Α.Π.: 3135/23-03-2022

ΔΗΜΟΤΙΚΗ ΕΠΙΧΕΙΡΗΣΗ ΥΔΡΕΥΣΗΣ ΑΠΟΧΕΤΕΥΣΗΣ ΤΥΡΝΑΒΟΥ (Δ.Ε.Υ.Α.Τ.)

ΕΡΓΟ: **«ΚΑΤΑΣΚΕΥΗ ΔΙΚΤΥΩΝ ΑΠΟΧΕΤΕΥΣΗΣ ΑΚΑΘΑΡΤΩΝ ΣΤΗΝ Τ.Κ. ΔΑΜΑΣΙΟΥ ΤΟΥ ΔΗΜΟΥ ΤΥΡΝΑΒΟΥ»**

ΧΡΗΜΑΤΟΔΟΤΗΣΗ: [i] **Ευρωπαϊκό Ταμείο Περιφερειακής Ανάπτυξης**

ΠΡΟΫΠΟΛΟΓΙΣΜΟΣ: 3.169.354,84€ (χωρίς ΦΠΑ)

ΤΕΥΧΟΣ ΣΤΑΤΙΚΩΝ ΥΠΟΛΟΓΙΣΜΩΝ

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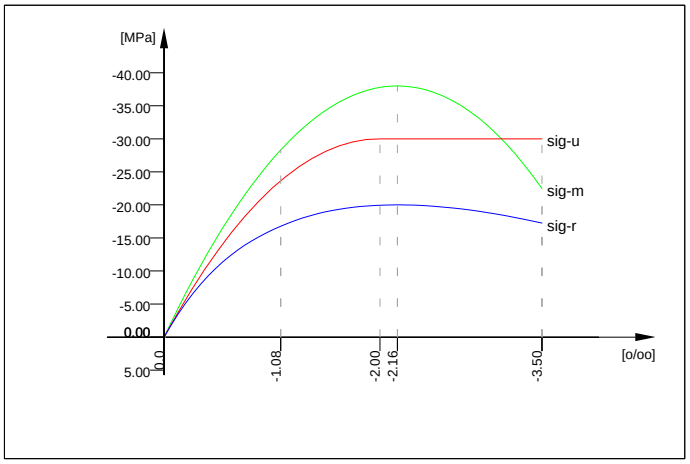
Materials

Default design code is EuroNorm EN 1992 Concrete with country code 0 (Europe)
Class(Tab.7.1N): N (Reinforced members and prestressed members with unbonded tendons)
Snow load zone : 1

No. 1 C 30/37 (EN 1992)

Youngs-modulus	E	32837 [MPa]	Safetyfactor		1.50	[-]
Poisson-Ratio	mu	0.20 [-]	Strength	fc	30.00	[MPa]
Shear-modulus	G	13682 [MPa]	Nomin. strength	fcn	30.00	[MPa]
Compression modulus		18243 [MPa]	Tens. strength	fctm	2.90	[MPa]
Weight		25.0 [kN/m3]	5 % t.strength	fctk	2.03	[MPa]
Weight buoyancy		25.0 [kN/m3]	95 % t.strength	fctk	3.77	[MPa]
Temp.elongat.coeff.		1.00E-05 [1/°K]	Bond strength	fbd	3.04	[MPa]
			Service strength		38.00	[MPa]
			Fatigue strength		17.60	[MPa]

	eps[o/oo]	sig-m[MPa]	E-t[MPa]
Stress-Strain for serviceability			
Is only valid within the defined	0.000	0.00	34478
stress range	-1.081	-28.31	17746
	-2.162	-38.00	0
	-3.500	-22.47	-23499
Safetyfactor			1.35
Stress-Strain for ultimate load	eps[o/oo]	sig-u[MPa]	E-t[MPa]
Is only valid within the defined	0.000	0.00	30000
stress range	-2.000	-30.00	0
	-3.500	-30.00	0
Safetyfactor			1.50
Stress-Strain of calc. mean values	eps[o/oo]	sig-r[MPa]	E-t[MPa]
Is only valid within the defined	0.000	0.00	28732
stress range	-1.081	-16.78	7018
	-2.162	-20.00	0
	-3.500	-17.25	-3601
Safetyfactor			(1.50)



No. 2 S 500 (EN 1992)

Youngs-modulus	E	200000 [MPa]	Safetyfactor		1.15	[-]
Poisson-Ratio	mu	0.30 [-]	Yield stress	fy	500.00	[MPa]
Shear-modulus	G	76923 [MPa]	Compr.yield val.	fyc	500.00	[MPa]
Compression modulus		166667 [MPa]	Tens. strength	ft	550.00	[MPa]
Weight		78.5 [kN/m3]	Compr. strength	fc	550.00	[MPa]
Weight buoyancy		78.5 [kN/m3]	Ultim. plast. strain		50.00	[o/oo]
Temp.elongat.coeff.		1.20E-05 [1/°K]	relative bond coeff.		1.00	[-]
max. thickness		32.00 [mm]	EC2 bondcoeff. K1		0.80	[-]
			Hardening modulus		0.00	[MPa]
			Proportional limit		500.00	[MPa]
			Dynamic stress range		152.17	[MPa]

	eps[o/oo]	sig-m[MPa]	E-t[MPa]
Stress-Strain for serviceability			
Is also extended beyond the	1000.000	550.00	0

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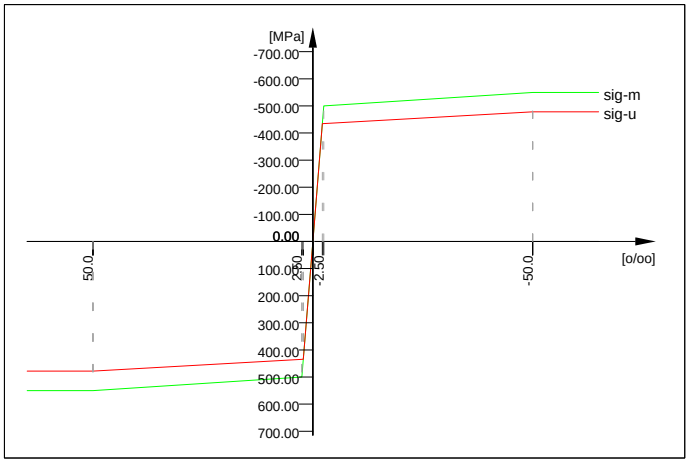
No. 2 S 500 (EN 1992)

defined stress range	50.000	550.00	0
	2.500	500.00	1053
	0.000	0.00	200000
	-2.500	-500.00	200000
	-50.000	-550.00	1053
	-1000.000	-550.00	0
	Safetyfactor		1.15
Stress-Strain for ultimate load	eps[o/oo]	sig-u[MPa]	E-t[MPa]
Is also extended beyond the	1000.000	478.26	0
defined stress range	50.000	478.26	0
	2.174	434.78	909
	0.000	0.00	200000
	-2.174	-434.78	200000
	-50.000	-478.26	909
	-1000.000	-478.26	0
	Safetyfactor		(1.15)



Thermal material constants

No.	TEMP	S[J/Km3]	Kxx[W/Km]	Kyy[W/Km]	Kzz[W/Km]	
1		2.07E+06	1.951E+00	0.000E+00	0.000E+00	C 30/37 (EN 1992)
2		3.45E+06	5.333E+01	0.000E+00	0.000E+00	S 500 (EN 1992)

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Sections

Default design code is EuroNorm EN 1992 Concrete with country code 0 (Europe)
Class(Tab.7.1N): N (Reinforced members and prestressed members with unbonded tendons)
Snow load zone : 1

Materials
No. 1 C 30/37 (EN 1992)
No. 2 S 500 (EN 1992)

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Actions

type	T	sup	Title	gam-u	gam-f	psi-0	psi-1	psi-2	psi-1'
C	G	perm	CREEP AND SHRINKAGE	1.00	1.00	1.00	1.00	1.00	1.00
G	G	perm	DEAD LOADS	1.35	1.00	1.00	1.00	1.00	1.00
G_2	G	perm	DEAD LOADS G_2	1.35	1.00	1.00	1.00	1.00	1.00
R	G	perm	EARTHPRESSURE	1.35	1.00	1.00	1.00	1.00	1.00
Q	Q	cond	VARIABLE Load	1.50	0.00	0.80	0.50	0.30	0.70
T	Q	excl	TEMPERATURE	1.50	0.00	0.60	0.50	0.00	0.60
E	E	excl	EARTHQUAKE COMBINATIONS	1.00	0.00	1.00	1.00	1.00	1.00

Load Case 1 (G) DEAD LOAD

Factor forces and moments		1.000	
Factor dead weight	DL-XX	0.000	
Factor dead weight	DL-YY	0.000	
Factor dead weight	DL-ZZ	-1.000	
unfavourable safety factor		1.350	
favourable safety factor		1.000	
Combination coefficient psi-0		1.000	(rare)
Combination coefficient psi-1'		1.000	(non frequent)
Combination coefficient psi-1		1.000	(frequent)
Combination coefficient psi-2		1.000	(permanent)

Load Case 2 (G_2) COVER

Factor forces and moments		1.000	
Factor dead weight	DL-XX	0.000	
Factor dead weight	DL-YY	0.000	
Factor dead weight	DL-ZZ	0.000	
unfavourable safety factor		1.350	
favourable safety factor		1.000	
Combination coefficient psi-0		1.000	(rare)
Combination coefficient psi-1'		1.000	(non frequent)
Combination coefficient psi-1		1.000	(frequent)
Combination coefficient psi-2		1.000	(permanent)

Loads acting on QUAD-elements

Elements from	to	inc	Load Prim Type LC/CC	Load val.	Dimension	Variation dP/dX	dP/dY	dP/dZ
10000	19999	1	PG	2.00	[kN/m2]			
30000	39999	1	PG	2.00	[kN/m2]			
40000	49999	1	PG	2.00	[kN/m2]			

Load Case 3 (Q) VARIABLE LOADING

Factor forces and moments		1.000	
Factor dead weight	DL-XX	0.000	
Factor dead weight	DL-YY	0.000	
Factor dead weight	DL-ZZ	0.000	
unfavourable safety factor		1.500	
favourable safety factor		0.000	
Combination coefficient psi-0		0.800	(rare)
Combination coefficient psi-1'		0.700	(non frequent)
Combination coefficient psi-1		0.500	(frequent)
Combination coefficient psi-2		0.300	(permanent)

Loads acting on QUAD-elements

Elements from	to	inc	Load Prim Type LC/CC	Load val.	Dimension	Variation dP/dX	dP/dY	dP/dZ
10000	19999	1	PG	5.00	[kN/m2]			
30000	39999	1	PG	4.00	[kN/m2]			
40000	49999	1	PG	5.00	[kN/m2]			

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Load Case 4 (Q) Q PRESSURE STATIC

Factor forces and moments		1.000
Factor dead weight	DL-XX	0.000
Factor dead weight	DL-YY	0.000
Factor dead weight	DL-ZZ	0.000
unfavourable safety factor		1.500
favourable safety factor		0.000
Combination coefficient psi-0		0.800 (rare)
Combination coefficient psi-1'		0.700 (non frequent)
Combination coefficient psi-1		0.500 (frequent)
Combination coefficient psi-2		0.300 (permanent)

Loads acting on QUAD-elements

Elements from	to	inc	Load Prim Type LC/CC	Load val.	Dimension	Variation dP/dX	dP/dY	dP/dZ
20000	29999	1	Pz	-9.35	[kN/m2]			
50000	59999	1	Pz	-9.35	[kN/m2]			

Load Case 5 (Q) Q PRESSURE DYN

Factor forces and moments		1.000
Factor dead weight	DL-XX	0.000
Factor dead weight	DL-YY	0.000
Factor dead weight	DL-ZZ	0.000
unfavourable safety factor		1.500
favourable safety factor		0.000
Combination coefficient psi-0		0.800 (rare)
Combination coefficient psi-1'		0.700 (non frequent)
Combination coefficient psi-1		0.500 (frequent)
Combination coefficient psi-2		0.300 (permanent)

Loads acting on QUAD-elements

Elements from	to	inc	Load Prim Type LC/CC	Load val.	Dimension	Variation dP/dX	dP/dY	dP/dZ
20000	29999	1	Pz	-4.68	[kN/m2]			
50000	59999	1	Pz	-4.68	[kN/m2]			

Load Case 6 (Q) Pw WATER PRESSURE INTERNAL

Factor forces and moments		1.000
Factor dead weight	DL-XX	0.000
Factor dead weight	DL-YY	0.000
Factor dead weight	DL-ZZ	0.000
unfavourable safety factor		1.500
favourable safety factor		0.000
Combination coefficient psi-0		0.800 (rare)
Combination coefficient psi-1'		0.700 (non frequent)
Combination coefficient psi-1		0.500 (frequent)
Combination coefficient psi-2		0.300 (permanent)

Loads acting on QUAD-elements

Elements from	to	inc	Load Prim Type LC/CC	Load val.	Dimension	Variation dP/dX	dP/dY	dP/dZ
10000	19999	1	PG	64.80	[kN/m2]			
20000	29999	1	Pz	64.80	[kN/m2]			-11.59
					Reference	0.000	0.000	0.000

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Load Case 7 (R) ós SOIL PRESSURE

Factor forces and moments		1.000
Factor dead weight	DL-XX	0.000
Factor dead weight	DL-YY	0.000
Factor dead weight	DL-ZZ	0.000
unfavourable safety factor		1.350
favourable safety factor		1.000
Combination coefficient psi-0		1.000 (rare)
Combination coefficient psi-1'		1.000 (non frequent)
Combination coefficient psi-1		1.000 (frequent)
Combination coefficient psi-2		1.000 (permanent)

Loads acting on QUAD-elements

Elements from	to	inc	Load Prim Type LC/CC	Load val.	Dimension	Variation dP/dX	dP/dY	dP/dZ
20000	29999	1	Pz	-62.60	[kN/m2]			11.20
					Reference	0.000	0.000	0.000
50000	59999	1	Pz	-62.60	[kN/m2]			11.20
					Reference	0.000	0.000	0.000

Load Case 8 (E) Åq CONCRETE XX

Factor forces and moments		1.000
Factor dead weight	DL-XX	0.000
Factor dead weight	DL-YY	0.000
Factor dead weight	DL-ZZ	0.000
unfavourable safety factor		1.000
favourable safety factor		0.000
Combination coefficient psi-0		1.000 (rare)
Combination coefficient psi-1'		1.000 (non frequent)
Combination coefficient psi-1		1.000 (frequent)
Combination coefficient psi-2		1.000 (permanent)

Loads acting on QUAD-elements

Elements from	to	inc	Load Prim Type LC/CC	Load val.	Dimension	Variation dP/dX	dP/dY	dP/dZ
10000	19999	1	PXX	3.38	[kN/m2]			
20000	29999	1	PXX	3.38	[kN/m2]			
30000	39999	1	PXX	3.38	[kN/m2]			
40000	49999	1	PXX	3.38	[kN/m2]			

Load Case 9 (E) Åq CONCRETE YY

Factor forces and moments		1.000
Factor dead weight	DL-XX	0.000
Factor dead weight	DL-YY	0.000
Factor dead weight	DL-ZZ	0.000
unfavourable safety factor		1.000
favourable safety factor		0.000
Combination coefficient psi-0		1.000 (rare)
Combination coefficient psi-1'		1.000 (non frequent)
Combination coefficient psi-1		1.000 (frequent)
Combination coefficient psi-2		1.000 (permanent)

Loads acting on QUAD-elements

Elements from	to	inc	Load Prim Type LC/CC	Load val.	Dimension	Variation dP/dX	dP/dY	dP/dZ
10000	19999	1	PYY	4.05	[kN/m2]			
20000	29999	1	PYY	3.38	[kN/m2]			
30000	39999	1	PYY	3.38	[kN/m2]			
40000	49999	1	PYY	4.05	[kN/m2]			

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Load Case 10 (E) Åq CONCRETE ZZ

Factor forces and moments		1.000
Factor dead weight	DL-XX	0.000
Factor dead weight	DL-YY	0.000
Factor dead weight	DL-ZZ	0.000
unfavourable safety factor		1.000
favourable safety factor		0.000
Combination coefficient psi-0		1.000 (rare)
Combination coefficient psi-1'		1.000 (non frequent)
Combination coefficient psi-1		1.000 (frequent)
Combination coefficient psi-2		1.000 (permanent)

Loads acting on QUAD-elements

Elements from	to	inc	Load Prim Type LC/CC	Load val.	Dimension	Variation dP/dX	dP/dY	dP/dZ
10000	19999	1	PG	2.84	[kN/m2]			
20000	29999	1	PG	2.36	[kN/m2]			
30000	39999	1	PG	2.36	[kN/m2]			
40000	49999	1	PG	2.84	[kN/m2]			

Load Case 11 (E) Åq SOIL

Factor forces and moments		1.000
Factor dead weight	DL-XX	0.000
Factor dead weight	DL-YY	0.000
Factor dead weight	DL-ZZ	0.000
unfavourable safety factor		1.000
favourable safety factor		0.000
Combination coefficient psi-0		1.000 (rare)
Combination coefficient psi-1'		1.000 (non frequent)
Combination coefficient psi-1		1.000 (frequent)
Combination coefficient psi-2		1.000 (permanent)

Loads acting on QUAD-elements

Elements from	to	inc	Load Prim Type LC/CC	Load val.	Dimension	Variation dP/dX	dP/dY	dP/dZ
20000	29999	1	Pz	-9.44	[kN/m2]			-3.38
					Reference	0.000	0.000	0.000
50000	59999	1	Pz	-9.44	[kN/m2]			-3.38
					Reference	0.000	0.000	0.000

Load Case 12 (T) TEMP UNIFORM +

Factor forces and moments		1.000
Factor dead weight	DL-XX	0.000
Factor dead weight	DL-YY	0.000
Factor dead weight	DL-ZZ	0.000
unfavourable safety factor		1.500
favourable safety factor		0.000
Combination coefficient psi-0		0.600 (rare)
Combination coefficient psi-1'		0.600 (non frequent)
Combination coefficient psi-1		0.500 (frequent)
Combination coefficient psi-2		0.000 (permanent)

Loads acting on QUAD-elements

Elements from	to	inc	Load Prim Type LC/CC	Load val.	Dimension	Variation dP/dX	dP/dY	dP/dZ
10000	19999	1	TEMP	30.000	[°C]			
20000	29999	1	TEMP	30.000	[°C]			
30000	39999	1	TEMP	30.000	[°C]			
40000	49999	1	TEMP	30.000	[°C]			
50000	59999	1	TEMP	30.000	[°C]			

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Load Case 13 (T) TEMP UNIFORM -

Factor forces and moments		1.000
Factor dead weight	DL-XX	0.000
Factor dead weight	DL-YY	0.000
Factor dead weight	DL-ZZ	0.000
unfavourable safety factor		1.500
favourable safety factor		0.000
Combination coefficient psi-0		0.600 (rare)
Combination coefficient psi-1'		0.600 (non frequent)
Combination coefficient psi-1		0.500 (frequent)
Combination coefficient psi-2		0.000 (permanent)

Loads acting on QUAD-elements

Elements from	to	inc	Load Prim Type LC/CC	Load val.	Dimension	Variation dP/dX	dP/dY	dP/dZ
10000	19999	1	TEMP	-20.000	[°C]			
20000	29999	1	TEMP	-20.000	[°C]			
30000	39999	1	TEMP	-20.000	[°C]			
40000	49999	1	TEMP	-20.000	[°C]			
50000	59999	1	TEMP	-20.000	[°C]			

Load Case 14 (C) CREEP

Factor forces and moments		1.000
Factor dead weight	DL-XX	0.000
Factor dead weight	DL-YY	0.000
Factor dead weight	DL-ZZ	0.000
unfavourable safety factor		1.000
favourable safety factor		1.000
Combination coefficient psi-0		1.000 (rare)
Combination coefficient psi-1'		1.000 (non frequent)
Combination coefficient psi-1		1.000 (frequent)
Combination coefficient psi-2		1.000 (permanent)

Loads acting on QUAD-elements

Elements from	to	inc	Load Prim Type LC/CC	Load val.	Dimension	Variation dP/dX	dP/dY	dP/dZ
10000	19999	1	TEMP	-17.000	[°C]			
20000	29999	1	TEMP	-17.000	[°C]			
30000	39999	1	TEMP	-17.000	[°C]			
40000	49999	1	TEMP	-17.000	[°C]			
50000	59999	1	TEMP	-17.000	[°C]			

Load Case 20 (T) dT SUMMER EMPTY OPEN

Factor forces and moments		1.000
Factor dead weight	DL-XX	0.000
Factor dead weight	DL-YY	0.000
Factor dead weight	DL-ZZ	0.000
unfavourable safety factor		1.500
favourable safety factor		0.000
Combination coefficient psi-0		0.600 (rare)
Combination coefficient psi-1'		0.600 (non frequent)
Combination coefficient psi-1		0.500 (frequent)
Combination coefficient psi-2		0.000 (permanent)

Loads acting on QUAD-elements

Elements from	to	inc	Load Prim Type LC/CC	Load val.	Dimension	Variation dP/dX	dP/dY	dP/dZ
10000	19999	1	dT	22.000	[°C]			
20000	29999	1	dT	0.000	[°C]			
40000	49999	1	dT	22.000	[°C]			
50000	59999	1	dT	0.000	[°C]			

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Load Case 21 (T) dT SUMMER FULL OPEN

Factor forces and moments		1.000
Factor dead weight	DL-XX	0.000
Factor dead weight	DL-YY	0.000
Factor dead weight	DL-ZZ	0.000
unfavourable safety factor		1.500
favourable safety factor		0.000
Combination coefficient psi-0		0.600 (rare)
Combination coefficient psi-1'		0.600 (non frequent)
Combination coefficient psi-1		0.500 (frequent)
Combination coefficient psi-2		0.000 (permanent)

Loads acting on QUAD-elements

Elements from	to	inc	Load Prim Type LC/CC	Load val.	Dimension	Variation dP/dX	dP/dY	dP/dZ
10000	19999	1	dT	10.000	[°C]			
20000	29999	1	dT	-12.000	[°C]			
40000	49999	1	dT	10.000	[°C]			
50000	59999	1	dT	-12.000	[°C]			

Load Case 22 (T) dT SUMMER EMPTY SOIL

Factor forces and moments		1.000
Factor dead weight	DL-XX	0.000
Factor dead weight	DL-YY	0.000
Factor dead weight	DL-ZZ	0.000
unfavourable safety factor		1.500
favourable safety factor		0.000
Combination coefficient psi-0		0.600 (rare)
Combination coefficient psi-1'		0.600 (non frequent)
Combination coefficient psi-1		0.500 (frequent)
Combination coefficient psi-2		0.000 (permanent)

Loads acting on QUAD-elements

Elements from	to	inc	Load Prim Type LC/CC	Load val.	Dimension	Variation dP/dX	dP/dY	dP/dZ
10000	19999	1	dT	22.000	[°C]			
20000	29999	1	dT	22.000	[°C]			
40000	49999	1	dT	22.000	[°C]			
50000	59999	1	dT	22.000	[°C]			

Load Case 23 (T) dT SUMMER FULL SOIL

Factor forces and moments		1.000
Factor dead weight	DL-XX	0.000
Factor dead weight	DL-YY	0.000
Factor dead weight	DL-ZZ	0.000
unfavourable safety factor		1.500
favourable safety factor		0.000
Combination coefficient psi-0		0.600 (rare)
Combination coefficient psi-1'		0.600 (non frequent)
Combination coefficient psi-1		0.500 (frequent)
Combination coefficient psi-2		0.000 (permanent)

Loads acting on QUAD-elements

Elements from	to	inc	Load Prim Type LC/CC	Load val.	Dimension	Variation dP/dX	dP/dY	dP/dZ
10000	19999	1	dT	10.000	[°C]			
20000	29999	1	dT	10.000	[°C]			
40000	49999	1	dT	10.000	[°C]			
50000	59999	1	dT	10.000	[°C]			

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Load Case 24 (T) dT WINTER EMPTY OPEN

Factor forces and moments		1.000
Factor dead weight	DL-XX	0.000
Factor dead weight	DL-YY	0.000
Factor dead weight	DL-ZZ	0.000
unfavourable safety factor		1.500
favourable safety factor		0.000
Combination coefficient psi-0		0.600 (rare)
Combination coefficient psi-1'		0.600 (non frequent)
Combination coefficient psi-1		0.500 (frequent)
Combination coefficient psi-2		0.000 (permanent)

Loads acting on QUAD-elements

Elements from	to	inc	Load Prim Type LC/CC	Load val.	Dimension	Variation dP/dX	dP/dY	dP/dZ
10000	19999	1	dT	-8.000	[°C]			
20000	29999	1	dT	0.000	[°C]			
40000	49999	1	dT	-8.000	[°C]			
50000	59999	1	dT	0.000	[°C]			

Load Case 25 (T) dT WINTER FULL OPEN

Factor forces and moments		1.000
Factor dead weight	DL-XX	0.000
Factor dead weight	DL-YY	0.000
Factor dead weight	DL-ZZ	0.000
unfavourable safety factor		1.500
favourable safety factor		0.000
Combination coefficient psi-0		0.600 (rare)
Combination coefficient psi-1'		0.600 (non frequent)
Combination coefficient psi-1		0.500 (frequent)
Combination coefficient psi-2		0.000 (permanent)

Loads acting on QUAD-elements

Elements from	to	inc	Load Prim Type LC/CC	Load val.	Dimension	Variation dP/dX	dP/dY	dP/dZ
10000	19999	1	dT	5.000	[°C]			
20000	29999	1	dT	13.000	[°C]			
40000	49999	1	dT	5.000	[°C]			
50000	59999	1	dT	13.000	[°C]			

Load Case 26 (T) dT WINTER EMPTY SOIL

Factor forces and moments		1.000
Factor dead weight	DL-XX	0.000
Factor dead weight	DL-YY	0.000
Factor dead weight	DL-ZZ	0.000
unfavourable safety factor		1.500
favourable safety factor		0.000
Combination coefficient psi-0		0.600 (rare)
Combination coefficient psi-1'		0.600 (non frequent)
Combination coefficient psi-1		0.500 (frequent)
Combination coefficient psi-2		0.000 (permanent)

Loads acting on QUAD-elements

Elements from	to	inc	Load Prim Type LC/CC	Load val.	Dimension	Variation dP/dX	dP/dY	dP/dZ
10000	19999	1	dT	-8.000	[°C]			
20000	29999	1	dT	-8.000	[°C]			
40000	49999	1	dT	-8.000	[°C]			
50000	59999	1	dT	-8.000	[°C]			

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LOADS

Load Case 27 (T) dT WINTER FULL SOIL

Factor forces and moments		1.000
Factor dead weight	DL-XX	0.000
Factor dead weight	DL-YY	0.000
Factor dead weight	DL-ZZ	0.000
unfavourable safety factor		1.500
favourable safety factor		0.000
Combination coefficient psi-0		0.600 (rare)
Combination coefficient psi-1'		0.600 (non frequent)
Combination coefficient psi-1		0.500 (frequent)
Combination coefficient psi-2		0.000 (permanent)

Loads acting on QUAD-elements

Elements from	to	inc	Load Prim Type LC/CC	Load val.	Dimension	Variation dP/dX	dP/dY	dP/dZ
10000	19999	1	dT	5.000	[°C]			
20000	29999	1	dT	5.000	[°C]			
40000	49999	1	dT	5.000	[°C]			
50000	59999	1	dT	5.000	[°C]			

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Text Interface for Loads

Actions

type	T	sup	Title	gam-u	gam-f	psi-0	psi-1	psi-2	psi-1'
C	G	perm	CREEP AND SHRINKAGE	1.00	1.00	1.00	1.00	1.00	1.00
		14	CREEP						
G	G	perm	DEAD LOADS	1.35	1.00	1.00	1.00	1.00	1.00
		1	DEAD LOAD						
G_2	G	perm	DEAD LOADS G_2	1.35	1.00	1.00	1.00	1.00	1.00
		2	COVER						
R	G	perm	EARTHPRESSURE	1.35	1.00	1.00	1.00	1.00	1.00
		7	ós SOIL PRESSURE						
Q	Q	cond	VARIABLE Load	1.50	0.00	0.80	0.50	0.30	0.70
		3	VARIABLE LOADING						0.70
		4	Q PRESSURE STATIC						0.70
		5	Q PRESSURE DYN						0.70
		6	Pw WATER PRESSURE INTERNAL						0.70
T	Q	excl	TEMPERATURE	1.50	0.00	0.60	0.50	0.00	0.60
		12	TEMP UNIFORM +						
		13	TEMP UNIFORM -						
		20	dT SUMMER EMPTY OPEN						
		21	dT SUMMER FULL OPEN						
		22	dT SUMMER EMPTY SOIL						
		23	dT SUMMER FULL SOIL						
		24	dT WINTER EMPTY OPEN						
		25	dT WINTER FULL OPEN						
		26	dT WINTER EMPTY SOIL						
		27	dT WINTER FULL SOIL						
E	E	excl	EARTHQUAKE COMBINATIONS	1.00	0.00	1.00	1.00	1.00	1.00
		8	Åq CONCRETE XX						
		9	Åq CONCRETE YY						
		10	Åq CONCRETE ZZ						
		11	Åq SOIL						
		300	WASTERGAARD XX						
		310	WASTERGAARD YY						

Load Case 300 (E) WASTERGAARD XX

Factor forces and moments		1.000	
Factor dead weight	DL-XX	0.000	
Factor dead weight	DL-YY	0.000	
Factor dead weight	DL-ZZ	0.000	
unfavourable safety factor		1.000	
favourable safety factor		0.000	
Combination coefficient psi-0		1.000	(rare)
Combination coefficient psi-1'		1.000	(non frequent)
Combination coefficient psi-1		1.000	(frequent)
Combination coefficient psi-2		1.000	(permanent)

Loads acting on QUAD-elements

Elements from	to	inc	Load Prim Type LC/CC	Load val.	Dimension	Variation dP/dX	dP/dY	dP/dZ
20000	29999	1	PXX	6.10	[kN/m2]			

Load Case 310 (E) WASTERGAARD YY

Factor forces and moments		1.000	
Factor dead weight	DL-XX	0.000	
Factor dead weight	DL-YY	0.000	
Factor dead weight	DL-ZZ	0.000	
unfavourable safety factor		1.000	
favourable safety factor		0.000	
Combination coefficient psi-0		1.000	(rare)
Combination coefficient psi-1'		1.000	(non frequent)
Combination coefficient psi-1		1.000	(frequent)
Combination coefficient psi-2		1.000	(permanent)

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Text Interface for Loads

Loads acting on QUAD-elements

Elements from	to	inc	Load Prim Type LC/CC	Load val.	Dimension	Variation dP/dX	dP/dY	dP/dZ
20000	29999	1	PYY	6.10	[kN/m2]			

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Calculation of forces and moments

Load Case 1 (G) DEAD LOAD

Factor forces and moments	1.000	
Factor dead weight DL-ZZ	-1.000	
unfavourable safety factor	1.350	
favourable safety factor	1.000	
Combination coefficient psi-0	1.000	(rare)
Combination coefficient psi-1'	1.000	(non frequent)
Combination coefficient psi-1	1.000	(frequent)
Combination coefficient psi-2	1.000	(permanent)

Load Case 2 (G_2) COVER

Factor forces and moments	1.000	
unfavourable safety factor	1.350	
favourable safety factor	1.000	
Combination coefficient psi-0	1.000	(rare)
Combination coefficient psi-1'	1.000	(non frequent)
Combination coefficient psi-1	1.000	(frequent)
Combination coefficient psi-2	1.000	(permanent)

Load Case 3 (Q) VARIABLE LOADING

Factor forces and moments	1.000	
unfavourable safety factor	1.500	
favourable safety factor	0.000	
Combination coefficient psi-0	0.800	(rare)
Combination coefficient psi-1'	0.700	(non frequent)
Combination coefficient psi-1	0.500	(frequent)
Combination coefficient psi-2	0.300	(permanent)

Load Case 4 (Q) Q PRESSURE STATIC

Factor forces and moments	1.000	
unfavourable safety factor	1.500	
favourable safety factor	0.000	
Combination coefficient psi-0	0.800	(rare)
Combination coefficient psi-1'	0.700	(non frequent)
Combination coefficient psi-1	0.500	(frequent)
Combination coefficient psi-2	0.300	(permanent)

Load Case 5 (Q) Q PRESSURE DYN

Factor forces and moments	1.000	
unfavourable safety factor	1.500	
favourable safety factor	0.000	
Combination coefficient psi-0	0.800	(rare)
Combination coefficient psi-1'	0.700	(non frequent)
Combination coefficient psi-1	0.500	(frequent)
Combination coefficient psi-2	0.300	(permanent)

Load Case 6 (Q) Pw WATER PRESSURE INTERNAL

Factor forces and moments	1.000	
unfavourable safety factor	1.500	
favourable safety factor	0.000	
Combination coefficient psi-0	0.800	(rare)
Combination coefficient psi-1'	0.700	(non frequent)
Combination coefficient psi-1	0.500	(frequent)
Combination coefficient psi-2	0.300	(permanent)

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Calculation of forces and moments

Load Case 7 (R) ós SOIL PRESSURE

Factor forces and moments	1.000	
unfavourable safety factor	1.350	
favourable safety factor	1.000	
Combination coefficient psi-0	1.000	(rare)
Combination coefficient psi-1'	1.000	(non frequent)
Combination coefficient psi-1	1.000	(frequent)
Combination coefficient psi-2	1.000	(permanent)

Load Case 8 (E) Åq CONCRETE XX

Factor forces and moments	1.000	
unfavourable safety factor	1.000	
favourable safety factor	0.000	
Combination coefficient psi-0	1.000	(rare)
Combination coefficient psi-1'	1.000	(non frequent)
Combination coefficient psi-1	1.000	(frequent)
Combination coefficient psi-2	1.000	(permanent)

Load Case 9 (E) Åq CONCRETE YY

Factor forces and moments	1.000	
unfavourable safety factor	1.000	
favourable safety factor	0.000	
Combination coefficient psi-0	1.000	(rare)
Combination coefficient psi-1'	1.000	(non frequent)
Combination coefficient psi-1	1.000	(frequent)
Combination coefficient psi-2	1.000	(permanent)

Load Case 10 (E) Åq CONCRETE ZZ

Factor forces and moments	1.000	
unfavourable safety factor	1.000	
favourable safety factor	0.000	
Combination coefficient psi-0	1.000	(rare)
Combination coefficient psi-1'	1.000	(non frequent)
Combination coefficient psi-1	1.000	(frequent)
Combination coefficient psi-2	1.000	(permanent)

