
82	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.09	0.10	0.09	2d8/25 L=48	162,158,68	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.12	0.09	0.08	2d8/25 L=48	162,158,68	
83	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.11	0.10	0.06	2d8/25 L=48	162,158,68	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.12	0.10	0.05	2d8/25 L=48	162,158,88	
84	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.12	0.12	0.03	2d8/25 L=48	162,155,88	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.11	0.12	0.03	2d8/25 L=48	162,15	

	1											5,150	
85	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.12	0.14	0.05	2d8/25 L=48	162,15 5,159	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.09	0.14	0.05	2d8/25 L=48	162,15 5,159	
86	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.11	0.16	0.08	2d8/25 L=48	162,15 5,159	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.06	0.17	0.09	2d8/25 L=48	150,15 5,159	
87	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.09	0.18	0.11	2d8/25 L=48	162,15 5,159	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.06	0.19	0.12	2d8/25 L=48	147,15 5,159	
88	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.06	0.22	0.16	2d8/25 L=48	150,15 5,159	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.10	0.22	0.17	2d8/25 L=48	159,15 5,159	
							M_T=14	Z=0.0	P=20	P=40			
Trav e	Note	Pos.	%Af	Af inf.	Af. sup	Af long.	x/d	V N/M	V V/T cls	V V/T acc	Staffe	Rif. cmb	
90	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.01	0.19	0.13	2d8/25 L=48	99,158, 158	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.11	0.18	0.12	2d8/25 L=48	158,15 8,158	
92	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.06	0.18	0.10	2d8/25 L=48	162,15 5,155	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.14	0.18	0.09	2d8/25 L=48	158,15 5,155	
94	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.11	0.18	0.08	2d8/25 L=48	162,15 5,155	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.16	0.18	0.08	2d8/25 L=48	158,15 5,155	
96	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.14	0.19	0.07	2d8/25 L=48	158,15 5,155	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.16	0.19	0.07	2d8/25 L=48	158,15 5,155	
98	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.16	0.20	0.08	2d8/25 L=48	158,15 5,155	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.16	0.20	0.08	2d8/25 L=48	158,15 5,40	
100	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.16	0.21	0.10	2d8/25 L=48	158,15 5,40	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.14	0.21	0.11	2d8/25 L=48	158,15 5,40	
102	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.15	0.21	0.13	2d8/25 L=48	158,15 5,50	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.16	0.22	0.14	2d8/25 L=48	155,15 5,50	
104	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.14	0.19	0.14	2d8/25 L=48	158,15 5,50	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.19	0.19	0.15	2d8/25 L=48	155,15 5,50	
130	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.30	0.20	0.28	2d8/25 L=45		

												158,15 8,158	
	s=9,m=1	44.6	0.34	6.0	6.0	0.0	0.11	0.22	0.20	0.27	2d8/25 L=45	158,15 8,158	
132	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.23	0.20	0.26	2d8/25 L=45	158,15 8,158	
	s=9,m=1	44.6	0.34	6.0	6.0	0.0	0.11	0.17	0.20	0.25	2d8/25 L=45	158,15 8,158	
134	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.19	0.18	0.24	2d8/25 L=45	158,15 8,158	
	s=9,m=1	44.6	0.34	6.0	6.0	0.0	0.11	0.16	0.17	0.23	2d8/25 L=45	162,15 8,158	
136	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.16	0.15	0.21	2d8/25 L=45	158,15 8,158	
	s=9,m=1	44.6	0.34	6.0	6.0	0.0	0.11	0.15	0.15	0.20	2d8/25 L=45	162,15 8,158	
138	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.14	0.13	0.18	2d8/25 L=45	162,15 8,158	
	s=9,m=1	44.6	0.34	6.0	6.0	0.0	0.11	0.16	0.12	0.17	2d8/25 L=45	162,15 8,158	
140	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.14	0.11	0.15	2d8/25 L=45	162,15 8,158	
	s=9,m=1	44.6	0.34	6.0	6.0	0.0	0.11	0.18	0.11	0.15	2d8/25 L=45	40,158, 158	
142	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.15	0.11	0.13	2d8/25 L=45	162,15 8,158	
	s=9,m=1	44.6	0.34	6.0	6.0	0.0	0.11	0.21	0.10	0.12	2d8/25 L=45	40,158, 158	
144	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.17	0.10	0.10	2d8/25 L=45	40,162, 158	
	s=9,m=1	44.6	0.34	6.0	6.0	0.0	0.11	0.24	0.09	0.10	2d8/25 L=45	40,162, 158	
146	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.21	0.09	0.08	2d8/25 L=45	40,162, 158	
	s=9,m=1	44.6	0.34	6.0	6.0	0.0	0.11	0.26	0.08	0.07	2d8/25 L=45	40,162, 158	
148	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.25	0.07	0.06	2d8/25 L=45	40,162, 158	
	s=9,m=1	44.6	0.34	6.0	6.0	0.0	0.11	0.28	0.07	0.05	2d8/25 L=45	40,162, 158	
150	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.27	0.06	0.03	2d8/25 L=45	40,147, 162	
	s=9,m=1	44.6	0.34	6.0	6.0	0.0	0.11	0.27	0.07	0.03	2d8/25 L=45	40,147, 162	
152	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.28	0.10	0.04	2d8/25 L=45	40,147, 159	
	s=9,m=1	44.6	0.34	6.0	6.0	0.0	0.11	0.25	0.10	0.05	2d8/25 L=45	40,147, 147	
154	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.28	0.14	0.08	2d8/25 L=45	40,147, 147	
	s=9,m=1	44.6	0.34	6.0	6.0	0.0	0.11	0.21	0.14	0.09	2d8/25 L=45	72,147, 147	
156	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.26	0.17	0.12	2d8/25 L=45	40,147,	

		44.6	0.34	6.0	6.0	0.0	0.11	0.15	0.18	0.14	2d8/25 L=45	147	
	s=9,m=1											72,147,147	
158	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.21	0.22	0.17	2d8/25 L=45	72,147,147	
	s=9,m=1	44.6	0.34	6.0	6.0	0.0	0.11	0.08	0.23	0.19	2d8/25 L=45	122,147,147	
160	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.15	0.22	0.22	2d8/25 L=45	72,147,147	
	s=9,m=1	44.6	0.34	6.0	6.0	0.0	0.11	0.08	0.22	0.24	2d8/25 L=45	147,147,147	
							M_T=15	Z=0.0	P=23	P=32			
Trav e	Note	Pos.	%Af	Af inf.	Af. sup	Af long.	x/d	V N/M	V V/T cls	V V/T acc	Staffe	Rif. cmb	
105	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.25	0.11	0.12	2d8/25 L=48	150,50,154	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.22	0.12	0.15	2d8/25 L=48	154,50,154	
106	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.22	0.10	0.11	2d8/25 L=48	150,163,154	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.18	0.11	0.14	2d8/25 L=48	154,86,154	
107	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.20	0.09	0.10	2d8/25 L=48	153,163,154	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.15	0.09	0.12	2d8/25 L=48	154,153,154	
108	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.18	0.09	0.11	2d8/25 L=48	150,143,147	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.10	0.08	0.10	2d8/25 L=48	86,143,150	
109	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.15	0.09	0.14	2d8/25 L=48	154,143,147	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.07	0.08	0.11	2d8/25 L=48	86,143,147	
110	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.12	0.11	0.17	2d8/25 L=48	50,82,147	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.05	0.10	0.15	2d8/25 L=48	150,82,147	
111	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.09	0.14	0.21	2d8/25 L=48	86,82,147	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.09	0.13	0.19	2d8/25 L=48	147,82,147	
112	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.04	0.18	0.28	2d8/25 L=48	170,82,50	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.21	0.17	0.25	2d8/25 L=48	147,82,50	
113	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.21	0.12	0.23	2d8/25 L=48	151,146,154	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.09	0.13	0.25	2d8/25 L=48	154,146,154	
114	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.13	0.08	0.16	2d8/25 L=48	151,154,154	
		47.6	0.34	6.0	6.0	0.0	0.11	0.06	0.09	0.19	2d8/25 L=48		

	s=9,m=1											150,154,154	
115	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.10	0.06	0.13	2d8/25 L=48	154,154,154	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.05	0.07	0.15	2d8/25 L=48	50,154,154	
116	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.07	0.06	0.12	2d8/25 L=48	154,151,151	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.05	0.06	0.12	2d8/25 L=48	150,154,154	
117	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.05	0.07	0.14	2d8/25 L=48	50,147,147	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.06	0.06	0.12	2d8/25 L=48	150,147,147	
118	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.05	0.09	0.17	2d8/25 L=48	50,147,147	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.11	0.08	0.14	2d8/25 L=48	147,147,147	
119	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.04	0.11	0.20	2d8/25 L=48	150,147,147	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.19	0.10	0.18	2d8/25 L=48	147,147,147	
120	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.09	0.15	0.27	2d8/25 L=48	147,82,147	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.32	0.13	0.24	2d8/25 L=48	147,82,147	
121	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.19	0.14	0.24	2d8/25 L=48	147,82,154	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.03	0.16	0.26	2d8/25 L=48	159,82,154	
122	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.10	0.10	0.18	2d8/25 L=48	147,82,154	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.05	0.11	0.20	2d8/25 L=48	52,82,154	
123	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.05	0.07	0.14	2d8/25 L=48	147,142,154	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.07	0.08	0.16	2d8/25 L=48	150,142,154	
124	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.03	0.07	0.11	2d8/25 L=48	88,142,154	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.10	0.08	0.14	2d8/25 L=48	154,142,154	
125	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.06	0.07	0.09	2d8/25 L=48	88,155,147	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.11	0.08	0.11	2d8/25 L=48	154,158,150	
126	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.07	0.10	0.10	2d8/25 L=48	150,155,147	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.13	0.10	0.10	2d8/25 L=48	147,158,150	
127	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.10	0.12	0.11	2d8/25 L=48	150,155,147	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.17	0.11	0.09	2d8/25 L=48	147,15	

	1											8,150	
128	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.14	0.14	0.11	2d8/25 L=48	147,15 5,147	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.22	0.14	0.09	2d8/25 L=48	147,15 8,150	
							M_T=16	Z=0.0	P=34	P=40			
Trav e	Note	Pos.	%Af	Af inf.	Af. sup	Af long.	x/d	V N/M	V V/T cls	V V/T acc	Staffe	Rif. cmb	
161	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.24	0.15	0.08	2d8/25 L=48	150,40, 92	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.22	0.16	0.09	2d8/25 L=48	154,40, 150	
162	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.22	0.16	0.07	2d8/25 L=48	150,72, 150	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.20	0.17	0.09	2d8/25 L=48	154,72, 150	
163	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.21	0.16	0.07	2d8/25 L=48	154,15 1,147	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.16	0.15	0.09	2d8/25 L=48	154,72, 150	
164	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.19	0.16	0.10	2d8/25 L=48	154,15 1,147	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.11	0.16	0.08	2d8/25 L=48	154,15 1,147	
165	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.16	0.17	0.13	2d8/25 L=48	154,15 1,151	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.05	0.17	0.12	2d8/25 L=48	154,15 1,151	
166	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.11	0.19	0.17	2d8/25 L=48	154,15 1,151	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.02	0.18	0.15	2d8/25 L=48	75,151, 151	
167	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.06	0.20	0.20	2d8/25 L=48	154,15 1,151	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.08	0.19	0.19	2d8/25 L=48	151,15 1,151	
168	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.01	0.22	0.26	2d8/25 L=48	75,151, 151	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.19	0.21	0.24	2d8/25 L=48	151,15 1,151	
169	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.24	0.13	0.24	2d8/25 L=48	147,15 0,150	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.10	0.14	0.26	2d8/25 L=48	154,15 0,150	
170	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.16	0.11	0.19	2d8/25 L=48	147,15 0,150	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.07	0.12	0.20	2d8/25 L=48	154,15 0,150	
171	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.11	0.10	0.16	2d8/25 L=48	154,14 7,150	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.04	0.11	0.18	2d8/25 L=48	92,150, 150	
172	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.08	0.09	0.13	2d8/25 L=48		

												154,14 7,150	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.05	0.09	0.15	2d8/25 L=48	154,15 4,150	
173	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.05	0.10	0.15	2d8/25 L=48	154,15 1,151	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.08	0.09	0.13	2d8/25 L=48	150,15 4,151	
174	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.04	0.11	0.17	2d8/25 L=48	92,147, 151	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.13	0.10	0.16	2d8/25 L=48	151,14 7,151	
175	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.05	0.13	0.20	2d8/25 L=48	150,14 7,151	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.21	0.12	0.19	2d8/25 L=48	151,14 7,151	
176	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.12	0.16	0.26	2d8/25 L=48	151,14 7,151	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.35	0.15	0.24	2d8/25 L=48	151,14 7,151	
177	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.18	0.20	0.24	2d8/25 L=48	147,15 0,150	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.02	0.21	0.26	2d8/25 L=48	92,150, 150	
178	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.08	0.19	0.19	2d8/25 L=48	147,15 0,154	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.07	0.20	0.20	2d8/25 L=48	154,15 0,154	
179	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.02	0.18	0.15	2d8/25 L=48	167,15 0,154	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.11	0.18	0.16	2d8/25 L=48	154,15 0,154	
180	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.05	0.16	0.12	2d8/25 L=48	154,15 0,154	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.13	0.17	0.13	2d8/25 L=48	154,15 0,154	
181	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.09	0.15	0.09	2d8/25 L=48	154,15 0,151	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.14	0.16	0.09	2d8/25 L=48	154,15 0,154	
182	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.12	0.15	0.09	2d8/25 L=48	154,72, 151	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.17	0.15	0.07	2d8/25 L=48	151,15 0,151	
183	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.14	0.16	0.10	2d8/25 L=48	154,72, 151	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.20	0.15	0.07	2d8/25 L=48	151,72, 151	
184	ok,ok	0.0	0.34	6.0	6.0	0.0	0.11	0.17	0.16	0.10	2d8/25 L=48	151,40, 151	
	s=9,m=1	47.6	0.34	6.0	6.0	0.0	0.11	0.25	0.15	0.09	2d8/25 L=48	151,40, 92	
			%Af	Af inf.	Af.	Af	x/d	V N/M	V V/T	V V/T			

Trav					sup	long.			cls	acc			
e			0.96	6.03	6.03	0.0	0.37	0.39	0.23	0.28			

VERIFICHE ELEMENTI PARETE E GUSCIO IN C.A.

