

Konstrukcijų skaičiavimo ataskaita

MOKSLO PASKIRTIES PASTATO (GINKŪNŲ SOFIJOS IR VLADIMIRO ZUBOVŲ ROGIMNAZIJOS) AUŠROS G.2, GINKŪNŲ K., ŠIAULIŲ R.SAV., STATYBOS PROJEKTAS

230804A-01-TP-SK

Projekto vadovas

*Aurelijus Dabrikas
Atestato Nr. A 35212*

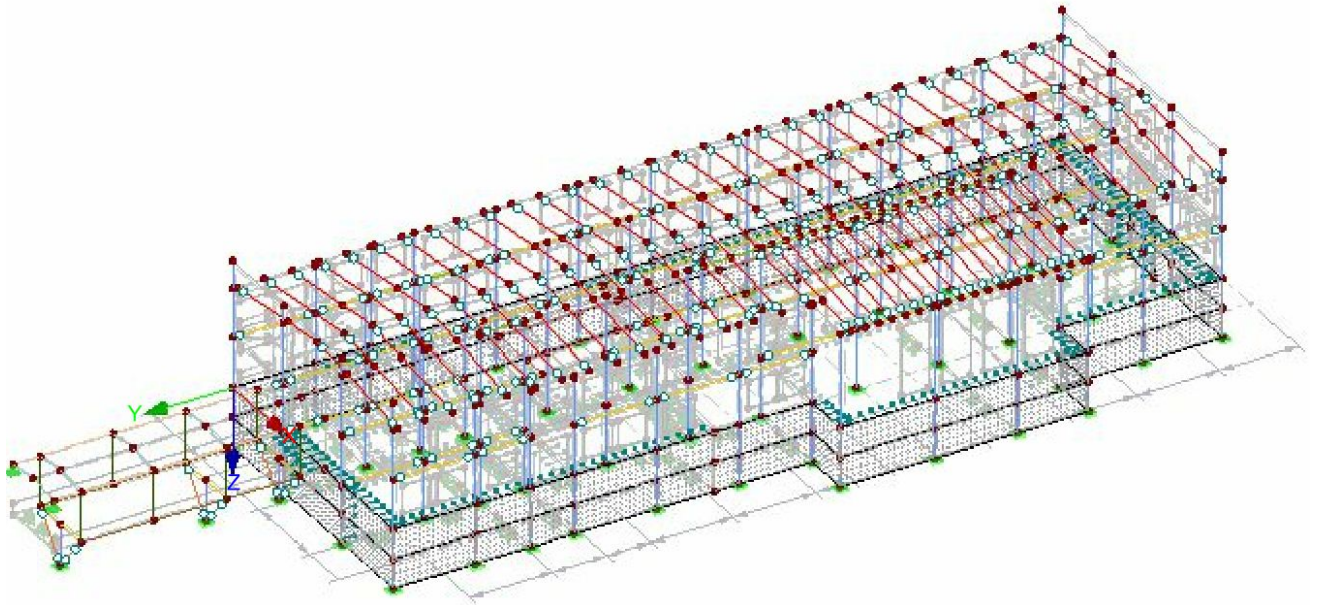
Projekto dalies vadovas

*Gediminas Vievesis
Atestato Nr. 38316*

Skaičiavimų išvados:

1. Pastato laikančiosios konstrukcijos

Laikančiąsias pastato konstrukcijas sudaro surenkamojo gelžbetoninio kolonos ir rygeliai, kompozitinės deltabeam sijos, surenkamos perdangos plokštės, plieninės ir klijuotos medienos sijos, bei mūro konstrukcijos. Kolonos su pamatais jungiamos standžiai, sijos prie kolonų tvirtinamos lankstais. Konstrukcijų stabilumą užtikrina mūro konstrukcijos ir surenkamos cokolinės plokštės - suvaržo pastato horizontaliuosius poslinkius visomis kryptimis. Pastato kolonų žingsnis kintamas.



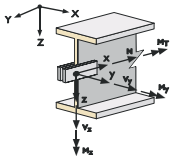
Skaičiavimo rezultatai atitinka projekto rengimo dokumentų reikalavimus, normatyvinių statybos dokumentų reikalavimus. Konstrukcinių elementų ir jų jungčių laikomosios galios išnaudojimas atitinka normatyvinių statybos dokumentų reikalavimus. Projektuojamo pastato konstrukcijos atitinka normatyvinių statybos techninių dokumentų reikalavimus.

MODEL - GENERAL DATA

General	Model name	: Ginkunai TP
	Project name	: Examples
	Project description	: Sample structures
	Type of model	: 3D
	Positive direction of global axis Z	: Downward
	Classification of load cases and combinations	: According to Standard: EN 1990 National Annex: LST - Lithuania
	<input checked="" type="checkbox"/> Automatically create combinations	: <input checked="" type="checkbox"/> Load Combinations
Options	<input type="checkbox"/> RF-FORM-FINDING - Find initial equilibrium shapes of membrane and cable structures	
	<input type="checkbox"/> RF-CUTTING-PATTERN	
	<input type="checkbox"/> Piping analysis	
	<input type="checkbox"/> Use CQC Rule	
	<input type="checkbox"/> Enable CAD/BIM model	
	Standard Gravity g	: 10.00 m/s ²

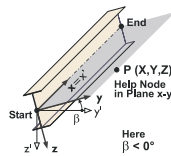
FE MESH SETTINGS

General	Target length of finite elements	l_{FE}	: 0.500 m
	Maximum distance between a node and a line to integrate it into the line	ϵ	: 0.001 m
	Maximum number of mesh nodes (in thousands)		: 500
Members	Number of divisions of members with cable, elastic foundation, taper, or plastic characteristic		: 10
	<input checked="" type="checkbox"/> Activate member divisions for large deformation or post-critical analysis		
	<input checked="" type="checkbox"/> Use division for members with node lying on them		
Surfaces	Maximum ratio of FE rectangle diagonals	Δ_D	: 1.800
	Maximum out-of-plane inclination of two finite elements	α	: 0.50 °
	Shape direction of finite elements		: Triangles and quadrangles <input checked="" type="checkbox"/> Same squares where possible



1.14 MEMBER HINGES

Release No.	Reference System	Axial/Shear Release or Spring[kN/m]			Moment Release or Spring[kNm/rad]			Comment
		U_x	U_y	U_z	φ_x	φ_y	φ_z	
1	Local x,y,z	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
2	Local x,y,z	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
3	Local x,y,z	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
4	Local x,y,z	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	



1.17 MEMBERS

Mbr. No.	Line No.	Member	Rotation		Cross-Section		Hinge No.		Ecc. No.	Div. No.	Length L [m]	
			Type	β [°]	Start	End	Start	End				
1	1	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
2	2	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
3	3	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
4	4	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
5	5	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
6	6	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
7	7	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
8	8	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
9	9	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
10	10	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
11	11	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
12	12	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
13	13	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
14	14	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
15	15	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
16	16	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
17	17	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
18	18	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
19	19	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
20	20	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
21	21	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
22	22	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
23	23	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
24	24	Beam	Angle	0.00	1	1	-	-	-	-	4.200	Z
25	25	Beam	Angle	0.00	1	1	-	-	-	-	4.200	Z
26	26	Beam	Angle	0.00	1	1	-	-	-	-	4.350	Z
27	27	Beam	Angle	0.00	1	1	-	-	-	-	4.350	Z
28	28	Beam	Angle	0.00	1	1	-	-	-	-	4.350	Z
29	29	Beam	Angle	0.00	1	1	-	-	-	-	4.350	Z
30	30	Beam	Angle	0.00	1	1	-	-	-	-	4.200	Z
31	31	Beam	Angle	0.00	1	1	-	-	-	-	4.200	Z
32	32	Beam	Angle	0.00	1	1	-	-	-	-	4.200	Z
33	33	Beam	Angle	0.00	1	1	-	-	-	-	4.200	Z
34	34	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
35	35	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
36	36	Beam	Angle	0.00	1	1	-	-	-	-	4.200	Z
37	37	Beam	Angle	0.00	1	1	-	-	-	-	4.200	Z
38	38	Beam	Angle	0.00	1	1	-	-	-	-	4.350	Z
39	39	Beam	Angle	0.00	1	1	-	-	-	-	4.350	Z
40	40	Beam	Angle	0.00	1	1	-	-	-	-	4.350	Z
41	41	Beam	Angle	0.00	1	1	-	-	-	-	4.350	Z

1.17 MEMBERS

Mbr. No.	Line No.	Member	Rotation		Cross-Section		Hinge No.		Ecc. No.	Div. No.	Length L [m]	
			Type	β [°]	Start	End	Start	End				
42	42	Beam	Angle	0.00	1	1	-	-	-	-	4.350	Z
43	43	Beam	Angle	0.00	1	1	-	-	-	-	4.200	Z
44	44	Beam	Angle	0.00	1	1	-	-	-	-	4.200	Z
45	45	Beam	Angle	0.00	1	1	-	-	-	-	4.350	Z
46	46	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
47	47	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
48	48	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
49	49	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
50	50	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
51	53	Beam	Angle	0.00	1	1	-	-	-	-	3.700	Z
52	54	Beam	Angle	0.00	1	1	-	-	-	-	3.550	Z
53	58	Beam	Angle	0.00	1	1	-	-	-	-	3.450	Z
54	59	Beam	Angle	0.00	1	1	-	-	-	-	4.200	Z
55	62	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
56	63	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
57	65	Beam	Angle	0.00	1	1	-	-	-	-	3.700	Z
58	66	Beam	Angle	0.00	1	1	-	-	-	-	3.550	Z
59	69	Beam	Angle	0.00	1	1	-	-	-	-	3.700	Z
60	70	Beam	Angle	0.00	1	1	-	-	-	-	3.550	Z
61	73	Beam	Angle	0.00	1	1	-	-	-	-	3.450	Z
62	74	Beam	Angle	0.00	1	1	-	-	-	-	4.200	Z
63	75	Beam	Angle	0.00	1	1	-	-	-	-	3.450	Z
64	76	Beam	Angle	0.00	1	1	-	-	-	-	4.200	Z
65	81	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
66	82	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
67	83	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
68	84	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
69	111	Beam	Angle	0.00	1	1	-	-	-	-	3.700	Z
70	112	Beam	Angle	0.00	1	1	-	-	-	-	3.550	Z
71	114	Beam	Angle	0.00	1	1	-	-	-	-	3.450	Z
72	115	Beam	Angle	0.00	1	1	-	-	-	-	4.200	Z
73	118	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
74	119	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
75	185	Beam	Angle	0.00	1	1	-	-	-	-	3.700	Z
76	186	Beam	Angle	0.00	1	1	-	-	-	-	3.700	Z
77	187	Beam	Angle	0.00	1	1	-	-	-	-	3.700	Z
78	188	Beam	Angle	0.00	1	1	-	-	-	-	3.700	Z
79	189	Beam	Angle	0.00	1	1	-	-	-	-	3.550	Z
80	190	Beam	Angle	0.00	1	1	-	-	-	-	3.700	Z
81	191	Beam	Angle	0.00	1	1	-	-	-	-	3.700	Z
82	192	Beam	Angle	0.00	1	1	-	-	-	-	3.700	Z
83	193	Beam	Angle	0.00	1	1	-	-	-	-	3.700	Z
84	194	Beam	Angle	0.00	1	1	-	-	-	-	3.700	Z
85	195	Beam	Angle	0.00	1	1	-	-	-	-	3.700	Z
86	196	Beam	Angle	0.00	1	1	-	-	-	-	3.700	Z
87	197	Beam	Angle	0.00	1	1	-	-	-	-	3.700	Z
88	198	Beam	Angle	0.00	1	1	-	-	-	-	3.700	Z
89	199	Beam	Angle	0.00	1	1	-	-	-	-	3.700	Z
90	200	Beam	Angle	0.00	1	1	-	-	-	-	3.700	Z
91	201	Beam	Angle	0.00	1	1	-	-	-	-	3.700	Z
92	202	Beam	Angle	0.00	1	1	-	-	-	-	3.700	Z
93	203	Beam	Angle	0.00	1	1	-	-	-	-	3.550	Z
94	204	Beam	Angle	0.00	1	1	-	-	-	-	3.700	Z
95	205	Beam	Angle	0.00	1	1	-	-	-	-	3.550	Z
96	206	Beam	Angle	0.00	1	1	-	-	-	-	3.700	Z
97	207	Beam	Angle	0.00	1	1	-	-	-	-	6.850	Z
98	208	Beam	Angle	0.00	1	1	-	-	-	-	6.850	Z
99	209	Beam	Angle	0.00	1	1	-	-	-	-	6.850	Z
100	210	Beam	Angle	0.00	1	1	-	-	-	-	6.850	Z
101	243	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
102	244	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
103	245	Beam	Angle	0.00	1	1	-	-	-	-	2.025	Z
104	246	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
105	247	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
106	248	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
107	249	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
108	250	Beam	Angle	0.00	1	1	-	-	-	-	2.025	Z
109	251	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
110	252	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
111	253	Beam	Angle	0.00	1	1	-	-	-	-	2.025	Z
112	254	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
113	255	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
114	256	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
115	257	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
116	258	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
117	259	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
118	260	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
119	261	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
120	262	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
121	263	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
122	264	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
123	265	Beam	Angle	0.00	1	1	-	-	-	-	2.025	Z
124	266	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
125	267	Beam	Angle	0.00	1	1	-	-	-	-	2.025	Z
126	268	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
127	269	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
128	270	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
129	271	Beam	Angle	0.00	1	1	-	-	-	-	2.025	Z
130	272	Beam	Angle	0.00	1	1	-	-	-	-	2.175	Z
131	278	Beam	Angle	0.00	1	1	-	-	-	-	3.550	Z
132	288	Beam	Angle	0.00	1	1	-	-	-	-	3.550	Z
133	290	Beam	Angle	0.00	1	1	-	-	-	-	3.550	Z
134	294	Beam	Angle	0.00	1	1	-	-	-	-	3.550	Z
135	306	Beam	Angle	0.00	1	1	-	-	-	-	3.550	Z
136	315	Beam	Angle	0.00	1	1	-	-	-	-	3.550	Z
137	333	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
138	334	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
139	336	Beam	Angle	0.00	1	1	-	-	-	-	3.450	Z
140	337	Beam	Angle	0.00	1	1	-	-	-	-	4.200	Z
141	339	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z

1.17 MEMBERS

Mbr. No.	Line No.	Member	Rotation		Cross-Section		Hinge No.		Ecc. No.	Div. No.	Length L [m]	
			Type	β [°]	Start	End	Start	End				
142	340	Beam	Angle	0.00	1	1	-	3	-	-	0.150	Z
143	355	Beam	Angle	0.00	1	1	-	-	-	-	3.600	Z
144	357	Beam	Angle	0.00	1	1	-	-	-	-	1.250	Z
145	362	Beam	Angle	0.00	2	2	1	1	-	-	6.000	Y
146	363	Beam	Angle	0.00	2	2	1	1	-	-	4.000	Y
147	364	Beam	Angle	0.00	1	1	-	-	-	-	3.550	Z
148	365	Beam	Angle	0.00	2	2	1	1	-	-	3.210	Y
149	366	Beam	Angle	0.00	2	2	1	-	-	-	2.740	Y
150	367	Beam	Angle	0.00	1	1	-	-	-	-	3.550	Z
151	368	Beam	Angle	0.00	2	2	-	1	-	-	2.590	Y
152	369	Beam	Angle	0.00	2	2	1	1	-	-	6.930	Y
153	370	Beam	Angle	0.00	1	1	-	-	-	-	3.550	Z
154	371	Beam	Angle	0.00	2	2	1	1	-	-	6.000	Y
155	372	Beam	Angle	0.00	1	1	-	-	-	-	3.550	Z
156	373	Beam	Angle	0.00	2	2	1	1	-	-	5.150	Y
157	374	Beam	Angle	0.00	1	1	-	-	-	-	3.550	Z
158	375	Beam	Angle	0.00	2	2	1	1	-	-	6.000	Y
159	376	Beam	Angle	0.00	1	1	-	-	-	-	3.550	Z
160	377	Beam	Angle	0.00	2	2	1	-	-	-	1.650	Y
161	378	Beam	Angle	0.00	2	2	1	1	-	-	6.000	Y
162	379	Beam	Angle	0.00	1	1	-	-	-	-	3.550	Z
163	380	Beam	Angle	0.00	2	2	1	1	-	-	4.000	Y
164	381	Beam	Angle	0.00	2	2	1	1	-	-	3.210	Y
165	382	Beam	Angle	0.00	2	2	1	1	-	-	6.930	Y
166	383	Beam	Angle	0.00	1	1	-	-	-	-	3.550	Z
167	384	Beam	Angle	0.00	2	2	1	1	-	-	6.000	Y
168	385	Beam	Angle	0.00	1	1	-	-	-	-	3.550	Z
169	386	Beam	Angle	0.00	2	2	1	1	-	-	5.150	Y
170	387	Beam	Angle	0.00	2	2	1	1	-	-	6.000	Y
171	388	Beam	Angle	0.00	1	1	-	-	-	-	3.700	Z
172	389	Beam	Angle	0.00	2	2	1	1	-	-	5.800	Y
173	458	Beam	Angle	0.00	1	1	-	-	-	-	3.600	Z
174	481	Beam	Angle	0.00	1	1	-	-	-	-	1.250	Z
175	463	Beam	Angle	0.00	2	2	1	1	-	-	4.000	Y
176	464	Beam	Angle	0.00	2	2	1	1	-	-	3.210	Y
177	465	Beam	Angle	0.00	2	2	1	1	-	-	6.930	Y
178	466	Beam	Angle	0.00	2	2	1	-	-	-	2.500	Y
179	467	Beam	Angle	0.00	2	2	1	1	-	-	5.150	Y
180	468	Beam	Angle	0.00	2	2	1	-	-	-	2.000	Y
181	469	Beam	Angle	0.00	2	2	1	1	-	-	5.800	Y
182	470	Beam	Angle	0.00	2	2	1	1	-	-	6.000	Y
183	471	Beam	Angle	0.00	2	2	1	1	-	-	4.000	Y
184	418	Beam	Angle	0.00	2	2	1	1	-	-	3.210	Y
185	473	Beam	Angle	0.00	2	2	1	1	-	-	6.930	Y
186	474	Beam	Angle	0.00	2	2	1	-	-	-	2.500	Y
187	475	Beam	Angle	0.00	2	2	1	1	-	-	5.150	Y
188	476	Beam	Angle	0.00	2	2	1	-	-	-	2.000	Y
189	477	Beam	Angle	0.00	2	2	1	1	-	-	5.800	Y
190	1103	Beam	Angle	0.00	4	4	-	2	-	-	0.310	Y
191	1104	Beam	Angle	0.00	4	4	-	2	-	-	0.310	Y
192	1111	Beam	Angle	0.00	4	4	-	-	-	-	2.000	Y
193	1112	Beam	Angle	0.00	4	4	-	-	-	-	2.000	Y
194	1167	Beam	Angle	0.00	4	4	-	2	-	-	1.100	Y
195	1175	Beam	Angle	0.00	4	4	-	-	-	-	2.000	Y
196	1183	Beam	Angle	0.00	4	4	-	-	-	-	2.000	Y
197	1191	Beam	Angle	0.00	4	4	-	-	-	-	1.000	Y
198	1198	Beam	Angle	0.00	4	4	-	-	-	-	1.000	Y
199	1205	Beam	Angle	0.00	4	4	-	-	-	-	1.000	Y
200	1212	Beam	Angle	0.00	4	4	-	-	-	-	0.840	Y
201	489	Beam	Angle	0.00	1	1	-	3	-	-	4.350	Z
202	490	Beam	Angle	0.00	1	1	-	3	-	-	4.350	Z
203	1219	Beam	Angle	0.00	4	4	-	-	-	-	1.000	Y
204	460	Beam	Angle	0.00	2	2	1	1	-	-	6.000	Y
205	472	Beam	Angle	0.00	2	2	1	1	-	-	5.330	Y
206	1225	Beam	Angle	0.00	4	4	-	-	-	-	1.000	Y
207	493	Beam	Angle	0.00	2	2	1	-	-	-	1.920	Y
208	1231	Beam	Angle	0.00	4	4	-	-	-	-	0.840	Y
209	1237	Beam	Angle	0.00	4	4	-	-	-	-	1.000	Y
210	496	Beam	Angle	0.00	2	2	1	1	-	-	5.330	Y
211	497	Beam	Angle	0.00	2	2	1	-	-	-	1.920	Y
212	1243	Beam	Angle	0.00	4	4	-	-	-	-	1.000	Y
213	499	Beam	Angle	0.00	2	2	1	-	-	-	4.670	Y
214	462	Beam	Angle	0.00	2	2	1	1	-	-	6.000	Y
215	500	Beam	Angle	0.00	2	2	1	1	-	-	4.000	Y
216	501	Beam	Angle	0.00	2	2	1	1	-	-	3.210	Y
217	502	Beam	Angle	0.00	2	2	1	1	-	-	6.930	Y
218	503	Beam	Angle	0.00	2	2	1	1	-	-	6.000	Y
219	504	Beam	Angle	0.00	2	2	1	1	-	-	5.150	Y
220	505	Beam	Angle	0.00	2	2	1	1	-	-	6.000	Y
221	506	Beam	Angle	0.00	2	2	1	1	-	-	5.800	Y
222	507	Beam	Angle	0.00	2	2	1	1	-	-	5.330	Y
223	508	Beam	Angle	0.00	2	2	1	1	-	-	6.000	Y
224	509	Beam	Angle	0.00	2	2	1	1	-	-	6.000	Y
225	510	Beam	Angle	0.00	1	1	-	-	-	-	3.600	Z
226	511	Beam	Angle	0.00	1	1	-	-	-	-	3.600	Z
227	512	Beam	Angle	0.00	1	1	-	-	-	-	3.600	Z
228	513	Beam	Angle	0.00	1	1	-	-	-	-	3.600	Z
229	514	Beam	Angle	0.00	1	1	-	-	-	-	3.600	Z
230	515	Beam	Angle	0.00	1	1	-	-	-	-	3.600	Z
231	516	Beam	Angle	0.00	1	1	-	-	-	-	3.600	Z
232	517	Beam	Angle	0.00	1	1	-	-	-	-	3.600	Z
233	518	Beam	Angle	0.00	1	1	-	-	-	-	3.600	Z
234	519	Beam	Angle	0.00	2	2	1	1	-	-	6.000	Y
235	520	Beam	Angle	0.00	2	2	1	1	-	-	4.000	Y
236	522	Beam	Angle	0.00	2	2	1	1	-	-	6.000	Y
237	523	Beam	Angle	0.00	2	2	1	1	-	-	5.800	Y
238	521	Beam	Angle	0.00	2	2	1	1	-	-	5.330	Y
239	524	Beam	Angle	0.00	2	2	1	1	-	-	6.000	Y
240	525	Beam	Angle	0.00	2	2	1	1	-	-	6.000	Y
241	526	Beam	Angle	0.00	1	1	-	-	-	-	3.600	Z

1.17 MEMBERS

Mbr. No.	Line No.	Member	Rotation		Cross-Section		Hinge No.		Ecc. No.	Div. No.	Length L [m]	
			Type	β [°]	Start	End	Start	End				
242	527	Beam	Angle	0.00	1	1	-	-	-	-	3.600	Z
243	528	Beam	Angle	0.00	1	1	-	-	-	-	3.600	Z
244	529	Beam	Angle	0.00	1	1	-	-	-	-	3.600	Z
245	530	Beam	Angle	0.00	1	1	-	-	-	-	3.600	Z
246	531	Beam	Angle	0.00	1	1	-	-	-	-	3.600	Z
247	537	Beam	Angle	0.00	3	3	-	-	-	-	6.150	Y
248	538	Beam	Angle	0.00	3	3	-	-	-	-	8.150	Y
249	539	Beam	Angle	0.00	3	3	-	-	-	-	2.000	X
250	540	Beam	Angle	0.00	2	2	-	1	-	-	4.000	Y
251	541	Beam	Angle	0.00	3	3	-	-	-	-	3.350	X
252	542	Beam	Angle	0.00	3	3	-	-	-	-	2.000	X
253	543	Beam	Angle	0.00	2	2	-	1	-	-	4.000	Y
254	544	Beam	Angle	0.00	3	3	-	-	-	-	2.000	X
255	545	Beam	Angle	0.00	2	2	-	1	-	-	1.000	Y
256	546	Beam	Angle	0.00	3	3	-	-	-	-	3.350	X
257	547	Beam	Angle	0.00	3	3	-	-	-	-	2.000	X
258	548	Beam	Angle	0.00	2	2	-	1	-	-	1.000	Y
259	549	Beam	Angle	0.00	3	3	-	-	-	-	2.000	X
260	550	Beam	Angle	0.00	3	3	-	-	-	-	3.350	X
261	551	Beam	Angle	0.00	3	3	-	-	-	-	2.000	X
262	552	Beam	Angle	0.00	2	2	-	-	-	-	2.500	Y
263	553	Beam	Angle	0.00	2	2	-	-	-	-	2.500	Y
264	554	Beam	Angle	0.00	3	3	-	-	-	-	2.000	X
265	555	Beam	Angle	0.00	3	3	-	-	-	-	3.350	X
266	556	Beam	Angle	0.00	3	3	-	-	-	-	2.000	X
267	557	Beam	Angle	0.00	3	3	-	-	-	-	9.430	Y
268	558	Beam	Angle	0.00	3	3	-	-	-	-	9.430	Y
269	561	Beam	Angle	0.00	3	3	-	-	-	-	2.000	X
270	562	Beam	Angle	0.00	3	3	-	-	-	-	3.350	X
271	563	Beam	Angle	0.00	3	3	-	-	-	-	2.000	X
272	564	Beam	Angle	0.00	2	2	-	1	-	-	4.080	Y
273	565	Beam	Angle	0.00	2	2	-	1	-	-	4.080	Y
274	566	Beam	Angle	0.00	3	3	-	-	-	-	2.000	X
275	567	Beam	Angle	0.00	3	3	-	-	-	-	3.350	X
276	568	Beam	Angle	0.00	3	3	-	-	-	-	2.000	X
277	569	Beam	Angle	0.00	2	2	-	1	-	-	1.330	Y
278	570	Beam	Angle	0.00	2	2	-	1	-	-	1.330	Y
279	571	Beam	Angle	0.00	3	3	-	-	-	-	8.750	Y
280	572	Beam	Angle	0.00	3	3	-	-	-	-	8.750	Y
281	581	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
282	582	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
283	583	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
284	596	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
285	597	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
286	598	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
287	599	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
288	610	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
289	611	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
290	617	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
291	618	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
292	632	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
293	643	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
294	644	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
295	653	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
296	654	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
297	671	Beam	Angle	0.00	2	2	-	1	-	-	4.150	Y
298	700	Beam	Angle	0.00	3	3	-	-	-	-	2.000	X
299	705	Beam	Angle	0.00	3	3	-	-	-	-	2.000	Y
300	688	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
301	676	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
302	664	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
303	665	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
304	666	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
305	667	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
306	668	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
307	677	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
308	678	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
309	679	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
310	680	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
311	689	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
312	690	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
313	691	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
314	692	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
315	693	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
316	747	Beam	Angle	0.00	1	1	-	-	-	-	2.000	Z
317	696	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
318	697	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
319	698	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
320	699	Beam	Angle	0.00	1	1	-	-	-	-	0.150	Z
321	703	Beam	Angle	0.00	1	1	-	-	-	-	4.350	Z
322	704	Beam	Angle	0.00	1	1	-	-	-	-	4.350	Z
323	758	Beam	Angle	0.00	1	1	-	-	-	-	2.000	Z
324	760	Beam	Angle	0.00	1	1	-	-	-	-	2.000	Z
325	773	Beam	Angle	0.00	1	1	-	-	-	-	2.000	Z
326	1066	Beam	Angle	0.00	1	1	-	-	-	-	1.250	Z
327	1067	Beam	Angle	0.00	1	1	-	-	-	-	1.250	Z
328	717	Beam	Angle	0.00	1	1	-	-	-	-	4.350	Z
329	718	Beam	Angle	0.00	1	1	-	-	-	-	4.350	Z
330	719	Beam	Angle	0.00	1	1	-	-	-	-	4.350	Z
331	720	Beam	Angle	0.00	1	1	-	-	-	-	4.350	Z
332	1309	Beam	Angle	0.00	4	4	-	-	-	-	0.770	Y
333	1312	Beam	Angle	0.00	4	4	-	-	-	-	1.000	Y
334	1314	Beam	Angle	0.00	4	4	-	-	-	-	1.000	Y
335	1317	Beam	Angle	0.00	4	4	-	-	-	-	1.000	Y
336	1320	Beam	Angle	0.00	4	4	-	-	-	-	1.000	Y
337	1323	Beam	Angle	0.00	4	4	-	-	-	-	1.000	Y
338	1326	Beam	Angle	0.00	4	4	-	-	-	-	1.000	Y
339	1329	Beam	Angle	0.00	4	4	-	-	-	-	1.000	Y
340	1332	Beam	Angle	0.00	4	4	-	-	-	-	1.000	Y
341	734	Beam	Angle	0.00	1	1	-	-	-	-	4.350	Z