Load Case 11 (E) Åq SOIL

Factor forces and moments	1.000	
unfavourable safety factor	1.000	
favourable safety factor	0.000	
Combination coefficient psi-0	1.000	(rare)
Combination coefficient psi-1'	1.000	(non frequent)
Combination coefficient psi-1	1.000	(frequent)
Combination coefficient psi-2	1.000	(permanent)

Load Case 12 (T) TEMP UNIFORM +

Factor forces and moments	1.000	
unfavourable safety factor	1.500	
favourable safety factor	0.000	
Combination coefficient psi-0	0.600	(rare)
Combination coefficient psi-1'	0.600	(non frequent)
Combination coefficient psi-1	0.500	(frequent)
Combination coefficient psi-2	0.000	(permanent)

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Calculation of forces and moments

Load Case 13 (T) TEMP UNIFORM -

Factor forces and moments	1.000	
unfavourable safety factor	1.500	
favourable safety factor	0.000	
Combination coefficient psi-0	0.600	(rare)
Combination coefficient psi-1'	0.600	(non frequent)
Combination coefficient psi-1	0.500	(frequent)
Combination coefficient psi-2	0.000	(permanent)

Load Case 14 (C) CREEP

Factor forces and moments	1.000	
unfavourable safety factor	1.000	
favourable safety factor	1.000	
Combination coefficient psi-0	1.000	(rare)
Combination coefficient psi-1'	1.000	(non frequent)
Combination coefficient psi-1	1.000	(frequent)
Combination coefficient psi-2	1.000	(permanent)

Load Case 20 (T) dT SUMMER EMPTY OPEN

Factor forces and moments	1.000	
unfavourable safety factor	1.500	
favourable safety factor	0.000	
Combination coefficient psi-0	0.600	(rare)
Combination coefficient psi-1'	0.600	(non frequent)
Combination coefficient psi-1	0.500	(frequent)
Combination coefficient psi-2	0.000	(permanent)

Load Case 21 (T) dT SUMMER FULL OPEN

Factor forces and moments	1.000	
unfavourable safety factor	1.500	
favourable safety factor	0.000	
Combination coefficient psi-0	0.600	(rare)
Combination coefficient psi-1'	0.600	(non frequent)
Combination coefficient psi-1	0.500	(frequent)
Combination coefficient psi-2	0.000	(permanent)

Load Case 22 (T) dT SUMMER EMPTY SOIL

Factor forces and moments	1.000	
unfavourable safety factor	1.500	
favourable safety factor	0.000	
Combination coefficient psi-0	0.600	(rare)
Combination coefficient psi-1'	0.600	(non frequent)
Combination coefficient psi-1	0.500	(frequent)
Combination coefficient psi-2	0.000	(permanent)

Load Case 23 (T) dT SUMMER FULL SOIL

Factor forces and moments	1.000	
unfavourable safety factor	1.500	
favourable safety factor	0.000	
Combination coefficient psi-0	0.600	(rare)
Combination coefficient psi-1'	0.600	(non frequent)
Combination coefficient psi-1	0.500	(frequent)
Combination coefficient psi-2	0.000	(permanent)

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Calculation of forces and moments

Load Case 24 (T) dT WINTER EMPTY OPEN

Factor forces and moments	1.000	
unfavourable safety factor	1.500	
favourable safety factor	0.000	
Combination coefficient psi-0	0.600	(rare)
Combination coefficient psi-1'	0.600	(non frequent)
Combination coefficient psi-1	0.500	(frequent)
Combination coefficient psi-2	0.000	(permanent)

Load Case 25 (T) dT WINTER FULL OPEN

Factor forces and moments	1.000	
unfavourable safety factor	1.500	
favourable safety factor	0.000	
Combination coefficient psi-0	0.600	(rare)
Combination coefficient psi-1'	0.600	(non frequent)
Combination coefficient psi-1	0.500	(frequent)
Combination coefficient psi-2	0.000	(permanent)

Load Case 26 (T) dT WINTER EMPTY SOIL

Factor forces and moments	1.000	
unfavourable safety factor	1.500	
favourable safety factor	0.000	
Combination coefficient psi-0	0.600	(rare)
Combination coefficient psi-1'	0.600	(non frequent)
Combination coefficient psi-1	0.500	(frequent)
Combination coefficient psi-2	0.000	(permanent)

Load Case 27 (T) dT WINTER FULL SOIL

Factor forces and moments	1.000	
unfavourable safety factor	1.500	
favourable safety factor	0.000	
Combination coefficient psi-0	0.600	(rare)
Combination coefficient psi-1'	0.600	(non frequent)
Combination coefficient psi-1	0.500	(frequent)
Combination coefficient psi-2	0.000	(permanent)

Load Case 300 (E) WASTERGAARD XX

Factor forces and moments	1.000	
unfavourable safety factor	1.000	
favourable safety factor	0.000	
Combination coefficient psi-0	1.000	(rare)
Combination coefficient psi-1'	1.000	(non frequent)
Combination coefficient psi-1	1.000	(frequent)
Combination coefficient psi-2	1.000	(permanent)

Load Case 310 (E) WASTERGAARD YY

Factor forces and moments	1.000	
unfavourable safety factor	1.000	
favourable safety factor	0.000	
Combination coefficient psi-0	1.000	(rare)
Combination coefficient psi-1'	1.000	(non frequent)
Combination coefficient psi-1	1.000	(frequent)
Combination coefficient psi-2	1.000	(permanent)

Sum of Loads

LC	Title	PXX[kN]	PYY[kN]	PZZ[kN]
1	DEAD LOAD	0.0	0.0	-892.7
2	COVER	0.0	0.0	-68.8
3	VARIABLE LOADING	0.0	0.0	-156.9
4	Q PRESSURE STATIC	-62.9	0.0	0.0
5	Q PRESSURE DYN	-31.4	0.0	0.0

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Calculation of forces and moments

Sum of Loads

LC	Title	PXX[kN]	PYY[kN]	PZZ[kN]
6	Pw WATER PRESSURE INTERN	0.0	0.0	-816.5
7	ós SOIL PRESSURE	-105.3	0.0	0.0
8	Åq CONCRETE XX	404.8	0.0	0.0
9	Åq CONCRETE YY	0.0	417.8	0.0
10	Åq CONCRETE ZZ	0.0	0.0	-292.4
11	Åq SOIL	-158.6	0.0	0.0
12	TEMP UNIFORM +	0.0	0.0	0.0
13	TEMP UNIFORM -	0.0	0.0	0.0
14	CREEP	0.0	0.0	0.0
20	dT SUMMER EMPTY OPEN	0.0	0.0	0.0
21	dT SUMMER FULL OPEN	0.0	0.0	0.0
22	dT SUMMER EMPTY SOIL	0.0	0.0	0.0
23	dT SUMMER FULL SOIL	0.0	0.0	0.0
24	dT WINTER EMPTY OPEN	0.0	0.0	0.0
25	dT WINTER FULL OPEN	0.0	0.0	0.0
26	dT WINTER EMPTY SOIL	0.0	0.0	0.0
27	dT WINTER FULL SOIL	0.0	0.0	0.0
300	WASTERGAARD XX	521.7	0.0	0.0
310	WASTERGAARD YY	0.0	521.7	0.0

Sum of Reactions and Loads

LC	Title	PXX[kN]	PYY[kN]	PZZ[kN]
1	DEAD LOAD	0.0	0.0	892.7
		0.0	0.0	-892.7
2	COVER	0.0	0.0	68.8
		0.0	0.0	-68.8
3	VARIABLE LOADING	0.0	0.0	156.9
		0.0	0.0	-156.9
4	Q PRESSURE STATIC	62.9	0.0	0.0
		-62.9	0.0	0.0
5	Q PRESSURE DYN	31.4	0.0	0.0
		-31.4	0.0	0.0
6	Pw WATER PRESSURE INTERN	0.0	0.0	816.5
		0.0	0.0	-816.5
7	ós SOIL PRESSURE	105.3	0.0	0.0
		-105.3	0.0	0.0
8	Åq CONCRETE XX	-404.8	0.0	0.0
		404.8	0.0	0.0
9	Åq CONCRETE YY	0.0	-417.8	0.0
		0.0	417.8	0.0
10	Åq CONCRETE ZZ	0.0	0.0	292.4
		0.0	0.0	-292.4
11	Åq SOIL	158.6	0.0	0.0
		-158.6	0.0	0.0
12	TEMP UNIFORM +	0.0	0.0	0.0
		0.0	0.0	0.0
13	TEMP UNIFORM -	0.0	0.0	0.0
		0.0	0.0	0.0
14	CREEP	0.0	0.0	0.0
		0.0	0.0	0.0
20	dT SUMMER EMPTY OPEN	0.0	0.0	0.0
		0.0	0.0	0.0
21	dT SUMMER FULL OPEN	0.0	0.0	0.0
		0.0	0.0	0.0
22	dT SUMMER EMPTY SOIL	0.0	0.0	0.0
		0.0	0.0	0.0
23	dT SUMMER FULL SOIL	0.0	0.0	0.0
		0.0	0.0	0.0
24	dT WINTER EMPTY OPEN	0.0	0.0	0.0
		0.0	0.0	0.0
25	dT WINTER FULL OPEN	0.0	0.0	0.0
		0.0	0.0	0.0

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Calculation of forces and moments

Sum of Reactions and Loads

LC	Title	PXX[kN]	PYY[kN]	PZZ[kN]
26	dT WINTER EMPTY SOIL	0.0	0.0	0.0
		0.0	0.0	0.0
27	dT WINTER FULL SOIL	0.0	0.0	0.0
		0.0	0.0	0.0
300	WASTERGAARD XX	-521.7	0.0	0.0
		521.7	0.0	0.0
310	WASTERGAARD YY	0.0	-521.7	0.0
		0.0	521.7	0.0

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Superposition ultimate limit state

Superposition according to EuroNorm EN 1992 Concrete

Combination rule Number 1
Ultimate Design combination
Superposition according to manual MAXIMA formula 1
Resulting loadcases type Ultimate Design combination
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'

```
     LC factor Type of loadcase                          Title
C     G   1.00  1.00  1.00  1.00  1.00   1.00 CREEP AND SHRINKAGE
     14   1.00 permanent load grouped in actions            CREEP
G     G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS
      1   1.00 permanent load grouped in actions            DEAD LOAD
G_2   G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS G_2
      2   1.00 permanent load grouped in actions            COVER
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      6   1.00 Conditional LC              Pw WATER PRESSURE INTERN
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      3   1.00 Conditional LC              VARIABLE LOADING
```

Combination rule Number 2
Ultimate Earthquake combin.
Superposition according to manual MAXIMA formula 3
Resulting loadcases type Ultimate Earthquake combin.
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'

```
     LC factor Type of loadcase                          Title
C     G   1.00  1.00  1.00  1.00  1.00   1.00 CREEP AND SHRINKAGE
     14   1.00 permanent load grouped in actions            CREEP
E     E   1.00  0.00  1.00  1.00  1.00   1.00 EARTHQUAKE COMBINATIONS
      8   1.00 Exclusive LC   A17          Åq CONCRETE XX
G     G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS
      1   1.00 permanent load grouped in actions            DEAD LOAD
G_2   G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS G_2
      2   1.00 permanent load grouped in actions            COVER
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      6   1.00 Conditional LC              Pw WATER PRESSURE INTERN
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      3   1.00 Conditional LC              VARIABLE LOADING
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      5   1.00 Conditional LC              Q PRESSURE DYN
```

Combination rule Number 3
Ultimate Earthquake combin.
Superposition according to manual MAXIMA formula 3
Resulting loadcases type Ultimate Earthquake combin.
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'

```
     LC factor Type of loadcase                          Title
C     G   1.00  1.00  1.00  1.00  1.00   1.00 CREEP AND SHRINKAGE
     14   1.00 permanent load grouped in actions            CREEP
E     E   1.00  0.00  1.00  1.00  1.00   1.00 EARTHQUAKE COMBINATIONS
      9   1.00 Exclusive LC   A17          Åq CONCRETE YY
G     G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS
      1   1.00 permanent load grouped in actions            DEAD LOAD
G_2   G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS G_2
      2   1.00 permanent load grouped in actions            COVER
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      6   1.00 Conditional LC              Pw WATER PRESSURE INTERN
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      3   1.00 Conditional LC              VARIABLE LOADING
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      5   1.00 Conditional LC              Q PRESSURE DYN
```

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Combination rule Number 3
Ultimate Earthquake combin.
Superposition according to manual MAXIMA formula 3
Resulting loadcases type Ultimate Earthquake combin.
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'

```
     LC factor Type of loadcase                          Title
```

Combination rule Number 4
Ultimate Earthquake combin.
Superposition according to manual MAXIMA formula 3
Resulting loadcases type Ultimate Earthquake combin.
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'

```
     LC factor Type of loadcase                          Title
C     G   1.00  1.00  1.00  1.00  1.00   1.00 CREEP AND SHRINKAGE
     14   1.00 permanent load grouped in actions            CREEP
E     E   1.00  0.00  1.00  1.00  1.00   1.00 EARTHQUAKE COMBINATIONS
     10   1.00 Exclusive LC   A17          Åq CONCRETE ZZ
G     G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS
      1   1.00 permanent load grouped in actions            DEAD LOAD
G_2   G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS G_2
      2   1.00 permanent load grouped in actions            COVER
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      6   1.00 Conditional LC              Pw WATER PRESSURE INTERN
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      3   1.00 Conditional LC              VARIABLE LOADING
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      5   1.00 Conditional LC              Q PRESSURE DYN
```

Combination rule Number 5
Ultimate Design combination
Superposition according to manual MAXIMA formula 1
Resulting loadcases type Ultimate Design combination
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'

```
     LC factor Type of loadcase                          Title
C     G   1.00  1.00  1.00  1.00  1.00   1.00 CREEP AND SHRINKAGE
     14   1.00 permanent load grouped in actions            CREEP
G     G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS
      1   1.00 permanent load grouped in actions            DEAD LOAD
G_2   G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS G_2
      2   1.00 permanent load grouped in actions            COVER
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      3   1.00 Conditional LC              VARIABLE LOADING
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      6   1.00 Conditional LC              Pw WATER PRESSURE INTERN
T     Q   1.50  0.00  0.60  0.50  0.00   0.60 TEMPERATURE
     12   1.00 Exclusive LC   A14          TEMP UNIFORM +
```

Combination rule Number 6
Ultimate Design combination
Superposition according to manual MAXIMA formula 1
Resulting loadcases type Ultimate Design combination
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'

```
     LC factor Type of loadcase                          Title
C     G   1.00  1.00  1.00  1.00  1.00   1.00 CREEP AND SHRINKAGE
     14   1.00 permanent load grouped in actions            CREEP
G     G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS
      1   1.00 permanent load grouped in actions            DEAD LOAD
G_2   G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS G_2
      2   1.00 permanent load grouped in actions            COVER
```

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Combination rule Number 6
Ultimate Design combination
Superposition according to manual MAXIMA formula 1
Resulting loadcases type Ultimate Design combination
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'

```
     LC factor Type of loadcase                          Title
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      3   1.00 Conditional LC              VARIABLE LOADING
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      6   1.00 Conditional LC              Pw WATER PRESSURE INTERN
T     Q   1.50  0.00  0.60  0.50  0.00   0.60 TEMPERATURE
     13   1.00 Exclusive LC   A14          TEMP UNIFORM -
```

Combination rule Number 7
Service: Permanent combination
Superposition according to manual MAXIMA formula 7
Resulting loadcases type Service: Permanent combination
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'

```
     LC factor Type of loadcase                          Title
C     G   1.00  1.00  1.00  1.00  1.00   1.00 CREEP AND SHRINKAGE
     14   1.00 permanent load grouped in actions            CREEP
G     G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS
      1   1.00 permanent load grouped in actions            DEAD LOAD
G_2   G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS G_2
      2   1.00 permanent load grouped in actions            COVER
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      3   1.00 Conditional LC              VARIABLE LOADING
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      6   1.00 Conditional LC              Pw WATER PRESSURE INTERN
T     Q   1.50  0.00  0.60  0.50  0.00   0.60 TEMPERATURE
     20   1.00 Exclusive LC   A14          dT SUMMER EMPTY OPEN
```

Combination rule Number 8
Service: Permanent combination
Superposition according to manual MAXIMA formula 7
Resulting loadcases type Service: Permanent combination
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'

```
     LC factor Type of loadcase                          Title
C     G   1.00  1.00  1.00  1.00  1.00   1.00 CREEP AND SHRINKAGE
     14   1.00 permanent load grouped in actions            CREEP
G     G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS
      1   1.00 permanent load grouped in actions            DEAD LOAD
G_2   G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS G_2
      2   1.00 permanent load grouped in actions            COVER
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      3   1.00 Conditional LC              VARIABLE LOADING
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      6   1.00 Conditional LC              Pw WATER PRESSURE INTERN
T     Q   1.50  0.00  0.60  0.50  0.00   0.60 TEMPERATURE
     21   1.00 Exclusive LC   A14          dT SUMMER FULL OPEN
```

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Combination rule Number 9
Service: Permanent combination
Superposition according to manual MAXIMA formula 7
Resulting loadcases type Service: Permanent combination
Loadcase selection and Actions
Act type gam-u gam-f psi-0 psi-1 psi-2 psi-1'

```
     LC factor Type of loadcase                          Title
C     G   1.00  1.00  1.00  1.00  1.00   1.00 CREEP AND SHRINKAGE
     14   1.00 permanent load grouped in actions            CREEP
G     G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS
      1   1.00 permanent load grouped in actions            DEAD LOAD
G_2   G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS G_2
      2   1.00 permanent load grouped in actions            COVER
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      3   1.00 Conditional LC              VARIABLE LOADING
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      6   1.00 Conditional LC              Pw WATER PRESSURE INTERN
T     Q   1.50  0.00  0.60  0.50  0.00   0.60 TEMPERATURE
     24   1.00 Exclusive LC   A14          dT WINTER EMPTY OPEN
```

Combination rule Number 10
Service: Permanent combination
Superposition according to manual MAXIMA formula 7
Resulting loadcases type Service: Permanent combination
Loadcase selection and Actions
Act type gam-u gam-f psi-0 psi-1 psi-2 psi-1'

```
     LC factor Type of loadcase                          Title
C     G   1.00  1.00  1.00  1.00  1.00   1.00 CREEP AND SHRINKAGE
     14   1.00 permanent load grouped in actions            CREEP
G     G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS
      1   1.00 permanent load grouped in actions            DEAD LOAD
G_2   G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS G_2
      2   1.00 permanent load grouped in actions            COVER
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      3   1.00 Conditional LC              VARIABLE LOADING
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      6   1.00 Conditional LC              Pw WATER PRESSURE INTERN
T     Q   1.50  0.00  0.60  0.50  0.00   0.60 TEMPERATURE
     25   1.00 Exclusive LC   A14          dT WINTER FULL OPEN
```

Generated Loadcases

```
Number Comb Title
  1100    1 MAX-MX QUAD
  1101    1 MIN-MX QUAD
  1102    1 MAX-MY QUAD
  1103    1 MIN-MY QUAD
  1104    1 MAX-MXY QUAD
  1105    1 MIN-MXY QUAD
  1100    1 MAX-MX QUAK
  1101    1 MIN-MX QUAK
  1102    1 MAX-MY QUAK
  1103    1 MIN-MY QUAK
  1104    1 MAX-MXY QUAK
  1105    1 MIN-MXY QUAK
  1106    1 MAX-VX QUAD
  1107    1 MIN-VX QUAD
  1106    1 MAX-VX QUAK
  1107    1 MIN-VX QUAK
  1108    1 MAX-VY QUAD
  1109    1 MIN-VY QUAD
  1108    1 MAX-VY QUAK
  1109    1 MIN-VY QUAK
  1110    1 MAX-NXX QUAD
  1111    1 MIN-NXX QUAD
  1112    1 MAX-NYY QUAD
```

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Generated Loadcases

Number	Comb	Title
1113	1	MIN-NYY QUAD
1114	1	MAX-NXY QUAD
1115	1	MIN-NXY QUAD
1110	1	MAX-NXX QUAK
1111	1	MIN-NXX QUAK
1112	1	MAX-NYY QUAK
1113	1	MIN-NYY QUAK
1114	1	MAX-NXY QUAK
1115	1	MIN-NXY QUAK
1150	1	MAX-P QUAD
1151	1	MIN-P QUAD
1152	1	MAX-PT QUAD
1153	1	MIN-PT QUAD
2100	2	MAXE-MX QUAD
2101	2	MINE-MX QUAD
2102	2	MAXE-MY QUAD
2103	2	MINE-MY QUAD
2104	2	MAXE-MXY QUAD
2105	2	MINE-MXY QUAD
2100	2	MAXE-MX QUAK
2101	2	MINE-MX QUAK
2102	2	MAXE-MY QUAK
2103	2	MINE-MY QUAK
2104	2	MAXE-MXY QUAK
2105	2	MINE-MXY QUAK
2106	2	MAXE-VX QUAD
2107	2	MINE-VX QUAD
2106	2	MAXE-VX QUAK
2107	2	MINE-VX QUAK
2108	2	MAXE-VY QUAD
2109	2	MINE-VY QUAD
2108	2	MAXE-VY QUAK
2109	2	MINE-VY QUAK
2110	2	MAXE-NXX QUAD
2111	2	MINE-NXX QUAD
2112	2	MAXE-NYY QUAD
2113	2	MINE-NYY QUAD
2114	2	MAXE-NXY QUAD
2115	2	MINE-NXY QUAD
2110	2	MAXE-NXX QUAK
2111	2	MINE-NXX QUAK
2112	2	MAXE-NYY QUAK
2113	2	MINE-NYY QUAK
2114	2	MAXE-NXY QUAK
2115	2	MINE-NXY QUAK
2150	2	MAXE-P QUAD
2151	2	MINE-P QUAD
2152	2	MAXE-PT QUAD
2153	2	MINE-PT QUAD
3100	3	MAXE-MX QUAD
3101	3	MINE-MX QUAD
3102	3	MAXE-MY QUAD
3103	3	MINE-MY QUAD
3104	3	MAXE-MXY QUAD
3105	3	MINE-MXY QUAD
3100	3	MAXE-MX QUAK
3101	3	MINE-MX QUAK
3102	3	MAXE-MY QUAK
3103	3	MINE-MY QUAK
3104	3	MAXE-MXY QUAK
3105	3	MINE-MXY QUAK
3106	3	MAXE-VX QUAD
3107	3	MINE-VX QUAD
3106	3	MAXE-VX QUAK

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Generated Loadcases

Number	Comb	Title
3107	3	MINE-VX QUAK
3108	3	MAXE-VY QUAD
3109	3	MINE-VY QUAD
3108	3	MAXE-VY QUAK
3109	3	MINE-VY QUAK
3110	3	MAXE-NXX QUAD
3111	3	MINE-NXX QUAD
3112	3	MAXE-NYY QUAD
3113	3	MINE-NYY QUAD
3114	3	MAXE-NXY QUAD
3115	3	MINE-NXY QUAD
3110	3	MAXE-NXX QUAK
3111	3	MINE-NXX QUAK
3112	3	MAXE-NYY QUAK
3113	3	MINE-NYY QUAK
3114	3	MAXE-NXY QUAK
3115	3	MINE-NXY QUAK
3150	3	MAXE-P QUAD
3151	3	MINE-P QUAD
3152	3	MAXE-PT QUAD
3153	3	MINE-PT QUAD
4100	4	MAXE-MX QUAD
4101	4	MINE-MX QUAD
4102	4	MAXE-MY QUAD
4103	4	MINE-MY QUAD
4104	4	MAXE-MXY QUAD
4105	4	MINE-MXY QUAD
4100	4	MAXE-MX QUAK
4101	4	MINE-MX QUAK
4102	4	MAXE-MY QUAK
4103	4	MINE-MY QUAK
4104	4	MAXE-MXY QUAK
4105	4	MINE-MXY QUAK
4106	4	MAXE-VX QUAD
4107	4	MINE-VX QUAD
4106	4	MAXE-VX QUAK
4107	4	MINE-VX QUAK
4108	4	MAXE-VY QUAD
4109	4	MINE-VY QUAD
4108	4	MAXE-VY QUAK
4109	4	MINE-VY QUAK
4110	4	MAXE-NXX QUAD
4111	4	MINE-NXX QUAD
4112	4	MAXE-NYY QUAD
4113	4	MINE-NYY QUAD
4114	4	MAXE-NXY QUAD
4115	4	MINE-NXY QUAD
4110	4	MAXE-NXX QUAK
4111	4	MINE-NXX QUAK
4112	4	MAXE-NYY QUAK
4113	4	MINE-NYY QUAK
4114	4	MAXE-NXY QUAK
4115	4	MINE-NXY QUAK
4150	4	MAXE-P QUAD
4151	4	MINE-P QUAD
4152	4	MAXE-PT QUAD
4153	4	MINE-PT QUAD
5100	5	MAX-MX QUAD
5101	5	MIN-MX QUAD
5102	5	MAX-MY QUAD
5103	5	MIN-MY QUAD
5104	5	MAX-MXY QUAD
5105	5	MIN-MXY QUAD
5100	5	MAX-MX QUAK

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Generated Loadcases

Number	Comb	Title
5101	5	MIN-MX QUAK
5102	5	MAX-MY QUAK
5103	5	MIN-MY QUAK
5104	5	MAX-MXY QUAK
5105	5	MIN-MXY QUAK
5106	5	MAX-VX QUAD
5107	5	MIN-VX QUAD
5106	5	MAX-VX QUAK
5107	5	MIN-VX QUAK
5108	5	MAX-VY QUAD
5109	5	MIN-VY QUAD
5108	5	MAX-VY QUAK
5109	5	MIN-VY QUAK
5110	5	MAX-NXX QUAD
5111	5	MIN-NXX QUAD
5112	5	MAX-NYY QUAD
5113	5	MIN-NYY QUAD
5114	5	MAX-NXY QUAD
5115	5	MIN-NXY QUAD
5110	5	MAX-NXX QUAK
5111	5	MIN-NXX QUAK
5112	5	MAX-NYY QUAK
5113	5	MIN-NYY QUAK
5114	5	MAX-NXY QUAK
5115	5	MIN-NXY QUAK
5150	5	MAX-P QUAD
5151	5	MIN-P QUAD
5152	5	MAX-PT QUAD
5153	5	MIN-PT QUAD
6100	6	MAX-MX QUAD
6101	6	MIN-MX QUAD
6102	6	MAX-MY QUAD
6103	6	MIN-MY QUAD
6104	6	MAX-MXY QUAD
6105	6	MIN-MXY QUAD
6100	6	MAX-MX QUAK
6101	6	MIN-MX QUAK
6102	6	MAX-MY QUAK
6103	6	MIN-MY QUAK
6104	6	MAX-MXY QUAK
6105	6	MIN-MXY QUAK
6106	6	MAX-VX QUAD
6107	6	MIN-VX QUAD
6106	6	MAX-VX QUAK
6107	6	MIN-VX QUAK
6108	6	MAX-VY QUAD
6109	6	MIN-VY QUAD
6108	6	MAX-VY QUAK
6109	6	MIN-VY QUAK
6110	6	MAX-NXX QUAD
6111	6	MIN-NXX QUAD
6112	6	MAX-NYY QUAD
6113	6	MIN-NYY QUAD
6114	6	MAX-NXY QUAD
6115	6	MIN-NXY QUAD
6110	6	MAX-NXX QUAK
6111	6	MIN-NXX QUAK
6112	6	MAX-NYY QUAK
6113	6	MIN-NYY QUAK
6114	6	MAX-NXY QUAK
6115	6	MIN-NXY QUAK
6150	6	MAX-P QUAD
6151	6	MIN-P QUAD
6152	6	MAX-PT QUAD

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Generated Loadcases

Number	Comb	Title
6153	6	MIN-PT QUAD
7100	7	MAXP-MX QUAD
7101	7	MINP-MX QUAD
7102	7	MAXP-MY QUAD
7103	7	MINP-MY QUAD
7104	7	MAXP-MXY QUAD
7105	7	MINP-MXY QUAD
7100	7	MAXP-MX QUAK
7101	7	MINP-MX QUAK
7102	7	MAXP-MY QUAK
7103	7	MINP-MY QUAK
7104	7	MAXP-MXY QUAK
7105	7	MINP-MXY QUAK
7106	7	MAXP-VX QUAD
7107	7	MINP-VX QUAD
7106	7	MAXP-VX QUAK
7107	7	MINP-VX QUAK
7108	7	MAXP-VY QUAD
7109	7	MINP-VY QUAD
7108	7	MAXP-VY QUAK
7109	7	MINP-VY QUAK
7110	7	MAXP-NXX QUAD
7111	7	MINP-NXX QUAD
7112	7	MAXP-NYY QUAD
7113	7	MINP-NYY QUAD
7114	7	MAXP-NXY QUAD
7115	7	MINP-NXY QUAD
7110	7	MAXP-NXX QUAK
7111	7	MINP-NXX QUAK
7112	7	MAXP-NYY QUAK
7113	7	MINP-NYY QUAK
7114	7	MAXP-NXY QUAK
7115	7	MINP-NXY QUAK
7150	7	MAXP-P QUAD
7151	7	MINP-P QUAD
7152	7	MAXP-PT QUAD
7153	7	MINP-PT QUAD
8100	8	MAXP-MX QUAD
8101	8	MINP-MX QUAD
8102	8	MAXP-MY QUAD
8103	8	MINP-MY QUAD
8104	8	MAXP-MXY QUAD
8105	8	MINP-MXY QUAD
8100	8	MAXP-MX QUAK
8101	8	MINP-MX QUAK
8102	8	MAXP-MY QUAK
8103	8	MINP-MY QUAK
8104	8	MAXP-MXY QUAK
8105	8	MINP-MXY QUAK
8106	8	MAXP-VX QUAD
8107	8	MINP-VX QUAD
8106	8	MAXP-VX QUAK
8107	8	MINP-VX QUAK
8108	8	MAXP-VY QUAD
8109	8	MINP-VY QUAD
8108	8	MAXP-VY QUAK
8109	8	MINP-VY QUAK
8110	8	MAXP-NXX QUAD
8111	8	MINP-NXX QUAD
8112	8	MAXP-NYY QUAD
8113	8	MINP-NYY QUAD
8114	8	MAXP-NXY QUAD
8115	8	MINP-NXY QUAD
8110	8	MAXP-NXX QUAK

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Generated Loadcases

Number	Comb	Title
8111	8	MINP-NXX QUAK
8112	8	MAXP-NYY QUAK
8113	8	MINP-NYY QUAK
8114	8	MAXP-NXY QUAK
8115	8	MINP-NXY QUAK
8150	8	MAXP-P QUAD
8151	8	MINP-P QUAD
8152	8	MAXP-PT QUAD
8153	8	MINP-PT QUAD
9100	9	MAXP-MX QUAD
9101	9	MINP-MX QUAD
9102	9	MAXP-MY QUAD
9103	9	MINP-MY QUAD
9104	9	MAXP-MXY QUAD
9105	9	MINP-MXY QUAD
9100	9	MAXP-MX QUAK
9101	9	MINP-MX QUAK
9102	9	MAXP-MY QUAK
9103	9	MINP-MY QUAK
9104	9	MAXP-MXY QUAK
9105	9	MINP-MXY QUAK
9106	9	MAXP-VX QUAD
9107	9	MINP-VX QUAD
9106	9	MAXP-VX QUAK
9107	9	MINP-VX QUAK
9108	9	MAXP-VY QUAD
9109	9	MINP-VY QUAD
9108	9	MAXP-VY QUAK
9109	9	MINP-VY QUAK
9110	9	MAXP-NXX QUAD
9111	9	MINP-NXX QUAD
9112	9	MAXP-NYY QUAD
9113	9	MINP-NYY QUAD
9114	9	MAXP-NXY QUAD
9115	9	MINP-NXY QUAD
9110	9	MAXP-NXX QUAK
9111	9	MINP-NXX QUAK
9112	9	MAXP-NYY QUAK
9113	9	MINP-NYY QUAK
9114	9	MAXP-NXY QUAK
9115	9	MINP-NXY QUAK
9150	9	MAXP-P QUAD
9151	9	MINP-P QUAD
9152	9	MAXP-PT QUAD
9153	9	MINP-PT QUAD
10100	10	MAXP-MX QUAD
10101	10	MINP-MX QUAD
10102	10	MAXP-MY QUAD
10103	10	MINP-MY QUAD
10104	10	MAXP-MXY QUAD
10105	10	MINP-MXY QUAD
10100	10	MAXP-MX QUAK
10101	10	MINP-MX QUAK
10102	10	MAXP-MY QUAK
10103	10	MINP-MY QUAK
10104	10	MAXP-MXY QUAK
10105	10	MINP-MXY QUAK
10106	10	MAXP-VX QUAD
10107	10	MINP-VX QUAD
10106	10	MAXP-VX QUAK
10107	10	MINP-VX QUAK
10108	10	MAXP-VY QUAD
10109	10	MINP-VY QUAD
10108	10	MAXP-VY QUAK

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Generated Loadcases

Number	Comb	Title
10109	10	MINP-VY QUAK
10110	10	MAXP-NXX QUAD
10111	10	MINP-NXX QUAD
10112	10	MAXP-NYY QUAD
10113	10	MINP-NYY QUAD
10114	10	MAXP-NXY QUAD
10115	10	MINP-NXY QUAD
10110	10	MAXP-NXX QUAK
10111	10	MINP-NXX QUAK
10112	10	MAXP-NYY QUAK
10113	10	MINP-NYY QUAK
10114	10	MAXP-NXY QUAK
10115	10	MINP-NXY QUAK
10150	10	MAXP-P QUAD
10151	10	MINP-P QUAD
10152	10	MAXP-PT QUAD
10153	10	MINP-PT QUAD

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Superposition ultimate limit state

Superposition according to EuroNorm EN 1992 Concrete

Combination rule Number 11
Ultimate Design combination
Superposition according to manual MAXIMA formula 1
Resulting loadcases type Ultimate Design combination
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'

```
     LC factor Type of loadcase                          Title
C     G   1.00  1.00  1.00  1.00  1.00   1.00 CREEP AND SHRINKAGE
     14   1.00 permanent load grouped in actions            CREEP
G     G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS
      1   1.00 permanent load grouped in actions            DEAD LOAD
G_2   G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS G_2
      2   1.00 permanent load grouped in actions            COVER
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      4   1.00 Conditional LC              Q PRESSURE STATIC
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      3   1.00 Conditional LC              VARIABLE LOADING
R     G   1.35  1.00  1.00  1.00  1.00   1.00 EARTHPRESSURE
      7   1.00 permanent load grouped in actions            ós SOIL PRESSURE
```