LEGENDA TABELLA VERIFICHE ELEMENTI PARETE E GUSCIO IN C.A.

Per le pareti in c.a. progettate in ottemperanza al cap. 7 del DM 14-01-08 vengono riportate 4 tabelle. In particolare per ogni parete si riportano:

- una tabella riassuntiva della geometria e dello stato di verifica per compressione assiale, pressoflessione e taglio; per le estese debolmente armate anche lo stato di verifica relativo alla snellezza.
- una tabella nella quale, per ogni quota significativa, si riporta l'armatura verticale di base e della zona confinata, eventuale armatura concentrata all'estremità per le estese debolmente armate, l'armatura orizzontale, l'esito delle 5 verifiche condotte, lo sforzo assiale aggiuntivo per q superiore a 2 e i valori di inviluppo di taglio e momento
- una tabella nella quale, per ogni quota significativa, si riportano le azioni che hanno reso massimo il valore delle 5 verifiche condotte (in particolare le verifiche a taglio sono influenzate dal valore dello sforzo assiale e del momento). Le azioni derivate dall'analisi, in ogni combinazione di calcolo, sono elaborate come previsto al punto 7.4.4.5.1: traslazione del momento, incremento e variazione diagramma taglio, incremento e decremento sforzo assiale
- una tabella riassuntiva dei parametri utilizzati per le verifiche a taglio per ogni quota significativa.

Tabella 1

H totale	Altezza complessiva della parete
Spessore	Spessore della parete
H critica	Altezza come da punto 7.4.4.5.1 per traslazione momento
H critica V	Altezza come da punto 7.4.6.1.4 per la definizione della zona critica e zona confinata
L totale	Larghezza di base della parete
L confinata	Larghezza della zona confinata
Verif. N	Verifica di cui al punto 7.4.4.5.2.1 compressione semplice
Verif. N-M	Verifica di cui al punto 7.4.4.5.2.1 pressoflessione
Verif. Snellezza	Verifica di cui al punto 7.4.4.5.2.1 limitazione compressione per prevenire l'instabilità
Fattore V	Fattore di amplificazione del taglio di cui al punto 7.4.4.5.1
Diagramma V	Diagramma elaborato per effetto modi superiori come da fig. 7.4.2
Verif. V	Verifica di cui al punto 7.4.4.5.2.2 taglio (compressione cls, trazione acciaio, scorrimento in zona critica)

Tabella 2

Af conf.	Numero e diametro armatura presente in una zona confinata
Af std	Diametro e passo armatura in zona non confinata (doppia maglia)
Af estremi	Diametro dei ferri di estremità del pannello; se posto uguale 0, viene utilizzato il diametro standard
Af V (ori)	Diametro e passo armatura orizzontale (doppia maglia)
Ver. N	Rapporto tra azione di calcolo e resistenza a compressione (normalizzato a 1 in quanto da confrontare con 40% in CDB e 35 % in CDA)
Ver. N/M	Rapporto tra azione di calcolo e resistenza a pressoflessione
Ver. Snell.	Rapporto tra la snellezza dell'elemento e la snellezza lim. come da formula 4.1.33
Ver. V cls	Rapporto tra azione di calcolo e resistenza a taglio-compressione
Ver. V acc	Rapporto tra azione di calcolo e resistenza a taglio-trazione
Ver. V scorr.	Rapporto tra azione di calcolo e resistenza a taglio scorrimento
N add	Sforzo assiale di cui al punto 7.4.4.5.1 da sommare e sottrarre nelle verifiche quando q supera 2
M invil	Inviluppo del momento come al punto 7.4.4.5.1 (informativo)
V invil	Inviluppo del taglio come al punto 7.4.4.5.1 (informativo)

Tabella 3	
N v.N	Valore dello sforzo assiale per cui Ver. N attinge il massimo valore
N v.M/N, M v.M/N	Valore dello sforzo assiale e momento per cui Ver. N/M attinge il massimo valore
N v.M/N, M v.M/N Mo v.M/N	Valore dello sforzo assiale e dei momenti per cui Ver. N/M attinge il massimo valore (per le pareti estese debolmente armate)
N v.Vcls, V v.Vcls,	Valore dello sforzo assiale e taglio per cui Ver. V. cls attinge il massimo valore
N v.Vacc, M v.Vacc, V v.Vacc,	Valore dello sforzo assiale, momento e taglio per cui Ver. V. acc attinge il massimo valore
N v.Vscorr, M v.Vscorr, V v.Vscorr,	Valore dello sforzo assiale, momento e taglio per cui Ver. V. scorr.e
Tabella 4	
CtgT Vcls	Valore di ctg(teta) adottato nella verifica V compressione cls
Vrsd Vcls	Valore della resistenza a taglio trazione (armatura di calcolo)
Vrcd Vcls	Valore della resistenza a taglio compressione
CtgT Vacc	Valore di ctg(teta) adottato nella verifica V trazione armatura
Vrsd Vacc	Valore della resistenza a taglio trazione (armatura presente)
Vrcd Vacc	Valore della resistenza a taglio compressione
Vdd	Valore del contributo alla resistenza allo scorrimento come da [7.4.19]
Vid	Valore del contributo alla resistenza allo scorrimento come da [7.4.20]
Vfd	Valore del contributo alla resistenza allo scorrimento come da [7.4.21]

Nel caso dei gusci e nel caso in cui la progettazione della parete sia integrata o effettuata del tutto con progettazione locale si produce una tabella nella quale vengono riportati per ogni macroelemento il numero dello stesso ed il codice di verifica.

Per la progettazione con il metodo degli stati limite vengono riportati il rapporto x/d , la verifica per sollecitazioni ultime e la verifica per compressione media con l'indicazione delle due combinazioni in cui si sono attinti i rispettivi valori.

Nel caso in cui si sia proceduto alla progettazione con le tensioni ammissibili vengono riportate le massime tensioni nell'elemento (massima compressione nel calcestruzzo, massima compressione media nel calcestruzzo, massima tensione nell'acciaio) con l'indicazione delle combinazioni in cui si sono attinti i rispettivi valori.

Per ogni elemento viene riportata inoltre la maglia di armatura necessaria in relazione alle risultanze della progettazione dei nodi dell'elemento stesso (diametri in mm, passi in cm). Le quantità di armature necessarie

sono armature (disposte rispettivamente in direzione principale e secondaria, inferiore e superiore) distribuite nell'elemento ed espresse in centimetri quadri per sviluppo lineare pari ad un metro.

In particolare i simboli utilizzati assumono il seguente significato:

M_S	macroelemento di tipo setto (elementi verticali contigui ed analoghi per proprietà)
M_G	macroelemento di tipo guscio (elementi non verticali contigui ed analoghi per proprietà)
Stato	codice di verifica dell'elemento
Nodo	numero del nodo
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: valore minore o uguale a 1 per verifica positiva
Ver.rd	rapporto N_d/N_u (N_u ottenuto con riduzione del 25% di f_{cd}): valore minore o uguale a 1 per verifica positiva
Rete pr	maglia di armatura (diametro/passi) in direzione principale inferiore e superiore
Rete sec	maglia di armatura (diametro/passi) in direzione secondaria inferiore e superiore
Aggiuntivi	relativa armatura aggiuntiva (diametro/passi) inferiore (i) e superiore (s) eventualmente differenziate
sc max	massima tensione di compressione del calcestruzzo
sc med	massima tensione media di compressione del calcestruzzo
sf max	massima tensione dell'acciaio
Rif. cmb	combinazioni di carico in cui si verificano i valori riportati

Af pr-		quantità di armatura richiesta in direzione principale relativa alla faccia negativa (intradosso piastre) (valore derivante da calcolo o minimo normativo)
Af pr+		quantità di armatura richiesta in direzione principale relativa alla faccia positiva (estradosso piastre) (valore derivante da calcolo o minimo normativo)
Af sec-	Af sec+	valori analoghi a quelli soprariportati ma relativi alla armatura secondaria
N	M	azioni membranali e flessionali (in direzione dell'armatura principale e secondaria) estratte, poiché rappresentative, tra quelle utilizzate per il progetto e la verifica

Progettazione delle fondazioni

Il D.M.14/02/2008 - par: 7.2.5 prevede:

“Per le strutture progettate sia per CD “A” sia per CD “B” il dimensionamento delle strutture di fondazione e la verifica di sicurezza del complesso fondazione-terreno devono essere eseguiti assumendo come azioni in fondazione le resistenze degli elementi strutturali soprastanti [...] si richiede tuttavia che tali azioni risultino non maggiori di quelle trasferite dagli elementi soprastanti, amplificate con un γ_{Rd} pari a 1,1 in CD “B” e 1,3 in CD “A” e comunque non maggiori di quelle derivanti da una analisi elastica della struttura in elevazione eseguita con un fattore di struttura q pari a 1....”

Nel contesto visualizzazione risultati e nella stampa della relazione sulle fondazioni PRO_SAP mostra le sollecitazioni che derivano dall'analisi non incrementate sia in termini di pressioni sul terreno che in termini di sollecitazioni.

La progettazione degli elementi strutturali con proprietà fondazione è effettuata da PRO_SAP (per travi e platee) o da PRO_CAD Plinti (per plinti e pali di fondazione) incrementando le sollecitazioni delle combinazioni con sisma del fattore: γ_{rd} = 1.1 in CDB γ_{rd} =1.3 in CDA per pali, plinti, travi e platee.

Per i bicchieri dei plinti di fondazione prefabbricati l'incremento delle sollecitazioni ha un fattore: γ_{rd} = 1.2 in CDB γ_{rd} =1.35 in CDA.

N.B.: se il fattore di struttura q è =1 la progettazione viene effettuata senza nessun incremento.

Le verifiche geotecniche vengono effettuate dal modulo geotecnico incrementando automaticamente le sollecitazioni del fattore: γ_{rd} = 1.1 in CDB γ_{rd} =1.3 in CDA per pali, plinti, travi e platee.

N.B.: se il fattore di struttura q è =1 le verifiche geotecniche vengono effettuate senza nessun incremento.

Guscio	Stat o	Nodo	x/d	verif.	ver. rid	Rif. cmb	Af pr-	Af pr+	Af sec-	Af sec+	Rete pr + Aggiuntivi	Rete sec + Aggiuntivi
1	ok	1	0.17	0.21	1.24e-04	146,140	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		2	0.17	0.24	2.46e-04	144,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		13	0.17	0.31	2.84e-04	143,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		12	0.17	0.32	7.33e-05	145,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
2	ok	2	0.17	0.27	1.74e-03	144,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		3	0.17	0.28	1.75e-03	146,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		14	0.17	0.52	1.63e-03	146,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		13	0.17	0.51	1.62e-03	144,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
3	ok	3	0.17	0.28	2.10e-03	146,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		4	0.17	0.25	2.00e-03	146,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		15	0.17	0.19	1.19e-03	68,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		14	0.17	0.18	1.25e-03	146,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
4	ok	4	0.17	0.17	9.86e-04	68,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		5	0.17	0.21	1.00e-03	68,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		16	0.17	0.21	8.14e-04	68,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		15	0.17	0.19	7.91e-04	68,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
5	ok	5	0.17	0.21	4.09e-04	68,119	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		6	0.17	0.22	4.52e-04	68,119	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		17	0.17	0.21	3.41e-04	68,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		16	0.17	0.21	3.05e-04	68,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
6	ok	6	0.17	0.22	4.56e-04	68,119	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		7	0.17	0.21	3.98e-04	68,117	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		18	0.17	0.21	3.35e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		17	0.17	0.21	3.51e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
7	ok	7	0.17	0.21	1.02e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		8	0.17	0.17	1.03e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		19	0.17	0.19	8.27e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		18	0.17	0.21	8.29e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
8	ok	8	0.17	0.26	2.03e-03	144,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		9	0.17	0.28	2.16e-03	144,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		20	0.17	0.19	1.28e-03	144,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		19	0.17	0.19	1.22e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
9	ok	9	0.17	0.28	1.78e-03	144,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		10	0.17	0.26	1.75e-03	146,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		21	0.17	0.50	1.62e-03	146,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		20	0.17	0.52	1.63e-03	144,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
10	ok	10	0.17	0.24	2.31e-04	146,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		11	0.17	0.21	1.33e-04	144,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		22	0.17	0.32	9.77e-05	143,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		21	0.17	0.31	2.72e-04	145,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
11	ok	12	0.17	0.32	8.77e-04	145,145	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		13	0.17	0.43	9.32e-04	145,145	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		24	0.17	0.29	8.45e-04	146,145	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)