1.17 MEMBERS

Mbr. No.	Line No.	Member	Rotation		Cross-Section		Hinge No.		Ecc. No.	Div. No.	Length L [m]	
			Type	β [°]	Start	End	Start	End				
342	735	Beam	Angle	0.00	1	1	-	-	-	-	4.350	Z
343	736	Beam	Angle	0.00	1	1	-	-	-	-	4.350	Z
344	737	Beam	Angle	0.00	1	1	-	-	-	-	4.350	Z
345	738	Beam	Angle	0.00	1	1	-	-	-	-	4.350	Z
346	739	Beam	Angle	0.00	1	1	-	-	-	-	4.350	Z
347	740	Beam	Angle	0.00	1	1	-	-	-	-	4.350	Z
348	741	Beam	Angle	0.00	1	1	-	-	-	-	4.350	Z
349	742	Beam	Angle	0.00	1	1	-	-	-	-	4.350	Z
350	743	Beam	Angle	0.00	1	1	-	-	-	-	4.350	Z
351	744	Beam	Angle	0.00	1	1	-	-	-	-	4.350	Z
352	482	Beam	Angle	0.00	4	4	2	-	-	-	0.900	Y
353	483	Beam	Angle	0.00	4	4	2	-	-	-	0.310	Y
354	484	Beam	Angle	0.00	4	4	-	-	-	-	0.160	Y
355	485	Beam	Angle	0.00	4	4	-	-	-	-	0.160	Y
356	486	Beam	Angle	0.00	4	4	-	-	-	-	0.230	Y
357	487	Beam	Angle	0.00	4	4	2	-	-	-	0.900	Y
358	488	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
359	494	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
360	712	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
361	715	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ
362	716	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
363	1068	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
364	1069	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
365	1070	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ
366	1075	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
367	1076	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
368	1077	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
369	1078	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ
370	1083	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
371	1084	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
372	1085	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
373	1086	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ
374	1091	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
375	1092	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
376	1093	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
377	1094	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ
378	1099	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
379	1100	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
380	1101	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
381	1102	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ
382	1107	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
383	1108	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
384	1109	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
385	1110	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ
386	1115	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
387	1116	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
388	1117	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
389	1118	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ
390	1123	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
391	1124	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
392	1125	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
393	1126	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ
394	1131	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
395	1132	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
396	1133	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
397	1134	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ
398	1139	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
399	1140	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
400	1141	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
401	1142	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ
402	1147	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
403	1148	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
404	1149	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
405	1150	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ
406	1155	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
407	1156	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
408	1157	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
409	1158	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ
410	1163	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
411	1164	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
412	1165	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
413	1166	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ
414	1171	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
415	1172	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
416	1173	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
417	1174	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ
418	1179	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
419	1180	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
420	1181	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
421	1182	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ
422	1187	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
423	1188	Beam	Angle	0.00	5	5	3	-	-	-	9.893	XZ
424	1189	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
425	1190	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ
426	1194	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
427	1202	Beam	Angle	0.00	5	5	3	-	-	-	9.893	XZ
428	1196	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
429	1197	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ
430	1201	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
431	1216	Beam	Angle	0.00	5	5	3	-	-	-	9.893	XZ
432	1203	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
433	1204	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ
434	1208	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
435	1295	Beam	Angle	0.00	5	5	3	-	-	-	9.893	XZ
436	1210	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
437	1211	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ
438	1215	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
439	1297	Beam	Angle	0.00	5	5	3	-	-	-	9.893	XZ
440	1217	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
441	1218	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ

1.17 MEMBERS

Mbr. No.	Line No.	Member	Rotation		Cross-Section		Hinge No.		Ecc. No.	Div. No.	Length L [m]	
			Type	β [°]	Start	End	Start	End				
442	1222	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
443	1223	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
444	1224	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ
445	1228	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
446	1229	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
447	1230	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ
448	1234	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
449	1235	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
450	1236	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ
451	1240	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
452	1241	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
453	1242	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ
454	1246	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
455	1247	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
456	1248	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ
457	1252	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
458	1253	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
459	1254	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ
460	1258	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
461	1259	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
462	1260	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ
463	1264	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
464	1265	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
465	1266	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ
466	1270	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
467	1271	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
468	1272	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ
469	1276	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
470	1277	Beam	Angle	0.00	5	5	-	3	-	-	3.701	XZ
471	1278	Beam	Angle	0.00	5	5	-	-	-	-	3.701	XZ
472	1282	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
473	1284	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
474	1286	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
475	1288	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
476	1290	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
477	1292	Beam	Angle	0.00	5	5	3	-	-	-	6.364	XZ
478	1299	Beam	Angle	0.00	5	5	3	-	-	-	9.893	XZ
479	1301	Beam	Angle	0.00	5	5	3	-	-	-	9.893	XZ
480	1303	Beam	Angle	0.00	5	5	3	-	-	-	9.893	XZ
481	1305	Beam	Angle	0.00	5	5	3	3	-	-	6.364	XZ
482	1307	Beam	Angle	0.00	5	5	3	-	-	-	3.526	XZ
483	1310	Beam	Angle	0.00	5	5	3	3	-	-	9.893	XZ
484	1313	Beam	Angle	0.00	5	5	3	3	-	-	9.893	XZ
485	1316	Beam	Angle	0.00	5	5	3	3	-	-	9.893	XZ
486	1319	Beam	Angle	0.00	5	5	3	3	-	-	9.893	XZ
487	1322	Beam	Angle	0.00	5	5	3	3	-	-	9.893	XZ
488	1325	Beam	Angle	0.00	5	5	3	3	-	-	9.893	XZ
489	1328	Beam	Angle	0.00	5	5	3	3	-	-	9.893	XZ
490	1331	Beam	Angle	0.00	5	5	3	3	-	-	9.893	XZ
491	1365	Beam	Angle	0.00	5	5	3	-	-	-	9.893	XZ
492	1367	Beam	Angle	0.00	5	5	-	-	-	-	0.022	Z
493	1369	Beam	Angle	0.00	5	5	-	3	-	-	6.367	XZ
494	51	Beam	Angle	0.00	6	6	-	-	-	-	3.000	Z
495	55	Beam	Angle	0.00	6	6	-	-	-	-	3.000	Z
496	60	Beam	Angle	0.00	6	6	-	-	-	-	3.000	Z
497	67	Beam	Angle	0.00	2	2	-	-	-	-	2.580	X
498	85	Beam	Angle	0.00	2	2	-	-	-	-	2.570	X
499	88	Beam	Angle	0.00	2	2	-	-	-	-	2.570	X
500	109	Beam	Angle	0.00	2	2	-	-	-	-	2.580	X
501	276	Beam	Angle	0.00	2	2	-	-	-	-	2.580	X
502	280	Beam	Angle	0.00	2	2	-	-	-	-	2.570	X
503	87	Beam	Angle	0.00	7	7	-	-	-	-	5.300	Y
504	120	Beam	Angle	0.00	7	7	-	-	-	-	5.300	Y
505	275	Beam	Angle	180.00	7	7	-	-	-	-	5.300	Y
506	281	Beam	Angle	180.00	7	7	-	-	-	-	5.300	Y
507	1457	Beam	Angle	180.00	7	7	-	-	-	-	5.300	Y
508	1458	Beam	Angle	180.00	7	7	-	-	-	-	5.300	Y
509	296	Beam	Angle	0.00	8	8	-	-	-	-	3.700	Z
510	297	Beam	Angle	0.00	8	8	-	-	-	-	3.700	Z
511	298	Beam	Angle	0.00	8	8	-	-	-	-	3.700	Z
512	299	Beam	Angle	0.00	8	8	-	-	-	-	3.700	Z
513	303	Beam	Angle	0.00	8	8	-	-	-	-	3.700	Z
514	304	Beam	Angle	0.00	8	8	-	-	-	-	3.700	Z
515	308	Beam	Angle	0.00	8	8	-	-	-	-	3.700	Z
516	309	Beam	Angle	0.00	8	8	-	-	-	-	3.700	Z
517	310	Beam	Angle	0.00	9	9	4	-	-	-	1.850	Y
518	311	Beam	Angle	0.00	9	9	-	-	-	-	5.300	Y
519	312	Beam	Angle	0.00	9	9	-	-	-	-	5.300	Y
520	317	Beam	Angle	0.00	9	9	-	-	-	-	5.300	Y
521	319	Beam	Angle	0.00	9	9	-	-	-	-	2.000	Y
522	325	Beam	Angle	0.00	9	9	4	-	-	-	1.850	Y
523	327	Beam	Angle	0.00	9	9	-	-	-	-	5.300	Y
524	328	Beam	Angle	0.00	9	9	-	-	-	-	5.300	Y
525	329	Beam	Angle	0.00	9	9	-	-	-	-	5.300	Y
526	330	Beam	Angle	0.00	9	9	-	-	-	-	2.000	Y
527	448	Beam	Angle	0.00	10	10	-	-	-	-	2.592	XZ
528	1459	Beam	Angle	0.00	10	10	-	-	-	-	2.592	XZ
529	586	Beam	Angle	0.00	10	10	-	-	-	-	2.592	XZ
530	1460	Beam	Angle	0.00	10	10	-	-	-	-	2.592	XZ
531	588	Beam	Angle	0.00	10	10	-	-	-	-	2.592	XZ
532	1461	Beam	Angle	0.00	10	10	-	-	-	-	2.592	XZ
533	589	Beam	Angle	0.00	10	10	-	-	-	-	2.592	XZ
534	1462	Beam	Angle	0.00	10	10	-	-	-	-	2.592	XZ
535	608	Beam	Angle	0.00	10	10	-	-	-	-	2.600	
536	612	Beam	Angle	0.00	10	10	-	-	-	-	2.600	
537	622	Beam	Angle	0.00	10	10	-	-	-	-	2.592	XZ
538	624	Beam	Angle	0.00	10	10	-	-	-	-	2.592	XZ
539	626	Beam	Angle	0.00	11	11	4	4	-	-	3.957	XZ
540	627	Beam	Angle	0.00	11	11	4	4	-	-	3.950	XZ
541	628	Beam	Angle	0.00	11	11	4	4	-	-	3.957	XZ

■ 1.17 MEMBERS

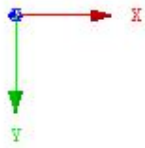
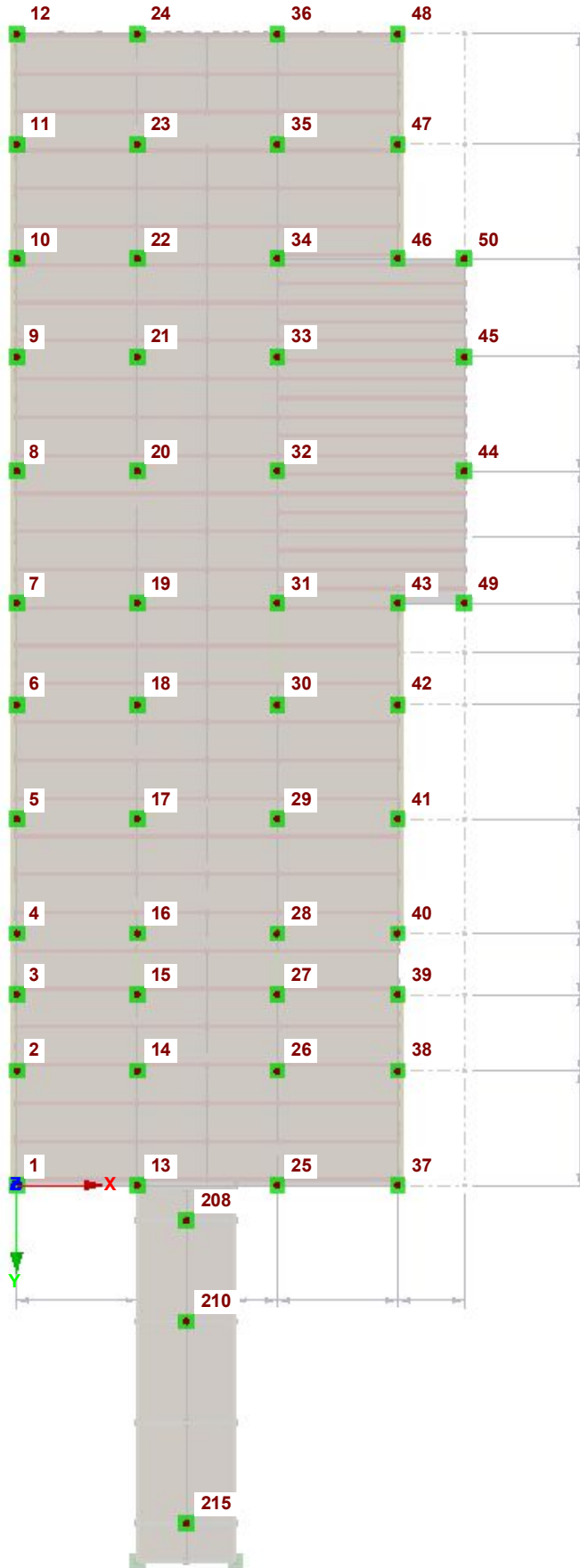
Mbr. No.	Line No.	Member	Rotation		Cross-Section		Hinge No.		Ecc. No.	Div. No.	Length L [m]	
			Type	β [°]	Start	End	Start	End				
542	633	Beam	Angle	0.00	11	11	4	4	-	-	3.950	XZ
543	635	Beam	Angle	0.00	11	11	4	4	-	-	3.957	XZ
544	639	Beam	Angle	0.00	11	11	4	4	-	-	3.950	XZ

MODEL

Surface Numbering
Line Numbering
Node Numbering
Member Numbering

In Z-direction

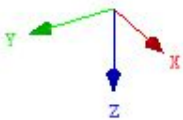
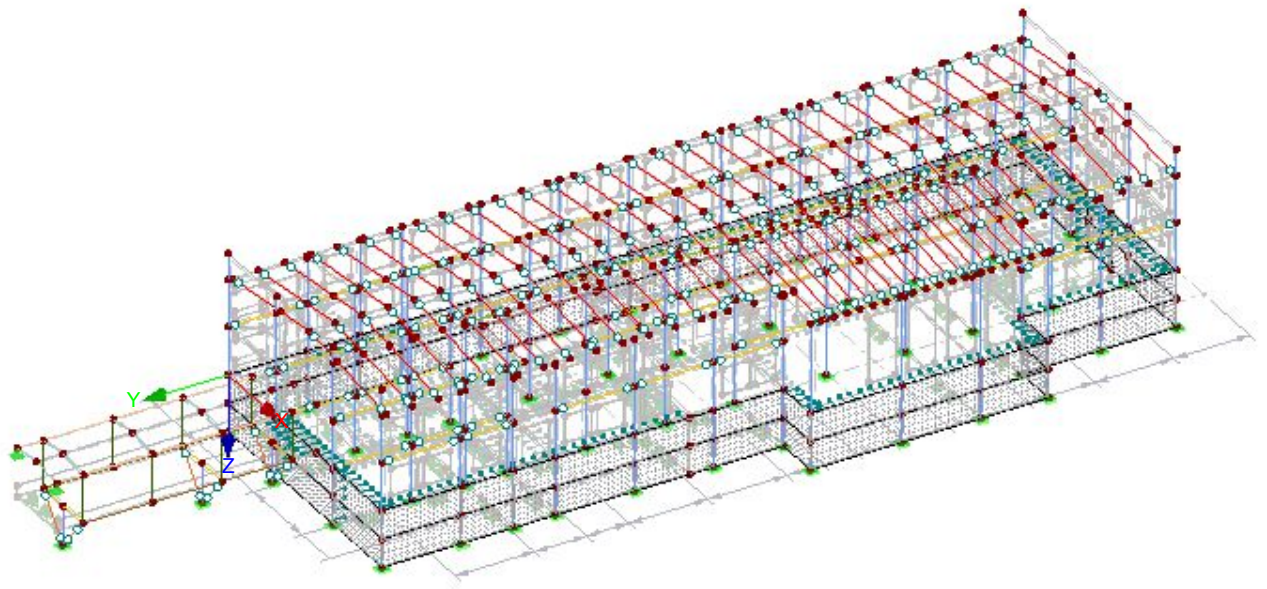
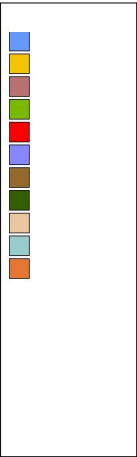
Cross-Sections



7.072 m

■ MODEL

Isometric



2.1 LOAD CASES

Load Case	Load Case Description	EN 1990 LST Action Category	Self-Weight - Factor in Direction			
			Active	X	Y	Z
LC1	Nuolatine Naudojimo	Permanent	<input checked="" type="checkbox"/>	0.000	0.000	1.000
LC2		Imposed - Category C: congregation areas	<input type="checkbox"/>			
LC3	Sniegas	Snow / ice	<input type="checkbox"/>			
LC4	Vejas1	Wind	<input type="checkbox"/>			
LC5	Vejas2	Wind	<input type="checkbox"/>			
LC6	Vejas3	Wind	<input type="checkbox"/>			
LC7	Vejas4	Wind	<input type="checkbox"/>			
LC8	Sprogimo	Accidental	<input type="checkbox"/>			

4.1 NODES - SUPPORT FORCES

Result Combinations

Node No.	RC		Support Forces [kN]			Support Moments [kNm]			
			P _x	P _y	P _z	M _x	M _y	M _z	
1	RC1	Max	-136.16	132.95	1068.12	-18.15	-11.17	-0.54	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-201.01	96.44	891.13	-19.49	-15.27	-1.50	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	-100.50	99.42	795.82	-13.43	-8.21	-0.38	SLS - Characteristic
		Min	-150.40	71.31	659.61	-14.46	-11.36	-1.12	SLS - Characteristic
2	RC1	Max	36.79	-68.16	1012.51	-5.21	-9.84	-11.29	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	11.57	-86.35	802.57	-6.85	-15.58	-11.79	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	27.33	-50.23	755.55	-3.84	-7.15	-8.36	SLS - Characteristic
		Min	7.94	-64.19	594.09	-5.10	-11.57	-8.74	SLS - Characteristic
3	RC1	Max	47.99	-38.09	739.00	-3.34	-15.60	-4.05	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	45.67	-54.41	576.23	-4.99	-17.03	-4.22	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	35.58	-28.10	551.82	-2.46	-11.55	-2.99	SLS - Characteristic
		Min	33.79	-40.61	426.64	-3.73	-12.64	-3.13	SLS - Characteristic
4	RC1	Max	21.27	63.92	848.41	6.80	-18.46	14.79	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-0.85	42.19	656.00	4.44	-20.10	13.98	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	15.84	47.74	633.66	5.08	-13.66	10.96	SLS - Characteristic
		Min	-1.18	31.07	485.67	3.27	-14.92	10.33	SLS - Characteristic
5	RC1	Max	31.27	11.48	1008.05	1.30	-22.64	0.29	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	6.20	0.13	782.59	-0.01	-24.16	0.16	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	23.25	8.64	752.81	0.98	-16.76	0.22	SLS - Characteristic
		Min	3.97	-0.06	579.38	-0.03	-17.93	0.12	SLS - Characteristic
6	RC1	Max	11.32	-55.57	824.96	-5.36	-15.65	-14.94	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-12.89	-77.44	632.62	-7.64	-16.99	-15.53	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	8.51	-41.04	616.10	-3.95	-11.58	-11.05	SLS - Characteristic
		Min	-10.12	-57.83	468.16	-5.70	-12.61	-11.51	SLS - Characteristic
7	RC1	Max	101.14	146.01	895.50	10.13	-34.49	29.15	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	97.64	99.62	673.74	6.69	-37.61	28.34	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	74.96	109.35	669.59	7.59	-25.49	21.61	SLS - Characteristic
		Min	72.26	73.69	499.00	4.95	-27.89	20.99	SLS - Characteristic
8	RC1	Max	103.06	-20.76	1209.52	-2.06	-34.22	-8.62	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	98.56	-40.49	896.47	-4.17	-37.82	-8.82	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	76.40	-15.24	904.75	-1.51	-25.32	-6.38	SLS - Characteristic
		Min	72.93	-30.40	663.96	-3.13	-28.09	-6.54	SLS - Characteristic
9	RC1	Max	114.85	-13.00	1146.03	-1.68	-42.34	-5.73	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	112.06	-33.63	850.16	-3.93	-45.22	-5.86	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	85.12	-9.47	857.23	-1.23	-31.32	-4.25	SLS - Characteristic
		Min	82.97	-25.32	629.64	-2.95	-33.53	-4.35	SLS - Characteristic
10	RC1	Max	114.87	12.62	1173.53	1.17	-41.59	6.43	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	112.35	-4.58	876.85	-0.68	-44.48	6.37	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	85.13	9.52	877.65	0.89	-30.75	4.77	SLS - Characteristic
		Min	83.19	-3.69	649.43	-0.53	-32.98	4.72	SLS - Characteristic
11	RC1	Max	89.52	7.79	1203.14	1.72	-29.30	-3.20	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	85.92	-23.45	908.45	-1.10	-31.94	-3.37	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	66.36	5.95	899.44	1.30	-21.69	-2.37	SLS - Characteristic
		Min	63.60	-18.07	672.75	-0.88	-23.71	-2.50	SLS - Characteristic
12	RC1	Max	-129.97	-100.97	1164.04	20.22	-11.89	7.33	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-200.91	-162.98	892.40	18.83	-14.55	6.35	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	-95.98	-74.65	869.45	15.01	-8.77	5.45	SLS - Characteristic
		Min	-150.55	-122.34	660.53	13.93	-10.82	4.69	SLS - Characteristic
13	RC1	Max	-28.36	-98.15	1453.34	-33.65	8.17	-10.86	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-106.47	-103.80	1165.55	-35.96	0.93	-11.78	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	-20.43	-72.62	1084.52	-24.91	6.19	-8.04	SLS - Characteristic
		Min	-80.52	-76.96	863.08	-26.68	0.62	-8.75	SLS - Characteristic
14	RC1	Max	45.87	6.40	661.08	2.83	1.27	0.03	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	30.95	-1.49	461.32	0.81	-0.41	-0.01	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	34.34	4.91	495.22	2.14	0.97	0.02	SLS - Characteristic
		Min	22.87	-1.16	341.54	0.59	-0.32	-0.01	SLS - Characteristic

4.1 NODES - SUPPORT FORCES

Result Combinations

Node No.	RC		Support Forces [kN]			Support Moments [kNm]			
			P _x	P _y	P _z	M _x	M _y	M _z	
15	RC1	Max	2.72	-16.34	610.85	2.20	-0.66	-0.02	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-0.78	-23.24	415.21	0.91	-1.66	-0.05	
	RC2	Max	2.07	-12.09	457.98	1.66	-0.48	-0.01	SLS - Characteristic
		Min	-0.63	-17.39	307.51	0.67	-1.25	-0.04	SLS - Characteristic
16	RC1	Max	0.10	26.25	689.95	28.28	-0.51	1.90	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-14.29	17.13	488.11	18.40	-2.08	1.21	
	RC2	Max	0.26	19.69	516.81	21.21	-0.36	1.43	SLS - Characteristic
		Min	-10.82	12.69	361.55	13.62	-1.57	0.89	SLS - Characteristic
17	RC1	Max	53.07	91.67	777.40	-7.51	14.69	-0.93	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	38.43	64.66	552.03	-11.02	9.51	-1.53	
	RC2	Max	39.66	68.64	582.15	-5.56	11.02	-0.69	SLS - Characteristic
		Min	28.40	47.85	408.78	-8.26	7.03	-1.15	SLS - Characteristic
18	RC1	Max	25.08	-77.41	708.14	1.06	1.92	-0.35	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	10.05	-113.07	514.96	0.32	0.04	-0.59	
	RC2	Max	18.85	-57.31	529.95	0.79	1.45	-0.26	SLS - Characteristic
		Min	7.29	-84.72	381.37	0.22	0.00	-0.44	SLS - Characteristic
19	RC1	Max	2.90	2.48	1146.98	3.66	-2.66	-0.06	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	1.85	1.33	753.51	1.93	-4.19	-0.11	
	RC2	Max	2.17	1.87	860.79	2.76	-1.96	-0.04	SLS - Characteristic
		Min	1.36	0.98	558.12	1.43	-3.13	-0.08	SLS - Characteristic
20	RC1	Max	19.62	-9.63	1276.22	18.30	16.82	-0.06	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	15.02	-12.51	840.82	11.67	9.49	-0.10	
	RC2	Max	14.62	-7.12	957.67	13.74	12.66	-0.05	SLS - Characteristic
		Min	11.08	-9.34	622.75	8.64	7.02	-0.08	SLS - Characteristic
21	RC1	Max	6.56	10.38	1038.73	-1.76	-6.22	-0.08	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	4.74	6.51	688.42	-3.13	-8.75	-0.12	
	RC2	Max	4.90	7.78	779.39	-1.30	-4.59	-0.06	SLS - Characteristic
		Min	3.50	4.81	509.92	-2.35	-6.52	-0.09	SLS - Characteristic
22	RC1	Max	-3.14	-15.16	982.67	-4.06	-10.27	-0.10	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-6.91	-26.44	660.39	-6.82	-16.71	-0.14	
	RC2	Max	-2.27	-11.20	736.99	-3.00	-7.60	-0.07	SLS - Characteristic
		Min	-5.17	-19.88	489.09	-5.12	-12.55	-0.11	SLS - Characteristic
23	RC1	Max	2.89	-16.76	845.33	7.59	-1.07	-0.09	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-7.12	-24.14	581.01	4.84	-2.38	-0.20	
	RC2	Max	2.23	-12.39	633.64	5.70	-0.78	-0.07	SLS - Characteristic
		Min	-5.47	-18.07	430.34	3.58	-1.78	-0.15	SLS - Characteristic
24	RC1	Max	64.31	89.21	1481.34	31.73	2.65	-25.45	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	31.66	87.18	1277.74	29.32	-1.94	-26.12	
	RC2	Max	48.06	66.11	1102.88	23.53	2.04	-18.84	SLS - Characteristic
		Min	22.96	64.55	946.28	21.67	-1.49	-19.36	SLS - Characteristic
25	RC1	Max	73.11	-94.48	1548.02	-32.64	0.32	10.71	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	13.72	-100.76	1194.88	-34.70	-5.77	9.88	
	RC2	Max	55.21	-69.87	1156.52	-24.16	0.31	7.95	SLS - Characteristic
		Min	9.54	-74.70	884.82	-25.74	-4.37	7.31	SLS - Characteristic
26	RC1	Max	0.02	6.42	718.42	3.90	0.14	0.00	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-0.07	-1.82	475.88	1.49	-0.12	0.00	
	RC2	Max	0.02	4.94	539.02	2.95	0.10	0.00	SLS - Characteristic
		Min	-0.06	-1.40	352.44	1.09	-0.10	0.00	SLS - Characteristic
27	RC1	Max	-17.27	-18.75	734.50	2.23	5.19	0.00	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-30.62	-28.45	488.01	1.03	2.85	-0.02	
	RC2	Max	-12.73	-13.87	550.86	1.68	3.90	0.00	SLS - Characteristic
		Min	-23.00	-21.33	361.28	0.76	2.10	-0.02	SLS - Characteristic
28	RC1	Max	44.36	87.47	706.00	-4.14	8.17	-0.10	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	21.19	60.41	504.56	-5.77	5.61	-0.17	
	RC2	Max	33.39	65.52	528.59	-3.06	6.10	-0.07	SLS - Characteristic
		Min	15.56	44.69	373.59	-4.32	4.14	-0.13	SLS - Characteristic
29	RC1	Max	50.70	-3.84	668.54	-0.64	-31.51	-0.95	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	31.89	-13.21	469.91	-1.73	-50.30	-1.50	
	RC2	Max	38.08	-2.79	500.83	-0.47	-23.32	-0.70	SLS - Characteristic
		Min	23.61	-9.98	348.05	-1.31	-37.76	-1.13	SLS - Characteristic
30	RC1	Max	50.97	28.52	522.55	2.90		-0.45	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	34.60	15.81	378.97	1.50	1.65	-0.74	
	RC2	Max	38.14	21.38	391.03	2.18	2.59	-0.33	SLS - Characteristic
		Min	25.56	11.61	280.59	1.10	1.21	-0.56	SLS - Characteristic
31	RC1	Max	-65.76	-28.58	867.23	17.01	-6.84	0.44	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-97.89	-41.45	602.42	11.61	-11.50	0.25	

4.1 NODES - SUPPORT FORCES

Result Combinations

Node No.	RC		Support Forces [kN]			Support Moments [kNm]			
			P _x	P _y	P _z	M _x	M _y	M _z	
31	RC2	Max	-48.53	-21.14	649.43	12.74	-5.05	0.33	SLS - Characteristic
		Min	-73.25	-31.03	445.76	8.59	-8.63	0.18	SLS - Characteristic
32	RC1	Max	-0.80	0.02	1329.76	-0.11	2.15	0.03	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-1.51	-0.06	864.74	-0.34	1.06	0.01	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	-0.58	0.01	998.24	-0.08	1.60	0.02	SLS - Characteristic
		Min	-1.13	-0.05	640.51	-0.26	0.77	0.01	SLS - Characteristic
33	RC1	Max	-2.13	-0.68	1181.17	-1.15	0.45	-0.01	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-6.20	-1.33	797.71	-2.29	-0.75	-0.02	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	-1.50	-0.50	885.80	-0.85	0.34	-0.01	SLS - Characteristic
		Min	-4.64	-1.01	590.84	-1.72	-0.58	-0.01	SLS - Characteristic
34	RC1	Max	-29.61	-1.82	1188.02	-2.64	8.97	0.11	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-50.09	-3.00	828.72	-4.47	5.09	0.08	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	-21.82	-1.35	889.91	-1.95	6.73	0.08	SLS - Characteristic
		Min	-37.57	-2.26	613.55	-3.36	3.74	0.06	SLS - Characteristic
35	RC1	Max	-0.12	0.07	933.65	-0.05	0.58	0.04	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-0.32	0.00	616.64	-0.31	0.21	0.01	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	-0.09	0.05	700.56	-0.03	0.44	0.03	SLS - Characteristic
		Min	-0.24	0.00	456.73	-0.24	0.15	0.01	SLS - Characteristic
36	RC1	Max	-95.01	89.32	1469.96	31.39	9.74	25.45	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-144.11	87.26	1265.32	28.89	5.26	24.76	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	-69.95	66.20	1094.49	23.27	7.29	18.86	SLS - Characteristic
		Min	-107.71	64.61	937.08	21.35	3.85	18.33	SLS - Characteristic
37	RC1	Max	231.24	127.72	1197.40	-21.92	15.78	1.00	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	147.15	81.48	923.95	-25.76	12.01	-0.04	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	173.34	95.81	894.38	-16.22	11.74	0.76	SLS - Characteristic
		Min	108.65	60.23	684.00	-19.17	8.85	-0.04	SLS - Characteristic
38	RC1	Max	-101.70	-70.29	979.73	-5.15	38.91	13.84	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-104.11	-91.59	742.14	-6.97	36.36	13.33	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	-75.30	-51.97	732.37	-3.81	28.85	10.26	SLS - Characteristic
		Min	-77.16	-68.35	549.60	-5.20	26.89	9.87	SLS - Characteristic
39	RC1	Max	23.92	-25.16	969.00	-2.76	6.22	5.60	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-4.33	-43.64	715.23	-4.64	-0.11	5.46	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	18.47	-18.55	724.63	-2.03	4.63	4.15	SLS - Characteristic
		Min	-3.26	-32.74	529.44	-3.48	-0.24	4.04	SLS - Characteristic
40	RC1	Max	-22.49	44.55	996.47	3.05	16.07	-18.81	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-41.51	24.91	739.79	1.54	11.98	-19.26	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	-16.18	33.30	745.01	2.27	11.93	-13.93	SLS - Characteristic
		Min	-30.81	18.22	547.57	1.11	8.78	-14.27	SLS - Characteristic
41	RC1	Max	-106.97	-25.08	1043.09	-3.18	40.51	12.85	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-109.10	-53.57	788.26	-6.13	38.47	12.57	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	-79.21	-18.47	779.77	-2.35	30.03	9.52	SLS - Characteristic
		Min	-80.85	-40.36	583.74	-4.61	28.46	9.30	SLS - Characteristic
42	RC1	Max	-52.04	-27.84	926.33	-2.37	14.13	-11.97	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-59.77	-62.29	718.65	-5.62	7.69	-14.34	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	-38.34	-20.52	691.88	-1.75	10.49	-8.80	SLS - Characteristic
		Min	-44.29	-46.99	532.13	-4.24	5.53	-10.63	SLS - Characteristic
43	RC1	Max	-17.28	-136.17	929.99	1.07	5.09	21.98	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-50.38	-187.93	741.54	-2.25	0.55	20.48	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	-12.12	-100.80	694.04	0.81	3.80	16.29	SLS - Characteristic
		Min	-37.57	-140.59	549.09	-1.74	0.31	15.14	SLS - Characteristic
44	RC1	Max	-140.29	-25.41	1073.98	-2.35	58.28	9.55	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-143.69	-38.78	825.48	-3.78	55.62	9.37	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	-103.91	-18.64	802.53	-1.72	43.22	7.07	SLS - Characteristic
		Min	-106.52	-28.92	611.39	-2.82	41.17	6.94	SLS - Characteristic
45	RC1	Max	-94.74	-47.03	918.06	-4.02	34.98	5.69	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-99.95	-85.79	708.38	-7.60	31.67	5.29	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	-70.15	-34.65	685.80	-2.96	25.99	4.22	SLS - Characteristic
		Min	-74.15	-64.44	524.53	-5.71	23.44	3.92	SLS - Characteristic
46	RC1	Max	-22.85	200.99	1094.61	-8.69	-7.87	-26.75	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-59.76	146.01	845.76	-11.41	-17.90	-27.66	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	-16.15	150.33	817.53	-6.41	-5.79	-19.80	SLS - Characteristic
		Min	-44.54	108.04	626.10	-8.50	-13.50	-20.50	SLS - Characteristic
47	RC1	Max	-120.24	13.92	1083.80	2.42	47.04	3.84	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-123.08	-11.07	826.39	0.13	44.47	3.67	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	-89.03	10.64	809.98	1.82	34.88	2.85	SLS - Characteristic
		Min	-91.22	-8.57	611.98	0.07	32.90	2.72	SLS - Characteristic
48	RC1	Max	137.08	-75.84	966.63	19.11	18.47	-5.37	ULS (STR/GEO) - Permanent / transient - Eq. 6.10