Combination rule Number 12
Ultimate Design combination
Superposition according to manual MAXIMA formula 1
Resulting loadcases type Ultimate Design combination
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'

```
     LC factor Type of loadcase                          Title
C     G   1.00  1.00  1.00  1.00  1.00   1.00 CREEP AND SHRINKAGE
     14   1.00 permanent load grouped in actions            CREEP
G     G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS
      1   1.00 permanent load grouped in actions            DEAD LOAD
G_2   G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS G_2
      2   1.00 permanent load grouped in actions            COVER
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      4   1.00 Conditional LC              Q PRESSURE STATIC
R     G   1.35  1.00  1.00  1.00  1.00   1.00 EARTHPRESSURE
      7   1.00 permanent load grouped in actions            ós SOIL PRESSURE
```

Combination rule Number 13
Ultimate Earthquake combin.
Superposition according to manual MAXIMA formula 3
Resulting loadcases type Ultimate Earthquake combin.
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'

```
     LC factor Type of loadcase                          Title
C     G   1.00  1.00  1.00  1.00  1.00   1.00 CREEP AND SHRINKAGE
     14   1.00 permanent load grouped in actions            CREEP
E     E   1.00  0.00  1.00  1.00  1.00   1.00 EARTHQUAKE COMBINATIONS
     11   1.00 Exclusive LC   A17          Åq SOIL
E     E   1.00  0.00  1.00  1.00  1.00   1.00 EARTHQUAKE COMBINATIONS
      8   1.00 Exclusive LC   A17          Åq CONCRETE XX
G     G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS
      1   1.00 permanent load grouped in actions            DEAD LOAD
G_2   G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS G_2
      2   1.00 permanent load grouped in actions            COVER
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      3   1.00 Conditional LC              VARIABLE LOADING
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      5   1.00 Conditional LC              Q PRESSURE DYN
R     G   1.35  1.00  1.00  1.00  1.00   1.00 EARTHPRESSURE
      7   1.00 permanent load grouped in actions            ós SOIL PRESSURE
```

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Combination rule Number 13
Ultimate Earthquake combin.
Superposition according to manual MAXIMA formula 3
Resulting loadcases type Ultimate Earthquake combin.
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'
LC factor Type of loadcase Title

Combination rule Number 14
Ultimate Earthquake combin.
Superposition according to manual MAXIMA formula 3
Resulting loadcases type Ultimate Earthquake combin.
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'
LC factor Type of loadcase Title

```
C     G   1.00  1.00  1.00  1.00  1.00   1.00 CREEP AND SHRINKAGE
     14   1.00 permanent load grouped in actions            CREEP
E     E   1.00  0.00  1.00  1.00  1.00   1.00 EARTHQUAKE COMBINATIONS
     11   1.00 Exclusive LC   A17          Åq SOIL
E     E   1.00  0.00  1.00  1.00  1.00   1.00 EARTHQUAKE COMBINATIONS
      9   1.00 Exclusive LC   A17          Åq CONCRETE YY
G     G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS
      1   1.00 permanent load grouped in actions            DEAD LOAD
G_2   G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS G_2
      2   1.00 permanent load grouped in actions            COVER
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      3   1.00 Conditional LC              VARIABLE LOADING
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      5   1.00 Conditional LC              Q PRESSURE DYN
R     G   1.35  1.00  1.00  1.00  1.00   1.00 EARTHPRESSURE
      7   1.00 permanent load grouped in actions            ós SOIL PRESSURE
```

Combination rule Number 15
Ultimate Earthquake combin.
Superposition according to manual MAXIMA formula 3
Resulting loadcases type Ultimate Earthquake combin.
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'
LC factor Type of loadcase Title

```
C     G   1.00  1.00  1.00  1.00  1.00   1.00 CREEP AND SHRINKAGE
     14   1.00 permanent load grouped in actions            CREEP
E     E   1.00  0.00  1.00  1.00  1.00   1.00 EARTHQUAKE COMBINATIONS
     11   1.00 Exclusive LC   A17          Åq SOIL
E     E   1.00  0.00  1.00  1.00  1.00   1.00 EARTHQUAKE COMBINATIONS
     10   1.00 Exclusive LC   A17          Åq CONCRETE ZZ
G     G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS
      1   1.00 permanent load grouped in actions            DEAD LOAD
G_2   G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS G_2
      2   1.00 permanent load grouped in actions            COVER
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      3   1.00 Conditional LC              VARIABLE LOADING
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      5   1.00 Conditional LC              Q PRESSURE DYN
R     G   1.35  1.00  1.00  1.00  1.00   1.00 EARTHPRESSURE
      7   1.00 permanent load grouped in actions            ós SOIL PRESSURE
```

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Combination rule Number 16
Ultimate Design combination
Superposition according to manual MAXIMA formula 1
Resulting loadcases type Ultimate Design combination
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'

```
     LC factor Type of loadcase                          Title
C     G   1.00  1.00  1.00  1.00  1.00   1.00 CREEP AND SHRINKAGE
     14   1.00 permanent load grouped in actions            CREEP
G     G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS
      1   1.00 permanent load grouped in actions            DEAD LOAD
G_2   G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS G_2
      2   1.00 permanent load grouped in actions            COVER
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      3   1.00 Conditional LC              VARIABLE LOADING
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      4   1.00 Conditional LC              Q PRESSURE STATIC
R     G   1.35  1.00  1.00  1.00  1.00   1.00 EARTHPRESSURE
      7   1.00 permanent load grouped in actions            ós SOIL PRESSURE
T     Q   1.50  0.00  0.60  0.50  0.00   0.60 TEMPERATURE
     13   1.00 Exclusive LC   A14          TEMP UNIFORM -
```

Combination rule Number 17
Ultimate Design combination
Superposition according to manual MAXIMA formula 1
Resulting loadcases type Ultimate Design combination
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'

```
     LC factor Type of loadcase                          Title
C     G   1.00  1.00  1.00  1.00  1.00   1.00 CREEP AND SHRINKAGE
     14   1.00 permanent load grouped in actions            CREEP
G     G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS
      1   1.00 permanent load grouped in actions            DEAD LOAD
G_2   G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS G_2
      2   1.00 permanent load grouped in actions            COVER
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      3   1.00 Conditional LC              VARIABLE LOADING
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      4   1.00 Conditional LC              Q PRESSURE STATIC
R     G   1.35  1.00  1.00  1.00  1.00   1.00 EARTHPRESSURE
      7   1.00 permanent load grouped in actions            ós SOIL PRESSURE
T     Q   1.50  0.00  0.60  0.50  0.00   0.60 TEMPERATURE
     12   1.00 Exclusive LC   A14          TEMP UNIFORM +
```

Combination rule Number 18
Service: Permanent combination
Superposition according to manual MAXIMA formula 7
Resulting loadcases type Service: Permanent combination
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'

```
     LC factor Type of loadcase                          Title
C     G   1.00  1.00  1.00  1.00  1.00   1.00 CREEP AND SHRINKAGE
     14   1.00 permanent load grouped in actions            CREEP
G     G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS
      1   1.00 permanent load grouped in actions            DEAD LOAD
G_2   G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS G_2
      2   1.00 permanent load grouped in actions            COVER
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      3   1.00 Conditional LC              VARIABLE LOADING
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      4   1.00 Conditional LC              Q PRESSURE STATIC
R     G   1.35  1.00  1.00  1.00  1.00   1.00 EARTHPRESSURE
      7   1.00 permanent load grouped in actions            ós SOIL PRESSURE
T     Q   1.50  0.00  0.60  0.50  0.00   0.60 TEMPERATURE
```

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Combination rule Number 18
Service: Permanent combination
Superposition according to manual MAXIMA formula 7
Resulting loadcases type Service: Permanent combination
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'

```
     LC factor Type of loadcase                          Title
     22   1.00 Exclusive LC   A14          dT SUMMER EMPTY SOIL
```

Combination rule Number 19
Service: Permanent combination
Superposition according to manual MAXIMA formula 7
Resulting loadcases type Service: Permanent combination
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'

```
     LC factor Type of loadcase                          Title
C     G   1.00  1.00  1.00  1.00  1.00   1.00 CREEP AND SHRINKAGE
     14   1.00 permanent load grouped in actions            CREEP
G     G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS
      1   1.00 permanent load grouped in actions            DEAD LOAD
G_2   G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS G_2
      2   1.00 permanent load grouped in actions            COVER
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      3   1.00 Conditional LC              VARIABLE LOADING
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      4   1.00 Conditional LC              Q PRESSURE STATIC
R     G   1.35  1.00  1.00  1.00  1.00   1.00 EARTHPRESSURE
      7   1.00 permanent load grouped in actions            ós SOIL PRESSURE
T     Q   1.50  0.00  0.60  0.50  0.00   0.60 TEMPERATURE
     26   1.00 Exclusive LC   A14          dT WINTER EMPTY SOIL
```

Generated Loadcases

```
Number Comb Title
 11000   11 MAX-MX QUAD
 11001   11 MIN-MX QUAD
 11002   11 MAX-MY QUAD
 11003   11 MIN-MY QUAD
 11004   11 MAX-MXY QUAD
 11005   11 MIN-MXY QUAD
 11000   11 MAX-MX QUAK
 11001   11 MIN-MX QUAK
 11002   11 MAX-MY QUAK
 11003   11 MIN-MY QUAK
 11004   11 MAX-MXY QUAK
 11005   11 MIN-MXY QUAK
 11006   11 MAX-VX QUAD
 11007   11 MIN-VX QUAD
 11006   11 MAX-VX QUAK
 11007   11 MIN-VX QUAK
 11008   11 MAX-VY QUAD
 11009   11 MIN-VY QUAD
 11008   11 MAX-VY QUAK
 11009   11 MIN-VY QUAK
 11010   11 MAX-NXX QUAD
 11011   11 MIN-NXX QUAD
 11012   11 MAX-NYY QUAD
 11013   11 MIN-NYY QUAD
 11014   11 MAX-NXY QUAD
 11015   11 MIN-NXY QUAD
 11010   11 MAX-NXX QUAK
 11011   11 MIN-NXX QUAK
 11012   11 MAX-NYY QUAK
 11013   11 MIN-NYY QUAK
 11014   11 MAX-NXY QUAK
 11015   11 MIN-NXY QUAK
```

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Generated Loadcases

Number	Comb	Title
11500	11	MAX-P QUAD
11501	11	MIN-P QUAD
11502	11	MAX-PT QUAD
11503	11	MIN-PT QUAD
12000	12	MAX-MX QUAD
12001	12	MIN-MX QUAD
12002	12	MAX-MY QUAD
12003	12	MIN-MY QUAD
12004	12	MAX-MXY QUAD
12005	12	MIN-MXY QUAD
12000	12	MAX-MX QUAK
12001	12	MIN-MX QUAK
12002	12	MAX-MY QUAK
12003	12	MIN-MY QUAK
12004	12	MAX-MXY QUAK
12005	12	MIN-MXY QUAK
12006	12	MAX-VX QUAD
12007	12	MIN-VX QUAD
12006	12	MAX-VX QUAK
12007	12	MIN-VX QUAK
12008	12	MAX-VY QUAD
12009	12	MIN-VY QUAD
12008	12	MAX-VY QUAK
12009	12	MIN-VY QUAK
12010	12	MAX-NXX QUAD
12011	12	MIN-NXX QUAD
12012	12	MAX-NYY QUAD
12013	12	MIN-NYY QUAD
12014	12	MAX-NXY QUAD
12015	12	MIN-NXY QUAD
12010	12	MAX-NXX QUAK
12011	12	MIN-NXX QUAK
12012	12	MAX-NYY QUAK
12013	12	MIN-NYY QUAK
12014	12	MAX-NXY QUAK
12015	12	MIN-NXY QUAK
12500	12	MAX-P QUAD
12501	12	MIN-P QUAD
12502	12	MAX-PT QUAD
12503	12	MIN-PT QUAD
13000	13	MAXE-MX QUAD
13001	13	MINE-MX QUAD
13002	13	MAXE-MY QUAD
13003	13	MINE-MY QUAD
13004	13	MAXE-MXY QUAD
13005	13	MINE-MXY QUAD
13000	13	MAXE-MX QUAK
13001	13	MINE-MX QUAK
13002	13	MAXE-MY QUAK
13003	13	MINE-MY QUAK
13004	13	MAXE-MXY QUAK
13005	13	MINE-MXY QUAK
13006	13	MAXE-VX QUAD
13007	13	MINE-VX QUAD
13006	13	MAXE-VX QUAK
13007	13	MINE-VX QUAK
13008	13	MAXE-VY QUAD
13009	13	MINE-VY QUAD
13008	13	MAXE-VY QUAK
13009	13	MINE-VY QUAK
13010	13	MAXE-NXX QUAD
13011	13	MINE-NXX QUAD
13012	13	MAXE-NYY QUAD
13013	13	MINE-NYY QUAD

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Generated Loadcases

Number	Comb	Title
13014	13	MAXE-NXY QUAD
13015	13	MINE-NXY QUAD
13010	13	MAXE-NXX QUAK
13011	13	MINE-NXX QUAK
13012	13	MAXE-NYY QUAK
13013	13	MINE-NYY QUAK
13014	13	MAXE-NXY QUAK
13015	13	MINE-NXY QUAK
13500	13	MAXE-P QUAD
13501	13	MINE-P QUAD
13502	13	MAXE-PT QUAD
13503	13	MINE-PT QUAD
14000	14	MAXE-MX QUAD
14001	14	MINE-MX QUAD
14002	14	MAXE-MY QUAD
14003	14	MINE-MY QUAD
14004	14	MAXE-MXY QUAD
14005	14	MINE-MXY QUAD
14000	14	MAXE-MX QUAK
14001	14	MINE-MX QUAK
14002	14	MAXE-MY QUAK
14003	14	MINE-MY QUAK
14004	14	MAXE-MXY QUAK
14005	14	MINE-MXY QUAK
14006	14	MAXE-VX QUAD
14007	14	MINE-VX QUAD
14006	14	MAXE-VX QUAK
14007	14	MINE-VX QUAK
14008	14	MAXE-VY QUAD
14009	14	MINE-VY QUAD
14008	14	MAXE-VY QUAK
14009	14	MINE-VY QUAK
14010	14	MAXE-NXX QUAD
14011	14	MINE-NXX QUAD
14012	14	MAXE-NYY QUAD
14013	14	MINE-NYY QUAD
14014	14	MAXE-NXY QUAD
14015	14	MINE-NXY QUAD
14010	14	MAXE-NXX QUAK
14011	14	MINE-NXX QUAK
14012	14	MAXE-NYY QUAK
14013	14	MINE-NYY QUAK
14014	14	MAXE-NXY QUAK
14015	14	MINE-NXY QUAK
14500	14	MAXE-P QUAD
14501	14	MINE-P QUAD
14502	14	MAXE-PT QUAD
14503	14	MINE-PT QUAD
15000	15	MAXE-MX QUAD
15001	15	MINE-MX QUAD
15002	15	MAXE-MY QUAD
15003	15	MINE-MY QUAD
15004	15	MAXE-MXY QUAD
15005	15	MINE-MXY QUAD
15000	15	MAXE-MX QUAK
15001	15	MINE-MX QUAK
15002	15	MAXE-MY QUAK
15003	15	MINE-MY QUAK
15004	15	MAXE-MXY QUAK
15005	15	MINE-MXY QUAK
15006	15	MAXE-VX QUAD
15007	15	MINE-VX QUAD
15006	15	MAXE-VX QUAK
15007	15	MINE-VX QUAK

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Superposition ultimate limit state

Generated Loadcases

Number	Comb	Title
15008	15	MAXE-VY QUAD
15009	15	MINE-VY QUAD
15008	15	MAXE-VY QUAK
15009	15	MINE-VY QUAK
15010	15	MAXE-NXX QUAD
15011	15	MINE-NXX QUAD
15012	15	MAXE-NYY QUAD
15013	15	MINE-NYY QUAD
15014	15	MAXE-NXY QUAD
15015	15	MINE-NXY QUAD
15010	15	MAXE-NXX QUAK
15011	15	MINE-NXX QUAK
15012	15	MAXE-NYY QUAK
15013	15	MINE-NYY QUAK
15014	15	MAXE-NXY QUAK
15015	15	MINE-NXY QUAK
15500	15	MAXE-P QUAD
15501	15	MINE-P QUAD
15502	15	MAXE-PT QUAD
15503	15	MINE-PT QUAD
16000	16	MAX-MX QUAD
16001	16	MIN-MX QUAD
16002	16	MAX-MY QUAD
16003	16	MIN-MY QUAD
16004	16	MAX-MXY QUAD
16005	16	MIN-MXY QUAD
16000	16	MAX-MX QUAK
16001	16	MIN-MX QUAK
16002	16	MAX-MY QUAK
16003	16	MIN-MY QUAK
16004	16	MAX-MXY QUAK
16005	16	MIN-MXY QUAK
16006	16	MAX-VX QUAD
16007	16	MIN-VX QUAD
16006	16	MAX-VX QUAK
16007	16	MIN-VX QUAK
16008	16	MAX-VY QUAD
16009	16	MIN-VY QUAD
16008	16	MAX-VY QUAK
16009	16	MIN-VY QUAK
16010	16	MAX-NXX QUAD
16011	16	MIN-NXX QUAD
16012	16	MAX-NYY QUAD
16013	16	MIN-NYY QUAD
16014	16	MAX-NXY QUAD
16015	16	MIN-NXY QUAD
16010	16	MAX-NXX QUAK
16011	16	MIN-NXX QUAK
16012	16	MAX-NYY QUAK
16013	16	MIN-NYY QUAK
16014	16	MAX-NXY QUAK
16015	16	MIN-NXY QUAK
16500	16	MAX-P QUAD
16501	16	MIN-P QUAD
16502	16	MAX-PT QUAD
16503	16	MIN-PT QUAD
17000	17	MAX-MX QUAD
17001	17	MIN-MX QUAD
17002	17	MAX-MY QUAD
17003	17	MIN-MY QUAD
17004	17	MAX-MXY QUAD
17005	17	MIN-MXY QUAD
17000	17	MAX-MX QUAK
17001	17	MIN-MX QUAK

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Superposition ultimate limit state

Generated Loadcases

Number	Comb	Title
17002	17	MAX-MY QUAK
17003	17	MIN-MY QUAK
17004	17	MAX-MXY QUAK
17005	17	MIN-MXY QUAK
17006	17	MAX-VX QUAD
17007	17	MIN-VX QUAD
17006	17	MAX-VX QUAK
17007	17	MIN-VX QUAK
17008	17	MAX-VY QUAD
17009	17	MIN-VY QUAD
17008	17	MAX-VY QUAK
17009	17	MIN-VY QUAK
17010	17	MAX-NXX QUAD
17011	17	MIN-NXX QUAD
17012	17	MAX-NYY QUAD
17013	17	MIN-NYY QUAD
17014	17	MAX-NXY QUAD
17015	17	MIN-NXY QUAD
17010	17	MAX-NXX QUAK
17011	17	MIN-NXX QUAK
17012	17	MAX-NYY QUAK
17013	17	MIN-NYY QUAK
17014	17	MAX-NXY QUAK
17015	17	MIN-NXY QUAK
17500	17	MAX-P QUAD
17501	17	MIN-P QUAD
17502	17	MAX-PT QUAD
17503	17	MIN-PT QUAD
18000	18	MAXP-MX QUAD
18001	18	MINP-MX QUAD
18002	18	MAXP-MY QUAD
18003	18	MINP-MY QUAD
18004	18	MAXP-MXY QUAD
18005	18	MINP-MXY QUAD
18000	18	MAXP-MX QUAK
18001	18	MINP-MX QUAK
18002	18	MAXP-MY QUAK
18003	18	MINP-MY QUAK
18004	18	MAXP-MXY QUAK
18005	18	MINP-MXY QUAK
18006	18	MAXP-VX QUAD
18007	18	MINP-VX QUAD
18006	18	MAXP-VX QUAK
18007	18	MINP-VX QUAK
18008	18	MAXP-VY QUAD
18009	18	MINP-VY QUAD
18008	18	MAXP-VY QUAK
18009	18	MINP-VY QUAK
18010	18	MAXP-NXX QUAD
18011	18	MINP-NXX QUAD
18012	18	MAXP-NYY QUAD
18013	18	MINP-NYY QUAD
18014	18	MAXP-NXY QUAD
18015	18	MINP-NXY QUAD
18010	18	MAXP-NXX QUAK
18011	18	MINP-NXX QUAK
18012	18	MAXP-NYY QUAK
18013	18	MINP-NYY QUAK
18014	18	MAXP-NXY QUAK
18015	18	MINP-NXY QUAK
18500	18	MAXP-P QUAD
18501	18	MINP-P QUAD
18502	18	MAXP-PT QUAD
18503	18	MINP-PT QUAD

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Generated Loadcases

Number	Comb	Title
19000	19	MAXP-MX QUAD
19001	19	MINP-MX QUAD
19002	19	MAXP-MY QUAD
19003	19	MINP-MY QUAD
19004	19	MAXP-MXY QUAD
19005	19	MINP-MXY QUAD
19000	19	MAXP-MX QUAK
19001	19	MINP-MX QUAK
19002	19	MAXP-MY QUAK
19003	19	MINP-MY QUAK
19004	19	MAXP-MXY QUAK
19005	19	MINP-MXY QUAK
19006	19	MAXP-VX QUAD
19007	19	MINP-VX QUAD
19006	19	MAXP-VX QUAK
19007	19	MINP-VX QUAK
19008	19	MAXP-VY QUAD
19009	19	MINP-VY QUAD
19008	19	MAXP-VY QUAK
19009	19	MINP-VY QUAK
19010	19	MAXP-NXX QUAD
19011	19	MINP-NXX QUAD
19012	19	MAXP-NYY QUAD
19013	19	MINP-NYY QUAD
19014	19	MAXP-NXY QUAD
19015	19	MINP-NXY QUAD
19010	19	MAXP-NXX QUAK
19011	19	MINP-NXX QUAK
19012	19	MAXP-NYY QUAK
19013	19	MINP-NYY QUAK
19014	19	MAXP-NXY QUAK
19015	19	MINP-NXY QUAK
19500	19	MAXP-P QUAD
19501	19	MINP-P QUAD
19502	19	MAXP-PT QUAD
19503	19	MINP-PT QUAD

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Superposition ultimate limit state

Superposition according to EuroNorm EN 1992 Concrete

Combination rule Number 19
Service: Permanent combination
Superposition according to manual MAXIMA formula 7
Resulting loadcases type Service: Permanent combination
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'

```
     LC factor Type of loadcase                          Title
C     G   1.00  1.00  1.00  1.00  1.00   1.00 CREEP AND SHRINKAGE
     14   1.00 permanent load grouped in actions            CREEP
G     G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS
      1   1.00 permanent load grouped in actions            DEAD LOAD
G_2   G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS G_2
      2   1.00 permanent load grouped in actions            COVER
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      3   1.00 Conditional LC              VARIABLE LOADING
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      4   1.00 Conditional LC              Q PRESSURE STATIC
R     G   1.35  1.00  1.00  1.00  1.00   1.00 EARTHPRESSURE
      7   1.00 permanent load grouped in actions            ós SOIL PRESSURE
T     Q   1.50  0.00  0.60  0.50  0.00   0.60 TEMPERATURE
     26   1.00 Exclusive LC   A14          dT WINTER EMPTY SOIL
```

Combination rule Number 21
Ultimate Design combination
Superposition according to manual MAXIMA formula 1
Resulting loadcases type Ultimate Design combination
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'

```
     LC factor Type of loadcase                          Title
C     G   1.00  1.00  1.00  1.00  1.00   1.00 CREEP AND SHRINKAGE
     14   1.00 permanent load grouped in actions            CREEP
G     G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS
      1   1.00 permanent load grouped in actions            DEAD LOAD
G_2   G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS G_2
      2   1.00 permanent load grouped in actions            COVER
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      3   1.00 Conditional LC              VARIABLE LOADING
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      6   1.00 Conditional LC              Pw WATER PRESSURE INTERN
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      4   1.00 Conditional LC              Q PRESSURE STATIC
R     G   1.35  1.00  1.00  1.00  1.00   1.00 EARTHPRESSURE
      7   1.00 permanent load grouped in actions            ós SOIL PRESSURE
```

Combination rule Number 22
Ultimate Design combination
Superposition according to manual MAXIMA formula 1
Resulting loadcases type Ultimate Design combination
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'

```
     LC factor Type of loadcase                          Title
C     G   1.00  1.00  1.00  1.00  1.00   1.00 CREEP AND SHRINKAGE
     14   1.00 permanent load grouped in actions            CREEP
G     G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS
      1   1.00 permanent load grouped in actions            DEAD LOAD
G_2   G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS G_2
      2   1.00 permanent load grouped in actions            COVER
R     G   1.35  1.00  1.00  1.00  1.00   1.00 EARTHPRESSURE
      7   1.00 permanent load grouped in actions            ós SOIL PRESSURE
```

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Superposition ultimate limit state

Combination rule Number 23
Ultimate Earthquake combin.
Superposition according to manual MAXIMA formula 3
Resulting loadcases type Ultimate Earthquake combin.
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'

	LC	factor	Type of loadcase						Title
C	G	1.00	1.00	1.00	1.00	1.00		1.00	CREEP AND SHRINKAGE
	14	1.00	permanent load grouped in actions						CREEP
E	E	1.00	0.00	1.00	1.00	1.00		1.00	EARTHQUAKE COMBINATIONS
	11	1.00	Exclusive LC	A17					Åq SOIL
E	E	1.00	0.00	1.00	1.00	1.00		1.00	EARTHQUAKE COMBINATIONS
	300	1.00	Exclusive LC	A17					WASTERGAARD XX
E	E	1.00	0.00	1.00	1.00	1.00		1.00	EARTHQUAKE COMBINATIONS
	8	1.00	Exclusive LC	A17					Åq CONCRETE XX
G	G	1.35	1.00	1.00	1.00	1.00		1.00	DEAD LOADS
	1	1.00	permanent load grouped in actions						DEAD LOAD
G_2	G	1.35	1.00	1.00	1.00	1.00		1.00	DEAD LOADS G_2
	2	1.00	permanent load grouped in actions						COVER
Q	Q	1.50	0.00	0.80	0.50	0.30		0.70	VARIABLE Load
	3	1.00	Conditional LC						VARIABLE LOADING
Q	Q	1.50	0.00	0.80	0.50	0.30		0.70	VARIABLE Load
	6	1.00	Conditional LC						Pw WATER PRESSURE INTERN
Q	Q	1.50	0.00	0.80	0.50	0.30		0.70	VARIABLE Load
	5	1.00	Conditional LC						Q PRESSURE DYN
R	G	1.35	1.00	1.00	1.00	1.00		1.00	EARTHPRESSURE
	7	1.00	permanent load grouped in actions						ós SOIL PRESSURE

Combination rule Number 24
Ultimate Earthquake combin.
Superposition according to manual MAXIMA formula 3
Resulting loadcases type Ultimate Earthquake combin.
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'

	LC	factor	Type of loadcase						Title
C	G	1.00	1.00	1.00	1.00	1.00		1.00	CREEP AND SHRINKAGE
	14	1.00	permanent load grouped in actions						CREEP
E	E	1.00	0.00	1.00	1.00	1.00		1.00	EARTHQUAKE COMBINATIONS
	11	1.00	Exclusive LC	A17					Åq SOIL
E	E	1.00	0.00	1.00	1.00	1.00		1.00	EARTHQUAKE COMBINATIONS
	310	1.00	Exclusive LC	A17					WASTERGAARD YY
E	E	1.00	0.00	1.00	1.00	1.00		1.00	EARTHQUAKE COMBINATIONS
	9	1.00	Exclusive LC	A17					Åq CONCRETE YY
G	G	1.35	1.00	1.00	1.00	1.00		1.00	DEAD LOADS
	1	1.00	permanent load grouped in actions						DEAD LOAD
G_2	G	1.35	1.00	1.00	1.00	1.00		1.00	DEAD LOADS G_2
	2	1.00	permanent load grouped in actions						COVER
Q	Q	1.50	0.00	0.80	0.50	0.30		0.70	VARIABLE Load
	3	1.00	Conditional LC						VARIABLE LOADING
Q	Q	1.50	0.00	0.80	0.50	0.30		0.70	VARIABLE Load
	6	1.00	Conditional LC						Pw WATER PRESSURE INTERN
Q	Q	1.50	0.00	0.80	0.50	0.30		0.70	VARIABLE Load
	5	1.00	Conditional LC						Q PRESSURE DYN
R	G	1.35	1.00	1.00	1.00	1.00		1.00	EARTHPRESSURE
	7	1.00	permanent load grouped in actions						ós SOIL PRESSURE

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Combination rule Number 25
Ultimate Earthquake combin.
Superposition according to manual MAXIMA formula 3
Resulting loadcases type Ultimate Earthquake combin.
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'

```
     LC factor Type of loadcase                          Title
C     G   1.00  1.00  1.00  1.00  1.00   1.00 CREEP AND SHRINKAGE
     14   1.00 permanent load grouped in actions            CREEP
E     E   1.00  0.00  1.00  1.00  1.00   1.00 EARTHQUAKE COMBINATIONS
     11   1.00 Exclusive LC   A17          Åq SOIL
E     E   1.00  0.00  1.00  1.00  1.00   1.00 EARTHQUAKE COMBINATIONS
     10   1.00 Exclusive LC   A17          Åq CONCRETE ZZ
G     G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS
      1   1.00 permanent load grouped in actions            DEAD LOAD
G_2   G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS G_2
      2   1.00 permanent load grouped in actions            COVER
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      5   1.00 Conditional LC              Q PRESSURE DYN
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      3   1.00 Conditional LC              VARIABLE LOADING
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      6   1.00 Conditional LC              Pw WATER PRESSURE INTERN
R     G   1.35  1.00  1.00  1.00  1.00   1.00 EARTHPRESSURE
      7   1.00 permanent load grouped in actions            ós SOIL PRESSURE
```

Combination rule Number 26
Ultimate Design combination
Superposition according to manual MAXIMA formula 1
Resulting loadcases type Ultimate Design combination
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'

```
     LC factor Type of loadcase                          Title
C     G   1.00  1.00  1.00  1.00  1.00   1.00 CREEP AND SHRINKAGE
     14   1.00 permanent load grouped in actions            CREEP
G     G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS
      1   1.00 permanent load grouped in actions            DEAD LOAD
G_2   G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS G_2
      2   1.00 permanent load grouped in actions            COVER
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      3   1.00 Conditional LC              VARIABLE LOADING
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      6   1.00 Conditional LC              Pw WATER PRESSURE INTERN
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      4   1.00 Conditional LC              Q PRESSURE STATIC
R     G   1.35  1.00  1.00  1.00  1.00   1.00 EARTHPRESSURE
      7   1.00 permanent load grouped in actions            ós SOIL PRESSURE
T     Q   1.50  0.00  0.60  0.50  0.00   0.60 TEMPERATURE
     13   1.00 Exclusive LC   A14          TEMP UNIFORM -
```

Combination rule Number 27
Ultimate Design combination
Superposition according to manual MAXIMA formula 1
Resulting loadcases type Ultimate Design combination
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'

```
     LC factor Type of loadcase                          Title
C     G   1.00  1.00  1.00  1.00  1.00   1.00 CREEP AND SHRINKAGE
     14   1.00 permanent load grouped in actions            CREEP
G     G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS
      1   1.00 permanent load grouped in actions            DEAD LOAD
G_2   G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS G_2
      2   1.00 permanent load grouped in actions            COVER
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
```

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Combination rule Number 27
Ultimate Design combination
Superposition according to manual MAXIMA formula 1
Resulting loadcases type Ultimate Design combination
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'

```
     LC factor Type of loadcase                          Title
      3   1.00 Conditional LC              VARIABLE LOADING
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      6   1.00 Conditional LC              Pw WATER PRESSURE INTERN
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      4   1.00 Conditional LC              Q PRESSURE STATIC
R     G   1.35  1.00  1.00  1.00  1.00   1.00 EARTHPRESSURE
      7   1.00 permanent load grouped in actions            ós SOIL PRESSURE
T     Q   1.50  0.00  0.60  0.50  0.00   0.60 TEMPERATURE
     12   1.00 Exclusive LC   A14          TEMP UNIFORM +
```

Combination rule Number 28
Service: Permanent combination
Superposition according to manual MAXIMA formula 7
Resulting loadcases type Service: Permanent combination
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'

```
     LC factor Type of loadcase                          Title
C     G   1.00  1.00  1.00  1.00  1.00   1.00 CREEP AND SHRINKAGE
     14   1.00 permanent load grouped in actions            CREEP
G     G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS
      1   1.00 permanent load grouped in actions            DEAD LOAD
G_2   G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS G_2
      2   1.00 permanent load grouped in actions            COVER
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      3   1.00 Conditional LC              VARIABLE LOADING
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      6   1.00 Conditional LC              Pw WATER PRESSURE INTERN
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      4   1.00 Conditional LC              Q PRESSURE STATIC
R     G   1.35  1.00  1.00  1.00  1.00   1.00 EARTHPRESSURE
      7   1.00 permanent load grouped in actions            ós SOIL PRESSURE
T     Q   1.50  0.00  0.60  0.50  0.00   0.60 TEMPERATURE
     23   1.00 Exclusive LC   A14          dT SUMMER FULL SOIL
```

Combination rule Number 29
Service: Permanent combination
Superposition according to manual MAXIMA formula 7
Resulting loadcases type Service: Permanent combination
Loadcase selection and Actions
Act type gam-u gam-f psi-O psi-1 psi-2 psi-1'

```
     LC factor Type of loadcase                          Title
C     G   1.00  1.00  1.00  1.00  1.00   1.00 CREEP AND SHRINKAGE
     14   1.00 permanent load grouped in actions            CREEP
G     G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS
      1   1.00 permanent load grouped in actions            DEAD LOAD
G_2   G   1.35  1.00  1.00  1.00  1.00   1.00 DEAD LOADS G_2
      2   1.00 permanent load grouped in actions            COVER
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      3   1.00 Conditional LC              VARIABLE LOADING
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      6   1.00 Conditional LC              Pw WATER PRESSURE INTERN
Q     Q   1.50  0.00  0.80  0.50  0.30   0.70 VARIABLE Load
      4   1.00 Conditional LC              Q PRESSURE STATIC
R     G   1.35  1.00  1.00  1.00  1.00   1.00 EARTHPRESSURE
      7   1.00 permanent load grouped in actions            ós SOIL PRESSURE
T     Q   1.50  0.00  0.60  0.50  0.00   0.60 TEMPERATURE
     27   1.00 Exclusive LC   A14          dT WINTER FULL SOIL
```

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Superposition ultimate limit state