		23	0.17	0.19	7.93e-04	146,145	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
12	ok	13	0.17	0.56	1.50e-03	143,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		14	0.17	0.49	1.66e-03	146,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		25	0.17	0.13	6.55e-04	146,143	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		24	0.17	0.27	7.93e-04	146,145	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
13	ok	14	0.17	0.13	1.34e-03	146,140	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		15	0.17	0.19	1.28e-03	68,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		26	0.17	0.18	7.66e-04	146,143	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		25	0.17	0.16	8.44e-04	146,143	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
14	ok	15	0.17	0.18	1.04e-03	68,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		16	0.17	0.20	1.04e-03	68,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		27	0.17	0.18	6.81e-04	68,143	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		26	0.17	0.17	6.88e-04	68,143	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
15	ok	16	0.17	0.20	6.06e-04	68,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		17	0.17	0.21	6.42e-04	68,140	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		28	0.17	0.18	5.47e-04	68,140	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		27	0.17	0.18	5.17e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
16	ok	17	0.17	0.21	7.18e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		18	0.17	0.20	6.91e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		29	0.17	0.18	6.02e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		28	0.17	0.18	6.30e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
17	ok	18	0.17	0.20	1.10e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		19	0.17	0.18	1.12e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		30	0.17	0.17	7.46e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		29	0.17	0.18	7.45e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
18	ok	19	0.17	0.19	1.34e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		20	0.17	0.13	1.40e-03	144,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		31	0.17	0.16	8.56e-04	139,141	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		30	0.17	0.18	7.82e-04	144,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
19	ok	20	0.17	0.49	1.67e-03	144,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		21	0.17	0.56	1.52e-03	145,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		32	0.17	0.28	6.92e-04	144,143	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		31	0.17	0.13	6.61e-04	144,141	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
20	ok	21	0.17	0.42	8.33e-04	143,143	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		22	0.17	0.32	7.68e-04	143,143	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		33	0.17	0.19	6.94e-04	144,143	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		32	0.17	0.29	7.43e-04	144,143	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
21	ok	23	0.17	0.23	1.30e-03	146,145	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		24	0.17	0.20	7.54e-04	146,145	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		35	0.17	0.18	7.58e-04	68,145	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		34	0.17	0.16	1.24e-03	68,145	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
22	ok	24	0.17	0.17	7.65e-04	146,145	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		25	0.17	0.16	6.03e-04	68,143	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		36	0.17	0.16	5.08e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		35	0.17	0.18	8.46e-04	68,145	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
23	ok	25	0.17	0.18	7.69e-04	146,143	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		26	0.17	0.18	8.12e-04	146,143	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		37	0.17	0.16	6.21e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		36	0.17	0.17	6.83e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
24	ok	26	0.17	0.17	8.32e-04	68,143	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		27	0.17	0.18	8.36e-04	68,140	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		38	0.17	0.16	7.76e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		37	0.17	0.16	7.55e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
25	ok	27	0.17	0.18	7.98e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		28	0.17	0.18	7.84e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		39	0.17	0.16	8.36e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		38	0.17	0.16	8.50e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
26	ok	28	0.17	0.18	9.24e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		29	0.17	0.18	8.81e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		40	0.17	0.16	8.39e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		39	0.17	0.16	8.77e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
27	ok	29	0.17	0.18	9.73e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		30	0.17	0.17	9.63e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		41	0.17	0.16	7.93e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		40	0.17	0.16	8.03e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
28	ok	30	0.17	0.18	8.91e-04	144,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		31	0.17	0.18	8.08e-04	144,141	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		42	0.17	0.17	5.52e-04	68,143	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		41	0.17	0.16	6.29e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
29	ok	31	0.17	0.16	6.42e-04	144,141	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		32	0.17	0.18	6.46e-04	144,139	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		43	0.17	0.18	7.26e-04	68,139	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		42	0.17	0.16	3.60e-04	68,140	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
30	ok	32	0.17	0.20	6.21e-04	144,139	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		33	0.17	0.23	1.13e-03	144,139	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		44	0.17	0.16	1.07e-03	68,139	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		43	0.17	0.19	6.20e-04	68,139	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
31	ok	34	0.17	0.16	1.31e-03	68,145	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		35	0.17	0.18	9.90e-04	68,142	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		46	0.17	0.19	9.70e-04	68,142	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		45	0.17	0.19	1.28e-03	68,145	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
32	ok	35	0.17	0.17	1.01e-03	68,142	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		36	0.17	0.16	6.47e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		47	0.17	0.16	6.62e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		46	0.17	0.18	9.99e-04	68,142	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
33	ok	36	0.17	0.16	8.81e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		37	0.17	0.16	7.68e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		48	0.17	0.15	8.13e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		47	0.17	0.16	9.02e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)

34		37	0.17	0.16	9.37e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		38	0.17	0.16	8.89e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		49	0.17	0.14	9.32e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		48	0.17	0.15	9.71e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
35	ok	38	0.17	0.16	1.01e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		39	0.17	0.16	9.51e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		50	0.17	0.14	9.75e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		49	0.17	0.14	1.05e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
36	ok	39	0.17	0.16	9.88e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		40	0.17	0.16	9.06e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		51	0.17	0.14	9.00e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		50	0.17	0.14	9.94e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
37	ok	40	0.17	0.16	8.28e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		41	0.17	0.16	7.57e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		52	0.17	0.15	7.36e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		51	0.17	0.14	8.17e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
38	ok	41	0.17	0.16	5.57e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		42	0.17	0.16	6.27e-04	68,143	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		53	0.17	0.16	6.44e-04	68,143	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		52	0.17	0.15	5.54e-04	68,140	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
39	ok	42	0.17	0.17	3.84e-04	68,140	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		43	0.17	0.17	8.20e-04	68,139	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		54	0.17	0.18	7.90e-04	68,139	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		53	0.17	0.16	3.82e-04	68,140	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
40	ok	43	0.17	0.18	7.98e-04	68,139	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		44	0.17	0.16	1.15e-03	68,139	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		55	0.17	0.19	1.09e-03	68,139	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		54	0.17	0.19	7.60e-04	68,139	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
41	ok	45	0.17	0.19	1.47e-03	68,142	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		46	0.17	0.19	1.30e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		57	0.17	0.18	1.30e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		56	0.17	0.18	1.44e-03	68,142	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
42	ok	46	0.17	0.18	1.36e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		47	0.17	0.16	1.06e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		58	0.17	0.15	1.06e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		57	0.17	0.17	1.36e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
43	ok	47	0.17	0.16	1.22e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		48	0.17	0.15	1.05e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		59	0.17	0.13	1.08e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		58	0.17	0.15	1.26e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
44	ok	48	0.17	0.15	1.20e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		49	0.17	0.14	1.03e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		60	0.17	0.13	1.10e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		59	0.17	0.13	1.26e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
45	ok	49	0.17	0.14	1.16e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		50	0.17	0.14	9.99e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		61	0.17	0.13	1.05e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		60	0.17	0.13	1.21e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
46	ok	50	0.17	0.14	1.02e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		51	0.17	0.14	8.48e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		62	0.17	0.13	8.70e-04	68,143	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		61	0.17	0.13	1.04e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
47	ok	51	0.17	0.14	7.73e-04	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		52	0.17	0.15	8.33e-04	68,140	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		63	0.17	0.13	8.82e-04	68,143	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		62	0.17	0.13	7.58e-04	68,140	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
48	ok	52	0.17	0.15	6.89e-04	68,140	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		53	0.17	0.16	8.35e-04	68,140	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		64	0.17	0.15	8.29e-04	68,140	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		63	0.17	0.13	7.05e-04	68,140	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
49	ok	53	0.17	0.16	8.00e-04	68,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		54	0.17	0.18	1.08e-03	68,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		65	0.17	0.17	1.03e-03	68,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		64	0.17	0.15	7.57e-04	68,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
50	ok	54	0.17	0.19	9.74e-04	68,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		55	0.17	0.19	1.17e-03	68,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		66	0.17	0.18	1.11e-03	68,139	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		65	0.17	0.18	9.37e-04	68,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
51	ok	56	0.17	0.18	1.85e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		57	0.17	0.18	1.64e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		68	0.17	0.15	1.68e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		67	0.17	0.15	1.86e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
52	ok	57	0.17	0.17	1.70e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		58	0.17	0.15	1.44e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		69	0.17	0.13	1.45e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		68	0.17	0.15	1.73e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
53	ok	58	0.17	0.15	1.57e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		59	0.17	0.13	1.32e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		70	0.17	0.12	1.45e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		69	0.17	0.13	1.70e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
54	ok	59	0.17	0.13	1.46e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		60	0.17	0.13	1.19e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		71	0.17	0.13	1.56e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		70	0.17	0.12	1.65e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
55	ok	60	0.17	0.13	1.28e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		61	0.17	0.13	1.09e-03	68,166	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		72	0.17	0.13	1.64e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		71	0.17	0.13	1.57e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
56	ok	61	0.17	0.13	1.10e-03	68,166	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)

		62	0.17	0.13	9.00e-04	68,166	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		73	0.17	0.13	1.53e-03	68,86	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		72	0.17	0.13	1.62e-03	68,86	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
57	ok	62	0.17	0.13	8.93e-04	68,166	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		63	0.17	0.13	9.65e-04	68,140	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		74	0.17	0.12	1.23e-03	68,86	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		73	0.17	0.13	1.48e-03	68,86	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
58	ok	63	0.17	0.13	8.36e-04	68,140	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		64	0.17	0.15	1.04e-03	68,140	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		75	0.17	0.13	1.18e-03	68,143	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		74	0.17	0.12	1.15e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
59	ok	64	0.17	0.15	1.05e-03	68,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		65	0.17	0.17	1.27e-03	68,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		76	0.17	0.15	1.27e-03	68,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		75	0.17	0.13	1.00e-03	68,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
60	ok	65	0.17	0.18	1.19e-03	68,140	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		66	0.17	0.18	1.45e-03	68,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		77	0.17	0.15	1.43e-03	68,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		76	0.17	0.15	1.19e-03	68,140	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
61	ok	67	0.17	0.15	2.55e-03	68,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		68	0.17	0.15	2.04e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		79	0.17	0.10	2.13e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		78	0.17	0.08	2.79e-03	86,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
62	ok	68	0.17	0.15	2.01e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		69	0.17	0.13	1.75e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		80	0.17	0.10	2.11e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		79	0.17	0.09	2.26e-03	146,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
63	ok	69	0.17	0.13	1.86e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		70	0.17	0.12	1.50e-03	68,166	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		81	0.17	0.12	2.50e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		80	0.17	0.10	2.46e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
64	ok	70	0.17	0.12	1.54e-03	68,166	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		71	0.17	0.13	1.67e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		82	0.17	0.13	2.90e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		81	0.17	0.12	2.87e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
65	ok	71	0.17	0.13	1.51e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		72	0.17	0.13	1.67e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		83	0.17	0.14	3.06e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		82	0.17	0.13	3.08e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
66	ok	72	0.17	0.13	1.63e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		73	0.17	0.13	1.47e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		84	0.17	0.13	3.01e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		83	0.17	0.14	3.05e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
67	ok	73	0.17	0.13	1.56e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		74	0.17	0.12	1.08e-03	68,50	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		85	0.17	0.12	2.75e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		84	0.17	0.13	2.79e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
68	ok	74	0.17	0.12	1.32e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		75	0.17	0.13	1.19e-03	68,140	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		86	0.17	0.10	2.31e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		85	0.17	0.12	2.32e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
69	ok	75	0.17	0.13	1.11e-03	68,140	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		76	0.17	0.15	1.35e-03	68,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		87	0.17	0.09	1.55e-03	144,143	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		86	0.17	0.10	1.88e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
70	ok	76	0.17	0.15	1.42e-03	68,140	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		77	0.17	0.15	2.16e-03	68,145	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		88	0.17	0.08	2.39e-03	144,145	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		87	0.17	0.10	1.46e-03	68,140	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
71	ok	78	0.17	0.09	2.84e-03	145,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		79	0.17	0.11	3.02e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		90	0.17	0.10	4.13e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		89	0.17	0.10	7.40e-03	145,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
72	ok	79	0.17	0.11	3.10e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		80	0.17	0.09	3.70e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		91	0.17	0.08	5.36e-03	146,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		90	0.17	0.10	6.19e-03	146,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
73	ok	80	0.17	0.11	2.22e-03	68,146	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		81	0.17	0.11	3.60e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		92	0.17	0.12	6.39e-03	68,145	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		91	0.17	0.10	6.81e-03	146,145	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
74	ok	81	0.17	0.12	2.58e-03	68,144	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		82	0.17	0.13	3.54e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		93	0.17	0.14	4.45e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		92	0.17	0.11	5.98e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
75	ok	82	0.17	0.13	2.76e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		83	0.17	0.14	3.21e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
		94	0.17	0.15	5.12e-03	68,68	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
...												
997	ok	1082	0.17	0.03	9.33e-03	151,40	5.7	5.7	5.7	5.7	12/20+(12/0 i 12/0 s)	12/20+(12/0 i 12/0 s)
Gusc io			x/d	verif.	ver. rid		Af pr-	Af pr+	Af sec-	Af sec+		
			0.17	0.56	0.08		5.65	5.65	5.65	5.65		

STATI LIMITE D' ESERCIZIO

LEGENDA TABELLA STATI LIMITE D' ESERCIZIO

In tabella vengono riportati i valori di interesse per il controllo degli stati limite d'esercizio.

In particolare vengono riportati, in relazione al tipo di elemento strutturale, i risultati relativi alle tre categorie di combinazione considerate:

- Combinazioni rare
- Combinazioni frequenti
- Combinazioni quasi permanenti.

I valori di interesse sono i seguenti:

rRfck	rapporto tra la massima compressione nel calcestruzzo e la tensione fck in combinazioni rare [normalizzato a 1]
rRfyk	rapporto tra la massima tensione nell'acciaio e la tensione fyk in combinazioni rare [normalizzato a 1]
rPfck	rapporto tra la massima compressione nel calcestruzzo e la tensione fck 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]
dR	massima deformazione in combinazioni rare
dF	massima deformazione in combinazioni frequenti
dP	massima deformazione in combinazioni quasi permanenti

Per ognuno dei nove valori soprariportati viene indicata (Rif.cmb) la combinazione in cui si è verificato.

In relazione al tipo di elemento strutturale i valori sono selezionati nel modo seguente:

pilastr	rRfck	rRfyk	rPfck	per sezioni significative
travi	rRfck	rRfyk	rPfck	per sezioni significative
	wR	wF	wP	per sezioni significative
	dR	dF	dP	massimi in campata
setti e gusci	rRfck	rRfyk	rPfck	massimi nei nodi dell'elemento
	wR	wF	wP	massimi nei nodi dell'elemento

Si precisa che i valori di massima deformazione per travi sono riferiti al piano verticale (piano locale 1-2 con momenti flettenti 3-3).