■ 4.1 NODES - SUPPORT FORCES

Result Combinations

Node No.	RC		Support Forces [kN]			Support Moments [kNm]			
			P _x	P _y	P _z	M _x	M _y	M _z	
48		Min	82.81	-129.69	758.57	16.96	15.06	-6.43	
	RC2	Max	102.76	-55.95	721.57	14.19	13.75	-3.96	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	61.02	-97.37	561.52	12.54	11.12	-4.78	SLS - Characteristic
49	RC1	Max	73.24	201.41	766.09	0.84	17.73	-35.64	
		Min	34.22	151.90	590.68	-1.54	16.24	-36.22	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	55.11	150.54	571.71	0.67	13.16	-26.39	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	25.09	112.45	436.77	-1.16	12.01	-26.84	SLS - Characteristic
	RC1	Max	167.48	-114.96	739.06	3.64	7.22	22.23	SLS - Characteristic
		Min	100.35	-153.91	557.91	1.47	2.85	21.75	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
RC2	Max	125.64	-85.08	551.84	2.73	5.38	16.47	ULS (STR/GEO) - Permanent / transient - Eq. 6.10	
	Min	74.01	-115.03	412.49	1.05	2.02	16.10	SLS - Characteristic	
208	RC1	Max	-0.57	-2.08	447.41	-2.16	1.62	0.14	
		Min	-5.15	-5.48	321.53	-6.14	-1.97	-0.38	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	-0.37	-1.53	335.03	-1.58	1.25	0.11	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-3.89	-4.14	238.18	-4.64	-1.51	-0.29	SLS - Characteristic
	RC1	Max	3.64	-48.95	1276.04	-48.65	4.49	0.33	
		Min	-0.56	-78.28	839.06	-78.23	-7.21	-0.43	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
RC2	Max	2.78	-36.25	957.55	-36.01	3.49	0.26	ULS (STR/GEO) - Permanent / transient - Eq. 6.10	
	Min	-0.47	-58.80	621.49	-58.73	-5.51	-0.33	SLS - Characteristic	
215	RC1	Max	6.78	128.51	1000.23	122.33	10.06	0.05	
		Min	-2.80	79.54	673.40	75.71	-13.00	-0.05	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	5.18	96.53	750.13	91.86	7.77	0.04	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	-2.21	58.90	498.81	56.04	-9.95	-0.04	SLS - Characteristic
	RC1	Max	-17.37	70.97	16.88	0.00	0.00	-2.04	
		Min	-137.49	4.21	2.87	0.00	0.00	-12.77	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
RC2	Max	-12.63	53.45	12.98	0.00	0.00	-1.50	SLS - Characteristic	
	Min	-104.84	2.84	2.10	0.00	0.00	-9.64	ULS (STR/GEO) - Permanent / transient - Eq. 6.10	
357	RC1	Max	138.78	72.77	17.03	0.00	0.00	12.79	
		Min	17.73	5.11	2.92	0.00	0.00	2.03	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
	RC2	Max	105.80	54.80	13.10	0.00	0.00	9.66	ULS (STR/GEO) - Permanent / transient - Eq. 6.10
		Min	12.89	3.51	2.14	0.00	0.00	1.49	SLS - Characteristic

1.1 GENERAL DATA

Members to design:	509-534,537-544	
Sets of members to design:		
National Annex:	CEN	
Ultimate Limit State Design Load combinations to design:	CO1	1.35*LC1
	CO2	1.35*LC1 + 1.3*LC2
	CO3	1.35*LC1 + 1.3*LC2 + 0.91*LC3
	CO4	1.35*LC1 + 1.3*LC2 + 0.91*LC3 + 0.78*LC4
	CO5	1.35*LC1 + 1.3*LC2 + 0.91*LC3 + 0.78*LC5
	CO6	1.35*LC1 + 1.3*LC2 + 0.91*LC3 + 0.78*LC6
	CO7	1.35*LC1 + 1.3*LC2 + 0.91*LC3 + 0.78*LC7
	CO8	1.35*LC1 + 1.3*LC2 + 0.78*LC4
	CO9	1.35*LC1 + 1.3*LC2 + 0.78*LC5
	CO10	1.35*LC1 + 1.3*LC2 + 0.78*LC6
	CO11	1.35*LC1 + 1.3*LC2 + 0.78*LC7
	CO12	1.35*LC1 + 1.3*LC3
	CO13	1.35*LC1 + 0.91*LC2 + 1.3*LC3
	CO14	1.35*LC1 + 0.91*LC2 + 1.3*LC3 + 0.78*LC4
	CO15	1.35*LC1 + 0.91*LC2 + 1.3*LC3 + 0.78*LC5
	CO16	1.35*LC1 + 0.91*LC2 + 1.3*LC3 + 0.78*LC6
	CO17	1.35*LC1 + 0.91*LC2 + 1.3*LC3 + 0.78*LC7
	CO18	1.35*LC1 + 1.3*LC3 + 0.78*LC4
	CO19	1.35*LC1 + 1.3*LC3 + 0.78*LC5
	CO20	1.35*LC1 + 1.3*LC3 + 0.78*LC6
	CO21	1.35*LC1 + 1.3*LC3 + 0.78*LC7
	CO22	1.35*LC1 + 1.3*LC4
	CO23	1.35*LC1 + 1.3*LC5
	CO24	1.35*LC1 + 1.3*LC6
	CO25	1.35*LC1 + 1.3*LC7
	CO26	1.35*LC1 + 0.91*LC2 + 1.3*LC4
	CO27	1.35*LC1 + 0.91*LC2 + 1.3*LC5
	CO28	1.35*LC1 + 0.91*LC2 + 1.3*LC6
	CO29	1.35*LC1 + 0.91*LC2 + 1.3*LC7
	CO30	1.35*LC1 + 0.91*LC2 + 0.91*LC3 + 1.3*LC4
	CO31	1.35*LC1 + 0.91*LC2 + 0.91*LC3 + 1.3*LC5
	CO32	1.35*LC1 + 0.91*LC2 + 0.91*LC3 + 1.3*LC6
	CO33	1.35*LC1 + 0.91*LC2 + 0.91*LC3 + 1.3*LC7
	CO34	1.35*LC1 + 0.91*LC3 + 1.3*LC4
	CO35	1.35*LC1 + 0.91*LC3 + 1.3*LC5
	CO36	1.35*LC1 + 0.91*LC3 + 1.3*LC6
	CO37	1.35*LC1 + 0.91*LC3 + 1.3*LC7
Result combinations to design:	RC1	ULS (STR/GEO) - Permanent / transient - Eq. 6.10

1.2 MATERIALS

Matl. No.	Material Description	E- Modulus E [kN/cm ²]	Shear Modulus G [kN/cm ²]	Poisson's Ratio ν [-]	Yield Stress f_{yk} [kN/cm ²]	Max. Thickness t [mm]
7	Steel S 355 J2 EN 10025-2:2019-10	21000.00	8100.00	0.300	35.50	3.0
					35.50	16.0
					34.50	40.0
					33.50	63.0
					32.50	80.0
					31.50	100.0
					29.50	150.0
					28.50	200.0

1.3 CROSS-SECTIONS

Sect. No.	Matl. No.	Cross-Section Description	Cross-Section Type	Max Design Ratio	Comment
8	7	QRO 160x6 EN 10219-2:2006	Box rolled	0.28	
9	7	HE A 160 Euronorm 53-62	I-section rolled	0.79	
10	7	HE A 160 Euronorm 53-62	I-section rolled	0.50	
11	7	QRO 160x6 EN 10219-2:2006	Box rolled	0.35	

RF-CONCRETE
Columns
CA1

Sample structures

1.1 GENERAL DATA

Design according to Standard:	LST EN 1992-1-1:2005/NA:2011	
ULTIMATE LIMIT STATES		
Load combinations to design:	CO1	1.35*LC1 Persistent and Transient
	CO2	1.35*LC1 + 1.3*LC2 Persistent and Transient
	CO3	1.35*LC1 + 1.3*LC2 + 0.91*LC3 Persistent and Transient
	CO4	1.35*LC1 + 1.3*LC2 + 0.91*LC3 + 0.78*LC4 Persistent and Transient
	CO5	1.35*LC1 + 1.3*LC2 + 0.91*LC3 + 0.78*LC5 Persistent and Transient
	CO6	1.35*LC1 + 1.3*LC2 + 0.91*LC3 + 0.78*LC6 Persistent and Transient
	CO7	1.35*LC1 + 1.3*LC2 + 0.91*LC3 + 0.78*LC7 Persistent and Transient
	CO8	1.35*LC1 + 1.3*LC2 + 0.78*LC4 Persistent and Transient
	CO9	1.35*LC1 + 1.3*LC2 + 0.78*LC5 Persistent and Transient
	CO10	1.35*LC1 + 1.3*LC2 + 0.78*LC6 Persistent and Transient
	CO11	1.35*LC1 + 1.3*LC2 + 0.78*LC7 Persistent and Transient
	CO12	1.35*LC1 + 1.3*LC3 Persistent and Transient
	CO13	1.35*LC1 + 0.91*LC2 + 1.3*LC3 Persistent and Transient
	CO14	1.35*LC1 + 0.91*LC2 + 1.3*LC3 + 0.78*LC4 Persistent and Transient
	CO15	1.35*LC1 + 0.91*LC2 + 1.3*LC3 + 0.78*LC5 Persistent and Transient
	CO16	1.35*LC1 + 0.91*LC2 + 1.3*LC3 + 0.78*LC6 Persistent and Transient
	CO17	1.35*LC1 + 0.91*LC2 + 1.3*LC3 + 0.78*LC7 Persistent and Transient
	CO18	1.35*LC1 + 1.3*LC3 + 0.78*LC4 Persistent and Transient
	CO19	1.35*LC1 + 1.3*LC3 + 0.78*LC5 Persistent and Transient
	CO20	1.35*LC1 + 1.3*LC3 + 0.78*LC6 Persistent and Transient
	CO21	1.35*LC1 + 1.3*LC3 + 0.78*LC7 Persistent and Transient
	CO22	1.35*LC1 + 1.3*LC4 Persistent and Transient
	CO23	1.35*LC1 + 1.3*LC5 Persistent and Transient
	CO24	1.35*LC1 + 1.3*LC6 Persistent and Transient
	CO25	1.35*LC1 + 1.3*LC7 Persistent and Transient
	CO26	1.35*LC1 + 0.91*LC2 + 1.3*LC4 Persistent and Transient
	CO27	1.35*LC1 + 0.91*LC2 + 1.3*LC5 Persistent and Transient
	CO28	1.35*LC1 + 0.91*LC2 + 1.3*LC6 Persistent and Transient
	CO29	1.35*LC1 + 0.91*LC2 + 1.3*LC7 Persistent and Transient
	CO30	1.35*LC1 + 0.91*LC2 + 0.91*LC3 + 1.3*LC4 Persistent and Transient
	CO31	1.35*LC1 + 0.91*LC2 + 0.91*LC3 + 1.3*LC5 Persistent and Transient
	CO32	1.35*LC1 + 0.91*LC2 + 0.91*LC3 + 1.3*LC6 Persistent and Transient
	CO33	1.35*LC1 + 0.91*LC2 + 0.91*LC3 + 1.3*LC7 Persistent and Transient
	CO34	1.35*LC1 + 0.91*LC3 + 1.3*LC4 Persistent and Transient
	CO35	1.35*LC1 + 0.91*LC3 + 1.3*LC5 Persistent and Transient
	CO36	1.35*LC1 + 0.91*LC3 + 1.3*LC6 Persistent and Transient
	CO37	1.35*LC1 + 0.91*LC3 + 1.3*LC7 Persistent and Transient
Result combinations to design:	RC1	ULS (STR/GEO) - Permanent / transient - Eq. 6.10 Persistent and Transient
CREEP-PRODUCING PERMANENT LOAD		
Result combinations to design:	RC2	SLS - Characteristic

1.2 MATERIALS

Material No.	Material Description		Notes	Comment
	Concrete Strength Class	Reinforcing Steel		
1	Concrete C30/37	B 500 (B)		
7	Steel S 355 J2		2)	
8	Glulam Timber GL24h		2)	

Notes:

2) Upper limit of the concrete strength class has been exceeded!

Sample structures

1.2.1 MATERIAL PARAMETERS

Material No.	Description	Name	Size	Unit	
1	Concrete Strength Class: Concrete C30/37				
	Characteristic Cylinder Compressive Strength	f_{ck}	30.00	N/mm ²	
	Mean Cylinder Compressive Strength	f_{cm}	38.00	N/mm ²	
	Mean Axial Tensile Strength	f_{ctm}	2.90	N/mm ²	
	5% Fractile of Axial Tensile Strength	$f_{ctk;0.05}$	2.00	N/mm ²	
	95% Fractile of Axial Tensile Strength	$f_{ctk;0.95}$	3.80	N/mm ²	
	Mean Secant Modulus of Elasticity	E_{cm}	33000.00	N/mm ²	
	Characteristic Strains for Nonlinear Analysis				
	Ultimate Strain for Pure Compression	ϵ_{c1}	-2.20	‰	
	Ultimate Strain at Failure	ϵ_{c1u}	-3.50	‰	
	Characteristic Strains for Parabolic-Rectangular Diagram				
	Ultimate Strain for Pure Compression	ϵ_{c2}	-2.00	‰	
	Ultimate Strain at Failure	ϵ_{c2u}	-3.50	‰	
	Ultimate Strain at Failure	ϵ_{c3}	-1.75	‰	
	Ultimate Strain at Failure	ϵ_{c3u}	-3.50	‰	
	Parabola Exponent	n	2.0000		
	Density Class	C_p	0.0000		
	Specific weight	γ	25.00	kN/m ³	
		Reinforcing Steel: B 500 (B)			
		Modulus of Elasticity	E_s	200000.00	N/mm ²
		Characteristic Yield Strength	f_{yk}	500.00	N/mm ²
Characteristic Tensile Strength		f_{tk}	540.00	N/mm ²	
Ultimate Strain		ϵ_{uk}	50.00	‰	
7	Concrete Strength Class: Steel S 355 J2				
	Characteristic Cylinder Compressive Strength	f_{ck}	0.00	N/mm ²	
	Mean Cylinder Compressive Strength	f_{cm}	0.00	N/mm ²	
	Mean Axial Tensile Strength	f_{ctm}	0.00	N/mm ²	
	5% Fractile of Axial Tensile Strength	$f_{ctk;0.05}$	0.00	N/mm ²	
	95% Fractile of Axial Tensile Strength	$f_{ctk;0.95}$	0.00	N/mm ²	
	Mean Secant Modulus of Elasticity	E_{cm}	210000.00	N/mm ²	
	Characteristic Strains for Nonlinear Analysis				
	Ultimate Strain for Pure Compression	ϵ_{c1}	0.00	‰	
	Ultimate Strain at Failure	ϵ_{c1u}	0.00	‰	
	Characteristic Strains for Parabolic-Rectangular Diagram				
	Ultimate Strain for Pure Compression	ϵ_{c2}	0.00	‰	
	Ultimate Strain at Failure	ϵ_{c2u}	0.00	‰	
	Ultimate Strain at Failure	ϵ_{c3}	0.00	‰	
	Ultimate Strain at Failure	ϵ_{c3u}	0.00	‰	
	Parabola Exponent	n	0.0000		
	Density Class	C_p	0.0000		
	Specific weight	γ	78.50	kN/m ³	
		Reinforcing Steel: B 500 S (A)			
		Modulus of Elasticity	E_s	200000.00	N/mm ²
		Characteristic Yield Strength	f_{yk}	500.00	N/mm ²
Characteristic Tensile Strength		f_{tk}	525.00	N/mm ²	
Ultimate Strain		ϵ_{uk}	25.00	‰	
8	Concrete Strength Class: Glulam Timber GL24h				
	Characteristic Cylinder Compressive Strength	f_{ck}	0.00	N/mm ²	
	Mean Cylinder Compressive Strength	f_{cm}	0.00	N/mm ²	
	Mean Axial Tensile Strength	f_{ctm}	0.00	N/mm ²	
	5% Fractile of Axial Tensile Strength	$f_{ctk;0.05}$	0.00	N/mm ²	
	95% Fractile of Axial Tensile Strength	$f_{ctk;0.95}$	0.00	N/mm ²	
	Mean Secant Modulus of Elasticity	E_{cm}	11500.00	N/mm ²	
	Characteristic Strains for Nonlinear Analysis				
	Ultimate Strain for Pure Compression	ϵ_{c1}	0.00	‰	
	Ultimate Strain at Failure	ϵ_{c1u}	0.00	‰	
	Characteristic Strains for Parabolic-Rectangular Diagram				
	Ultimate Strain for Pure Compression	ϵ_{c2}	0.00	‰	
	Ultimate Strain at Failure	ϵ_{c2u}	0.00	‰	
	Ultimate Strain at Failure	ϵ_{c3}	0.00	‰	
	Ultimate Strain at Failure	ϵ_{c3u}	0.00	‰	
	Parabola Exponent	n	0.0000		
	Density Class	C_p	0.0000		
	Specific weight	γ	4.20	kN/m ³	
		Reinforcing Steel: B 500 S (A)			
		Modulus of Elasticity	E_s	200000.00	N/mm ²
		Characteristic Yield Strength	f_{yk}	500.00	N/mm ²
Characteristic Tensile Strength		f_{tk}	525.00	N/mm ²	
Ultimate Strain		ϵ_{uk}	25.00	‰	

1.3 CROSS-SECTIONS

Section No.	Material No.	Cross-Section Description	Notes	Comment
1	1	Rectangle 400/400		
6	1	Rectangle 500/500		

1.4 REINFORCEMENT GROUP NO. 1

Applied to members:	All (97-100,494-496)
LONGITUDINAL REINFORCEMENT	
Possible diameters:	20.0 mm, 25.0 mm, 28.0 mm, 32.0 mm
Reinforcement layout - Rectangular:	In corners
Max. number of layers - Rectangular:	1
Type of anchorage:	Straight
Steel surface:	Ribbed
STIRRUPS	
Possible diameters:	8.0 mm, 10.0 mm

1.4 REINFORCEMENT GROUP NO. 1

Number of legs - Rectangular:	2
Min. shear reinforcement A_{sw} :	According to Standard
Type of anchorage:	Hook
SECONDARY REINFORCEMENT	
Max. secondary reinforcement distance:	350.0 mm
CONCRETE COVER	
Concrete cover acc. to Standard	<input type="checkbox"/>
Axial spacing concrete cover - Rectangle C_z :	50.0 mm
Axial spacing concrete cover - Rectangle C_y :	50.0 mm
Relevant internal forces:	N, V-y, V-z, M-y, M-z
OPTIONS FOR LST EN 1992-1-1:2005/NA:2011	
Maximum longitudinal reinforcement according to Standard	<input checked="" type="checkbox"/>
Minimum longitudinal reinforcement according to Standard	<input checked="" type="checkbox"/>
Partial safety factor according to Table 2.1N: γ_c :	1.5000
Partial safety factor according to Table 2.1N: γ_s	1.1500
Factor α_{cc} :	1.0000
Min. inclination of concrete strut:	21.801 °
Max. inclination of concrete strut:	45.000 °

1.5 PARAMETERS - BY MEMBER

Member No.	Cross-Section	Direction	Buckling Risk	System Unbraced	System Length [m]	Coefficient β	Effective Length [m] / Slenderness
97	1 - Rectangle 400/400	about axis y	+	-	6.850	1.0000	6.850 / 59.3
		about axis z	+	-	6.850	1.0000	6.850 / 59.3
98	1 - Rectangle 400/400	about axis y	+	-	6.850	1.0000	6.850 / 59.3
		about axis z	+	-	6.850	1.0000	6.850 / 59.3
99	1 - Rectangle 400/400	about axis y	+	-	6.850	1.0000	6.850 / 59.3
		about axis z	+	-	6.850	1.0000	6.850 / 59.3
100	1 - Rectangle 400/400	about axis y	+	-	6.850	1.0000	6.850 / 59.3
		about axis z	+	-	6.850	1.0000	6.850 / 59.3
494	6 - Rectangle 500/500	about axis y	+	-	3.000	1.0000	3.000 / 20.8
		about axis z	+	-	3.000	1.0000	3.000 / 20.8
495	6 - Rectangle 500/500	about axis y	+	-	3.000	1.0000	3.000 / 20.8
		about axis z	+	-	3.000	1.0000	3.000 / 20.8
496	6 - Rectangle 500/500	about axis y	+	-	3.000	1.0000	3.000 / 20.8
		about axis z	+	-	3.000	1.0000	3.000 / 20.8

2.1 CHECK OF MEMBERS

Member No.	Considerable Load Case	Check Ratio	Criterion	Comment
97	Cross-Section No. 1 - Rectangle 400/400			100) CHECK OF CRITICAL CROSS-SECTION OF MODEL COLUMN ACC. TO 5.8.8
		0.0356	≤ 1	
97	Cross-Section No. 1 - Rectangle 400/400			201) SHEAR CHECK ($V_{Ed} / V_{Rd,c} \leq 1$) ACCORDING TO 6.2.2 (2) WITH (6.4)
		0.0203	≤ 1	
97	Cross-Section No. 1 - Rectangle 400/400			202) SHEAR CHECK ($V_{Ed} / V_{Rd,c} \leq 1$) ACCORDING TO 6.2.2 (1) WITH (6.2.a)
	CO33	0.1945	≤ 1	
98	Cross-Section No. 1 - Rectangle 400/400			100) CHECK OF CRITICAL CROSS-SECTION OF MODEL COLUMN ACC. TO 5.8.8
		0.2347	≤ 1	
98	Cross-Section No. 1 - Rectangle 400/400			201) SHEAR CHECK ($V_{Ed} / V_{Rd,c} \leq 1$) ACCORDING TO 6.2.2 (2) WITH (6.4)
	CO18	0.0368	≤ 1	
98	Cross-Section No. 1 - Rectangle 400/400			202) SHEAR CHECK ($V_{Ed} / V_{Rd,c} \leq 1$) ACCORDING TO 6.2.2 (1) WITH (6.2.a)
	RC1	0.4468	≤ 1	
99	Cross-Section No. 1 - Rectangle 400/400			100) CHECK OF CRITICAL CROSS-SECTION OF MODEL COLUMN ACC. TO 5.8.8
	RC1	0.2179	≤ 1	
99	Cross-Section No. 1 - Rectangle 400/400			201) SHEAR CHECK ($V_{Ed} / V_{Rd,c} \leq 1$) ACCORDING TO 6.2.2 (2) WITH (6.4)
	CO34	0.0332	≤ 1	
99	Cross-Section No. 1 - Rectangle 400/400			202) SHEAR CHECK ($V_{Ed} / V_{Rd,c} \leq 1$) ACCORDING TO 6.2.2 (1) WITH (6.2.a)
	RC1	0.4160	≤ 1	
100	Cross-Section No. 1 - Rectangle 400/400			100) CHECK OF CRITICAL CROSS-SECTION OF MODEL COLUMN ACC. TO 5.8.8
		0.0595	≤ 1	
100	Cross-Section No. 1 - Rectangle 400/400			202) SHEAR CHECK ($V_{Ed} / V_{Rd,c} \leq 1$) ACCORDING TO 6.2.2 (1) WITH (6.2.a)
	CO2	0.1516	≤ 1	
494	Cross-Section No. 6 - Rectangle 500/500			100) CHECK OF CRITICAL CROSS-SECTION OF MODEL COLUMN ACC. TO 5.8.8
	CO7	0.0635	≤ 1	
494	Cross-Section No. 6 - Rectangle 500/500			201) SHEAR CHECK ($V_{Ed} / V_{Rd,c} \leq 1$) ACCORDING TO 6.2.2 (2) WITH (6.4)
	RC1	0.0182	≤ 1	
495	Cross-Section No. 6 - Rectangle 500/500			100) CHECK OF CRITICAL CROSS-SECTION OF MODEL COLUMN ACC. TO 5.8.8
	RC1	0.3616	≤ 1	
495	Cross-Section No. 6 - Rectangle 500/500			201) SHEAR CHECK ($V_{Ed} / V_{Rd,c} \leq 1$) ACCORDING TO 6.2.2 (2) WITH (6.4)
	RC1	0.1888	≤ 1	
495	Cross-Section No. 6 - Rectangle 500/500			202) SHEAR CHECK ($V_{Ed} / V_{Rd,c} \leq 1$) ACCORDING TO 6.2.2 (1) WITH (6.2.a)
	RC1	0.4664	≤ 1	
496	Cross-Section No. 6 - Rectangle 500/500			100) CHECK OF CRITICAL CROSS-SECTION OF MODEL COLUMN ACC. TO 5.8.8
	RC1	0.5261	≤ 1	
496	Cross-Section No. 6 - Rectangle 500/500			201) SHEAR CHECK ($V_{Ed} / V_{Rd,c} \leq 1$) ACCORDING TO 6.2.2 (2) WITH (6.4)
	RC1	0.3366	≤ 1	
496	Cross-Section No. 6 - Rectangle 500/500			202) SHEAR CHECK ($V_{Ed} / V_{Rd,c} \leq 1$) ACCORDING TO 6.2.2 (1) WITH (6.2.a)
	CO4	0.5612	≤ 1	

3.2 REQUIRED REINFORCEMENT BY MEMBER

Member No.	Reinforcement Type	Location x [m]	LC / CO RC	Reinforcement			Error or notice
				Area	Unit		
97	Rectangle 400/400 Longitudinal	0.000	CO1	As	3.20	cm ²	Governing minimum reinforcement for determining the required reinforcement
97	Rectangle 400/400 Shear	-	-	a_{sw}	2.51	cm ² /m	
98	Rectangle 400/400						

3.2 REQUIRED REINFORCEMENT BY MEMBER

Member No.	Reinforcement Type	Location x [m]	LC / CO RC	Reinforcement			Error or notice	
				As	Area	Unit		
98	Longitudinal	0.489	CO1	As	3.20	cm ²	Governing minimum reinforcement for determining the required reinforcement	
	Rectangle 400/400							
99	Shear	-	-	a _{sw}	2.51	cm ² /m	Governing minimum reinforcement for determining the required reinforcement	
	Rectangle 400/400							
99	Longitudinal	0.489	CO1	As	3.20	cm ²	Governing minimum reinforcement for determining the required reinforcement	
	Rectangle 400/400							
100	Shear	-	-	a _{sw}	2.51	cm ² /m	Governing minimum reinforcement for determining the required reinforcement	
	Rectangle 400/400							
100	Longitudinal	0.000	CO1	As	3.20	cm ²	Governing minimum reinforcement for determining the required reinforcement	
	Rectangle 400/400							
494	Shear	-	-	a _{sw}	2.51	cm ² /m	Governing minimum reinforcement for determining the required reinforcement	
	Rectangle 500/500							
494	Longitudinal	0.000	CO1	As	5.00	cm ²	Governing minimum reinforcement for determining the required reinforcement	
	Rectangle 500/500							
495	Shear	-	-	a _{sw}	2.51	cm ² /m	Governing minimum reinforcement for determining the required reinforcement	
	Rectangle 500/500							
495	Longitudinal	0.000	CO1	As	5.00	cm ²	Governing minimum reinforcement for determining the required reinforcement	
	Rectangle 500/500							
496	Shear	-	-	a _{sw}	2.51	cm ² /m	Governing minimum reinforcement for determining the required reinforcement	
	Rectangle 500/500							
496	Longitudinal	3.000	RC1	As	14.86	cm ²	Governing minimum reinforcement for determining the required reinforcement	
	Rectangle 500/500							
496	Shear	-	-	a _{sw}	2.51	cm ² /m	Governing minimum reinforcement for determining the required reinforcement	
	Rectangle 500/500							
Slenderness About Axis y							λ _y	20.7846
Effective Length							l _{0,y}	3.000 m
Buckling Coefficient							β _y	1.000
Geometrical Length							l _y	3.000 m
Slenderness About Axis z							λ _z	20.7846
Effective Length							l _{0,z}	3.000 m
Buckling Coefficient							β _z	1.000
Geometrical Length							l _z	3.000 m
Condition of standard design fulfilled?								Yes
Moments According to First Order Theory								
Design Normal Force							N _{Ed}	-636.582 kN
Moment About Axis y							M _{Ed,1,y}	-12.732 kNm
Moment About Axis z							M _{Ed,1,z}	-267.306 kNm