Generated Loadcases

Number	Comb	Title
21000	21	MAX-MX QUAD
21001	21	MIN-MX QUAD
21002	21	MAX-MY QUAD
21003	21	MIN-MY QUAD
21004	21	MAX-MXY QUAD
21005	21	MIN-MXY QUAD
21000	21	MAX-MX QUAK
21001	21	MIN-MX QUAK
21002	21	MAX-MY QUAK
21003	21	MIN-MY QUAK
21004	21	MAX-MXY QUAK
21005	21	MIN-MXY QUAK
21006	21	MAX-VX QUAD
21007	21	MIN-VX QUAD
21006	21	MAX-VX QUAK
21007	21	MIN-VX QUAK
21008	21	MAX-VY QUAD
21009	21	MIN-VY QUAD
21008	21	MAX-VY QUAK
21009	21	MIN-VY QUAK
21010	21	MAX-NXX QUAD
21011	21	MIN-NXX QUAD
21012	21	MAX-NYY QUAD
21013	21	MIN-NYY QUAD
21014	21	MAX-NXY QUAD
21015	21	MIN-NXY QUAD
21010	21	MAX-NXX QUAK
21011	21	MIN-NXX QUAK
21012	21	MAX-NYY QUAK
21013	21	MIN-NYY QUAK
21014	21	MAX-NXY QUAK
21015	21	MIN-NXY QUAK
21500	21	MAX-P QUAD
21501	21	MIN-P QUAD
21502	21	MAX-PT QUAD
21503	21	MIN-PT QUAD
22000	22	MAX-MX QUAD
22001	22	MIN-MX QUAD
22002	22	MAX-MY QUAD
22003	22	MIN-MY QUAD
22004	22	MAX-MXY QUAD
22005	22	MIN-MXY QUAD
22000	22	MAX-MX QUAK
22001	22	MIN-MX QUAK
22002	22	MAX-MY QUAK
22003	22	MIN-MY QUAK
22004	22	MAX-MXY QUAK
22005	22	MIN-MXY QUAK
22006	22	MAX-VX QUAD
22007	22	MIN-VX QUAD
22006	22	MAX-VX QUAK
22007	22	MIN-VX QUAK
22008	22	MAX-VY QUAD
22009	22	MIN-VY QUAD
22008	22	MAX-VY QUAK
22009	22	MIN-VY QUAK
22010	22	MAX-NXX QUAD
22011	22	MIN-NXX QUAD
22012	22	MAX-NYY QUAD
22013	22	MIN-NYY QUAD
22014	22	MAX-NXY QUAD
22015	22	MIN-NXY QUAD
22010	22	MAX-NXX QUAK
22011	22	MIN-NXX QUAK

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Superposition ultimate limit state

Generated Loadcases

Number	Comb	Title
22012	22	MAX-NYY QUAK
22013	22	MIN-NYY QUAK
22014	22	MAX-NXY QUAK
22015	22	MIN-NXY QUAK
22500	22	MAX-P QUAD
22501	22	MIN-P QUAD
22502	22	MAX-PT QUAD
22503	22	MIN-PT QUAD
23000	23	MAXE-MX QUAD
23001	23	MINE-MX QUAD
23002	23	MAXE-MY QUAD
23003	23	MINE-MY QUAD
23004	23	MAXE-MXY QUAD
23005	23	MINE-MXY QUAD
23000	23	MAXE-MX QUAK
23001	23	MINE-MX QUAK
23002	23	MAXE-MY QUAK
23003	23	MINE-MY QUAK
23004	23	MAXE-MXY QUAK
23005	23	MINE-MXY QUAK
23006	23	MAXE-VX QUAD
23007	23	MINE-VX QUAD
23006	23	MAXE-VX QUAK
23007	23	MINE-VX QUAK
23008	23	MAXE-VY QUAD
23009	23	MINE-VY QUAD
23008	23	MAXE-VY QUAK
23009	23	MINE-VY QUAK
23010	23	MAXE-NXX QUAD
23011	23	MINE-NXX QUAD
23012	23	MAXE-NYY QUAD
23013	23	MINE-NYY QUAD
23014	23	MAXE-NXY QUAD
23015	23	MINE-NXY QUAD
23010	23	MAXE-NXX QUAK
23011	23	MINE-NXX QUAK
23012	23	MAXE-NYY QUAK
23013	23	MINE-NYY QUAK
23014	23	MAXE-NXY QUAK
23015	23	MINE-NXY QUAK
23500	23	MAXE-P QUAD
23501	23	MINE-P QUAD
23502	23	MAXE-PT QUAD
23503	23	MINE-PT QUAD
24000	24	MAXE-MX QUAD
24001	24	MINE-MX QUAD
24002	24	MAXE-MY QUAD
24003	24	MINE-MY QUAD
24004	24	MAXE-MXY QUAD
24005	24	MINE-MXY QUAD
24000	24	MAXE-MX QUAK
24001	24	MINE-MX QUAK
24002	24	MAXE-MY QUAK
24003	24	MINE-MY QUAK
24004	24	MAXE-MXY QUAK
24005	24	MINE-MXY QUAK
24006	24	MAXE-VX QUAD
24007	24	MINE-VX QUAD
24006	24	MAXE-VX QUAK
24007	24	MINE-VX QUAK
24008	24	MAXE-VY QUAD
24009	24	MINE-VY QUAD
24008	24	MAXE-VY QUAK
24009	24	MINE-VY QUAK

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Superposition ultimate limit state

Generated Loadcases

Number	Comb	Title
24010	24	MAXE-NXX QUAD
24011	24	MINE-NXX QUAD
24012	24	MAXE-NYY QUAD
24013	24	MINE-NYY QUAD
24014	24	MAXE-NXY QUAD
24015	24	MINE-NXY QUAD
24010	24	MAXE-NXX QUAK
24011	24	MINE-NXX QUAK
24012	24	MAXE-NYY QUAK
24013	24	MINE-NYY QUAK
24014	24	MAXE-NXY QUAK
24015	24	MINE-NXY QUAK
24500	24	MAXE-P QUAD
24501	24	MINE-P QUAD
24502	24	MAXE-PT QUAD
24503	24	MINE-PT QUAD
25000	25	MAXE-MX QUAD
25001	25	MINE-MX QUAD
25002	25	MAXE-MY QUAD
25003	25	MINE-MY QUAD
25004	25	MAXE-MXY QUAD
25005	25	MINE-MXY QUAD
25000	25	MAXE-MX QUAK
25001	25	MINE-MX QUAK
25002	25	MAXE-MY QUAK
25003	25	MINE-MY QUAK
25004	25	MAXE-MXY QUAK
25005	25	MINE-MXY QUAK
25006	25	MAXE-VX QUAD
25007	25	MINE-VX QUAD
25006	25	MAXE-VX QUAK
25007	25	MINE-VX QUAK
25008	25	MAXE-VY QUAD
25009	25	MINE-VY QUAD
25008	25	MAXE-VY QUAK
25009	25	MINE-VY QUAK
25010	25	MAXE-NXX QUAD
25011	25	MINE-NXX QUAD
25012	25	MAXE-NYY QUAD
25013	25	MINE-NYY QUAD
25014	25	MAXE-NXY QUAD
25015	25	MINE-NXY QUAD
25010	25	MAXE-NXX QUAK
25011	25	MINE-NXX QUAK
25012	25	MAXE-NYY QUAK
25013	25	MINE-NYY QUAK
25014	25	MAXE-NXY QUAK
25015	25	MINE-NXY QUAK
25500	25	MAXE-P QUAD
25501	25	MINE-P QUAD
25502	25	MAXE-PT QUAD
25503	25	MINE-PT QUAD
26000	26	MAX-MX QUAD
26001	26	MIN-MX QUAD
26002	26	MAX-MY QUAD
26003	26	MIN-MY QUAD
26004	26	MAX-MXY QUAD
26005	26	MIN-MXY QUAD
26000	26	MAX-MX QUAK
26001	26	MIN-MX QUAK
26002	26	MAX-MY QUAK
26003	26	MIN-MY QUAK
26004	26	MAX-MXY QUAK
26005	26	MIN-MXY QUAK

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AS DAMASI
Superposition ultimate limit state

Generated Loadcases

Number	Comb	Title
26006	26	MAX-VX QUAD
26007	26	MIN-VX QUAD
26006	26	MAX-VX QUAK
26007	26	MIN-VX QUAK
26008	26	MAX-VY QUAD
26009	26	MIN-VY QUAD
26008	26	MAX-VY QUAK
26009	26	MIN-VY QUAK
26010	26	MAX-NXX QUAD
26011	26	MIN-NXX QUAD
26012	26	MAX-NYY QUAD
26013	26	MIN-NYY QUAD
26014	26	MAX-NXY QUAD
26015	26	MIN-NXY QUAD
26010	26	MAX-NXX QUAK
26011	26	MIN-NXX QUAK
26012	26	MAX-NYY QUAK
26013	26	MIN-NYY QUAK
26014	26	MAX-NXY QUAK
26015	26	MIN-NXY QUAK
26500	26	MAX-P QUAD
26501	26	MIN-P QUAD
26502	26	MAX-PT QUAD
26503	26	MIN-PT QUAD
27000	27	MAX-MX QUAD
27001	27	MIN-MX QUAD
27002	27	MAX-MY QUAD
27003	27	MIN-MY QUAD
27004	27	MAX-MXY QUAD
27005	27	MIN-MXY QUAD
27000	27	MAX-MX QUAK
27001	27	MIN-MX QUAK
27002	27	MAX-MY QUAK
27003	27	MIN-MY QUAK
27004	27	MAX-MXY QUAK
27005	27	MIN-MXY QUAK
27006	27	MAX-VX QUAD
27007	27	MIN-VX QUAD
27006	27	MAX-VX QUAK
27007	27	MIN-VX QUAK
27008	27	MAX-VY QUAD
27009	27	MIN-VY QUAD
27008	27	MAX-VY QUAK
27009	27	MIN-VY QUAK
27010	27	MAX-NXX QUAD
27011	27	MIN-NXX QUAD
27012	27	MAX-NYY QUAD
27013	27	MIN-NYY QUAD
27014	27	MAX-NXY QUAD
27015	27	MIN-NXY QUAD
27010	27	MAX-NXX QUAK
27011	27	MIN-NXX QUAK
27012	27	MAX-NYY QUAK
27013	27	MIN-NYY QUAK
27014	27	MAX-NXY QUAK
27015	27	MIN-NXY QUAK
27500	27	MAX-P QUAD
27501	27	MIN-P QUAD
27502	27	MAX-PT QUAD
27503	27	MIN-PT QUAD
28000	28	MAXP-MX QUAD
28001	28	MINP-MX QUAD
28002	28	MAXP-MY QUAD
28003	28	MINP-MY QUAD

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Superposition ultimate limit state

Generated Loadcases

Number	Comb	Title
28004	28	MAXP-MXY QUAD
28005	28	MINP-MXY QUAD
28000	28	MAXP-MX QUAK
28001	28	MINP-MX QUAK
28002	28	MAXP-MY QUAK
28003	28	MINP-MY QUAK
28004	28	MAXP-MXY QUAK
28005	28	MINP-MXY QUAK
28006	28	MAXP-VX QUAD
28007	28	MINP-VX QUAD
28006	28	MAXP-VX QUAK
28007	28	MINP-VX QUAK
28008	28	MAXP-VY QUAD
28009	28	MINP-VY QUAD
28008	28	MAXP-VY QUAK
28009	28	MINP-VY QUAK
28010	28	MAXP-NXX QUAD
28011	28	MINP-NXX QUAD
28012	28	MAXP-NYY QUAD
28013	28	MINP-NYY QUAD
28014	28	MAXP-NXY QUAD
28015	28	MINP-NXY QUAD
28010	28	MAXP-NXX QUAK
28011	28	MINP-NXX QUAK
28012	28	MAXP-NYY QUAK
28013	28	MINP-NYY QUAK
28014	28	MAXP-NXY QUAK
28015	28	MINP-NXY QUAK
28500	28	MAXP-P QUAD
28501	28	MINP-P QUAD
28502	28	MAXP-PT QUAD
28503	28	MINP-PT QUAD
29000	29	MAXP-MX QUAD
29001	29	MINP-MX QUAD
29002	29	MAXP-MY QUAD
29003	29	MINP-MY QUAD
29004	29	MAXP-MXY QUAD
29005	29	MINP-MXY QUAD
29000	29	MAXP-MX QUAK
29001	29	MINP-MX QUAK
29002	29	MAXP-MY QUAK
29003	29	MINP-MY QUAK
29004	29	MAXP-MXY QUAK
29005	29	MINP-MXY QUAK
29006	29	MAXP-VX QUAD
29007	29	MINP-VX QUAD
29006	29	MAXP-VX QUAK
29007	29	MINP-VX QUAK
29008	29	MAXP-VY QUAD
29009	29	MINP-VY QUAD
29008	29	MAXP-VY QUAK
29009	29	MINP-VY QUAK
29010	29	MAXP-NXX QUAD
29011	29	MINP-NXX QUAD
29012	29	MAXP-NYY QUAD
29013	29	MINP-NYY QUAD
29014	29	MAXP-NXY QUAD
29015	29	MINP-NXY QUAD
29010	29	MAXP-NXX QUAK
29011	29	MINP-NXX QUAK
29012	29	MAXP-NYY QUAK
29013	29	MINP-NYY QUAK
29014	29	MAXP-NXY QUAK
29015	29	MINP-NXY QUAK

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Superposition ultimate limit state

Generated Loadcases

Number	Comb	Title
29500	29	MAXP-P QUAD
29501	29	MINP-P QUAD
29502	29	MAXP-PT QUAD
29503	29	MINP-PT QUAD
19000	19	MAXP-MX QUAD
19001	19	MINP-MX QUAD
19002	19	MAXP-MY QUAD
19003	19	MINP-MY QUAD
19004	19	MAXP-MXY QUAD
19005	19	MINP-MXY QUAD
19000	19	MAXP-MX QUAK
19001	19	MINP-MX QUAK
19002	19	MAXP-MY QUAK
19003	19	MINP-MY QUAK
19004	19	MAXP-MXY QUAK
19005	19	MINP-MXY QUAK
19006	19	MAXP-VX QUAD
19007	19	MINP-VX QUAD
19006	19	MAXP-VX QUAK
19007	19	MINP-VX QUAK
19008	19	MAXP-VY QUAD
19009	19	MINP-VY QUAD
19008	19	MAXP-VY QUAK
19009	19	MINP-VY QUAK
19010	19	MAXP-NXX QUAD
19011	19	MINP-NXX QUAD
19012	19	MAXP-NYY QUAD
19013	19	MINP-NYY QUAD
19014	19	MAXP-NXY QUAD
19015	19	MINP-NXY QUAD
19010	19	MAXP-NXX QUAK
19011	19	MINP-NXX QUAK
19012	19	MAXP-NYY QUAK
19013	19	MINP-NYY QUAK
19014	19	MAXP-NXY QUAK
19015	19	MINP-NXY QUAK
19500	19	MAXP-P QUAD
19501	19	MINP-P QUAD
19502	19	MAXP-PT QUAD
19503	19	MINP-PT QUAD

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design parameter list

Reinforcementparameter two layer reinforcement

Selection Grp No.	elem No.	bar-distance d1-u d1-l [cm]	d2-u d2-l [cm]	bar-diameter ds-u ds-l [mm]	2.lay ds-2-l [mm]	crackwidth wk-u wk-l [mm]	2.lay wk-2-l [mm]	steelstress sigsu sigsl [MPa]	2.lay sigs2l [MPa]
default		5.0	6.0	14	14	0.20	0.20	-	-
		5.0	6.0	14	14	0.20	0.20	-	-

The reinforcement directions relate to the local coordinate system of
the elements and have to be plotted graphically.
With the input of a steel stress sigsu... the 'crack design according tables'
uses this given stress sigsu for the corresponding layer. With this input,
the check can be done for bar distances instead of bar diameters.

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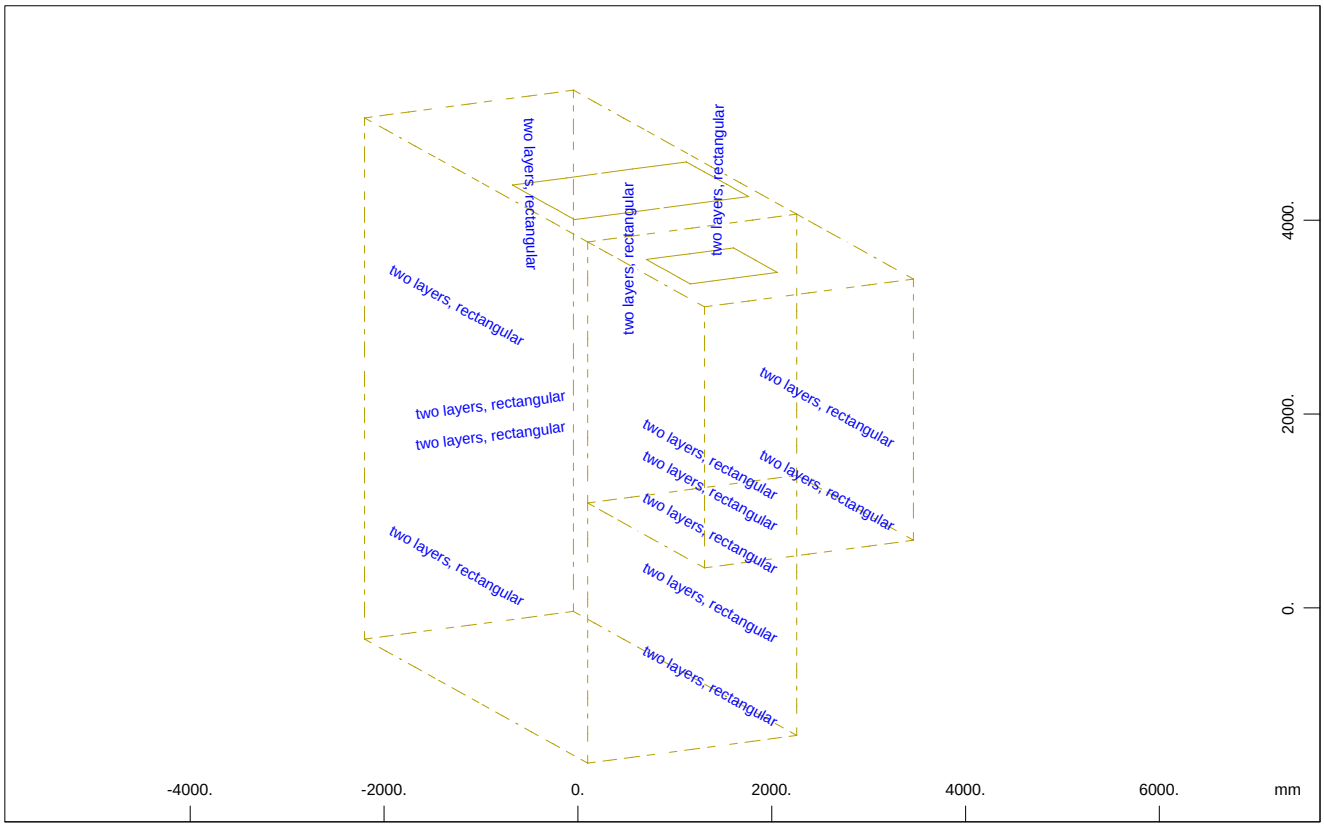
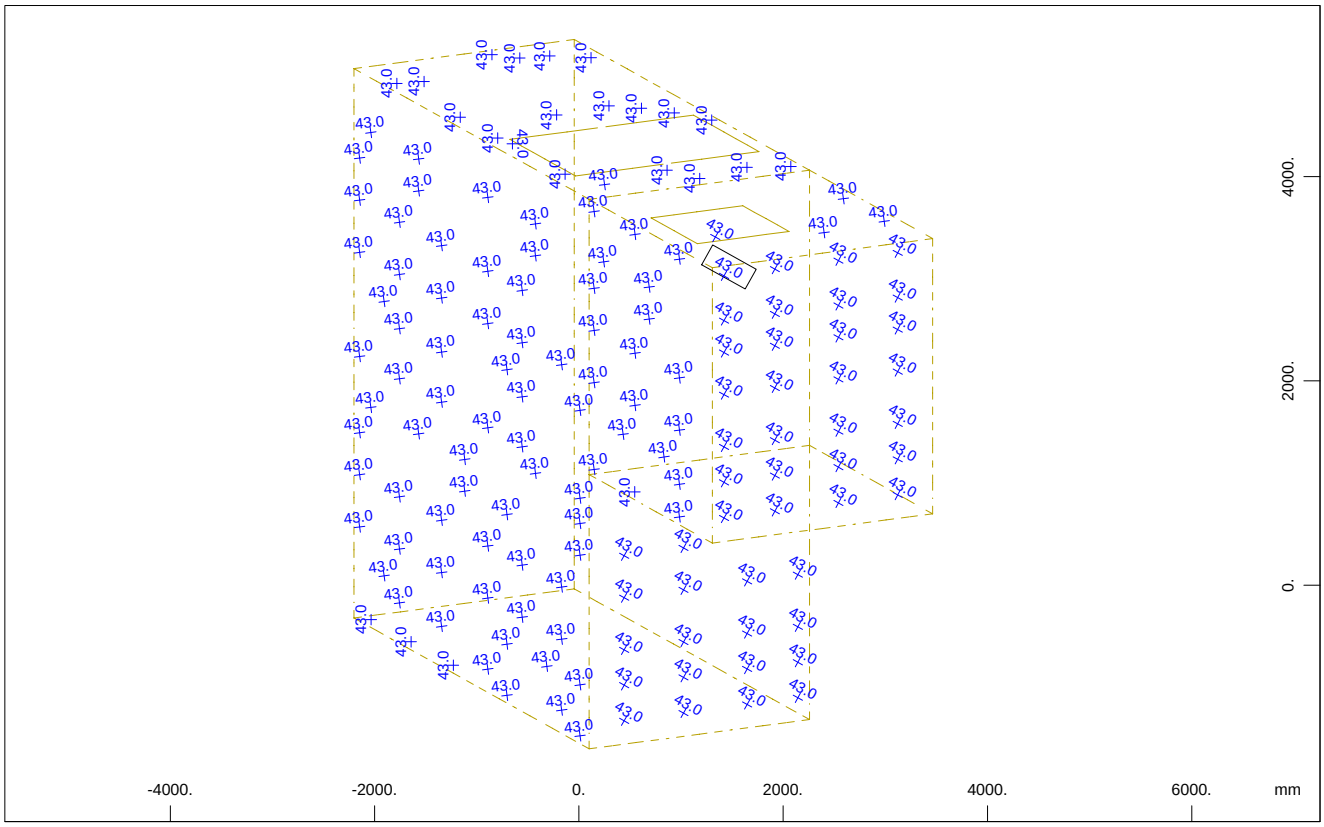


Laying of prescribed reinforcements in Elements

M 1 : 78
X * 0.502
Y * 0.906
Z * 0.962



Cover of upper Reinforcements in Elements in mm (Max=43.0)

M 1 : 74
X * 0.502
Y * 0.906
Z * 0.962

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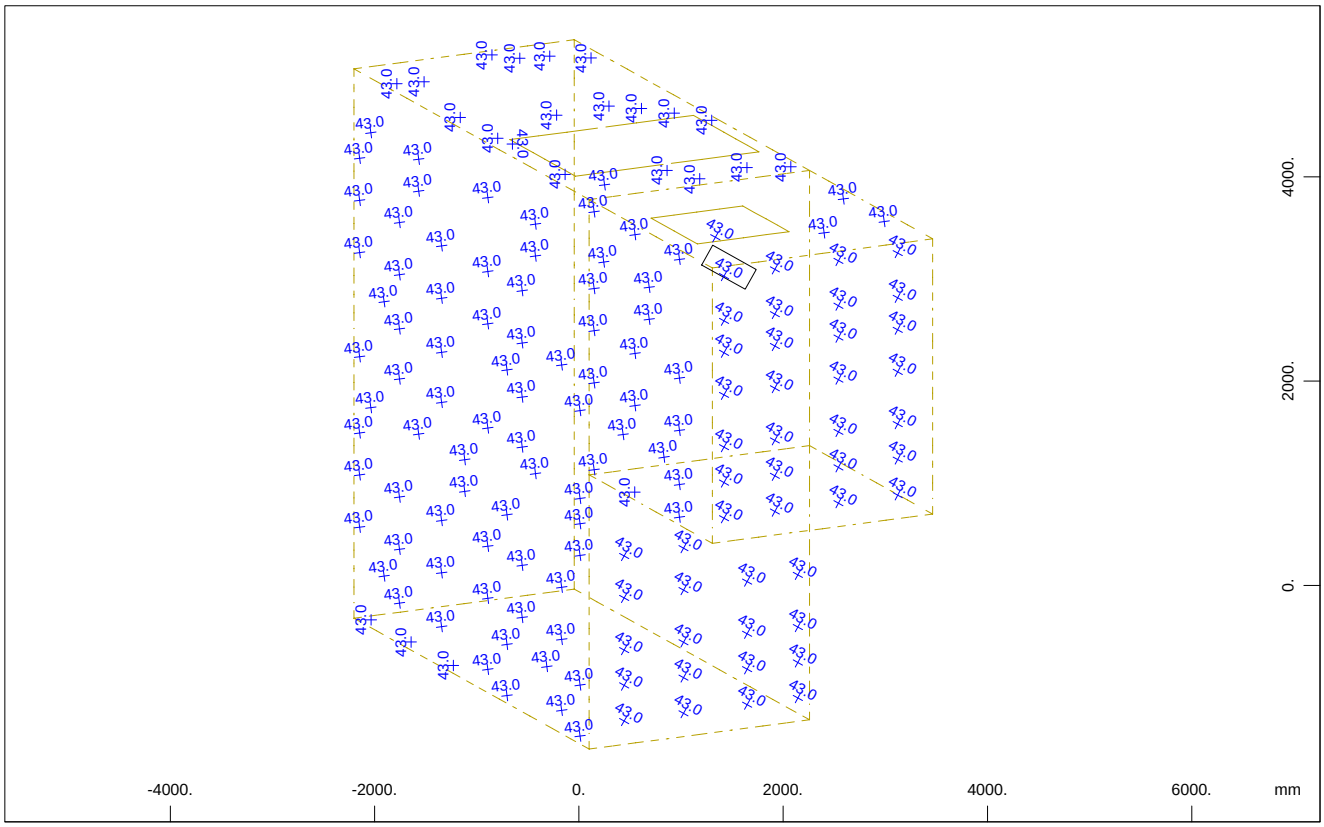
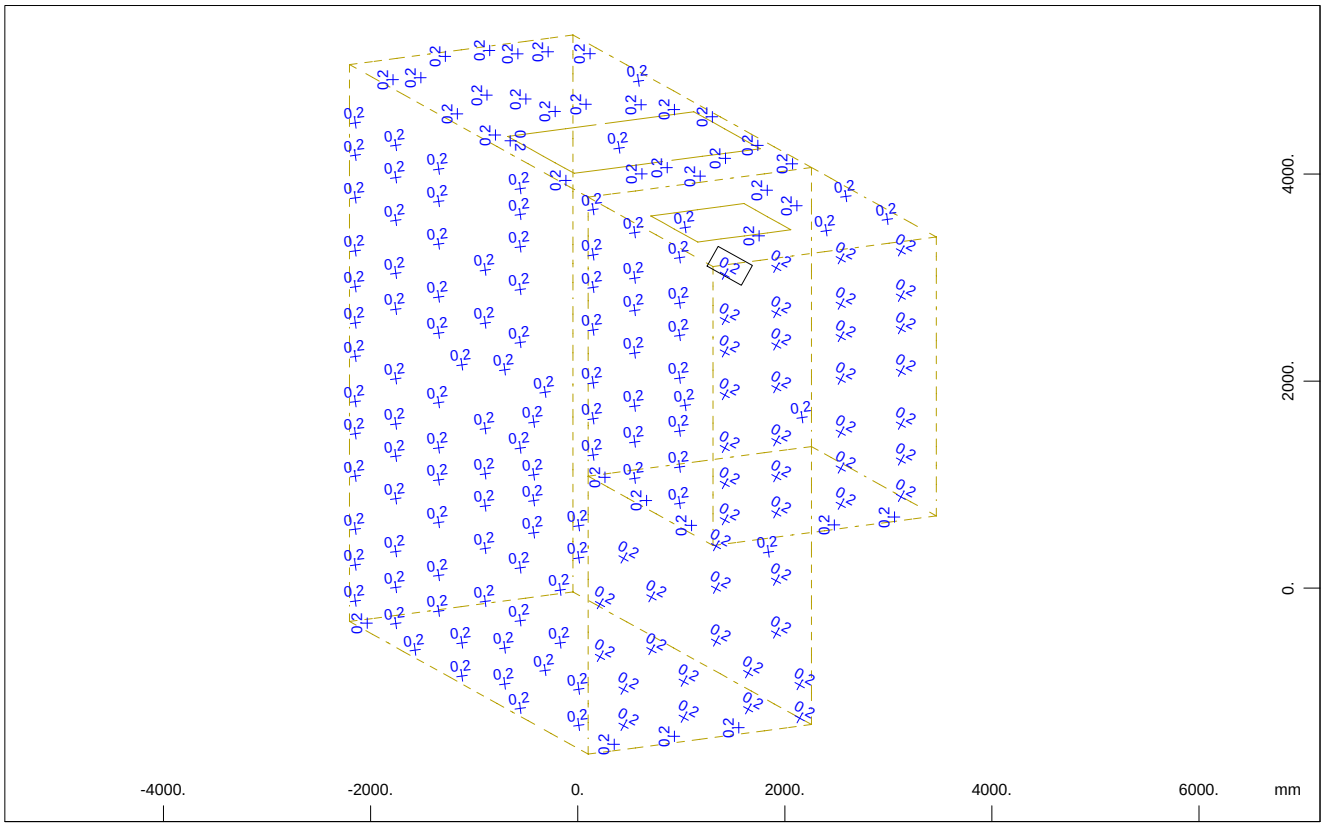


Cover of lower Reinforcements in Elements in mm (Max=43.0)

M 1 : 74
X * 0.502
Y * 0.906
Z * 0.962



Crack width of prescribed upper Reinforcements in Elements in mm (Max=0.200)

M 1 : 73
X * 0.502
Y * 0.906
Z * 0.962

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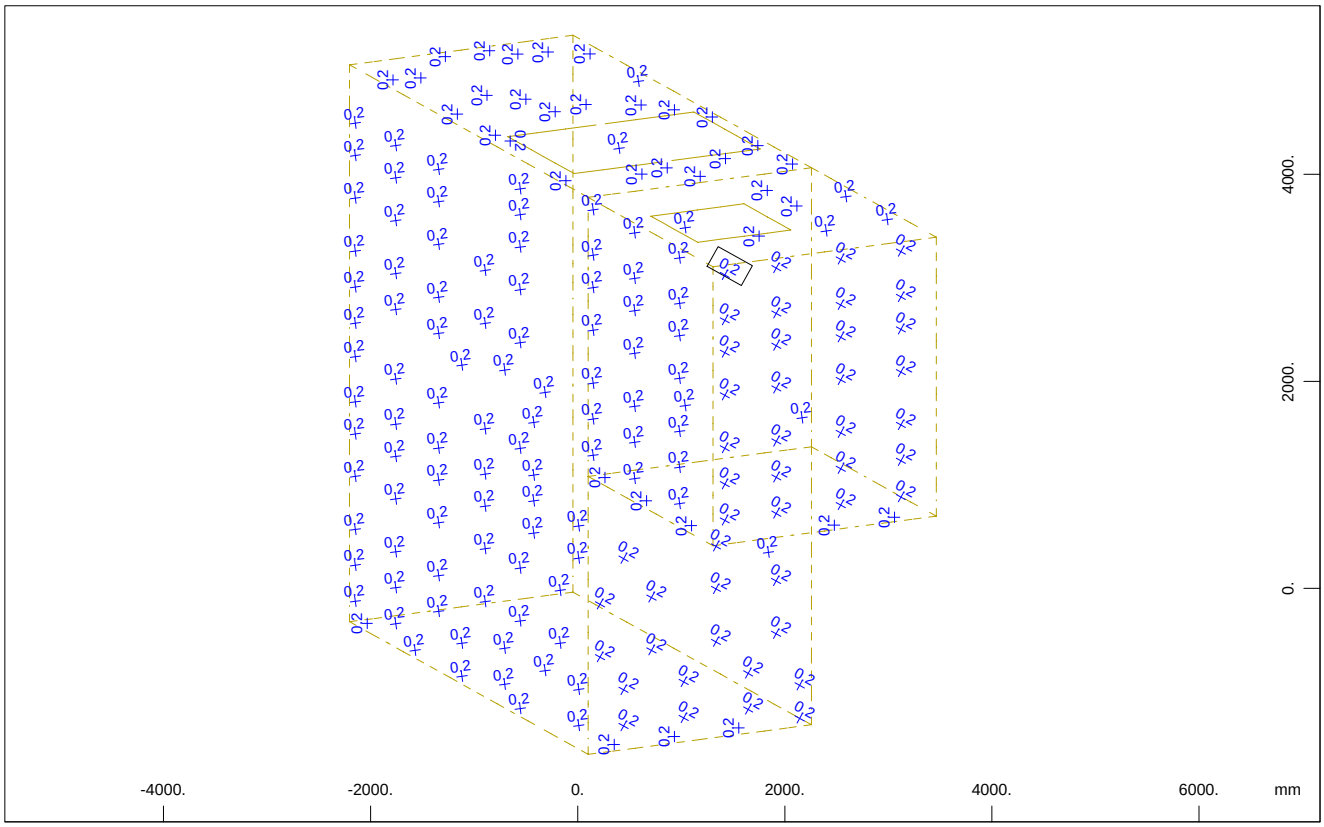
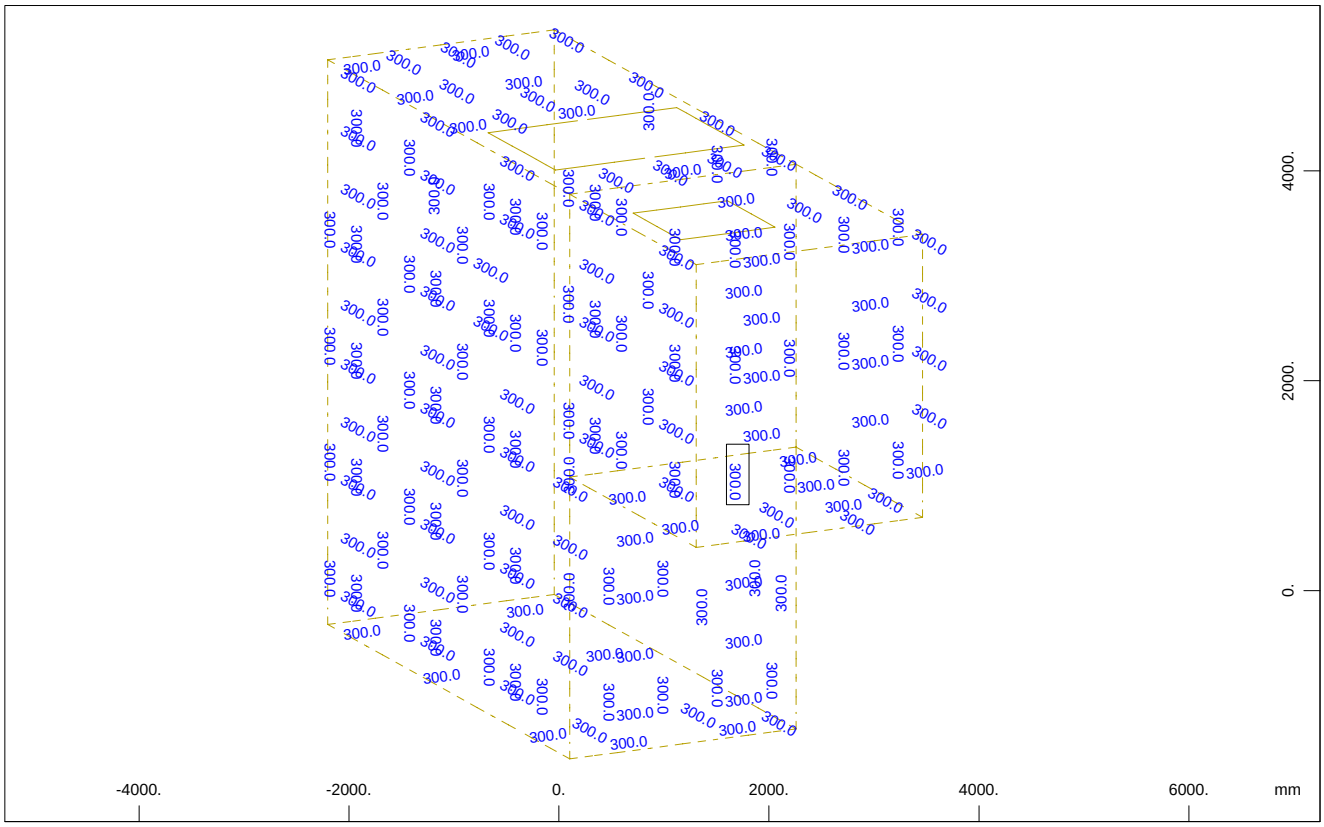