Trav e	Pos.	rRfck	rRfyk	rPfck	Rif. cmb	wR	wF	wP	Rif. cmb	dR	dF	dP	Rif. cmb
	cm					mm	mm	mm		cm	cm	cm	
9	0.0	0.07	0.07	0.02	269,269, 311	0.0	0.0	0.0	0,0,0	-0.02	-7.04e- 03	-3.98e- 03	269,309, 311
	47.6	0.06	0.07	0.02	269,269, 311	0.0	0.0	0.0	0,0,0				
10	0.0	0.01	0.05	0.0	302,269, 0	0.0	0.0	0.0	0,0,0	-0.02	-5.70e- 03	-3.20e- 03	269,309, 311

	47.6	0.05	0.08	0.01	269,269,311	0.0	0.0	0.0	0,0,0				
11	0.0	0.02	0.08	0.0	302,269,0	0.0	0.0	0.0	0,0,0	-0.01	-3.55e-03	-1.95e-03	269,309,311
	47.6	0.04	0.10	7.66e-03	269,269,311	0.0	0.0	0.0	0,0,0				
12	0.0	0.03	0.10	3.69e-03	302,269,311	0.0	0.0	0.0	0,0,0	-3.64e-03	-1.09e-03	-5.39e-04	278,309,311
	47.6	0.03	0.10	5.56e-03	269,269,311	0.0	0.0	0.0	0,0,0				
13	0.0	0.03	0.10	6.09e-03	269,269,311	0.0	0.0	0.0	0,0,0	4.01e-03	1.46e-03	9.18e-04	269,309,311
	47.6	0.03	0.10	3.04e-03	302,269,311	0.0	0.0	0.0	0,0,0				
14	0.0	0.04	0.10	8.10e-03	269,269,311	0.0	0.0	0.0	0,0,0	-0.01	-3.91e-03	-2.32e-03	269,309,311
	47.6	0.02	0.08	0.0	302,269,0	0.0	0.0	0.0	0,0,0				
15	0.0	0.05	0.08	0.01	269,269,311	0.0	0.0	0.0	0,0,0	-0.02	-6.02e-03	-3.53e-03	269,309,311
	47.6	0.01	0.04	0.0	302,269,0	0.0	0.0	0.0	0,0,0				
16	0.0	0.06	0.07	0.02	269,269,311	0.0	0.0	0.0	0,0,0	-0.02	-7.29e-03	4.24e-03	269,309,311
	47.6	0.07	0.07	0.03	269,269,311	0.0	0.0	0.0	0,0,0				
17	0.0	0.02	0.03	3.38e-03	278,293,311	0.0	0.0	0.0	0,0,0	6.05e-03	3.86e-03	3.31e-03	302,310,311
	47.6	3.50e-03	8.90e-03	1.79e-03	278,293,311	0.0	0.0	0.0	0,0,0				
18	0.0	0.02	0.03	3.44e-03	278,293,311	0.0	0.0	0.0	0,0,0	-5.63e-03	-3.42e-03	-2.86e-03	302,310,311
	47.6	4.14e-03	9.81e-03	4.21e-03	303,293,311	0.0	0.0	0.0	0,0,0				
19	0.0	0.01	0.02	2.96e-03	278,278,311	0.0	0.0	0.0	0,0,0	6.18e-03	3.80e-03	3.20e-03	302,310,311
	47.6	0.01	0.03	8.45e-04	269,269,311	0.0	0.0	0.0	0,0,0				
20	0.0	0.01	0.02	4.29e-03	278,278,311	0.0	0.0	0.0	0,0,0	-5.64e-03	-3.23e-03	-2.62e-03	302,310,311
	47.6	0.02	0.02	3.47e-03	302,269,311	0.0	0.0	0.0	0,0,0				
21	0.0	6.21e-03	0.02	1.52e-03	302,269,311	0.0	0.0	0.0	0,0,0	5.51e-03	3.65e-03	3.18e-03	302,310,311
	47.6	0.02	0.05	1.39e-03	302,269,311	0.0	0.0	0.0	0,0,0				
22	0.0	7.95e-03	0.02	3.73e-03	302,269,311	0.0	0.0	0.0	0,0,0	4.79e-03	2.88e-03	2.40e-03	302,310,311
	47.6	0.02	0.04	3.65e-03	284,269,311	0.0	0.0	0.0	0,0,0				
23	0.0	0.01	0.04	0.0	302,269,0	0.0	0.0	0.0	0,0,0	-4.45e-03	-3.48e-03	-3.23e-03	293,310,311
	47.6	0.01	0.05	1.97e-		0.0	0.0	0.0	0,0,0				

				03	302,269,311								
24	0.0	0.01	0.04	3.50e-03	302,269,311	0.0	0.0	0.0	0,0,0	3.44e-03	2.43e-03	2.17e-03	302,310,311
	47.6	0.02	0.04	4.29e-03	293,278,311	0.0	0.0	0.0	0,0,0				
25	0.0	0.02	0.05	2.91e-04	302,269,311	0.0	0.0	0.0	0,0,0	-3.40e-03	-3.36e-03	-3.35e-03	265,307,311
	47.6	8.17e-03	0.04	1.94e-03	293,278,311	0.0	0.0	0.0	0,0,0				
26	0.0	0.02	0.04	3.59e-03	302,278,311	0.0	0.0	0.0	0,0,0	1.96e-03	1.93e-03	1.92e-03	302,310,311
	47.6	0.01	0.03	5.63e-03	293,278,311	0.0	0.0	0.0	0,0,0				
27	0.0	0.02	0.04	1.52e-03	269,278,311	0.0	0.0	0.0	0,0,0	-4.72e-03	-3.72e-03	-3.51e-03	269,309,311
	47.6	3.87e-03	0.02	1.02e-03	293,278,311	0.0	0.0	0.0	0,0,0				
28	0.0	0.02	0.03	4.18e-03	284,278,311	0.0	0.0	0.0	0,0,0	2.71e-03	-1.80e-03	-1.61e-03	278,309,311
	47.6	7.36e-03	0.02	8.15e-03	266,278,311	0.0	0.0	0.0	0,0,0				
29	0.0	0.02	0.02	2.44e-03	269,278,311	0.0	0.0	0.0	0,0,0	5.29e-03	3.94e-03	3.66e-03	269,309,311
	47.6	0.02	0.03	0.0	269,302,0	0.0	0.0	0.0	0,0,0				
30	0.0	0.02	0.02	5.53e-03	293,302,311	0.0	0.0	0.0	0,0,0	-2.69e-03	-1.44e-03	-1.17e-03	278,309,311
	47.6	0.03	0.03	0.01	269,278,311	0.0	0.0	0.0	0,0,0				
31	0.0	9.53e-03	0.03	2.12e-03	269,302,311	0.0	0.0	0.0	0,0,0	4.35e-03	3.79e-03	3.67e-03	269,309,311
	47.6	0.06	0.08	6.39e-03	269,302,311	0.0	0.0	0.0	0,0,0				
32	0.0	0.01	0.02	8.16e-03	269,302,311	0.0	0.0	0.0	0,0,0	-1.06e-03	-5.79e-04	-4.87e-04	278,309,311
	47.6	0.07	0.05	0.02	269,302,311	0.0	0.0	0.0	0,0,0				
33	0.0	0.06	0.08	0.01	278,293,311	0.0	0.0	0.0	0,0,0	5.40e-03	3.83e-03	3.45e-03	293,310,311
	47.6	0.01	0.04	0.01	269,293,311	0.0	0.0	0.0	0,0,0				
34	0.0	0.07	0.06	0.02	278,278,311	0.0	0.0	0.0	0,0,0	-2.98e-03	-9.93e-04	-5.90e-04	269,309,311
	47.6	9.08e-03	0.02	3.86e-03	269,302,311	0.0	0.0	0.0	0,0,0				
35	0.0	0.02	0.05	0.0	278,293,0	0.0	0.0	0.0	0,0,0	6.79e-03	4.46e-03	3.91e-03	293,310,311
	47.6	0.03	0.05	0.01	269,269,311	0.0	0.0	0.0	0,0,0				
36	0.0	0.03	0.03	0.01	278,278,311	0.0	0.0	0.0	0,0,0	-4.50e-03	-1.69e-03	-1.11e-03	269,309,311
	47.6	0.02	0.02	4.28e-03	269,269,	0.0	0.0	0.0	0,0,0				

					311								
37	0.0	6.61e-03	0.04	0.0	293,269,0	0.0	0.0	0.0	0,0,0	7.58e-03	5.41e-03	4.91e-03	293,310,311
	47.6	0.02	0.08	0.01	269,269,311	0.0	0.0	0.0	0,0,0				
38	0.0	2.95e-03	0.03	2.38e-03	298,278,311	0.0	0.0	0.0	0,0,0	4.23e-03	1.70e-03	1.17e-03	269,309,311
	47.6	0.02	0.05	5.12e-03	269,278,311	0.0	0.0	0.0	0,0,0				
39	0.0	3.62e-03	0.08	1.07e-03	290,269,311	0.0	0.0	0.0	0,0,0	8.10e-03	-6.56e-03	-6.23e-03	293,310,311
	47.6	0.02	0.09	8.05e-03	269,269,311	0.0	0.0	0.0	0,0,0				
40	0.0	7.05e-03	0.04	0.0	302,278,0	0.0	0.0	0.0	0,0,0	3.00e-03	1.28e-03	9.24e-04	260,309,311
	47.6	0.01	0.06	2.99e-03	269,278,311	0.0	0.0	0.0	0,0,0				
41	0.0	0.02	0.09	0.01	269,269,311	0.0	0.0	0.0	0,0,0	8.53e-03	7.79e-03	7.67e-03	293,310,311
	47.6	1.43e-03	0.08	2.51e-05	245,269,311	0.0	0.0	0.0	0,0,0				
42	0.0	9.29e-03	0.06	0.0	302,278,0	0.0	0.0	0.0	0,0,0	-1.32e-03	-6.23e-04	-4.87e-04	260,309,311
	47.6	3.50e-03	0.06	0.0	293,278,0	0.0	0.0	0.0	0,0,0				
43	0.0	0.02	0.08	0.02	269,269,311	0.0	0.0	0.0	0,0,0	9.78e-03	9.11e-03	9.01e-03	266,307,311
	47.6	2.58e-03	0.05	0.0	293,260,0	0.0	0.0	0.0	0,0,0				
44	0.0	0.01	0.06	0.0	269,278,0	0.0	0.0	0.0	0,0,0	3.91e-04	1.15e-04	6.99e-05	278,309,311
	47.6	3.37e-03	0.05	0.0	284,278,0	0.0	0.0	0.0	0,0,0				
45	0.0	0.03	0.05	0.02	269,260,311	0.0	0.0	0.0	0,0,0	0.01	0.01	9.96e-03	269,309,311
	47.6	0.01	0.03	1.83e-03	269,278,311	0.0	0.0	0.0	0,0,0				
46	0.0	0.01	0.05	0.0	269,278,0	0.0	0.0	0.0	0,0,0	1.64e-03	7.98e-04	6.21e-04	278,309,311
	47.6	9.64e-03	0.03	0.0	293,297,0	0.0	0.0	0.0	0,0,0				
47	0.0	0.02	0.01	0.01	269,285,311	0.0	0.0	0.0	0,0,0	-0.01	-0.01	-0.01	266,307,311
	47.6	0.05	0.05	0.03	269,278,311	0.0	0.0	0.0	0,0,0				
48	0.0	0.01	0.03	0.0	269,298,0	0.0	0.0	0.0	0,0,0	-2.02e-03	-1.30e-03	-1.15e-03	278,309,311
	47.6	0.02	0.06	0.0	284,302,0	0.0	0.0	0.0	0,0,0				
49	0.0	6.47e-03	0.09	0.0	302,269,0	0.0	0.0	0.0	0,0,0	-0.02	-0.01	-0.01	269,309,311
	47.6	0.02	0.12	9.28e-03	269,269,311	0.0	0.0	0.0	0,0,0				

50	0.0	2.64e-03	0.12	0.0	294,269,0	0.0	0.0	0.0	0,0,0	-0.02	-0.01	-0.01	269,309,311
	47.6	0.02	0.19	8.43e-03	269,269,311	0.0	0.0	0.0	0,0,0				
51	0.0	4.01e-03	0.18	0.0	302,269,0	0.0	0.0	0.0	0,0,0	0.01	0.01	0.01	269,309,311
	47.6	9.37e-03	0.22	0.0	302,269,0	0.0	0.0	0.0	0,0,0				
52	0.0	6.87e-03	0.22	0.0	302,269,0	0.0	0.0	0.0	0,0,0	0.01	9.38e-03	9.20e-03	269,309,311
	47.6	0.01	0.23	0.0	302,269,0	0.0	0.0	0.0	0,0,0				
53	0.0	9.29e-03	0.23	0.0	302,269,0	0.0	0.0	0.0	0,0,0	-9.05e-03	-8.19e-03	-8.04e-03	293,310,311
	47.6	0.01	0.20	0.0	302,269,0	0.0	0.0	0.0	0,0,0				
54	0.0	0.01	0.21	3.58e-03	302,269,311	0.0	0.0	0.0	0,0,0	9.58e-03	7.49e-03	7.04e-03	293,310,311
	47.6	7.81e-03	0.16	0.0	302,269,0	0.0	0.0	0.0	0,0,0				
55	0.0	0.02	0.16	7.11e-03	269,269,311	0.0	0.0	0.0	0,0,0	0.01	6.99e-03	6.30e-03	293,310,311
	47.6	3.60e-03	0.10	0.0	302,269,0	0.0	0.0	0.0	0,0,0				
56	0.0	0.02	0.10	5.12e-03	269,269,311	0.0	0.0	0.0	0,0,0	0.01	6.74e-03	5.93e-03	293,310,311
	47.6	7.58e-03	0.08	0.0	302,269,0	0.0	0.0	0.0	0,0,0				
57	0.0	0.02	0.04	0.01	293,293,311	0.0	0.0	0.0	0,0,0	-0.01	-0.01	-9.99e-03	291,307,311
	47.6	0.01	0.02	0.01	300,302,311	0.0	0.0	0.0	0,0,0				
58	0.0	0.01	0.03	0.0	278,293,0	0.0	0.0	0.0	0,0,0	-1.67e-03	-1.49e-03	-1.45e-03	297,306,311
	47.6	5.57e-03	0.02	0.0	269,282,0	0.0	0.0	0.0	0,0,0				
59	0.0	8.67e-03	4.78e-03	5.70e-03	278,278,311	0.0	0.0	0.0	0,0,0	-0.01	-9.82e-03	-9.70e-03	291,307,311
	47.6	0.02	0.01	0.02	293,302,311	0.0	0.0	0.0	0,0,0				
60	0.0	3.92e-03	0.02	0.0	293,278,0	0.0	0.0	0.0	0,0,0	-1.82e-03	-1.60e-03	-1.54e-03	297,306,311
	47.6	9.24e-03	0.04	0.0	269,278,0	0.0	0.0	0.0	0,0,0				
61	0.0	9.72e-03	5.49e-03	0.01	302,293,311	0.0	0.0	0.0	0,0,0	-0.01	-9.23e-03	-9.10e-03	291,307,311
	47.6	0.02	0.01	0.02	293,293,311	0.0	0.0	0.0	0,0,0				
62	0.0	2.84e-04	0.03	0.0	290,278,0	0.0	0.0	0.0	0,0,0	-2.13e-03	-1.80e-03	-1.73e-03	257,306,311
	47.6	8.19e-03	0.05	0.0	269,278,0	0.0	0.0	0.0	0,0,0				
63	0.0	0.02	8.55e-	0.01		0.0	0.0	0.0	0,0,0	9.25e-	8.48e-	8.37e-	