4.1 PROVIDED LONGITUDINAL REINFORCEMENT

Section	Item No.	Number of Bars	d _s [mm]	Location x [m]		Anchorage	Message
				from	to		
Member No. 97 - Rectangle 400/400							
1	1	4	20.0	-0.200	7.050	<input checked="" type="checkbox"/>	
Member No. 98 - Rectangle 400/400							
1	1	4	20.0	-0.200	7.050	<input checked="" type="checkbox"/>	
Member No. 99 - Rectangle 400/400							
1	1	4	20.0	-0.200	7.050	<input checked="" type="checkbox"/>	
Member No. 100 - Rectangle 400/400							
1	1	4	20.0	-0.200	7.050	<input checked="" type="checkbox"/>	
Member No. 494 - Rectangle 500/500							
1	2	4	20.0	-0.200	3.200	<input checked="" type="checkbox"/>	
2	2	4	20.0	-0.200	3.200	<input checked="" type="checkbox"/>	
Member No. 495 - Rectangle 500/500							
1	2	4	20.0	-0.200	3.200	<input checked="" type="checkbox"/>	
2	2	4	20.0	-0.200	3.200	<input checked="" type="checkbox"/>	
Member No. 496 - Rectangle 500/500							
1	3	4	25.0	-0.370	3.370	<input checked="" type="checkbox"/>	
2	3	4	25.0	-0.370	3.370	<input checked="" type="checkbox"/>	

4.2 PROVIDED SHEAR REINFORCEMENT

Section	Item No.	Number of Stirrups	d _s [mm]	Location x [m]		Spacing s _{sw} [mm]	Number of Legs	Message
				from	to			
Member No. 97 - Rectangle 400/400								
1	4	3	8.0	0.225	0.705	240.0	2	
2	4	14	8.0	0.705	6.305	400.0	2	
3	4	1	8.0	6.305	6.545	240.0	2	
Member No. 98 - Rectangle 400/400								
1	4	3	8.0	0.225	0.705	240.0	2	
2	4	14	8.0	0.705	6.305	400.0	2	
3	4	1	8.0	6.305	6.545	240.0	2	

4.2 PROVIDED SHEAR REINFORCEMENT

Section	Item No.	Number of Stirrups	d _s [mm]	Location x [m]		Spacing s _{sw} [mm]	Number of Legs	Message
				from	to			
Member No. 99 - Rectangle 400/400								
1	4	3	8.0	0.225	0.705	240.0	2	
2	4	14	8.0	0.705	6.305	400.0	2	
3	4	1	8.0	6.305	6.545	240.0	2	
Member No. 100 - Rectangle 400/400								
1	4	3	8.0	0.225	0.705	240.0	2	
2	4	14	8.0	0.705	6.305	400.0	2	
3	4	1	8.0	6.305	6.545	240.0	2	
Member No. 494 - Rectangle 500/500								
1	5	3	8.0	0.051	0.531	240.0	2	
2	5	4	8.0	0.531	2.131	400.0	2	
3	5	2	8.0	2.131	2.611	240.0	2	
Member No. 495 - Rectangle 500/500								
1	5	3	8.0	0.051	0.531	240.0	2	
2	5	4	8.0	0.531	2.131	400.0	2	
3	5	3	8.0	2.131	2.851	240.0	2	
Member No. 496 - Rectangle 500/500								
1	6	3	8.0	0.051	0.531	240.0	2	
2	6	4	8.0	0.531	2.131	400.0	2	
3	6	2	8.0	2.131	2.611	240.0	2	

4.3 STEEL SCHEDULE

Item No.	Reinforcement Type	d _s [mm]	Surface Type	No. of Bars	Length [m]	Anchorage Type		Bending Diameter [mm]	Weight [kg]	Message
						Start	End			
Material No. 1 - Reinforcing Steel B 500 S (B)										
1	Longitudinal	20.0	Ribbed	16	7.250	Straight	Straight		286.07	
2	Longitudinal	20.0	Ribbed	16	3.400	Straight	Straight		134.16	
3	Longitudinal	25.0	Ribbed	8	3.740	Straight	Straight		115.30	
4	Shear	8.0	Ribbed	72	1.468	Hook	Hook		41.71	
5	Shear	8.0	Ribbed	19	1.868	Hook	Hook		14.00	
6	Shear	8.0	Ribbed	9	1.888	Hook	Hook		6.70	
Sum				140					597.95	

2.1 LOAD CASES

Load Case	Load Case Description	EN 1990 LST Action Category	Self-Weight - Factor in Direction			
			Active	X	Y	Z
LC1 LC2	Nuolatine Naudojimo	Permanent Imposed - Category C: congregation areas	<input checked="" type="checkbox"/> <input type="checkbox"/>	0.000	0.000	1.000

2.1.1 LOAD CASES - CALCULATION PARAMETERS

Load Case	Load Case Description	Calculation Parameters	
LC1	Nuolatine	Method of analysis	: <input type="radio"/> Geometrically linear analysis
		Method for solving system of nonlinear algebraic equations	: <input type="radio"/> Newton-Raphson
		Activate stiffness factors of:	: <input checked="" type="checkbox"/> Cross-sections (factor for J, I _y , I _z , A, A _y , A _z)
			: <input checked="" type="checkbox"/> Members (factor for GJ, E _{I_y} , E _{I_z} , EA, GA _y , GA _z)
LC2	Naudojimo	Method of analysis	: <input type="radio"/> Geometrically linear analysis
		Method for solving system of nonlinear algebraic equations	: <input type="radio"/> Newton-Raphson
		Activate stiffness factors of:	: <input checked="" type="checkbox"/> Cross-sections (factor for J, I _y , I _z , A, A _y , A _z)
			: <input checked="" type="checkbox"/> Members (factor for GJ, E _{I_y} , E _{I_z} , EA, GA _y , GA _z)

2.5 LOAD COMBINATIONS

Load Combin.	Load Combination		No.	Factor	Load Case	
	DS	Description			LC1	LC2
CO1	STR	1.35*LC1	1	1.35	LC1	Nuolatine
CO2	STR	1.35*LC1 + 1.3*LC2	1	1.35	LC1	Nuolatine
			2	1.30	LC2	Naudojimo
CO3	S Ch	LC1	1	1.00	LC1	Nuolatine
CO4	S Ch	LC1 + LC2	1	1.00	LC1	Nuolatine
			2	1.00	LC2	Naudojimo

2.5.2 LOAD COMBINATIONS - CALCULATION PARAMETERS

Load Combin.	Description	Calculation Parameters	
CO1	1.35*LC1	Method of analysis	: <input type="radio"/> Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: <input type="radio"/> Picard
		Options	: <input checked="" type="checkbox"/> Consider favorable effects due to tension
			: <input checked="" type="checkbox"/> Refer internal forces to deformed system for:
			: <input checked="" type="checkbox"/> Normal forces N
			: <input checked="" type="checkbox"/> Shear forces V _y and V _z
			: <input checked="" type="checkbox"/> Moments M _y , M _z and M _T
		Activate stiffness factors of:	: <input checked="" type="checkbox"/> Materials (partial factor γ _M)
			: <input checked="" type="checkbox"/> Cross-sections (factor for J, I _y , I _z , A, A _y , A _z)
			: <input checked="" type="checkbox"/> Members (factor for GJ, E _{I_y} , E _{I_z} , EA, GA _y , GA _z)
CO2	1.35*LC1 + 1.3*LC2	Method of analysis	: <input type="radio"/> Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: <input type="radio"/> Picard
		Options	: <input checked="" type="checkbox"/> Consider favorable effects due to tension
			: <input checked="" type="checkbox"/> Refer internal forces to deformed system for:
			: <input checked="" type="checkbox"/> Normal forces N
			: <input checked="" type="checkbox"/> Shear forces V _y and V _z
			: <input checked="" type="checkbox"/> Moments M _y , M _z and M _T
		Activate stiffness factors of:	: <input checked="" type="checkbox"/> Materials (partial factor γ _M)
			: <input checked="" type="checkbox"/> Cross-sections (factor for J, I _y , I _z , A, A _y , A _z)
			: <input checked="" type="checkbox"/> Members (factor for GJ, E _{I_y} , E _{I_z} , EA, GA _y , GA _z)
CO3	LC1	Method of analysis	: <input type="radio"/> Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: <input type="radio"/> Picard
		Options	: <input checked="" type="checkbox"/> Consider favorable effects due to tension
			: <input checked="" type="checkbox"/> Refer internal forces to deformed system for:
			: <input checked="" type="checkbox"/> Normal forces N
			: <input checked="" type="checkbox"/> Shear forces V _y and V _z
			: <input checked="" type="checkbox"/> Moments M _y , M _z and M _T
		Activate stiffness factors of:	: <input checked="" type="checkbox"/> Materials (partial factor γ _M)
			: <input checked="" type="checkbox"/> Cross-sections (factor for J, I _y , I _z , A, A _y , A _z)
			: <input checked="" type="checkbox"/> Members (factor for GJ, E _{I_y} , E _{I_z} , EA, GA _y , GA _z)
CO4	LC1 + LC2	Method of analysis	: <input type="radio"/> Second order analysis (P-Delta)
		Method for solving system of nonlinear algebraic equations	: <input type="radio"/> Picard
		Options	: <input checked="" type="checkbox"/> Consider favorable effects due to tension
			: <input checked="" type="checkbox"/> Refer internal forces to deformed system for:
			: <input checked="" type="checkbox"/> Normal forces N
			: <input checked="" type="checkbox"/> Shear forces V _y and V _z
			: <input checked="" type="checkbox"/> Moments M _y , M _z and M _T
		Activate stiffness factors of:	: <input checked="" type="checkbox"/> Materials (partial factor γ _M)
			: <input checked="" type="checkbox"/> Cross-sections (factor for J, I _y , I _z , A, A _y , A _z)
			: <input checked="" type="checkbox"/> Members (factor for GJ, E _{I_y} , E _{I_z} , EA, GA _y , GA _z)

2.7 RESULT COMBINATIONS

Result Combin	Description	Loading
RC1	ULS (STR/GEO) - Permanent / transient - Eq. 6.10	CO1/p or CO2/p
RC2	SLS - Characteristic	CO3/p or CO4/p

LC1
Nuolatine

■ 3.3 LINE LOADS

LC1: Nuolatine

No.	Reference to	On Lines No.	Load Type	Load Distribution	Load Direction	Symbol	Load Parameters	
							Value	Unit
1	Lines	3,4	Force	Uniform	ZL	p	5.000	kN/m

LC2
Naudojimo

■ 3.3 LINE LOADS

LC2: Naudojimo

No.	Reference to	On Lines No.	Load Type	Load Distribution	Load Direction	Symbol	Load Parameters	
							Value	Unit
1	Lines	3,4	Force	Concentr.	ZL	P	75.000	kN
						A	5.300	m

■ 3.4 SURFACE LOADS

LC2: Naudojimo

No.	On Surfaces No.	Load Type	Load Distribution	Load Direction	Symbol	Load Parameters	
						Value	Unit
1	1	Force	Uniform	ZL	p	5.00	kN/m ²

4.0 RESULTS - SUMMARY

	Description	Value	Unit	Comment
Load Case LC1 - Nuolatine				
	Sum of loads in X	0.00	kN	
	Sum of support reactions in X	0.00	kN	
	Sum of loads in Y	0.00	kN	
	Sum of support reactions in Y	0.00	kN	
	Sum of loads in Z	477.00	kN	
	Sum of support reactions in Z	477.00	kN	Deviation 0.00%
	Resultant of reactions about X	0.000	kNm	At center of gravity of model (X:5.300, Y:2.500, Z:0.000 m)
	Resultant of reactions about Y	0.000	kNm	At center of gravity of model
	Resultant of reactions about Z	0.000	kNm	At center of gravity of model
	Max. displacement in X	0.0	mm	
	Max. displacement in Y	0.0	mm	
	Max. displacement in Z	5.4	mm	FE Mesh Node No. 111 (X: 5.048, Y: 0.000, Z: 0.000 m)
	Max. vector displacement	5.4	mm	FE Mesh Node No. 111 (X: 5.048, Y: 0.000, Z: 0.000 m)
	Max. rotation about X	-0.4	mrاد	FE Mesh Node No. 111 (X: 5.048, Y: 0.000, Z: 0.000 m)
	Max. rotation about Y	-1.6	mrاد	FE Mesh Node No. 45 (X: 2.019, Y: 0.000, Z: 0.000 m)
	Max. rotation about Z	0.0	mrاد	
	Maximum surface strain	0.000	‰	FE Mesh Node No. 0 (X: 0.000, Y: 0.000, Z: 0.000 m)
	Method of analysis	Linear		Geometrically linear analysis
	Reduction of stiffness			Cross-sections, Members, Surfaces
	Number of load increments	1		
	Number of iterations	1		
	Maximum value of element of stiffness matrix on diagonal	1.695E+10		
	Minimum value of element of stiffness matrix on diagonal	1.268E+08		
	Stiffness matrix determinant	5.734E+1214		
	Infinity Norm	4.257E+10		
Load Case LC2 - Naudojimo				
	Sum of loads in X	0.00	kN	
	Sum of support reactions in X	0.00	kN	
	Sum of loads in Y	0.00	kN	
	Sum of support reactions in Y	0.00	kN	
	Sum of loads in Z	415.00	kN	
	Sum of support reactions in Z	415.00	kN	Deviation 0.00%
	Resultant of reactions about X	0.000	kNm	At center of gravity of model (X:5.300, Y:2.500, Z:0.000 m)
	Resultant of reactions about Y	0.000	kNm	At center of gravity of model
	Resultant of reactions about Z	0.000	kNm	At center of gravity of model
	Max. displacement in X	0.0	mm	
	Max. displacement in Y	0.0	mm	
	Max. displacement in Z	6.8	mm	FE Mesh Node No. 111 (X: 5.048, Y: 0.000, Z: 0.000 m)
	Max. vector displacement	6.8	mm	FE Mesh Node No. 111 (X: 5.048, Y: 0.000, Z: 0.000 m)
	Max. rotation about X	-0.9	mrاد	FE Mesh Node No. 111 (X: 5.048, Y: 0.000, Z: 0.000 m)
	Max. rotation about Y	-1.9	mrاد	FE Mesh Node No. 56 (X: 2.524, Y: 0.000, Z: 0.000 m)
	Max. rotation about Z	0.0	mrاد	
	Maximum surface strain	0.000	‰	FE Mesh Node No. 0 (X: 0.000, Y: 0.000, Z: 0.000 m)
	Method of analysis	Linear		Geometrically linear analysis
	Reduction of stiffness			Cross-sections, Members, Surfaces
	Number of load increments	1		
	Number of iterations	1		
	Maximum value of element of stiffness matrix on diagonal	1.695E+10		
	Minimum value of element of stiffness matrix on diagonal	1.268E+08		
	Stiffness matrix determinant	5.734E+1214		
	Infinity Norm	4.257E+10		
Load Combination CO1 - 1.35*LC1				
	Sum of loads in X	0.00	kN	
	Sum of support reactions in X	0.00	kN	
	Sum of loads in Y	0.00	kN	
	Sum of support reactions in Y	0.00	kN	
	Sum of loads in Z	643.95	kN	
	Sum of support reactions in Z	643.95	kN	Deviation 0.00%
	Resultant of reactions about X	0.0	kNm	At center of gravity of model (X:5.3, Y:2.5, Z:0.0 m)
	Resultant of reactions about Y	0.0	kNm	At center of gravity of model
	Resultant of reactions about Z	0.0	kNm	At center of gravity of model
	Max. displacement in X	0.0	mm	
	Max. displacement in Y	0.0	mm	
	Max. displacement in Z	7.3	mm	FE Mesh Node No. 111 (X: 5.048, Y: 0.000, Z: 0.000 m)
	Max. vector displacement	7.3	mm	FE Mesh Node No. 111 (X: 5.048, Y: 0.000, Z: 0.000 m)
	Max. rotation about X	-0.5	mrاد	FE Mesh Node No. 111 (X: 5.048, Y: 0.000, Z: 0.000 m)
	Max. rotation about Y	-2.1	mrاد	FE Mesh Node No. 45 (X: 2.019, Y: 0.000, Z: 0.000 m)
	Max. rotation about Z	0.0	mrاد	
	Maximum surface strain	0.000	‰	FE Mesh Node No. 0 (X: 0.000, Y: 0.000, Z: 0.000 m)
	Method of analysis	2nd Order		Second order analysis (Nonlinear, Timoshenko)
	Internal forces referred to deformed system for...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
	Reduction of stiffness			Materials, Cross-sections, Members, Surfaces
	Consider favorable effects of tensile forces	<input checked="" type="checkbox"/>		
	Divide results by CO factor	<input type="checkbox"/>		
	Number of load increments	1		
	Number of iterations	2		
	Maximum value of element of stiffness matrix on diagonal	1.695E+10		
	Minimum value of element of stiffness matrix on diagonal	1.268E+08		
	Stiffness matrix determinant	5.734E+1214		
	Infinity Norm	4.257E+10		
Load Combination CO2 - 1.35*LC1 + 1.3*LC2				
	Sum of loads in X	0.00	kN	
	Sum of support reactions in X	0.00	kN	
	Sum of loads in Y	0.00	kN	
	Sum of support reactions in Y	0.00	kN	
	Sum of loads in Z	1183.45	kN	

4.0 RESULTS - SUMMARY

	Description	Value	Unit	Comment
	Sum of support reactions in Z	1183.45	kN	Deviation 0.00%
	Resultant of reactions about X	0.0	kNm	At center of gravity of model (X:5.3, Y:2.5, Z:0.0 m)
	Resultant of reactions about Y	0.0	kNm	At center of gravity of model
	Resultant of reactions about Z	0.0	kNm	At center of gravity of model
	Max. displacement in X	0.0	mm	
	Max. displacement in Y	0.0	mm	
	Max. displacement in Z	16.2	mm	FE Mesh Node No. 111 (X: 5.048, Y: 0.000, Z: 0.000 m)
	Max. vector displacement	16.2	mm	FE Mesh Node No. 111 (X: 5.048, Y: 0.000, Z: 0.000 m)
	Max. rotation about X	-1.6	mrad	FE Mesh Node No. 111 (X: 5.048, Y: 0.000, Z: 0.000 m)
	Max. rotation about Y	-4.5	mrad	FE Mesh Node No. 56 (X: 2.524, Y: 0.000, Z: 0.000 m)
	Max. rotation about Z	0.0	mrad	
	Maximum surface strain	0.000	‰	FE Mesh Node No. 0 (X: 0.000, Y: 0.000, Z: 0.000 m)
	Method of analysis	2nd Order		Second order analysis (Nonlinear, Timoshenko)
	Internal forces referred to deformed system for...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
	Reduction of stiffness			Materials, Cross-sections, Members, Surfaces
	Consider favorable effects of tensile forces	<input checked="" type="checkbox"/>		
	Divide results by CO factor	<input type="checkbox"/>		
	Number of load increments	1		
	Number of iterations	2		
	Maximum value of element of stiffness matrix on diagonal	1.695E+10		
	Minimum value of element of stiffness matrix on diagonal	1.268E+08		
	Stiffness matrix determinant	5.734E+1214		
		1		
	Infinity Norm	4.257E+10		
Load Combination CO3 - LC1				
	Sum of loads in X	0.00	kN	
	Sum of support reactions in X	0.00	kN	
	Sum of loads in Y	0.00	kN	
	Sum of support reactions in Y	0.00	kN	
	Sum of loads in Z	477.00	kN	
	Sum of support reactions in Z	477.00	kN	Deviation 0.00%
	Resultant of reactions about X	0.0	kNm	At center of gravity of model (X:5.3, Y:2.5, Z:0.0 m)
	Resultant of reactions about Y	0.0	kNm	At center of gravity of model
	Resultant of reactions about Z	0.0	kNm	At center of gravity of model
	Max. displacement in X	0.0	mm	
	Max. displacement in Y	0.0	mm	
	Max. displacement in Z	5.4	mm	FE Mesh Node No. 111 (X: 5.048, Y: 0.000, Z: 0.000 m)
	Max. vector displacement	5.4	mm	FE Mesh Node No. 111 (X: 5.048, Y: 0.000, Z: 0.000 m)
	Max. rotation about X	-0.4	mrad	FE Mesh Node No. 111 (X: 5.048, Y: 0.000, Z: 0.000 m)
	Max. rotation about Y	-1.6	mrad	FE Mesh Node No. 45 (X: 2.019, Y: 0.000, Z: 0.000 m)
	Max. rotation about Z	0.0	mrad	
	Maximum surface strain	0.000	‰	FE Mesh Node No. 0 (X: 0.000, Y: 0.000, Z: 0.000 m)
	Method of analysis	2nd Order		Second order analysis (Nonlinear, Timoshenko)
	Internal forces referred to deformed system for...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
	Reduction of stiffness			Materials, Cross-sections, Members, Surfaces
	Consider favorable effects of tensile forces	<input checked="" type="checkbox"/>		
	Divide results by CO factor	<input type="checkbox"/>		
	Number of load increments	1		
	Number of iterations	2		
	Maximum value of element of stiffness matrix on diagonal	1.695E+10		
	Minimum value of element of stiffness matrix on diagonal	1.268E+08		
	Stiffness matrix determinant	5.734E+1214		
		1		
	Infinity Norm	4.257E+10		
Load Combination CO4 - LC1 + LC2				
	Sum of loads in X	0.00	kN	
	Sum of support reactions in X	0.00	kN	
	Sum of loads in Y	0.00	kN	
	Sum of support reactions in Y	0.00	kN	
	Sum of loads in Z	892.00	kN	
	Sum of support reactions in Z	892.00	kN	Deviation 0.00%
	Resultant of reactions about X	0.0	kNm	At center of gravity of model (X:5.3, Y:2.5, Z:0.0 m)
	Resultant of reactions about Y	0.0	kNm	At center of gravity of model
	Resultant of reactions about Z	0.0	kNm	At center of gravity of model
	Max. displacement in X	0.0	mm	
	Max. displacement in Y	0.0	mm	
	Max. displacement in Z	12.2	mm	FE Mesh Node No. 111 (X: 5.048, Y: 0.000, Z: 0.000 m)
	Max. vector displacement	12.2	mm	FE Mesh Node No. 111 (X: 5.048, Y: 0.000, Z: 0.000 m)
	Max. rotation about X	-1.3	mrad	FE Mesh Node No. 111 (X: 5.048, Y: 0.000, Z: 0.000 m)
	Max. rotation about Y	-3.4	mrad	FE Mesh Node No. 56 (X: 2.524, Y: 0.000, Z: 0.000 m)
	Max. rotation about Z	0.0	mrad	
	Maximum surface strain	0.000	‰	FE Mesh Node No. 0 (X: 0.000, Y: 0.000, Z: 0.000 m)
	Method of analysis	2nd Order		Second order analysis (Nonlinear, Timoshenko)
	Internal forces referred to deformed system for...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
	Reduction of stiffness			Materials, Cross-sections, Members, Surfaces
	Consider favorable effects of tensile forces	<input checked="" type="checkbox"/>		
	Divide results by CO factor	<input type="checkbox"/>		
	Number of load increments	1		
	Number of iterations	2		
	Maximum value of element of stiffness matrix on diagonal	1.695E+10		
	Minimum value of element of stiffness matrix on diagonal	1.268E+08		
	Stiffness matrix determinant	5.734E+1214		
		1		
	Infinity Norm	4.257E+10		
Summary				
	Max. displacement in X	0.0		
	Max. displacement in Y	0.0		
	Max. displacement in Z	16.2	mm	CO2, FE Mesh Node No. 111 (X: 5.048, Y: 0.000, Z: 0.000 m)

4.0 RESULTS - SUMMARY

Description	Value	Unit	Comment
Max. vector displacement	16.2	mm	CO2, FE Mesh Node No. 111 (X: 5.048, Y: 0.000, Z: 0.000 m)
Max. rotation about X	-1.6	mrad	CO2, FE Mesh Node No. 111 (X: 5.048, Y: 0.000, Z: 0.000 m)
Max. rotation about Y	-4.5	mrad	CO2, FE Mesh Node No. 56 (X: 2.524, Y: 0.000, Z: 0.000 m)
Max. rotation about Z	0.0		
Other Settings:			
Number of 1D finite elements	0		
Number of 2D finite elements	210		
Number of 3D finite elements	0		
Number of FE mesh nodes	242		
Number of equations	1452		
Internal forces referred to deformed system for...:			
Max. number of iterations	100		
Number of divisions for member results	10		
Division of cable/foundation/tapered members	10		
Number of member divisions for searching maximum values	10		
Subdivisions of FE mesh for graphical results	3		
Percentage of iterations according to Picard method in combination with Newton-Raphson method	5	%	
Options:			
Activate shear stiffness of members (Ay, Az)	<input checked="" type="checkbox"/>		
Activate member divisions for large deformation or post-critical analysis	<input checked="" type="checkbox"/>		
Activate entered stiffness modifications	<input checked="" type="checkbox"/>		
Ignore rotational degrees of freedom	<input type="checkbox"/>		
Check of critical forces of members	<input checked="" type="checkbox"/>		
Nonsymmetric direct solver if demanded by nonlinear model	<input type="checkbox"/>		
Method for the system of equations	Direct		
Plate bending theory	Mindlin		
Solver version	64-bit		
Precision and Tolerance:			
Change default setting	<input type="checkbox"/>		

4.3 LINES - SUPPORT FORCES

Line No.	LC/CO	Node No.	Location x [m]	Support Forces [kN/m]			Support Moments [kNm/m]		
				px	py	pz	mx	my	mz
1	LC1	1	0.000	0.00	0.00	36.33	18.58	-86.68	0.00
			0.500	0.00	0.00	64.99	0.16	-89.94	0.00
			1.000	0.00	0.00	51.18	-0.52	-87.01	0.00
			1.500	0.00	0.00	43.60	-0.27	-83.46	0.00
			2.000	0.00	0.00	40.64	-0.11	-81.39	0.00
			2.500	0.00	0.00	39.84	0.00	-80.72	0.00
			3.000	0.00	0.00	40.64	0.11	-81.39	0.00
			3.500	0.00	0.00	43.60	0.27	-83.46	0.00
			4.000	0.00	0.00	51.18	0.52	-87.01	0.00
			4.500	0.00	0.00	64.99	-0.16	-89.94	0.00
			5.000	0.00	0.00	36.33	-18.58	-86.68	0.00
			LC2	1	0.000	0.00	0.00	8.15	17.42
	0.500	0.00			0.00	59.01	0.71	-91.64	0.00
	1.000	0.00			0.00	48.41	-0.46	-90.52	0.00
	1.500	0.00			0.00	40.58	-0.28	-87.30	0.00
	2.000	0.00			0.00	37.26	-0.12	-85.21	0.00
	2.500	0.00			0.00	36.33	0.00	-84.50	0.00
	3.000	0.00			0.00	37.26	0.12	-85.21	0.00
	3.500	0.00			0.00	40.58	0.28	-87.30	0.00
	4.000	0.00			0.00	48.41	0.46	-90.52	0.00
	4.500	0.00			0.00	59.01	-0.71	-91.64	0.00
	5.000	0.00			0.00	8.15	-17.42	-84.86	0.00
	CO1	1			0.000	0.00	0.00	49.05	25.08
			0.500	0.00	0.00	87.74	0.22	-121.42	0.00
1.000			0.00	0.00	69.09	-0.71	-117.46	0.00	
1.500			0.00	0.00	58.86	-0.37	-112.68	0.00	
2.000			0.00	0.00	54.86	-0.15	-109.88	0.00	
2.500			0.00	0.00	53.79	0.00	-108.97	0.00	
3.000			0.00	0.00	54.86	0.15	-109.88	0.00	
3.500			0.00	0.00	58.86	0.37	-112.68	0.00	
4.000			0.00	0.00	69.09	0.71	-117.46	0.00	
4.500			0.00	0.00	87.74	-0.22	-121.42	0.00	
5.000			0.00	0.00	49.05	-25.08	-117.02	0.00	
CO2			1	0.000	0.00	0.00	59.65	47.73	-227.33
	0.500	0.00		0.00	164.46	1.14	-240.55	0.00	
	1.000	0.00		0.00	132.03	-1.31	-235.13	0.00	
	1.500	0.00		0.00	111.61	-0.73	-226.17	0.00	
	2.000	0.00		0.00	103.30	-0.31	-220.65	0.00	
	2.500	0.00		0.00	101.01	0.00	-218.83	0.00	
	3.000	0.00		0.00	103.30	0.31	-220.65	0.00	
	3.500	0.00		0.00	111.61	0.73	-226.17	0.00	
	4.000	0.00		0.00	132.03	1.31	-235.13	0.00	
	4.500	0.00		0.00	164.46	-1.14	-240.55	0.00	
	5.000	0.00		0.00	59.65	-47.73	-227.33	0.00	
	CO3	1		0.000	0.00	0.00	36.33	18.58	-86.68
0.500			0.00	0.00	64.99	0.16	-89.94	0.00	
1.000			0.00	0.00	51.18	-0.52	-87.01	0.00	
1.500			0.00	0.00	43.60	-0.27	-83.46	0.00	
2.000			0.00	0.00	40.64	-0.11	-81.39	0.00	
2.500			0.00	0.00	39.84	0.00	-80.72	0.00	