Crack width of prescribed lower Reinforcements in Elements in mm (Max=0.200)

M 1 : 73
X * 0.502
Y * 0.906
Z * 0.962



Minimum of prescribed upper Reinforcements in Elements in mm2/m (Max=300.0)

M 1 : 72
X * 0.502
Y * 0.906
Z * 0.962

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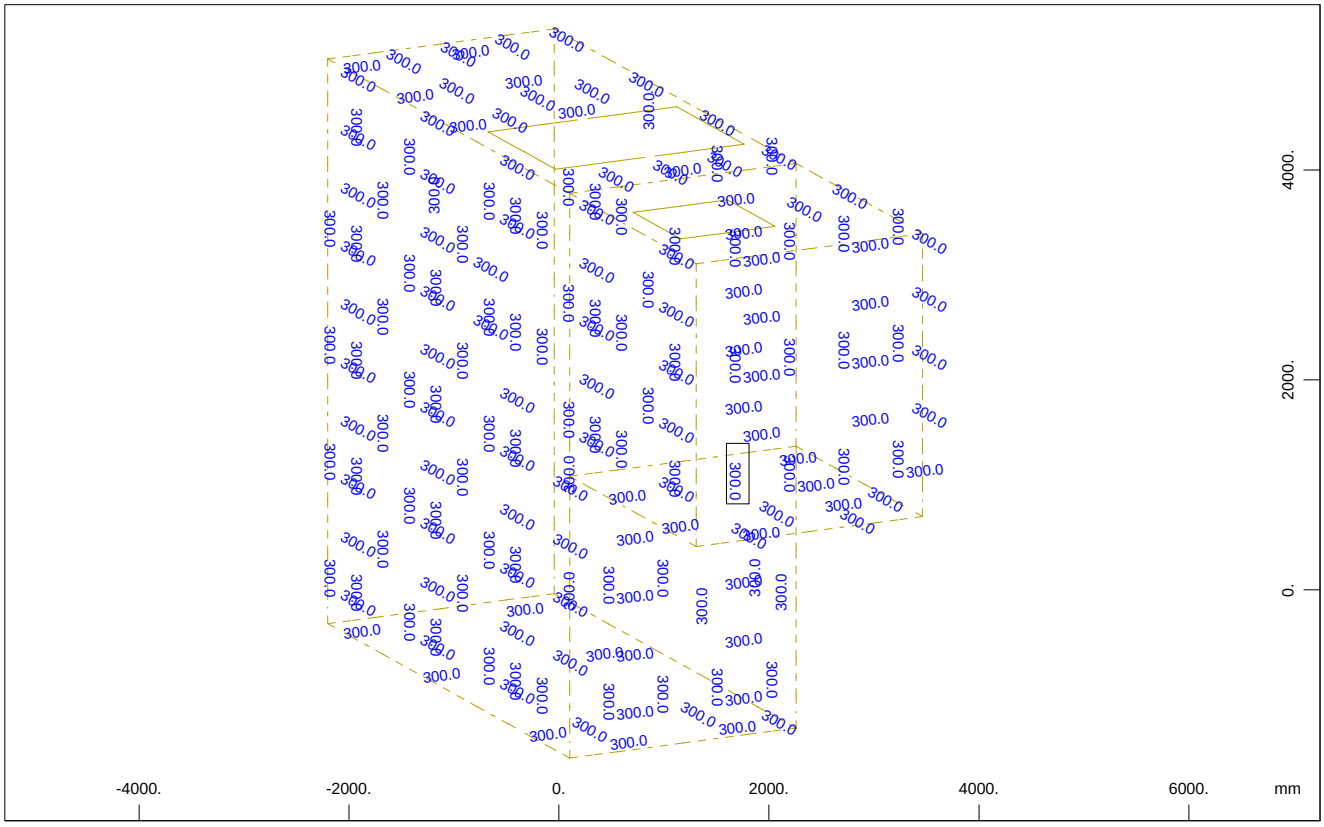

Minimum of prescribed lower Reinforcements in Elements in mm2/m (Max=300.0)

M 1 : 72
X * 0.502
Y * 0.906
Z * 0.962

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Design according to EC 2 EN 1992-1-1:2004(E)
Loadcases have been calculated in the Ultimate Limit State
In BEMESS no additional load safety factor is applied.

Load Cases for the Design

Loadcase 1100	MAX-MX QUAK	
Loadcase 1101	MIN-MX QUAK	
Loadcase 1102	MAX-MY QUAK	
Loadcase 1103	MIN-MY QUAK	
Loadcase 1104	MAX-MXY QUAK	
Loadcase 1105	MIN-MXY QUAK	
Loadcase 1106	MAX-VX QUAK	
Loadcase 1107	MIN-VX QUAK	
Loadcase 1108	MAX-VY QUAK	
Loadcase 1109	MIN-VY QUAK	
Loadcase 1110	MAX-NXX QUAK	
Loadcase 1111	MIN-NXX QUAK	
Loadcase 1112	MAX-NYY QUAK	
Loadcase 1113	MIN-NYY QUAK	
Loadcase 1114	MAX-NXY QUAK	
Loadcase 1115	MIN-NXY QUAK	
Loadcase 1150	MAX-P QUAD	Bedding stresses for punching design
Loadcase 1151	MIN-P QUAD	Bedding stresses for punching design
Loadcase 1152	MAX-PT QUAD	Bedding stresses for punching design
Loadcase 1153	MIN-PT QUAD	Bedding stresses for punching design
Loadcase 2100	MAXE-MX QUAK	
Loadcase 2101	MINE-MX QUAK	
Loadcase 2102	MAXE-MY QUAK	
Loadcase 2103	MINE-MY QUAK	
Loadcase 2104	MAXE-MXY QUAK	
Loadcase 2105	MINE-MXY QUAK	
Loadcase 2106	MAXE-VX QUAK	
Loadcase 2107	MINE-VX QUAK	
Loadcase 2108	MAXE-VY QUAK	
Loadcase 2109	MINE-VY QUAK	
Loadcase 2110	MAXE-NXX QUAK	
Loadcase 2111	MINE-NXX QUAK	
Loadcase 2112	MAXE-NYY QUAK	
Loadcase 2113	MINE-NYY QUAK	
Loadcase 2114	MAXE-NXY QUAK	
Loadcase 2115	MINE-NXY QUAK	
Loadcase 2150	MAXE-P QUAD	Bedding stresses for punching design
Loadcase 2151	MINE-P QUAD	Bedding stresses for punching design
Loadcase 2152	MAXE-PT QUAD	Bedding stresses for punching design
Loadcase 2153	MINE-PT QUAD	Bedding stresses for punching design
Loadcase 3100	MAXE-MX QUAK	
Loadcase 3101	MINE-MX QUAK	
Loadcase 3102	MAXE-MY QUAK	
Loadcase 3103	MINE-MY QUAK	
Loadcase 3104	MAXE-MXY QUAK	
Loadcase 3105	MINE-MXY QUAK	
Loadcase 3106	MAXE-VX QUAK	
Loadcase 3107	MINE-VX QUAK	
Loadcase 3108	MAXE-VY QUAK	
Loadcase 3109	MINE-VY QUAK	
Loadcase 3110	MAXE-NXX QUAK	
Loadcase 3111	MINE-NXX QUAK	
Loadcase 3112	MAXE-NYY QUAK	
Loadcase 3113	MINE-NYY QUAK	
Loadcase 3114	MAXE-NXY QUAK	
Loadcase 3115	MINE-NXY QUAK	
Loadcase 3150	MAXE-P QUAD	Bedding stresses for punching design
Loadcase 3151	MINE-P QUAD	Bedding stresses for punching design
Loadcase 3152	MAXE-PT QUAD	Bedding stresses for punching design
Loadcase 3153	MINE-PT QUAD	Bedding stresses for punching design

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Load Cases for the Design

```
Loadcase 4100   MAXE-MX QUAK
Loadcase 4101   MINE-MX QUAK
Loadcase 4102   MAXE-MY QUAK
Loadcase 4103   MINE-MY QUAK
Loadcase 4104   MAXE-MXY QUAK
Loadcase 4105   MINE-MXY QUAK
Loadcase 4106   MAXE-VX QUAK
Loadcase 4107   MINE-VX QUAK
Loadcase 4108   MAXE-VY QUAK
Loadcase 4109   MINE-VY QUAK
Loadcase 4110   MAXE-NXX QUAK
Loadcase 4111   MINE-NXX QUAK
Loadcase 4112   MAXE-NYY QUAK
Loadcase 4113   MINE-NYY QUAK
Loadcase 4114   MAXE-NXY QUAK
Loadcase 4115   MINE-NXY QUAK
Loadcase 4150   MAXE-P QUAD                Bedding stresses for punching design
Loadcase 4151   MINE-P QUAD                Bedding stresses for punching design
Loadcase 4152   MAXE-PT QUAD               Bedding stresses for punching design
Loadcase 4153   MINE-PT QUAD               Bedding stresses for punching design
Loadcase 5100   MAX-MX QUAK
Loadcase 5101   MIN-MX QUAK
Loadcase 5102   MAX-MY QUAK
Loadcase 5103   MIN-MY QUAK
Loadcase 5104   MAX-MXY QUAK
Loadcase 5105   MIN-MXY QUAK
Loadcase 5106   MAX-VX QUAK
Loadcase 5107   MIN-VX QUAK
Loadcase 5108   MAX-VY QUAK
Loadcase 5109   MIN-VY QUAK
Loadcase 5110   MAX-NXX QUAK
Loadcase 5111   MIN-NXX QUAK
Loadcase 5112   MAX-NYY QUAK
Loadcase 5113   MIN-NYY QUAK
Loadcase 5114   MAX-NXY QUAK
Loadcase 5115   MIN-NXY QUAK
Loadcase 5150   MAX-P QUAD                Bedding stresses for punching design
Loadcase 5151   MIN-P QUAD                Bedding stresses for punching design
Loadcase 5152   MAX-PT QUAD               Bedding stresses for punching design
Loadcase 5153   MIN-PT QUAD               Bedding stresses for punching design
Loadcase 6100   MAX-MX QUAK
Loadcase 6101   MIN-MX QUAK
Loadcase 6102   MAX-MY QUAK
Loadcase 6103   MIN-MY QUAK
Loadcase 6104   MAX-MXY QUAK
Loadcase 6105   MIN-MXY QUAK
Loadcase 6106   MAX-VX QUAK
Loadcase 6107   MIN-VX QUAK
Loadcase 6108   MAX-VY QUAK
Loadcase 6109   MIN-VY QUAK
Loadcase 6110   MAX-NXX QUAK
Loadcase 6111   MIN-NXX QUAK
Loadcase 6112   MAX-NYY QUAK
Loadcase 6113   MIN-NYY QUAK
Loadcase 6114   MAX-NXY QUAK
Loadcase 6115   MIN-NXY QUAK
Loadcase 6150   MAX-P QUAD                Bedding stresses for punching design
Loadcase 6151   MIN-P QUAD                Bedding stresses for punching design
Loadcase 6152   MAX-PT QUAD               Bedding stresses for punching design
Loadcase 6153   MIN-PT QUAD               Bedding stresses for punching design
Loadcase11000   MAX-MX QUAK
Loadcase11001   MIN-MX QUAK
Loadcase11002   MAX-MY QUAK
Loadcase11003   MIN-MY QUAK
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ULS design

Load Cases for the Design

```
Loadcase11004   MAX-MXY QUAK
Loadcase11005   MIN-MXY QUAK
Loadcase11006   MAX-VX QUAK
Loadcase11007   MIN-VX QUAK
Loadcase11008   MAX-VY QUAK
Loadcase11009   MIN-VY QUAK
Loadcase11010   MAX-NXX QUAK
Loadcase11011   MIN-NXX QUAK
Loadcase11012   MAX-NYY QUAK
Loadcase11013   MIN-NYY QUAK
Loadcase11014   MAX-NXY QUAK
Loadcase11015   MIN-NXY QUAK
Loadcase11500   MAX-P QUAD                 Bedding stresses for punching design
Loadcase11501   MIN-P QUAD                 Bedding stresses for punching design
Loadcase11502   MAX-PT QUAD                Bedding stresses for punching design
Loadcase11503   MIN-PT QUAD                Bedding stresses for punching design
Loadcase12000   MAX-MX QUAK
Loadcase12001   MIN-MX QUAK
Loadcase12002   MAX-MY QUAK
Loadcase12003   MIN-MY QUAK
Loadcase12004   MAX-MXY QUAK
Loadcase12005   MIN-MXY QUAK
Loadcase12006   MAX-VX QUAK
Loadcase12007   MIN-VX QUAK
Loadcase12008   MAX-VY QUAK
Loadcase12009   MIN-VY QUAK
Loadcase12010   MAX-NXX QUAK
Loadcase12011   MIN-NXX QUAK
Loadcase12012   MAX-NYY QUAK
Loadcase12013   MIN-NYY QUAK
Loadcase12014   MAX-NXY QUAK
Loadcase12015   MIN-NXY QUAK
Loadcase12500   MAX-P QUAD                 Bedding stresses for punching design
Loadcase12501   MIN-P QUAD                 Bedding stresses for punching design
Loadcase12502   MAX-PT QUAD                Bedding stresses for punching design
Loadcase12503   MIN-PT QUAD                Bedding stresses for punching design
Loadcase13000   MAXE-MX QUAK
Loadcase13001   MINE-MX QUAK
Loadcase13002   MAXE-MY QUAK
Loadcase13003   MINE-MY QUAK
Loadcase13004   MAXE-MXY QUAK
Loadcase13005   MINE-MXY QUAK
Loadcase13006   MAXE-VX QUAK
Loadcase13007   MINE-VX QUAK
Loadcase13008   MAXE-VY QUAK
Loadcase13009   MINE-VY QUAK
Loadcase13010   MAXE-NXX QUAK
Loadcase13011   MINE-NXX QUAK
Loadcase13012   MAXE-NYY QUAK
Loadcase13013   MINE-NYY QUAK
Loadcase13014   MAXE-NXY QUAK
Loadcase13015   MINE-NXY QUAK
Loadcase13500   MAXE-P QUAD                 Bedding stresses for punching design
Loadcase13501   MINE-P QUAD                 Bedding stresses for punching design
Loadcase13502   MAXE-PT QUAD                Bedding stresses for punching design
Loadcase13503   MINE-PT QUAD                Bedding stresses for punching design
Loadcase14000   MAXE-MX QUAK
Loadcase14001   MINE-MX QUAK
Loadcase14002   MAXE-MY QUAK
Loadcase14003   MINE-MY QUAK
Loadcase14004   MAXE-MXY QUAK
Loadcase14005   MINE-MXY QUAK
Loadcase14006   MAXE-VX QUAK
Loadcase14007   MINE-VX QUAK
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ULS design

Load Cases for the Design

```
Loadcase14008   MAXE-VY QUAK
Loadcase14009   MINE-VY QUAK
Loadcase14010   MAXE-NXX QUAK
Loadcase14011   MINE-NXX QUAK
Loadcase14012   MAXE-NYY QUAK
Loadcase14013   MINE-NYY QUAK
Loadcase14014   MAXE-NXY QUAK
Loadcase14015   MINE-NXY QUAK
Loadcase14500   MAXE-P QUAD                Bedding stresses for punching design
Loadcase14501   MINE-P QUAD                Bedding stresses for punching design
Loadcase14502   MAXE-PT QUAD               Bedding stresses for punching design
Loadcase14503   MINE-PT QUAD               Bedding stresses for punching design
Loadcase15000   MAXE-MX QUAK
Loadcase15001   MINE-MX QUAK
Loadcase15002   MAXE-MY QUAK
Loadcase15003   MINE-MY QUAK
Loadcase15004   MAXE-MXY QUAK
Loadcase15005   MINE-MXY QUAK
Loadcase15006   MAXE-VX QUAK
Loadcase15007   MINE-VX QUAK
Loadcase15008   MAXE-VY QUAK
Loadcase15009   MINE-VY QUAK
Loadcase15010   MAXE-NXX QUAK
Loadcase15011   MINE-NXX QUAK
Loadcase15012   MAXE-NYY QUAK
Loadcase15013   MINE-NYY QUAK
Loadcase15014   MAXE-NXY QUAK
Loadcase15015   MINE-NXY QUAK
Loadcase15500   MAXE-P QUAD                Bedding stresses for punching design
Loadcase15501   MINE-P QUAD                Bedding stresses for punching design
Loadcase15502   MAXE-PT QUAD               Bedding stresses for punching design
Loadcase15503   MINE-PT QUAD               Bedding stresses for punching design
Loadcase16000   MAX-MX QUAK
Loadcase16001   MIN-MX QUAK
Loadcase16002   MAX-MY QUAK
Loadcase16003   MIN-MY QUAK
Loadcase16004   MAX-MXY QUAK
Loadcase16005   MIN-MXY QUAK
Loadcase16006   MAX-VX QUAK
Loadcase16007   MIN-VX QUAK
Loadcase16008   MAX-VY QUAK
Loadcase16009   MIN-VY QUAK
Loadcase16010   MAX-NXX QUAK
Loadcase16011   MIN-NXX QUAK
Loadcase16012   MAX-NYY QUAK
Loadcase16013   MIN-NYY QUAK
Loadcase16014   MAX-NXY QUAK
Loadcase16015   MIN-NXY QUAK
Loadcase16500   MAX-P QUAD                Bedding stresses for punching design
Loadcase16501   MIN-P QUAD                Bedding stresses for punching design
Loadcase16502   MAX-PT QUAD               Bedding stresses for punching design
Loadcase16503   MIN-PT QUAD               Bedding stresses for punching design
Loadcase17000   MAX-MX QUAK
Loadcase17001   MIN-MX QUAK
Loadcase17002   MAX-MY QUAK
Loadcase17003   MIN-MY QUAK
Loadcase17004   MAX-MXY QUAK
Loadcase17005   MIN-MXY QUAK
Loadcase17006   MAX-VX QUAK
Loadcase17007   MIN-VX QUAK
Loadcase17008   MAX-VY QUAK
Loadcase17009   MIN-VY QUAK
Loadcase17010   MAX-NXX QUAK
Loadcase17011   MIN-NXX QUAK
```

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Load Cases for the Design

Loadcase17012	MAX-NYY QUAK	
Loadcase17013	MIN-NYY QUAK	
Loadcase17014	MAX-NXY QUAK	
Loadcase17015	MIN-NXY QUAK	
Loadcase17500	MAX-P QUAD	Bedding stresses for punching design
Loadcase17501	MIN-P QUAD	Bedding stresses for punching design
Loadcase17502	MAX-PT QUAD	Bedding stresses for punching design
Loadcase17503	MIN-PT QUAD	Bedding stresses for punching design
Loadcase21000	MAX-MX QUAK	
Loadcase21001	MIN-MX QUAK	
Loadcase21002	MAX-MY QUAK	
Loadcase21003	MIN-MY QUAK	
Loadcase21004	MAX-MXY QUAK	
Loadcase21005	MIN-MXY QUAK	
Loadcase21006	MAX-VX QUAK	
Loadcase21007	MIN-VX QUAK	
Loadcase21008	MAX-VY QUAK	
Loadcase21009	MIN-VY QUAK	
Loadcase21010	MAX-NXX QUAK	
Loadcase21011	MIN-NXX QUAK	
Loadcase21012	MAX-NYY QUAK	
Loadcase21013	MIN-NYY QUAK	
Loadcase21014	MAX-NXY QUAK	
Loadcase21015	MIN-NXY QUAK	
Loadcase21500	MAX-P QUAD	Bedding stresses for punching design
Loadcase21501	MIN-P QUAD	Bedding stresses for punching design
Loadcase21502	MAX-PT QUAD	Bedding stresses for punching design
Loadcase21503	MIN-PT QUAD	Bedding stresses for punching design
Loadcase22000	MAX-MX QUAK	
Loadcase22001	MIN-MX QUAK	
Loadcase22002	MAX-MY QUAK	
Loadcase22003	MIN-MY QUAK	
Loadcase22004	MAX-MXY QUAK	
Loadcase22005	MIN-MXY QUAK	
Loadcase22006	MAX-VX QUAK	
Loadcase22007	MIN-VX QUAK	
Loadcase22008	MAX-VY QUAK	
Loadcase22009	MIN-VY QUAK	
Loadcase22010	MAX-NXX QUAK	
Loadcase22011	MIN-NXX QUAK	
Loadcase22012	MAX-NYY QUAK	
Loadcase22013	MIN-NYY QUAK	
Loadcase22014	MAX-NXY QUAK	
Loadcase22015	MIN-NXY QUAK	
Loadcase22500	MAX-P QUAD	Bedding stresses for punching design
Loadcase22501	MIN-P QUAD	Bedding stresses for punching design
Loadcase22502	MAX-PT QUAD	Bedding stresses for punching design
Loadcase22503	MIN-PT QUAD	Bedding stresses for punching design
Loadcase23000	MAXE-MX QUAK	
Loadcase23001	MINE-MX QUAK	
Loadcase23002	MAXE-MY QUAK	
Loadcase23003	MINE-MY QUAK	
Loadcase23004	MAXE-MXY QUAK	
Loadcase23005	MINE-MXY QUAK	
Loadcase23006	MAXE-VX QUAK	
Loadcase23007	MINE-VX QUAK	
Loadcase23008	MAXE-VY QUAK	
Loadcase23009	MINE-VY QUAK	
Loadcase23010	MAXE-NXX QUAK	
Loadcase23011	MINE-NXX QUAK	
Loadcase23012	MAXE-NYY QUAK	
Loadcase23013	MINE-NYY QUAK	
Loadcase23014	MAXE-NXY QUAK	
Loadcase23015	MINE-NXY QUAK	

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Load Cases for the Design

Loadcase23500	MAXE-P QUAD	Bedding stresses for punching design
Loadcase23501	MINE-P QUAD	Bedding stresses for punching design
Loadcase23502	MAXE-PT QUAD	Bedding stresses for punching design
Loadcase23503	MINE-PT QUAD	Bedding stresses for punching design
Loadcase24000	MAXE-MX QUAK	
Loadcase24001	MINE-MX QUAK	
Loadcase24002	MAXE-MY QUAK	
Loadcase24003	MINE-MY QUAK	
Loadcase24004	MAXE-MXY QUAK	
Loadcase24005	MINE-MXY QUAK	
Loadcase24006	MAXE-VX QUAK	
Loadcase24007	MINE-VX QUAK	
Loadcase24008	MAXE-VY QUAK	
Loadcase24009	MINE-VY QUAK	
Loadcase24010	MAXE-NXX QUAK	
Loadcase24011	MINE-NXX QUAK	
Loadcase24012	MAXE-NYY QUAK	
Loadcase24013	MINE-NYY QUAK	
Loadcase24014	MAXE-NXY QUAK	
Loadcase24015	MINE-NXY QUAK	
Loadcase24500	MAXE-P QUAD	Bedding stresses for punching design
Loadcase24501	MINE-P QUAD	Bedding stresses for punching design
Loadcase24502	MAXE-PT QUAD	Bedding stresses for punching design
Loadcase24503	MINE-PT QUAD	Bedding stresses for punching design
Loadcase25000	MAXE-MX QUAK	
Loadcase25001	MINE-MX QUAK	
Loadcase25002	MAXE-MY QUAK	
Loadcase25003	MINE-MY QUAK	
Loadcase25004	MAXE-MXY QUAK	
Loadcase25005	MINE-MXY QUAK	
Loadcase25006	MAXE-VX QUAK	
Loadcase25007	MINE-VX QUAK	
Loadcase25008	MAXE-VY QUAK	
Loadcase25009	MINE-VY QUAK	
Loadcase25010	MAXE-NXX QUAK	
Loadcase25011	MINE-NXX QUAK	
Loadcase25012	MAXE-NYY QUAK	
Loadcase25013	MINE-NYY QUAK	
Loadcase25014	MAXE-NXY QUAK	
Loadcase25015	MINE-NXY QUAK	
Loadcase25500	MAXE-P QUAD	Bedding stresses for punching design
Loadcase25501	MINE-P QUAD	Bedding stresses for punching design
Loadcase25502	MAXE-PT QUAD	Bedding stresses for punching design
Loadcase25503	MINE-PT QUAD	Bedding stresses for punching design
Loadcase26000	MAX-MX QUAK	
Loadcase26001	MIN-MX QUAK	
Loadcase26002	MAX-MY QUAK	
Loadcase26003	MIN-MY QUAK	
Loadcase26004	MAX-MXY QUAK	
Loadcase26005	MIN-MXY QUAK	
Loadcase26006	MAX-VX QUAK	
Loadcase26007	MIN-VX QUAK	
Loadcase26008	MAX-VY QUAK	
Loadcase26009	MIN-VY QUAK	
Loadcase26010	MAX-NXX QUAK	
Loadcase26011	MIN-NXX QUAK	
Loadcase26012	MAX-NYY QUAK	
Loadcase26013	MIN-NYY QUAK	
Loadcase26014	MAX-NXY QUAK	
Loadcase26015	MIN-NXY QUAK	
Loadcase26500	MAX-P QUAD	Bedding stresses for punching design
Loadcase26501	MIN-P QUAD	Bedding stresses for punching design
Loadcase26502	MAX-PT QUAD	Bedding stresses for punching design
Loadcase26503	MIN-PT QUAD	Bedding stresses for punching design

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Load Cases for the Design

```
Loadcase27000   MAX-MX QUAK
Loadcase27001   MIN-MX QUAK
Loadcase27002   MAX-MY QUAK
Loadcase27003   MIN-MY QUAK
Loadcase27004   MAX-MXY QUAK
Loadcase27005   MIN-MXY QUAK
Loadcase27006   MAX-VX QUAK
Loadcase27007   MIN-VX QUAK
Loadcase27008   MAX-VY QUAK
Loadcase27009   MIN-VY QUAK
Loadcase27010   MAX-NXX QUAK
Loadcase27011   MIN-NXX QUAK
Loadcase27012   MAX-NYY QUAK
Loadcase27013   MIN-NYY QUAK
Loadcase27014   MAX-NXY QUAK
Loadcase27015   MIN-NXY QUAK
Loadcase27500   MAX-P QUAD                 Bedding stresses for punching design
Loadcase27501   MIN-P QUAD                 Bedding stresses for punching design
Loadcase27502   MAX-PT QUAD                Bedding stresses for punching design
Loadcase27503   MIN-PT QUAD                Bedding stresses for punching design
```

Material (EC 2 EN 1992-1-1:2004(E))

```
Mat   f-ck   f-cr   f-yk   f-tk  f-ctm    N minQ type
     [MPa]  [MPa]  [MPa]  [MPa]  [MPa]  [-]  [-]
  1   30.0   30.0                2.896  6.1 0.20 mainly static
Minimum reinforcement: 0.00 p.c. of stat. req. section
  2                500.0  545.0

Reduction of FC in case of transvers tension = 20.0 [o/o]
```

Material-safety-factors:

```
Mat     concr SC1   SC2     steel SS1   SS2
  1          1.50  1.50
  2                             1.15  1.15
```

The punching design has been switched off and must be done separately.
Outside the punching area, the normal slab shear design may increase the,
longitudinal reinforcement up to 0.20% [input CTRL...RO_V].

Reinforcementparameter two layer reinforcement

```
Selection bar-distance  bar-diameter    crackwidth   steelstress
Grp elem   d1-u   d2-u   ds-u  2.lay   wk-u  2.lay  sigsu  2.lay
No. No.    d1-l   d2-l   ds-l ds-2-l   wk-l wk-2-l  sigsl sigs2l
           [cm]   [cm]   [mm]   [mm]   [mm]   [mm]  [MPa]  [MPa]
default     5.0    6.0     14     14   0.20   0.20      -      -
            5.0    6.0     14     14   0.20   0.20      -      -
```

The reinforcement directions relate to the local coordinate system of
the elements and have to be plotted graphically.
With the input of a steel stress sigsu... the 'crack design according tables'
uses this given stress sigsu for the corresponding layer. With this input,
the check can be done for bar distances instead of bar diameters.

Reinforcement is saved in the data base file
Number of stored reinforcement-distribution: 1

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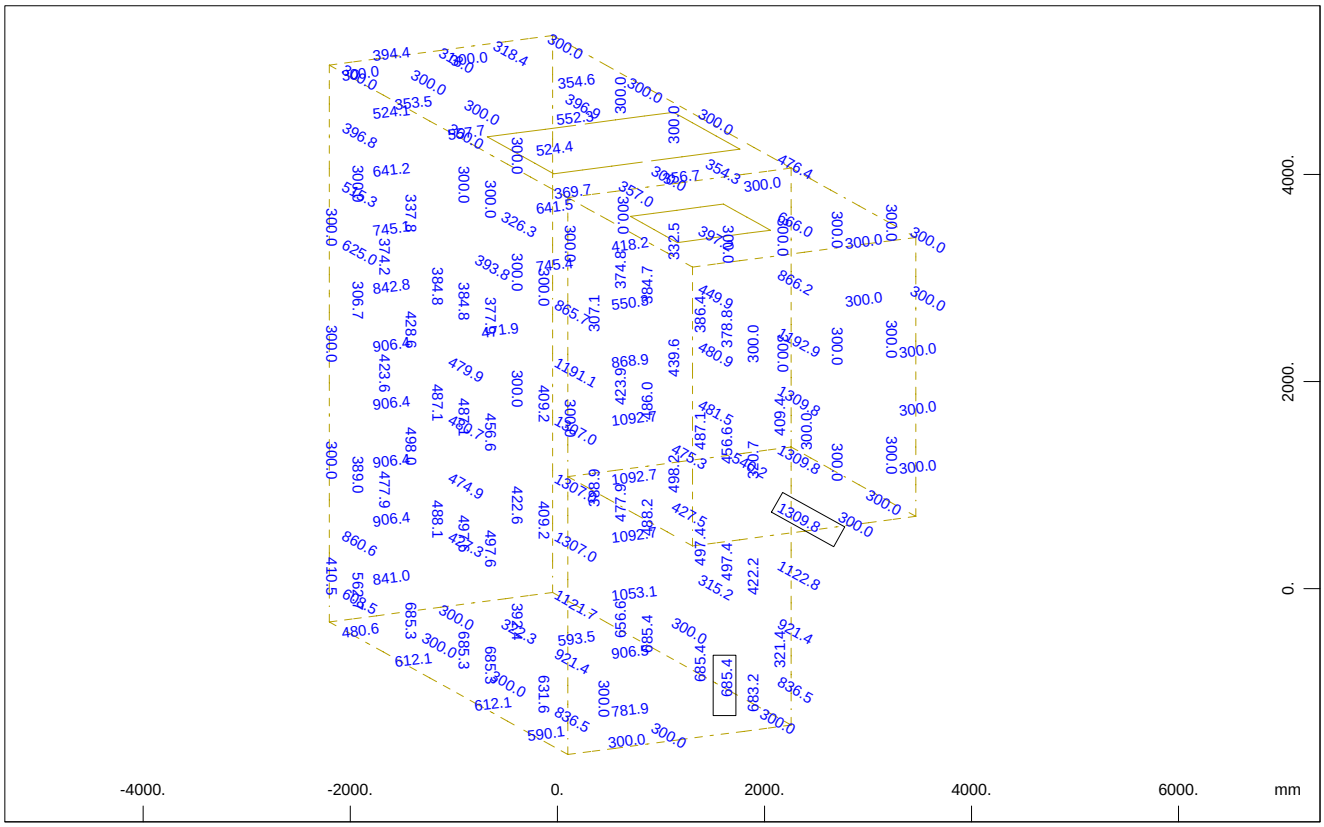
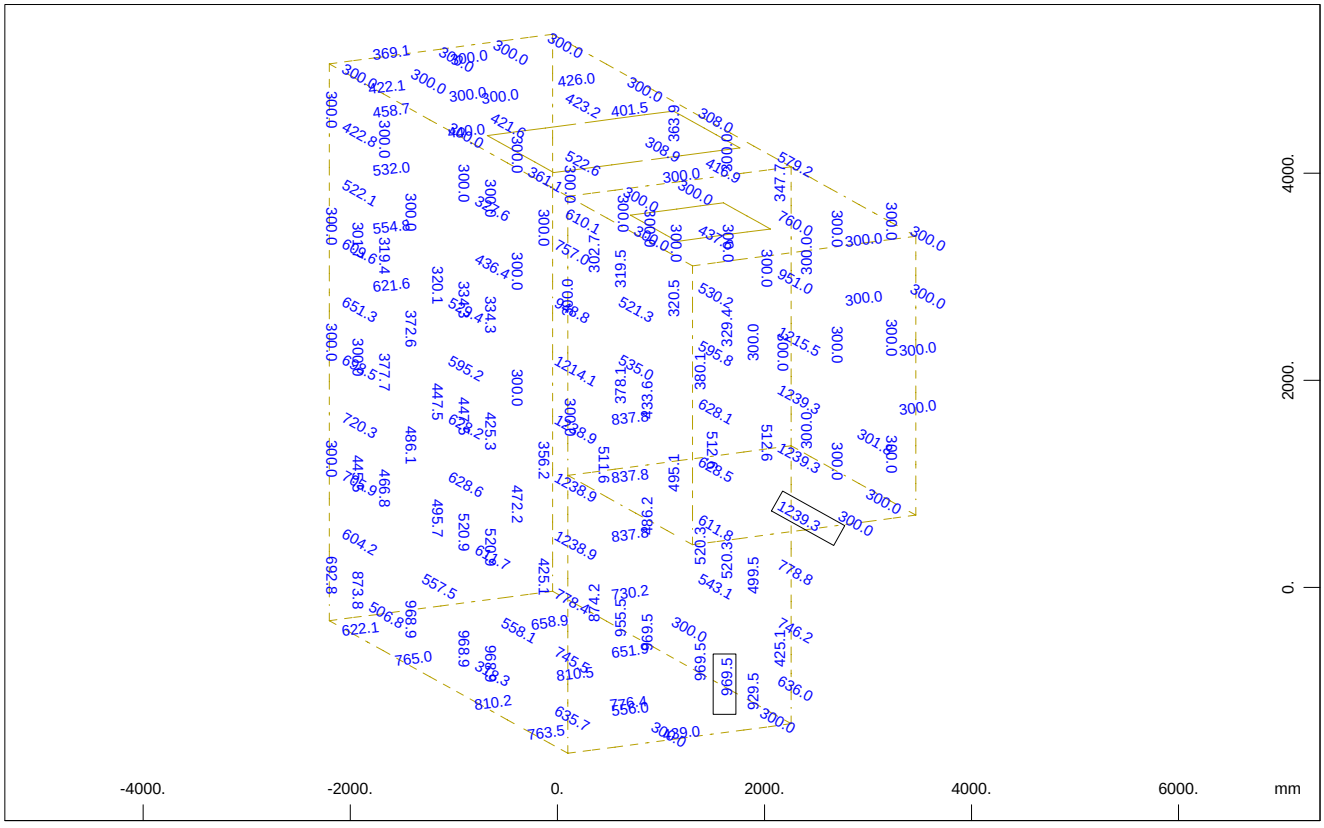


Z
X Y

upper Reinforcements in Nodes in mm2/m, Design Case 1 (Max=1310.)