			03		293,293,311					03	03	03	291,307,311
	47.6	0.02	0.01	0.02	293,293,311	0.0	0.0	0.0	0,0,0				
64	0.0	2.40e-03	0.05	0.0	293,278,0	0.0	0.0	0.0	0,0,0	-2.77e-03	-2.12e-03	-2.00e-03	264,309,311
	47.6	3.98e-03	0.06	0.0	266,278,0	0.0	0.0	0.0	0,0,0				
65	0.0	0.02	0.01	0.02	293,293,311	0.0	0.0	0.0	0,0,0	8.45e-03	7.68e-03	7.57e-03	262,305,311
	47.6	0.02	0.01	0.02	290,290,311	0.0	0.0	0.0	0,0,0				
66	0.0	7.58e-03	0.06	0.0	269,278,0	0.0	0.0	0.0	0,0,0	-3.62e-03	-2.55e-03	-2.35e-03	260,309,311
	47.6	3.31e-03	0.05	0.0	291,278,0	0.0	0.0	0.0	0,0,0				
67	0.0	0.02	0.01	0.02	293,293,311	0.0	0.0	0.0	0,0,0	7.66e-03	6.85e-03	6.71e-03	262,305,311
	47.6	0.03	0.01	0.02	266,265,311	0.0	0.0	0.0	0,0,0				
68	0.0	0.01	0.05	8.79e-04	269,278,311	0.0	0.0	0.0	0,0,0	-4.36e-03	-2.99e-03	-2.73e-03	260,309,311
	47.6	7.26e-03	0.03	0.0	293,298,0	0.0	0.0	0.0	0,0,0				
69	0.0	0.02	0.01	0.02	265,265,311	0.0	0.0	0.0	0,0,0	-6.56e-03	-5.93e-03	-5.79e-03	255,305,311
	47.6	0.04	0.02	0.02	269,269,311	0.0	0.0	0.0	0,0,0				
70	0.0	0.01	0.03	4.57e-03	269,298,311	0.0	0.0	0.0	0,0,0	-4.72e-03	-3.34e-03	-3.09e-03	260,309,311
	47.6	0.01	0.05	0.0	293,302,0	0.0	0.0	0.0	0,0,0				
71	0.0	0.03	0.02	0.02	269,269,311	0.0	0.0	0.0	0,0,0	5.77e-03	4.85e-03	4.71e-03	296,310,311
	47.6	0.07	0.03	0.03	269,269,311	0.0	0.0	0.0	0,0,0				
72	0.0	6.12e-03	0.05	6.03e-03	238,302,311	0.0	0.0	0.0	0,0,0	-4.48e-03	-3.48e-03	-3.34e-03	257,309,311
	47.6	0.03	0.07	0.0	269,302,0	0.0	0.0	0.0	0,0,0				
73	0.0	0.02	0.05	0.0	278,293,0	0.0	0.0	0.0	0,0,0	2.15e-03	1.59e-03	1.50e-03	298,306,311
	47.6	6.16e-03	0.04	3.68e-03	266,293,311	0.0	0.0	0.0	0,0,0				
74	0.0	5.91e-03	0.04	0.0	302,293,0	0.0	0.0	0.0	0,0,0	2.04e-03	1.34e-03	1.25e-03	273,306,311
	47.6	0.01	0.04	2.04e-03	269,266,311	0.0	0.0	0.0	0,0,0				
75	0.0	1.72e-03	0.04	0.0	302,266,0	0.0	0.0	0.0	0,0,0	-1.64e-03	-9.49e-04	-8.65e-04	273,306,311
	47.6	9.65e-03	0.06	0.0	269,269,0	0.0	0.0	0.0	0,0,0				
76	0.0	0.0	0.06	0.0	0,269,0	0.0	0.0	0.0	0,0,0	-1.15e-03	-5.26e-04	-4.22e-04	298,308,

													311
	47.6	4.08e-03	0.07	0.0	278,269,0	0.0	0.0	0.0	0,0,0				
77	0.0	6.40e-03	0.07	0.0	278,269,0	0.0	0.0	0.0	0,0,0	1.01e-03	1.73e-04	5.46e-05	266,307,311
	47.6	0.0	0.06	0.0	0,269,0	0.0	0.0	0.0	0,0,0				
78	0.0	0.01	0.06	0.0	278,269,0	0.0	0.0	0.0	0,0,0	1.80e-03	6.20e-04	4.49e-04	266,307,311
	47.6	1.10e-03	0.04	0.0	302,291,0	0.0	0.0	0.0	0,0,0				
79	0.0	0.01	0.04	3.97e-04	260,266,311	0.0	0.0	0.0	0,0,0	2.34e-03	9.91e-04	7.89e-04	266,307,311
	47.6	0.01	0.05	0.0	278,293,0	0.0	0.0	0.0	0,0,0				
80	0.0	4.97e-03	0.05	0.0	262,293,0	0.0	0.0	0.0	0,0,0	2.39e-03	1.22e-03	9.80e-04	266,307,311
	47.6	0.03	0.08	0.0	278,293,0	0.0	0.0	0.0	0,0,0				
81	0.0	0.03	0.08	0.0	278,293,0	0.0	0.0	0.0	0,0,0	2.81e-03	1.31e-03	1.03e-03	290,307,311
	47.6	9.33e-03	0.05	3.51e-03	269,291,311	0.0	0.0	0.0	0,0,0				
82	0.0	0.01	0.05	0.0	284,294,0	0.0	0.0	0.0	0,0,0	3.58e-03	1.66e-03	1.34e-03	290,307,311
	47.6	0.02	0.07	5.37e-03	269,266,311	0.0	0.0	0.0	0,0,0				
83	0.0	7.17e-03	0.06	0.0	293,266,0	0.0	0.0	0.0	0,0,0	4.23e-03	2.21e-03	1.84e-03	291,307,311
	47.6	0.02	0.09	5.03e-03	278,269,311	0.0	0.0	0.0	0,0,0				
84	0.0	5.30e-03	0.09	1.95e-03	294,269,311	0.0	0.0	0.0	0,0,0	4.89e-03	2.87e-03	2.45e-03	291,307,311
	47.6	0.01	0.11	3.34e-03	278,269,311	0.0	0.0	0.0	0,0,0				
85	0.0	5.72e-03	0.10	6.47e-03	287,269,311	0.0	0.0	0.0	0,0,0	5.70e-03	3.55e-03	3.09e-03	266,307,311
	47.6	5.78e-03	0.10	0.0	302,269,0	0.0	0.0	0.0	0,0,0				
86	0.0	0.01	0.10	8.95e-03	269,269,311	0.0	0.0	0.0	0,0,0	-7.04e-03	-4.18e-03	-3.68e-03	266,307,311
	47.6	4.81e-03	0.08	0.0	302,269,0	0.0	0.0	0.0	0,0,0				
87	0.0	0.02	0.08	9.20e-03	269,269,311	0.0	0.0	0.0	0,0,0	-8.06e-03	-4.64e-03	-4.11e-03	266,307,311
	47.6	2.86e-03	0.04	0.0	293,269,0	0.0	0.0	0.0	0,0,0				
88	0.0	0.01	0.05	6.13e-03	269,269,311	0.0	0.0	0.0	0,0,0	-8.46e-03	-4.81e-03	-4.29e-03	266,307,311
	47.6	0.01	0.04	6.28e-03	266,269,311	0.0	0.0	0.0	0,0,0				
89	0.0	0.06	0.03	0.03	269,269,311	0.0	0.0	0.0	0,0,0	5.97e-03	3.89e-03	3.49e-03	303,310,311
	47.6	0.03	0.02	0.02	269,269,	0.0	0.0	0.0	0,0,0				

					311								
90	0.0	5.12e-03	0.03	0.0	284,269,0	0.0	0.0	0.0	0,0,0	-0.01	-7.10e-03	-5.82e-03	302,310,311
	47.6	0.01	0.06	2.48e-03	269,269,311	0.0	0.0	0.0	0,0,0				
91	0.0	0.04	0.02	0.02	269,269,311	0.0	0.0	0.0	0,0,0	-5.78e-03	-3.01e-03	-2.48e-03	303,310,311
	47.6	0.02	0.01	0.02	265,265,311	0.0	0.0	0.0	0,0,0				
92	0.0	4.85e-03	0.06	2.89e-03	302,269,311	0.0	0.0	0.0	0,0,0	-0.01	7.21e-03	6.02e-03	302,310,311
	47.6	0.02	0.08	6.46e-04	302,269,311	0.0	0.0	0.0	0,0,0				
93	0.0	0.02	0.01	0.02	269,269,311	0.0	0.0	0.0	0,0,0	-5.18e-03	-2.11e-03	-1.52e-03	303,310,311
	47.6	0.02	0.01	0.02	293,293,311	0.0	0.0	0.0	0,0,0				
94	0.0	9.45e-03	0.08	6.61e-03	302,269,311	0.0	0.0	0.0	0,0,0	-0.01	-7.28e-03	-6.22e-03	302,310,311
	47.6	0.02	0.08	0.0	302,269,0	0.0	0.0	0.0	0,0,0				
95	0.0	0.02	0.01	0.02	265,265,311	0.0	0.0	0.0	0,0,0	4.22e-03	1.07e-03	4.91e-04	303,310,311
	47.6	0.03	0.01	0.03	285,285,311	0.0	0.0	0.0	0,0,0				
96	0.0	0.01	0.08	6.85e-03	302,269,311	0.0	0.0	0.0	0,0,0	-0.01	-7.19e-03	-6.29e-03	303,310,311
	47.6	0.02	0.06	0.01	302,269,311	0.0	0.0	0.0	0,0,0				
97	0.0	0.02	0.01	0.03	293,293,311	0.0	0.0	0.0	0,0,0	4.66e-03	1.29e-03	7.38e-04	268,309,311
	47.6	0.03	0.02	0.04	285,280,311	0.0	0.0	0.0	0,0,0				
98	0.0	0.02	0.06	5.39e-03	302,269,311	0.0	0.0	0.0	0,0,0	-0.01	-6.81e-03	-6.06e-03	303,310,311
	47.6	0.03	0.03	0.02	303,269,311	0.0	0.0	0.0	0,0,0				
99	0.0	0.03	0.01	0.03	285,285,311	0.0	0.0	0.0	0,0,0	5.99e-03	2.80e-03	2.29e-03	268,309,311
	47.6	0.04	0.02	0.05	280,280,311	0.0	0.0	0.0	0,0,0				
100	0.0	0.02	0.02	0.01	302,269,311	0.0	0.0	0.0	0,0,0	0.01	5.95e-03	5.33e-03	303,310,311
	47.6	0.04	0.04	0.04	296,269,311	0.0	0.0	0.0	0,0,0				
101	0.0	0.03	0.02	0.04	280,280,311	0.0	0.0	0.0	0,0,0	7.77e-03	4.73e-03	4.23e-03	269,309,311
	47.6	0.05	0.03	0.06	255,255,311	0.0	0.0	0.0	0,0,0				
102	0.0	0.03	0.02	0.02	303,303,311	0.0	0.0	0.0	0,0,0	8.12e-03	4.42e-03	3.89e-03	303,310,311
	47.6	0.06	0.05	0.06	271,269,311	0.0	0.0	0.0	0,0,0				