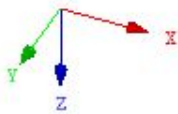
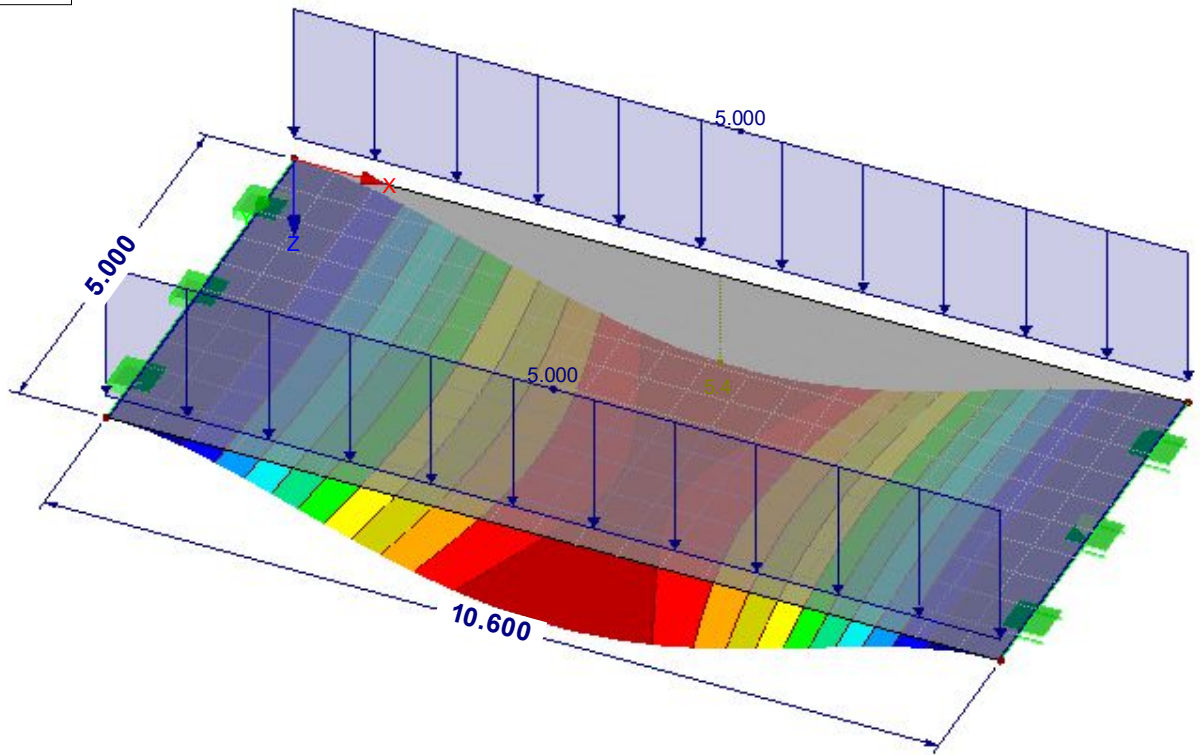
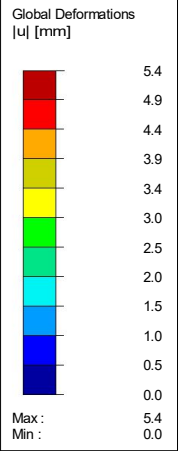
■ 4.3 LINES - SUPPORT FORCES

Line No.	LC/CO	Node No.	Location x [m]	Support Forces [kN/m]			Support Moments [kNm/m]				
				P _x	P _y	P _z	m _x	m _y	m _z		
1	CO3	1	3.000	0.00	0.00	40.64	0.11	-81.39	0.00		
			3.500	0.00	0.00	43.60	0.27	-83.46	0.00		
			4.000	0.00	0.00	51.18	0.52	-87.01	0.00		
			4.500	0.00	0.00	64.99	-0.16	-89.94	0.00		
			5.000	0.00	0.00	36.33	-18.58	-86.68	0.00		
			CO4	1	0.000	0.00	0.00	44.48	36.00	-171.54	0.00
					0.500	0.00	0.00	124.01	0.87	-181.58	0.00
					1.000	0.00	0.00	99.59	-0.99	-177.52	0.00
	1.500	0.00			0.00	84.18	-0.55	-170.77	0.00		
	2.000	0.00			0.00	77.90	-0.23	-166.60	0.00		
	2.500	0.00			0.00	76.17	0.00	-165.22	0.00		
	3.000	0.00			0.00	77.90	0.23	-166.60	0.00		
	3.500	0.00			0.00	84.18	0.55	-170.77	0.00		
	2	LC1	3	0.000	0.00	0.00	36.33	18.58	86.68	0.00	
				0.500	0.00	0.00	64.99	0.16	89.94	0.00	
				1.000	0.00	0.00	51.18	-0.52	87.01	0.00	
1.500				0.00	0.00	43.60	-0.27	83.46	0.00		
2.000				0.00	0.00	40.64	-0.11	81.39	0.00		
2.500				0.00	0.00	39.84	0.00	80.72	0.00		
3.000				0.00	0.00	40.64	0.11	81.39	0.00		
3.500				0.00	0.00	43.60	0.27	83.46	0.00		
LC2	3	0.000	0.00	0.00	8.15	17.42	84.86	0.00			
		0.500	0.00	0.00	59.01	0.71	91.64	0.00			
		1.000	0.00	0.00	48.41	-0.46	90.52	0.00			
		1.500	0.00	0.00	40.58	-0.28	87.30	0.00			
		2.000	0.00	0.00	37.26	-0.12	85.21	0.00			
		2.500	0.00	0.00	36.33	0.00	84.50	0.00			
		3.000	0.00	0.00	37.26	0.12	85.21	0.00			
		3.500	0.00	0.00	40.58	0.28	87.30	0.00			
CO1	3	0.000	0.00	0.00	49.05	25.08	117.02	0.00			
		0.500	0.00	0.00	87.74	0.22	121.42	0.00			
		1.000	0.00	0.00	69.09	-0.71	117.46	0.00			
		1.500	0.00	0.00	58.86	-0.37	112.68	0.00			
		2.000	0.00	0.00	54.86	-0.15	109.88	0.00			
		2.500	0.00	0.00	53.79	0.00	108.97	0.00			
		3.000	0.00	0.00	54.86	0.15	109.88	0.00			
		3.500	0.00	0.00	58.86	0.37	112.68	0.00			
CO2	3	0.000	0.00	0.00	59.65	47.73	227.33	0.00			
		0.500	0.00	0.00	164.46	1.14	240.55	0.00			
		1.000	0.00	0.00	132.03	-1.31	235.13	0.00			
		1.500	0.00	0.00	111.61	-0.73	226.17	0.00			
		2.000	0.00	0.00	103.30	-0.31	220.65	0.00			
		2.500	0.00	0.00	101.01	0.00	218.83	0.00			
		3.000	0.00	0.00	103.30	0.31	220.65	0.00			
		3.500	0.00	0.00	111.61	0.73	226.17	0.00			
CO3	3	0.000	0.00	0.00	36.33	18.58	86.68	0.00			
		0.500	0.00	0.00	64.99	0.16	89.94	0.00			
		1.000	0.00	0.00	51.18	-0.52	87.01	0.00			
		1.500	0.00	0.00	43.60	-0.27	83.46	0.00			
		2.000	0.00	0.00	40.64	-0.11	81.39	0.00			
		2.500	0.00	0.00	39.84	0.00	80.72	0.00			
		3.000	0.00	0.00	40.64	0.11	81.39	0.00			
		3.500	0.00	0.00	43.60	0.27	83.46	0.00			
CO4	3	0.000	0.00	0.00	44.48	36.00	171.54	0.00			
		0.500	0.00	0.00	124.01	0.87	181.58	0.00			
		1.000	0.00	0.00	99.59	-0.99	177.52	0.00			
		1.500	0.00	0.00	84.18	-0.55	170.77	0.00			
		2.000	0.00	0.00	77.90	-0.23	166.60	0.00			
		2.500	0.00	0.00	76.17	0.00	165.22	0.00			
		3.000	0.00	0.00	77.90	0.23	166.60	0.00			
		3.500	0.00	0.00	84.18	0.55	170.77	0.00			
Σ Supp.	CO4	4	0.000	0.00	0.00	124.01	-0.87	181.58	0.00		
			0.500	0.00	0.00	44.48	-36.00	171.54	0.00		
			0.000	0.00	0.00	477.00			0.00		
			0.000	0.00	0.00	477.00			0.00		
			0.000	0.00	0.00	415.00			0.00		
			0.000	0.00	0.00	415.00			0.00		
			0.000	0.00	0.00	643.95			0.00		
			0.000	0.00	0.00	643.95			0.00		
Σ Loads	CO4	4	0.000	0.00	0.00	1183.45			0.00		
			0.000	0.00	0.00	1183.45			0.00		
			0.000	0.00	0.00	477.00			0.00		
			0.000	0.00	0.00	477.00			0.00		
			0.000	0.00	0.00	892.00			0.00		
			0.000	0.00	0.00	892.00			0.00		
			0.000	0.00	0.00	892.00			0.00		
			0.000	0.00	0.00	892.00			0.00		

GLOBAL DEFORMATIONS u

LC1 : Nuolatine
Loads [kN/m]
Global Deformations u [mm]

Isometric

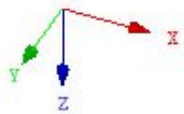
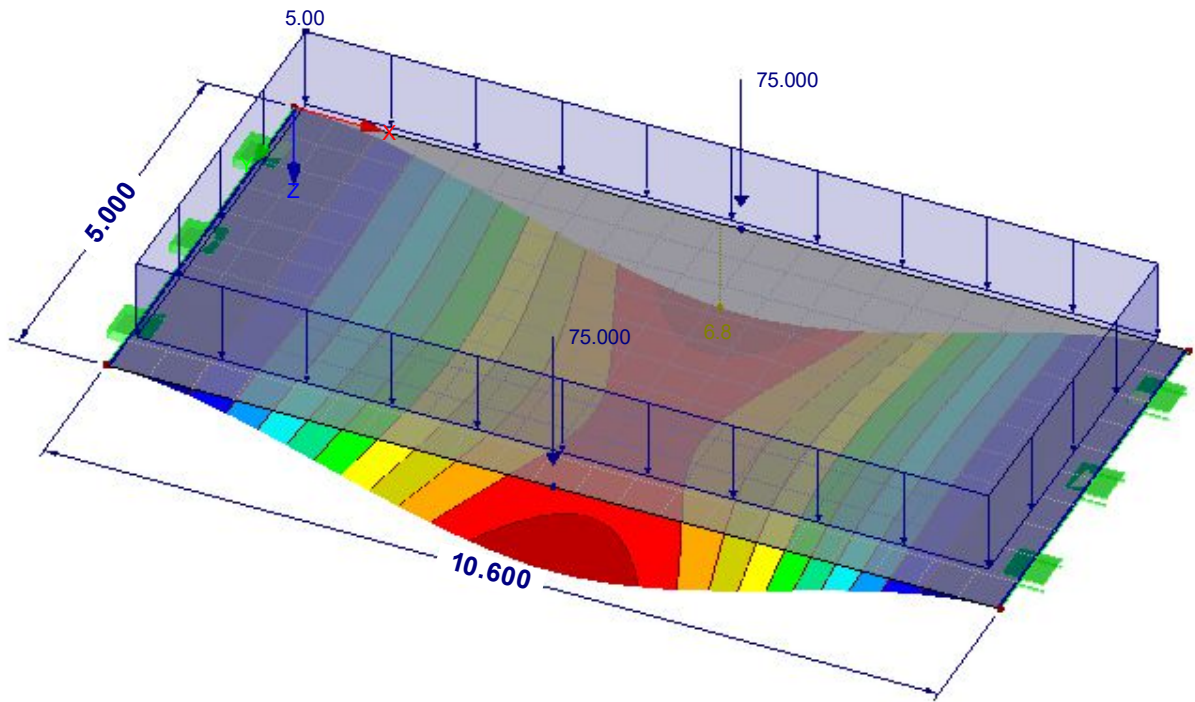
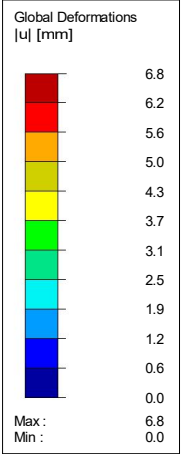


Factor of deformations: 220.00
Max u: 5.4, Min u: 0.0 mm

GLOBAL DEFORMATIONS u

LC2 : Naudojimo
Loads [kN/m²], [kN]
Global Deformations u [mm]

Isometric



Factor of deformations: 170.00
Max u: 6.8, Min u: 0.0 mm

■ 4.3 LINES - SUPPORT FORCES

Result Combinations

Line No.	RC	Node No.	Location x [m]	Support Forces [kN/m]			Support Moments [kNm/m]						
				P _x	P _y	P _z	m _x	m _y	m _z				
1	RC1	1	0.000	0.00	0.00	59.65	47.73	-117.02	0.00				
			0.000	0.00	0.00	49.05	25.08	-227.33	0.00				
			0.500	0.00	0.00	164.46	1.14	-121.42	0.00				
			0.500	0.00	0.00	87.74	0.22	-240.55	0.00				
			1.000	0.00	0.00	132.03	-0.71	-117.46	0.00				
			1.000	0.00	0.00	69.09	-1.31	-235.13	0.00				
			1.500	0.00	0.00	111.61	-0.37	-112.68	0.00				
			1.500	0.00	0.00	58.86	-0.73	-226.17	0.00				
			2.000	0.00	0.00	103.30	-0.15	-109.88	0.00				
			2.000	0.00	0.00	54.86	-0.31	-220.65	0.00				
			2.500	0.00	0.00	101.01	0.00	-108.97	0.00				
			2.500	0.00	0.00	53.79	0.00	-218.83	0.00				
			3.000	0.00	0.00	103.30	0.31	-109.88	0.00				
			3.000	0.00	0.00	54.86	0.15	-220.65	0.00				
			3.500	0.00	0.00	111.61	0.73	-112.68	0.00				
			3.500	0.00	0.00	58.86	0.37	-226.17	0.00				
			4.000	0.00	0.00	132.03	1.31	-117.46	0.00				
			4.000	0.00	0.00	69.09	0.71	-235.13	0.00				
			4.500	0.00	0.00	164.46	-0.22	-121.42	0.00				
			4.500	0.00	0.00	87.74	-1.14	-240.55	0.00				
	2	2	2	5.000	0.00	0.00	59.65	-25.08	-117.02	0.00			
				5.000	0.00	0.00	49.05	-47.73	-227.33	0.00			
				Max p _x	0.00	▷	0.00	0.00	59.65	47.73	-117.02	0.00	
				Min p _x	0.00	▷	0.00	0.00	49.05	25.08	-227.33	0.00	
				Max p _y	0.00	▷	0.00	0.00	59.65	47.73	-117.02	0.00	
				Min p _y	0.00	▷	0.00	0.00	49.05	25.08	-227.33	0.00	
				Max p _z	0.500	▷	0.00	▷	164.46	1.14	-121.42	0.00	
				Min p _z	0.000	▷	0.00	▷	49.05	25.08	-227.33	0.00	
				Max m _x	0.000	▷	0.00	▷	59.65	47.73	-117.02	0.00	
				Min m _x	5.000	▷	0.00	▷	49.05	-47.73	-227.33	0.00	
				Max m _y	2.500	▷	0.00	▷	101.01	0.00	-108.97	0.00	
				Min m _y	0.500	▷	0.00	▷	87.74	0.22	-240.55	0.00	
				Max m _z	0.000	▷	0.00	▷	59.65	47.73	-117.02	▷	0.00
				Min m _z	0.000	▷	0.00	▷	49.05	25.08	-227.33	▷	0.00
				RC2	1	1	0.000	0.00	0.00	44.48	36.00	-86.68	0.00
							0.000	0.00	0.00	36.33	18.58	-171.54	0.00
							0.500	0.00	0.00	124.01	0.87	-89.94	0.00
							0.500	0.00	0.00	64.99	0.16	-181.58	0.00
							1.000	0.00	0.00	99.59	-0.52	-87.01	0.00
							1.000	0.00	0.00	51.18	-0.99	-177.52	0.00
1.500	0.00	0.00	84.18				-0.27	-83.46	0.00				
1.500	0.00	0.00	43.60				-0.55	-170.77	0.00				
2.000	0.00	0.00	77.90				-0.11	-81.39	0.00				
2.000	0.00	0.00	40.64				-0.23	-166.60	0.00				
2.500	0.00	0.00	76.17				0.00	-80.72	0.00				
2.500	0.00	0.00	39.84				0.00	-165.22	0.00				
3.000	0.00	0.00	77.90				0.23	-81.39	0.00				
3.000	0.00	0.00	40.64				0.11	-166.60	0.00				
3.500	0.00	0.00	84.18				0.55	-83.46	0.00				
3.500	0.00	0.00	43.60				0.27	-170.77	0.00				
4.000	0.00	0.00	99.59				0.99	-87.01	0.00				
4.000	0.00	0.00	51.18				0.52	-177.52	0.00				
4.500	0.00	0.00	124.01				-0.16	-89.94	0.00				
4.500	0.00	0.00	64.99				-0.87	-181.58	0.00				
2	2	2	5.000		0.00	0.00	44.48	-18.58	-86.68	0.00			
			5.000		0.00	0.00	36.33	-36.00	-171.54	0.00			
			Max p _x		0.000	▷	0.00	▷	44.48	36.00	-86.68	0.00	
			Min p _x		0.000	▷	0.00	▷	36.33	18.58	-171.54	0.00	
			Max p _y		0.000	▷	0.00	▷	44.48	36.00	-86.68	0.00	
			Min p _y		0.000	▷	0.00	▷	36.33	18.58	-171.54	0.00	
			Max p _z		0.500	▷	0.00	▷	124.01	0.87	-89.94	0.00	
			Min p _z		0.000	▷	0.00	▷	36.33	18.58	-171.54	0.00	
			Max m _x		0.000	▷	0.00	▷	44.48	36.00	-86.68	0.00	
			Min m _x		5.000	▷	0.00	▷	36.33	-36.00	-171.54	0.00	
			Max m _y		2.500	▷	0.00	▷	76.17	0.00	-80.72	0.00	
			Min m _y		0.500	▷	0.00	▷	64.99	0.16	-181.58	0.00	
			Max m _z		0.000	▷	0.00	▷	44.48	36.00	-86.68	▷	0.00
			Min m _z		0.000	▷	0.00	▷	36.33	18.58	-171.54	▷	0.00
			2		RC1	3	0.000	0.00	0.00	59.65	47.73	227.33	0.00
							0.000	0.00	0.00	49.05	25.08	117.02	0.00
							0.500	0.00	0.00	164.46	1.14	240.55	0.00
							0.500	0.00	0.00	87.74	0.22	121.42	0.00
							1.000	0.00	0.00	132.03	-0.71	235.13	0.00
							1.000	0.00	0.00	69.09	-1.31	117.46	0.00
1.500	0.00	0.00		111.61			-0.37	226.17	0.00				
1.500	0.00	0.00		58.86			-0.73	112.68	0.00				
2.000	0.00	0.00		103.30			-0.15	220.65	0.00				
2.000	0.00	0.00		54.86			-0.31	109.88	0.00				
2.500	0.00	0.00		101.01			0.00	218.83	0.00				
2.500	0.00	0.00		53.79			0.00	108.97	0.00				
3.000	0.00	0.00		103.30			0.31	220.65	0.00				
3.000	0.00	0.00		54.86			0.15	109.88	0.00				
3.500	0.00	0.00		111.61			0.73	226.17	0.00				
3.500	0.00	0.00		58.86			0.37	112.68	0.00				
4.000	0.00	0.00		132.03			1.31	235.13	0.00				
4.000	0.00	0.00		69.09			0.71	117.46	0.00				
4.500	0.00	0.00		164.46			-0.22	240.55	0.00				
4.500	0.00	0.00		87.74			-1.14	121.42	0.00				
4	4	4		5.000	0.00	0.00	59.65	-25.08	227.33	0.00			
				5.000	0.00	0.00	49.05	-47.73	117.02	0.00			
				Max p _x	0.000	▷	0.00	▷	59.65	47.73	227.33	0.00	
				Min p _x	0.000	▷	0.00	▷	49.05	25.08	117.02	0.00	
				Max p _y	0.000	▷	0.00	▷	59.65	47.73	227.33	0.00	
				Min p _y	0.000	▷	0.00	▷	49.05	25.08	117.02	0.00	
				Max p _z	0.500	▷	0.00	▷	164.46	1.14	240.55	0.00	
				Min p _z	0.000	▷	0.00	▷	49.05	25.08	117.02	0.00	
				Max m _x	0.000	▷	0.00	▷	59.65	47.73	227.33	0.00	

4.3 LINES - SUPPORT FORCES

Result Combinations

Line No.	RC	Node No.	Location x [m]	Support Forces [kN/m]			Support Moments [kNm/m]			
				P_x	P_y	P_z	m_x	m_y	m_z	
2	RC1	Min m_x	5.000	0.00	0.00	49.05	-47.73	117.02	0.00	
		Max m_y	0.500	0.00	0.00	164.46	1.14	240.55	0.00	
		Min m_y	2.500	0.00	0.00	53.79	0.00	108.97	0.00	
		Max m_z	0.000	0.00	0.00	59.65	47.73	227.33	0.00	
		Min m_z	0.000	0.00	0.00	49.05	25.08	117.02	0.00	
	RC2	3	0.000	0.00	0.00	44.48	36.00	171.54	0.00	
			0.000	0.00	0.00	36.33	18.58	86.68	0.00	
			0.500	0.00	0.00	124.01	0.87	181.58	0.00	
			0.500	0.00	0.00	64.99	0.16	89.94	0.00	
			1.000	0.00	0.00	99.59	-0.52	177.52	0.00	
			1.000	0.00	0.00	51.18	-0.99	87.01	0.00	
			1.500	0.00	0.00	84.18	-0.27	170.77	0.00	
			1.500	0.00	0.00	43.60	-0.55	83.46	0.00	
			2.000	0.00	0.00	77.90	-0.11	166.60	0.00	
			2.000	0.00	0.00	40.64	-0.23	81.39	0.00	
			2.500	0.00	0.00	76.17	0.00	165.22	0.00	
			2.500	0.00	0.00	39.84	0.00	80.72	0.00	
			3.000	0.00	0.00	77.90	0.23	166.60	0.00	
			3.000	0.00	0.00	40.64	0.11	81.39	0.00	
			3.500	0.00	0.00	84.18	0.55	170.77	0.00	
		3.500	0.00	0.00	43.60	0.27	83.46	0.00		
		4.000	0.00	0.00	99.59	0.99	177.52	0.00		
		4.000	0.00	0.00	51.18	0.52	87.01	0.00		
		4.500	0.00	0.00	124.01	-0.16	181.58	0.00		
		4.500	0.00	0.00	64.99	-0.87	89.94	0.00		
		4	5.000	0.00	0.00	44.48	-18.58	171.54	0.00	
			5.000	0.00	0.00	36.33	-36.00	86.68	0.00	
			Max p_x	0.000	0.00	0.00	44.48	36.00	171.54	0.00
			Min p_x	0.000	0.00	0.00	36.33	18.58	86.68	0.00
			Max p_y	0.000	0.00	0.00	44.48	36.00	171.54	0.00
Min p_y	0.000		0.00	0.00	36.33	18.58	86.68	0.00		
Max p_z	0.500		0.00	0.00	124.01	0.87	181.58	0.00		
Min p_z	0.000		0.00	0.00	36.33	18.58	86.68	0.00		
Max m_x	0.000		0.00	0.00	44.48	36.00	171.54	0.00		
Min m_x	5.000		0.00	0.00	36.33	-36.00	86.68	0.00		
Max m_y	0.500	0.00	0.00	124.01	0.87	181.58	0.00			
Min m_y	2.500	0.00	0.00	39.84	0.00	80.72	0.00			
Max m_z	0.000	0.00	0.00	44.48	36.00	171.54	0.00			
Min m_z	0.000	0.00	0.00	36.33	18.58	86.68	0.00			

1.1 GENERAL DATA

Design according to Standard:	LST EN 1992-1-1:2005/NA:2011		
ULTIMATE LIMIT STATE			
Load combinations for design:	CO1	1.35*LC1 Persistent and Transient	
	CO2	1.35*LC1 + 1.3*LC2 Persistent and Transient	
Result combination for design:	RC1	ULS (STR/GEO) - Permanent / transient - Eq. 6.10 Persistent and Transient	
SERVICEABILITY LIMIT STATE			
Result combination for design:	RC2	SLS - Characteristic Characteristic with direct load, k_1 0.600	
Definition of Provided Additional Reinforcement	Automatic arrangement according to the specifications in Table 1.4		
Type of SLS method:	Analytical Method By assuming an identical deformation ratio of the longitudinal reinforcement		
Design of			
Concrete Stress Analysis	<input type="checkbox"/>		
Steel Stress Analysis	<input checked="" type="checkbox"/>		
Crack widths	<input checked="" type="checkbox"/>		
Layout of longitudinal reinforcement			
Required longitudinal reinforcement automatically increased for serviceability limit state design:	<input checked="" type="checkbox"/>		
DETAILS			
Analysis Method for Reinforcement Envelope	Mixed		
Apply the internal forces without the rib components	<input type="checkbox"/>		
Design Situation Settings for Serviceability Limit State Checks			
Load combination:			
Characteristic with direct load	Checks: k_1*f_{ck} , k_3*f_{yk}		
Characteristic with imposed deformation	Checks: k_1*f_{ck} , k_4*f_{yk}		
Frequent	Checks: w_k		
Quasi-permanent	Checks: k_2*f_{ck} , w_k , U_i		

1.2 MATERIALS

Material No.	Concrete Strength Class	Material Description	Steel Description	Comment
3	Concrete C25/30	B 500 S (A)		

1.2.1 MATERIAL PARAMETERS

Material No.	Description	Name	Size	Unit
3	Concrete Strength Class: Concrete C25/30			
	Characteristic Cylinder Compressive Strength	f_{ck}	25.00	N/mm ²
	5 % Fractile of Axial Tensile Strength	$f_{ctk,0.05}$	1.80	N/mm ²
	Characteristic for Nonlinear Calculations			
	Mean Secant Modulus of Elasticity	E_{cm}	31000.00	N/mm ²
	Mean Cylinder Compressive Strength	f_{cm}	33.00	N/mm ²
	Mean Axial Tensile Strength	f_{ctm}	2.60	N/mm ²
	Ultimate Strain for Pure Compression	ϵ_{c1}	-2.100	‰
	Ultimate Strain at Failure	ϵ_{c1u}	-3.500	‰
	Shear Modulus	G	12916.70	N/mm ²
	Poisson's Ratio	ν	0.200	-
	Characteristic Strains for Parabolic-Rectangular Diagram			
	Ultimate Strain for Pure Compression	ϵ_{c2}	-2.000	‰
	Ultimate Strain at Failure	ϵ_{cu2}	-3.500	‰
	Parabola Exponent	n	2.000	-
	Specific Weight	γ	25.00	kN/m ³
	Reinforcing Steel: B 500 S (A)			
	Modulus of Elasticity	E_s	200000.00	N/mm ²
	Yield Stress Mean Value	f_{ym}	550.00	N/mm ²
	Characteristic Yield Stress	f_{yk}	500.00	N/mm ²
	Tensile Strength Mean Value	f_{tm}	551.25	N/mm ²
	Characteristic Tensile Strength	f_{tk}	525.00	N/mm ²
	Limiting Strain	ϵ_{uk}	25.000	‰

1.3 SURFACES

Surface No.	Matl. No.	$f_{ct,eff,wk}$ [N/mm ²]	$f_{ct,eff,As,min}$ [N/mm ²]	$w_{k,+z}$ (top) [mm]	$w_{k,-z}$ (bottom) [mm]	Effects due to Restraint		Notes
						Apply	k_c [-]	
1	3	2.60	2.60	0.300	0.300	<input checked="" type="checkbox"/>	var.	6)

Notes:
 6) Calculation of minimum reinforcement for effects due to restraint

1.4 REINFORCEMENT GROUP NO. 1

Applied to surfaces:	All
REINFORCEMENT RATIO	
Minimum secondary reinforcement	20.0 %
Basic minimum reinforcement	0.0 %
Minimum compression reinforcement	0.0 %

1.4 REINFORCEMENT GROUP NO. 1

Minimum tension reinforcement	0.0 %
Maximum reinforcement percentage	4.0 %
Minimum shear reinforcement percentage	0.0 %
REINFORCEMENT AREA FOR DESIGN OF SLS	
Use provided basic reinforcement and required additional reinforcement acc. to Tables 2.1, 2.2, 2.3	
Concrete cover acc. to Standard	<input type="checkbox"/>
BASIC REINFORCEMENT LAYOUT - TOP (-z)	
Number of directions	2
Cover to rebar centroid	d-1: 30.00, d-2: 40.00 mm
Bar diameter	ds-1: 10.00, ds-2: 10.00 mm
Directions of reinforcement	Phi-1: 0.000°, Phi-2: 90.000°
Reinforcement area	As-1,-z (top): 0.00, As-2,-z (top): 0.00 cm ² /m
BASIC REINFORCEMENT LAYOUT - BOTTOM (+z)	
Number of directions	2
Cover to rebar centroid	d-1: 30.00, d-2: 40.00 mm
Bar diameter	ds-1: 10.00, ds-2: 10.00 mm
Directions of reinforcement	Phi-1: 0.000°, Phi-2: 90.000°
Reinforcement area	As-1,+z (bottom): 0.00, As-2,+z (bottom): 0.00 cm ² /m
ADDITIONAL REINFORCEMENT LAYOUT - TOP (-z)	
Number of directions	2
Cover to rebar centroid	d-1: 30.00, d-2: 40.00 mm
Bar diameter	ds-1: 10.00, ds-2: 10.00 mm
Directions of reinforcement	Phi-1: 0.000°, Phi-2: 90.000°
Reinforcement area	Use required additional reinforcement acc. to Tables 2.1, 2.2, 2.3
ADDITIONAL REINFORCEMENT LAYOUT - BOTTOM (+z)	
Number of directions	2
Cover to rebar centroid	d-1: 30.00, d-2: 40.00 mm
Bar diameter	ds-1: 10.00, ds-2: 10.00 mm
Directions of reinforcement	Phi-1: 0.000°, Phi-2: 90.000°
Reinforcement area	Use required additional reinforcement acc. to Tables 2.1, 2.2, 2.3
LONGITUDINAL REINFORCEMENT FOR SHEAR FORCE DESIGN	
Apply the greater value resulting from either the required or provided reinforcement (basic and add. reinforcement) per reinforcement direction	
OPTIONS FOR LST EN 1992-1-1:2005/NA:2011	
Minimum longitudinal reinforcement for plates acc. to 9.3.1	<input checked="" type="checkbox"/>
Direction of minimum reinforcement	<input checked="" type="checkbox"/>
Reinforcement direction with the main tensile force from top (-z) and bottom (+z) surfaces together:	<input checked="" type="checkbox"/>
Minimum longitudinal reinforcement for walls acc. to 9.6	<input type="checkbox"/>
Minimum shear reinforcement	<input checked="" type="checkbox"/>
Neutral axis depth limitation	<input checked="" type="checkbox"/>
Variable strut inclination - min	21.801 °
Variable concrete strut inclination - max	45.000 °
Partial safety factor γ_s	PT 1.15, AC 1.00, SLS 1.00
Partial safety factor γ_c	PT 1.50, AC 1.20, SLS 1.00
Consideration of long-term effects Alpha-cc	PT 1.00, AC 1.00, SLS 1.00
Consideration of long-term effects Alpha-ct	SLS 1.00

2.2 REQUIRED REINFORCEMENT BY SURFACE

Surface No.	Point No.	Point Coordinates [m]			Symbol	Required Reinforcement			Basic Reinf.	Additional Reinforcement		Unit	Notes
		X	Y	Z		ULS	SLS	ULS/SLS		Required	Provided		
1	M20	0.000	4.500	0.000	a _{s,1,-z} (top)	26.05	20.51	26.05	0.00	26.05	26.05	cm ² /m	
	M20	0.000	4.500	0.000	a _{s,2,-z} (top)	5.28	4.29	5.28	0.00	5.28	5.28	cm ² /m	
	M111	5.048	0.000	0.000	a _{s,1,+z} (bottom)	16.51	13.78	16.51	0.00	16.51	16.51	cm ² /m	
	M111	5.048	0.000	0.000	a _{s,2,+z} (bottom)	3.30	0.76	3.30	0.00	3.30	3.30	cm ² /m	
	M20	0.000	4.500	0.000	a _{sw}	10.52	-	10.52	-	-	-	cm ² /m ²	

3.2 SERVICEABILITY CHECK BY SURFACE

Surface No.	Point No.	Point Coordinates [m]			Load Case	Type	Exist. Value	Design		Unit	Ratio	Notes
		X	Y	Z				Limit Value	Limit Value			
1	M37	1.514	1.500	0.000	RC2	σ_s	349.55	400.00	400.00	N/mm ²	0.9	
	M1	0.000	0.000	0.000		a _{s,min}	Not designable	0.00	0.00	cm ² /m	0.0	239)
	M1	0.000	0.000	0.000		lim d _s	Not designable	0.00	0.00	mm	0.0	239)
	M1	0.000	0.000	0.000		lim s ₁	Not designable	0.000	0.000	m	0.0	239)
	M1	0.000	0.000	0.000		w _k	Not designable	0.000	0.000	mm	0.0	239)

SERVICEABILITY CHECK NOTES

No.	Description
239)	The design is not possible! The specified loads (LC/CO/RC) with the selected types of load combinations (characteristic/frequent/quasi-permanent) do not contain the required checks (stress/crack width/deflection).