M 1 : 73
X * 0.502
Y * 0.906
Z * 0.962



Z
X Y

lower Reinforcements in Nodes in mm2/m, Design Case 1 (Max=1239.)

M 1 : 73
X * 0.502
Y * 0.906
Z * 0.962

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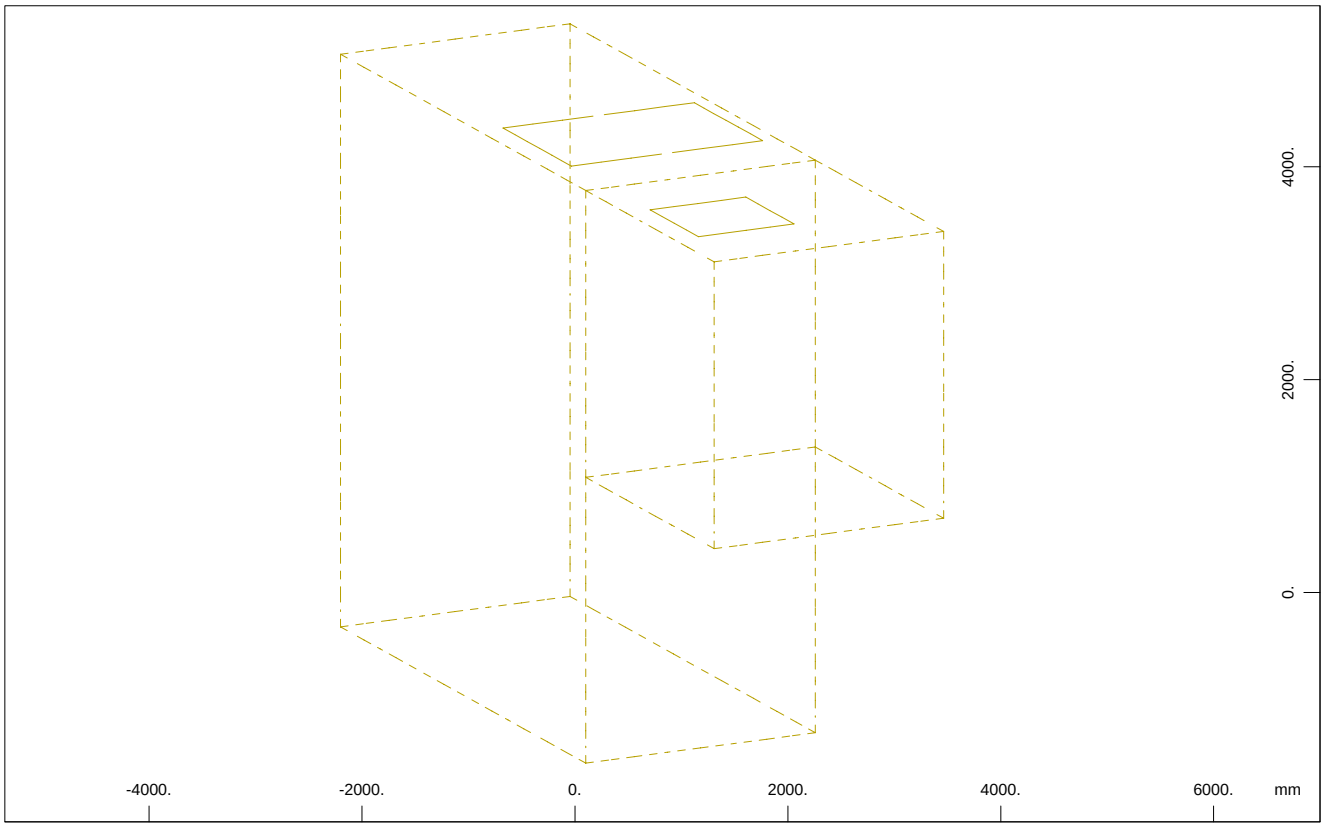
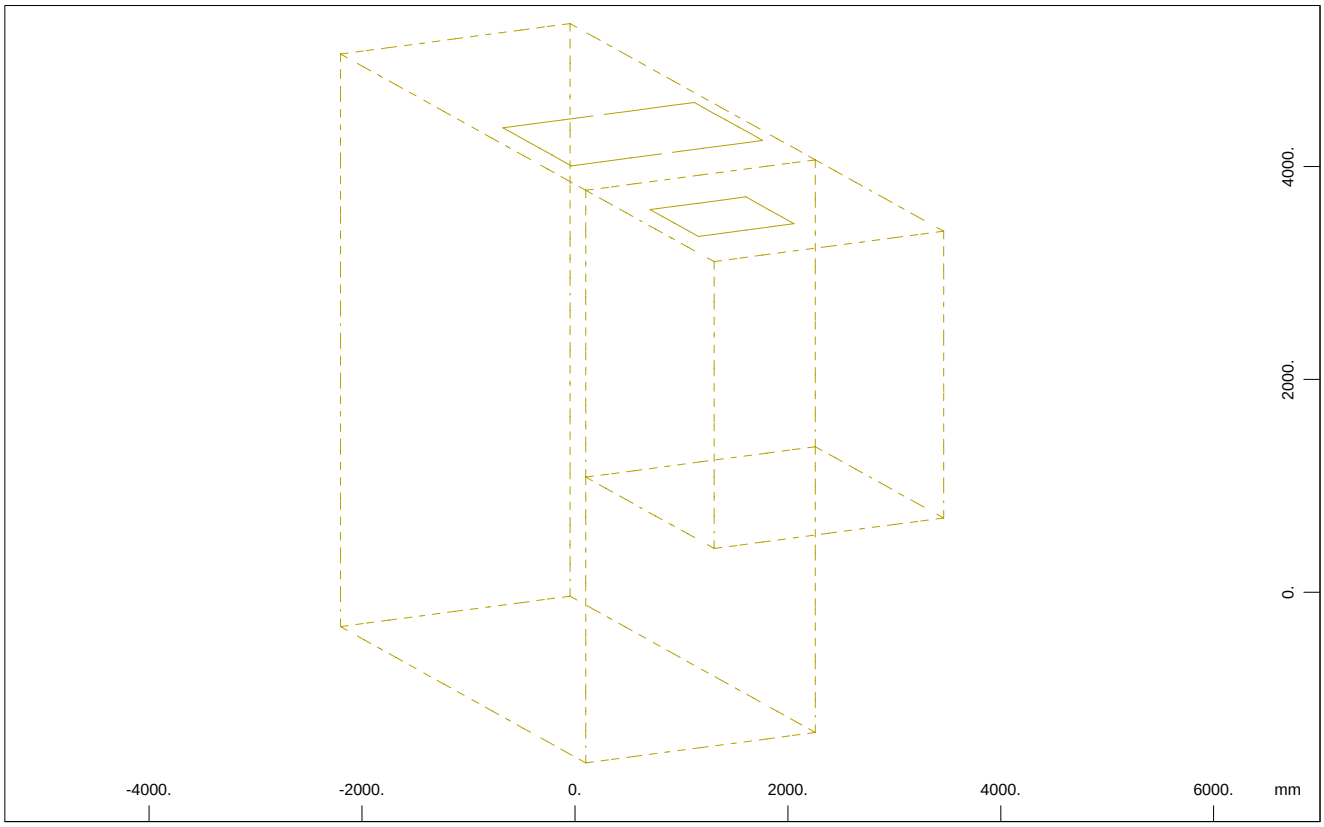


Z
Y
X

upper Principal reinforcements (1st layer) LC 1: NO values found
lower Principal reinforcements (1st layer) LC 1: NO values found

M 1 : 71
X * 0.502
Y * 0.906
Z * 0.962



Z
Y
X

upper Cross reinforcements (2nd layer) LC 1: NO values found
lower Cross reinforcements (2nd layer) LC 1: NO values found

M 1 : 71
X * 0.502
Y * 0.906
Z * 0.962

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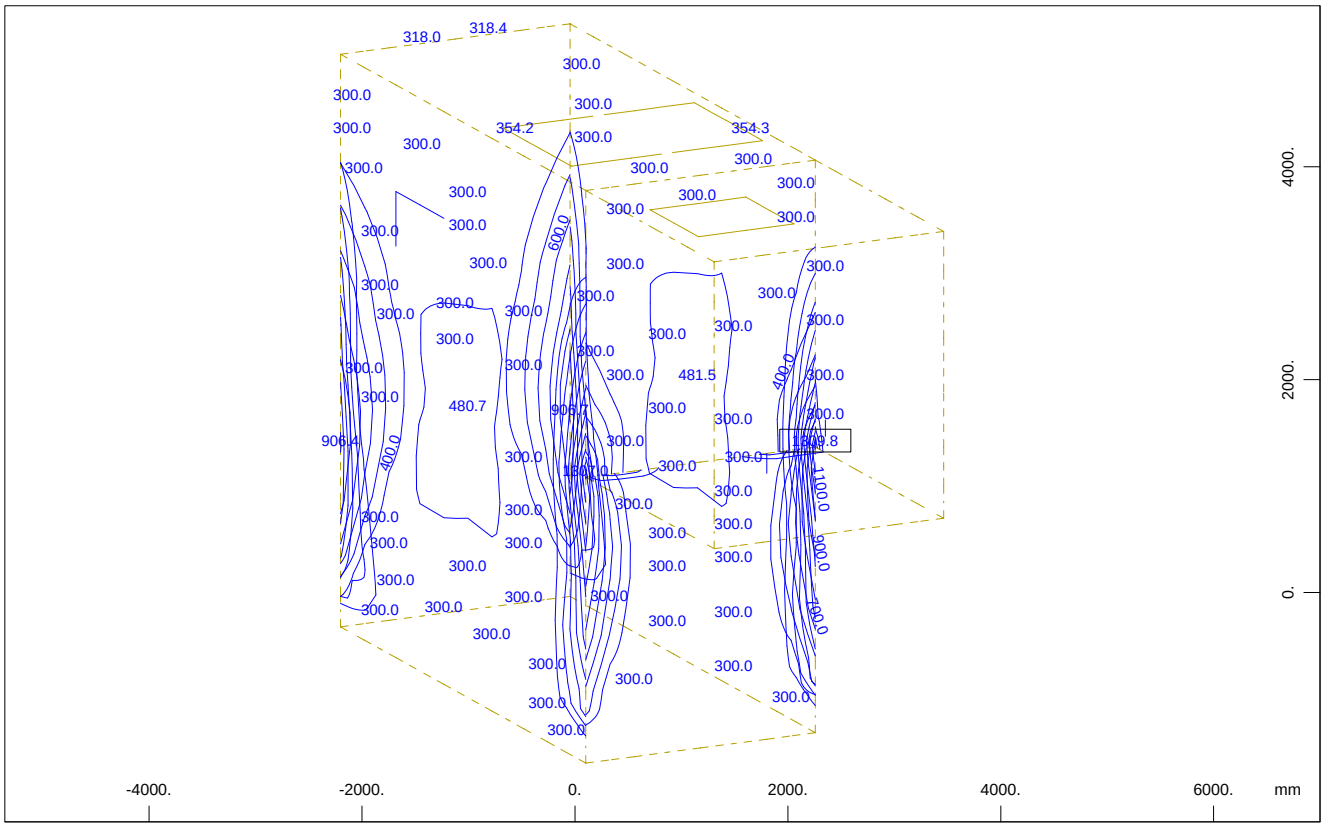
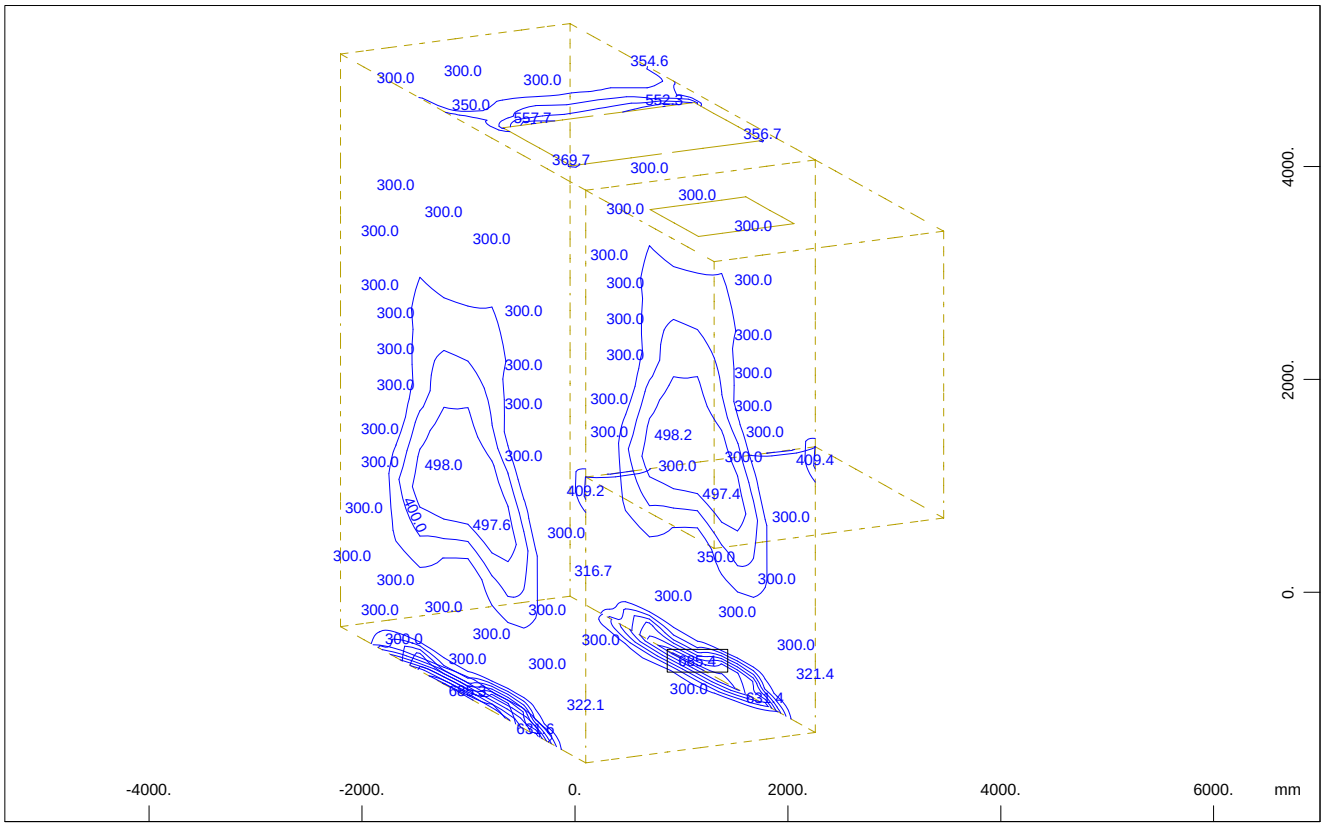
AS DAMASI



Z Y X

upper Principal reinforcements (1st layer) in Nodes, Design Case 1 , from 0 to 1310.
step 100.0 mm2/m

M 1 : 71
X * 0.502
Y * 0.906
Z * 0.962



Z Y X

upper Cross reinforcements (2nd layer) in Nodes, Design Case 1 , from 0 to 685.4 step
50.0 mm2/m

M 1 : 71
X * 0.502
Y * 0.906
Z * 0.962

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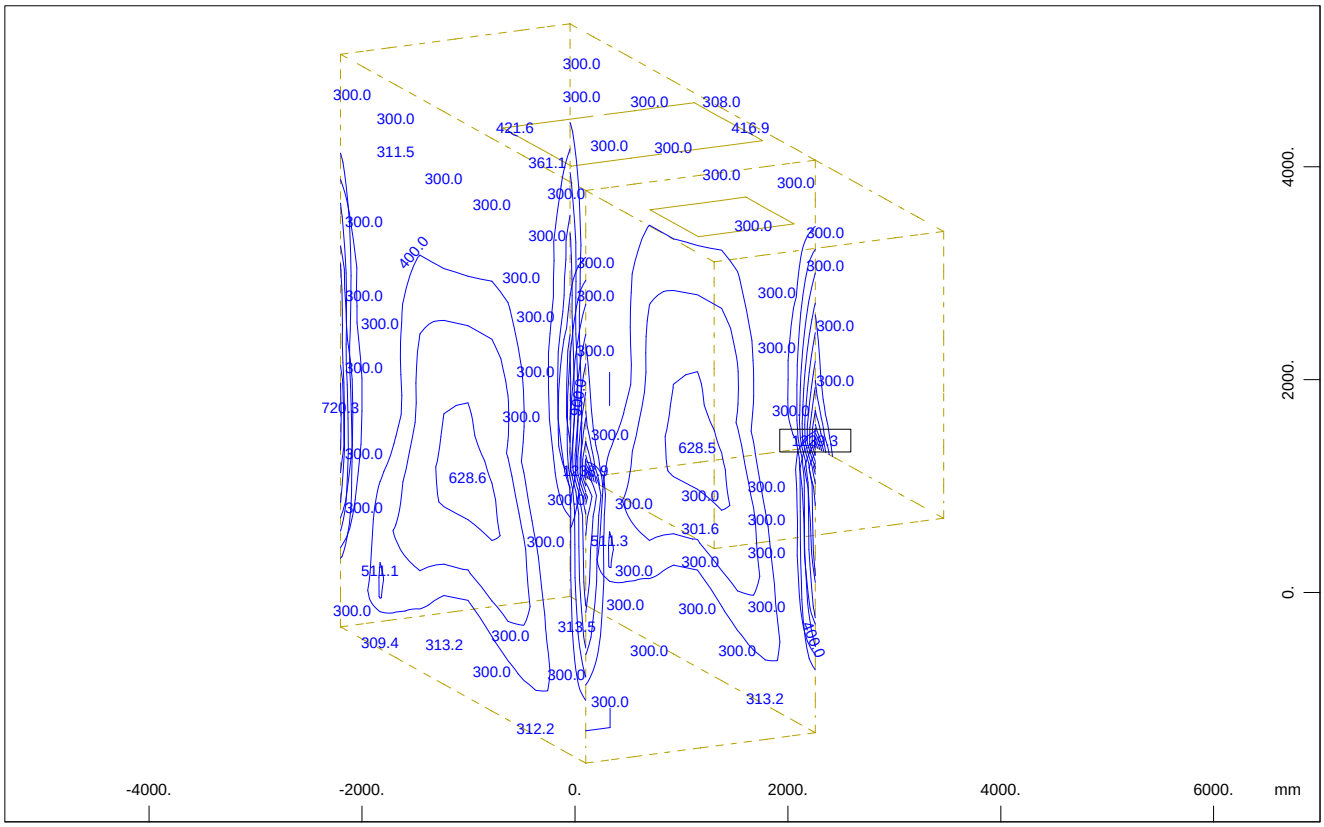
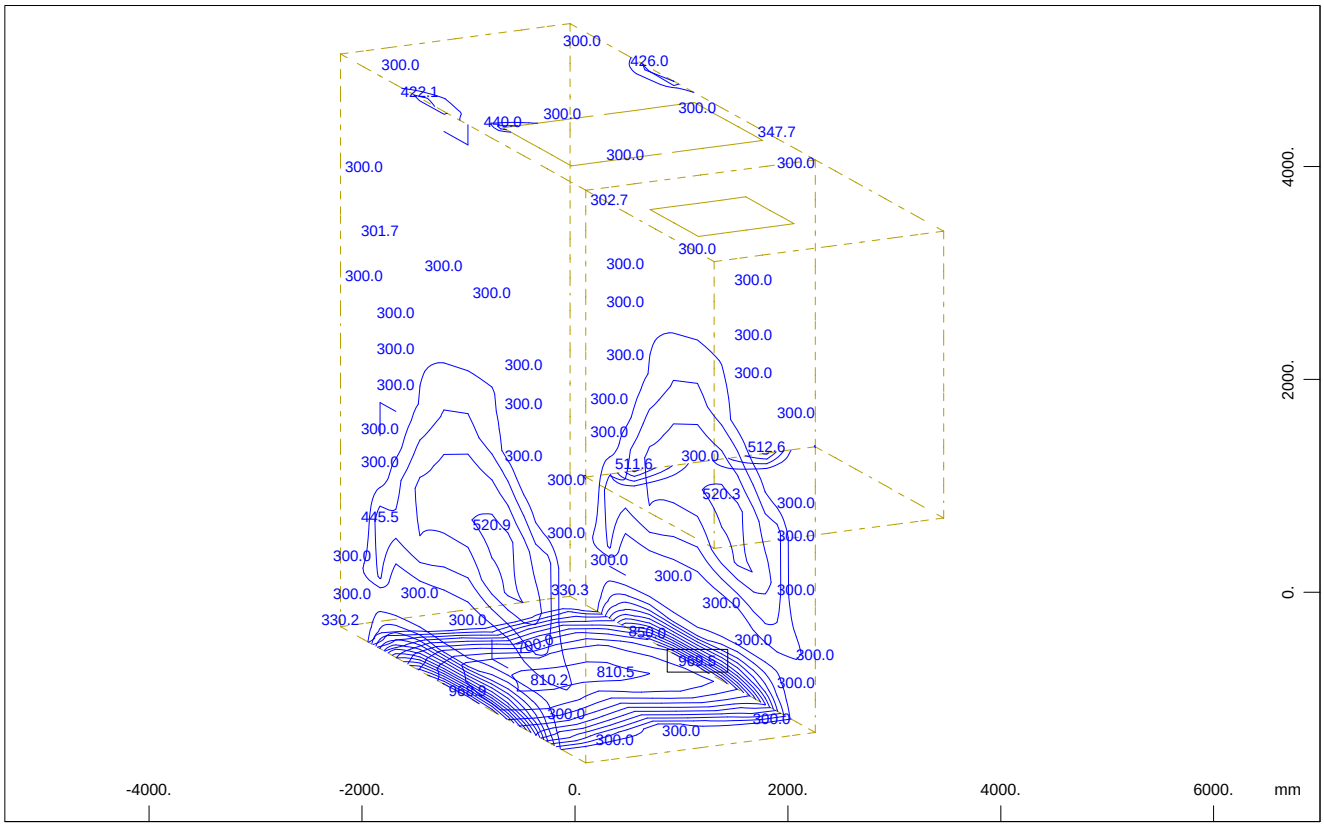


Z Y X

lower Principal reinforcements (1st layer) in Nodes, Design Case 1 , from 0 to 1239.
step 100.0 mm2/m

M 1 : 71
X * 0.502
Y * 0.906
Z * 0.962



Z Y X

lower Cross reinforcements (2nd layer) in Nodes, Design Case 1 , from 0 to 969.5 step
50.0 mm2/m

M 1 : 71
X * 0.502
Y * 0.906
Z * 0.962

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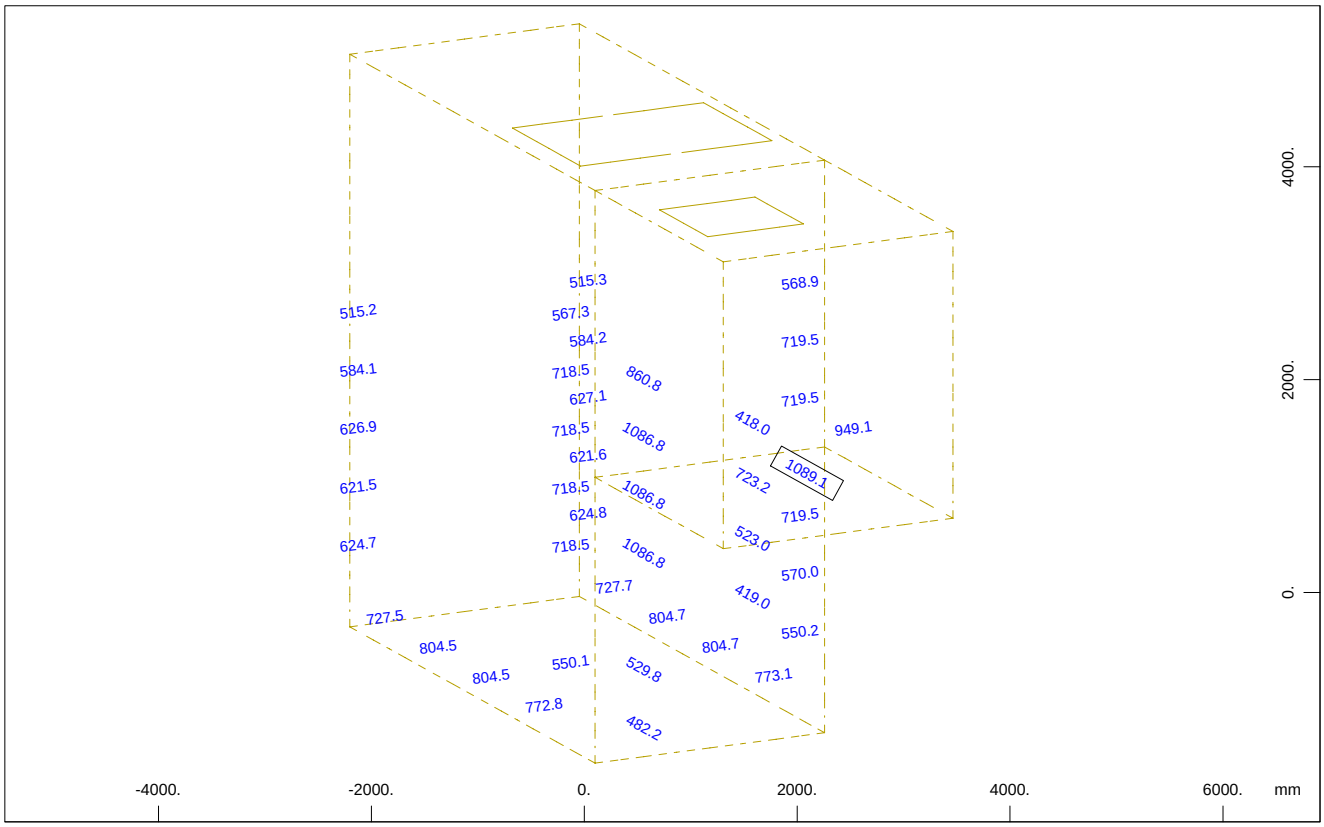
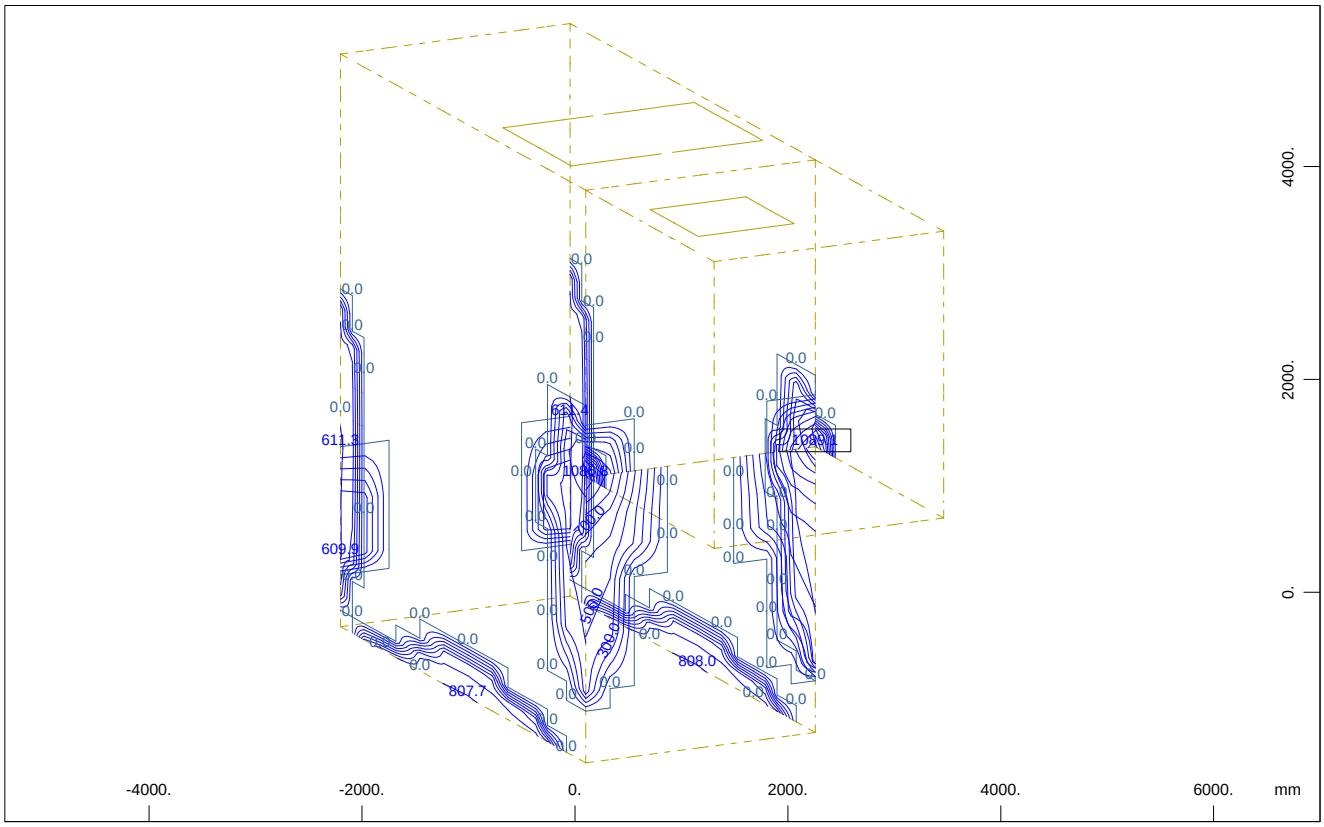


Shear reinforcement and punching in Elements in mm2/m2, Design Case 1 (Max=1089.)

M 1 : 71
X * 0.502
Y * 0.906
Z * 0.962



Shear reinforcement in Nodes, Design Case 1 , from 0 to 1089. step 100.0 mm2/m2

M 1 : 71
X * 0.502
Y * 0.906
Z * 0.962

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Maximum of reinforcement-distributions
The reinforcement maximum was build out of the numbers of reinforcement-distributions:
1
and stored as new reinforcement-distribution 2 .

Design according to EC 2 EN 1992-1-1:2004(E)
Loadcases have been calculated in the Serviceability State
In BEMESS no additional load safety factor is applied.