103	0.0	0.04	0.02	0.05	255,255,311	0.0	0.0	0.0	0,0,0	0.01	7.10e-03	6.58e-03	269,309,311
	47.6	0.06	0.03	0.06	255,255,311	0.0	0.0	0.0	0,0,0				
104	0.0	0.04	0.02	0.04	296,296,311	0.0	0.0	0.0	0,0,0	5.51e-03	2.02e-03	1.51e-03	302,310,311
	47.6	0.09	0.07	0.09	271,269,311	0.0	0.0	0.0	0,0,0				
105	0.0	0.0	0.07	0.0	0,269,0	0.0	0.0	0.0	0,0,0	9.85e-03	7.81e-03	7.44e-03	278,309,311
	47.6	0.02	0.13	0.01	271,260,311	0.0	0.0	0.0	0,0,0				
106	0.0	0.0	0.13	0.0	0,260,0	0.0	0.0	0.0	0,0,0	8.34e-03	6.72e-03	6.43e-03	278,309,311
	47.6	8.63e-03	0.18	6.24e-03	271,260,311	0.0	0.0	0.0	0,0,0				
107	0.0	0.0	0.17	0.0	0,260,0	0.0	0.0	0.0	0,0,0	-6.11e-03	-5.14e-03	-4.97e-03	278,309,311
	47.6	0.0	0.20	0.0	0,260,0	0.0	0.0	0.0	0,0,0				
108	0.0	0.0	0.20	0.0	0,260,0	0.0	0.0	0.0	0,0,0	-3.77e-03	-3.39e-03	-3.28e-03	275,308,311
	47.6	0.0	0.19	0.0	0,278,0	0.0	0.0	0.0	0,0,0				
109	0.0	8.53e-03	0.19	0.0	269,260,0	0.0	0.0	0.0	0,0,0	2.33e-03	1.70e-03	1.59e-03	300,308,311
	47.6	0.0	0.15	0.0	0,278,0	0.0	0.0	0.0	0,0,0				
110	0.0	0.03	0.16	0.02	260,278,311	0.0	0.0	0.0	0,0,0	-1.51e-03	-3.69e-04	-1.72e-04	262,310,311
	47.6	0.0	0.09	0.0	0,278,0	0.0	0.0	0.0	0,0,0				
111	0.0	0.03	0.09	0.03	260,278,311	0.0	0.0	0.0	0,0,0	2.52e-03	-9.11e-04	-6.76e-04	255,309,311
	47.6	0.02	0.07	0.0	262,278,0	0.0	0.0	0.0	0,0,0				
112	0.0	0.01	0.04	0.02	276,302,311	0.0	0.0	0.0	0,0,0	1.79e-03	6.49e-04	4.84e-04	255,309,311
	47.6	0.08	0.11	0.06	260,260,311	0.0	0.0	0.0	0,0,0				
113	0.0	0.07	0.07	0.05	255,255,311	0.0	0.0	0.0	0,0,0	1.18e-03	9.88e-04	9.54e-04	278,309,311
	47.6	8.72e-03	0.02	6.55e-03	260,302,311	0.0	0.0	0.0	0,0,0				
114	0.0	0.02	0.03	0.01	255,271,311	0.0	0.0	0.0	0,0,0	2.09e-03	1.48e-03	1.36e-03	278,309,311
	47.6	0.02	0.03	0.02	260,276,311	0.0	0.0	0.0	0,0,0				
115	0.0	0.0	0.03	0.0	0,300,0	0.0	0.0	0.0	0,0,0	1.76e-03	1.18e-03	1.07e-03	260,309,311
	47.6	0.02	0.06	0.01	260,271,311	0.0	0.0	0.0	0,0,0				
116	0.0	5.47e-03	0.06	4.07e-03	266,271,311	0.0	0.0	0.0	0,0,0	8.47e-04	5.46e-04	4.89e-04	269,309,311
	47.6	0.01	0.07	5.43e-03	269,271,311	0.0	0.0	0.0	0,0,0				
117	0.0	0.02	0.07	0.01	269,271,311	0.0	0.0	0.0	0,0,0	2.72e-04	1.48e-04	1.27e-04	271,305,311

	47.6	0.0	0.04	0.0	0,271,0	0.0	0.0	0.0	0,0,0				
118	0.0	0.02	0.05	0.02	260,271,311	0.0	0.0	0.0	0,0,0	1.03e-03	5.98e-04	5.37e-04	271,305,311
	47.6	8.93e-03	0.02	7.05e-03	264,271,311	0.0	0.0	0.0	0,0,0				
119	0.0	0.02	8.86e-03	0.01	278,260,311	0.0	0.0	0.0	0,0,0	1.05e-03	5.45e-04	4.77e-04	271,305,311
	47.6	0.04	0.03	0.03	260,271,311	0.0	0.0	0.0	0,0,0				
120	0.0	0.01	8.55e-03	0.01	269,269,311	0.0	0.0	0.0	0,0,0	-8.54e-04	-5.20e-04	-4.70e-04	263,306,311
	47.6	0.08	0.08	0.07	260,255,311	0.0	0.0	0.0	0,0,0				
121	0.0	0.09	0.09	0.07	255,255,311	0.0	0.0	0.0	0,0,0	-4.15e-03	-2.80e-03	-2.60e-03	269,309,311
	47.6	0.01	8.13e-03	0.01	264,264,311	0.0	0.0	0.0	0,0,0				
122	0.0	0.04	0.05	0.03	255,271,311	0.0	0.0	0.0	0,0,0	5.70e-03	3.91e-03	3.63e-03	269,309,311
	47.6	0.02	0.02	0.01	260,271,311	0.0	0.0	0.0	0,0,0				
123	0.0	0.01	0.04	9.28e-03	242,271,311	0.0	0.0	0.0	0,0,0	5.72e-03	4.03e-03	3.78e-03	269,309,311
	47.6	0.02	0.07	0.02	260,271,311	0.0	0.0	0.0	0,0,0				
124	0.0	4.54e-03	0.06	0.0	293,271,0	0.0	0.0	0.0	0,0,0	5.01e-03	3.62e-03	3.45e-03	264,309,311
	47.6	0.02	0.10	0.01	269,255,311	0.0	0.0	0.0	0,0,0				
125	0.0	1.72e-03	0.10	0.0	293,271,0	0.0	0.0	0.0	0,0,0	4.09e-03	3.04e-03	2.88e-03	264,306,311
	47.6	2.64e-03	0.11	0.0	290,255,0	0.0	0.0	0.0	0,0,0				
126	0.0	0.0	0.11	0.0	0,255,0	0.0	0.0	0.0	0,0,0	3.53e-03	2.40e-03	2.22e-03	288,306,311
	47.6	7.90e-04	0.11	0.0	293,255,0	0.0	0.0	0.0	0,0,0				
127	0.0	0.0	0.11	0.0	0,255,0	0.0	0.0	0.0	0,0,0	3.33e-03	1.78e-03	1.57e-03	288,306,311
	47.6	2.37e-03	0.08	0.0	293,260,0	0.0	0.0	0.0	0,0,0				
128	0.0	9.57e-03	0.09	4.51e-03	271,260,311	0.0	0.0	0.0	0,0,0	-2.99e-03	-1.19e-03	-9.68e-04	288,310,311
	47.6	9.77e-03	0.06	0.0	293,269,0	0.0	0.0	0.0	0,0,0				
129	0.0	0.10	0.09	0.10	271,271,311	0.0	0.0	0.0	0,0,0	-0.01	-9.32e-03	-8.75e-03	269,309,311
	44.6	0.03	0.02	0.03	276,276,311	0.0	0.0	0.0	0,0,0				
130	0.0	0.11	0.09	0.10	271,271,311	0.0	0.0	0.0	0,0,0	-5.42e-03	-2.13e-03	-1.61e-03	269,309,311
	44.6	0.04	0.02	0.04	276,276,311	0.0	0.0	0.0	0,0,0				

131	0.0	0.06	0.07	0.06	271,255,311	0.0	0.0	0.0	0,0,0	-0.01	-0.01	-0.01	269,309,311
	44.6	0.02	0.02	0.01	266,290,311	0.0	0.0	0.0	0,0,0				
132	0.0	0.07	0.07	0.07	276,255,311	0.0	0.0	0.0	0,0,0	7.18e-03	4.11e-03	3.57e-03	269,309,311
	44.6	0.02	0.01	9.40e-03	301,301,311	0.0	0.0	0.0	0,0,0				
133	0.0	0.03	0.07	0.02	276,255,311	0.0	0.0	0.0	0,0,0	0.01	0.01	0.01	260,309,311
	44.6	0.03	0.10	0.03	255,266,311	0.0	0.0	0.0	0,0,0				
134	0.0	0.04	0.07	0.04	276,262,311	0.0	0.0	0.0	0,0,0	7.84e-03	4.94e-03	4.40e-03	260,309,311
	44.6	0.02	0.07	0.02	255,266,311	0.0	0.0	0.0	0,0,0				
135	0.0	0.0	0.09	0.0	0,266,0	0.0	0.0	0.0	0,0,0	0.01	0.01	9.89e-03	260,309,311
	44.6	0.03	0.17	0.03	271,262,311	0.0	0.0	0.0	0,0,0				
136	0.0	0.02	0.07	0.0	300,255,0	0.0	0.0	0.0	0,0,0	7.55e-03	4.79e-03	4.28e-03	260,309,311
	44.6	0.03	0.13	0.03	271,262,311	0.0	0.0	0.0	0,0,0				
137	0.0	0.0	0.16	0.0	0,262,0	0.0	0.0	0.0	0,0,0	0.01	8.87e-03	8.32e-03	278,309,311
	44.6	0.03	0.24	0.03	271,255,311	0.0	0.0	0.0	0,0,0				
138	0.0	0.0	0.13	0.0	0,262,0	0.0	0.0	0.0	0,0,0	6.43e-03	3.78e-03	3.31e-03	278,309,311
	44.6	0.03	0.19	0.03	276,262,311	0.0	0.0	0.0	0,0,0				
139	0.0	0.0	0.23	0.0	0,255,0	0.0	0.0	0.0	0,0,0	-9.29e-03	-6.54e-03	-6.04e-03	278,309,311
	44.6	0.02	0.30	0.02	276,255,311	0.0	0.0	0.0	0,0,0				
140	0.0	0.0	0.19	0.0	0,262,0	0.0	0.0	0.0	0,0,0	4.50e-03	2.04e-03	1.62e-03	278,309,311
	44.6	0.02	0.25	0.02	301,255,311	0.0	0.0	0.0	0,0,0				
141	0.0	0.0	0.29	0.0	0,255,0	0.0	0.0	0.0	0,0,0	-6.03e-03	-3.62e-03	-3.17e-03	278,309,311
	44.6	7.90e-03	0.34	0.0	300,255,0	0.0	0.0	0.0	0,0,0				
142	0.0	0.0	0.24	0.0	0,255,0	0.0	0.0	0.0	0,0,0	2.97e-03	1.08e-03	7.05e-04	293,310,311
	44.6	0.02	0.30	0.01	301,255,311	0.0	0.0	0.0	0,0,0				
143	0.0	0.0	0.34	0.0	0,255,0	0.0	0.0	0.0	0,0,0	-2.39e-03	-5.83e-04	4.44e-04	294,310,311
	44.6	0.0	0.38	0.0	0,255,0	0.0	0.0	0.0	0,0,0				
144	0.0	0.0	0.29	0.0	0,255,0	0.0	0.0	0.0	0,0,0	-5.57e-03	-3.89e-03	-3.57e-03	294,310,311

	44.6	0.01	0.34	3.61e-03	300,255,311	0.0	0.0	0.0	0,0,0				
145	0.0	0.0	0.37	0.0	0,255,0	0.0	0.0	0.0	0,0,0	-6.03e-03	-4.27e-03	-3.93e-03	285,310,311
	44.6	0.0	0.40	0.0	0,255,0	0.0	0.0	0.0	0,0,0				
146	0.0	0.0	0.33	0.0	0,255,0	0.0	0.0	0.0	0,0,0	-8.79e-03	-7.16e-03	-6.88e-03	294,310,311
	44.6	7.01e-03	0.36	0.0	300,255,0	0.0	0.0	0.0	0,0,0				
147	0.0	0.0	0.40	0.0	0,255,0	0.0	0.0	0.0	0,0,0	-0.01	-8.27e-03	-7.96e-03	280,305,311
	44.6	0.0	0.41	0.0	0,255,0	0.0	0.0	0.0	0,0,0				
148	0.0	0.0	0.36	0.0	0,255,0	0.0	0.0	0.0	0,0,0	-0.01	-0.01	-0.01	280,305,311
	44.6	0.0	0.38	0.0	0,255,0	0.0	0.0	0.0	0,0,0				
149	0.0	0.0	0.41	0.0	0,255,0	0.0	0.0	0.0	0,0,0	0.02	0.01	0.01	280,305,311
	44.6	0.0	0.41	0.0	0,255,0	0.0	0.0	0.0	0,0,0				
150	0.0	0.0	0.38	0.0	0,255,0	0.0	0.0	0.0	0,0,0	-0.02	-0.01	-0.01	280,305,311
	44.6	0.0	0.38	0.0	0,255,0	0.0	0.0	0.0	0,0,0				
151	0.0	0.0	0.41	0.0	0,255,0	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	280,305,311
	44.6	0.0	0.38	0.0	0,255,0	0.0	0.0	0.0	0,0,0				
152	0.0	2.39e-03	0.38	0.0	265,255,0	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	280,305,311
	44.6	0.0	0.36	0.0	0,255,0	0.0	0.0	0.0	0,0,0				
153	0.0	0.02	0.39	0.01	266,255,311	0.0	0.0	0.0	0,0,0	-0.02	-0.02	-0.02	280,305,311
	44.6	0.0	0.34	0.0	0,271,0	0.0	0.0	0.0	0,0,0				
154	0.0	0.02	0.36	0.02	266,255,311	0.0	0.0	0.0	0,0,0	-0.03	-0.02	-0.02	280,305,311
	44.6	0.0	0.32	0.0	0,271,0	0.0	0.0	0.0	0,0,0				
155	0.0	0.03	0.35	0.04	262,271,311	0.0	0.0	0.0	0,0,0	0.03	0.02	0.02	280,305,311
	44.6	0.0	0.28	0.0	0,271,0	0.0	0.0	0.0	0,0,0				
156	0.0	0.04	0.33	0.04	255,271,311	0.0	0.0	0.0	0,0,0	0.03	0.03	0.03	280,305,311
	44.6	0.0	0.26	0.0	0,271,0	0.0	0.0	0.0	0,0,0				
157	0.0	0.04	0.28	0.05	255,271,311	0.0	0.0	0.0	0,0,0	-0.03	-0.03	-0.03	280,305,311
	44.6	0.0	0.19	0.0	0,271,0	0.0	0.0	0.0	0,0,0				
...													
184	47.6	0.0	0.06	0.0	0,280,0	0.0	0.0	0.0	0,0,0	-3.29e-03	-1.72e-03	-1.35e-03	280,305,311
Trav e		rRfck	rRfyk	rPfck		wR	wF	wP		dR	dF	dP	
		0.11	0.41	0.10		0.0	0.0	0.0		0.04	0.03	0.03	