REQUIRED REINFORCEMENT $a_{s,1,-z}$ (top)

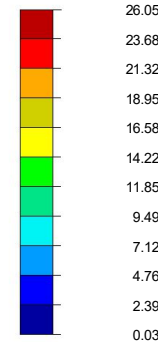
RF-CONCRETE Surfaces CA1

Reinforced concrete design

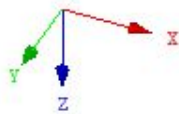
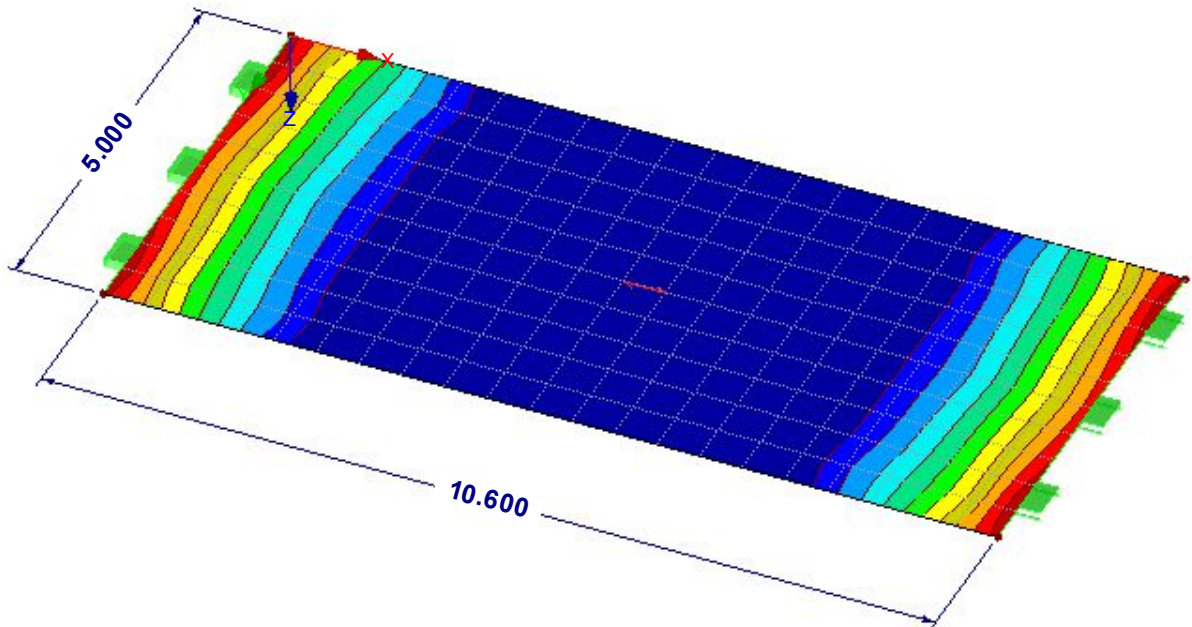
Required Reinforcement $a_{s,1,-z}$ (top) [cm^2/m]

Isometric

Required Reinforcement $a_{s,1,-z}$ (top) [cm^2/m]



Max : 26.05
Min : 0.03



Max $a_{s,1,-z}$ (top): 26.05, Min $a_{s,1,-z}$ (top): 0.03 cm^2/m

■ REQUIRED REINFORCEMENT $a_{s,2,-z}$ (top)

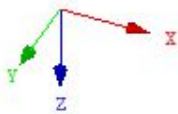
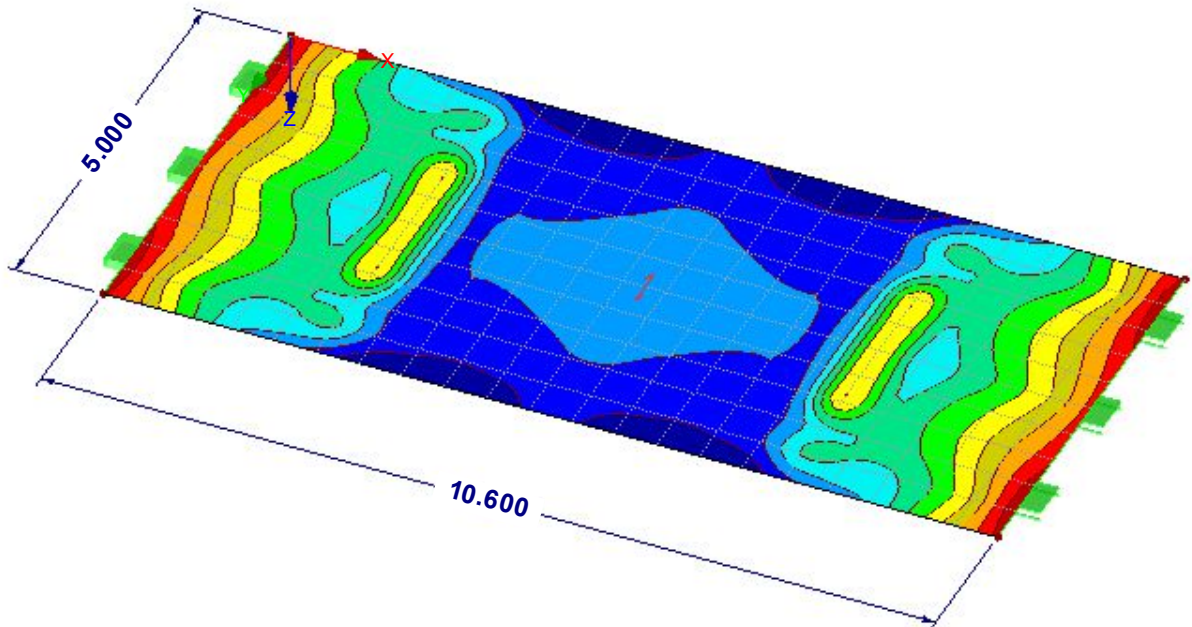
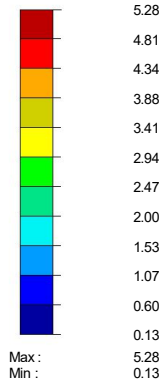
RF-CONCRETE Surfaces CA1

Reinforced concrete design

Required Reinforcement $a_{s,2,-z}$ (top) [cm^2/m]

Isometric

Required Reinforcement $a_{s,2,-z}$ (top) [cm^2/m]



Max $a_{s,2,-z}$ (top): 5.28, Min $a_{s,2,-z}$ (top): 0.13 cm^2/m

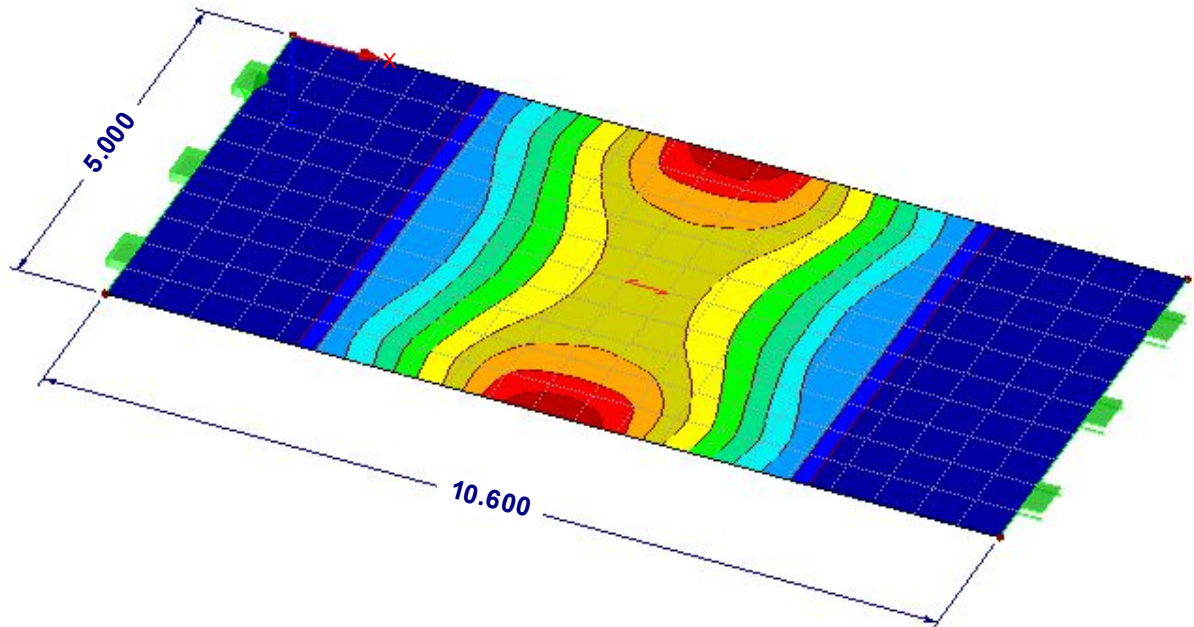
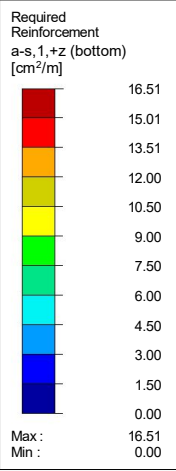
■ REQUIRED REINFORCEMENT $a_{s,1,+z}$ (bottom)

RF-CONCRETE Surfaces CA1

Reinforced concrete design

Required Reinforcement $a_{s,1,+z}$ (bottom) [cm^2/m]

Isometric



Max $a_{s,1,+z}$ (bottom): 16.51, Min $a_{s,1,+z}$ (bottom): 0.00 cm^2/m

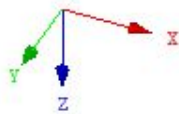
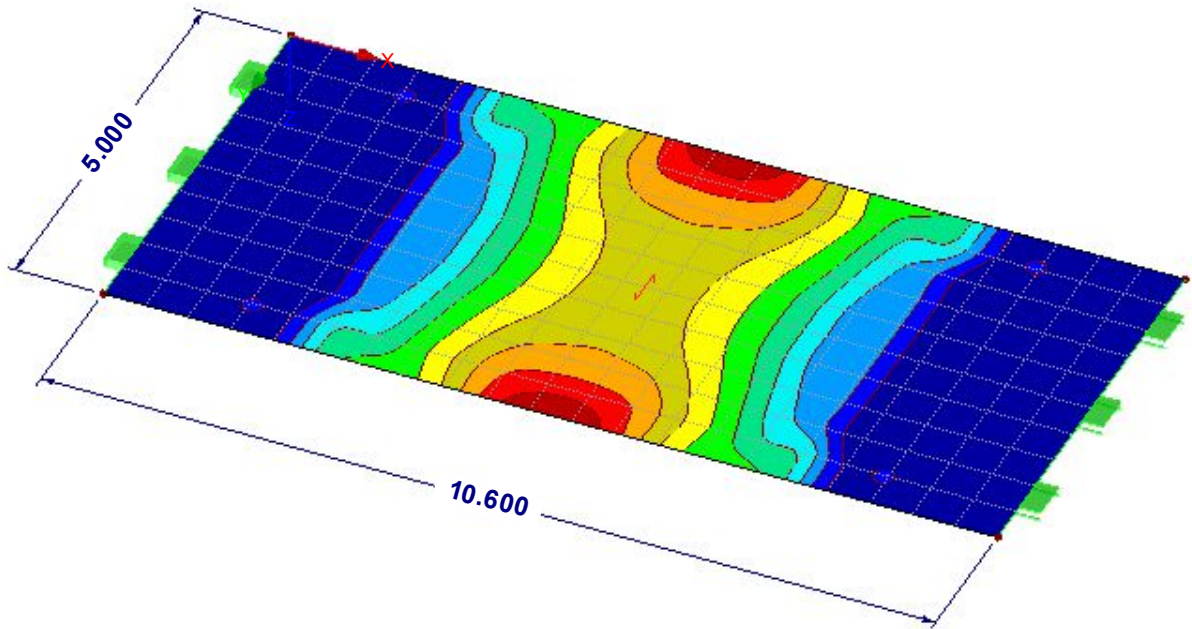
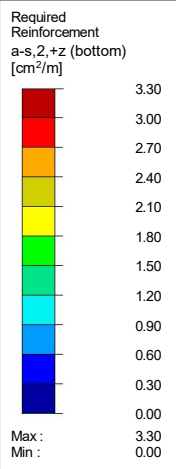
REQUIRED REINFORCEMENT $a_{s,2,+z}$ (bottom)

RF-CONCRETE Surfaces CA1

Reinforced concrete design

Required Reinforcement a-s,2,+z (bottom) [cm^2/m]

Isometric



Max a-s,2,+z (bottom): 3.30, Min a-s,2,+z (bottom): 0.00 cm^2/m



Telefonas:

Projekto numeris:

Pavadinimas: "215" atraminė reakcija

Vieta:

KOLONOS - PAMATO JUNGTIŲ SKAIČIAVIMAS

Užsakovas:

2025-03-18

Projektuotojas:

Kompanija:
Adresas:
Telefonas:
Elektroninis paštas:
Vardas:

Projektas:

Pavadinimas: Naujas projektas
Vieta:
Kontaktinis asmuo:
Komentariai:
Projektavimo normos: EN Eurocodes (without NA)
Vienetų sistema: SI

Šie skaičiavimai tinka tik Peikko gaminiams ir negali būti naudojami trečiųjų šalių produkcijai, net jei jie atrodo identiškai.

Suvestinė

Vardas	Etapas	#	Apkrovų derinys:	Puslapio Nr.	Maksimalus Išnaudojimas	Statusas
Kolona 1	Ekspluatavimo stadija	1	Nd=-675,0, Mxd=125,0, Myd=15,0, Vxd=7,0, Vyd=-130,0	6	72%	OK

Kolona 1

Pastaba:

Kolonų kiekis: 1

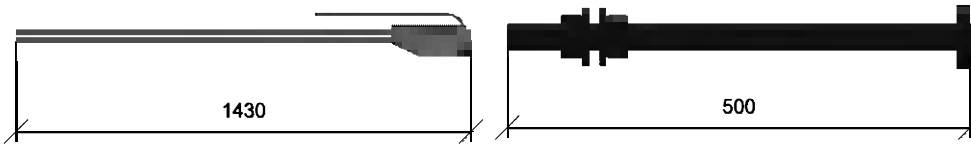
Peikko produktai

Kolonos padai: 4 x HPKM30

Varžtai: 4 x HPM30L

Viso

Produktas	Kiekis
HPKM30	4
HPM30L	4


 Minimalus reikiamas varžlių užveržimo momentas : $T_{\min} = 250 \text{ Nm}$

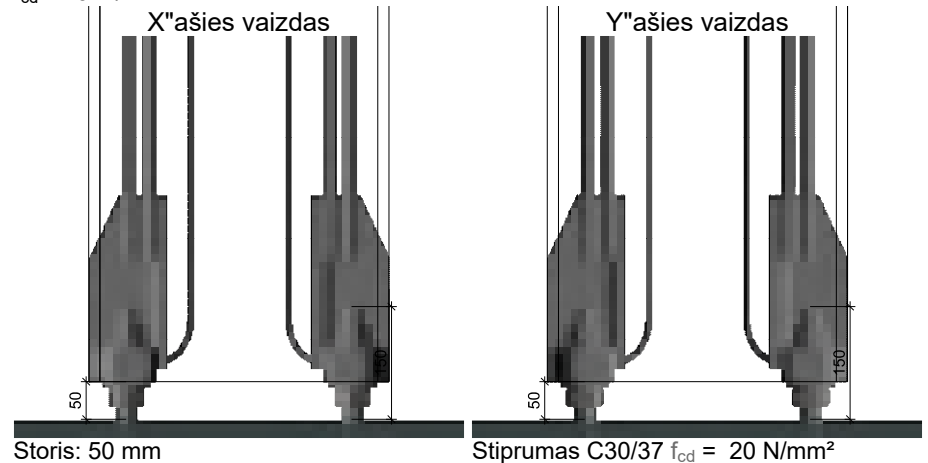
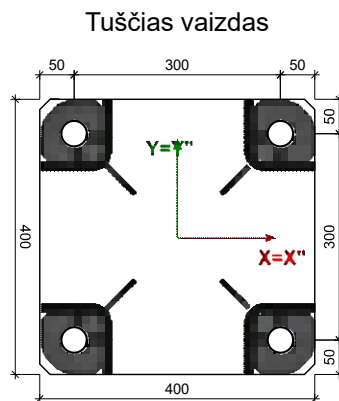
 Maksimalus leistinas varžlių užveržimo momentas : $T_{\max} = 450 \text{ Nm}$

Varžtų įrengimo šablonas: PPL30-4 300x300

Medžiagos ir geometrija

Kolona: 400x400

Betonas: C30/37

 $f_{cd} = 20 \text{ N/mm}^2$


Skiedinys:

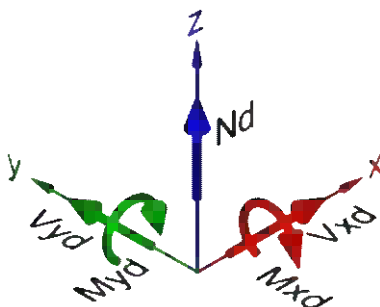
 X'' ; Y'' = profilio lokalinė koordinatinių sistema

 X'' ; Y'' = lokali ankerių koordinatinių sistema

Apkrovų deriniai

Pastaba: apkrovos aprašytos pagal lokalią profilio koordinatinių sistemą

Apkrovos



Eksploatacijos stadija

#	Vardas	N_d [kN]	M_{xd} [kNm]	M_{yd} [kNm]	V_{xd} [kN]	V_{yd} [kN]
1		-675,0	125,0	15,0	7,0	-130,0

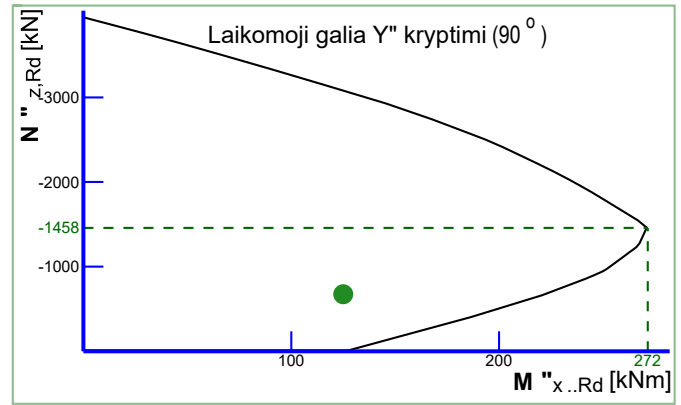
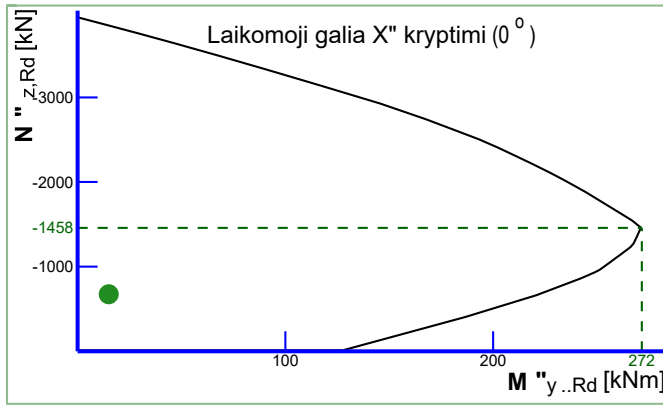
Montavimo stadija

Šiam etapui nėra pateikta apkrovų derinio

Gaisro apkrovos (apkrvos gaisro atveju)

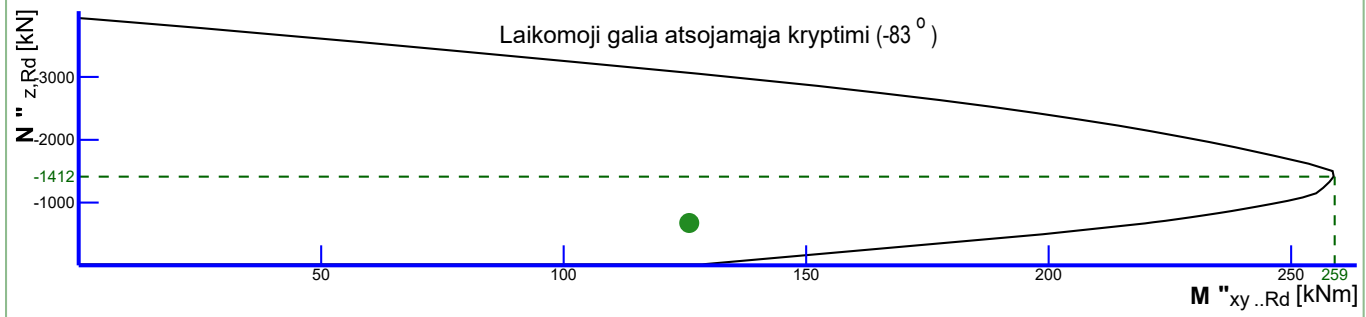
Šiam etapui nėra pateikta apkrovų derinio

Laikomosios galios diagramos

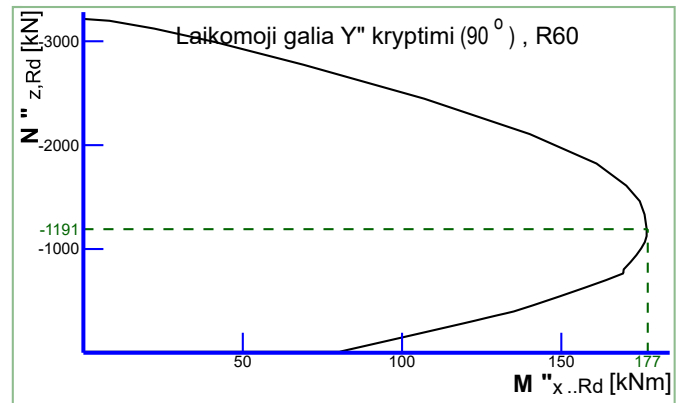
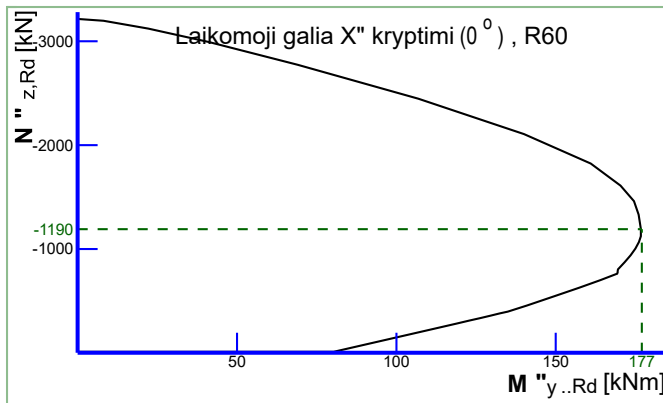


Apkrovų kombinacijos atstojamosios diagramos

Nd=-675,0, Mxd=125,0, Myd=15,0, Vxd=7,0, Vyd=-130,0
 (apkrovos profilio koordinatinių sistemoje)
 N"d=-675,0, M"xd=125,0, M"yd=15,0, V"xd=7,0, V"yd=-130,0
 (apkrovos ankerių koordinatinių sistemoje)



Stiprumo diagramos gaisro atveju



Kolonos pado papildomas armavimas

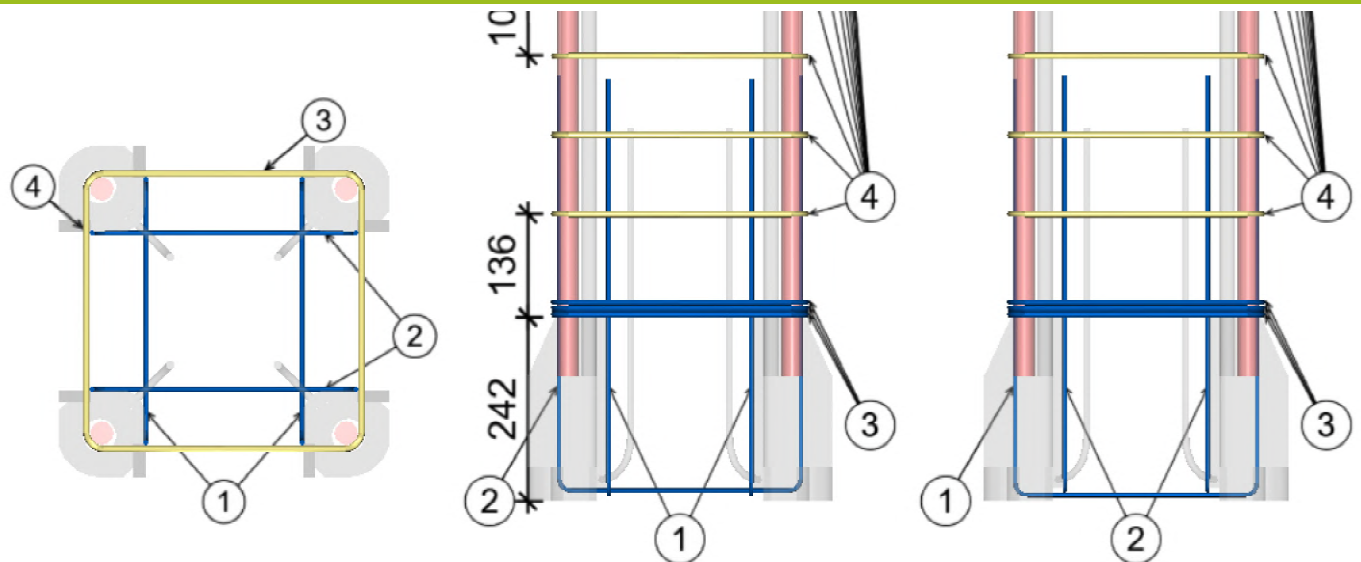
Apsauginis sluoksnis 30 mm
 Armatūra B500B

$f_{yd} = 434,8 \text{ N/mm}^2$

Tuščias vaizdas

X" ašies vaizdas

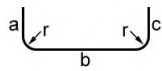
Y" ašies vaizdas



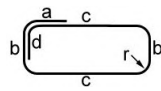
Armavimo parametrai

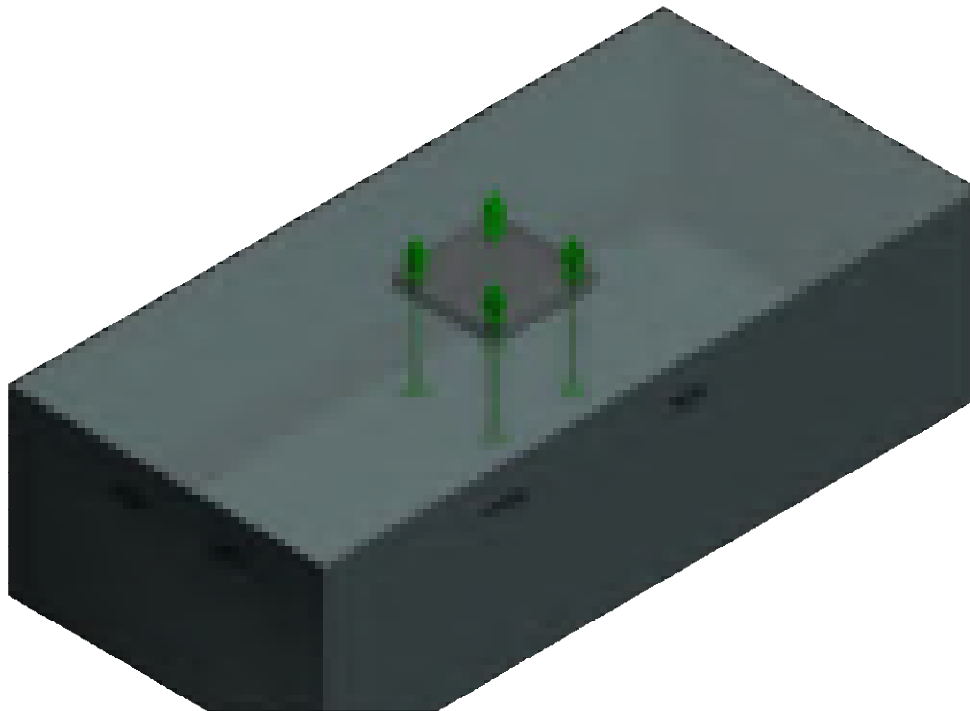
Pos	Lenkimo tipas	∅ [mm]	a [mm]	b [mm]	c [mm]	d [mm]	r [mm]	L [mm]	pcs	[kg]/ pcs	[kg]
1	B	6	550	324	550	0	12	1 400	2	0,31	0,62
2	B	6	550	324	550	0	12	1 400	2	0,31	0,62
3	C	8	96	340	340	96	16	1 472	3	0,58	1,74
4	C	8	96	340	340	96	16	1 472	11	0,58	6,4
										Bendra masė :9,39	