Load Cases for the Design

```
Loadcase 7100   MAXP-MX QUAK
Loadcase 7101   MINP-MX QUAK
Loadcase 7102   MAXP-MY QUAK
Loadcase 7103   MINP-MY QUAK
Loadcase 7104   MAXP-MXY QUAK
Loadcase 7105   MINP-MXY QUAK
Loadcase 7106   MAXP-VX QUAK
Loadcase 7107   MINP-VX QUAK
Loadcase 7108   MAXP-VY QUAK
Loadcase 7109   MINP-VY QUAK
Loadcase 7110   MAXP-NXX QUAK
Loadcase 7111   MINP-NXX QUAK
Loadcase 7112   MAXP-NYY QUAK
Loadcase 7113   MINP-NYY QUAK
Loadcase 7114   MAXP-NXY QUAK
Loadcase 7115   MINP-NXY QUAK
Loadcase 7150   MAXP-P QUAD                Bedding stresses for punching design
Loadcase 7151   MINP-P QUAD                Bedding stresses for punching design
Loadcase 7152   MAXP-PT QUAD               Bedding stresses for punching design
Loadcase 7153   MINP-PT QUAD               Bedding stresses for punching design
Loadcase 8100   MAXP-MX QUAK
Loadcase 8101   MINP-MX QUAK
Loadcase 8102   MAXP-MY QUAK
Loadcase 8103   MINP-MY QUAK
Loadcase 8104   MAXP-MXY QUAK
Loadcase 8105   MINP-MXY QUAK
Loadcase 8106   MAXP-VX QUAK
Loadcase 8107   MINP-VX QUAK
Loadcase 8108   MAXP-VY QUAK
Loadcase 8109   MINP-VY QUAK
Loadcase 8110   MAXP-NXX QUAK
Loadcase 8111   MINP-NXX QUAK
Loadcase 8112   MAXP-NYY QUAK
Loadcase 8113   MINP-NYY QUAK
Loadcase 8114   MAXP-NXY QUAK
Loadcase 8115   MINP-NXY QUAK
Loadcase 8150   MAXP-P QUAD                Bedding stresses for punching design
Loadcase 8151   MINP-P QUAD                Bedding stresses for punching design
Loadcase 8152   MAXP-PT QUAD               Bedding stresses for punching design
Loadcase 8153   MINP-PT QUAD               Bedding stresses for punching design
Loadcase 9100   MAXP-MX QUAK
Loadcase 9101   MINP-MX QUAK
Loadcase 9102   MAXP-MY QUAK
Loadcase 9103   MINP-MY QUAK
Loadcase 9104   MAXP-MXY QUAK
Loadcase 9105   MINP-MXY QUAK
Loadcase 9106   MAXP-VX QUAK
Loadcase 9107   MINP-VX QUAK
Loadcase 9108   MAXP-VY QUAK
Loadcase 9109   MINP-VY QUAK
Loadcase 9110   MAXP-NXX QUAK
Loadcase 9111   MINP-NXX QUAK
Loadcase 9112   MAXP-NYY QUAK
Loadcase 9113   MINP-NYY QUAK
Loadcase 9114   MAXP-NXY QUAK
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Load Cases for the Design