Guscio	rRfck	rRfyk	rPfck	Rif. cmb	wR mm	wF mm	wP mm	Rif. cmb
1	0.10	0.17	0.03	269,269,311	0.0	0.0	0.0	0,0,0
2	0.10	0.17	0.03	269,269,311	0.0	0.0	0.0	0,0,0
3	0.09	0.16	0.03	269,269,311	0.0	0.0	0.0	0,0,0
4	0.10	0.17	0.03	269,269,311	0.0	0.0	0.0	0,0,0
5	0.10	0.18	0.03	269,269,311	0.0	0.0	0.0	0,0,0
6	0.10	0.18	0.03	269,269,311	0.0	0.0	0.0	0,0,0
7	0.10	0.17	0.03	269,269,311	0.0	0.0	0.0	0,0,0
8	0.09	0.16	0.03	269,269,311	0.0	0.0	0.0	0,0,0
9	0.10	0.17	0.03	269,269,311	0.0	0.0	0.0	0,0,0
10	0.10	0.17	0.03	269,269,311	0.0	0.0	0.0	0,0,0

11	0.09	0.16	0.03	278,278,311	0.0	0.0	0.0	0,0,0
12	0.09	0.16	0.03	278,278,311	0.0	0.0	0.0	0,0,0
13	0.09	0.15	0.03	269,269,311	0.0	0.0	0.0	0,0,0
14	0.10	0.17	0.03	269,269,311	0.0	0.0	0.0	0,0,0
15	0.10	0.17	0.03	269,269,311	0.0	0.0	0.0	0,0,0
16	0.10	0.17	0.03	269,269,311	0.0	0.0	0.0	0,0,0
17	0.10	0.17	0.03	269,269,311	0.0	0.0	0.0	0,0,0
18	0.09	0.15	0.03	269,269,311	0.0	0.0	0.0	0,0,0
19	0.09	0.16	0.03	278,278,311	0.0	0.0	0.0	0,0,0
20	0.09	0.16	0.03	278,278,311	0.0	0.0	0.0	0,0,0
21	0.09	0.15	0.03	269,269,311	0.0	0.0	0.0	0,0,0
22	0.09	0.15	0.03	269,269,311	0.0	0.0	0.0	0,0,0
23	0.08	0.14	0.03	269,269,311	0.0	0.0	0.0	0,0,0
24	0.09	0.15	0.03	269,269,311	0.0	0.0	0.0	0,0,0
25	0.09	0.15	0.03	269,269,311	0.0	0.0	0.0	0,0,0
26	0.09	0.15	0.03	269,269,311	0.0	0.0	0.0	0,0,0
27	0.09	0.15	0.03	269,269,311	0.0	0.0	0.0	0,0,0
28	0.08	0.14	0.03	269,269,311	0.0	0.0	0.0	0,0,0
29	0.09	0.15	0.03	269,269,311	0.0	0.0	0.0	0,0,0
30	0.09	0.15	0.03	269,269,311	0.0	0.0	0.0	0,0,0
31	0.09	0.16	0.03	269,269,311	0.0	0.0	0.0	0,0,0
32	0.09	0.15	0.03	269,269,311	0.0	0.0	0.0	0,0,0
33	0.08	0.13	0.03	269,269,311	0.0	0.0	0.0	0,0,0
34	0.08	0.13	0.02	269,269,311	0.0	0.0	0.0	0,0,0
35	0.08	0.13	0.02	269,269,311	0.0	0.0	0.0	0,0,0
36	0.08	0.13	0.02	269,269,311	0.0	0.0	0.0	0,0,0
37	0.08	0.13	0.02	269,269,311	0.0	0.0	0.0	0,0,0
38	0.08	0.13	0.03	269,269,311	0.0	0.0	0.0	0,0,0
39	0.09	0.15	0.03	269,269,311	0.0	0.0	0.0	0,0,0
40	0.09	0.16	0.03	269,269,311	0.0	0.0	0.0	0,0,0
41	0.09	0.16	0.03	269,269,311	0.0	0.0	0.0	0,0,0
42	0.09	0.15	0.03	269,269,311	0.0	0.0	0.0	0,0,0
43	0.08	0.13	0.03	269,269,311	0.0	0.0	0.0	0,0,0
44	0.07	0.12	0.02	269,269,311	0.0	0.0	0.0	0,0,0
45	0.07	0.12	0.02	269,269,311	0.0	0.0	0.0	0,0,0
46	0.07	0.12	0.02	269,269,311	0.0	0.0	0.0	0,0,0
47	0.07	0.12	0.02	269,269,311	0.0	0.0	0.0	0,0,0
48	0.08	0.13	0.03	269,269,311	0.0	0.0	0.0	0,0,0
49	0.09	0.15	0.03	269,269,311	0.0	0.0	0.0	0,0,0
50	0.09	0.16	0.03	269,269,311	0.0	0.0	0.0	0,0,0
51	0.09	0.15	0.03	269,269,311	0.0	0.0	0.0	0,0,0
52	0.08	0.14	0.03	269,269,311	0.0	0.0	0.0	0,0,0
53	0.07	0.12	0.03	269,269,311	0.0	0.0	0.0	0,0,0
54	0.06	0.11	0.02	269,269,311	0.0	0.0	0.0	0,0,0
55	0.06	0.11	0.02	269,269,311	0.0	0.0	0.0	0,0,0
56	0.06	0.11	0.02	269,269,311	0.0	0.0	0.0	0,0,0
57	0.06	0.11	0.02	269,269,311	0.0	0.0	0.0	0,0,0
58	0.07	0.12	0.03	269,269,311	0.0	0.0	0.0	0,0,0
59	0.08	0.15	0.03	269,269,311	0.0	0.0	0.0	0,0,0
60	0.09	0.15	0.03	269,269,311	0.0	0.0	0.0	0,0,0
61	0.07	0.13	0.03	269,278,311	0.0	0.0	0.0	0,0,0
62	0.07	0.12	0.03	269,278,311	0.0	0.0	0.0	0,0,0
63	0.06	0.10	0.03	269,278,311	0.0	0.0	0.0	0,0,0
64	0.06	0.10	0.02	269,269,311	0.0	0.0	0.0	0,0,0
65	0.07	0.10	0.02	269,269,311	0.0	0.0	0.0	0,0,0
66	0.07	0.10	0.02	269,269,311	0.0	0.0	0.0	0,0,0
67	0.06	0.10	0.02	269,269,311	0.0	0.0	0.0	0,0,0
68	0.06	0.11	0.03	269,269,311	0.0	0.0	0.0	0,0,0
69	0.07	0.12	0.03	269,269,311	0.0	0.0	0.0	0,0,0
70	0.07	0.13	0.03	269,278,311	0.0	0.0	0.0	0,0,0
71	0.05	0.10	0.02	269,269,311	0.0	0.0	0.0	0,0,0
72	0.05	0.08	0.02	269,278,311	0.0	0.0	0.0	0,0,0
73	0.06	0.09	0.02	269,269,311	0.0	0.0	0.0	0,0,0
74	0.07	0.10	0.02	269,269,311	0.0	0.0	0.0	0,0,0
75	0.07	0.10	0.02	269,269,311	0.0	0.0	0.0	0,0,0
76	0.07	0.10	0.02	269,269,311	0.0	0.0	0.0	0,0,0
77	0.07	0.10	0.02	269,269,311	0.0	0.0	0.0	0,0,0
78	0.06	0.09	0.02	269,269,311	0.0	0.0	0.0	0,0,0
79	0.05	0.09	0.02	269,278,311	0.0	0.0	0.0	0,0,0
80	0.05	0.10	0.02	269,269,311	0.0	0.0	0.0	0,0,0
81	0.22	0.37	0.05	269,269,311	0.0	0.0	0.0	0,0,0
82	0.20	0.33	0.05	269,269,311	0.0	0.0	0.0	0,0,0
83	0.07	0.11	0.02	269,269,311	0.0	0.0	0.0	0,0,0
84	0.07	0.11	0.02	269,269,311	0.0	0.0	0.0	0,0,0
85	0.07	0.10	0.02	269,269,311	0.0	0.0	0.0	0,0,0
86	0.07	0.10	0.02	269,269,311	0.0	0.0	0.0	0,0,0
87	0.07	0.11	0.02	269,269,311	0.0	0.0	0.0	0,0,0
88	0.08	0.11	0.02	269,269,311	0.0	0.0	0.0	0,0,0

89	0.21	0.35	0.06	269,269,311	0.0	0.0	0.0	0,0,0
90	0.23	0.38	0.06	269,269,311	0.0	0.0	0.0	0,0,0
91	0.12	0.22	0.03	269,278,311	0.0	0.0	0.0	0,0,0
92	0.10	0.14	0.03	269,278,311	0.0	0.0	0.0	0,0,0
93	0.06	0.11	0.02	269,278,311	0.0	0.0	0.0	0,0,0
94	0.07	0.11	0.02	269,278,311	0.0	0.0	0.0	0,0,0
95	0.07	0.09	0.02	269,278,311	0.0	0.0	0.0	0,0,0
96	0.07	0.09	0.02	269,278,311	0.0	0.0	0.0	0,0,0
97	0.07	0.11	0.02	269,278,311	0.0	0.0	0.0	0,0,0
98	0.06	0.11	0.02	269,278,311	0.0	0.0	0.0	0,0,0
99	0.10	0.15	0.03	269,269,311	0.0	0.0	0.0	0,0,0
100	0.13	0.23	0.03	269,278,311	0.0	0.0	0.0	0,0,0
101	0.02	0.06	9.72e-03	269,278,311	0.0	0.0	0.0	0,0,0
102	0.03	0.07	9.92e-03	269,278,311	0.0	0.0	0.0	0,0,0
103	0.05	0.08	0.01	269,278,311	0.0	0.0	0.0	0,0,0
104	0.06	0.09	0.01	269,278,311	0.0	0.0	0.0	0,0,0
105	0.07	0.09	0.01	269,278,311	0.0	0.0	0.0	0,0,0
106	0.07	0.09	0.01	269,278,311	0.0	0.0	0.0	0,0,0
107	0.06	0.09	0.01	269,278,311	0.0	0.0	0.0	0,0,0
108	0.05	0.07	0.01	269,278,311	0.0	0.0	0.0	0,0,0
109	0.03	0.07	0.01	269,278,311	0.0	0.0	0.0	0,0,0
110	0.02	0.06	0.01	269,278,311	0.0	0.0	0.0	0,0,0
111	0.02	0.05	0.01	269,302,311	0.0	0.0	0.0	0,0,0
112	0.03	0.06	9.90e-03	269,302,311	0.0	0.0	0.0	0,0,0
113	0.05	0.07	9.38e-03	269,278,311	0.0	0.0	0.0	0,0,0
114	0.06	0.08	9.94e-03	269,278,311	0.0	0.0	0.0	0,0,0
115	0.06	0.09	0.01	278,278,311	0.0	0.0	0.0	0,0,0
116	0.06	0.09	9.91e-03	278,278,311	0.0	0.0	0.0	0,0,0
117	0.06	0.08	9.46e-03	278,278,311	0.0	0.0	0.0	0,0,0
118	0.05	0.07	9.50e-03	278,278,311	0.0	0.0	0.0	0,0,0
119	0.03	0.07	9.16e-03	269,302,311	0.0	0.0	0.0	0,0,0
120	0.02	0.06	0.01	269,302,311	0.0	0.0	0.0	0,0,0
121	0.02	0.05	8.59e-03	269,302,311	0.0	0.0	0.0	0,0,0
122	0.03	0.05	0.01	269,302,311	0.0	0.0	0.0	0,0,0
123	0.04	0.07	7.23e-03	269,278,311	0.0	0.0	0.0	0,0,0
124	0.05	0.08	7.16e-03	269,269,311	0.0	0.0	0.0	0,0,0
125	0.06	0.08	8.23e-03	278,269,311	0.0	0.0	0.0	0,0,0
126	0.06	0.08	8.62e-03	278,269,311	0.0	0.0	0.0	0,0,0
127	0.05	0.08	8.64e-03	278,278,311	0.0	0.0	0.0	0,0,0
128	0.04	0.07	8.38e-03	278,293,311	0.0	0.0	0.0	0,0,0
129	0.03	0.07	9.23e-03	278,302,311	0.0	0.0	0.0	0,0,0
130	0.02	0.07	8.88e-03	269,302,311	0.0	0.0	0.0	0,0,0
131	0.02	0.06	8.89e-03	269,302,311	0.0	0.0	0.0	0,0,0
132	0.03	0.05	0.01	269,302,311	0.0	0.0	0.0	0,0,0
133	0.04	0.07	7.81e-03	269,269,311	0.0	0.0	0.0	0,0,0
134	0.05	0.08	6.57e-03	269,269,311	0.0	0.0	0.0	0,0,0
135	0.05	0.09	7.57e-03	269,269,311	0.0	0.0	0.0	0,0,0
136	0.05	0.09	7.83e-03	269,269,311	0.0	0.0	0.0	0,0,0
137	0.05	0.08	7.84e-03	278,269,311	0.0	0.0	0.0	0,0,0
138	0.04	0.07	7.05e-03	278,302,311	0.0	0.0	0.0	0,0,0
139	0.03	0.07	7.60e-03	278,302,311	0.0	0.0	0.0	0,0,0
140	0.02	0.07	7.26e-03	269,302,311	0.0	0.0	0.0	0,0,0
141	0.01	0.06	0.01	269,302,311	0.0	0.0	0.0	0,0,0
142	0.03	0.07	0.01	269,302,311	0.0	0.0	0.0	0,0,0
143	0.04	0.08	9.83e-03	269,269,311	0.0	0.0	0.0	0,0,0
144	0.05	0.09	8.69e-03	269,269,311	0.0	0.0	0.0	0,0,0
145	0.05	0.10	7.42e-03	269,269,311	0.0	0.0	0.0	0,0,0
146	0.05	0.10	6.70e-03	269,269,311	0.0	0.0	0.0	0,0,0
147	0.05	0.09	6.73e-03	269,269,311	0.0	0.0	0.0	0,0,0
148	0.04	0.07	6.02e-03	278,269,311	0.0	0.0	0.0	0,0,0
149	0.02	0.07	7.08e-03	278,302,311	0.0	0.0	0.0	0,0,0
150	0.01	0.07	5.59e-03	293,302,311	0.0	0.0	0.0	0,0,0
151	0.02	0.10	9.72e-03	293,278,311	0.0	0.0	0.0	0,0,0
152	0.03	0.09	0.01	269,302,311	0.0	0.0	0.0	0,0,0
153	0.05	0.09	0.01	269,269,311	0.0	0.0	0.0	0,0,0
154	0.05	0.10	0.01	269,269,311	0.0	0.0	0.0	0,0,0
155	0.06	0.10	9.64e-03	269,269,311	0.0	0.0	0.0	0,0,0
156	0.06	0.10	7.74e-03	269,269,311	0.0	0.0	0.0	0,0,0
157	0.05	0.10	5.82e-03	269,269,311	0.0	0.0	0.0	0,0,0
158	0.04	0.08	6.10e-03	278,269,311	0.0	0.0	0.0	0,0,0
159	0.03	0.09	0.01	269,260,311	0.0	0.0	0.0	0,0,0
160	0.02	0.15	0.01	269,269,311	0.0	0.0	0.0	0,0,0
161	0.04	0.13	7.11e-03	278,278,311	0.0	0.0	0.0	0,0,0
162	0.04	0.14	0.01	284,278,311	0.0	0.0	0.0	0,0,0
163	0.05	0.09	0.01	269,269,311	0.0	0.0	0.0	0,0,0
164	0.05	0.10	0.01	269,269,311	0.0	0.0	0.0	0,0,0
165	0.06	0.11	0.01	269,269,311	0.0	0.0	0.0	0,0,0
166	0.06	0.11	9.94e-03	269,269,311	0.0	0.0	0.0	0,0,0