Lenkimo Tipas B



Lenkimo Tipas C


Pagrindinė konstrukcija



Betonas	C25/30
Nepleišėjantis	Ne
Užpildo dydis	16 mm
Pamato matmuo X-ašies kryptimi (b)	2500 mm
Pamato matmuo Y-ašies kryptimi (h)	1200 mm
Pamato aukštis	700 mm
Kolonos ekscentricitetas (e_x)	0 mm
Kolonos ekscentricitetas (e_y)	0 mm

Inkarinių varžtų suirimo pobūdis

Varžtai eksploatacijos stadijoje

Apkrovų derinys: #1 : $N_d = -675,0$, $M_{xd} = 125,0$, $M_{yd} = 15,0$, $V_{xd} = 7,0$, $V_{yd} = -130,0$

Plieno suirimas: Atsparumas pakankamas

Betono suirimas: Atsparumas pakankamas

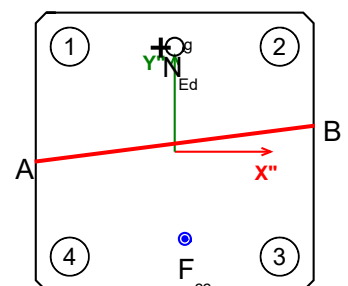
Plieno suirimo pobūdis

Design value of normal compressive force in the column	$N_{c,Ed}$	-675	kN
Trinties koeficientas (tarp bazės plokštelės ir išlyginamo sluoksnio)	C_{fd}	0,2	
Mazgo stipris trinčiai	$F_{f,Rd}$	135	kN
Suminė skersinė jėga	V_{sd}	130,19	kN
Suminė skersinė jėga įvertinus trinties poveikį	$V_{sd,f}$	0	kN

Neutralioji ašis (X"/Y") = A(-200,0 / -13,3); B(200,0 / 37,1)

Atsiradusi tempimo jėga (X"/Y") = $N_{Ed} = (-20,5/150,0)$

Atsiradusi gniuždymo jėga (betone) (X"/Y") = $F_{cc} = (14,4/-124,5)$



Varžtas Poz.	Veikianti ašinė jėga [kN]	Atsparumas tempimui [kN]	Ašinio atsparumo naudojimas [%]	Veikianti skersinė jėga [kN]	Atsparumas kirpimui [kN]	Išnaudojimas skersinei jėgai [%]	Sąveika [%]
1	77,5	202,0	38,4	0,0	71,6	0,0	n/r
2	58,8	202,0	29,1	0,0	71,6	0,0	n/r
3	-89,2	202,0	44,2	0,0	71,6	0,0	n/r
4	-70,6	202,0	35,0	0,0	71,6	0,0	n/r

Betono suirimo patvirtinimas

Patikrinimas	Apkrova [kN]	Laikomoji galia [kN]	Išnaudojimas [%]	Statusas
Ištraukimo suirimas	77,5	380,5	20,4	Ok
Kūgio suirimas				Ok
Problema dėl betono:				
1) Pamatas (Betono paviršius)	136,3	208,3	65,4	
2) Pasirinktos apkabos	0,0	0,0	n/r	
3) Gniuždymo ir tempimo metodo reikalavimai	0,0	0,0	n/r	
Skėlimo suirimas				Ok
Problema dėl betono:				
1) Pamatas (Betono paviršius)	136,3	286,1	47,6	
2) priskirtas skėlimo armavimas X	0,0	0,0	-	
3) priskirtas skėlimo armavimas Y	0,0	0,0	-	
Atskėlimo suirimas	0,0	0,0	n/r	Ok
Suirimas dėl išstūmimo	0,0	0,0	n/r	Ok
Krašto suirimas				Ok
Problema dėl betono:				
1) X (kairysis) kraštas (Nearmuoto betono)	0,0	0,0	n/r	
2) +X(dešinys) kraštas (paprastasis betonas)	0,0	0,0	n/r	
3) +Y (viršutinis) kraštas (paprastasis betonas)	0,0	0,0	n/r	
4) Y (apatinis) kraštas (paprastasis betonas)	0,0	0,0	n/r	
5) priskirtas kraštinis armavimas (X)	0,0	0,0	n/r	
6) priskirtas kraštinis armavimas (+X)	0,0	0,0	n/r	
7) priskirtas kraštinis armavimas (+Y)	0,0	0,0	n/r	
8) priskirtas kraštinis armavimas (Y)	0,0	0,0	n/r	
Suminis atsparumas	$\beta_N \leq 1$		65,4	Ok

Tension load(EN 1992 - 4:2018, Section 7.2.1 and ETA)

Skaičiuotinės vertės

Ištraukimo suirimas		Betono kūgio suirimas		Skėlimo suirimas		Vietinio atskėlimo suirimas	
$N_{Rk,p}$	570,8 [kN]	h_{ef}	335,0 [mm]	h_{ef}	335,0 [mm]	h_{ef}	n/a [mm]
A_h	3044,2 [mm ²]	f_{ck}	25,0 [N/mm ²]	h	700,0 [mm]	f_{ck}	25,0 [N/mm ²]
f_{ck}	25,0 [N/mm ²]	k_1	8,9	$S_{cr,sp}$	1005,0 [mm]	S_1	n/a [mm]
k_2	7,5	$S_{cr,N}$	1005,0 [mm]	$C_{cr,sp}$	502,5 [mm]	c_1	n/a [mm]
$\gamma_{M,p}$	1,50	$C_{cr,N}$	502,5 [mm]	$A^0_{c,sp}$	1010025 [mm ²]	A_h	n/a [mm ²]
$N_{Rd,p}$	380,5 [kN]	$S_{min,N}$	300,0 [mm]	$A_{c,sp}$	1243013 [mm ²]	n	n/a
N_{hEd}	77,5 [kN]	$C_{min,N}$	450,0 [mm]	$\Psi_{ec,sp}$	0,96	$A^0_{c,Nb}$	n/a [mm ²]
		$A^0_{c,N}$	1010025 [mm ²]	e_N	20,50	$A_{c,Nb}$	n/a [mm ²]
		$A_{c,N}$	1243013 [mm ²]	$\Psi_{re,sp}$	1,00	$\Psi_{s,Nb}$	n/a
		$\Psi_{ec,N}$	0,96	$\Psi_{s,sp}$	0,97	$\Psi_{ec,Nb}$	n/a
		e_N	20,50	$\Psi_{h,sp}$	1,37	$\Psi_{g,Nb}$	n/a
		$\Psi_{s,N}$	0,97	$N_{0Rk,c}$	272,85 [kN]	k_5	n/a

$\Psi_{M,N}$	1,00	$\gamma_{M,sp}$	1,50	$N_{0rk,cb}$	n/a [kN]
$N_{0Rk,c}$	272,85 [kN]	$N_{Rd,sp}$	286,1 [kN]	$\gamma_{M,c}$	1,50
$\gamma_{M,c}$	1,50	$N_{gE,d}$	136,3 [kN]	$N_{Rd,cb}$	n/a [kN]
$N_{Rd,c}$	208,3 [kN]			$N_{gE,d}$	n/a [kN]
$N_{gE,d}$	136,3 [kN]				

Shear load (EN 1992-4:2018, Section 7.2.2 and ETA)

Skaičiuotinės vertės

Betono išstūmimo suirimas

$A_{c,N}$	n/a [mm ²]
$A_{c,N}^0$	n/a [mm ²]
$C_{cr,N}$	n/a [mm]
$S_{cr,N}$	n/a [mm]
h_{ef}	335,0 [mm]
k_8	n/a
$N_{0rk,c}^0$	n/a [kN]
$\gamma_{m,c,p}$	n/a
$V_{Rd,cp}$	n/a [kN]
$V_{S,d}$	n/a [kN]

Betono krašto suirimas

l_f	n/a [mm]
c_1	n/a [mm]
$A_{c,V}$	n/a [mm ²]
$A_{c,V}^0$	n/a [mm ²]
$\Psi_{s,V}$	n/a
$\Psi_{h,V}$	n/a
$\Psi_{a,V}$	n/a
$\Psi_{ec,V}$	n/a
$\Psi_{re,V}$	n/a
$V_{0Rk,c}^0$	n/a [kN]
$\gamma_{M,c}$	n/a
$V_{Rd,c}$	n/a [kN]
V_{gEd}	n/a [kN]

Paaiškinimas:
n/r Suirimo pobūdžio tikrinimas nenaudojamas

n/a Netaikomas suirimo pobūdis

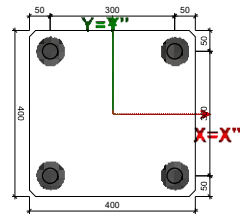
() Poveikiams neatsparus suirimo pobūdis

Peikko produktų suvestinė Naujas projektas

Varžtai
HPM30L **Bendras kiekis**
4

Varžtų įrengimo šablonai
PPL30-4 300x300 **Bendras kiekis**
1

Vaizdas iš viršaus



Kolonos padai
HPKM30 **Bendras kiekis**
4

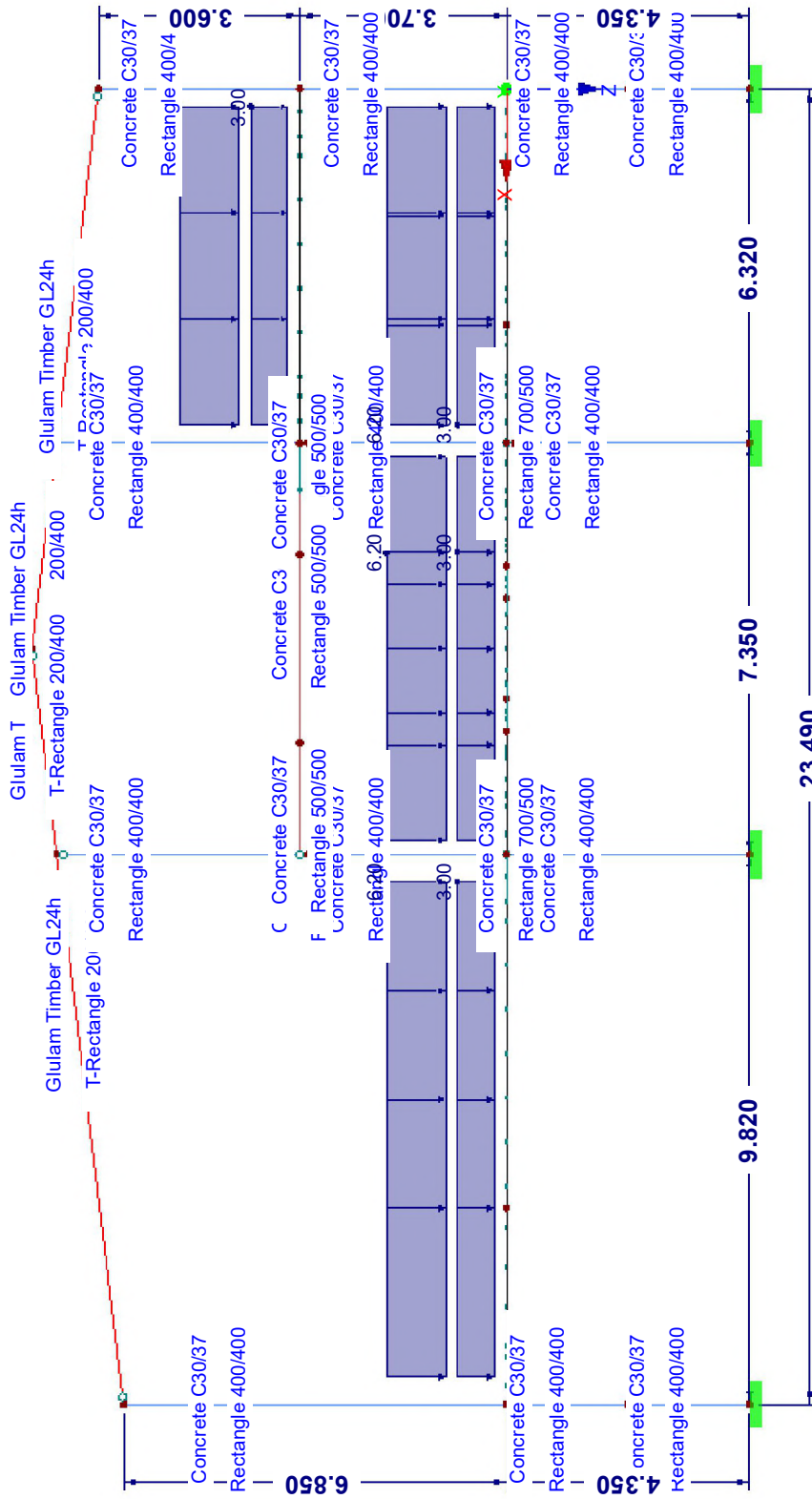
Can't find
HPKM 30 C BOX **Bendras kiekis**
4

SKAICIUOJAMOJI SCHEMA

In Y-direction

CO39 : LC1 + LC2
Loads [kN/m²]

- Cross-Section
- 1: Rectangl
 - 2: Rectangl
 - 3: Rectangl
 - 5: T-Rectar



2.58 m

GEŽTINIO POLIO LAIKOMOSIOS GALIOS SKAIČIAVIMAS PAGAL LST ENV 1997-1,2 (EUROCOD 7)

Pamatų pagrindas molis Pagal CPT-1 - CPT-4

Pamato viršaus alt. -5,05 m; pamatų apačios alt. -8,55 m.

Skaičiuotinė gręžtinio polio apkrova

Nsk= 730 [kN]

Pagrindo po gręžtinio polio padu stipris:

$q_{c,vid}$ = 7,53 [MPa]

Gręžtinio polio šoninio paviršiaus vidutinės trinties stiprio vertės:

f_s = 70 [kPa]

Gręžtinio polio ilgis:

L= 3,5 [m]

3,5

Gręžtinio polio skersmuo:

D= 0,6 [m]

Jautraus sluoksnio storis

h_s = 0,5 [m]

Iš lentelės A.10 pagal grunto tyrimų skaičių n=4 priimame

ξ_3 = 1,31

Iš lentelės A.3 apkrovimo grupė A1 (EN 1997-1)

γ_{G1} = 1,35

γ_{Q1} = 1,5

Iš lentelės A.3 apkrovimo grupė A2 (EN 1997-1)

γ_{G2} = 1

γ_{Q2} = 1,3

Iš lentelės A.7 apkrovimo grupė R1 (EN 1997-1)

γ_{p1} = 1,25

γ_{s1} = 1

Iš lentelės A.7 apkrovimo grupė R4 (EN 1997-1)

γ_{p4} = 1,6

γ_{s4} = 1,3

Charakteristinis pagrindo po gręžtinio polio padu stipris: $q_{c,vid, ch} = \frac{q_{c,vid}}{\xi_3}$ **$p_{pado, ch}$ = 5,75 [MPa]**

Charakteristinis gręžtinio polio šono stipris $p_{sono, ch} = \frac{f_s / 2}{\xi_3}$ **$p_{sono, ch}$ = 26,72 [kPa]**

Gręžtinio polio pado plotas $A = \frac{\pi \cdot D^2}{4}$ **A= 0,2826 [m²]**

Tiriamoji (nedrenuotoji) sankiba moliniam gruntui pagal statinio zondavimo rezultatus:

$C_u = \frac{q_{c,vid, ch}}{20}$ **Cu= 0,287 MPa**

KOMBINACIJA 1 Derinama su: A1, R1

Apkrova į pamatą:

Fcd1=Nsk

Fcd1= 730 [kN]

Gręžtinio polio pado stipris

$p_{pado} = \frac{c_u \cdot 9}{\gamma_{p1}}$

p_{pado} = 2,069 [MPa]

Gręžtinio polio šono stipris

$p_{sono} = \frac{p_{sono, ch}}{\gamma_{s1}}$

p_{sono} = 26,72 [kPa]

Gręžtinio polio atlaikoma jėga

$F_{atl} = A \cdot p_{pado} + \pi \cdot D \cdot (L - h_s) \cdot p_{sono}$

Fatl= 735,8 [kN]

Fcd1= 730 kN

<

Fatl= 735,8 kN

Sąlyga tenkinama

KOMBINACIJA 1 Derinama su: A2, R4

Apkrova į pamatą:

$F_{cd2} = \frac{N_{sk}}{1.3}$

Fcd2= 561,5 [kN]

Gręžtinio polio pado stipris

$p_{pado} = \frac{c_u \cdot 9}{\gamma_{p4}}$

p_{pado} = 1,617 [MPa]

Gręžtinio polio šono stipris

$p_{sono} = \frac{p_{sono, ch}}{\gamma_{s4}}$

p_{sono} = 20,55 [kPa]

Gręžtinio polio atlaikoma jėga

$F_{atl} = A \cdot p_{pado} + \pi \cdot D \cdot (L - h_s) \cdot p_{sono}$

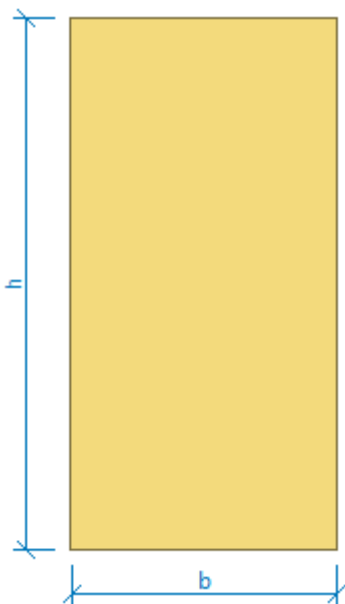
Fatl= 573,0 [kN]

Fcd1= 562 kN

<

Fatl= 573,0 kN

Sąlyga tenkinama



Standard EN 1995-1-2/Default EC

Reliability of timber in fire : γ_{wf} =1.000

Cross-section:rectangle 200x400

Dimensions:

Cross-section height $h=400.0$ mm

Cross-section width $b=200.0$ mm

Material:GL24h • glued

Material characteristics;

Bending strength	f_{mk}	24.0	MPa
Tensile strength in fibre direction	f_k	19.2	MPa
Compressive strength in fibre direction	f_{eox}	24.0	MPa
Shear strength	f_{vk}	3.5	MPa
Compressive strength perpendicular to fibres	f_{eok}	2.5	MPa
Tensile strength perpendicular to fibres	$f_{,9ok}$	0.5	MPa
Elastic modulus	E_o mean	11500	MPa
5%elastic modulus quantile	E_{aos}	9600	MPa
Shear modulus	G_{mean}	650	MPa
Characteristic value of density	ρ_k	385.0	kg/m ³

Internal forces in system of cross-section coordinates:

Load with maximal utilization

Load 1

$N=$	1.000	kN		
$M_1=$	25.000	kNm	$M_2=$	0.000
				kNm
V_2	10.000	kN	$V=$	0.000
				kN

Fire detail:



Buckling:

Calculation with buckling

Sector length for buckling $L=10.000$ m

Buckling length factor $k_z=1,0$ Buckling length $L_{az}=10,000$ m

Sector length for buckling $L=10.000$ m

Buckling length factor $k_y=0,1$ Buckling length $L_{ey}=1.000$ m

Results

Check in required fire resistance time $t=20.0$ min:

Method of reduced cross-section _____

Charring depth $d_{char}=14.0$ mm

Decisive load:Load 1

Internal forces; $N=1,000$ kN; $M_1=25.000$ kNm; $M_2=0.000$ kNm; $V_2=10.000$ kN; $V_1=0.000$ kN

Tension and bending moment combination check:

Resistances: $N_{Rd}=1376.907$ kN; $M_{Rd} =/108,718$ kNm

$0,001+0,23*0,0=0,231<1$ **Pass**

Shear forces check:

Resistance: $V_{ktn}=107,658$ KN

$0,093<1$ **Pass**

Section ok

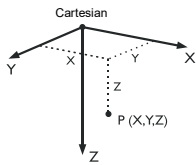
Sample structures

MODEL - GENERAL DATA

General	Model name	: Ginkunai monilitas
	Project name	: Examples
Project description	Project description	: Sample structures
	Type of model	: 3D
Positive direction of global axis Z	Positive direction of global axis Z	: Downward
	Classification of load cases and combinations	: According to Standard: EN 1990 National Annex: LST - Lithuania
Options	<input checked="" type="checkbox"/> Automatically create combinations	: <input checked="" type="checkbox"/> Load Combinations
	<input type="checkbox"/> RF-FORM-FINDING - Find initial equilibrium shapes of membrane and cable structures	
	<input type="checkbox"/> RF-CUTTING-PATTERN	
	<input type="checkbox"/> Piping analysis	
	<input type="checkbox"/> Use CQC Rule	
	<input type="checkbox"/> Enable CAD/BIM model	
	Standard Gravity g	: 10.00 m/s ²

FE MESH SETTINGS

General	Target length of finite elements	l_{FE}	: 0.600 m
	Maximum distance between a node and a line to integrate it into the line	ϵ	: 0.001 m
	Maximum number of mesh nodes (in thousands)		: 500
	Members	Number of divisions of members with cable, elastic foundation, taper, or plastic characteristic	
Members	<input checked="" type="checkbox"/> Activate member divisions for large deformation or post-critical analysis		
	<input checked="" type="checkbox"/> Use division for members with node lying on them		
Surfaces	Maximum ratio of FE rectangle diagonals	Δ_D	: 1.800
	Maximum out-of-plane inclination of two finite elements	α	: 0.50 °
	Shape direction of finite elements		: Triangles and quadrangles <input checked="" type="checkbox"/> Same squares where possible



1.1 NODES

Node No.	Node Type	Reference Node	Coordinate System	Node Coordinates			Comment
				X [m]	Y [m]	Z [m]	
5	Standard	-	Cartesian	0.000	-10.000	0.000	
6	Standard	-	Cartesian	15.000	-10.000	0.000	
7	Standard	-	Cartesian	0.000	-10.000	-2.500	
8	Standard	-	Cartesian	15.000	-10.000	-2.500	
9	Standard	-	Cartesian	0.000	-11.600	0.000	
10	Standard	-	Cartesian	15.000	-11.600	0.000	
11	Standard	-	Cartesian	0.000	-11.600	-2.500	
12	Standard	-	Cartesian	15.000	-11.600	-2.500	

1.2 LINES

Line No.	Line Type	Nodes No.	Line Length			Comment
			L [m]			
5	Polyline	5,6	15.000	X		
6	Polyline	7,8	15.000	X		
7	Polyline	6,8	2.500	Z		
8	Polyline	5,7	2.500	Z		
9	Polyline	9,10	15.000	X		
10	Polyline	11,12	15.000	X		
11	Polyline	10,12	2.500	Z		
12	Polyline	9,11	2.500	Z		
13	Polyline	9,5	1.600	Y		
14	Polyline	10,6	1.600	Y		
15	Polyline	12,8	1.600	Y		
16	Polyline	11,7	1.600	Y		

1.3 MATERIALS

Matl. No.	Modulus E [kN/cm ²]	Modulus G [kN/cm ²]	Poisson's Ratio ν [-]	Spec. Weight γ [kN/m ³]	Coeff. of Th. Ex α [1/°C]	Partial Factor γ_M [-]	Material Model
1	Concrete C30/37 3300.00	EN 1992-1-1:2004/A1:2014 1375.00	0.200	25.00	1.00E-05	1.00	Isotropic Linear Elastic

1.4 SURFACES

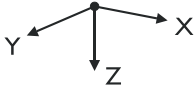
Surface No.	Surface Type		Boundary Lines No.	Matl. No.	Thickness		Area A [m ²]	Weight W [kg]
	Geometry	Stiffness			Type	d [mm]		
2	Plane	Standard	5,14,9,13	1	Constant	300.0	24.000	18000.00
3	Plane	Standard	5,7,6,8	1	Constant	300.0	37.500	28125.00
4	Plane	Standard	9,11,10,12	1	Constant	300.0	37.500	28125.00
5	Plane	Standard	6,15,10,16	1	Constant	300.0	24.000	18000.00

Sample structures

1.8 LINE SUPPORTS

Support No.	Lines No.	Reference System	Rotation β [°]	Wall in Z	Support Conditions					
					u_x	u_y	u_z	ϕ_x	ϕ_y	ϕ_z
1	7,8,11-16	Global		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1.9 SURFACE SUPPORTS



Found. No.	On Surfaces No.	Spring Constants RF-SOILIN	Translation Support or Spring [kN/m ³]			Shear Spring [kN/m]	
			u_x	u_y	u_z	V_{xz}	V_{yz}
1	2	-	100000.000	100000.000	100000.000	100000.000	100000.000

2.1 LOAD CASES

Load Case	Load Case Description	EN 1990 LST Action Category	Self-Weight - Factor in Direction			
			Active	X	Y	Z
LC1	Nuolatine	Permanent	<input checked="" type="checkbox"/>	0.000	0.000	1.000

2.1.1 LOAD CASES - CALCULATION PARAMETERS

Load Case	Load Case Description	Calculation Parameters	
		LC1	Nuolatine

2.7 RESULT COMBINATIONS

Result Combin	Description	Loading
RC1	ULS (STR/GEO) - Permanent / transient - Eq. 6.10	CO1/p
RC2	SLS - Characteristic	CO2/p

3.4 SURFACE LOADS

LC1: Nuolatine

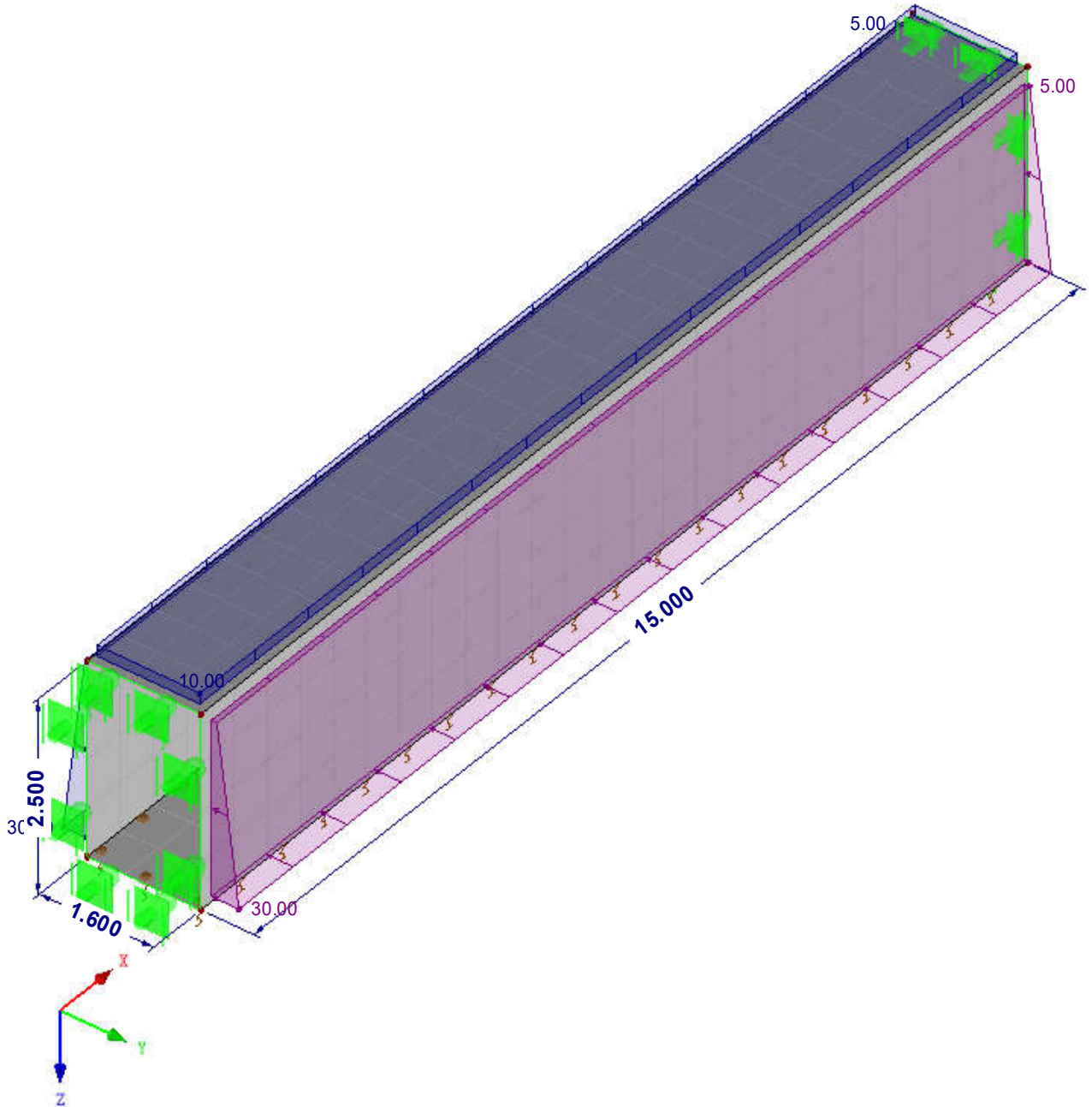
No.	On Surfaces No.	Load Type	Load Distribution	Load Direction	Load Parameters			On Node No.
					Symbol	Value	Unit	
1	3	Force	Linear	YL	p_1	-5.00	kN/m ²	7
					p_2	-5.00	kN/m ²	8
					p_3	-30.00	kN/m ²	6
2	4	Force	Linear	YL	p_1	5.00	kN/m ²	12
					p_2	5.00	kN/m ²	11
					p_3	30.00	kN/m ²	9
3	5	Force	Uniform	ZP	p	10.00	kN/m ²	

LC1
Nuolatine

LC1: NUOLATINE

LC1 : Nuolatine
Loads [kN/m²]