```
Loadcase 9115   MINP-NXY QUAK
Loadcase 9150   MAXP-P QUAD                Bedding stresses for punching design
Loadcase 9151   MINP-P QUAD                Bedding stresses for punching design
Loadcase 9152   MAXP-PT QUAD               Bedding stresses for punching design
Loadcase 9153   MINP-PT QUAD               Bedding stresses for punching design
Loadcase10100   MAXP-MX QUAK
Loadcase10101   MINP-MX QUAK
Loadcase10102   MAXP-MY QUAK
Loadcase10103   MINP-MY QUAK
Loadcase10104   MAXP-MXY QUAK
Loadcase10105   MINP-MXY QUAK
Loadcase10106   MAXP-VX QUAK
Loadcase10107   MINP-VX QUAK
Loadcase10108   MAXP-VY QUAK
Loadcase10109   MINP-VY QUAK
Loadcase10110   MAXP-NXX QUAK
Loadcase10111   MINP-NXX QUAK
Loadcase10112   MAXP-NYY QUAK
Loadcase10113   MINP-NYY QUAK
Loadcase10114   MAXP-NXY QUAK
Loadcase10115   MINP-NXY QUAK
Loadcase10150   MAXP-P QUAD                Bedding stresses for punching design
Loadcase10151   MINP-P QUAD                Bedding stresses for punching design
Loadcase10152   MAXP-PT QUAD               Bedding stresses for punching design
Loadcase10153   MINP-PT QUAD               Bedding stresses for punching design
Loadcase18000   MAXP-MX QUAK
Loadcase18001   MINP-MX QUAK
Loadcase18002   MAXP-MY QUAK
Loadcase18003   MINP-MY QUAK
Loadcase18004   MAXP-MXY QUAK
Loadcase18005   MINP-MXY QUAK
Loadcase18006   MAXP-VX QUAK
Loadcase18007   MINP-VX QUAK
Loadcase18008   MAXP-VY QUAK
Loadcase18009   MINP-VY QUAK
Loadcase18010   MAXP-NXX QUAK
Loadcase18011   MINP-NXX QUAK
Loadcase18012   MAXP-NYY QUAK
Loadcase18013   MINP-NYY QUAK
Loadcase18014   MAXP-NXY QUAK
Loadcase18015   MINP-NXY QUAK
Loadcase18500   MAXP-P QUAD                Bedding stresses for punching design
Loadcase18501   MINP-P QUAD                Bedding stresses for punching design
Loadcase18502   MAXP-PT QUAD               Bedding stresses for punching design
Loadcase18503   MINP-PT QUAD               Bedding stresses for punching design
Loadcase19000   MAXP-MX QUAK
Loadcase19001   MINP-MX QUAK
Loadcase19002   MAXP-MY QUAK
Loadcase19003   MINP-MY QUAK
Loadcase19004   MAXP-MXY QUAK
Loadcase19005   MINP-MXY QUAK
Loadcase19006   MAXP-VX QUAK
Loadcase19007   MINP-VX QUAK
Loadcase19008   MAXP-VY QUAK
Loadcase19009   MINP-VY QUAK
Loadcase19010   MAXP-NXX QUAK
Loadcase19011   MINP-NXX QUAK
Loadcase19012   MAXP-NYY QUAK
Loadcase19013   MINP-NYY QUAK
Loadcase19014   MAXP-NXY QUAK
Loadcase19015   MINP-NXY QUAK
Loadcase19500   MAXP-P QUAD                Bedding stresses for punching design
Loadcase19501   MINP-P QUAD                Bedding stresses for punching design
Loadcase19502   MAXP-PT QUAD               Bedding stresses for punching design
```

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Load Cases for the Design

Loadcase19503	MINP-PT QUAD	Bedding stresses for punching design
Loadcase28000	MAXP-MX QUAK	
Loadcase28001	MINP-MX QUAK	
Loadcase28002	MAXP-MY QUAK	
Loadcase28003	MINP-MY QUAK	
Loadcase28004	MAXP-MXY QUAK	
Loadcase28005	MINP-MXY QUAK	
Loadcase28006	MAXP-VX QUAK	
Loadcase28007	MINP-VX QUAK	
Loadcase28008	MAXP-VY QUAK	
Loadcase28009	MINP-VY QUAK	
Loadcase28010	MAXP-NXX QUAK	
Loadcase28011	MINP-NXX QUAK	
Loadcase28012	MAXP-NYY QUAK	
Loadcase28013	MINP-NYY QUAK	
Loadcase28014	MAXP-NXY QUAK	
Loadcase28015	MINP-NXY QUAK	
Loadcase28500	MAXP-P QUAD	Bedding stresses for punching design
Loadcase28501	MINP-P QUAD	Bedding stresses for punching design
Loadcase28502	MAXP-PT QUAD	Bedding stresses for punching design
Loadcase28503	MINP-PT QUAD	Bedding stresses for punching design
Loadcase29000	MAXP-MX QUAK	
Loadcase29001	MINP-MX QUAK	
Loadcase29002	MAXP-MY QUAK	
Loadcase29003	MINP-MY QUAK	
Loadcase29004	MAXP-MXY QUAK	
Loadcase29005	MINP-MXY QUAK	
Loadcase29006	MAXP-VX QUAK	
Loadcase29007	MINP-VX QUAK	
Loadcase29008	MAXP-VY QUAK	
Loadcase29009	MINP-VY QUAK	
Loadcase29010	MAXP-NXX QUAK	
Loadcase29011	MINP-NXX QUAK	
Loadcase29012	MAXP-NYY QUAK	
Loadcase29013	MINP-NYY QUAK	
Loadcase29014	MAXP-NXY QUAK	
Loadcase29015	MINP-NXY QUAK	
Loadcase29500	MAXP-P QUAD	Bedding stresses for punching design
Loadcase29501	MINP-P QUAD	Bedding stresses for punching design
Loadcase29502	MAXP-PT QUAD	Bedding stresses for punching design
Loadcase29503	MINP-PT QUAD	Bedding stresses for punching design

Load Cases - with factors of dead load in per cent

LcNo	per cent	LcNo	per cent	LcNo	per cent	LcNo	per cent	LcNo	per cent
7100	100.0	7101	100.0	7102	100.0	7103	100.0	7104	100.0
7105	100.0	7106	100.0	7107	100.0	7108	100.0	7109	100.0
7110	100.0	7111	100.0	7112	100.0	7113	100.0	7114	100.0
7115	100.0	8100	100.0	8101	100.0	8102	100.0	8103	100.0
8104	100.0	8105	100.0	8106	100.0	8107	100.0	8108	100.0
8109	100.0	8110	100.0	8111	100.0	8112	100.0	8113	100.0
8114	100.0	8115	100.0	9100	100.0	9101	100.0	9102	100.0
9103	100.0	9104	100.0	9105	100.0	9106	100.0	9107	100.0
9108	100.0	9109	100.0	9110	100.0	9111	100.0	9112	100.0
9113	100.0	9114	100.0	9115	100.0	****	100.0	****	100.0
****	100.0	****	100.0	****	100.0	****	100.0	****	100.0
****	100.0	****	100.0	****	100.0	****	100.0	****	100.0
****	100.0	****	100.0	****	100.0	****	100.0	****	100.0
****	100.0	****	100.0	****	100.0	****	100.0	****	100.0
****	100.0	****	100.0	****	100.0	****	100.0	****	100.0
****	100.0	****	100.0	****	100.0	****	100.0	****	100.0
****	100.0	****	100.0	****	100.0	****	100.0	****	100.0
****	100.0	****	100.0	****	100.0	****	100.0	****	100.0
****	100.0	****	100.0	****	100.0	****	100.0	****	100.0
****	100.0	****	100.0	****	100.0	****	100.0	****	100.0

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Load Cases - with factors of dead load in per cent

LcNo	per cent	LcNo	per cent	LcNo	per cent	LcNo	per cent	LcNo	per cent
****	100.0	****	100.0	****	100.0	****	100.0	****	100.0
****	100.0	****	100.0	****	100.0	****	100.0	****	100.0
****	100.0	****	100.0	****	100.0	****	100.0	****	100.0
****	100.0	****	100.0	****	100.0	****	100.0	****	100.0
****	100.0	****	100.0	****	100.0	****	100.0	****	100.0
****	100.0	****	100.0	****	100.0				

Material (EC 2 EN 1992-1-1:2004(E))

Mat	f-ck [MPa]	f-cr [MPa]	f-yk [MPa]	f-tk [MPa]	f-ctm [MPa]	N [-]	minQ [-]	type
1	30.0	30.0			2.896	6.1	0.20	mainly static
2			500.0	545.0				

Minimum reinforcement: 0.00 p.c. of stat. req. section
A robustness minimum reinforcement has not been requested [MREI] and
has to be checked separately.
A minimum reinforcement has not been requested [MREI] and
has to be checked separately.

SERVICEABILITY LIMIT STATE CONTROL PARAMETERS

No	Code	dNW[mm]	wk[mm]	Beta	Beta1	Beta2	k1
1	EC2	->para	0.10	1.7	1.0	0.5	0.8

Reinforcementparameter two layer reinforcement

Selection Grp No.	elem No.	bar-distance d1-u d1-l [cm]	d2-u d2-l [cm]	bar-diameter ds-u ds-l [mm]	2.lay ds-2-l [mm]	crackwidth wk-u wk-l [mm]	2.lay wk-2-l [mm]	steelstress sigsu sigsl [MPa]	2.lay sigs2l [MPa]
default		5.0	6.0	14	14				
		5.0	6.0	14	14				

The reinforcement directions relate to the local coordinate system of
the elements and have to be plotted graphically.

Maximum of stored and calculated reinforcement is saved
Number of stored reinforcement-distribution: 2

Reinforcement has been increased by live-load design

Steel stress, concrete pressure, stress range

E=ELEM N=NODE	stress range on top Asa [MPa]	Asm [MPa]	Asi [MPa]	stress range botton Asa [MPa]	Asm [MPa]	Asi [MPa]	links Ass [MPa]	concre sig-c [MPa]	steel-l sig-max [MPa]
E 20025	76.1	14.8		93.8	20.3		400.0	-3.2	101.9
E 20032	76.1	10.4		93.9	20.0		400.0	-3.2	102.0
E 20033	84.3	35.6		115.3	58.4		400.0	-5.1	119.9
E 20040	84.3	24.7		115.4	58.0		400.0	-5.1	119.9
E 20041	94.2	48.3		131.3	72.6		400.0	-6.5	133.4
E 20048	94.3	33.0		131.3	73.1		400.0	-6.5	133.5
E 20161	87.9	16.5		133.7	49.5		400.0	-6.6	134.4
E 20173	62.9	1.7		99.4	5.0		400.0	-3.1	99.7
E 20174	99.9	17.8		139.4	79.5		400.0	-7.6	139.5
E 20175	88.5	13.5		134.7	56.0		400.0	-6.4	135.3
E 20187	59.8	9.1		106.9	22.4		400.0	-3.5	107.7
E 20188	98.0	17.9		137.1	75.3		400.0	-7.7	139.1
E 20189	88.2	9.9		134.3	59.8		400.0	-6.2	134.9
E 20202	96.8	49.5		137.8	76.7		400.0	-7.5	139.1
E 20216	96.3	48.5		138.0	77.0		400.0	-7.2	139.1
E 20303	36.5	41.1		60.7	97.5		400.0	-4.9	109.8
E 20304	18.5	36.0		60.9	121.3		400.0	-6.1	121.6
E 20305	4.5	29.6		58.1	131.6		400.0	-7.2	129.4
E 20306	3.8	25.4		51.5	130.6		400.0	-8.1	128.3
E 20307	2.4	24.6		29.4	130.3		400.0	-8.5	128.0
E 20308	1.9	20.2		56.0	129.5		400.0	-8.2	127.7
E 20309	16.0	18.1		61.4	129.7		400.0	-7.7	128.7

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Steel stress, concrete pressure, stress range

E=ELEM N=NODE	stress range on top Asa [MPa]	Asm [MPa]	Asi [MPa]	stress range botton Asa [MPa]	Asm [MPa]	Asi [MPa]	links Ass [MPa]	concre sig-c [MPa]	steel-l sig-max [MPa]
E 20310	25.5	17.4		57.7	128.7		400.0	-7.0	128.5
E 20311	35.1	16.7		57.5	108.6		400.0	-6.2	123.4
E 20312	33.8	11.1		48.5	110.2		400.0	-5.2	116.8
E 20313	35.0	3.7		44.0	85.3		400.0	-3.9	103.7
E 20320	9.4	32.8		28.5	121.5		400.0	-6.2	120.3
E 20321	9.2	34.9		34.7	119.0		400.0	-6.7	118.4
E 20322	8.9	22.9		26.4	120.2		400.0	-6.4	120.6
E 20323	17.6	13.2		37.0	119.5		400.0	-5.8	121.4
E 20329	81.3	34.6		99.4	68.1		400.0	-3.6	106.4
E 20343	86.3	47.6		109.9	79.9		400.0	-4.7	115.6
E 20356	80.4	49.5		110.5	78.0		400.0	-4.4	114.6
E 20357	93.8	56.6		125.6	75.7		400.0	-5.7	129.1
E 20370	87.2	49.7		123.0	79.8		400.0	-5.1	126.6
E 20371	96.2	22.4		135.2	68.2		400.0	-6.4	136.9
E 20372	80.2	24.5		113.6	65.1		400.0	-4.4	116.1
E 20384	91.1	40.1		131.3	67.4		400.0	-5.9	133.8
E 20385	94.5	26.3		138.2	61.0		400.0	-6.8	139.3
E 20386	74.1	7.9		110.8	31.4		400.0	-4.1	112.6
E 20397	70.8	61.6		76.2	49.3		400.0	-1.9	80.9
E 20398	91.7	30.9		132.7	55.0		400.0	-6.5	135.2
E 20399	90.7	24.8		137.7	55.1		400.0	-6.9	138.5
E 20400	67.7	2.7		103.8	0.7		400.0	-3.8	105.4
E 20411	70.2	48.8		64.7	7.9		400.0	-1.8	70.6
E 20412	93.6	43.0		131.9	38.9		400.0	-7.0	134.5
E 20413	88.0	21.9		135.0	41.9		400.0	-6.9	135.8
E 20414	66.2	2.2		97.9	1.3		400.0	-3.6	99.6
E 20425	67.4	10.1		71.4	4.2		400.0	-2.2	77.4
E 20426	94.0	38.7		134.7	55.9		400.0	-7.5	137.4
E 20427	88.0	19.3		134.0	29.0		400.0	-6.8	134.7
E 20439	63.9	5.5		86.4	4.3		400.0	-2.6	86.7
E 20440	100.8	60.4		135.9	80.8		400.0	-7.3	139.2
E 20473	81.0	44.6		114.4	55.7		400.0	-5.1	119.2
E 20480	80.7	31.6		114.5	60.5		400.0	-5.1	119.3
E 20481	91.8	49.9		129.5	69.2		400.0	-6.5	131.9
E 20482	74.8	49.3		89.3	59.1		400.0	-3.1	93.1
E 20487	74.6	41.1		89.4	62.9		400.0	-3.1	93.3
E 20488	91.7	49.2		129.5	73.0		400.0	-6.5	131.9
E 20489	97.1	57.3		133.9	70.4		400.0	-7.3	135.4
E 20490	76.6	49.6		93.3	61.9		400.0	-3.7	95.5
E 20495	76.4	49.4		93.5	65.2		400.0	-3.7	95.7
E 20496	97.0	57.1		134.0	73.7		400.0	-7.3	135.5
E 20497	97.0	40.9		134.3	66.9		400.0	-7.5	135.4
E 20498	73.3	43.2		87.9	52.3		400.0	-3.4	89.1
E 20503	73.1	45.5		88.7	51.8		400.0	-3.4	89.6
E 20504	96.9	62.4		134.3	68.8		400.0	-7.5	135.5
E 20505	97.5	51.2		136.8	71.1		400.0	-7.4	137.6
E 20506	72.2	7.7		65.4	30.0		400.0	-2.5	80.3
E 20511	72.0	8.5		65.3	29.8		400.0	-2.5	80.0
E 20512	97.4	50.2		136.8	72.2		400.0	-7.4	137.7
E 20513	91.3	26.4		131.4	57.1		400.0	-6.7	131.7
E 20514	72.7	34.4		41.2	56.2		400.0	-1.1	79.5
E 20519	72.9	18.8		39.7	81.0		400.0	-1.4	79.8
E 20520	91.5	6.2		131.6	56.9		400.0	-6.7	131.8
E 20521	99.8	34.0		138.3	79.4		400.0	-7.6	138.3
E 20522	62.9	2.6		99.9	6.5		400.0	-3.1	100.1
E 20534	87.9	22.9		133.8	50.4		400.0	-6.6	134.4
E 20535	98.0	27.7		137.4	75.7		400.0	-7.7	139.2
E 20536	59.8	10.4		107.5	22.3		400.0	-3.5	108.2
E 20548	88.5	25.2		134.7	56.3		400.0	-6.4	135.3
E 20549	96.9	50.7		138.0	76.4		400.0	-7.5	139.3
E 20562	88.3	26.9		134.3	60.6		400.0	-6.2	134.9
E 20563	96.4	49.6		138.2	76.7		400.0	-7.2	139.2

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Steel stress, concrete pressure, stress range

E=ELEM N=NODE	stress range on top Asa [MPa]	Asm [MPa]	Asi [MPa]	stress range botton Asa [MPa]	Asm [MPa]	Asi [MPa]	links Ass [MPa]	concre sig-c [MPa]	steel-l sig-max [MPa]
E 20662	35.0	41.3		44.3	85.2		400.0	-4.0	103.7
E 20663	33.7	40.8		48.8	110.2		400.0	-5.2	116.8
E 20664	34.9	36.5		57.9	126.3		400.0	-6.0	123.5
E 20665	25.2	32.0		57.5	131.7		400.0	-6.8	128.6
E 20666	15.8	28.4		61.4	131.9		400.0	-7.6	128.7
E 20667	1.8	26.1		56.1	130.8		400.0	-8.1	127.7
E 20668	2.4	25.2		29.6	130.3		400.0	-8.5	128.0
E 20669	3.8	20.9		51.7	129.4		400.0	-8.2	128.3
E 20670	4.5	19.6		58.1	129.1		400.0	-7.4	129.4
E 20671	18.7	16.8		60.9	121.3		400.0	-6.2	121.6
E 20672	36.7	6.8		60.6	97.5		400.0	-4.8	109.8
E 20680	17.4	35.5		36.8	119.5		400.0	-5.8	121.4
E 20681	8.8	33.9		26.4	122.1		400.0	-6.3	120.6
E 20682	9.1	33.7		34.5	118.9		400.0	-6.8	118.4
E 20683	9.3	21.0		28.7	108.6		400.0	-6.4	120.3
E 20702	81.3	43.7		99.3	68.0		400.0	-3.5	106.3
E 20703	80.4	47.2		110.6	78.1		400.0	-4.6	114.6
E 20716	86.2	59.0		109.9	79.8		400.0	-4.5	115.5
E 20717	87.3	28.8		121.8	78.0		400.0	-5.5	125.4
E 20730	92.8	60.8		125.6	78.9		400.0	-5.4	129.1
E 20731	91.1	22.4		130.0	67.8		400.0	-6.0	132.6
E 20743	80.2	25.1		112.4	66.0		400.0	-4.3	115.0
E 20744	96.2	39.1		135.2	68.2		400.0	-6.3	136.9
E 20745	91.5	30.8		132.7	57.2		400.0	-6.5	135.3
E 20746	70.7	62.2		76.5	49.9		400.0	-1.9	81.3
E 20757	74.1	1.2		110.5	32.9		400.0	-4.1	112.3
E 20758	94.5	19.3		138.2	61.1		400.0	-6.8	139.3
E 20759	93.5	51.5		131.9	42.0		400.0	-7.0	134.5
E 20760	70.2	50.4		64.1	8.3		400.0	-1.8	70.2
E 20771	67.8	0.8		103.3	0.4		400.0	-3.8	105.0
E 20772	90.7	8.8		137.6	55.3		400.0	-6.9	138.4
E 20773	94.0	57.8		134.8	58.8		400.0	-7.5	137.6
E 20774	67.5	28.8		71.7	0.9		400.0	-2.2	77.8
E 20785	66.2	2.4		97.6	1.5		400.0	-3.6	99.3
E 20786	88.0	15.5		135.0	42.1		400.0	-6.9	135.7
E 20787	100.8	59.3		136.1	84.2		400.0	-7.3	139.4
E 20788	63.9	5.8		86.3	1.1		400.0	-2.6	86.6
E 20800	88.0	19.7		134.0	30.0		400.0	-6.8	134.7
E 20801	88.4	44.8		109.4	54.3		400.0	-5.2	110.4
E 20802	81.0	25.9		4.7	0.7		400.0	-1.2	72.7
E 20807	81.1	24.6		4.9	13.5		400.0	-1.2	72.8
E 20808	88.5	58.2		109.2	53.1		400.0	-5.1	110.3
E 20809	87.4	52.3		86.2	28.4		400.0	-4.2	92.1
E 20816	87.5	56.7		85.9	29.2		400.0	-4.2	91.9
E 50009	25.1	36.9		100.4	41.5		400.0	-1.7	103.8
E 50010	62.1	35.7		128.4	68.9		400.0	-4.7	130.4
E 50020	60.8	40.1		119.4	71.2		400.0	-4.5	125.4
E 50101	63.7	40.1		128.0	69.0		400.0	-4.7	130.5
E 50102	25.2	5.2		100.3	42.5		400.0	-1.8	103.9
E 50111	60.5	17.0		120.7	70.2		400.0	-4.5	126.8
N 125	53.4	126.1		50.3	50.2			-7.3	126.2
N 130	53.2	126.0		50.5	50.4			-7.4	126.2
N 3	93.1	33.0		139.3	61.9		400.0	-7.8	139.8
N 4	93.2	35.1		139.4	62.7		400.0	-7.8	139.8
N 8	110.8	68.5		137.3	95.1		400.0	-9.0	139.8
N	106.2	42.1		141.3	69.9		400.0	-7.9	141.8
N	105.8	39.3		140.1	81.0		400.0	-8.1	140.5
N 11	110.8	67.4		136.8	96.1		400.0	-9.0	139.3
N	105.6	8.6		140.2	80.1		400.0	-8.1	140.5
N	105.1	60.3		141.4	67.2		400.0	-7.9	141.8
N 27	42.0	40.9		63.6	109.8		400.0	-5.3	117.2
N 34	37.3	15.2		63.7	109.8		400.0	-5.3	117.2

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Steel stress, concrete pressure, stress range

E=ELEM		stress range on top			stress range botton			links	concre	steel-l
N=NODE		Asa	Asm	Asi	Asa	Asm	Asi	Ass	sig-c	sig-max
		[MPa]	[MPa]	[MPa]	[MPa]	[MPa]	[MPa]	[MPa]	[MPa]	[MPa]
N	36	91.1	42.0		119.0	59.4		400.0	-5.3	124.3
N		97.5	41.6		124.2	69.6		400.0	-5.6	128.6
N	37	103.8	27.9		139.2	80.4		400.0	-7.8	140.0
N	38	96.9	40.2		138.8	70.2		400.0	-8.0	139.3
N	40	91.1	55.4		119.0	59.2		400.0	-5.2	124.3
N		97.5	60.7		124.1	69.5		400.0	-5.3	128.6
N	41	103.8	52.0		139.2	81.2		400.0	-7.7	140.0
N	42	96.9	28.8		138.8	70.4		400.0	-8.0	139.3
N	44	94.4	61.8		126.5	75.1		400.0	-5.5	132.2
N		84.8	52.0		117.1	56.1		400.0	-5.3	124.2
N	45	104.8	53.8		138.3	78.0		400.0	-7.9	139.7
N		107.3	55.9		139.0	73.3		400.0	-8.0	140.3
N	46	105.8	66.0		138.4	69.6		400.0	-8.8	140.0
N		106.2	37.1		139.9	73.7		400.0	-8.6	140.4
N	48	84.8	36.3		117.2	55.8		400.0	-5.3	124.3
N		94.4	44.5		126.6	74.3		400.0	-5.8	132.3
N	49	107.2	55.6		139.1	77.0		400.0	-8.0	140.4
N		104.8	53.3		138.3	80.6		400.0	-7.9	139.7
N	50	106.1	65.3		139.9	75.8		400.0	-8.6	140.4
N		105.8	64.9		138.5	72.3		400.0	-8.8	140.1
N	63	38.2	62.6		57.3	92.5		400.0	-1.7	92.7
N	65	38.3	57.1		57.6	94.5		400.0	-1.7	93.5
N	75	94.4	26.6		139.8	69.4		400.0	-7.4	140.2
N	79	94.4	38.9		139.8	70.1		400.0	-7.4	140.2
N	83	102.1	15.5		138.6	86.6		400.0	-9.2	139.5
N		87.5	53.3		108.7	52.1		400.0	-7.0	119.0
N	87	102.1	16.3		138.7	86.5		400.0	-9.2	139.6
N		87.5	53.4		108.5	52.7		400.0	-7.0	119.0
N	123	30.8	30.5		63.2	131.1		400.0	-7.2	129.0
N	124	24.9	22.6		84.0	128.4		400.0	-8.6	126.2
N	125	25.1	18.9		82.9	128.8		400.0	-9.2	125.6
N	126	10.0	19.6		65.5	129.6		400.0	-7.6	129.8
N	127	21.0	5.1		49.5	85.9		400.0	-4.2	103.5
N	128	31.2	16.1		63.3	129.6		400.0	-7.4	129.0
N	129	25.2	16.8		84.2	128.8		400.0	-8.7	126.2
N	130	25.1	19.8		82.9	127.1		400.0	-9.1	125.6
N	131	9.9	29.2		65.5	132.4		400.0	-7.4	129.8
N	132	20.8	40.4		49.5	85.9		400.0	-4.3	103.5
N	310	20.4	17.6		86.4	128.1		400.0	-8.6	126.4
N	341	38.1	15.0		61.4	110.0		400.0	-6.5	126.0
N	348	20.2	22.5		86.3	129.8		400.0	-8.5	126.4
N	355	17.5	18.5		61.1	116.9		400.0	-6.2	120.2
N	358	46.1	17.4		82.3	129.1		400.0	-8.2	127.4
N	360	37.7	35.5		61.1	127.5		400.0	-6.3	126.0
N	368	17.3	18.0		81.0	128.3		400.0	-9.2	126.4
N	370	17.3	36.9		61.7	118.1		400.0	-6.1	121.4
N	373	32.5	25.7		82.6	129.4		400.0	-8.0	127.4
N	376	17.1	20.4		80.9	128.8		400.0	-9.2	126.4
N	385	99.8	31.3		138.5	74.8		400.0	-7.9	139.0
N	390	99.8	40.0		138.5	74.6		400.0	-7.9	139.0
N	398	95.1	36.3		139.5	63.4		400.0	-7.9	140.0
N	413	102.6	59.0		138.0	74.2		400.0	-7.0	140.2
N		106.1	66.3		137.9	81.3		400.0	-7.0	139.7
N	420	95.0	32.3		139.5	63.6		400.0	-7.9	140.0
N	422	102.6	40.3		139.3	73.2		400.0	-7.1	141.6
N		106.1	57.0		138.0	77.0		400.0	-7.0	139.8
N	431	91.2	67.4		107.9	66.9		400.0	-4.4	115.8
N	434	91.2	45.2		108.0	67.0		400.0	-4.5	115.8
N	474	93.8	37.2		140.3	66.9		400.0	-7.6	140.7
N	483	93.8	29.8		140.3	66.1		400.0	-7.6	140.7
N	536	78.0	5.2		119.1	10.0		400.0	-5.4	120.0
N	541	72.3	13.3		130.3	52.3		400.0	-5.7	130.4

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Steel stress, concrete pressure, stress range

E=ELEM N=NODE	stress range on top Asa [MPa]	Asm [MPa]	Asi [MPa]	stress range botton Asa [MPa]	Asm [MPa]	Asi [MPa]	links Ass [MPa]	concre sig-c [MPa]	steel-l sig-max [MPa]
N 542	106.2	19.8		138.8	89.8		400.0	-9.4	140.1
N	92.8	53.6		126.5	68.0		400.0	-7.3	126.8
N 584	110.1	70.5		137.8	88.7		400.0	-8.8	139.5
N	106.1	60.3		138.6	85.1		400.0	-8.5	138.8
N 613	106.8	59.3		138.5	69.9		400.0	-8.4	139.9
N	106.8	62.3		140.4	69.3		400.0	-8.4	141.3
N 621	105.1	59.0		138.0	79.1		400.0	-7.1	140.0
N	100.1	48.9		138.1	67.8		400.0	-7.1	140.5
N 681	80.3	26.9		32.6	83.3		400.0	-1.4	83.5
N	89.6	39.8		23.0	0.7		400.0	-1.7	78.0
N 684	106.0	61.0		138.6	86.0		400.0	-8.5	138.9
N	110.1	69.2		137.9	90.8		400.0	-8.8	139.7
N 685	80.5	21.2		31.3	85.5		400.0	-1.5	83.0
N	88.9	39.0		23.9	14.8		400.0	-1.0	77.3
N 692	99.8	41.1		138.1	72.2		400.0	-7.1	140.6
N	105.1	53.0		138.1	78.5		400.0	-7.1	140.0
N 700	106.7	61.4		140.5	73.1		400.0	-8.4	141.3
N	106.8	58.3		138.5	73.5		400.0	-8.4	139.9
N 741	72.3	28.0		125.7	53.2		400.0	-5.7	130.5
N 778	106.2	19.4		138.9	90.0		400.0	-9.4	140.2
N	92.9	55.1		126.3	66.8		400.0	-7.3	126.8
N 794	78.0	10.8		119.1	11.1		400.0	-5.4	120.0
N 1398	68.9	3.0		83.5	18.1		400.0	-2.2	86.5
N 1404	69.6	4.9		83.7	18.5		400.0	-2.2	86.6
N 1405	80.6	27.9		108.3	62.1		400.0	-4.6	112.2
N 1411	80.6	18.7		108.4	62.9		400.0	-4.6	112.4
N 1515	76.9	18.0		129.8	59.5		400.0	-5.7	133.4
N 1528	78.9	38.2		130.6	65.4		400.0	-5.7	133.3
N 1541	80.3	40.6		131.2	68.3		400.0	-5.8	133.2
N 1624	13.8	30.5		62.4	128.5		400.0	-6.8	126.5
N 1625	4.0	28.8		59.4	129.2		400.0	-7.6	127.4
N 1626	2.7	25.4		53.1	128.9		400.0	-7.7	127.7
N 1627	12.6	19.9		51.8	127.6		400.0	-7.1	127.3
N 1628	32.9	16.1		59.8	111.6		400.0	-6.5	125.9
N 1629	43.2	9.6		56.5	116.7		400.0	-5.6	121.8
N 1630	51.7	1.9		60.7	106.0		400.0	-5.1	117.8
N 1638	10.4	37.7		41.2	112.2		400.0	-5.6	111.9
N 1639	10.1	30.9		50.0	96.0		400.0	-5.7	109.6
N 1640	9.9	11.8		43.1	109.5		400.0	-5.1	113.7
N 1659	83.9	51.1		111.0	78.3		400.0	-4.3	114.6
N 1672	88.7	37.5		122.2	77.0		400.0	-5.5	125.0
N 1684	78.9	36.8		109.5	72.5		400.0	-4.1	112.3
N 1685	86.1	27.5		125.7	67.8		400.0	-5.7	127.3
N 1697	76.6	13.3		111.2	54.8		400.0	-4.3	114.7
N 1698	80.7	17.0		124.3	51.7		400.0	-5.5	125.7
N 1710	72.9	0.8		108.0	10.8		400.0	-4.5	112.0
N 1711	78.2	12.3		120.6	20.4		400.0	-5.5	121.7
N 1722	46.7	71.3		34.8	29.3		400.0	-1.7	71.3
N 1723	73.6	19.3		105.3	13.4		400.0	-4.9	109.3
N 1724	77.3	8.1		118.1	1.8		400.0	-5.5	119.1
N 1735	52.0	63.6		39.3	35.5		400.0	-1.4	63.6
N 1736	70.5	12.3		112.0	25.5		400.0	-5.4	116.2
N 1765	78.3	47.1		104.4	58.2		400.0	-4.4	108.7
N 1771	78.1	38.6		104.5	62.4		400.0	-4.4	108.8
N 1772	81.9	49.8		115.9	65.6		400.0	-5.7	118.2
N 1778	81.8	49.1		116.1	69.5		400.0	-5.7	118.3
N 1779	79.8	56.3		114.5	61.6		400.0	-6.0	116.1
N 1780	73.8	49.9		23.8	60.4		400.0	-1.3	67.5
N 1784	73.6	48.7		24.9	60.7		400.0	-1.5	67.2
N 1785	79.7	56.0		114.6	64.8		400.0	-6.0	116.3
N 1786	78.7	46.9		114.8	62.9		400.0	-5.8	116.0
N 1787	68.6	7.9		25.6	27.4		400.0	-1.0	60.8

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Steel stress, concrete pressure, stress range

E=ELEM N=NODE	stress range on top Asa [MPa]	Asm [MPa]	Asi [MPa]	stress range botton Asa [MPa]	Asm [MPa]	Asi [MPa]	links Ass [MPa]	concre sig-c [MPa]	steel-l sig-max [MPa]
N 1791	68.4	5.9		25.5	27.3		400.0	-1.1	60.6
N 1792	78.6	48.4		114.5	62.5		400.0	-5.8	115.8
N 1793	74.7	12.0		102.3	37.0		400.0	-4.7	108.7
N 1794	43.5	31.6		39.8	68.9		400.0	-0.8	71.4
N 1798	43.5	16.9		39.9	68.1		400.0	-0.9	71.5
N 1799	74.5	11.1		102.3	36.8		400.0	-4.7	108.5
N 1800	76.9	34.1		130.2	59.7		400.0	-5.7	133.8
N 1813	79.0	39.8		130.8	65.3		400.0	-5.7	133.4
N 1826	80.4	42.1		131.4	68.8		400.0	-5.7	133.4
N 1919	51.6	40.4		60.5	106.0		400.0	-5.2	117.8
N 1920	42.9	37.3		56.3	116.8		400.0	-5.7	121.9
N 1921	32.6	33.5		59.6	128.7		400.0	-6.3	125.9
N 1922	12.3	31.3		51.7	129.9		400.0	-6.9	127.3
N 1923	2.6	29.7		53.1	129.7		400.0	-7.7	127.7
N 1924	4.0	25.0		59.6	128.3		400.0	-7.7	127.4
N 1925	13.9	19.5		62.4	126.1		400.0	-7.0	126.6
N 1935	9.8	37.6		43.2	109.5		400.0	-5.1	113.7
N 1936	10.0	38.6		50.3	110.0		400.0	-5.7	109.6
N 1937	10.4	26.4		40.9	100.9		400.0	-5.7	112.0
N 1968	83.8	56.4		110.9	79.8		400.0	-4.3	114.5
N 1969	78.9	37.5		110.4	72.8		400.0	-4.1	113.2
N 1981	88.7	52.4		122.2	77.5		400.0	-5.1	125.0
N 1982	76.6	14.6		111.2	55.0		400.0	-4.3	114.7
N 1994	86.0	29.5		125.7	68.9		400.0	-5.5	127.3
N 1995	73.0	7.0		107.7	11.3		400.0	-4.5	111.7
N 2007	80.7	5.9		124.3	51.9		400.0	-5.5	125.6
N 2008	73.7	20.8		105.0	7.2		400.0	-4.9	109.0
N 2009	46.3	71.6		35.0	29.8		400.0	-1.8	71.2
N 2015	130.9	117.5		83.3	68.1			-6.7	133.9
N 2020	78.1	4.0		120.5	20.6		400.0	-5.5	121.6
N 2021	70.5	22.9		112.4	27.8		400.0	-5.4	116.7
N 2022	52.0	63.9		39.3	35.7		400.0	-1.4	63.6
N 2033	77.3	6.3		117.0	2.1		400.0	-5.5	118.0
N 2034	89.5	48.4		14.8	17.8		400.0	-1.7	77.8
N 2040	89.6	51.6		14.6	17.7		400.0	-1.0	77.9
N 2041	86.2	47.0		20.2	27.3		400.0	-1.2	76.7
N 2047	86.3	50.4		19.8	29.0		400.0	-1.1	76.8
N 8	86.3	13.7		128.4	67.0		400.0	-6.3	130.8
N 11	86.5	54.5		129.0	73.8		400.0	-6.3	131.0
N 542	76.1	11.2		128.7	72.8		400.0	-5.9	132.8
N 778	76.1	49.1		128.8	73.1		400.0	-5.9	132.8
N 949	34.9	39.7		112.5	28.3		400.0	-2.6	117.9
N 986	34.9	11.2		112.1	29.7		400.0	-2.6	118.0
N 2168	46.2	40.2		108.7	71.3		400.0	-3.0	111.1
N 2241	46.5	21.1		108.2	72.1		400.0	-3.0	111.2
Maximum	130.9	126.1		141.4	132.4		400.0	-9.4	141.8

The elements with the maximum values have been printed.

steel-l: longitudinal reinf. - links are also checked to CHKS but not printed!

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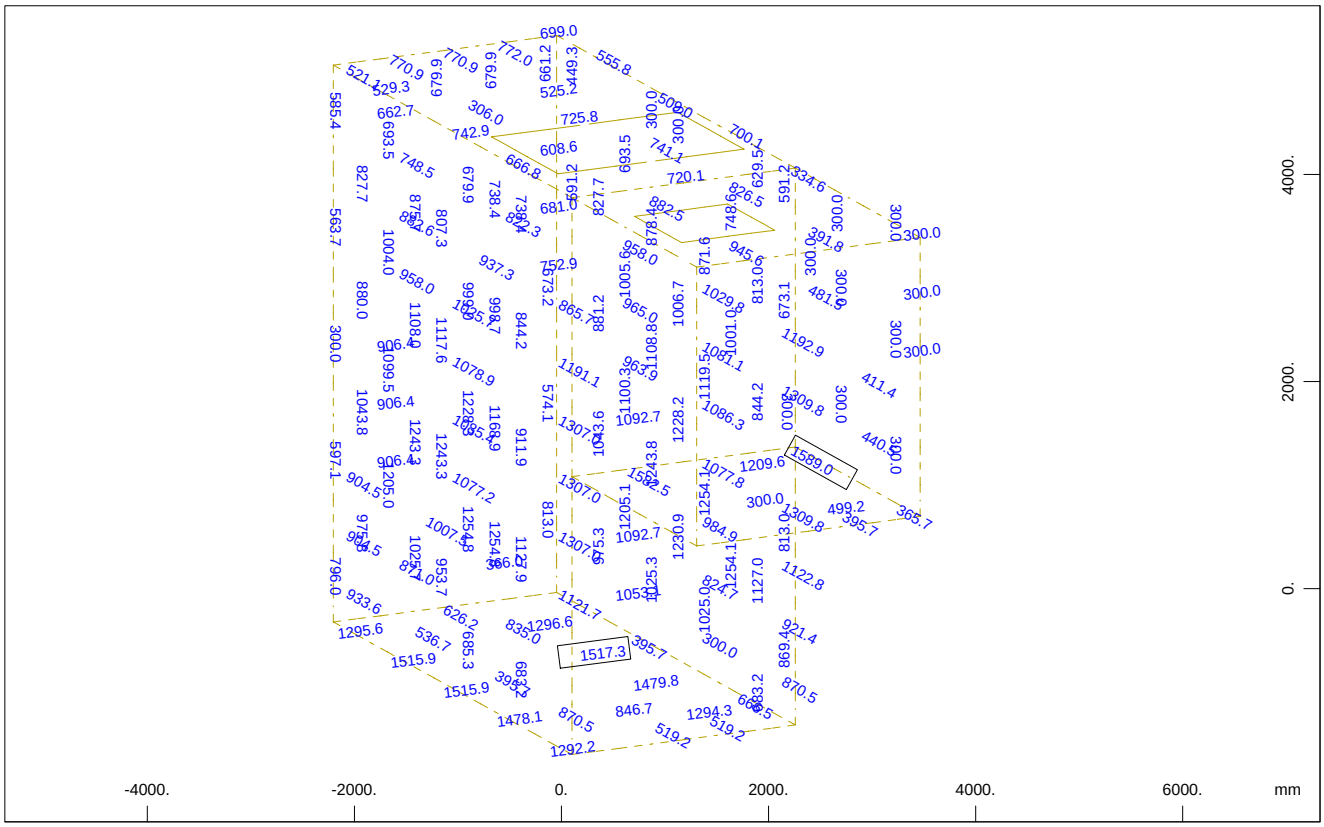
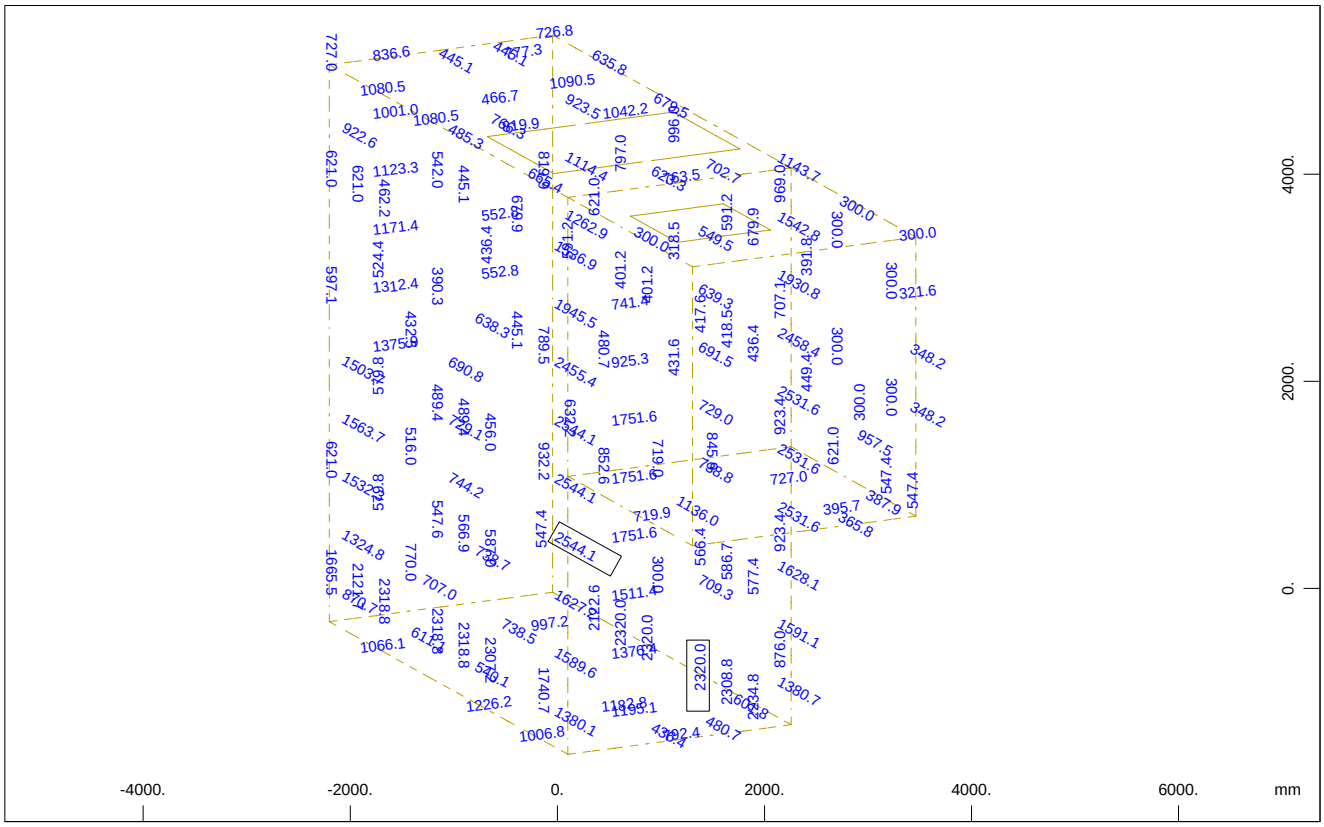


upper Reinforcements in Nodes in mm2/m, Design Case 2 (Max=1589.)

M 1 : 73
X * 0.502
Y * 0.906
Z * 0.962



lower Reinforcements in Nodes in mm2/m, Design Case 2 (Max=2544.)

M 1 : 73
X * 0.502
Y * 0.906
Z * 0.962

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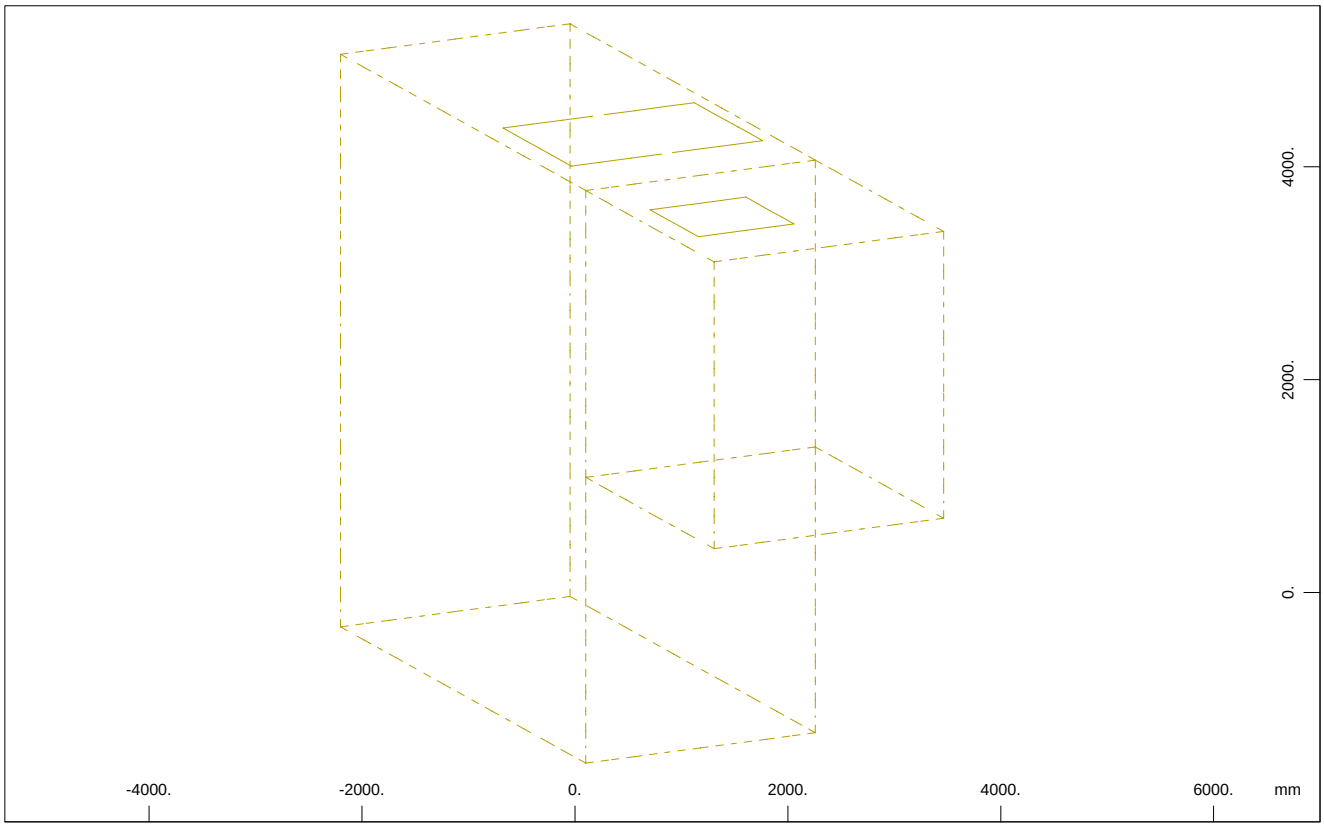
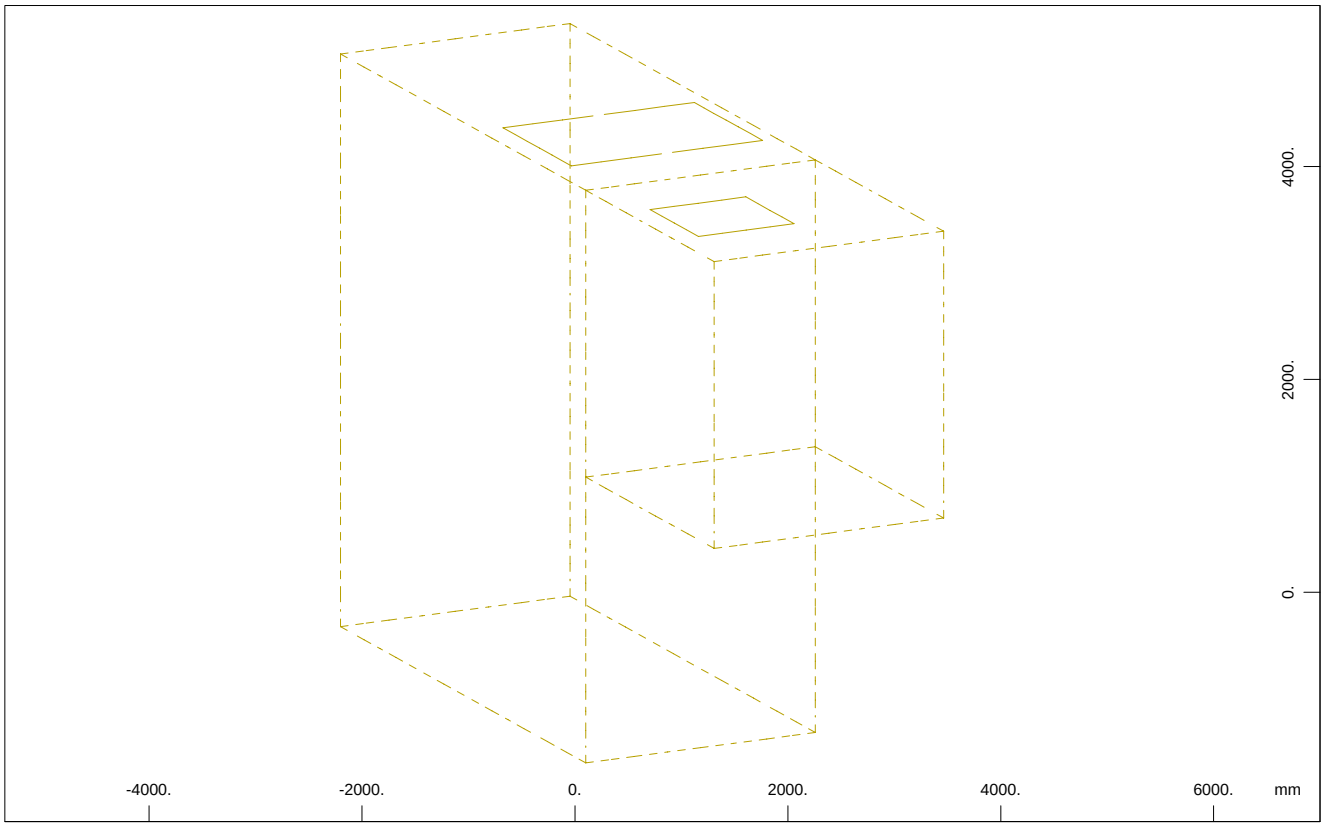
AS DAMASI



Z
Y
X

upper Principal reinforcements (1st layer) LC 2: NO values found
lower Principal reinforcements (1st layer) LC 2: NO values found

M 1 : 71
X * 0.502
Y * 0.906
Z * 0.962



Z
Y
X

upper Cross reinforcements (2nd layer) LC 2: NO values found
lower Cross reinforcements (2nd layer) LC 2: NO values found

M 1 : 71
X * 0.502
Y * 0.906
Z * 0.962

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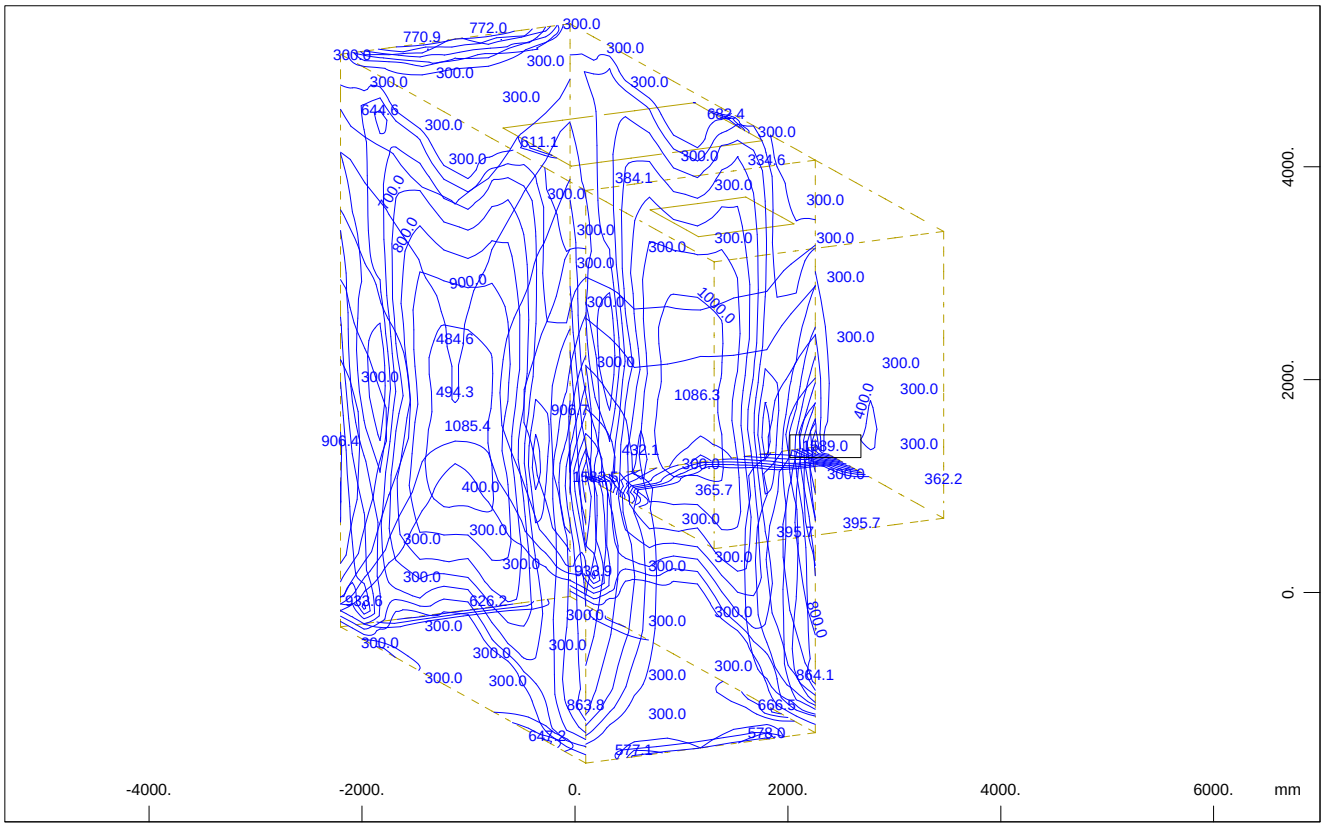
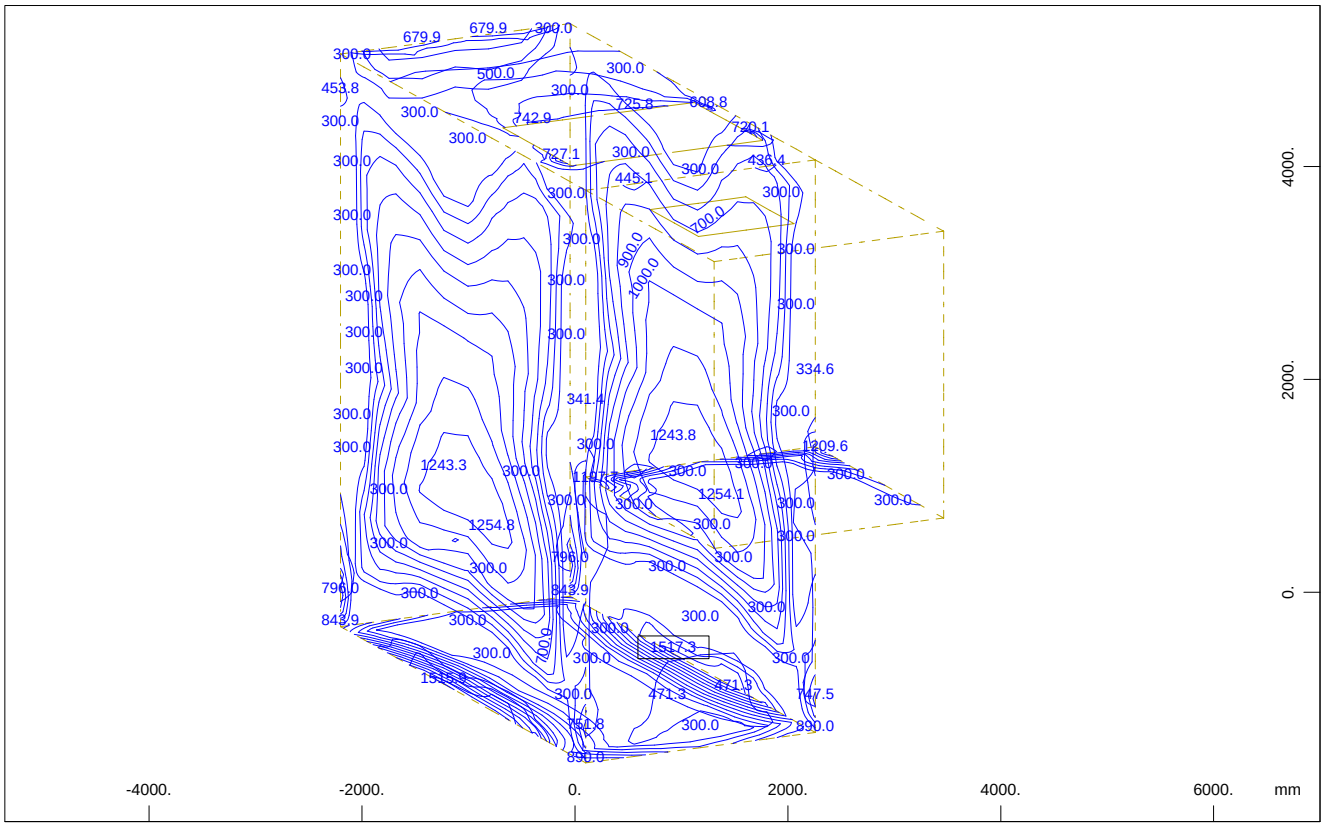
AS DAMASI



Z Y X upper Principal reinforcements (1st layer) in Nodes, Design Case 2 , from 0 to 1589. step 100.0 mm2/m

M 1 : 71
X * 0.502
Y * 0.906
Z * 0.962



Z Y X upper Cross reinforcements (2nd layer) in Nodes, Design Case 2 , from 0 to 1517. step 100.0 mm2/m

M 1 : 71
X * 0.502
Y * 0.906
Z * 0.962

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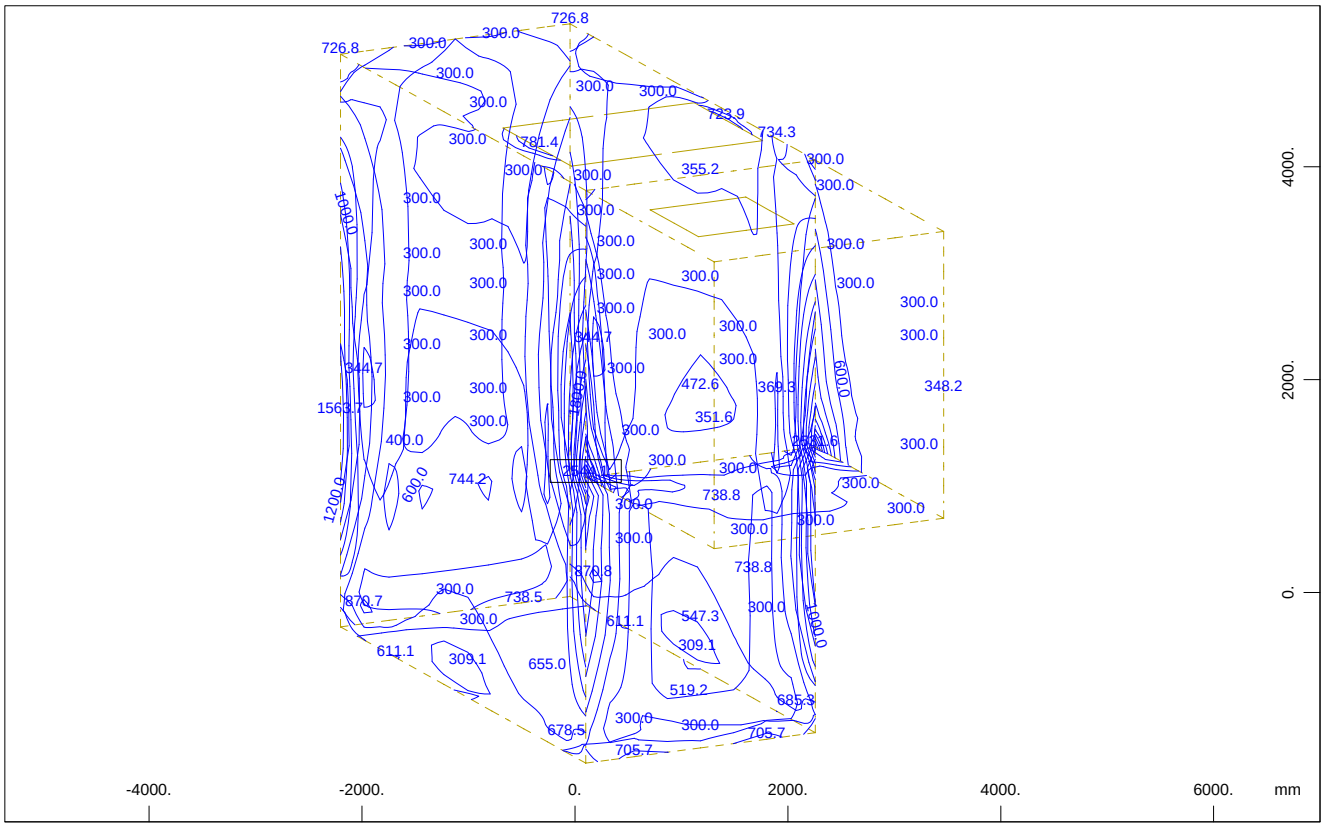
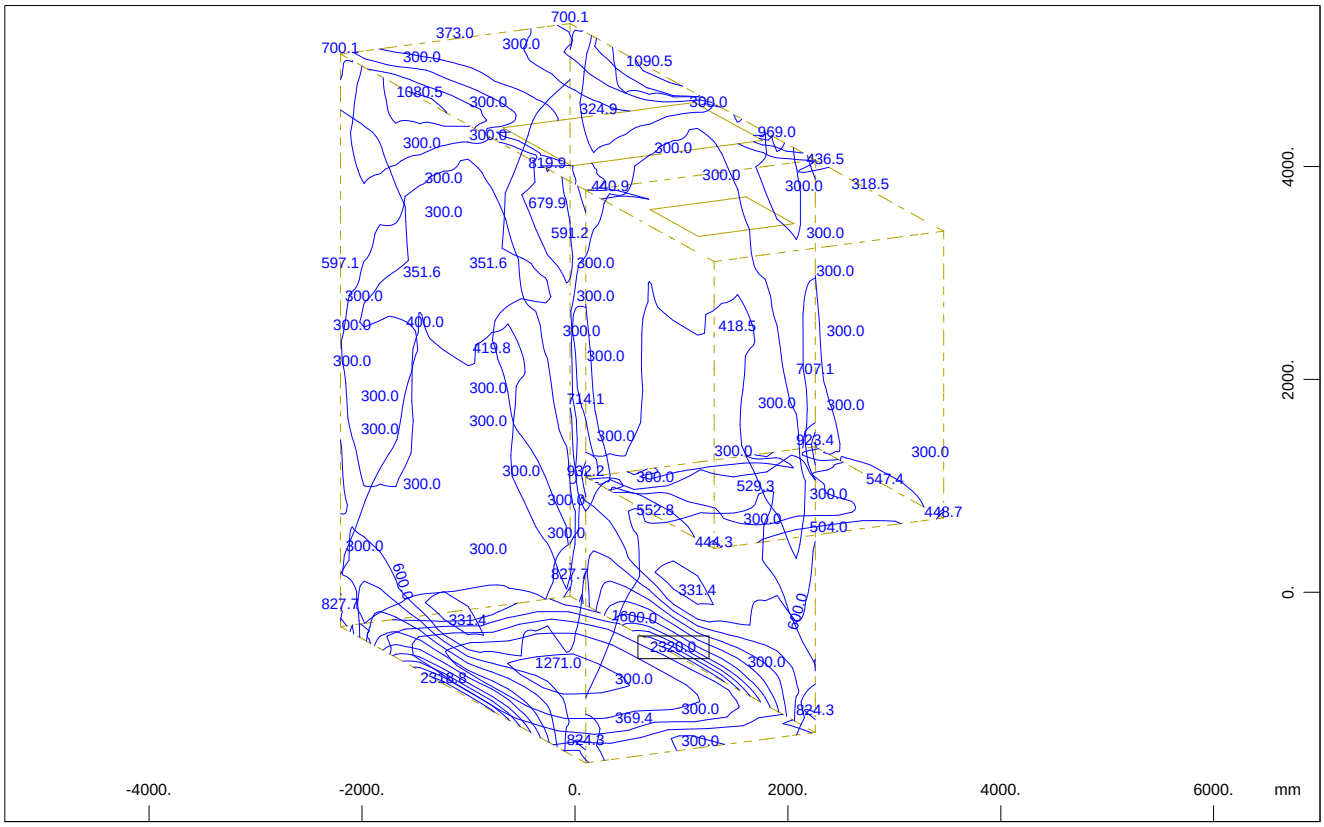
AS DAMASI



Z Y X lower Principal reinforcements (1st layer) in Nodes, Design Case 2 , from 0 to 2544. step 200.0 mm2/m

M 1 : 71
X * 0.502
Y * 0.906
Z * 0.962



Z Y X lower Cross reinforcements (2nd layer) in Nodes, Design Case 2 , from 0 to 2320. step 200.0 mm2/m

M 1 : 71
X * 0.502
Y * 0.906
Z * 0.962

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ΤΥΡΝΑΒΟΣ, 8 ΜΑΡΤΙΟΥ 2022
(Τόπος – Ημερομηνία)

ΣΥΝΤΑΧΘΗΚΕ
Ο Συντάξας

Κων/νος Παπαϊωάννου

Διπλ. Πολιτικός Μηχανικός, MSc

ΕΛΕΓΧΘΗΚΕ & ΘΕΩΡΗΘΗΚΕ
Ο Γεν. Δ/ντης της ΔΕΥΑ ΤΥΡΝΑΒΟΥ

Σταύρος Τσαγκαράκος

Διπλ. Τοπογράφος Μηχανικός, MSc

ΕΓΚΡΙΘΗΚΕ

Με την υπ' αριθμ. 07/2022 Απόφαση του ΔΣ της ΔΕΥΑ ΤΥΡΝΑΒΟΥ

Ο Πρόεδρος του ΔΣ της ΔΕΥΑ ΤΥΡΝΑΒΟΥ

ΙΩΑΝΝΗΣ ΚΟΚΟΥΡΑΣ
ΔΗΜΑΡΧΟΣ ΤΥΡΝΑΒΟΥ

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