167	0.05	0.10	7.56e-03	269,269,311	0.0	0.0	0.0	0,0,0
168	0.04	0.08	7.11e-03	278,269,311	0.0	0.0	0.0	0,0,0
169	0.06	0.17	0.02	269,269,311	0.0	0.0	0.0	0,0,0
170	0.06	0.18	0.02	269,269,311	0.0	0.0	0.0	0,0,0
171	0.04	0.14	0.01	278,278,311	0.0	0.0	0.0	0,0,0
172	0.04	0.15	0.01	278,278,311	0.0	0.0	0.0	0,0,0
173	0.05	0.09	0.01	269,269,311	0.0	0.0	0.0	0,0,0
174	0.05	0.10	0.01	269,269,311	0.0	0.0	0.0	0,0,0
175	0.06	0.11	0.01	269,269,311	0.0	0.0	0.0	0,0,0
176	0.06	0.11	0.01	269,269,311	0.0	0.0	0.0	0,0,0
177	0.05	0.10	9.96e-03	269,269,311	0.0	0.0	0.0	0,0,0
178	0.04	0.08	9.55e-03	269,269,311	0.0	0.0	0.0	0,0,0
179	0.05	0.21	0.02	269,278,311	0.0	0.0	0.0	0,0,0
180	0.04	0.17	0.01	278,278,311	0.0	0.0	0.0	0,0,0
181	0.03	0.10	0.02	293,278,311	0.0	0.0	0.0	0,0,0
182	0.03	0.09	0.02	269,278,311	0.0	0.0	0.0	0,0,0
183	0.04	0.08	0.02	269,269,311	0.0	0.0	0.0	0,0,0
184	0.05	0.10	0.02	269,269,311	0.0	0.0	0.0	0,0,0
185	0.05	0.10	0.02	269,278,311	0.0	0.0	0.0	0,0,0
186	0.05	0.10	0.02	269,278,311	0.0	0.0	0.0	0,0,0
187	0.05	0.09	0.01	269,278,311	0.0	0.0	0.0	0,0,0
188	0.04	0.08	0.01	269,278,311	0.0	0.0	0.0	0,0,0
189	0.03	0.13	0.01	278,278,311	0.0	0.0	0.0	0,0,0
190	0.02	0.15	9.65e-03	269,278,311	0.0	0.0	0.0	0,0,0
191	0.03	0.04	0.02	293,302,311	0.0	0.0	0.0	0,0,0
192	0.03	0.06	0.03	269,278,311	0.0	0.0	0.0	0,0,0
193	0.04	0.07	0.02	269,278,311	0.0	0.0	0.0	0,0,0
194	0.05	0.09	0.02	269,278,311	0.0	0.0	0.0	0,0,0
195	0.05	0.09	0.02	269,278,311	0.0	0.0	0.0	0,0,0
196	0.05	0.09	0.02	269,278,311	0.0	0.0	0.0	0,0,0
197	0.05	0.08	0.02	269,278,311	0.0	0.0	0.0	0,0,0
198	0.04	0.07	0.01	269,278,311	0.0	0.0	0.0	0,0,0
199	0.03	0.08	0.01	269,278,311	0.0	0.0	0.0	0,0,0
200	0.03	0.08	0.01	269,278,311	0.0	0.0	0.0	0,0,0
201	0.03	0.03	0.03	293,302,311	0.0	0.0	0.0	0,0,0
202	0.03	0.04	0.03	278,278,311	0.0	0.0	0.0	0,0,0
203	0.04	0.06	0.03	269,269,311	0.0	0.0	0.0	0,0,0
204	0.05	0.07	0.03	269,269,311	0.0	0.0	0.0	0,0,0
205	0.05	0.07	0.02	269,269,311	0.0	0.0	0.0	0,0,0
206	0.05	0.07	0.02	269,269,311	0.0	0.0	0.0	0,0,0
207	0.05	0.07	0.02	269,278,311	0.0	0.0	0.0	0,0,0
208	0.04	0.06	0.02	269,278,311	0.0	0.0	0.0	0,0,0
209	0.03	0.06	0.01	269,278,311	0.0	0.0	0.0	0,0,0
210	0.03	0.04	0.01	269,278,311	0.0	0.0	0.0	0,0,0
211	0.03	0.03	0.03	293,284,311	0.0	0.0	0.0	0,0,0
212	0.03	0.03	0.03	269,278,311	0.0	0.0	0.0	0,0,0
213	0.04	0.05	0.03	269,269,311	0.0	0.0	0.0	0,0,0
214	0.04	0.06	0.03	269,269,311	0.0	0.0	0.0	0,0,0
215	0.05	0.06	0.03	269,269,311	0.0	0.0	0.0	0,0,0
216	0.05	0.06	0.02	269,278,311	0.0	0.0	0.0	0,0,0
217	0.05	0.06	0.02	269,269,311	0.0	0.0	0.0	0,0,0
218	0.04	0.06	0.02	269,278,311	0.0	0.0	0.0	0,0,0
219	0.04	0.05	0.01	269,278,311	0.0	0.0	0.0	0,0,0
220	0.03	0.04	0.01	269,302,311	0.0	0.0	0.0	0,0,0
221	0.03	0.04	0.02	293,284,311	0.0	0.0	0.0	0,0,0
222	0.03	0.06	0.03	269,278,311	0.0	0.0	0.0	0,0,0
223	0.03	0.04	0.03	269,302,311	0.0	0.0	0.0	0,0,0
224	0.04	0.04	0.03	269,269,311	0.0	0.0	0.0	0,0,0
225	0.04	0.05	0.03	269,278,311	0.0	0.0	0.0	0,0,0
226	0.04	0.05	0.02	269,278,311	0.0	0.0	0.0	0,0,0
227	0.04	0.05	0.02	269,278,311	0.0	0.0	0.0	0,0,0
228	0.04	0.05	0.02	269,278,311	0.0	0.0	0.0	0,0,0
229	0.03	0.06	0.01	269,278,311	0.0	0.0	0.0	0,0,0
230	0.03	0.05	0.01	269,278,311	0.0	0.0	0.0	0,0,0
231	0.02	0.06	0.02	293,278,311	0.0	0.0	0.0	0,0,0
232	0.03	0.09	0.02	293,278,311	0.0	0.0	0.0	0,0,0
233	0.03	0.04	0.03	269,278,311	0.0	0.0	0.0	0,0,0
234	0.03	0.04	0.03	269,302,311	0.0	0.0	0.0	0,0,0
235	0.03	0.03	0.02	269,302,311	0.0	0.0	0.0	0,0,0
236	0.03	0.04	0.02	269,269,311	0.0	0.0	0.0	0,0,0
237	0.03	0.05	0.02	269,278,311	0.0	0.0	0.0	0,0,0
238	0.03	0.06	0.02	269,278,311	0.0	0.0	0.0	0,0,0
239	0.03	0.08	0.01	269,278,311	0.0	0.0	0.0	0,0,0
240	0.02	0.04	0.01	269,278,311	0.0	0.0	0.0	0,0,0
241	0.03	0.11	0.03	269,269,311	0.0	0.0	0.0	0,0,0
242	0.03	0.14	0.03	269,269,311	0.0	0.0	0.0	0,0,0
243	0.04	0.11	0.03	269,278,311	0.0	0.0	0.0	0,0,0
244	0.05	0.10	0.03	269,278,311	0.0	0.0	0.0	0,0,0

245	0.05	0.10	0.03	269,278,311	0.0	0.0	0.0	0,0,0
246	0.05	0.10	0.03	269,278,311	0.0	0.0	0.0	0,0,0
247	0.04	0.09	0.02	269,278,311	0.0	0.0	0.0	0,0,0
248	0.03	0.08	0.01	269,278,311	0.0	0.0	0.0	0,0,0
249	0.02	0.09	0.02	269,269,311	0.0	0.0	0.0	0,0,0
250	0.02	0.08	0.01	302,269,311	0.0	0.0	0.0	0,0,0
251	0.03	0.07	0.03	269,278,311	0.0	0.0	0.0	0,0,0
252	0.05	0.08	0.04	269,278,311	0.0	0.0	0.0	0,0,0
253	0.05	0.10	0.04	269,278,311	0.0	0.0	0.0	0,0,0
254	0.06	0.12	0.04	269,278,311	0.0	0.0	0.0	0,0,0
255	0.06	0.11	0.04	269,278,311	0.0	0.0	0.0	0,0,0
256	0.06	0.12	0.04	269,278,311	0.0	0.0	0.0	0,0,0
257	0.05	0.11	0.03	269,278,311	0.0	0.0	0.0	0,0,0
258	0.04	0.10	0.02	269,278,311	0.0	0.0	0.0	0,0,0
259	0.02	0.10	0.01	269,278,311	0.0	0.0	0.0	0,0,0
260	0.01	0.06	8.96e-03	302,278,311	0.0	0.0	0.0	0,0,0
261	0.04	0.10	0.04	269,269,311	0.0	0.0	0.0	0,0,0
262	0.04	0.11	0.04	269,293,311	0.0	0.0	0.0	0,0,0
263	0.05	0.07	0.04	269,269,311	0.0	0.0	0.0	0,0,0
264	0.05	0.07	0.04	269,269,311	0.0	0.0	0.0	0,0,0
265	0.05	0.06	0.04	269,269,311	0.0	0.0	0.0	0,0,0
266	0.04	0.04	0.03	269,269,311	0.0	0.0	0.0	0,0,0
267	0.04	0.04	0.02	269,278,311	0.0	0.0	0.0	0,0,0
268	0.03	0.04	0.02	269,278,311	0.0	0.0	0.0	0,0,0
269	0.02	0.05	0.01	269,278,311	0.0	0.0	0.0	0,0,0
270	8.87e-03	0.03	9.07e-03	269,278,311	0.0	0.0	0.0	0,0,0
271	0.05	0.09	0.05	269,293,311	0.0	0.0	0.0	0,0,0
272	0.05	0.12	0.05	269,293,311	0.0	0.0	0.0	0,0,0
273	0.06	0.09	0.05	269,269,311	0.0	0.0	0.0	0,0,0
274	0.06	0.09	0.05	269,269,311	0.0	0.0	0.0	0,0,0
275	0.06	0.09	0.05	269,269,311	0.0	0.0	0.0	0,0,0
276	0.06	0.08	0.04	269,269,311	0.0	0.0	0.0	0,0,0
277	0.05	0.06	0.03	269,269,311	0.0	0.0	0.0	0,0,0
278	0.04	0.05	0.02	269,278,311	0.0	0.0	0.0	0,0,0
279	0.03	0.04	0.02	269,278,311	0.0	0.0	0.0	0,0,0
280	0.01	0.03	0.01	278,302,311	0.0	0.0	0.0	0,0,0
281	0.05	0.10	0.05	269,269,311	0.0	0.0	0.0	0,0,0
282	0.05	0.12	0.05	269,290,311	0.0	0.0	0.0	0,0,0
283	0.06	0.10	0.05	269,269,311	0.0	0.0	0.0	0,0,0
284	0.07	0.11	0.05	269,269,311	0.0	0.0	0.0	0,0,0
285	0.07	0.11	0.05	269,269,311	0.0	0.0	0.0	0,0,0
286	0.07	0.10	0.05	269,269,311	0.0	0.0	0.0	0,0,0
287	0.06	0.09	0.04	269,269,311	0.0	0.0	0.0	0,0,0
288	0.04	0.06	0.03	269,269,311	0.0	0.0	0.0	0,0,0
289	0.03	0.05	0.02	293,302,311	0.0	0.0	0.0	0,0,0
290	0.02	0.04	0.01	278,302,311	0.0	0.0	0.0	0,0,0
291	0.05	0.12	0.05	269,269,311	0.0	0.0	0.0	0,0,0
292	0.05	0.14	0.06	269,269,311	0.0	0.0	0.0	0,0,0
293	0.06	0.11	0.05	269,269,311	0.0	0.0	0.0	0,0,0
294	0.08	0.13	0.06	269,269,311	0.0	0.0	0.0	0,0,0
295	0.08	0.13	0.06	269,269,311	0.0	0.0	0.0	0,0,0
296	0.08	0.13	0.06	269,269,311	0.0	0.0	0.0	0,0,0
297	0.06	0.10	0.05	269,269,311	0.0	0.0	0.0	0,0,0
298	0.04	0.07	0.04	269,269,311	0.0	0.0	0.0	0,0,0
...								
997	0.02	0.12	0.02	269,255,311	0.0	0.0	0.0	0,0,0
Guscio	rRfck	rRfyk	rPfck		wR	wF	wP	
	0.23	0.40	0.22		0.0	0.0	0.0	

Il Progettista

Dott. Ing. Andrea Pagliazzi