Isometric



4.0 RESULTS - SUMMARY

	Description	Value	Unit	Comment
Load Case LC1 - Nuolatine				
	Sum of loads in X	0.00	kN	
	Sum of support reactions in X	0.00	kN	
	Sum of loads in Y	0.00	kN	
	Sum of support reactions in Y	0.00	kN	
	Sum of loads in Z	1162.50	kN	
	Sum of support reactions in Z	1162.50	kN	Deviation 0.00%
	Resultant of reactions about X	0.000	kNm	At center of gravity of model (X:7.500, Y:-10.800, Z:-1.250 m)
	Resultant of reactions about Y	0.000	kNm	At center of gravity of model
	Resultant of reactions about Z	0.000	kNm	At center of gravity of model
	Max. displacement in X	-0.0	mm	FE Mesh Node No. 3 (X: 0.600, Y: -10.533, Z: 0.000 m)
	Max. displacement in Y	-0.0	mm	FE Mesh Node No. 140 (X: 5.400, Y: -10.000, Z: -1.250 m)
	Max. displacement in Z	0.5	mm	FE Mesh Node No. 313 (X: 0.000, Y: -10.533, Z: -2.500 m)
	Max. vector displacement	0.5	mm	FE Mesh Node No. 313 (X: 0.000, Y: -10.533, Z: -2.500 m)
	Max. rotation about X	-0.0	mrad	FE Mesh Node No. 114 (X: 5.400, Y: -10.000, Z: -0.625 m)
	Max. rotation about Y	-0.0	mrad	FE Mesh Node No. 5 (X: 0.000, Y: -10.000, Z: 0.000 m)
	Max. rotation about Z	-0.0	mrad	FE Mesh Node No. 132 (X: 0.000, Y: -10.000, Z: -1.250 m)
	Maximum surface strain	0.000	%	FE Mesh Node No. 0 (X: 0.000, Y: 0.000, Z: 0.000 m)
	Method of analysis	Linear		Geometrically linear analysis
	Reduction of stiffness			Cross-sections, Members, Surfaces
	Number of load increments	1		
	Number of iterations	1		
	Maximum value of element of stiffness matrix on diagonal	2.037E+10		
	Minimum value of element of stiffness matrix on diagonal	1.859E+08		
	Stiffness matrix determinant	1.671E+1974	9	
	Infinity Norm	5.382E+10		
Load Combination CO1 - 1.35*LC1				
	Sum of loads in X	0.00	kN	
	Sum of support reactions in X	0.00	kN	
	Sum of loads in Y	0.00	kN	
	Sum of support reactions in Y	0.00	kN	
	Sum of loads in Z	1569.38	kN	
	Sum of support reactions in Z	1569.38	kN	Deviation 0.00%
	Resultant of reactions about X	0.0	kNm	At center of gravity of model (X:7.5, Y:-10.8, Z:-1.3 m)
	Resultant of reactions about Y	0.0	kNm	At center of gravity of model
	Resultant of reactions about Z	0.0	kNm	At center of gravity of model
	Max. displacement in X	-0.0	mm	FE Mesh Node No. 3 (X: 0.600, Y: -10.533, Z: 0.000 m)
	Max. displacement in Y	-0.1	mm	FE Mesh Node No. 140 (X: 5.400, Y: -10.000, Z: -1.250 m)
	Max. displacement in Z	0.7	mm	FE Mesh Node No. 313 (X: 0.000, Y: -10.533, Z: -2.500 m)
	Max. vector displacement	0.7	mm	FE Mesh Node No. 313 (X: 0.000, Y: -10.533, Z: -2.500 m)
	Max. rotation about X	-0.1	mrad	FE Mesh Node No. 114 (X: 5.400, Y: -10.000, Z: -0.625 m)
	Max. rotation about Y	-0.0	mrad	FE Mesh Node No. 5 (X: 0.000, Y: -10.000, Z: 0.000 m)
	Max. rotation about Z	-0.0	mrad	FE Mesh Node No. 132 (X: 0.000, Y: -10.000, Z: -1.250 m)
	Maximum surface strain	0.000	%	FE Mesh Node No. 0 (X: 0.000, Y: 0.000, Z: 0.000 m)
	Method of analysis	2nd Order		Second order analysis (Nonlinear, Timoshenko)
	Internal forces referred to deformed system for...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
	Reduction of stiffness			Materials, Cross-sections, Members, Surfaces
	Consider favorable effects of tensile forces	<input checked="" type="checkbox"/>		
	Divide results by CO factor	<input type="checkbox"/>		
	Number of load increments	1		
	Number of iterations	2		
	Maximum value of element of stiffness matrix on diagonal	2.037E+10		
	Minimum value of element of stiffness matrix on diagonal	1.859E+08		
	Stiffness matrix determinant	1.658E+1974	9	
	Infinity Norm	5.382E+10		
Load Combination CO2 - LC1				
	Sum of loads in X	0.00	kN	
	Sum of support reactions in X	0.00	kN	
	Sum of loads in Y	0.00	kN	
	Sum of support reactions in Y	0.00	kN	
	Sum of loads in Z	1162.50	kN	
	Sum of support reactions in Z	1162.50	kN	Deviation 0.00%
	Resultant of reactions about X	0.0	kNm	At center of gravity of model (X:7.5, Y:-10.8, Z:-1.3 m)
	Resultant of reactions about Y	0.0	kNm	At center of gravity of model
	Resultant of reactions about Z	0.0	kNm	At center of gravity of model
	Max. displacement in X	-0.0	mm	FE Mesh Node No. 3 (X: 0.600, Y: -10.533, Z: 0.000 m)
	Max. displacement in Y	-0.0	mm	FE Mesh Node No. 140 (X: 5.400, Y: -10.000, Z: -1.250 m)
	Max. displacement in Z	0.5	mm	FE Mesh Node No. 313 (X: 0.000, Y: -10.533, Z: -2.500 m)
	Max. vector displacement	0.5	mm	FE Mesh Node No. 313 (X: 0.000, Y: -10.533, Z: -2.500 m)
	Max. rotation about X	-0.0	mrad	FE Mesh Node No. 114 (X: 5.400, Y: -10.000, Z: -0.625 m)
	Max. rotation about Y	-0.0	mrad	FE Mesh Node No. 5 (X: 0.000, Y: -10.000, Z: 0.000 m)
	Max. rotation about Z	-0.0	mrad	FE Mesh Node No. 132 (X: 0.000, Y: -10.000, Z: -1.250 m)
	Maximum surface strain	0.000	%	FE Mesh Node No. 0 (X: 0.000, Y: 0.000, Z: 0.000 m)
	Method of analysis	2nd Order		Second order analysis (Nonlinear, Timoshenko)
	Internal forces referred to deformed system for...	<input checked="" type="checkbox"/>		N, V _y , V _z , M _y , M _z , M _T
	Reduction of stiffness			Materials, Cross-sections, Members, Surfaces
	Consider favorable effects of tensile forces	<input checked="" type="checkbox"/>		
	Divide results by CO factor	<input type="checkbox"/>		
	Number of load increments	1		
	Number of iterations	2		
	Maximum value of element of stiffness matrix on diagonal	2.037E+10		
	Minimum value of element of stiffness matrix on diagonal	1.859E+08		
	Stiffness matrix determinant	1.661E+1974	9	
	Infinity Norm	5.382E+10		
Summary				
	Other Settings:			
	Number of 1D finite elements	0		

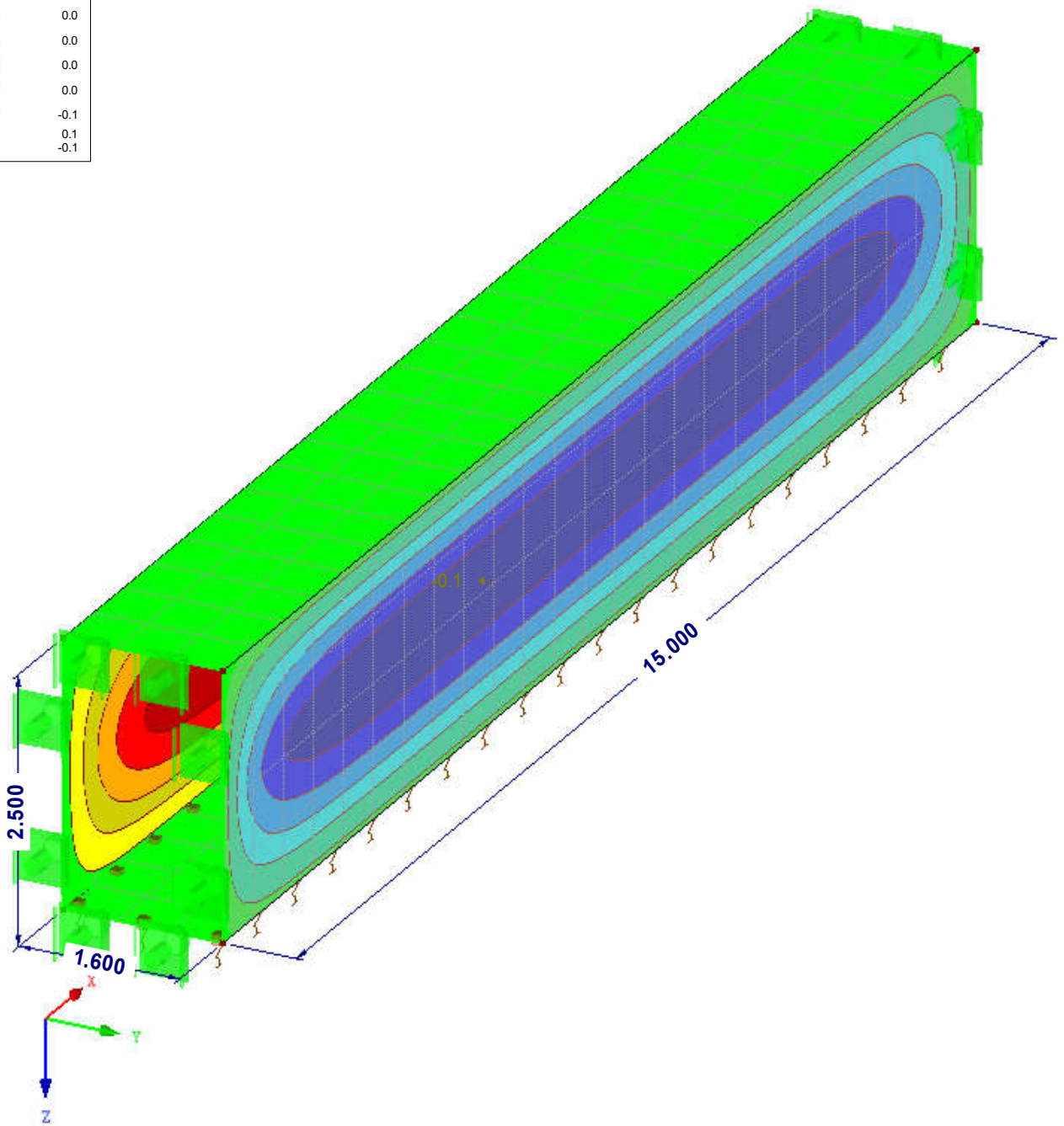
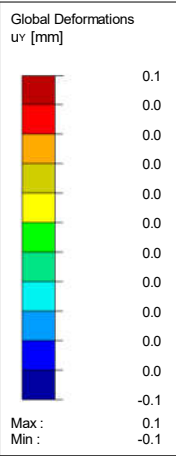
■ 4.0 RESULTS - SUMMARY

Number of 2D finite elements	350		
Number of 3D finite elements	0		
Number of FE mesh nodes	364		
Number of equations	2184		
Internal forces referred to deformed system for...:			
Max. number of iterations	100		
Number of divisions for member results	10		
Division of cable/foundation/tapered members	10		
Number of member divisions for searching maximum values	10		
Subdivisions of FE mesh for graphical results	3		
Percentage of iterations according to Picard method in combination with Newton-Raphson method	5	%	
Options:			
Activate shear stiffness of members (Ay, Az)	<input checked="" type="checkbox"/>		
Activate member divisions for large deformation or post-critical analysis	<input checked="" type="checkbox"/>		
Activate entered stiffness modifications	<input checked="" type="checkbox"/>		
Ignore rotational degrees of freedom	<input type="checkbox"/>		
Check of critical forces of members	<input checked="" type="checkbox"/>		
Nonsymmetric direct solver if demanded by nonlinear model	<input type="checkbox"/>		
Method for the system of equations	Direct		
Plate bending theory	Mindlin		
Solver version	64-bit		
Precision and Tolerance:			
Change default setting	<input type="checkbox"/>		

GLOBAL DEFORMATIONS u_Y

RC1 : ULS (STR/GEO) - Permanent / transient - Eq. 6.10
Global Deformations u-Y [mm]
Result Combinations: Max and Min Values

Isometric



Factor of deformations: 2300.00
Max u-Y: 0.1, Min u-Y: -0.1 mm

1.1 GENERAL DATA

Design according to Standard:	LST EN 1992-1-1:2005/NA:2011		
ULTIMATE LIMIT STATE			
Result combination for design:	RC1	ULS (STR/GEO) - Permanent / transient - Eq. 6.10 Persistent and Transient	
Definition of Provided Additional Reinforcement	Automatic arrangement according to the specifications in Table 1.4		
DETAILS			
Analysis Method for Reinforcement Envelope	Mixed		
Apply the internal forces without the rib components	<input type="checkbox"/>		
Design Situation Settings for Serviceability Limit State Checks			
Load combination:			
Characteristic with direct load	Checks: $k_1 \cdot f_{ck}$, $k_3 \cdot f_{yk}$		
Characteristic with imposed deformation	Checks: $k_1 \cdot f_{ck}$, $k_4 \cdot f_{yk}$		
Frequent	Checks: w_k		
Quasi-permanent	Checks: $k_2 \cdot f_{ck}$, w_k , u_l		

1.2 MATERIALS

Material No.	Concrete Strength Class	Steel Description	Comment
1	Concrete C30/37	B 500 S (B)	

1.2.1 MATERIAL PARAMETERS

Material No.	Description	Name	Size	Unit
1	Concrete Strength Class: Concrete C30/37			
	Characteristic Cylinder Compressive Strength	f_{ck}	30.00	N/mm ²
	5 % Fractile of Axial Tensile Strength	$f_{ctk,0.05}$	2.00	N/mm ²
	Characteristic for Nonlinear Calculations			
	Mean Secant Modulus of Elasticity	E_{cm}	33000.00	N/mm ²
	Mean Cylinder Compressive Strength	f_{cm}	38.00	N/mm ²
	Mean Axial Tensile Strength	f_{ctm}	2.90	N/mm ²
	Ultimate Strain for Pure Compression	ϵ_{c1}	-2.200	%
	Ultimate Strain at Failure	ϵ_{cu}	-3.500	%
	Shear Modulus	G	13750.00	N/mm ²
	Poisson's Ratio	ν	0.200	-
	Characteristic Strains for Parabolic-Rectangular Diagram			
	Ultimate Strain for Pure Compression	ϵ_{c2}	-2.000	%
	Ultimate Strain at Failure	ϵ_{cu2}	-3.500	%
	Parabola Exponent	n	2.000	-
	Specific Weight	γ	25.00	kN/m ³
	Reinforcing Steel: B 500 S (B)			
	Modulus of Elasticity	E_s	200000.00	N/mm ²
	Yield Stress Mean Value	f_{ym}	550.00	N/mm ²
	Characteristic Yield Stress	f_{yk}	500.00	N/mm ²
	Tensile Strength Mean Value	f_{tm}	583.20	N/mm ²
	Characteristic Tensile Strength	f_{tk}	540.00	N/mm ²
	Limiting Strain	ϵ_{uk}	50.000	%

1.3 SURFACES

Surface No.	Matl. No.	Thickness Type	Thickness [mm]	Notes	Comment
2	1	Constant	300.00		
3	1	Constant	300.00		
4	1	Constant	300.00		
5	1	Constant	300.00		

1.4 REINFORCEMENT GROUP NO. 1

Applied to surfaces:	All
REINFORCEMENT RATIO	
Minimum secondary reinforcement	20.0 %
Basic minimum reinforcement	0.0 %
Minimum compression reinforcement	0.0 %
Minimum tension reinforcement	0.0 %
Maximum reinforcement percentage	4.0 %
Minimum shear reinforcement percentage	0.0 %
Concrete cover acc. to Standard	<input type="checkbox"/>
BASIC REINFORCEMENT LAYOUT - TOP (-z)	
Number of directions	2
Cover to rebar centroid	d-1: 30.00, d-2: 40.00 mm
Bar diameter	ds-1: 10.00, ds-2: 10.00 mm
Directions of reinforcement	Phi-1: 0.000°, Phi-2: 90.000°
Reinforcement area	As-1,-z (top): 0.00, As-2,-z (top): 0.00 cm ² /m
BASIC REINFORCEMENT LAYOUT - BOTTOM (+z)	
Number of directions	2
Cover to rebar centroid	d-1: 30.00, d-2: 40.00 mm
Bar diameter	ds-1: 10.00, ds-2: 10.00 mm
Directions of reinforcement	Phi-1: 0.000°, Phi-2: 90.000°
Reinforcement area	As-1,+z (bottom): 0.00, As-2,+z (bottom): 0.00 cm ² /m
ADDITIONAL REINFORCEMENT LAYOUT - TOP (-z)	
Number of directions	2

1.4 REINFORCEMENT GROUP NO. 1

Cover to rebar centroid	d-1: 30.00, d-2: 40.00 mm
Bar diameter	ds-1: 10.00, ds-2: 10.00 mm
Directions of reinforcement	Phi-1: 0.000°, Phi-2: 90.000°
Reinforcement area	Use required additional reinforcement acc. to Tables 2.1, 2.2, 2.3

ADDITIONAL REINFORCEMENT LAYOUT - BOTTOM (+z)

Number of directions	2
Cover to rebar centroid	d-1: 30.00, d-2: 40.00 mm
Bar diameter	ds-1: 10.00, ds-2: 10.00 mm
Directions of reinforcement	Phi-1: 0.000°, Phi-2: 90.000°
Reinforcement area	Use required additional reinforcement acc. to Tables 2.1, 2.2, 2.3

LONGITUDINAL REINFORCEMENT FOR SHEAR FORCE DESIGN

Apply the greater value resulting from either the required or provided reinforcement (basic and add. reinforcement) per reinforcement direction

OPTIONS FOR LST EN 1992-1-1:2005/NA:2011

Minimum longitudinal reinforcement for plates acc. to 9.3.1

Direction of minimum reinforcement

Reinforcement direction with the main tensile force from top (-z) and bottom (+z) surfaces together:

Minimum longitudinal reinforcement for walls acc. to 9.6

Minimum shear reinforcement

Neutral axis depth limitation

Variable strut inclination - min 21.801°

Variable concrete strut inclination - max 45.000°

Partial safety factor γ_s PT 1.15, AC 1.00, SLS 1.00

Partial safety factor γ_c PT 1.50, AC 1.20, SLS 1.00

Consideration of long-term effects Alpha-cc PT 1.00, AC 1.00, SLS 1.00

Consideration of long-term effects Alpha-ct SLS 1.00

2.2 REQUIRED REINFORCEMENT BY SURFACE

Surface No.	Point No.	Point Coordinates [m]			Symbol	Required Reinf. ULS	Basic Reinf.	Additional Reinforcement		Unit	Notes
		X	Y	Z				Required	Provided		
2	M3	0.600	-10.533	0.000	$a_{s,1,-z}$ (top)	4.00	0.00	4.00	4.00	cm ² /m	
	M2	0.000	-10.533	0.000	$a_{s,2,-z}$ (top)	4.00	0.00	4.00	4.00	cm ² /m	
	M5	0.000	-10.000	0.000	$a_{s,1,+z}$ (bottom)	4.00	0.00	4.00	4.00	cm ² /m	
	M4	0.600	-10.000	0.000	$a_{s,2,+z}$ (bottom)	4.00	0.00	4.00	4.00	cm ² /m	
3	M1	1.200	-10.533	0.000	a_{sw}	0.00	-	-	-	cm ² /m ²	
	M5	0.000	-10.000	0.000	$a_{s,1,-z}$ (top)	4.00	0.00	4.00	4.00	cm ² /m	
	M133	1.200	-10.000	-1.250	$a_{s,2,-z}$ (top)	4.00	0.00	4.00	4.00	cm ² /m	
	M158	0.000	-10.000	-1.875	$a_{s,1,+z}$ (bottom)	4.00	0.00	4.00	4.00	cm ² /m	
4	M4	0.600	-10.000	0.000	$a_{s,2,+z}$ (bottom)	4.00	0.00	4.00	4.00	cm ² /m	
	M4	0.600	-10.000	0.000	a_{sw}	0.00	-	-	-	cm ² /m ²	
	M262	0.000	-11.600	-1.875	$a_{s,1,-z}$ (top)	4.00	0.00	4.00	4.00	cm ² /m	
	M80	0.600	-11.600	0.000	$a_{s,2,-z}$ (top)	4.00	0.00	4.00	4.00	cm ² /m	
5	M9	0.000	-11.600	0.000	$a_{s,1,+z}$ (bottom)	4.00	0.00	4.00	4.00	cm ² /m	
	M237	1.200	-11.600	-1.250	$a_{s,2,+z}$ (bottom)	4.00	0.00	4.00	4.00	cm ² /m	
	M9	0.000	-11.600	0.000	a_{sw}	0.00	-	-	-	cm ² /m ²	
	M315	1.200	-10.533	-2.500	$a_{s,1,-z}$ (top)	4.00	0.00	4.00	4.00	cm ² /m	
5	M7	0.000	-10.000	-2.500	$a_{s,2,-z}$ (top)	4.00	0.00	4.00	4.00	cm ² /m	
	M313	0.000	-10.533	-2.500	$a_{s,1,+z}$ (bottom)	0.80	0.00	0.80	0.80	cm ² /m	
	M313	0.000	-10.533	-2.500	$a_{s,2,+z}$ (bottom)	4.00	0.00	4.00	4.00	cm ² /m	
	M7	0.000	-10.000	-2.500	a_{sw}	0.00	-	-	-	cm ² /m ²	

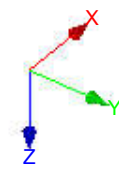
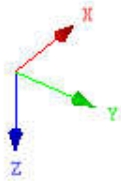
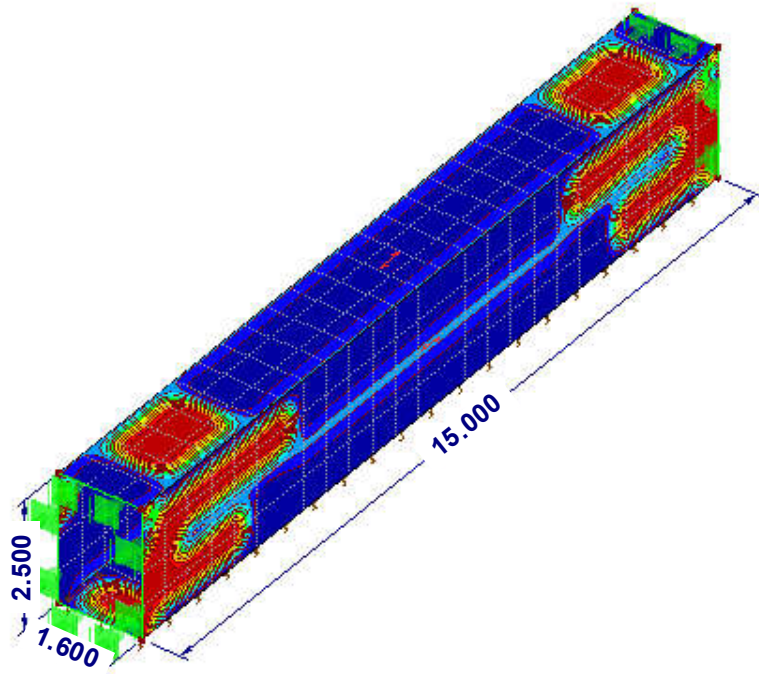
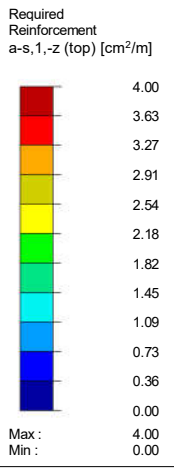
■ REQUIRED REINFORCEMENT $a_{s,1,-z}$ (top)

RF-CONCRETE Surfaces CA1

Reinforced concrete design

Required Reinforcement $a_{s,1,-z}$ (top) [cm²/m]

Isometric



Max $a_{s,1,-z}$ (top): 4.00, Min $a_{s,1,-z}$ (top): 0.00 cm²/m

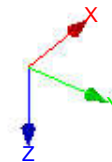
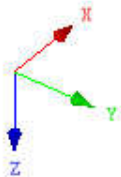
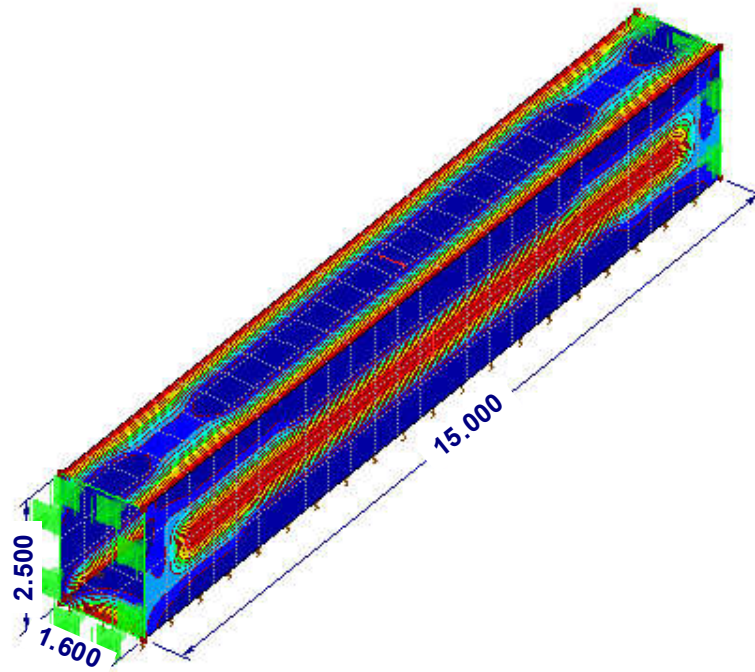
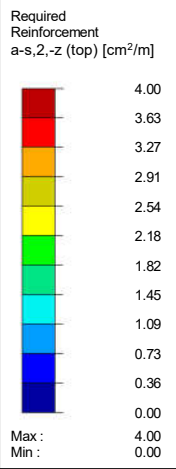
■ REQUIRED REINFORCEMENT $a_{s,2,-z}$ (top)

RF-CONCRETE Surfaces CA1

Reinforced concrete design

Required Reinforcement a-s,2,-z (top) [cm²/m]

Isometric



Max a-s,2,-z (top): 4.00, Min a-s,2,-z (top): 0.00 cm²/m

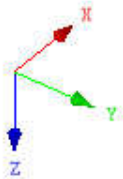
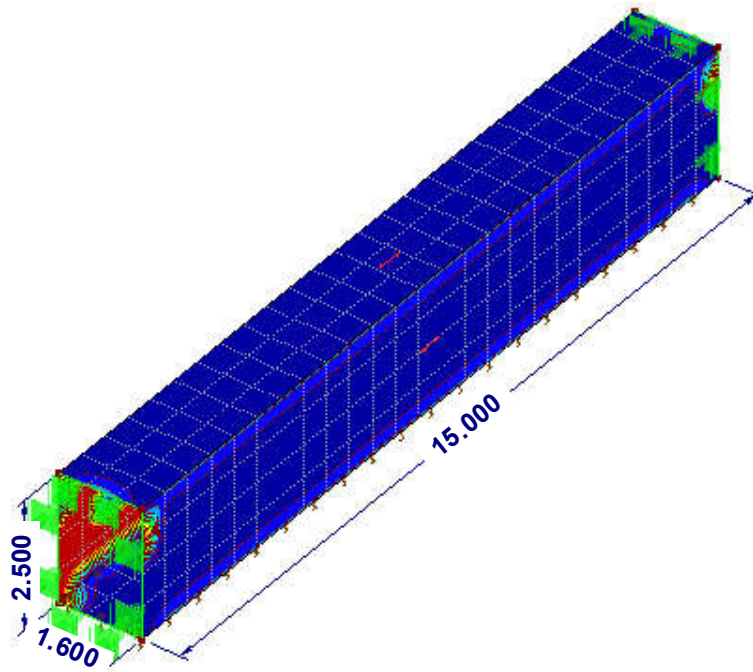
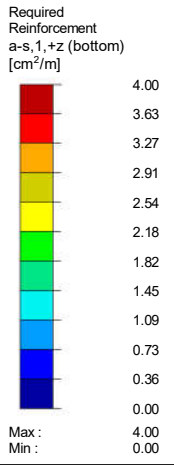
■ REQUIRED REINFORCEMENT $a_{s,1,+z}$ (bottom)

RF-CONCRETE Surfaces CA1

Reinforced concrete design

Required Reinforcement a-s,1,+z (bottom) [cm²/m]

Isometric



Max a-s,1,+z (bottom): 4.00, Min a-s,1,+z (bottom): 0.00 cm²/m

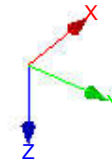
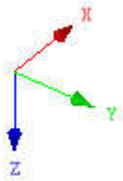
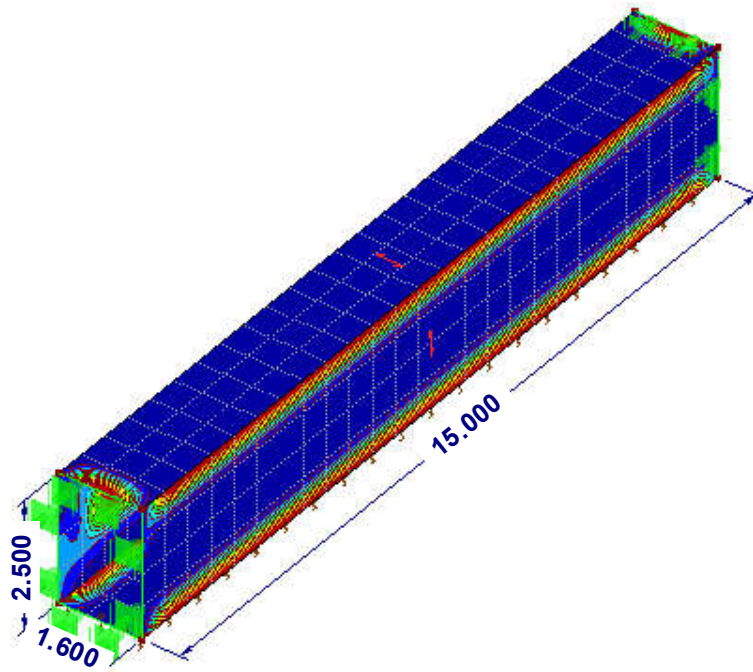
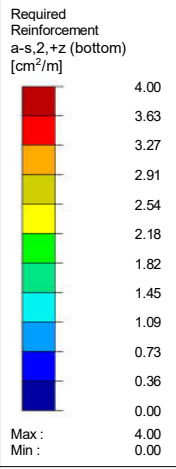
■ REQUIRED REINFORCEMENT $a_{s,2,+z}$ (bottom)

RF-CONCRETE Surfaces CA1

Reinforced concrete design

Required Reinforcement a-s,2,+z (bottom) [cm²/m]

Isometric



Max a-s,2,+z (bottom): 4.00, Min a-s,2,+z (bottom): 0.00 cm²/m